

INDEX OF PLANS

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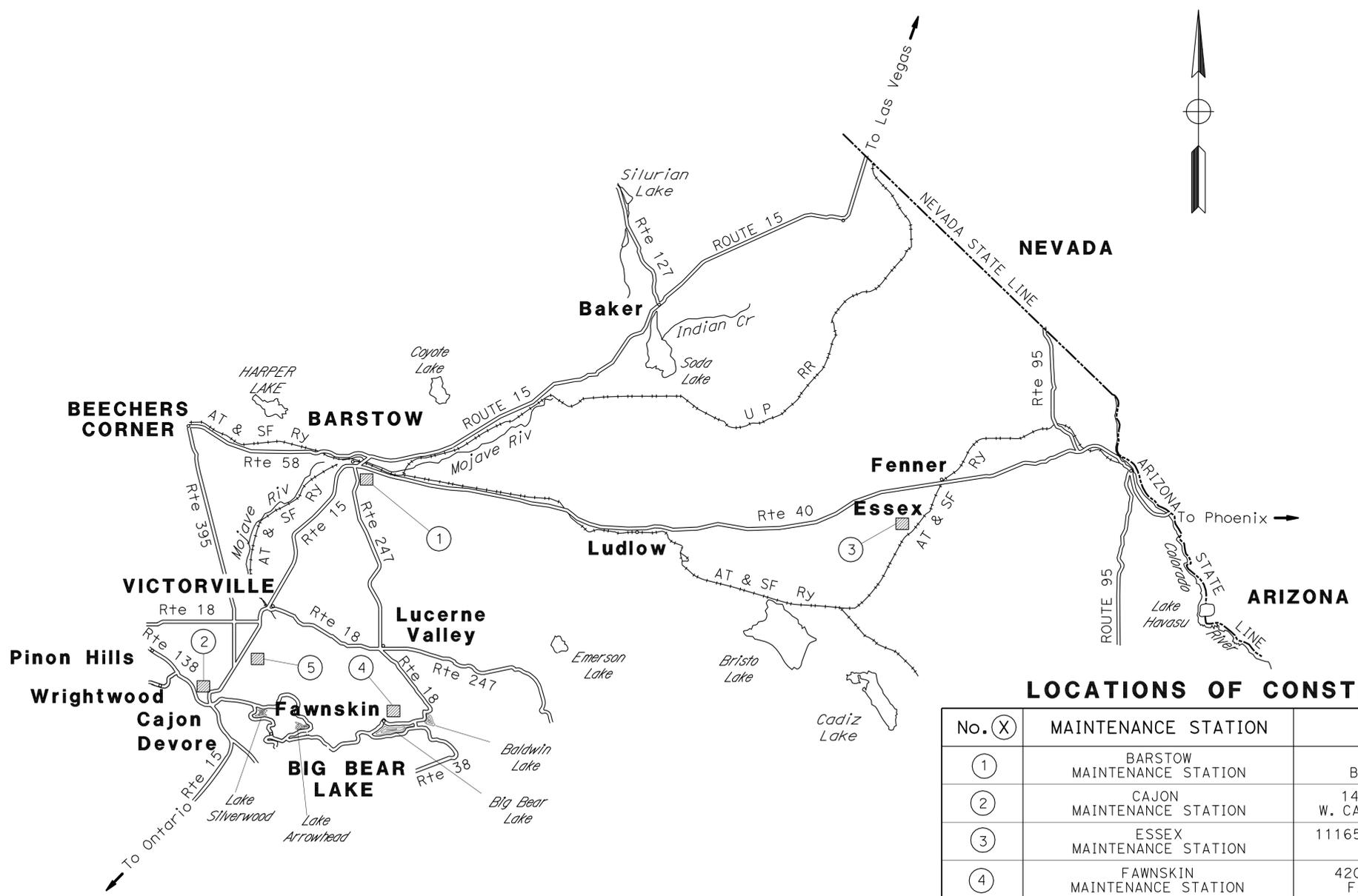
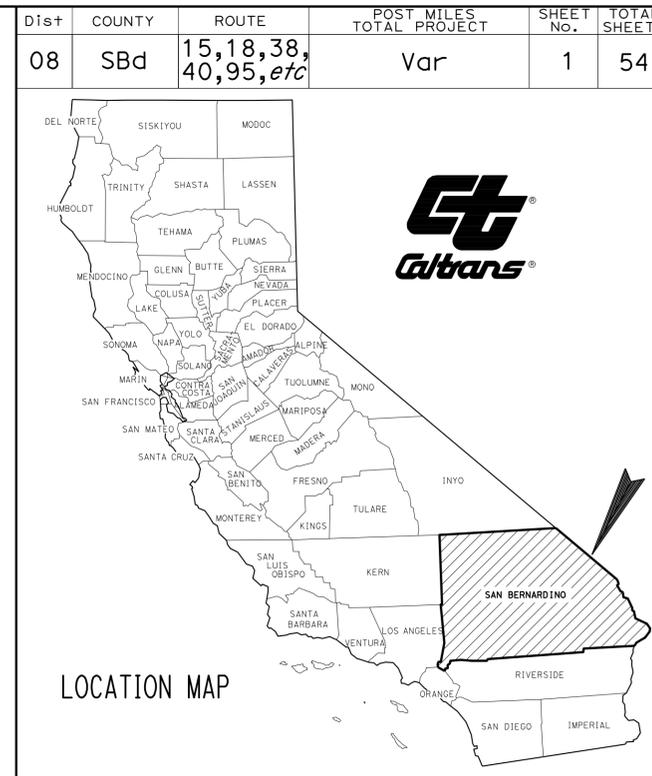
BUILDING PLANS

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THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR BUILDING CONSTRUCTION
IN SAN BERNARDINO COUNTY
AT VARIOUS MAINTENANCE STATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



LOCATIONS OF CONSTRUCTION

No. (X)	MAINTENANCE STATION	DESCRIPTION
①	BARSTOW MAINTENANCE STATION	1800 DILL ROAD BARSTOW, CA 92311
②	CAJON MAINTENANCE STATION	14747 STATE Hwy 138 W. CAJON VALLEY, CA 92371
③	ESSEX MAINTENANCE STATION	11165 NATIONAL TRAILS Hwy ESSEX, CA 92332
④	FAWNSKIN MAINTENANCE STATION	42060 NORTH SHORE Dr FAWNSKIN, CA 92333
⑤	VICTORVILLE MAINTENANCE STATION	13693 MARIPOSA ROAD VICTORVILLE, CA 92392

NO SCALE

ACCESSIBILITY DESIGN APPROVAL STAMP
 DOT / DES / OTA

PROJECT ID
0800020059

EXEMPT

Reviewed by: *[Signature]*
 Date: 01-25-11

CALIFORNIA STATE FIRE MARSHAL APPROVED

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by: *[Signature]*
 JEFFERY SCHWARTZ
 Approval date: 02-15-11

* PER 2007 CBC SEC.1123B.2 EXCEPTION (2) AND 1991 ADAAG 4.1.1 (5) (b) (ii), ACCESSIBILITY IS NOT REQUIRED IN NON-OCCUPIABLE SPACES ACCESSED ONLY BY LADDERS.

PROJECT MANAGER
MUSTAFA TAALI

DESIGN ENGINEER
MICHAEL RISTIC

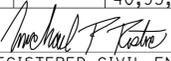
[Signature] 8-29-11
 PROJECT ENGINEER
 REGISTERED CIVIL ENGINEER

April 9, 2012
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

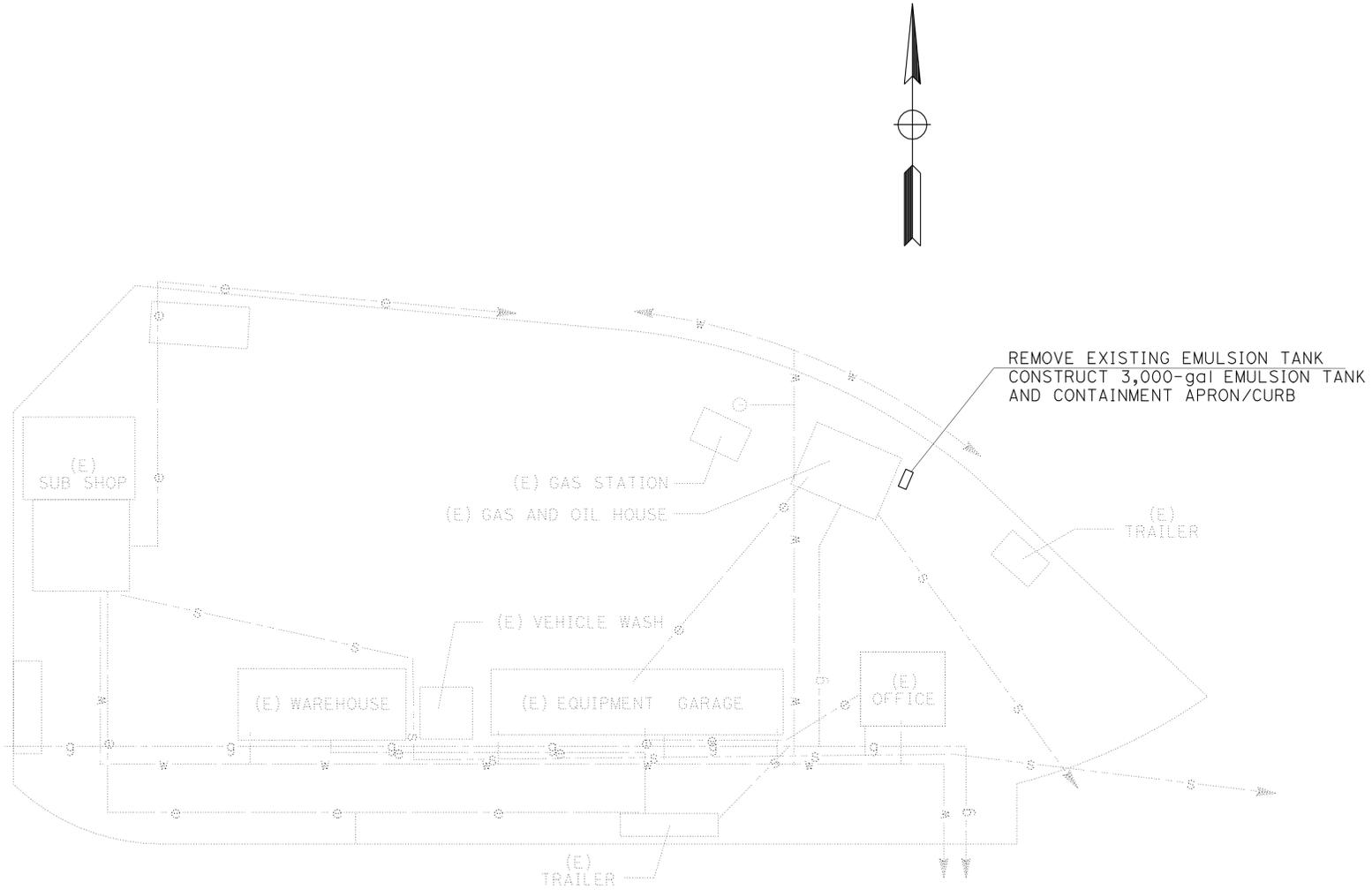


CONTRACT No.	08-ON1404
PROJECT ID	0800020059

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15,18,38, 40,95,etc	Var	2	54
			8-29-11		
REGISTERED CIVIL ENGINEER			DATE		
4-9-12			PLANS APPROVAL DATE		
					
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NOTE:

1. LOCATION OF UNDERGROUND CONDUIT SYSTEMS ARE SHOWN DIAGRAMATICALLY ONLY.



BARSTOW MAINTENANCE YARD

LAYOUT

NO SCALE **L-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
Caltrans MAINTENANCE DESIGN	MICHAEL RISTIC	MICHAEL RISTIC		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE DESIGN

BORDER LAST REVISED 7/2/2010

USERNAME => s109858
 DGN FILE => 80n140ea002.dgn

RELATIVE BORDER SCALE IS IN INCHES



UNIT 2341

PROJECT NUMBER & PHASE

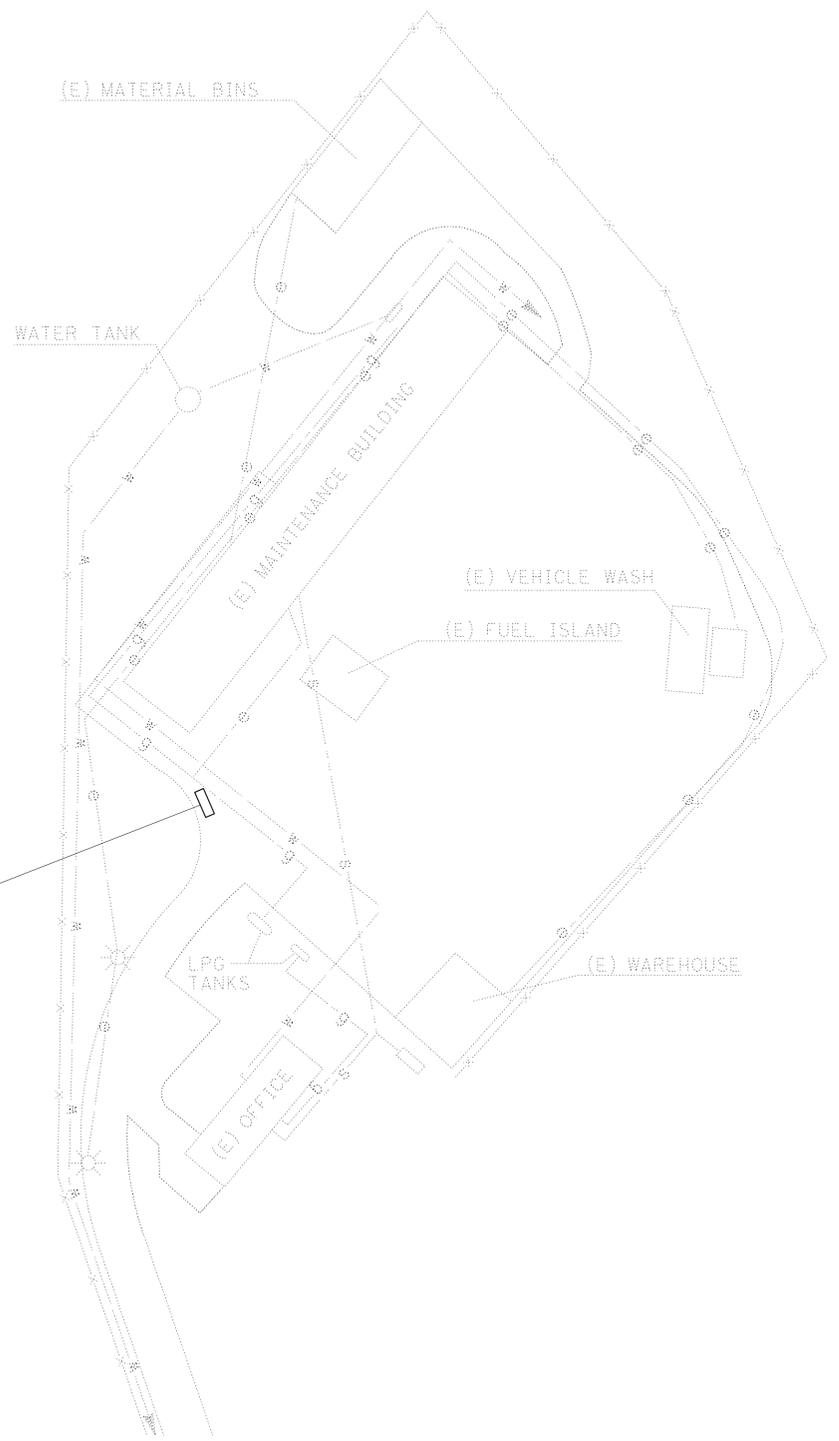
08000200591

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08	SBd	15,18,38,40,95,etc	Var	3	54

REGISTERED CIVIL ENGINEER DATE 8-29-11
 4-9-12
 PLANS APPROVAL DATE



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CAJON MAINTENANCE YARD

LAYOUT

NO SCALE **L-2**

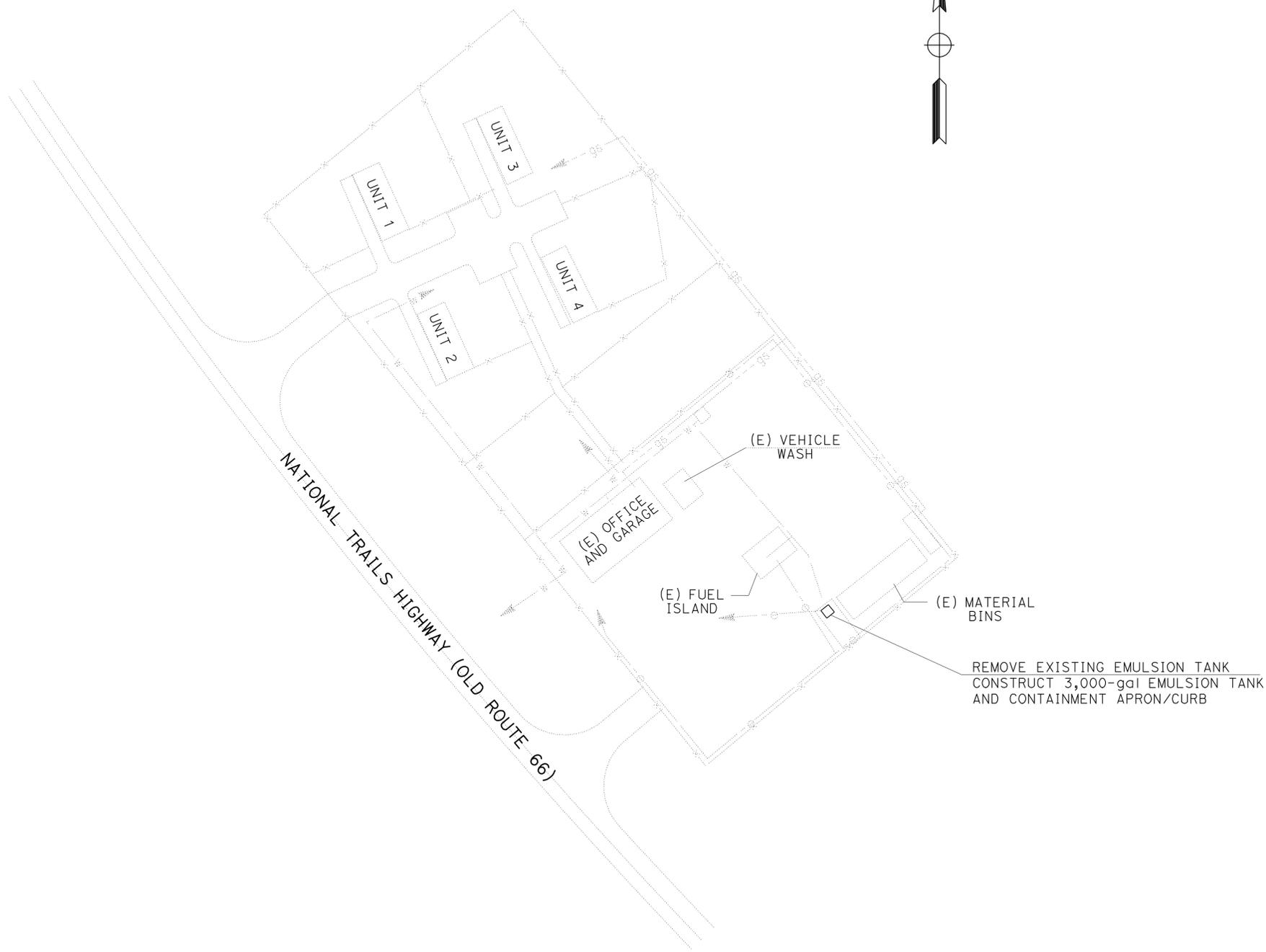
LAST REVISION | DATE PLOTTED => 05-APR-2012
 08-29-11 | TIME PLOTTED => 16:56

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans MAINTENANCE DESIGN	FUNCTIONAL SUPERVISOR	MICHAEL RISTIC
	CALCULATED-DESIGNED BY	CHECKED BY
	MICHAEL RISTIC	
	REVISOR	DATE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15,18,38,40,95,etc	Var	4	54
 REGISTERED CIVIL ENGINEER			8-29-11	DATE	
4-9-12 PLANS APPROVAL DATE					



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ESSEX MAINTENANCE STATION

LAYOUT
NO SCALE **L-3**

LAST REVISION | DATE PLOTTED => 05-APR-2012
 08-29-11 | TIME PLOTTED => 16:56

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE DESIGN

FUNCTIONAL SUPERVISOR
 MICHAEL RISTIC

CALCULATED/DESIGNED BY
 CHECKED BY

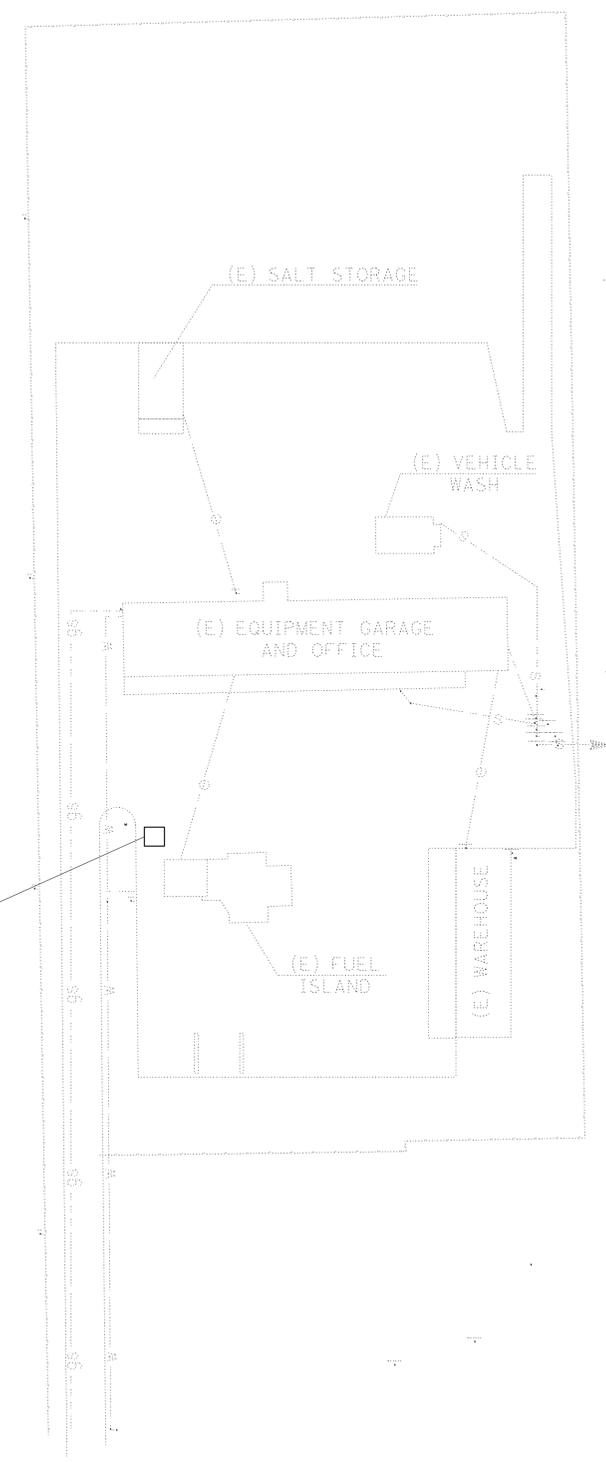
REVISOR
 MICHAEL RISTIC

REVISOR
 DATE

REVISOR
 DATE

REVISOR
 DATE

CONSTRUCT 3,000-gal EMULSION TANK AND CONTAINMENT APRON/CURB



FAWSKIN MAINTENCE YARD

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15,18,38, 40,95,etc	Var	5	54

Michael P. Ristic 8-29-11
 REGISTERED CIVIL ENGINEER DATE
 4-9-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 MICHAEL P. RISTIC
 No. C69429
 Exp. 6/30/12
 CIVIL
 STATE OF CALIFORNIA

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LAYOUT
 NO SCALE **L-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE DESIGN

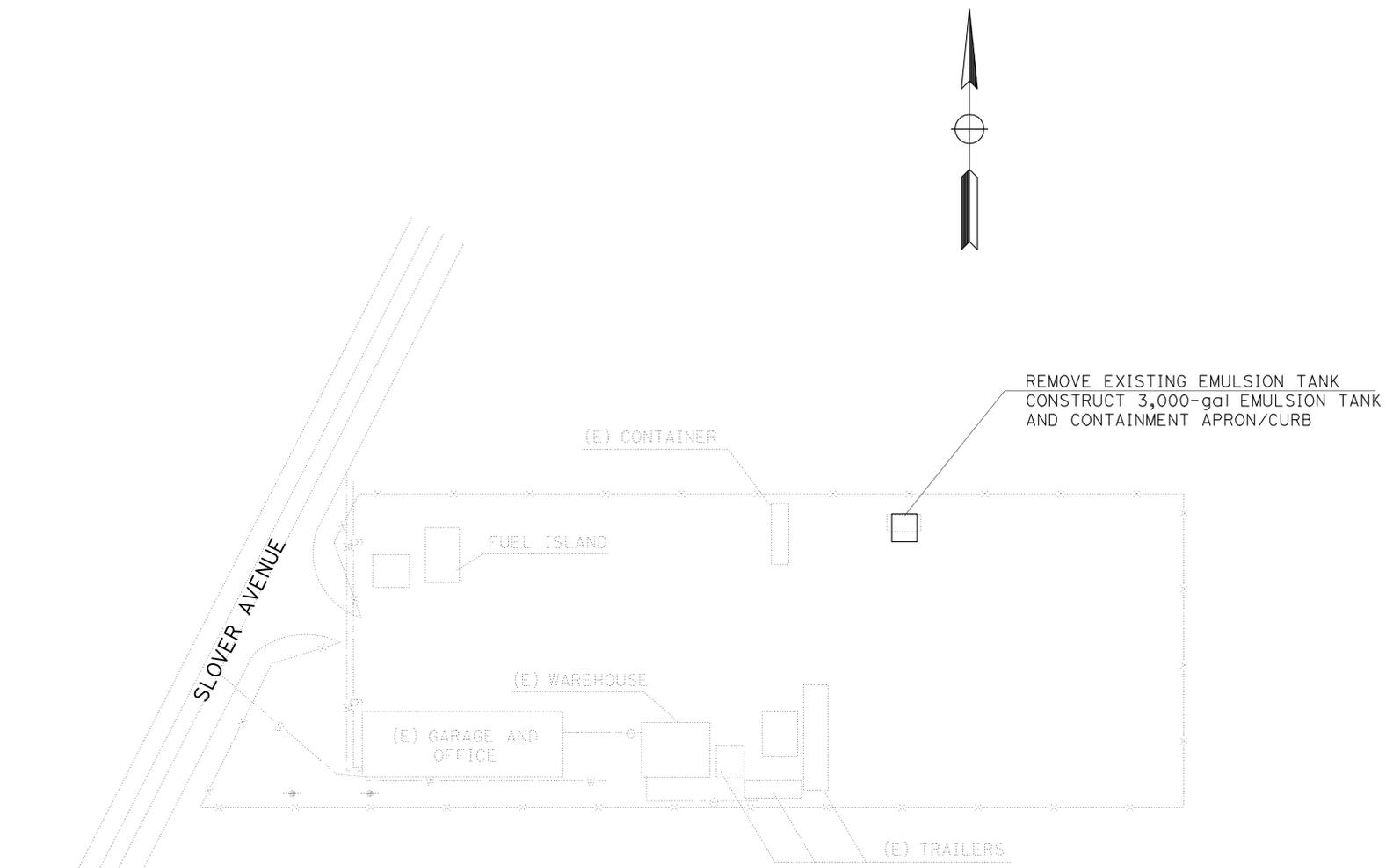
FUNCTIONAL SUPERVISOR
 MICHAEL RISTIC

CALCULATED/DESIGNED BY
 CHECKED BY

REVISOR
 MICHAEL RISTIC

REVISOR
 DATE
 DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15,18,38,40,95,etc	Var	6	54
			8-29-11		
REGISTERED CIVIL ENGINEER			DATE		
4-9-12			PLANS APPROVAL DATE		
					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



VICTORVILLE MAINTENANCE YARD

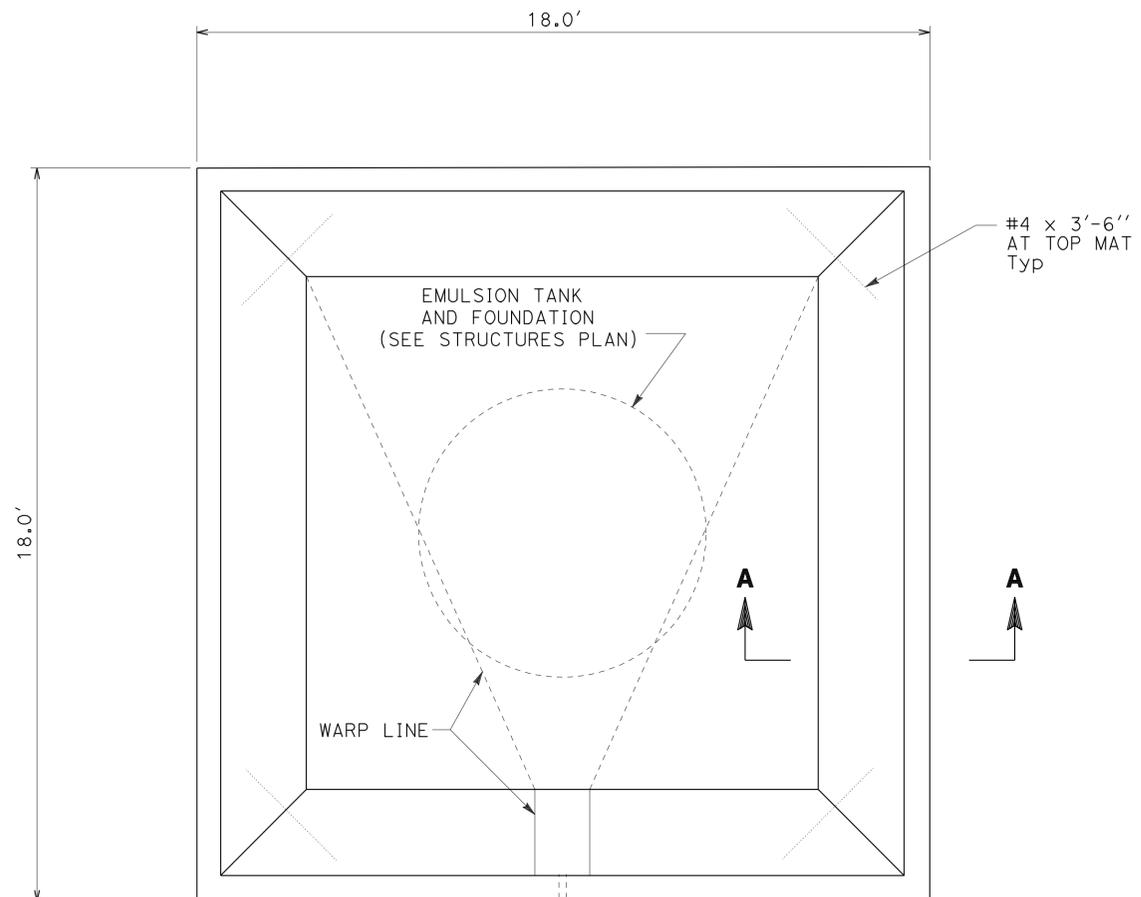
LAYOUT
 NO SCALE **L-5**

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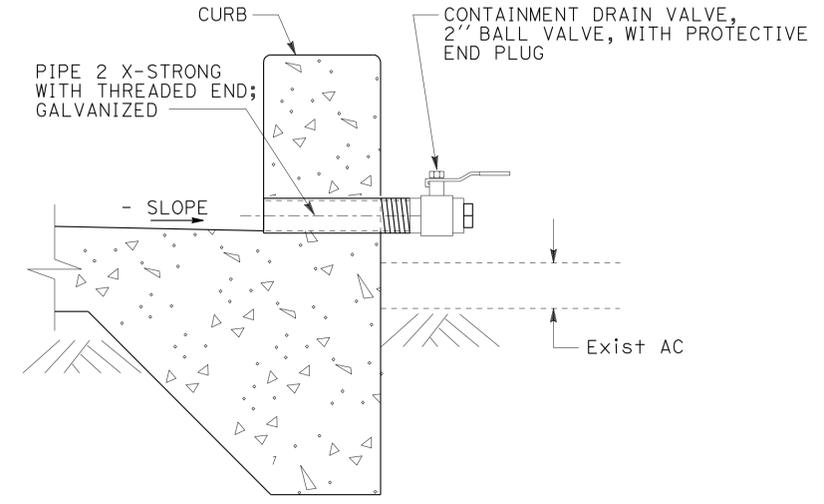
<i>Michael P. Ristic</i>	8-29-11
REGISTERED CIVIL ENGINEER	DATE
4-9-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
MICHAEL P. RISTIC
No. C69429
Exp. 6/30/12
CIVIL

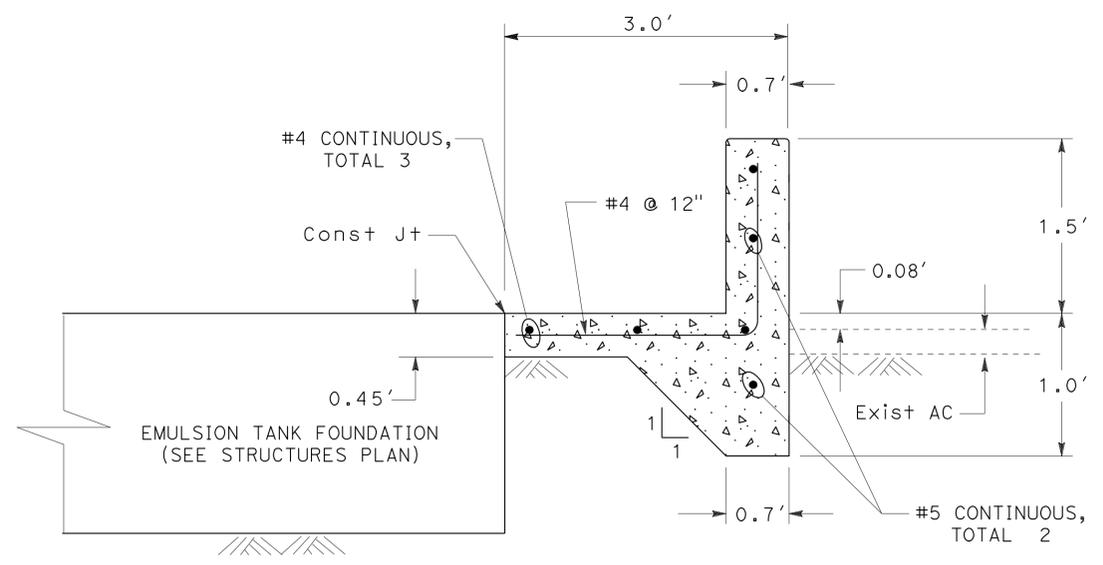
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CONTAINMENT APRON/CURB PLAN



DETAIL A
CONTAINMENT DRAIN VALVE DETAIL



SECTION A-A
CONTAINMENT APRON/CURB SECTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE DESIGN
 FUNCTIONAL SUPERVISOR: MICHAEL RISTIC
 CALCULATED/DESIGNED BY: MICHAEL RISTIC
 CHECKED BY:
 RHEA VILLARAMA
 MICHAEL RISTIC
 REVISED BY: DATE REVISIONS:
 REVISIONS:

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE DESIGN

FUNCTIONAL SUPERVISOR
 MICHAEL RISTIC

CALCULATED/DESIGNED BY
 CHECKED BY

RHEA VILLARAMA
 MICHAEL RISTIC

REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15,18,38,40,95,etc	Var	9	54

 11-10-11
 REGISTERED CIVIL ENGINEER DATE

4-9-12
 PLANS APPROVAL DATE

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MINOR CONCRETE QUANTITIES

LOCATION	Misc CONCRETE CY
BARSTOW	6.9
CAJON	6.9
ESSEX	6.9
FAWNSKIN	6.9
VICTORVILLE	6.9
TOTAL	34.5

SUMMARY OF QUANTITIES

Q-1

LAST REVISION | DATE PLOTTED => 05-APR-2012
 11-11-11 | TIME PLOTTED => 16:56

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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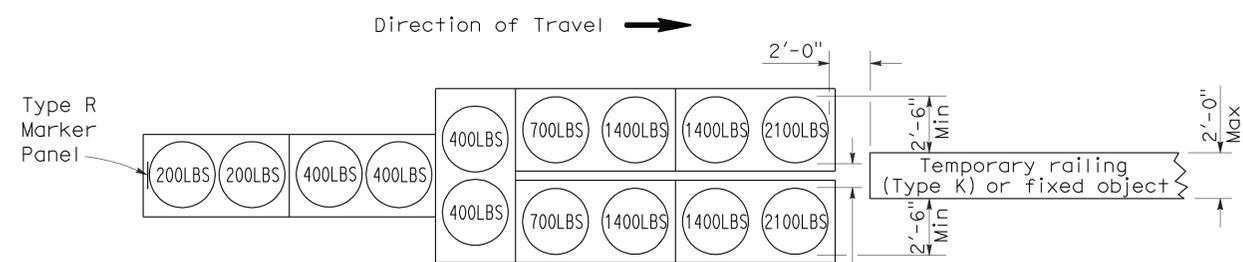
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

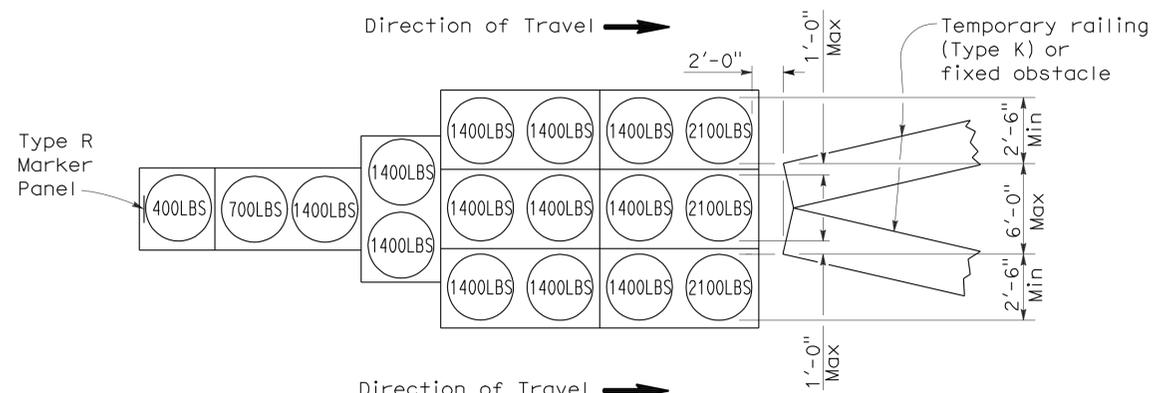
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To accompany plans dated 04-9-12



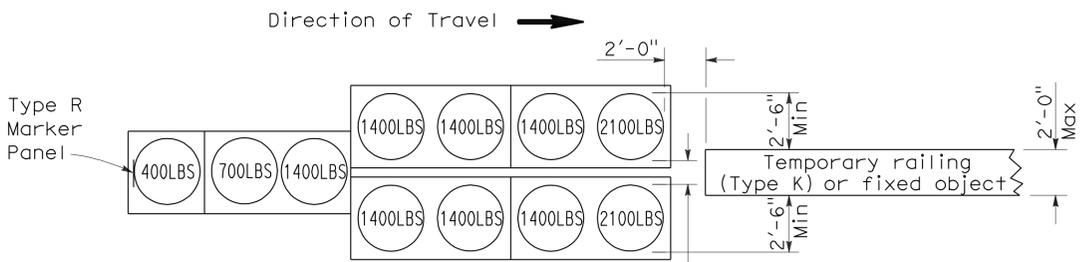
ARRAY 'TU14'

Approach speed 45 mph or more



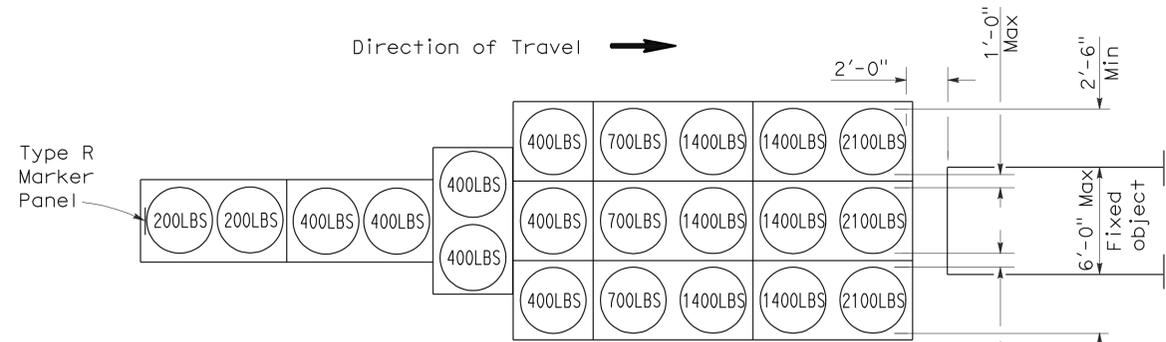
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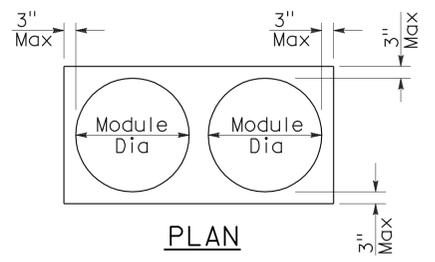
ARRAY 'TU11'

Approach speed less than 45 mph

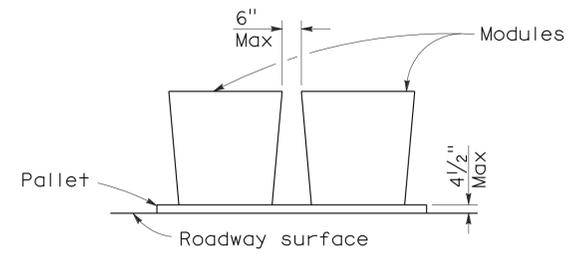


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,
SAND FILLED
(UNIDIRECTIONAL)**

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

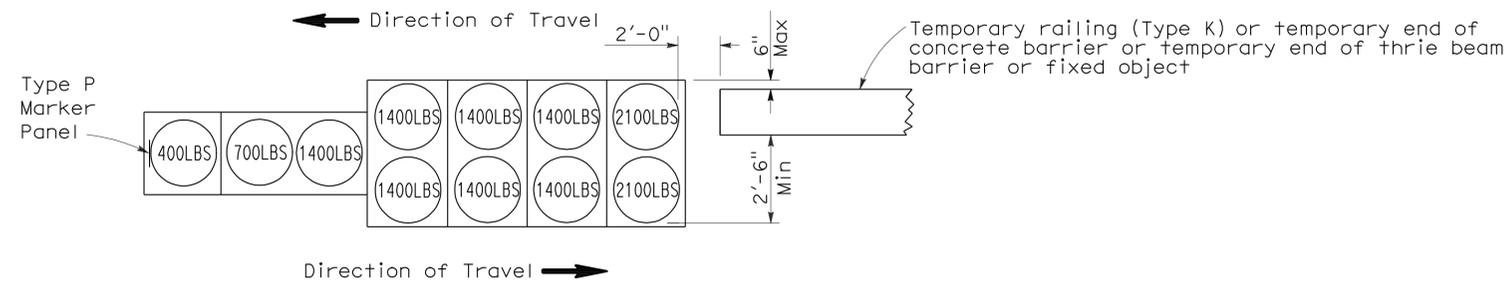
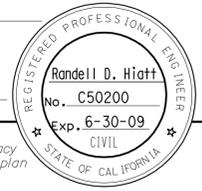
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08	SBd	15,18,38,40,95,etc	Var	11	54

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

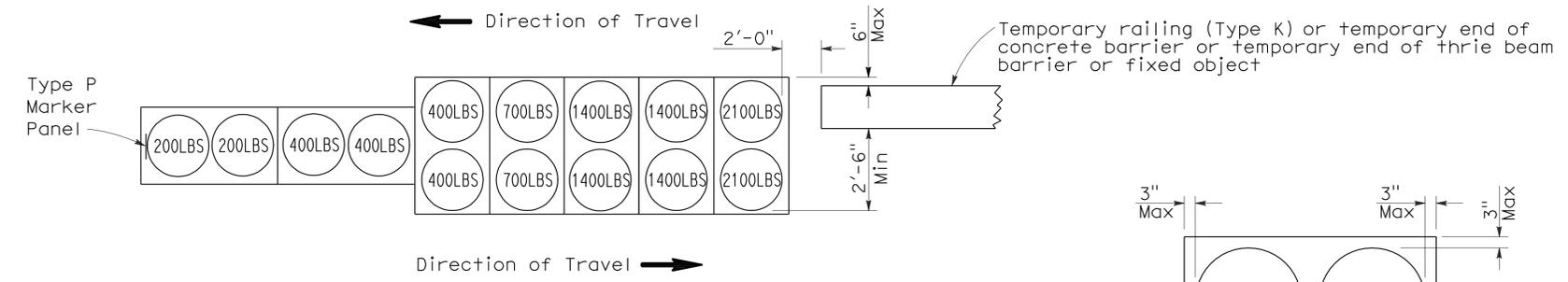
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To accompany plans dated 04-9-12



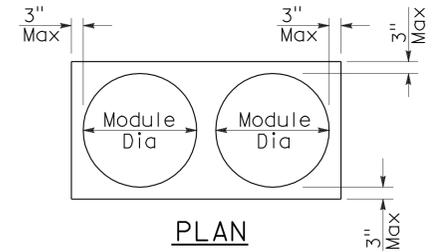
ARRAY 'TB11'

Approach speed less than 45 mph

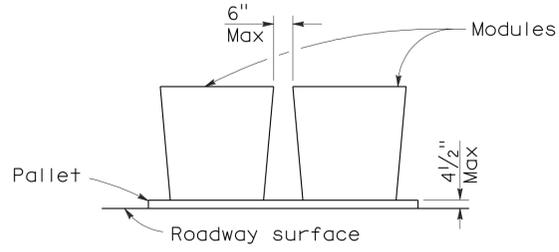


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,
SAND FILLED
(BIDIRECTIONAL)**

NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

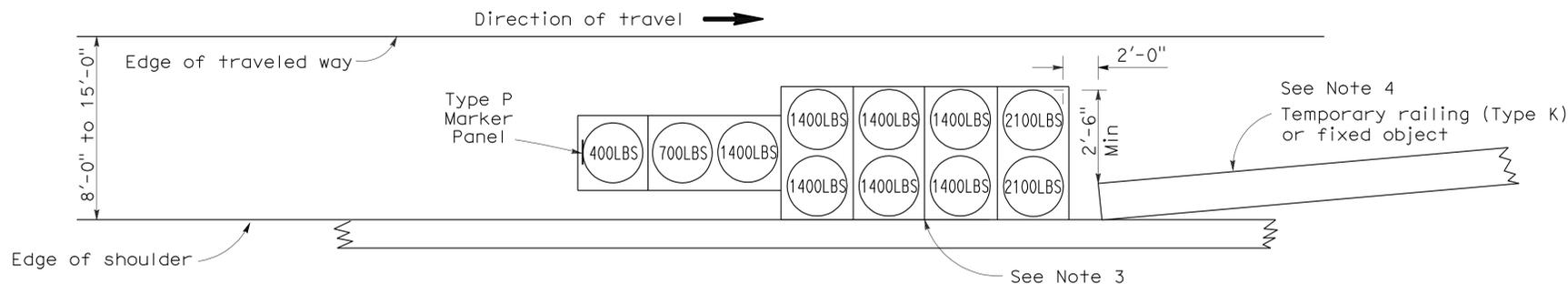
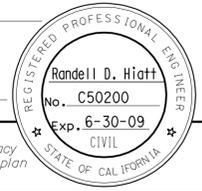
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38, 40,95,etc	Var	12	54

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

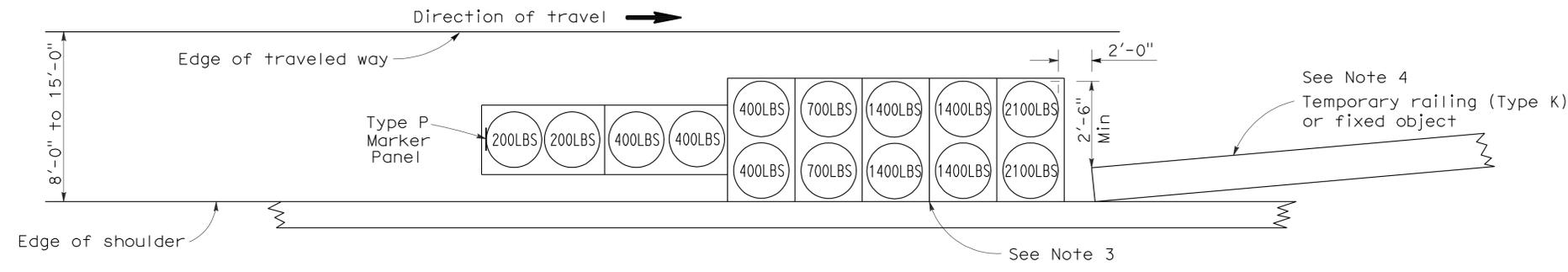
June 6, 2008
PLANS APPROVAL DATE

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To accompany plans dated 04-9-12



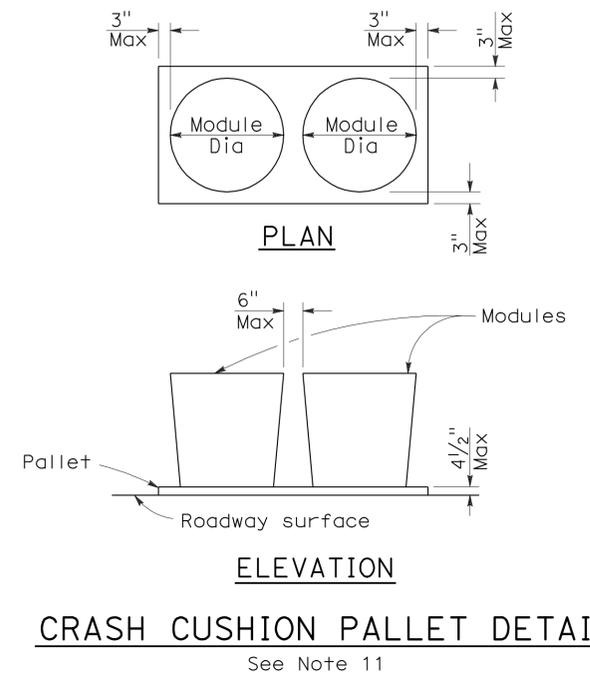
ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



ARRAY 'TS14'
Approach speed 45 mph or more
See Note 9

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
4. If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
5. Temporary crash cushion arrays shall not encroach on the traveled way.
6. Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
7. Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
8. Refer to Standard Plan A73B for marker details.
9. For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
10. Approach speeds indicated conform to NCHRP 350 Report criteria.
11. Use of pallets is optional.



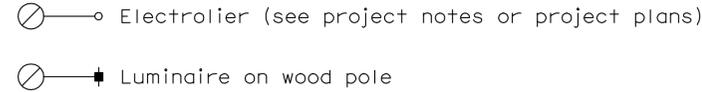
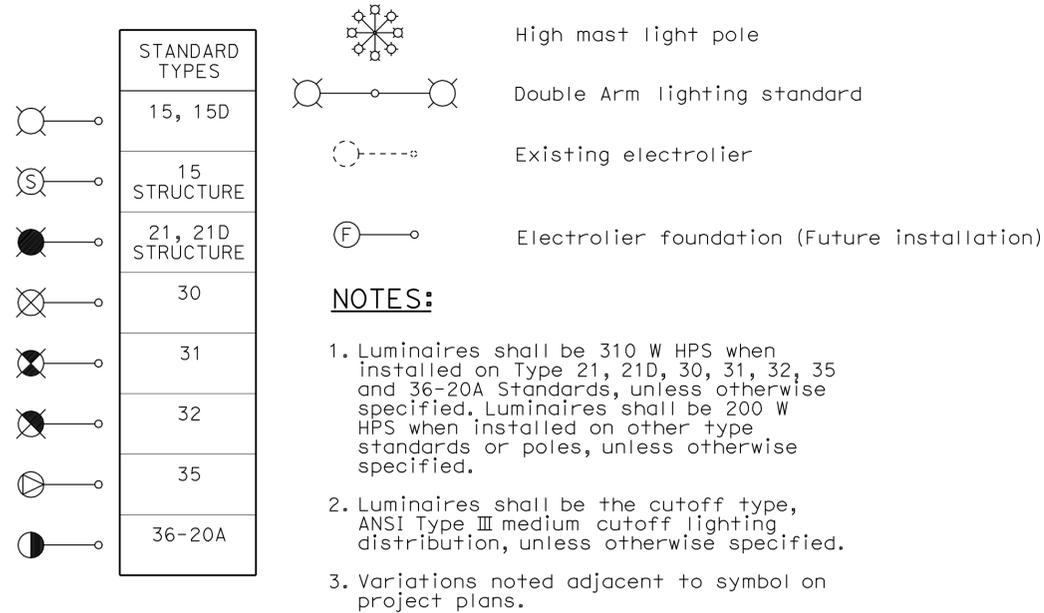
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TEMPORARY CRASH CUSHION,
SAND FILLED
(SHOULDER INSTALLATIONS)**
NO SCALE

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

ELECTROLIERS



STANDARD NOTES:

- AB** Abandon. If applied to conduit, remove conductors.
- BC** Install pull box in existing conduit run.
- BP** Pedestrian barricade, type as indicated on plan.
- CB** Install conduit into existing pull box.
- CC** Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF** Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH** Detector handhole.
- FA** Foundation to be abandoned.
- IS** Install sign on signal mast arm.
- NS** No slip base on standard.
- PEC** Photoelectric control.
- PEU** Photoelectric unit.
- RC** Equipment or material to be removed and become the property of the Contractor.
- RE** Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL** Relocate equipment.
- RR** Remove and reuse equipment.
- RS** Remove and salvage equipment.
- SC** Splice new to existing conductors.
- SD** Service disconnect.
- SF** Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP** Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces, top attachment
MAS-4B	mas-4B	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4C	mas-4C	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, top attachment
MAS-5B	mas-5B	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL	rl	Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38, 40,95,etc	Var	13	54

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

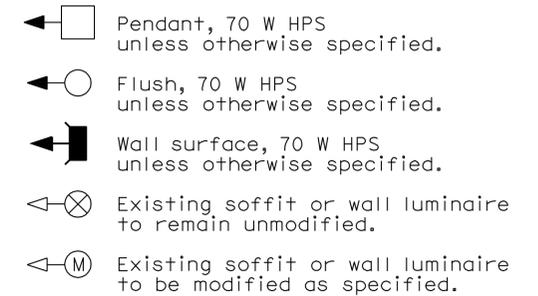
October 5, 2007
PLANS APPROVAL DATE

Jeffery G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 04-9-12

SOFFIT AND WALL MOUNTED LUMINAIRES



NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38, 40,95,etc	Var	14	54

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

CONDUIT

PROPOSED	EXISTING	
		Lighting Conduit, unless otherwise indicated or noted
		Traffic signal conduit
		Communication conduit
		Telephone conduit
		Fire alarm conduit
		Fiber optic conduit
		Conduit termination
		Conduit riser in/on structure or service pole

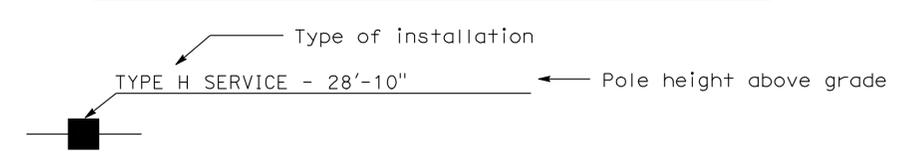
SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
		Modifications of basic symbols: "L" indicates all non-arrow sections louvered "LG" indicates louvered green section only "PV" indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
		Type 33 Standard, Left-turn vehicle signal face and sign
		Standard with luminaire and signal mast arms and attached vehicle signal faces
		Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated
		Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
		Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
		Controller assembly. Door indicates front of cabinet

SERVICE EQUIPMENT

PROPOSED	EXISTING	
		Overhead lines
		Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
		Telephone demarcation cabinet

POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

PROPOSED	EXISTING	
		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

SIGNAL EQUIPMENT Cont

PROPOSED	EXISTING	
		Guard post
		Type 1 Standard with "Meter On" sign
		Emergency Vehicle detector

NOTES:

- All signal sections shall be 12" unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.
- Signal indication shall be LED.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SYMBOLS AND ABBREVIATIONS)
 NO SCALE

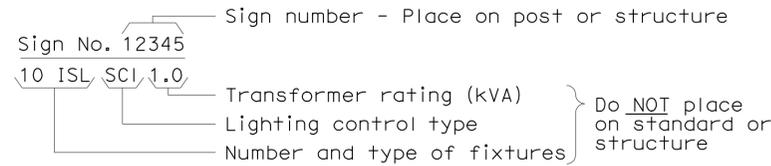
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

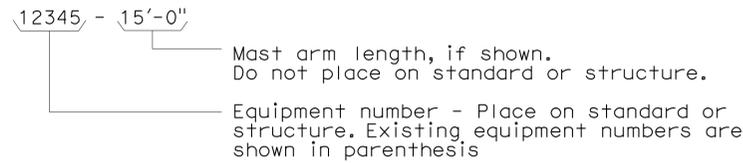
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

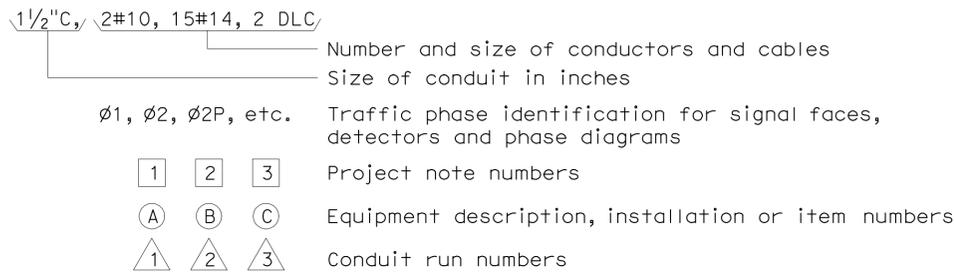
ILLUMINATED SIGN IDENTIFICATION NUMBER:



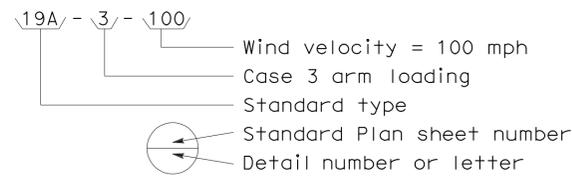
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



CONDUIT AND CONDUCTOR IDENTIFICATION:



SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



MISCELLANEOUS EQUIPMENT

PROPOSED	EXISTING	
		Changeable message sign
		Closed circuit television camera
		Highway advisory radio pole and antenna
		Extinguishable message sign
		Detection device M = Microwave sensor V = Video image sensor

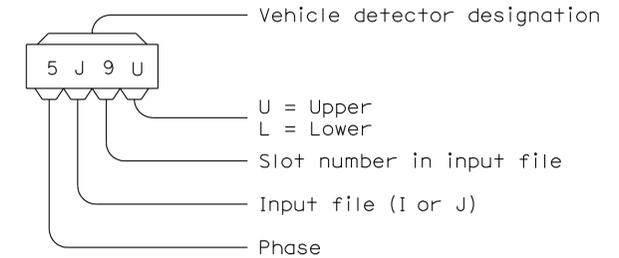
WIRING DIAGRAM LEGEND

P	Pole	----	External conductor
CB	Circuit breaker	—	Conductor or bus
A	Ampere	—•—	Tie point
V	Volt	—/—	Contactor coil
M	Metered	— —	Contactor, Contact NO
UM	Unmetered	—X—	Terminal blocks
NB	Neutral bus	— /—	Contactor, Contact NC
GB	Ground bus	— —	Enclosure bond
G	Equipment grounding conductor	— —	Grounding electrode
N	Grounded conductor (Neutral)	— —	Circuit breaker
		Ⓜ	Receptacle

PULL BOXES

PROPOSED	EXISTING	
		Pull box-No. 5 unless otherwise indicated or noted.
		Pull box-Additional designations or descriptions
3		(C) = Communications pull box
5		(E) = Pull box with extension
6		(S) = Sprinkler control pull box
7		(21) = Anchor bolts and conduit for future installation of Type 21 Standard
8		(T) = Traffic pull box
9		
9A		

VEHICLE DETECTORS



PROPOSED	EXISTING	
		Type A detector loop. Outline of sawcut shown.
		Type B detector loop. Outline of sawcut shown.
		Type C detector loop. Outline of sawcut shown.
		Type D detector loop. Outline of sawcut shown.
		Type E detector loop. Outline of sawcut shown.
		Type Q detector loop. Outline of sawcut shown.
		Magnetic detector
		Detector handhole
		Microwave or video detection zone

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C
DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
00	INDEX
GP-1	BARSTOW MAINTENANCE STATION EMULSION TANK GENERAL PLAN & INDEX
GP-2	CAJON MAINTENANCE STATION EMULSION TANK GENERAL PLAN & INDEX
GP-3	ESSEX MAINTENANCE STATION EMULSION TANK GENERAL PLAN & INDEX
GP-4	FAWNSKIN MAINTENANCE STATION EMULSION TANK GENERAL PLAN & INDEX
GP-5	VICTORVILLE MAINTENANCE STATION EMULSION TANK GENERAL PLAN & INDEX

STRUCTURAL

ST-1	LEGEND
STI-0	EMULSION TANK DETAILS
STI-1	EMULSION TANK PLANS
STI-2	EMULSION TANK ELEVATIONS
STI-3	EMULSION TANK ELEVATIONS
STI-4	EMULSION TANK SECTIONS
STI-5	HEATER WELL SECTIONS AND DETAILS
STI-6	EMULSION TANK DETAILS NO.1
STI-7	EMULSION TANK DETAILS NO.2
STI-8	EMULSION TANK DETAILS NO.3
STI-9	EMULSION TANK DETAILS NO.4
STI-10	EMULSION TANK DETAILS NO.5
STI-11	EMULSION TANK DETAILS NO.6
STI-12	EMULSION TANK DETAILS NO.7

MECHANICAL

M-0	LEGEND
M-1	BARSTOW MAINTENANCE STATION EMULSION TANK SITE PLAN
M-2	CAJON MAINTENANCE STATION EMULSION TANK SITE PLAN
M-3	ESSEX MAINTENANCE STATION EMULSION TANK SITE PLAN
M-4	FAWNSKIN MAINTENANCE STATION EMULSION TANK SITE PLAN
M-5	VICTORVILLE MAINTENANCE STATION EMULSION TANK SITE PLAN
M-6	EMULSION TANK DETAILS
M-7	LIMIT SWITCH MOUNTING DETAILS
M-8	SCHEMATIC DIAGRAM

ELECTRICAL

E-1	ELECTRICAL WORK (BARSTOW MAINTENANCE YARD)
E-2	ELECTRICAL WORK (BARSTOW MAINTENANCE YARD)
E-3	ELECTRICAL WORK (CAJON MAINTENANCE YARD)
E-4	ELECTRICAL WORK (CAJON MAINTENANCE YARD)
E-5	ELECTRICAL WORK (ESSEX MAINTENANCE YARD)
E-6	ELECTRICAL WORK (ESSEX MAINTENANCE YARD)
E-7	ELECTRICAL WORK (FAWNSKIN MAINTENANCE YARD)
E-8	ELECTRICAL WORK (FAWNSKIN MAINTENANCE YARD)
E-9	ELECTRICAL WORK (VICTORVILLE MAINTENANCE YARD)
E-10	ELECTRICAL WORK (VICTORVILLE MAINTENANCE YARD)

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	15,18,38,40,95,etc	Var	16	54



REGISTERED MECHANICAL ENGINEER

03-07-11

DATE

REGISTERED PROFESSIONAL ENGINEER

Jack Wheeler

No. 21648

Exp. 06-30-11

MECH

STATE OF CALIFORNIA

4-9-12
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

DESIGN	BY <i>Alvin Kwan</i>	CHECKED <i>Jack Wheeler</i>
DETAILS	BY <i>S Yeh</i>	CHECKED <i>Jack Wheeler</i>
QUANTITIES	BY <i>Alvin Kwan</i>	CHECKED <i>Jack Wheeler</i>

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
ELECTRICAL-MECHANICAL-WATER
AND
WASTEWATER DESIGN

BRIDGE NO.	VARIOUS
POST MILE	

DISTRICT 8 VARIOUS MAINTENANCE STATIONS EMULSION TANK
INDEX

SHEET	00	OF	
-------	----	----	--

INDEX TO SHEETS

GP-1 GENERAL PLAN & INDEX

STRUCTURAL

- ST-1 LEGEND
- STI-0 EMULSION TANK DETAILS
- STI-1 EMULSION TANK PLANS
- STI-2 EMULSION TANK ELEVATIONS
- STI-3 EMULSION TANK ELEVATIONS
- STI-4 EMULSION TANK SECTIONS
- STI-5 HEATER WELL SECTIONS AND DETAILS
- STI-6 EMULSION TANK DETAILS NO.1
- STI-7 EMULSION TANK DETAILS NO.2
- STI-8 EMULSION TANK DETAILS NO.3
- STI-9 EMULSION TANK DETAILS NO.4
- STI-10 EMULSION TANK DETAILS NO.5
- STI-11 EMULSION TANK DETAILS NO.6
- STI-12 EMULSION TANK DETAILS NO.7

MECHANICAL

- M-0 LEGEND
- M-1 SITE PLAN
- M-6 EMULSION TANK DETAILS
- M-7 LIMIT SWITCH MOUNTING DETAILS
- M-8 SCHEMATIC DIAGRAM

ELECTRICAL

- E-1 ELECTRICAL WORK (BARSTOW MAINTENANCE YARD)
- E-2 ELECTRICAL WORK (BARSTOW MAINTENANCE YARD)

PROJECT DATA

APPLICABLE CODES INCLUDE:

2010 CALIFORNIA BUILDING CODE (CBC)
TITLE 24, PART 2 CCR

2010 CALIFORNIA ELECTRICAL CODE (CEC)
TITLE 24, PART 3 CCR

2010 CALIFORNIA MECHANICAL CODE (CMC)
TITLE 24, PART 4 CCR

2010 CALIFORNIA PLUMBING CODE (CPC)
TITLE 24, PART 5 CCR

2010 CALIFORNIA FIRE CODE (CFC)
TITLE 24, PART 9 CCR

AS DEFINED IN THE 2010 CALIFORNIA BUILDING CODE
THE CONSTRUCTION TYPE, OCCUPANCY GROUP, AND
THE ALLOWABLE FLOOR AREA FOR THE BUILDING IN
THIS PROJECT ARE:

EMULSION TANK

CONSTRUCTION TYPE	V-B
OCCUPANCY GROUP	U
NUMBER OF STORIES	N/A
BUILDING HEIGHT	20'-4"
SEPARATION FROM PROPERTY LINE	NOT REQUIRED - MORE THAN 10', ALL SIDES
ROOF COVERING	N/A
SPRINKLERS	NOT REQUIRED
FIRE ALARM	NOT REQUIRED
SMOKE CONTROL	NOT REQUIRED
HIGH FIRE HAZARD SEVERITY ZONE	NO
BASIC ALLOWABLE FLOOR AREA:	
TYPE V-B, GROUP U	
ALLOWABLE AREA	5,500 SF
DESIGN FLOOR AREAS	144 SF

EXISTING BUILDINGS

WELD SHOP:	
CONSTRUCTION TYPE	V-B
OCCUPANCY GROUP	F1
STORAGE	
CONSTRUCTION TYPE	V-B
OCCUPANCY GROUP	S-1

BARSTOW MAINTENANCE STATION
1800 DILL ROAD, BARSTOW, CA 92311

ASPHALT EMULSION

COMPOSITION:

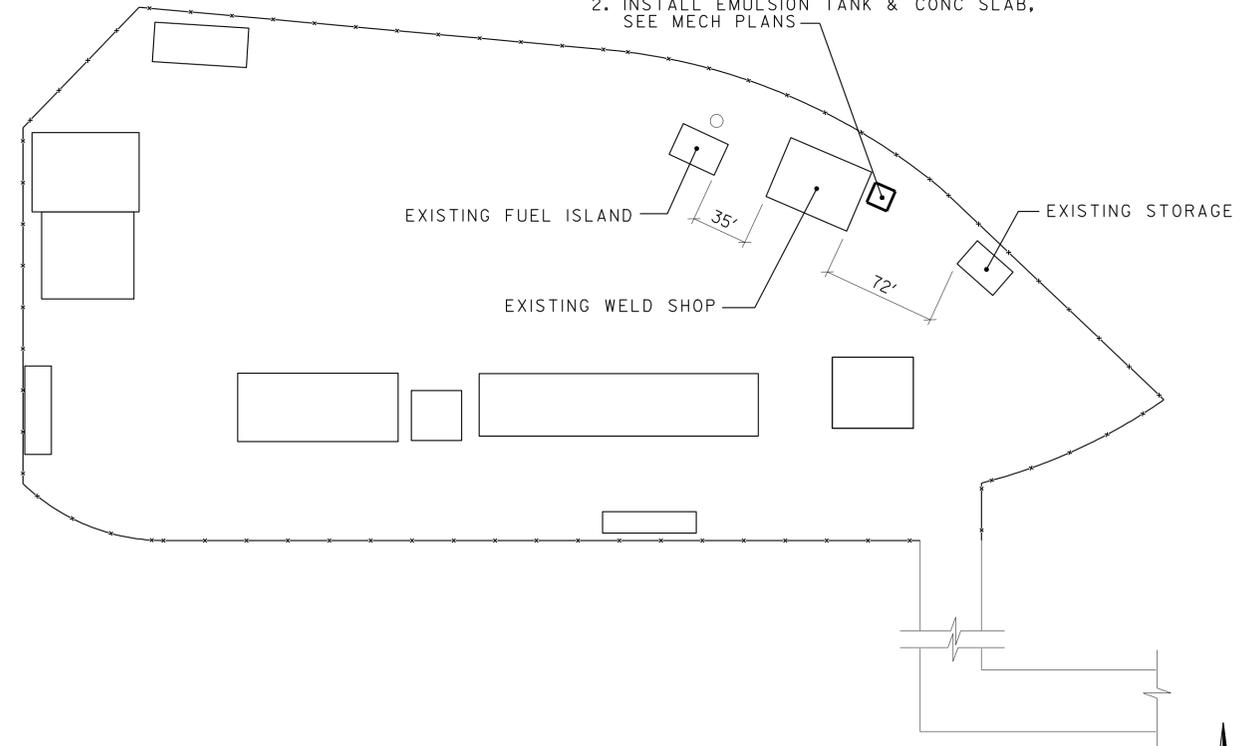
ASPHALT	38 - 72%
LIGHT DISTILLATE	0 - 12%
WATER & EMULSIFIER	18 - 37%

HAZARDS IDENTIFICATION:
NFPA RATING -- HEALTH: 1
FLAMMABILITY: 1
REACTIVITY: 0
SPECIAL HAZARD: CORROSIVE

FIRE FIGHTING MEASURES
NFPA FLAMMABILITY CLASSIFICATION:
NFPA CLASS - IIIB COMBUSTIBLE
FLASH POINT - 450°F MINIMUM
AUTO IGNITION TEMPERATURE - >700°F
EXTINGUISHING MEDIA - FOAM, CO2,
DRY CHEMICAL,
WATER FOG, OTHER

SCOPE OF WORK

1. REMOVE AND DISPOSE 2,000-gal (E) EMULSION TANK & (E) CONC SLAB
2. INSTALL EMULSION TANK & CONC SLAB, SEE MECH PLANS



GENERAL PLAN

NO SCALE

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38,40,95,etc	Var	17	54

REGISTERED MECHANICAL ENGINEER DATE 3-07-11

4-9-12 PLANS APPROVAL DATE

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CALIFORNIA STATE FIRE MARSHAL APPROVED

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by: *Jeffery Schwartz*
JEFFERY SCHWARTZ
Approval date: 02-15-11
CSFM File #: 01-36-11-0057

DESIGN SUPERVISOR <i>Jack Schreff</i>	DESIGNER Alvin Kwan	CHECKED BY Jack Wheeler	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 54M5703	GENERAL PLAN GENERAL PLAN & INDEX	SHEET OF GP-1
DESIGN ENGINEER <i>Jack Wheeler</i>	DRAWN BY S.W.Yeh	STRUCTURAL REVIEW Jack Wheeler			POST MILE		
DOES SD Imperial Rev.1/07			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT PROJECT NUMBER & PHASE 3615 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES	12-16-10 3-07-11	X X

gp_1_Barstow.dgn

INDEX TO SHEETS

GP-2 GENERAL PLAN & INDEX

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- ST-1 LEGEND
- STI-0 EMULSION TANK DETAILS
- STI-1 EMULSION TANK PLANS
- STI-2 EMULSION TANK ELEVATIONS
- STI-3 EMULSION TANK ELEVATIONS
- STI-4 EMULSION TANK SECTIONS
- STI-5 HEATER WELL SECTIONS AND DETAILS
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- STI-8 EMULSION TANK DETAILS NO.3
- STI-9 EMULSION TANK DETAILS NO.4
- STI-10 EMULSION TANK DETAILS NO.5
- STI-11 EMULSION TANK DETAILS NO.6
- STI-12 EMULSION TANK DETAILS NO.7

MECHANICAL

- M-0 LEGEND
- M-2 SITE PLAN
- M-6 EMULSION TANK DETAILS
- M-7 LIMIT SWITCH MOUNTING DETAILS
- M-8 SCHEMATIC DIAGRAM

ELECTRICAL

- E-3 ELECTRICAL WORK (CAJON MAINTENANCE YARD)
- E-4 ELECTRICAL WORK (CAJON MAINTENANCE YARD)

PROJECT DATA

CAJON MAINTENANCE STATION
14747 STATE HWY 138, W. CAJON VALLEY, CA 92371

APPLICABLE CODES INCLUDE:

- 2010 CALIFORNIA BUILDING CODE (CBC)
TITLE 24, PART 2 CCR
- 2010 CALIFORNIA ELECTRICAL CODE (CEC)
TITLE 24, PART 3 CCR
- 2010 CALIFORNIA MECHANICAL CODE (CMC)
TITLE 24, PART 4 CCR
- 2010 CALIFORNIA PLUMBING CODE (CPC)
TITLE 24, PART 5 CCR
- 2010 CALIFORNIA FIRE CODE (CFC)
TITLE 24, PART 9 CCR

AS DEFINED IN THE 2010 CALIFORNIA BUILDING CODE THE CONSTRUCTION TYPE, OCCUPANCY GROUP, AND THE ALLOWABLE FLOOR AREA FOR THE BUILDING IN THIS PROJECT ARE:

EMULSION TANK

CONSTRUCTION TYPE	V-B
OCCUPANCY GROUP	U
NUMBER OF STORIES	N/A
BUILDING HEIGHT	20'-4"
SEPARATION FROM PROPERTY LINE	NOT REQUIRED - MORE THAN 10', ALL SIDES
ROOF COVERING	N/A
SPRINKLERS	NOT REQUIRED
FIRE ALARM	NOT REQUIRED
SMOKE CONTROL	NOT REQUIRED
HIGH FIRE HAZARD SEVERITY ZONE	NO

BASIC ALLOWABLE FLOOR AREA:
TYPE V-B, GROUP U

ALLOWABLE AREA	5,500 SF
DESIGN FLOOR AREAS	144 SF

EXISTING BUILDING

MAINTENANCE BUILDING:	
CONSTRUCTION TYPE	V-B
OCCUPANCY GROUP	S1, B

ASPHALT EMULSION

COMPOSITION:

ASPHALT	38 - 72%
LIGHT DISTILLATE	0 - 12%
WATER & EMULSIFIER	18 - 37%

HAZARDS IDENTIFICATION:

NFPA RATING -- HEALTH:	1
FLAMMABILITY:	1
REACTIVITY:	0
SPECIAL HAZARD:	CORROSIVE

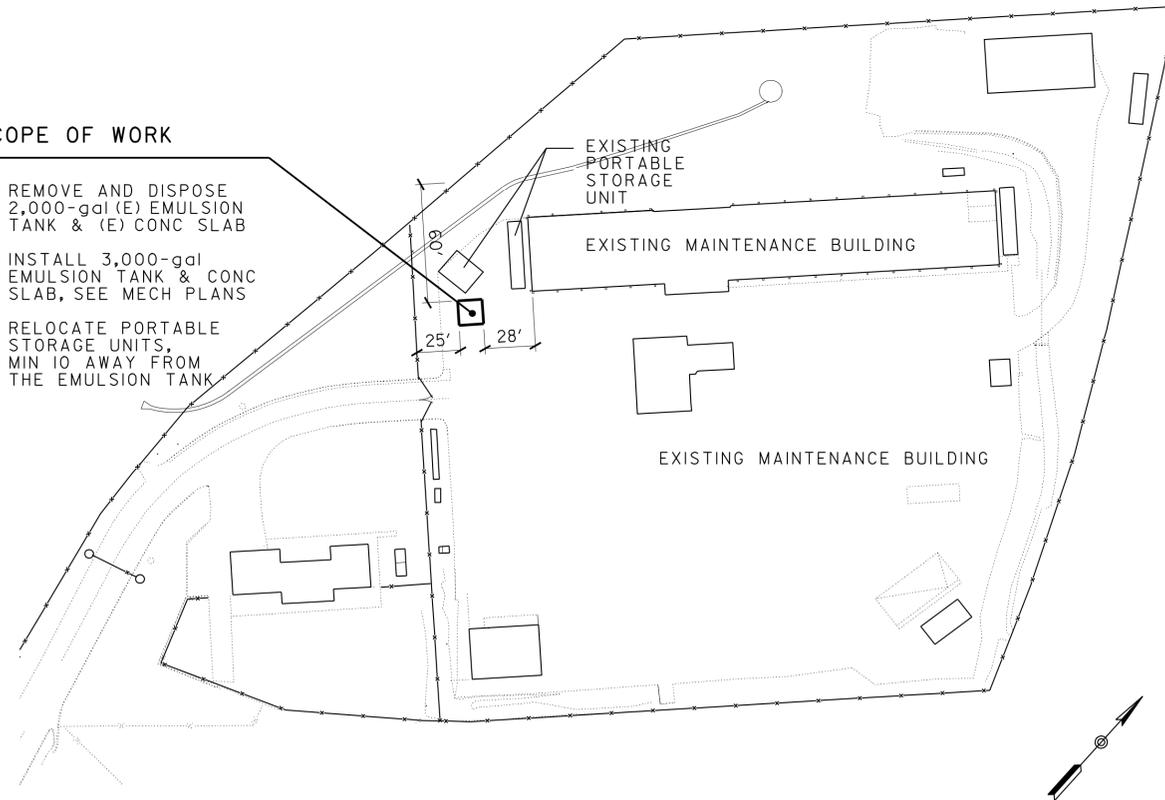
FIRE FIGHTING MEASURES

NFPA FLAMMABILITY CLASSIFICATION:

NFPA CLASS -	IIIB COMBUSTIBLE
FLASH POINT -	450°F MINIMUM
AUTO IGNITION TEMPERATURE -	>700°F
EXTINGUISHING MEDIA -	FOAM, CO2, DRY CHEMICAL, WATER FOG, OTHER

SCOPE OF WORK

1. REMOVE AND DISPOSE 2,000-gal (E) EMULSION TANK & (E) CONC SLAB
2. INSTALL 3,000-gal EMULSION TANK & CONC SLAB, SEE MECH PLANS
3. RELOCATE PORTABLE STORAGE UNITS, MIN 10 AWAY FROM THE EMULSION TANK



GENERAL PLAN

NO SCALE

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38,40,95,etc	Var	18	54

REGISTERED MECHANICAL ENGINEER *Jack Wheeler* 3-07-11 DATE
 No. 21648
 Exp. 06-30-11
 MECH
 STATE OF CALIFORNIA

4-9-12
PLANS APPROVAL DATE

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CALIFORNIA STATE FIRE MARSHAL APPROVED

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by: *Jeffery Schwartz*
JEFFERY SCHWARTZ
Approval date: 02-22-11
CSFM File #: 01-36-11-0036

DESIGN SUPERVISOR <i>Jack Schreff</i>	DESIGNER Alvin Kwan	CHECKED BY Jack Wheeler	STRUCTURAL REVIEW Jack Wheeler	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 54M5707 POST MILE	CAJON MAINTENANCE STATION EMULSION TANK GENERAL PLAN & INDEX	SHEET GP-2
DESIGN ENGINEER <i>Jack Wheeler</i>	DRAWN BY S.W.Yeh						REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF X X

DOES SD Imperial Rev. 1/07 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 UNIT PROJECT NUMBER & PHASE 3615 08000200591 DISREGARD PRINTS BEARING EARLIER REVISION DATES 12-16-10 3-07-11

gp_2_Cajon.dgn

INDEX TO SHEETS

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- STI-0 EMULSION TANK DETAILS
- STI-1 EMULSION TANK PLANS
- STI-2 EMULSION TANK ELEVATIONS
- STI-3 EMULSION TANK ELEVATIONS
- STI-4 EMULSION TANK SECTIONS
- STI-5 HEATER WELL SECTIONS AND DETAILS
- STI-6 EMULSION TANK DETAILS NO.1
- STI-7 EMULSION TANK DETAILS NO.2
- STI-8 EMULSION TANK DETAILS NO.3
- STI-9 EMULSION TANK DETAILS NO.4
- STI-10 EMULSION TANK DETAILS NO.5
- STI-11 EMULSION TANK DETAILS NO.6
- STI-12 EMULSION TANK DETAILS NO.7

MECHANICAL

- M-0 LEGEND
- M-3 SITE PLAN
- M-6 EMULSION TANK DETAILS
- M-7 LIMIT SWITCH MOUNTING DETAILS
- M-8 SCHEMATIC DIAGRAM

ELECTRICAL

- E-5 ELECTRICAL WORK (ESSEX MAINTENANCE YARD)
- E-6 ELECTRICAL WORK (ESSEX MAINTENANCE YARD)

PROJECT DATA

ESSEX MAINTENANCE STATION
11165 NATIONAL TRAILS HWY, ESSEX, CA 92332

APPLICABLE CODES INCLUDE:

- 2010 CALIFORNIA BUILDING CODE (CBC)
TITLE 24, PART 2 CCR
- 2010 CALIFORNIA ELECTRICAL CODE (CEC)
TITLE 24, PART 3 CCR
- 2010 CALIFORNIA MECHANICAL CODE (CMC)
TITLE 24, PART 4 CCR
- 2010 CALIFORNIA PLUMBING CODE (CPC)
TITLE 24, PART 5 CCR
- 2010 CALIFORNIA FIRE CODE (CFC)
TITLE 24, PART 9 CCR

AS DEFINED IN THE 2010 CALIFORNIA BUILDING CODE
THE CONSTRUCTION TYPE, OCCUPANCY GROUP, AND
THE ALLOWABLE FLOOR AREA FOR THE BUILDING IN
THIS PROJECT ARE:

EMULSION TANK

CONSTRUCTION TYPE	V-B
OCCUPANCY GROUP	U
NUMBER OF STORIES	N/A
BUILDING HEIGHT	20'-4"
SEPARATION FROM PROPERTY LINE	NOT REQUIRED - MORE THAN 10', ALL SIDES
ROOF COVERING	N/A
SPRINKLERS	NOT REQUIRED
FIRE ALARM	NOT REQUIRED
SMOKE CONTROL	NOT REQUIRED
HIGH FIRE HAZARD SEVERITY ZONE	NO
BASIC ALLOWABLE FLOOR AREA:	
TYPE V-B, GROUP U	
ALLOWABLE AREA	5,500 SF
DESIGN FLOOR AREAS	144 SF

EXISTING BUILDING

MATERIAL BINS:	
CONSTRUCTION TYPE	V-B
OCCUPANCY GROUP	S2

ASPHALT EMULSION

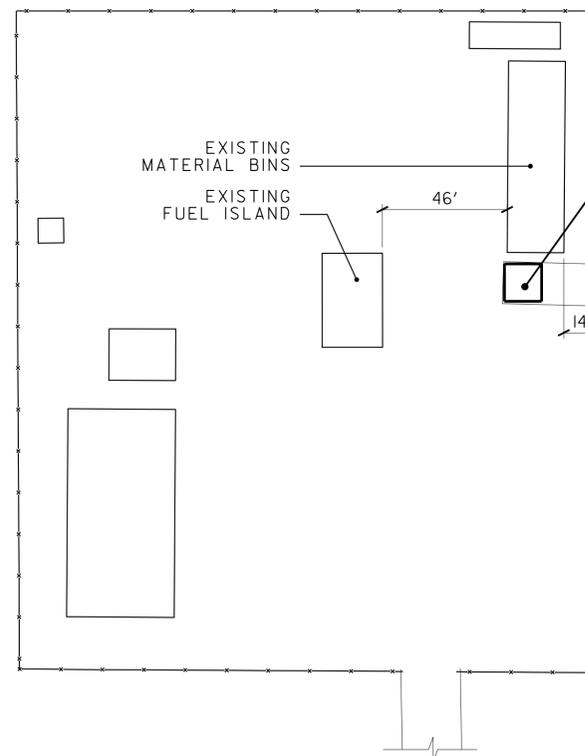
COMPOSITION:	
ASPHALT	38 - 72%
LIGHT DISTILLATE	0 - 12%
WATER & EMULSIFIER	18 - 37%

HAZARDS IDENTIFICATION:

NFPA RATING -- HEALTH:	1
FLAMMABILITY:	1
REACTIVITY:	0
SPECIAL HAZARD:	CORROSIVE

FIRE FIGHTING MEASURES

NFPA FLAMMABILITY CLASSIFICATION:	
NFPA CLASS -	IIIB COMBUSTIBLE
FLASH POINT -	450°F MINIMUM
AUTO IGNITION TEMPERATURE -	>700°F
EXTINGUISHING MEDIA -	FOAM, CO2, DRY CHEMICAL, WATER FOG, OTHER



SCOPE OF WORK

1. REMOVE AND DISPOSE (E) EMULSION TANK & (E) CONC SLAB
2. INSTALL EMULSION TANK & CONC SLAB, SEE MECH PLANS

GENERAL PLAN

NO SCALE

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	15, 18, 38, 40, 95, etc	Var	19	54

REGISTERED MECHANICAL ENGINEER DATE 3-07-11

4-9-12 PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



CALIFORNIA STATE FIRE MARSHAL APPROVED

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by: *Jeffery Schwartz*
JEFFERY SCHWARTZ
Approval date: 02-22-11
CSFM File #: 01-36-11-0033

DESIGN SUPERVISOR <i>Jack Schreff</i>	DESIGNER Alvin Kwan	CHECKED BY Jack Wheeler	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 54M5713	ESSEX MAINTENANCE STATION EMULSION TANK GENERAL PLAN & INDEX	SHEET GP-3
DESIGN ENGINEER <i>Jack Wheeler</i>	DRAWN BY S.W. Yeh	STRUCTURAL REVIEW Jack Wheeler		POST MILE	GENERAL PLAN		REVISION DATES (PRELIMINARY STAGE ONLY)
DOES SD Imperial Rev. 1/07			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT PROJECT NUMBER & PHASE 3615 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES	12-16-10 3-07-11	05-APR-2012 17:38 gp_3_Essex.dgn

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- STI-0 EMULSION TANK DETAILS
- STI-1 EMULSION TANK PLANS
- STI-2 EMULSION TANK ELEVATIONS
- STI-3 EMULSION TANK ELEVATIONS
- STI-4 EMULSION TANK SECTIONS
- STI-5 HEATER WELL SECTIONS AND DETAILS
- STI-6 EMULSION TANK DETAILS NO.1
- STI-7 EMULSION TANK DETAILS NO.2
- STI-8 EMULSION TANK DETAILS NO.3
- STI-9 EMULSION TANK DETAILS NO.4
- STI-10 EMULSION TANK DETAILS NO.5
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MECHANICAL

- M-0 LEGEND
- M-4 SITE PLAN
- M-6 EMULSION TANK DETAILS
- M-7 LIMIT SWITCH MOUNTING DETAILS
- M-8 SCHEMATIC DIAGRAM

ELECTRICAL

- E-7 ELECTRICAL WORK (FAWNSKIN MAINTENANCE YARD)
- E-8 ELECTRICAL WORK (FAWNSKIN MAINTENANCE YARD)

PROJECT DATA

APPLICABLE CODES INCLUDE:

2010 CALIFORNIA BUILDING CODE (CBC)
TITLE 24, PART 2 CCR

2010 CALIFORNIA ELECTRICAL CODE (CEC)
TITLE 24, PART 3 CCR

2010 CALIFORNIA MECHANICAL CODE (CMC)
TITLE 24, PART 4 CCR

2010 CALIFORNIA PLUMBING CODE (CPC)
TITLE 24, PART 5 CCR

2010 CALIFORNIA FIRE CODE (CFC)
TITLE 24, PART 9 CCR

AS DEFINED IN THE 2010 CALIFORNIA BUILDING CODE
THE CONSTRUCTION TYPE, OCCUPANCY GROUP, AND
THE ALLOWABLE FLOOR AREA FOR THE BUILDING IN
THIS PROJECT ARE:

EMULSION TANK

CONSTRUCTION TYPE	V-B
OCCUPANCY GROUP	U
NUMBER OF STORIES	N/A
BUILDING HEIGHT	20'-4"
SEPARATION FROM PROPERTY LINE	NOT REQUIRED - MORE THAN 10', ALL SIDES

ROOF COVERING	N/A
SPRINKLERS	NOT REQUIRED
FIRE ALARM	NOT REQUIRED
SMOKE CONTROL	NOT REQUIRED
HIGH FIRE HAZARD SEVERITY ZONE	NO

BASIC ALLOWABLE FLOOR AREA:
TYPE V-B, GROUP U

ALLOWABLE AREA	5,500 SF
DESIGN FLOOR AREAS	144 SF

EXISTING BUILDINGS

FUEL ISLAND:	
CONSTRUCTION TYPE	V-B
OCCUPANCY GROUP	U

FAWNSKIN MAINTENANCE STATION
42060 NORTH SHORE Dr, FAWNSKIN, CA 92333

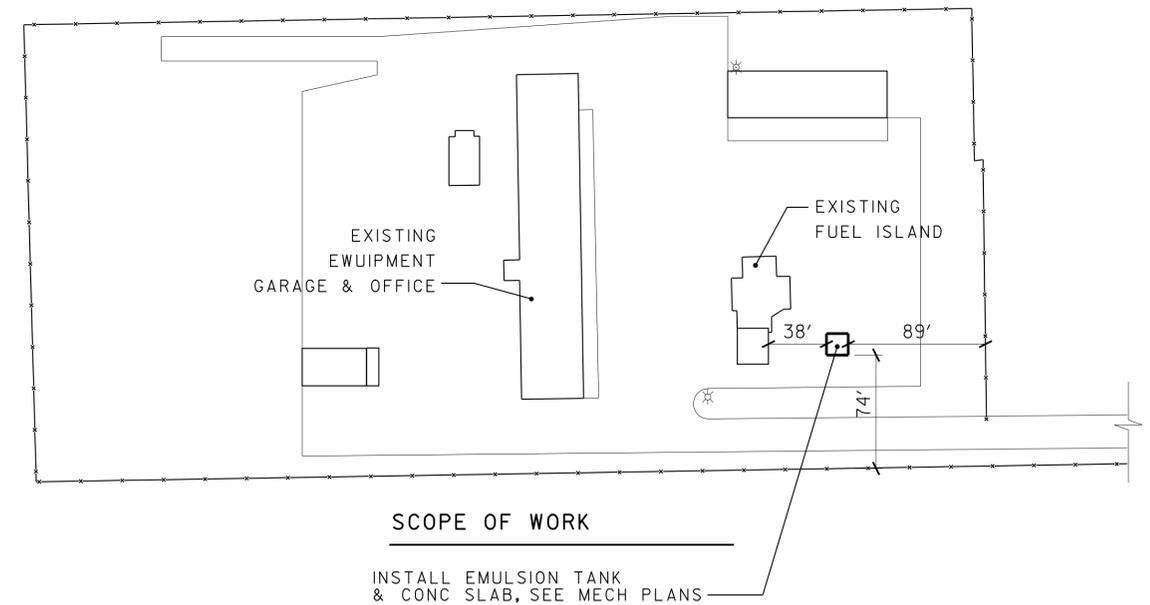
ASPHALT EMULSION

COMPOSITION:

ASPHALT	38 - 72%
LIGHT DISTILLATE	0 - 12%
WATER & EMULSIFIER	18 - 37%

HAZARDS IDENTIFICATION:
NFPA RATING -- HEALTH: 1
FLAMMABILITY: 1
REACTIVITY: 0
SPECIAL HAZARD: CORROSIVE

FIRE FIGHTING MEASURES
NFPA FLAMMABILITY CLASSIFICATION:
NFPA CLASS - IIIB COMBUSTIBLE
FLASH POINT - 450°F MINIMUM
AUTO IGNITION TEMPERATURE - >700°F
EXTINGUISHING MEDIA - FOAM, CO2,
DRY CHEMICAL,
WATER FOG, OTHER



GENERAL PLAN

NO SCALE

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	15,18,38,40,95,etc	Var	20	54

REGISTERED MECHANICAL ENGINEER DATE 3-07-11

4-9-12 PLANS APPROVAL DATE

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CALIFORNIA STATE FIRE MARSHAL APPROVED

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by: *Jeffery Schwartz*
JEFFERY SCHWARTZ
Approval date: 02-25-11
CSFM File #: 01-36-11-0043

DESIGN SUPERVISOR <i>Jack Schreff</i>	DESIGNER Alvin Kwan	CHECKED BY Jack Wheeler	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 54M5714	FAWNSKIN MAINTENANCE STATION EMULSION TANK		SHEET
DESIGN ENGINEER <i>Jack Wheeler</i>	DRAWN BY S.W.Yeh	STRUCTURAL REVIEW Jack Wheeler		GENERAL PLAN	POST MILE X	GENERAL PLAN & INDEX		GP-4
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			0 1 2 3	UNIT PROJECT NUMBER & PHASE 3615 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF X X

DOES SD Imperial Rev.1/07

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INDEX TO SHEETS

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STRUCTURAL

- ST-1 LEGEND
- STI-0 EMULSION TANK DETAILS
- STI-1 EMULSION TANK PLANS
- STI-2 EMULSION TANK ELEVATIONS
- STI-3 EMULSION TANK ELEVATIONS
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- STI-9 EMULSION TANK DETAILS NO.4
- STI-10 EMULSION TANK DETAILS NO.5
- STI-11 EMULSION TANK DETAILS NO.6
- STI-12 EMULSION TANK DETAILS NO.7

MECHANICAL

- M-0 LEGEND
- M-5 SITE PLAN
- M-6 EMULSION TANK DETAILS
- M-7 LIMIT SWITCH MOUNTING DETAILS
- M-8 SCHEMATIC DIAGRAM

ELECTRICAL

- E-9 ELECTRICAL WORK (VICTORVILLE MAINTENANCE YARD)
- E-10 ELECTRICAL WORK (VICTORVILLE MAINTENANCE YARD)

PROJECT DATA

VICTORVILLE MAINTENANCE STATION
13693 MARIPOSA ROAD, VICTORVILLE, CA 92392

APPLICABLE CODES INCLUDE:

- 2010 CALIFORNIA BUILDING CODE (CBC)
TITLE 24, PART 2 CCR
- 2010 CALIFORNIA ELECTRICAL CODE (CEC)
TITLE 24, PART 3 CCR
- 2010 CALIFORNIA MECHANICAL CODE (CMC)
TITLE 24, PART 4 CCR
- 2010 CALIFORNIA PLUMBING CODE (CPC)
TITLE 24, PART 5 CCR
- 2010 CALIFORNIA FIRE CODE (CFC)
TITLE 24, PART 9 CCR

AS DEFINED IN THE 2010 CALIFORNIA BUILDING CODE
THE CONSTRUCTION TYPE, OCCUPANCY GROUP, AND
THE ALLOWABLE FLOOR AREA FOR THE BUILDING IN
THIS PROJECT ARE:

EMULSION TANK

CONSTRUCTION TYPE	V-B
OCCUPANCY GROUP	U
NUMBER OF STORIES	N/A
BUILDING HEIGHT	20'-4"
SEPARATION FROM PROPERTY LINE	NOT REQUIRED - MORE THAN 10', ALL SIDES

ROOF COVERING	N/A
SPRINKLERS	NOT REQUIRED
FIRE ALARM	NOT REQUIRED
SMOKE CONTROL	NOT REQUIRED
HIGH FIRE HAZARD SEVERITY ZONE	NO

BASIC ALLOWABLE FLOOR AREA:
TYPE V-B, GROUP U

ALLOWABLE AREA	5,500 SF
DESIGN FLOOR AREAS	144 SF

EXISTING BUILDINGS

STORAGE CONTAINER:	
CONSTRUCTION TYPE	V-B
OCCUPANCY GROUP	U

OFFICE TRAILER:	
CONSTRUCTION TYPE	V-B
OCCUPANCY GROUP	B

ASPHALT EMULSION

COMPOSITION:

ASPHALT	38 - 72%
LIGHT DISTILLATE	0 - 12%
WATER & EMULSIFIER	18 - 37%

HAZARDS IDENTIFICATION:

NFPA RATING -- HEALTH:	1
FLAMMABILITY:	1
REACTIVITY:	0
SPECIAL HAZARD:	CORROSIVE

FIRE FIGHTING MEASURES

NFPA FLAMMABILITY CLASSIFICATION:

NFPA CLASS -	IIIB COMBUSTIBLE
FLASH POINT -	450°F MINIMUM
AUTO IGNITION TEMPERATURE -	>700°F
EXTINGUISHING MEDIA -	FOAM, CO2, DRY CHEMICAL, WATER FOG, OTHER

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	15,18,38,40,95,etc	Var	21	54

REGISTERED MECHANICAL ENGINEER DATE 3-07-11

4-9-12 PLANS APPROVAL DATE

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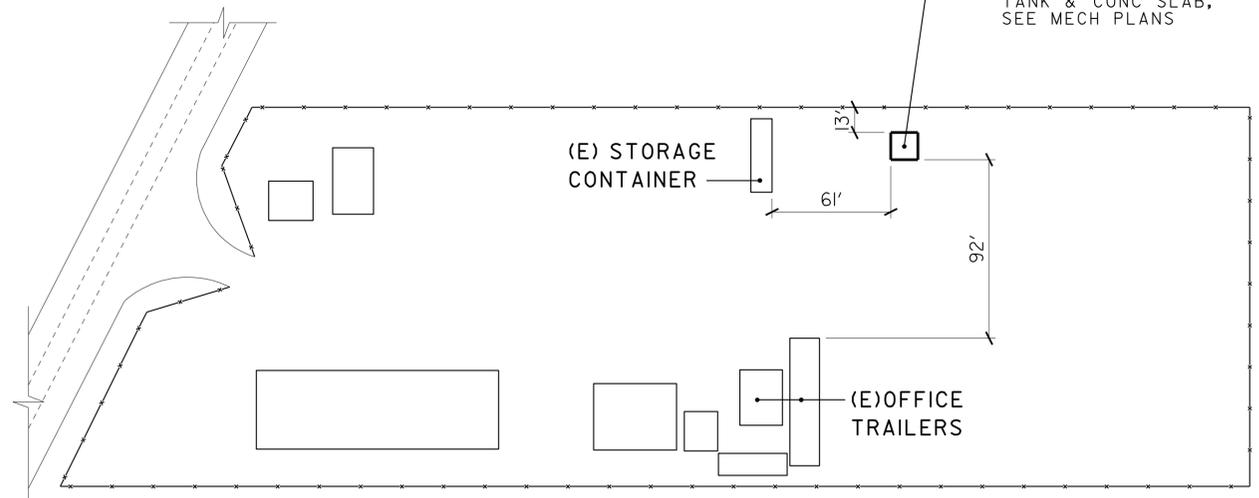
CALIFORNIA STATE FIRE MARSHAL APPROVED

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by: *Jeffery Schwartz*
JEFFERY SCHWARTZ
Approval date: 02-25-11
CSFM File #: 01-36-11-0029

SCOPE OF WORK

1. REMOVE AND DISPOSE (E) EMULSION TANK & (E) CONC SLAB
2. INSTALL 3,000-GAL EMULSION TANK & CONC SLAB, SEE MECH PLANS



GENERAL PLAN

NO SCALE

DESIGN SUPERVISOR <i>Jack Schreff</i>	DESIGNER Alvin Kwan	CHECKED BY Jack Wheeler	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 54M5727	VICTORVILLE MAINTENANCE STATION EMULSION TANK	SHEET
DESIGN ENGINEER <i>Jack Wheeler</i>	DRAWN BY S.W.Yeh	STRUCTURAL REVIEW Jack Wheeler			POST MILE X		GENERAL PLAN
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			0 1 2 3	UNIT PROJECT NUMBER & PHASE 3615 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF
DOES SD Imperial Rev.1/07						12-16-10 3-07-11	X X

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DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	15, 18, 38, 40, 35, etc	Var	22	54

REGISTERED CIVIL ENGINEER		DATE
Edgardo A. Isidro		02-10-11

PLANS APPROVAL DATE	
4-9-12	

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ABBREVIATIONS

AAD	Adhesive Anchorage Device	HD	Holdown
AB	Anchor Bolt	Hex	Hexagon
AC	Asphalt Concrete	Horiz	Horizontal
Alt	Alternate	HSB	High Strength Bolt
APA	American Plywood Association	HSS	Hollow Structural Section
APC	Alternative Pipe Culvert	Jt	Joint
Bldg	Building	LOL	Layout Line
Blkg	Blocking	LVL	Laminated Veneer Lumber
BN	Boundary Nailing	m	Meter
Btm	Bottom	Max	Maximum
CB	Carriage Bolt	MEA	Mechanical Expansion Anchor
CIDH	Cast In Drilled Hole	Mech	Mechanical
CJ	Control Joint	Mfr	Manufacturer
Clr	Clear	mm	Millimeter
CMU	Concrete Masonry Unit	Min	Minimum
Conc	Concrete	MIW	Malleable Iron Washer
Const	Construction	OC	On Center
Cont	Continuous	OG	Original Grade
CP	Complete Penetration Weld	OH	Opposite Hand
Dbl	Double	Opt	Optional
DF	Douglas Fir	P	Pitch
Dia	Diameter	PDF	Powder Driven Fastener
DIP	Ductile Iron Pipe	Plwd	Plywood
DN	Diameter Nominal	PT	Pressure Treated
do	Ditto	PW	Puddle Weld
(E)	Existing	PWB	Prefabricated Wood I Beam
Ea	Each	RCP	Reinforced Concrete Pipe
EL	Elevation	Reinf	Reinforced, Reinforcing
Elec	Electrical	Req'd	Required
Embed	Embedment	SDSTS	Self Drill, Self Tap Screw
EN	Edge Nail	Sim	Similar
Eq	Equal	SPS	Structural Plywood Sheathing
Exp	Expansion	Sq	Square
FDGM	Free Draining Granular Material	Stagg	Staggered
FG	Finish Grade	Std	Standard
FL	Flow Line	SW	Stud Weld
Fir	Floor	Sym	Symmetrical
FN	Face (Field) Nail	T&G	Tongue-and-Groove
FOC	Face of Concrete	TN	Toe Nail
FOM	Face of Masonry	TS	Tube Steel
FOS	Face of Stud	Typ	Typical
Ftg	Footing	UON	Unless Otherwise Noted
Ga	Gage	Vert	Vertical
Galv	Galvanized		
GLM	Glue Laminated Member		
Gyp Bd	Gypsum Board		

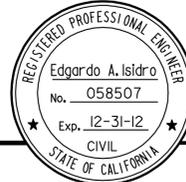
SYMBOLS

	Blocking in Section or Elevation		CMU Wall on Plan Views
	Continuous Member in Section		Dropped Slab on Plan Views
	End of Member		Reinforced Concrete
	Bearing Wall		Sand
	Shear Wall		Structural Backfill
	Length Shearwall Schedule Symbol Reference		Structural Excavation
	Glue Laminated Member Section		Original Ground
	North Arrow		Limits of Structural Backfill (shown on plan view)
	Partial Section Cut		Free Draining Granular Material
	Full Section Cut		Bottom of Footing
	Revision Callout		Elevation or Working Point
	Grid Line Indicator		Existing Features
	Center Line		Holdown, Typ (Manufacturers are those noted in the order shown.)
	Station Line		Frame Connector (Manufacturers are those noted in the order shown.)
	Steel Plate		Detail Number or Note Number Additional Reference (if required) Sheet Number
	Diameter		
	Square		

NOTE: SPECIFIC DETAILS OR NOTES ON OTHER SHEETS SHALL PREVAIL OVER STANDARD DETAILS AND NOTES ON THIS SHEET

FILE NO. XS-25-0		DESIGN BY <i>Sean Samal</i>		CHECKED <i>George E. Rowe</i>		APPROVED <i>R.E. Travis</i>		BRIDGE NO.		VARIOUS DISTRICT 8 MAINTENANCE STATIONS EMULSION TANK				SHEET ST-1	
DRAWING DATE 1-04		SUBMITTED BY <i>Sean Samal</i>		DESIGN ENGINEER		DESIGN SUPERVISOR		POST MILE		LEGEND				OF	
TAEMWW Imperlal Rev. 7/10		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		UNIT PROJECT NUMBER & PHASE 3581 08000200591		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)				1-16-04	

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DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	15, 18, 38, 40, 95, etc	Var	23	54
			02-10-11		
REGISTERED CIVIL ENGINEER			DATE		
					
4-9-12					
PLANS APPROVAL DATE					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

A GENERAL DESIGN NOTES

1. CRITERIA

BUILDING CODE:
 2010 California Building Code as Adopted by the California Building Standards Commission

OCCUPANCY CATEGORY: I

2. MATERIALS

REINFORCED CONCRETE: (Strength Design)
 $f'c = 3,000 \text{ psi}$
 $f_y = 60,000 \text{ psi}$

STRUCTURAL STEEL: (Allowable Strength Design)
 Channels, Angles, Plates & Misc. Shapes $F_y = 36 \text{ ksi}$
 Hollow Structural Sections (HSS) $F_y = 46 \text{ ksi}$
 Weld Electrodes $F_y = 70 \text{ ksi}$

3. FOUNDATION

Soils report dated : December 13, 2010
 Allowable Soil Pressure: 2,000 psf

Note:
 Notify Geotechnical Engineer to observe the exposed foundation excavation bottom prior to any additional work.

C GENERAL NOTES

- All bolts shall be hex head machine bolts, with hex head nuts; unless otherwise noted.
- All lock washers shall be helical spring lock washers.
- The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

B DESIGN LOADS

1. LIVE

Roof = 20 psf

2. SEISMIC

Importance Factor = 1.0
 Site Class = D
 Spectral Response Accelerations:
 $S_s = 2.00$ $S_l = 0.960$
 Spectral Response Coefficients:
 $S_{DS} = 1.33$ $S_{Dl} = 0.960$
 Design Category = E
 Analysis Procedure: Equivalent Lateral Force

Seismic Force-Resisting System:
North - South East - West

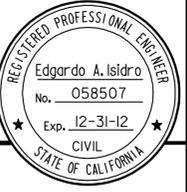
$R = 3.00$ $R = 3.00$
 $C_s = 0.44$ $C_s = 0.44$

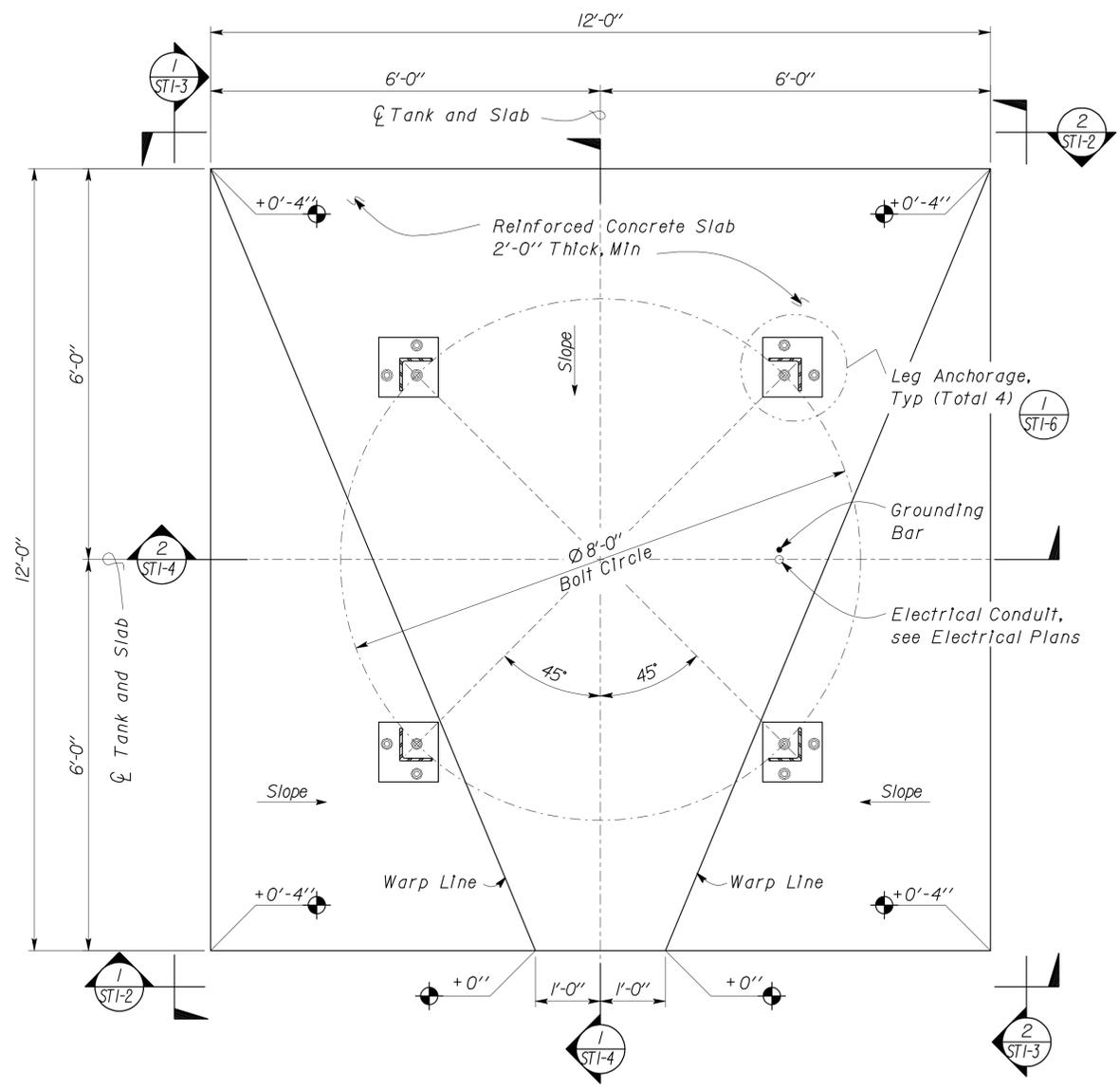
3. WIND

Importance Factor = 1.0
 Basic Wind Speed = 85 mph (3 sec gust)
 Exposure C

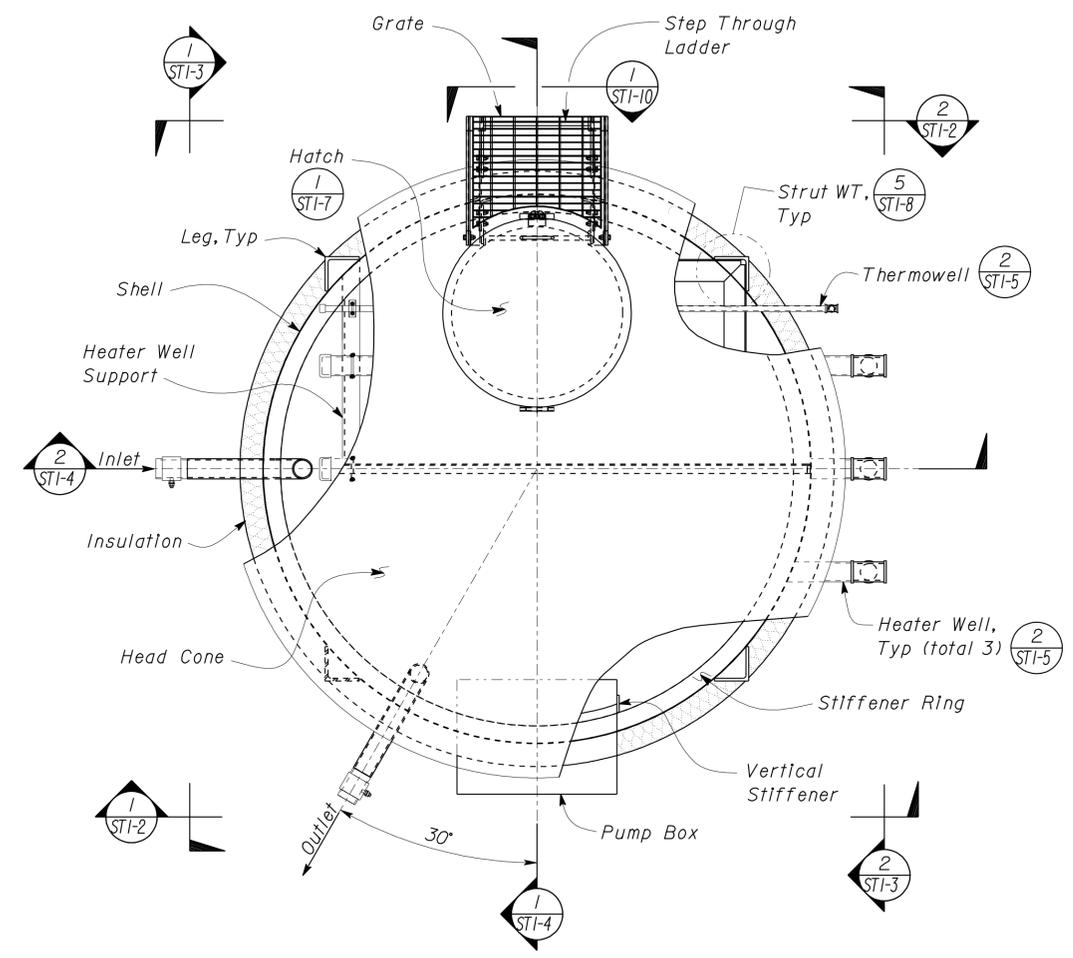
DESIGN	BY	Edgardo Isidro	CHECKED	Tahir Rashid	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ARCHITECTURAL AND STRUCTURAL DESIGN	BRIDGE NO.	VARIOUS DISTRICT 8 MAINTENANCE STATIONS EMULSION TANK	SHEET	ST1-0				
	DETAILS	BY	Aleksey Serin	CHECKED			Edgardo Isidro		POST MILE		3000 GALLON TANK	EMULSION TANK DETAILS		
	QUANTITIES	BY		CHECKED										
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					0	1	2	3	UNIT PROJECT NUMBER & PHASE	3581 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET	OF
EA 000000					D:\User\projects\dist_08\080800020059_3000gll_Emulsoin_Tank\Expd\ite\st1_00.dgn					11-10-10 12-15-10 02-08-11				

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DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15, 18, 38, 40, 95, etc	Var	24	54
 REGISTERED CIVIL ENGINEER			02-10-11 DATE		
4-9-12 PLANS APPROVAL DATE					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



1 FOUNDATION PLAN
Scale 3/4" = 1' - 0"

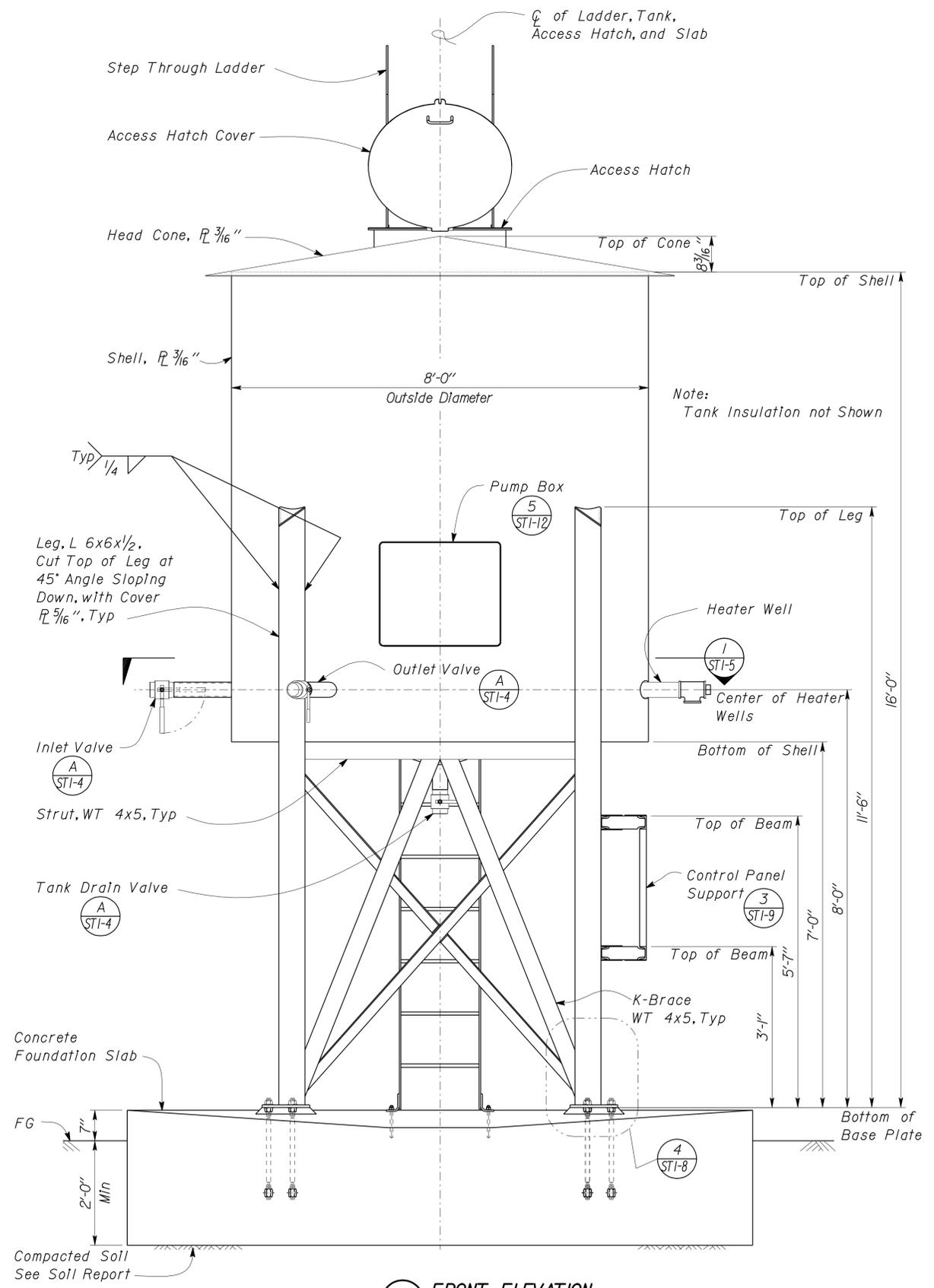


2 EMULSION TANK PLAN
Scale 3/4" = 1' - 0"

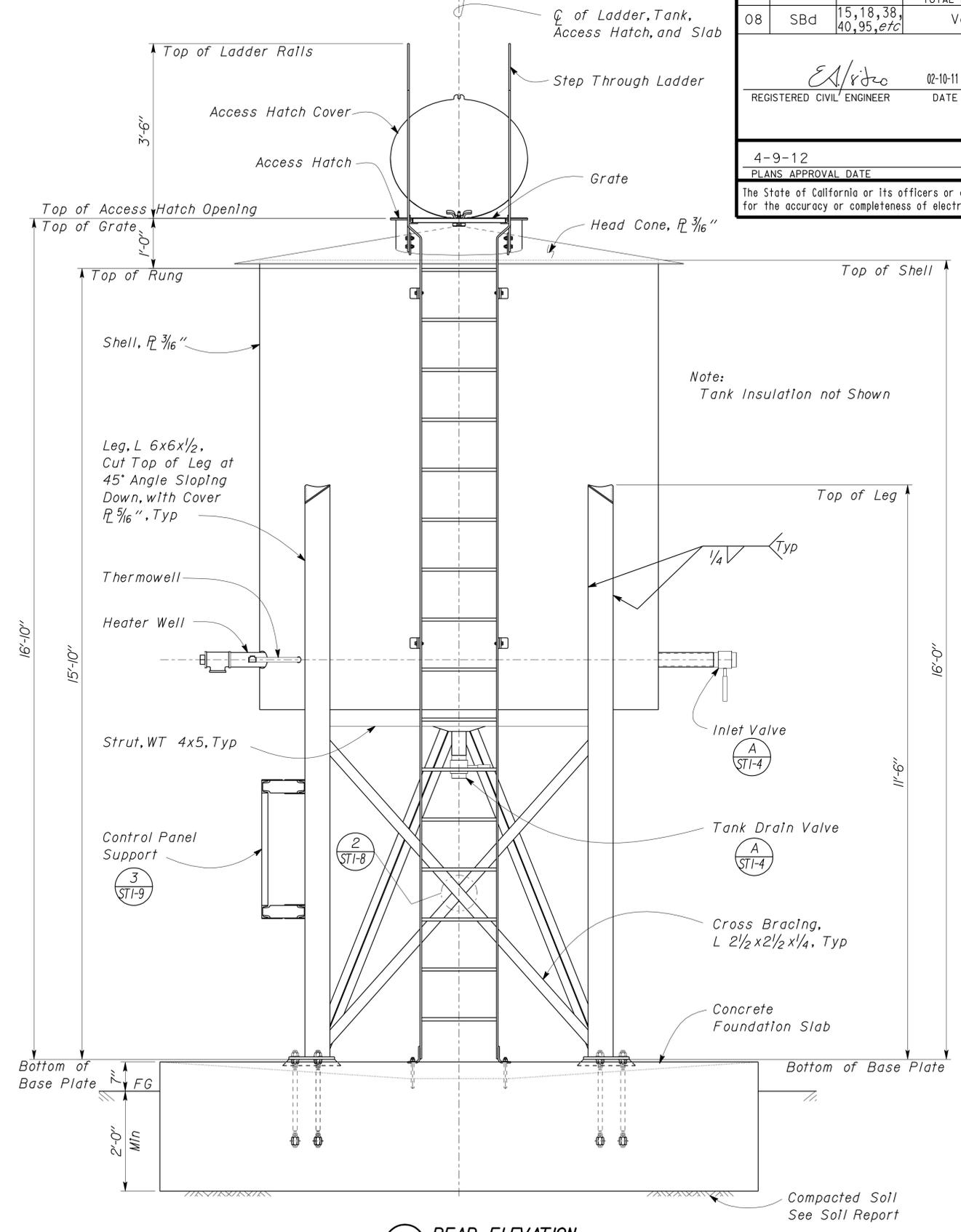
TAEMWW Imperial Rev. 7/10  DESIGN ENGINEER	DESIGN BY Edgardo Isidro CHECKED Tahir Rashid	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ARCHITECTURAL AND STRUCTURAL DESIGN	BRIDGE NO. POST MILE	VARIOUS DISTRICT 8 MAINTENANCE STATIONS EMULSION TANK EMULSION TANK PLANS	SHEET NO. 24 OF 54 SHEET ST1-1
	DETAILS BY Aleksey Serin CHECKED Edgardo Isidro		QUANTITIES BY CHECKED	PROJECT NUMBER & PHASE 08000200591 UNIT 3581		

05-APR-2012 17:39

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	15,18,38,40,95,etc	Var	25	54
			02-10-11		
REGISTERED CIVIL ENGINEER			DATE		
4-9-12					
PLANS APPROVAL DATE					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



1 FRONT ELEVATION
Scale $\frac{3}{4}'' = 1' - 0''$



2 REAR ELEVATION
Scale $\frac{3}{4}'' = 1' - 0''$

DESIGN	By Edgardo Isidro	CHECKED Tahir Rashid
DETAILS	By Aleksey Serin	CHECKED Edgardo Isidro
QUANTITIES	By	CHECKED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
ARCHITECTURAL AND STRUCTURAL DESIGN

BRIDGE NO.	VARIOUS DISTRICT 8 MAINTENANCE STATIONS EMULSION TANK		SHEET OF
POST MILE	3000 GALLON TANK	EMULSION TANK ELEVATIONS	ST1-2

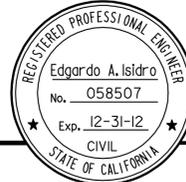
TAEMWW Imperial Rev. 7/10

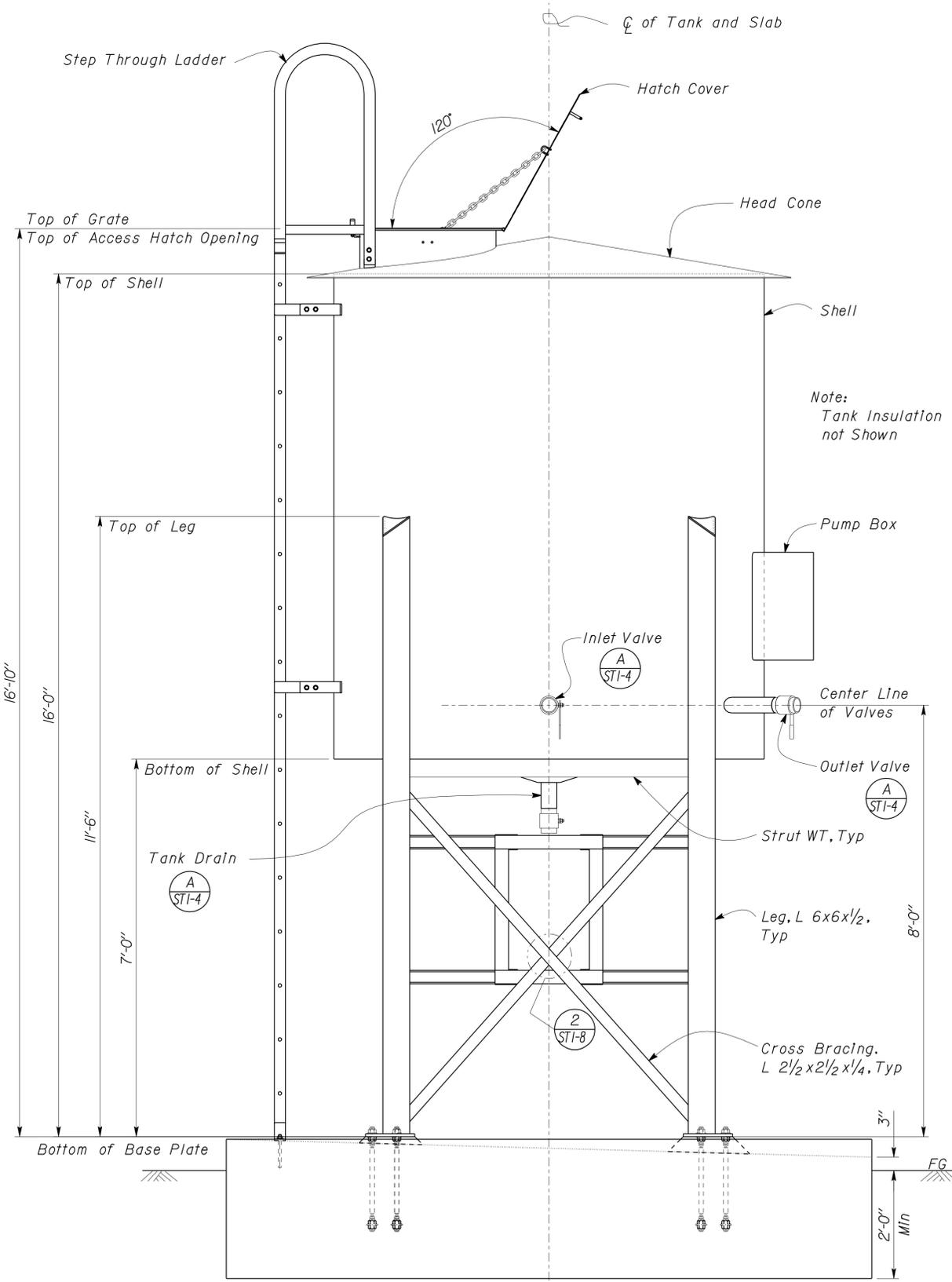
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT PROJECT NUMBER & PHASE 3581 08000200591

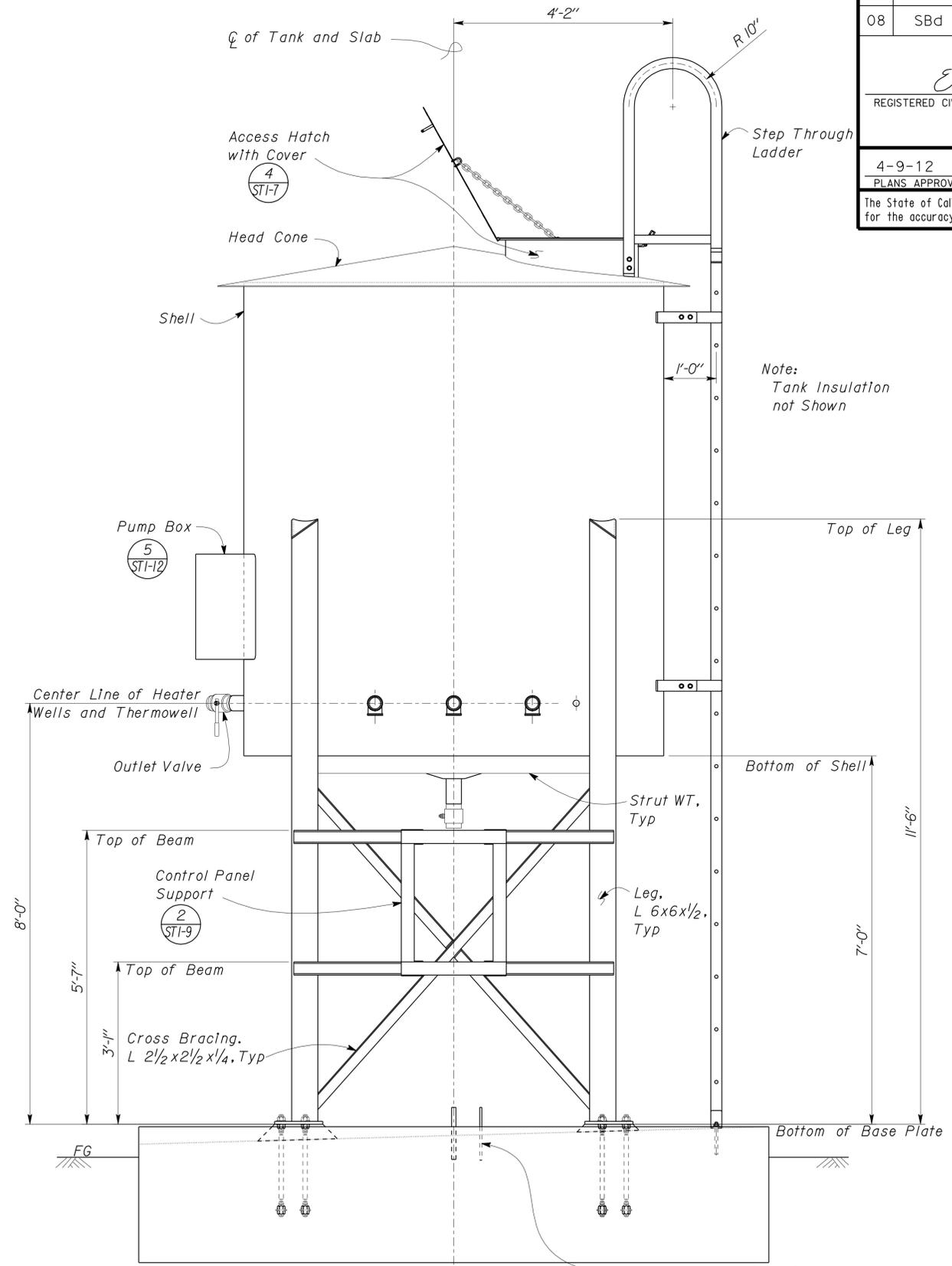
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF
11-05-10, 11-30-10, 12-15-10, 01-06-11, 03-03-11	11 OF 11

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	15, 18, 38, 40, 95, etc	Var	26	54
			02-10-11 DATE		
4-9-12 PLANS APPROVAL DATE					
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1 LEFT SIDE ELEVATION
Scale $\frac{3}{4}'' = 1' - 0''$



2 RIGHT SIDE ELEVATION
Scale $\frac{3}{4}'' = 1' - 0''$

Ground Bar, #4 \square x20'-0", see Electrical Plans for Location May be Used as Part of Footing Reinforcing. Exposed Portion, 6" above Slab, shall be Covered with Heat Shrinkable Tubing with 2" Min Embedment into Concrete.

DESIGN	BY Edgardo Isidro	CHECKED Tahir Rashid
DETAILS	BY Aleksey Serin	CHECKED Edgardo Isidro
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
ARCHITECTURAL AND STRUCTURAL DESIGN

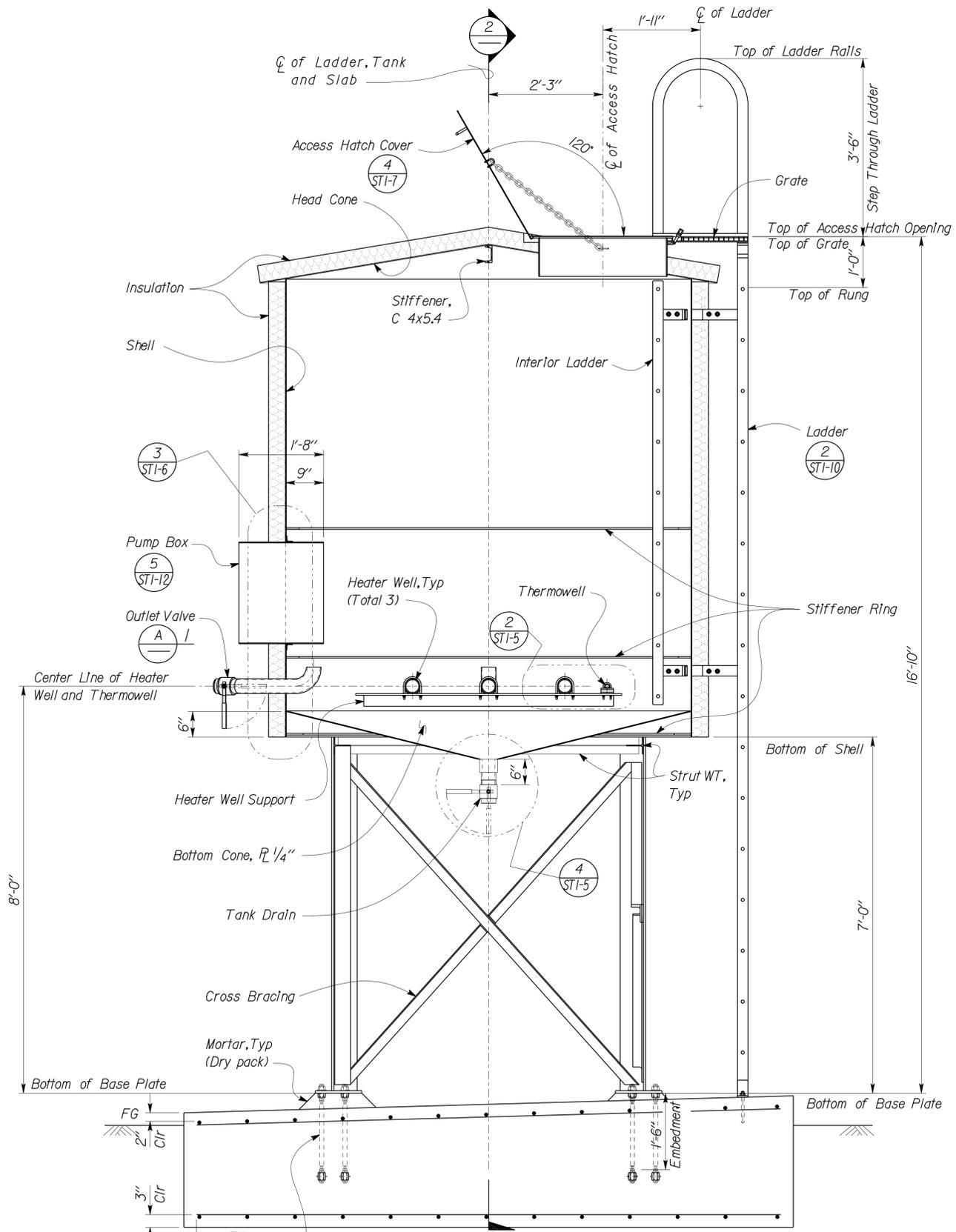
BRIDGE NO.	VARIOUS DISTRICT 8 MAINTENANCE STATIONS EMULSION TANK		SHEET ST1-3
POST MILE	3000 GALLON TANK	EMULSION TANK ELEVATIONS	

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38, 40,95, etc	Var	27	54

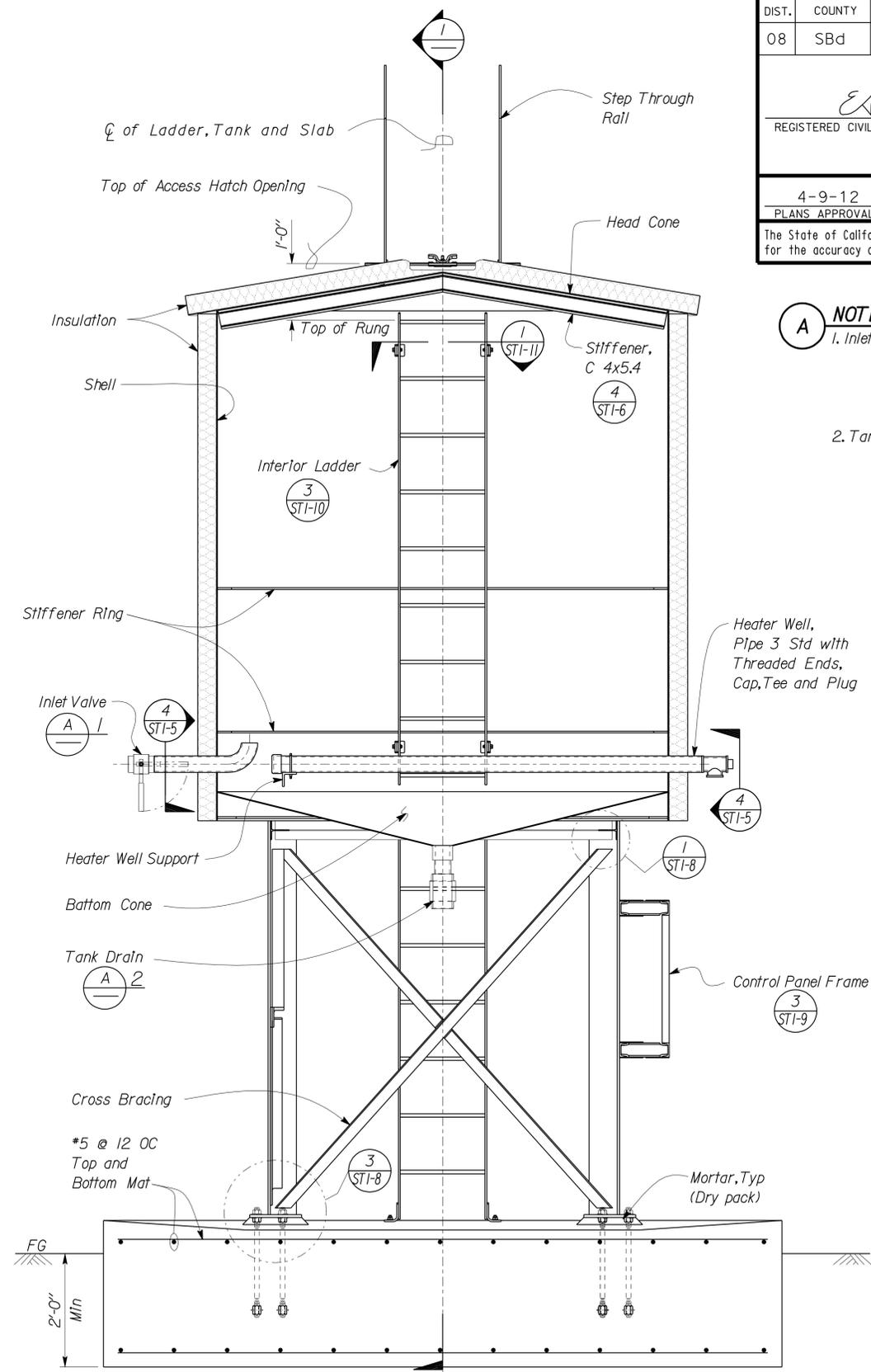
REGISTERED CIVIL ENGINEER	DATE
Edgardo A. Isidro	02-10-11
No. 058507	
Exp. 12-31-12	
CIVIL	
STATE OF CALIFORNIA	

4-9-12
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



1 MAIN SECTION
Scale 3/4" = 1'-0"



2 CROSS SECTION
Scale 3/4" = 1'-0"

- NOTES:**
- Inlet and Outlet:**
3" Half coupling, nipple and long radius welded elbow, and 3" ball valve with stem turned sideways.
 - Tank Drain:**
3" ball valve, with half coupling and pipe 3 x-strong nipple.

Anchor Bolt, 1" ϕ with Double Nuts and 2"x2"x3/16" Square Plate Washer at Bottom, Galvanized, Typ

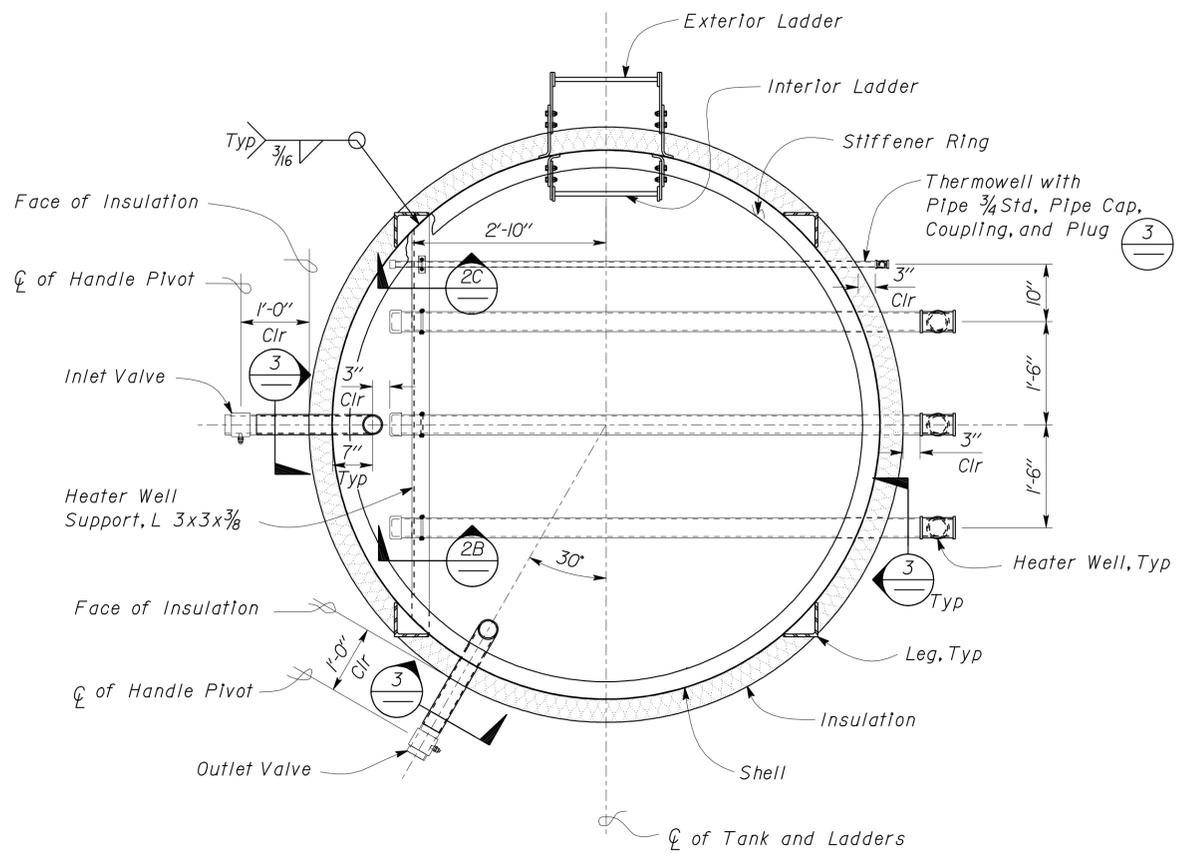
DESIGN	BY Edgardo Isidro	CHECKED Tahir Rashid
DETAILS	BY Aleksey Serin	CHECKED Edgardo Isidro
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

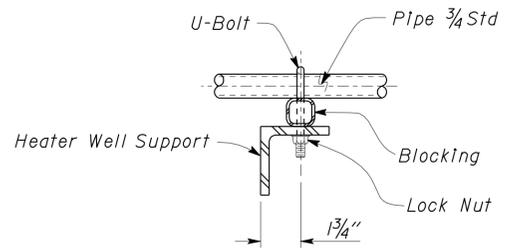
DIVISION OF ENGINEERING SERVICES
ARCHITECTURAL AND STRUCTURAL DESIGN

BRIDGE NO.	VARIOUS DISTRICT 8 MAINTENANCE STATIONS EMULSION TANK	SHEET OF
POST MILE	3000 GALLON TANK	ST1-4
EMULSION TANK SECTIONS		

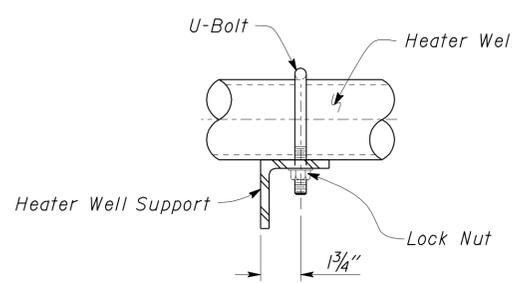
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38,40,95,etc	Var	28	54
			02-10-11	DATE	
REGISTERED CIVIL ENGINEER PLANS APPROVAL DATE 4-9-12 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



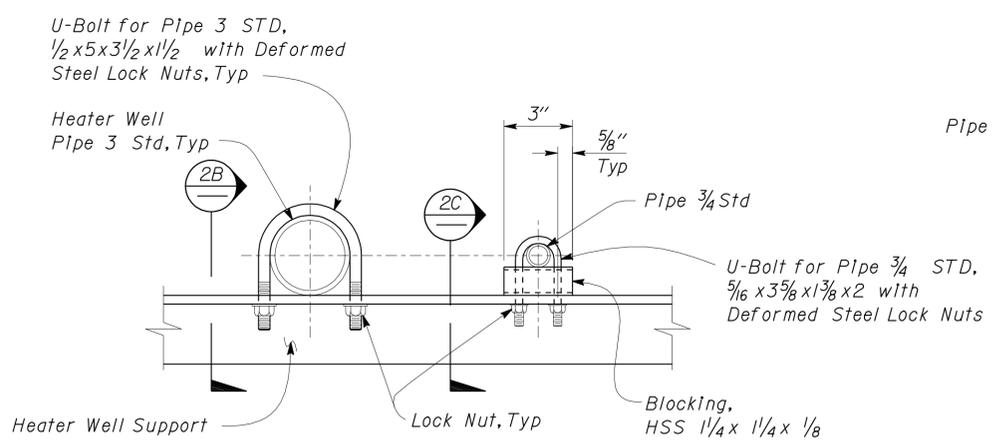
1 HEATER WELL LAYOUT
Scale 3/4" = 1' - 0"



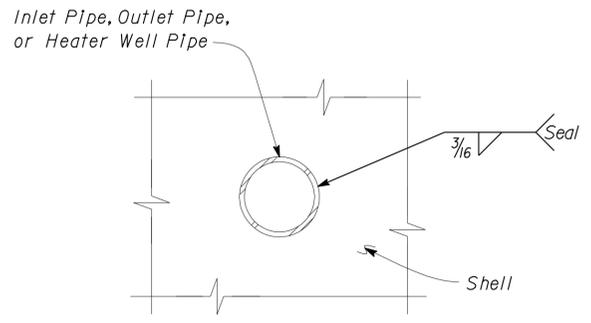
C U-BOLT AND BLOCKING DETAIL



B U-BOLT DETAIL

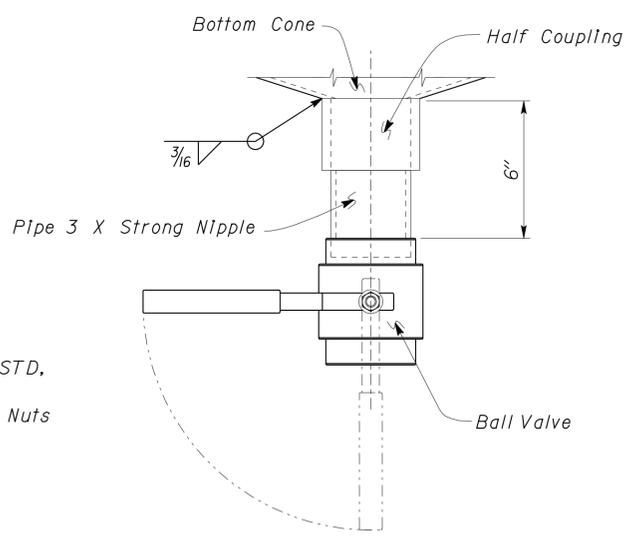


2 HEATER WELL SUPPORT DETAILS
Scale 3" = 1' - 0"



Note: Thermowell Pipe Similar.

3 PIPE PENETRATION WELDING DETAIL
Scale 3" = 1' - 0"



4 TANK DRAIN WELDING DETAIL
Scale 3" = 1' - 0"

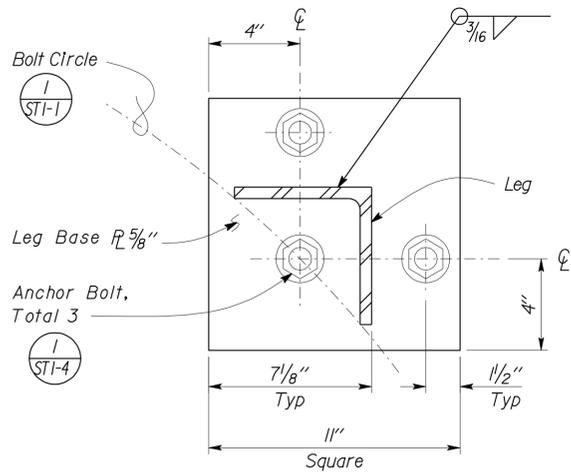
DESIGN	BY Edgardo Isidro	CHECKED Tahir Rashid
DETAILS	BY Aleksey Serin	CHECKED Edgardo Isidro
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
ARCHITECTURAL AND STRUCTURAL DESIGN

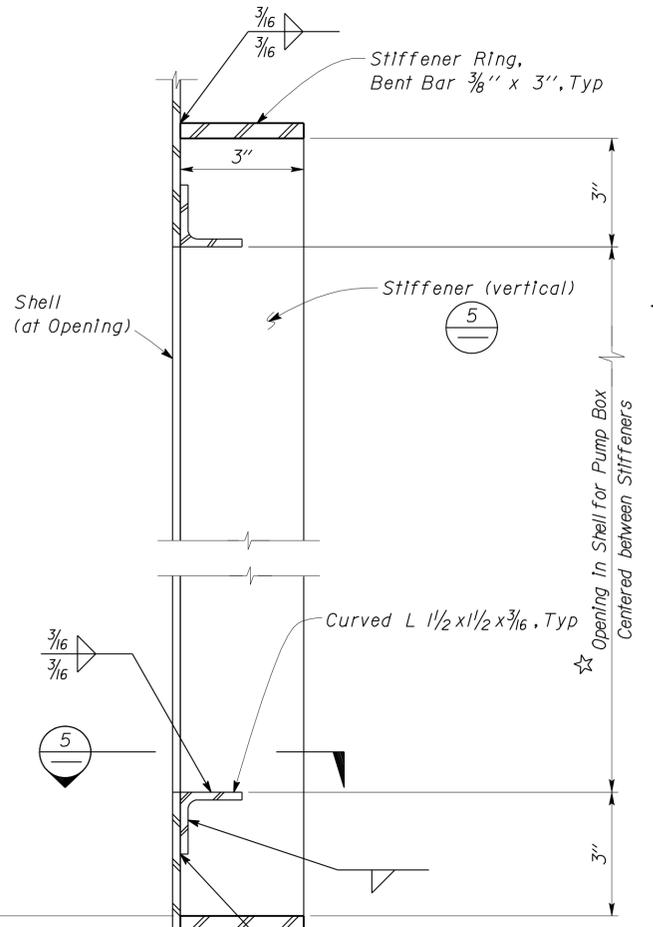
BRIDGE NO.
POST MILE
3000 GALLON TANK
VARIOUS DISTRICT 8 MAINTENANCE STATIONS EMULSION TANK
HEATER WELL SECTIONS AND DETAILS

SHEET OF
ST1-5

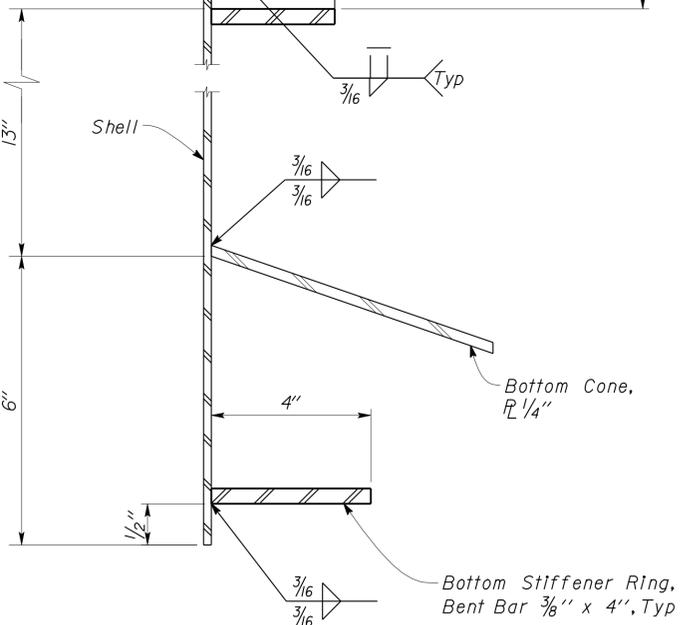
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38, 40,95, etc	Var	29	54
			02-10-11	DATE	
REGISTERED CIVIL ENGINEER 4-9-12 PLANS APPROVAL DATE The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



1 LEG ANCHORAGE DETAILS
Scale 3" = 1'-0"

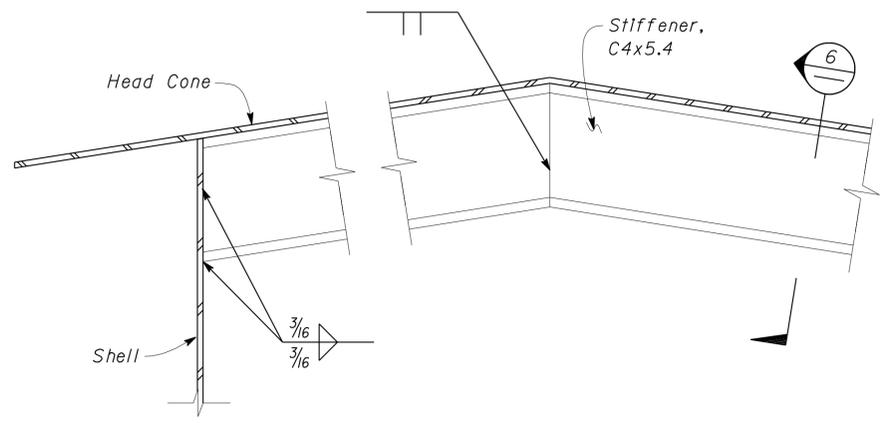


2 SHELL TO HEAD CONE WELD DETAIL
Scale 4" = 1'-0"

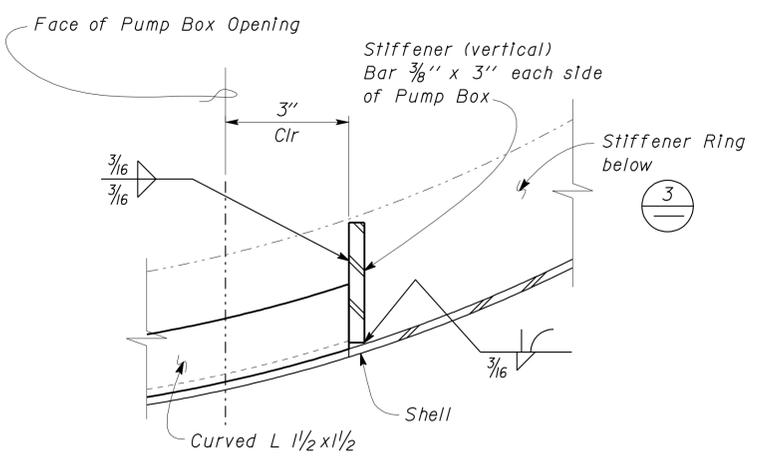


3 SHELL WELDING DETAILS
No Scale

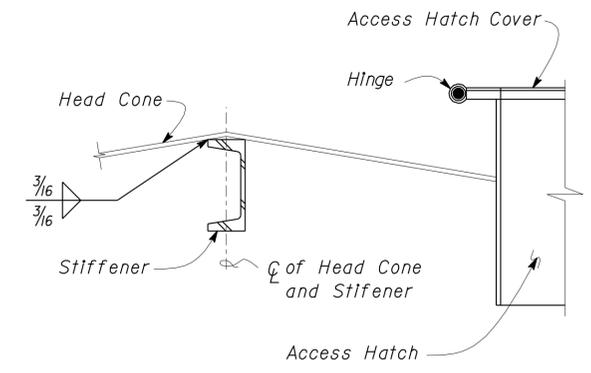
★ **Weld Note**
Fillet Weld Pump Box to the Tank Shell all around, to provide liquid tight Seal.



4 HEAD CONE STIFFENER WELD DETAIL
Scale 4" = 1'-0"



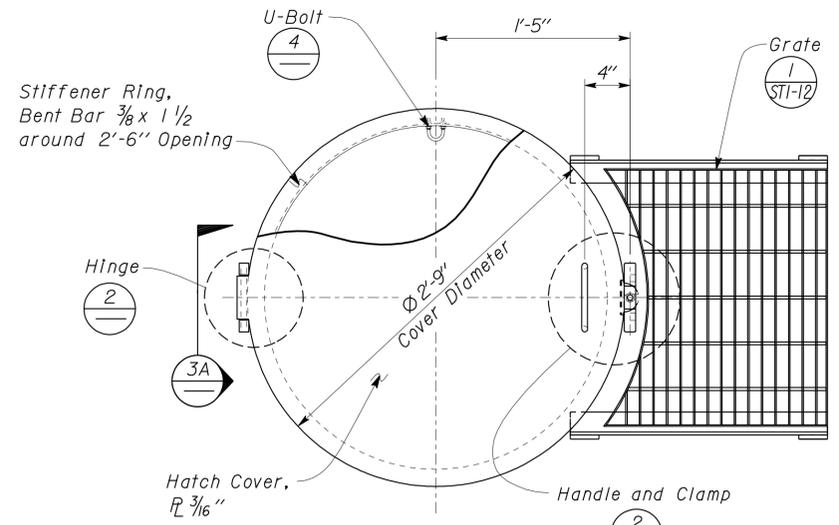
5 VERTICAL STIFFENER TO RING STIFFENER WELD DETAIL
No Scale



6 HEAD CONE STIFFENER SECTION
Scale 3" = 1'-0"

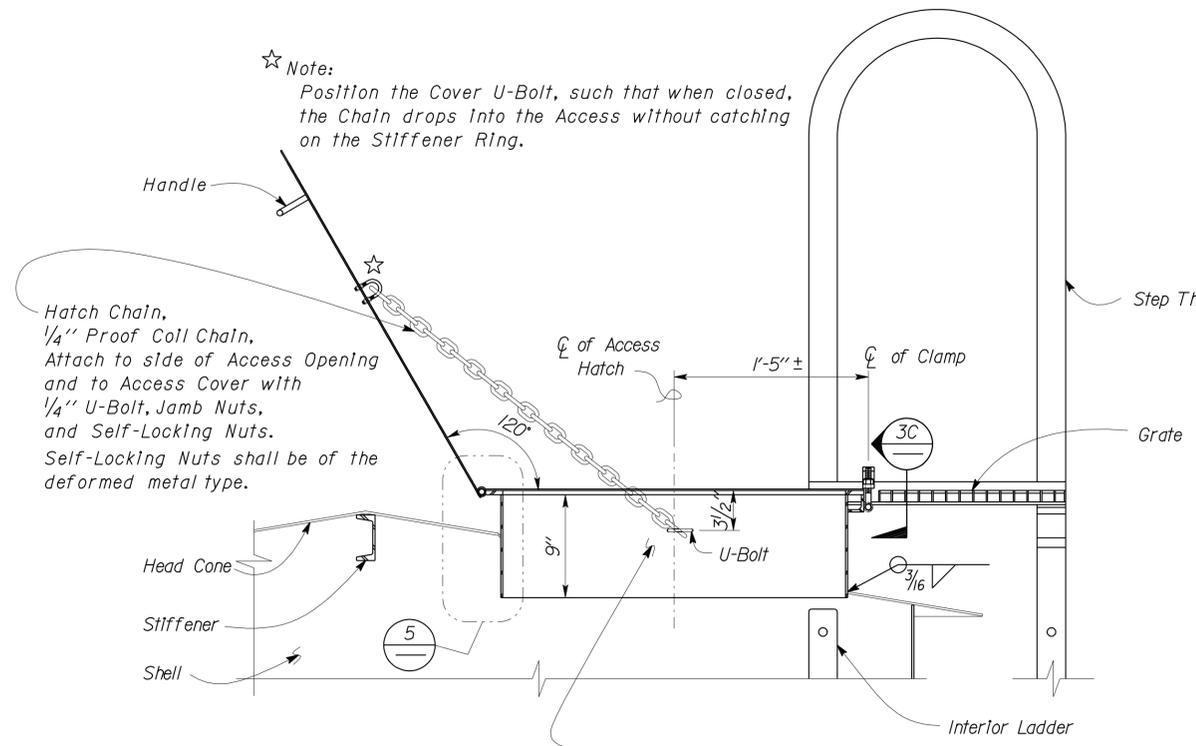
DESIGN	By Edgardo Isidro	CHECKED Tahir Rashid	STATE OF CALIFORNIA	DIVISION OF ENGINEERING SERVICES	BRIDGE NO.	VARIOUS DISTRICT 8 MAINTENANCE STATIONS EMULSION TANK	SHEET ST1-6
	DETAILS	By Aleksey Serin					
QUANTITIES	BY	CHECKED	DEPARTMENT OF TRANSPORTATION	ARCHITECTURAL AND STRUCTURAL DESIGN	POST MILE	EMULSION TANK DETAILS NO. 1	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			0 1 2 3	UNIT PROJECT NUMBER & PHASE	3581 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)
EA 000000			PROJECT NUMBER & PHASE		08000200591	11-08-10 03-03-11	SHEET OF

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38,40,95,etc	Var	30	54
			02-10-11	DATE	
4-9-12 PLANS APPROVAL DATE					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

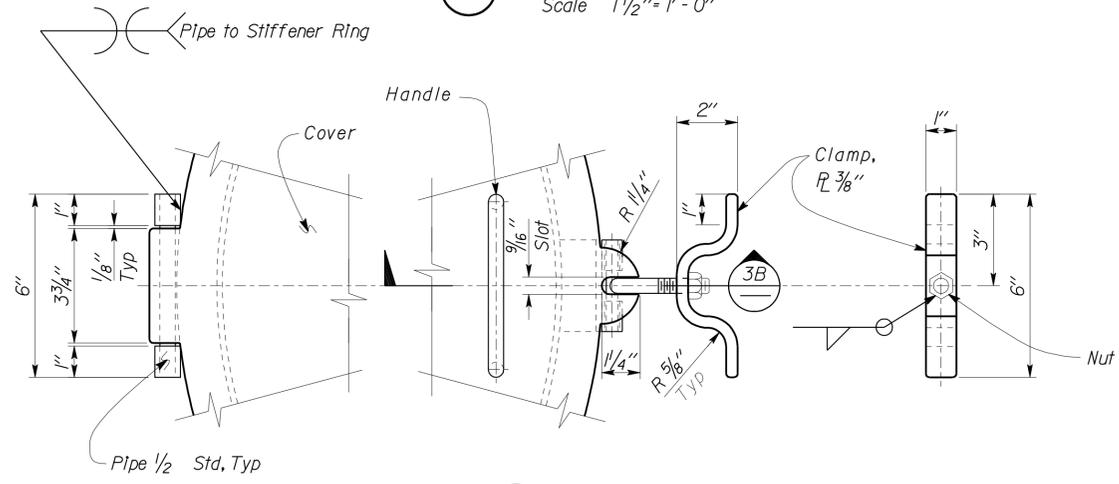


Note:
Plan shown rotated 90°

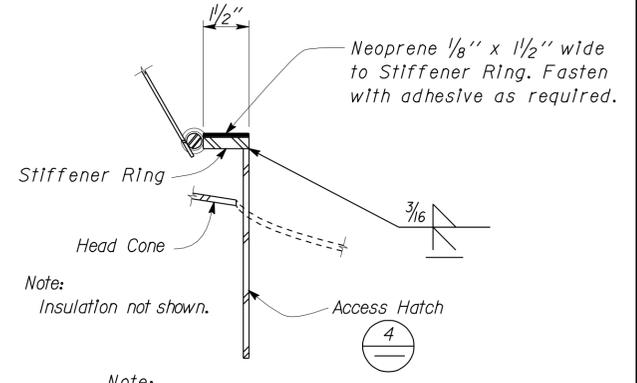
1 ACCESS HATCH PLAN
Scale 1 1/2" = 1' - 0"



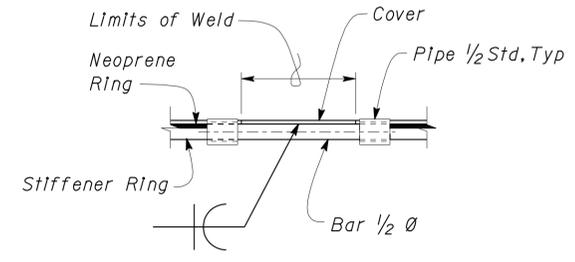
4 ACCESS HATCH SECTION
Scale 1 1/2" = 1' - 0"



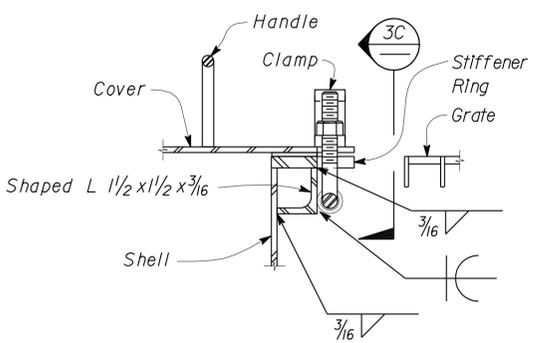
2 HATCH PARTIAL PLAN DETAILS
Scale 4" = 1' - 0"



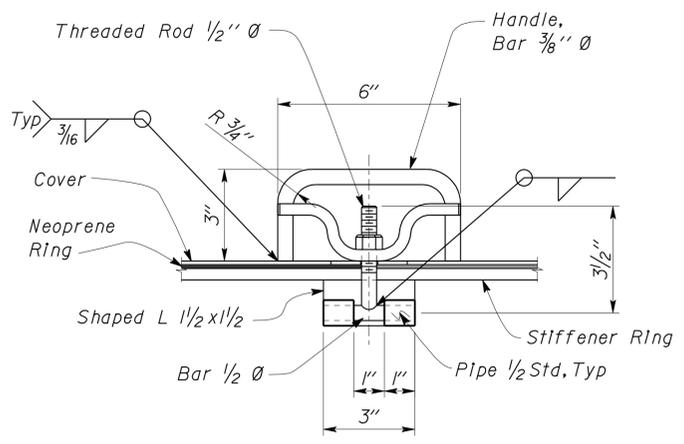
5 STIFFENER RING WELD DETAIL
Scale 1 1/2" = 1' - 0"



A HINGE END VIEW



B HANDLE AND CLAMP

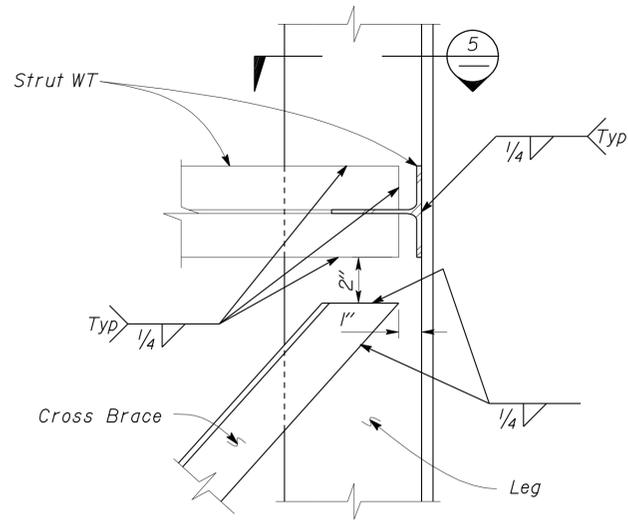


C HANDLE AND CLAMP DETAIL

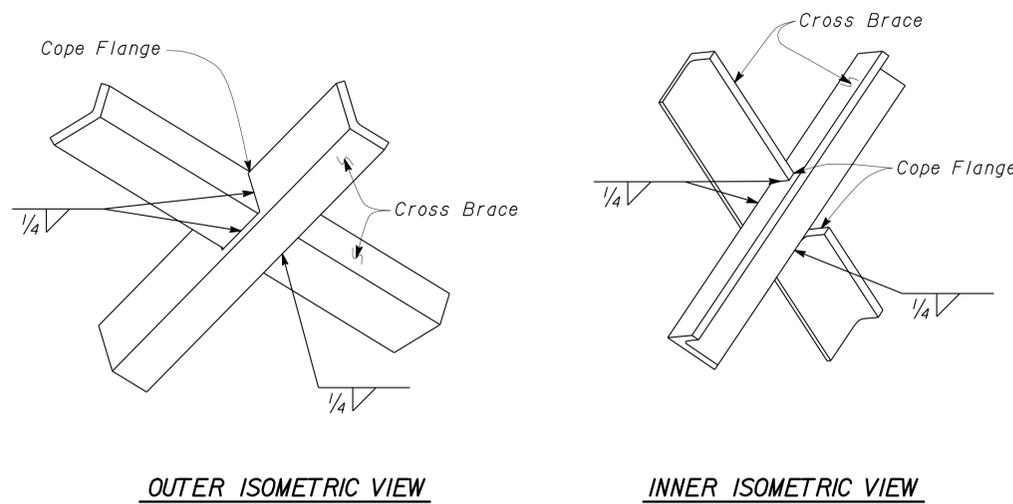
3 HATCH HINGE AND CLAMP DETAILS
Scale 4" = 1' - 0"

DESIGN	By Edgardo Isidro	CHECKED Tahir Rashid	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ARCHITECTURAL AND STRUCTURAL DESIGN	BRIDGE NO.	VARIOUS DISTRICT 8 MAINTENANCE STATIONS EMULSION TANK	SHEET ST1-7
	DETAILS	By Aleksey Serin			CHECKED Edgardo Isidro		
QUANTITIES	BY	CHECKED	UNIT PROJECT NUMBER & PHASE	3581 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES	EMULSION TANK DETAILS NO. 2	SHEET OF
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			0 1 2 3		REVISION DATES (PRELIMINARY STAGE ONLY)		11-09-10
TAEMWW Imperial Rev. 7/10							

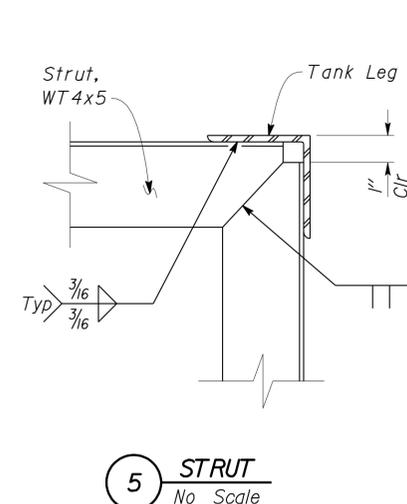
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38,40,95,etc	Var	31	54
			02-10-11		
REGISTERED CIVIL ENGINEER			DATE		
4-9-12					
PLANS APPROVAL DATE					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



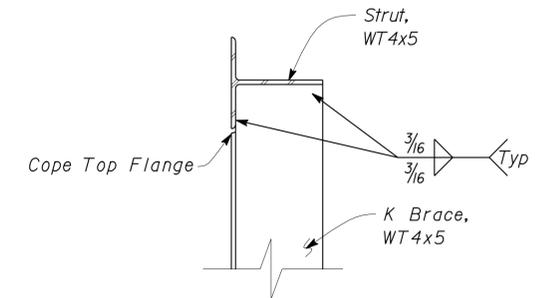
1 STRUT AND CROSS BRACE TO LEG DETAIL
Scale 3" = 1' - 0"



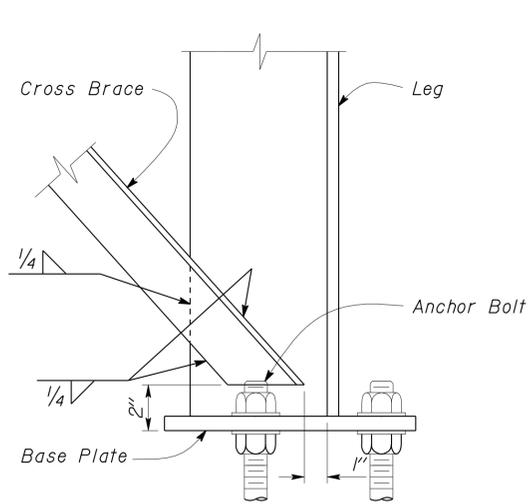
2 CROSS BRACE INTERSECTION DETAIL
Scale 3" = 1' - 0"



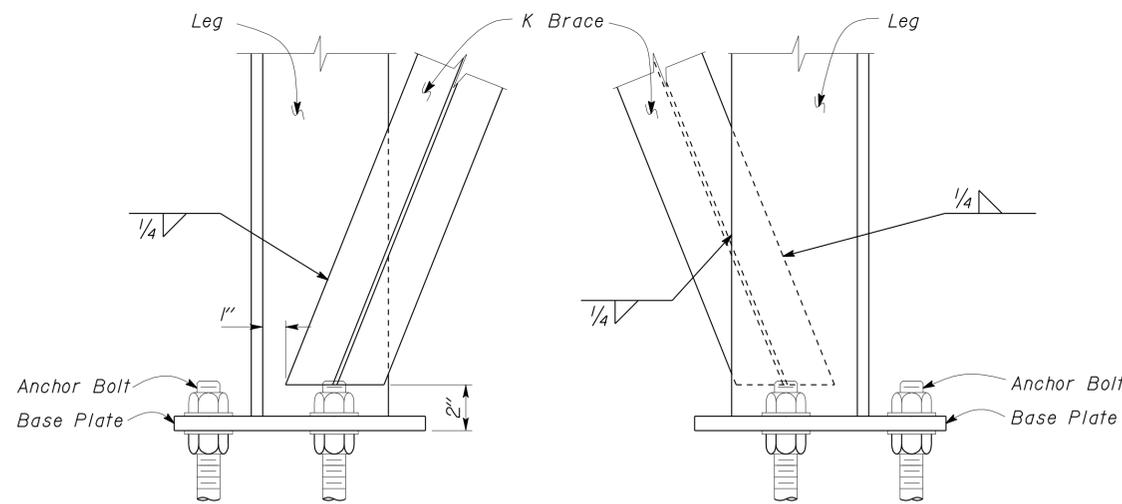
5 STRUT
No Scale



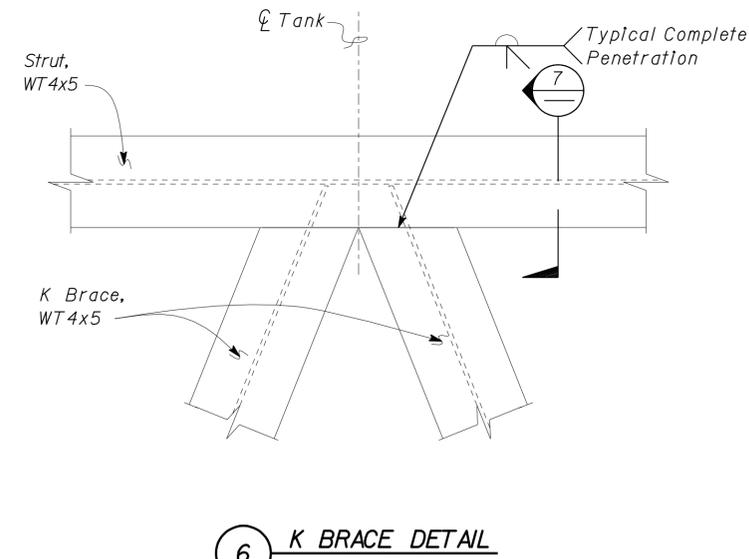
7 K BRACE SECTION
No Scale



3 CROSS BRACE TO LEG DETAIL
Scale 3" = 1' - 0"

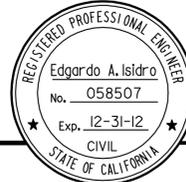


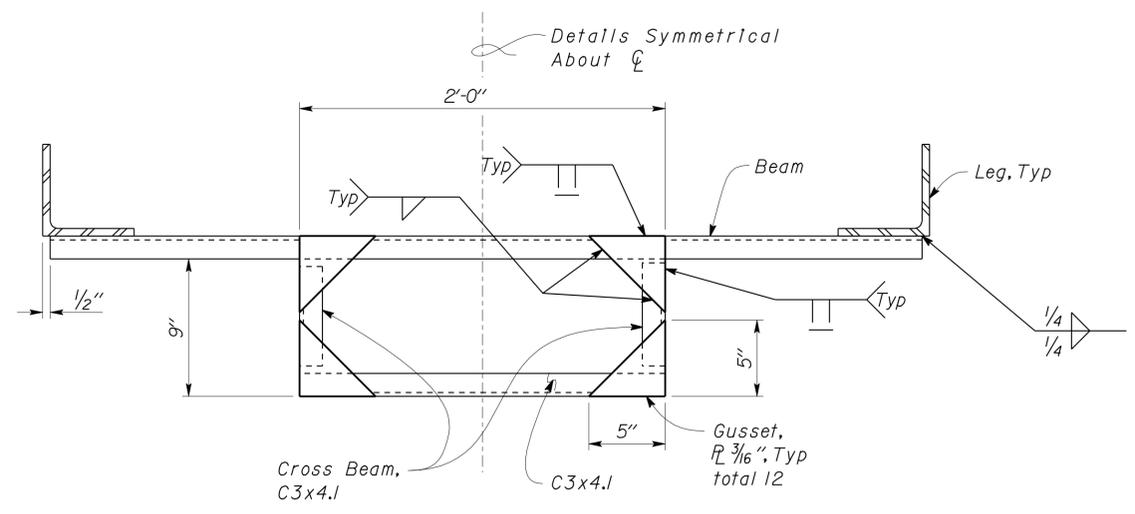
4 K-BRACE TO LEG DETAIL
Scale 3" = 1' - 0"



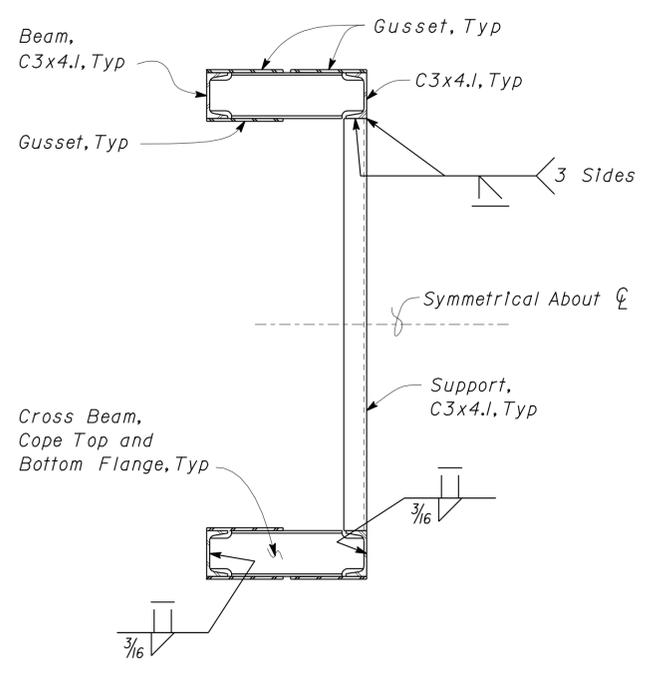
6 K BRACE DETAIL
No Scale

DESIGN	BY	Edgardo Isidro	CHECKED	Tahir Rashid	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ARCHITECTURAL AND STRUCTURAL DESIGN	BRIDGE NO.	VARIOUS DISTRICT 8 MAINTENANCE STATIONS EMULSION TANK		SHEET OF ST1-8
	DETAILS	BY	Aleksey Serin	CHECKED			Edgardo Isidro	POST MILE	3000 GALLON TANK	
QUANTITIES	BY		CHECKED		UNIT PROJECT NUMBER & PHASE	08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	11-09-10 02-10-11 03-03-11	SHEET OF
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					0	1	2	3	D:\User\projects\dist_08\080800020059_3000gll_Emulsoin_Tank\Expedite\st1_08.dgn	

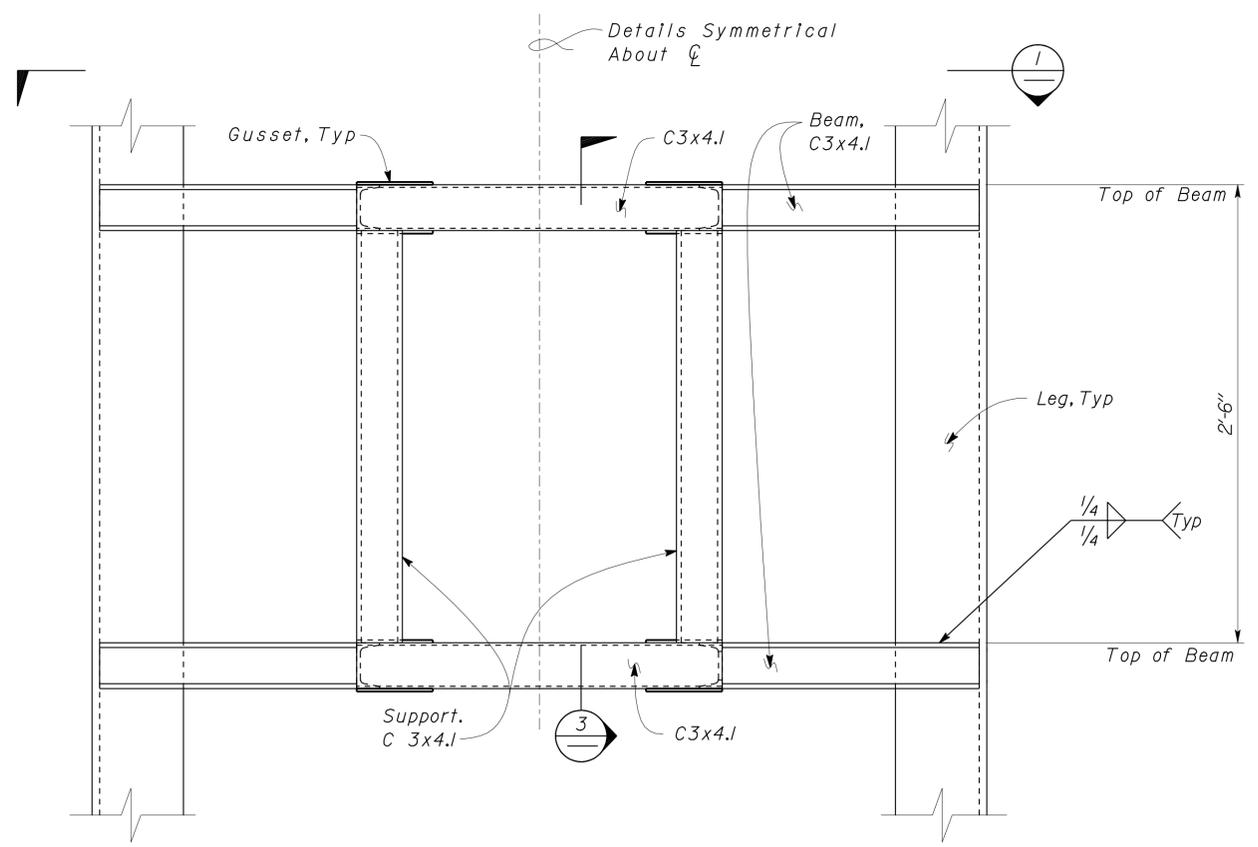
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38,40,95,etc	Var	32	54
			02-10-11 DATE		
4-9-12 PLANS APPROVAL DATE					
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1 CONTROL PANEL SUPPORT FRAME PLAN
 Scale 2" = 1'-0"



3 CONTROL PANEL SUPPORT FRAME SECTION
 Scale 2" = 1'-0"



2 CONTROL PANEL SUPPORT FRAME ELEVATION
 Scale 2" = 1'-0"

DESIGN	BY Edgardo Isidro	CHECKED Tahir Rashid
DETAILS	BY Aleksey Serin	CHECKED Edgardo Isidro
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

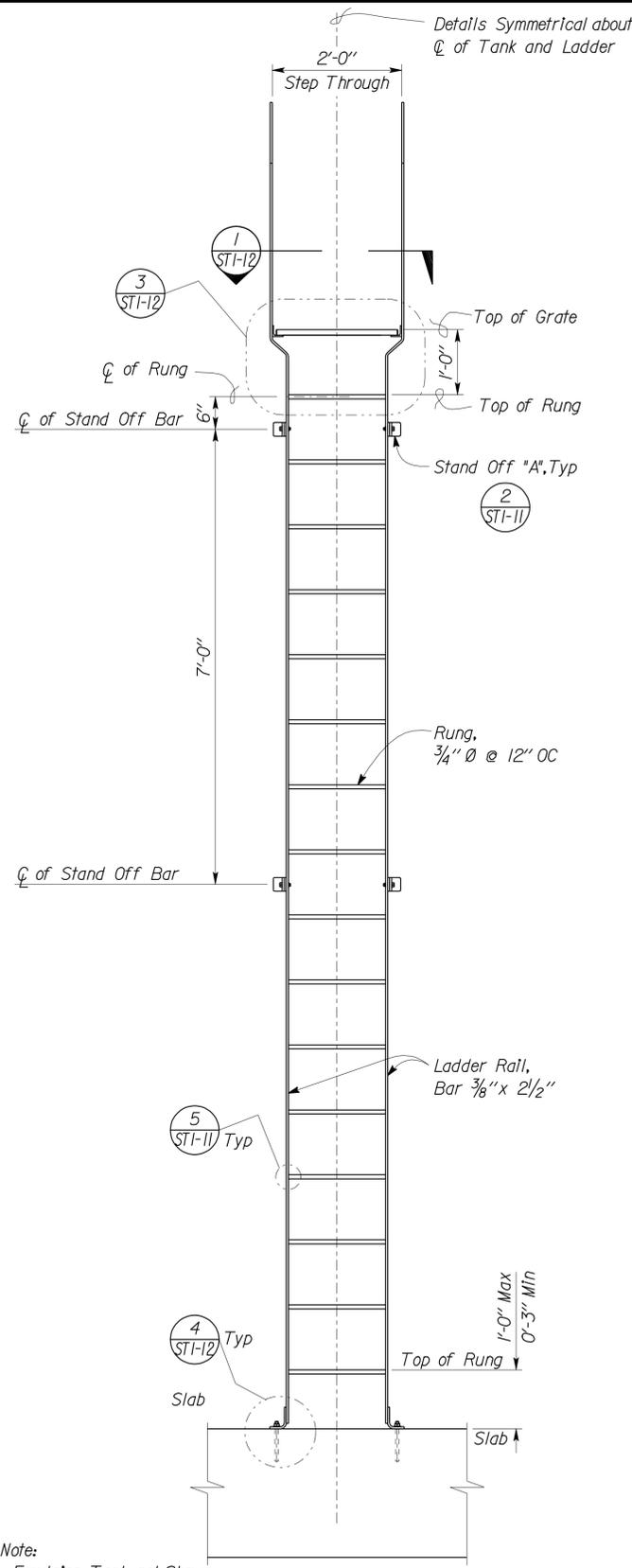
DIVISION OF ENGINEERING SERVICES
 ARCHITECTURAL AND STRUCTURAL DESIGN

BRIDGE NO.
 POST MILE

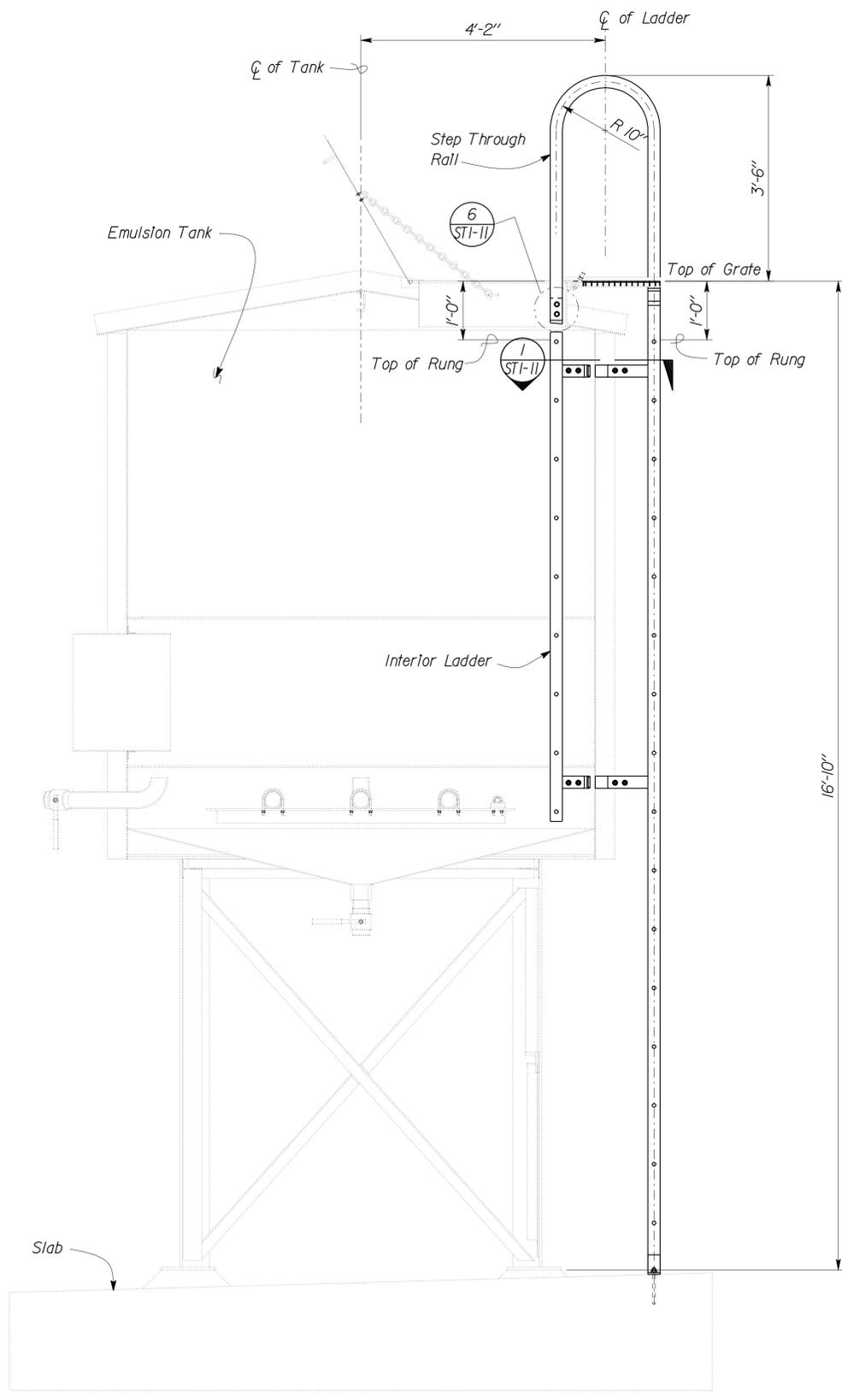
VARIOUS DISTRICT 8 MAINTENANCE STATIONS EMULSION TANK
 3000 GALLON TANK
 EMULSION TANK DETAILS NO. 4

SHEET **ST1-9** OF

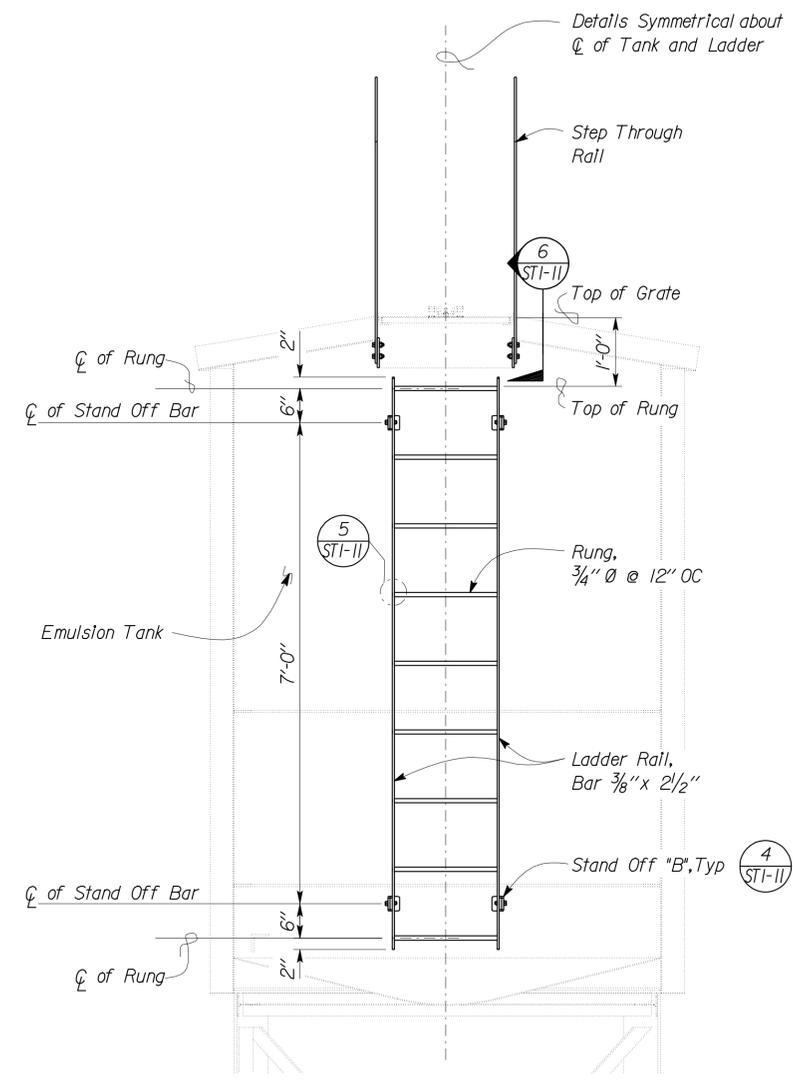
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38,40,95,etc	Var	33	54
			02-10-11	DATE	
4-9-12 PLANS APPROVAL DATE					
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1 STEP THROUGH LADDER ELEVATION
Scale 3/4" = 1'-0"



2 STEP THROUGH LADDER AND INTERIOR LADDER SECTION
Scale 3/4" = 1'-0"



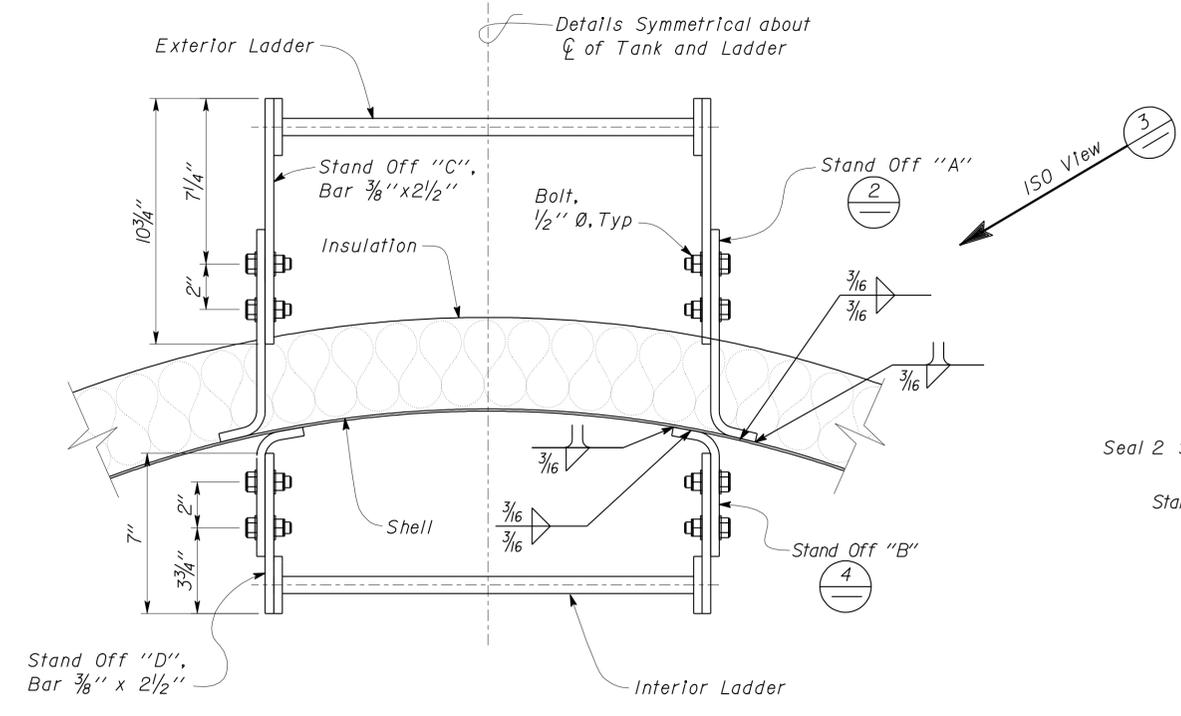
3 INTERIOR LADDER ELEVATION
Scale 3/4" = 1'-0"

Note:
Emulsion Tank not Shown

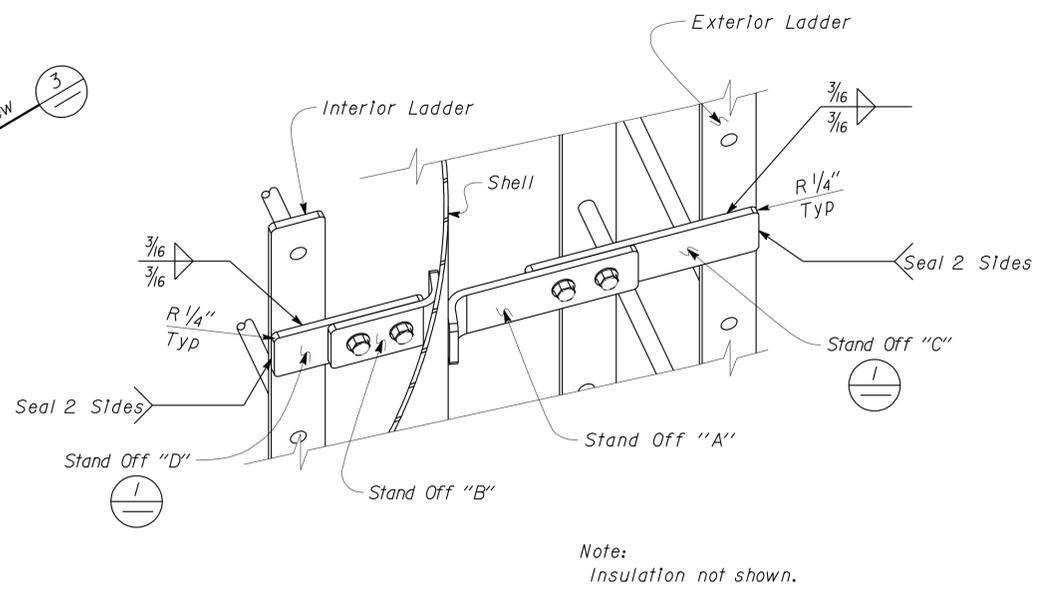
DESIGN	By Edgardo Isidro	CHECKED Tahir Rashid	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ARCHITECTURAL AND STRUCTURAL DESIGN	BRIDGE NO.	VARIOUS DISTRICT 8 MAINTENANCE STATIONS EMULSION TANK	SHEET
	DETAILS	By Aleksey Serin			CHECKED Edgardo Isidro		POST MILE
QUANTITIES	BY	CHECKED	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT PROJECT NUMBER & PHASE	3581 08000200591	EMULSION TANK DETAILS NO. 5	OF
				DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF	
TAEMWW Imperial Rev. 7/10				EA 000000	11-10-10 02-03-11	D:\User\projects\dist_08\080800020059_3000gll_EmulsoIn_Tank\Expedite\st1_10.dgn	

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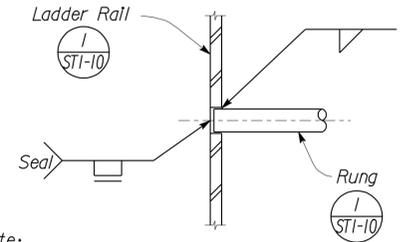
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38,40,95,etc	Var	34	54
			02-10-11	DATE	
4-9-12 PLANS APPROVAL DATE					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



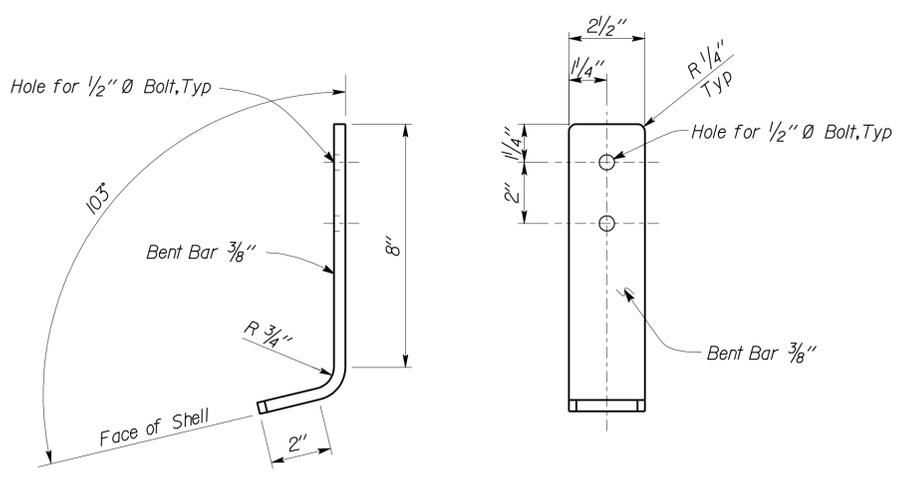
1 STAND OFF PLAN
Scale 3" = 1' - 0"



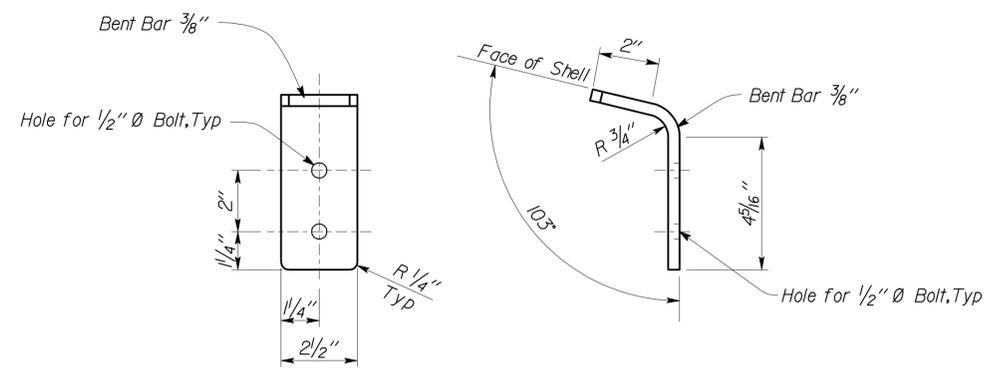
3 STAND OFF 'C' & 'D' DETAILS
Scale 3" = 1' - 0"



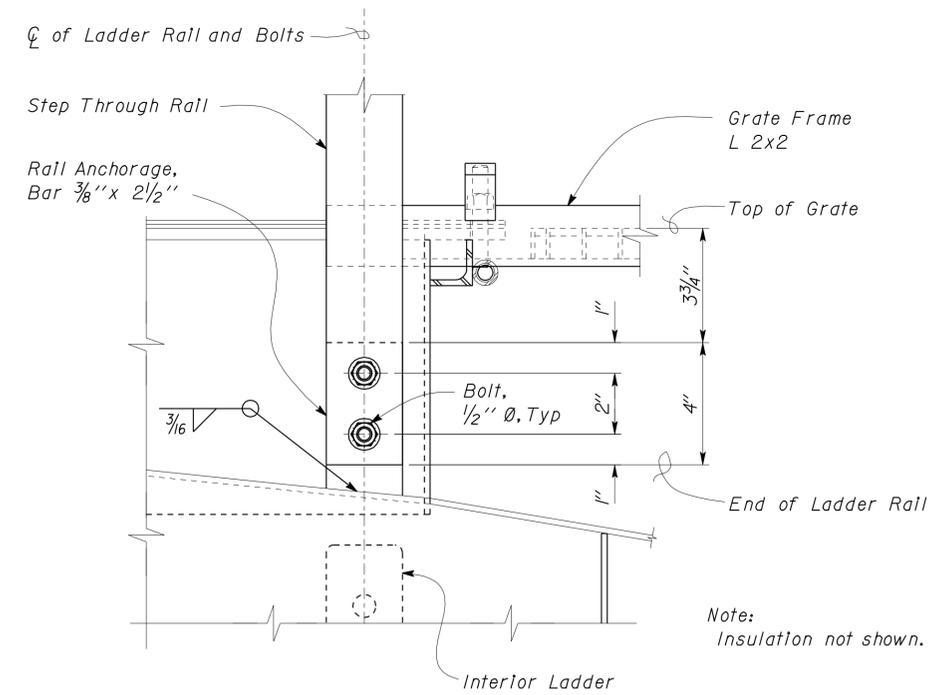
5 RUNG WELD DETAIL
Scale 4" = 1' - 0"



2 STAND OFF 'A' DETAILS
Scale 4" = 1' - 0"



4 STAND OFF 'B' DETAILS
Scale 4" = 1' - 0"



6 STEP THROUGH RAIL CONNECTION
No Scale

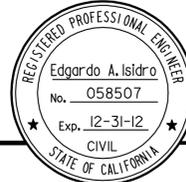
DESIGN	By Edgardo Isidro	Checked Tahir Rashid	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ARCHITECTURAL AND STRUCTURAL DESIGN	BRIDGE NO.	VARIOUS DISTRICT 8 MAINTENANCE STATIONS EMULSION TANK	SHEET
	DETAILS	BY Aleksey Serin			Checked Edgardo Isidro		POST MILE
QUANTITIES	BY	Checked	UNIT PROJECT NUMBER & PHASE	3581 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			0 1 2 3			11-10-10	OF

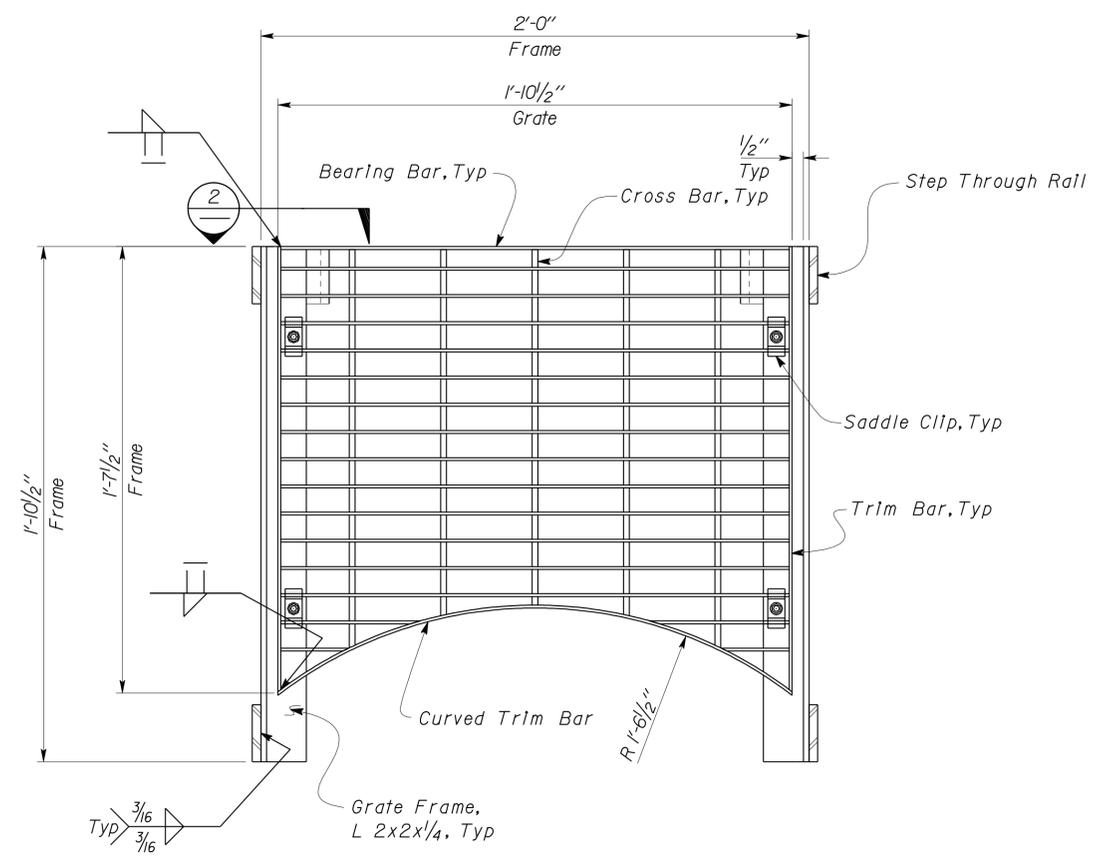
TAEMWW Imperial Rev. 7/10

EA 000000

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DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38, 40,95, etc	Var	35	54
			02-10-11 REGISTERED CIVIL ENGINEER DATE		4-9-12 PLANS APPROVAL DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

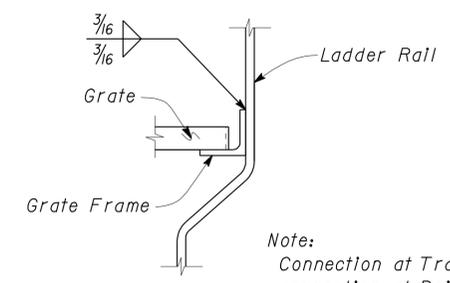


Welded Steel Grate

- Bearing Bars 1" x 1/8" @ 1 3/16" C-C
- Cross Bars @ 4" C-C
- Trim Bars 1" x 1/8" fillet welded to ends of Bearing Bars

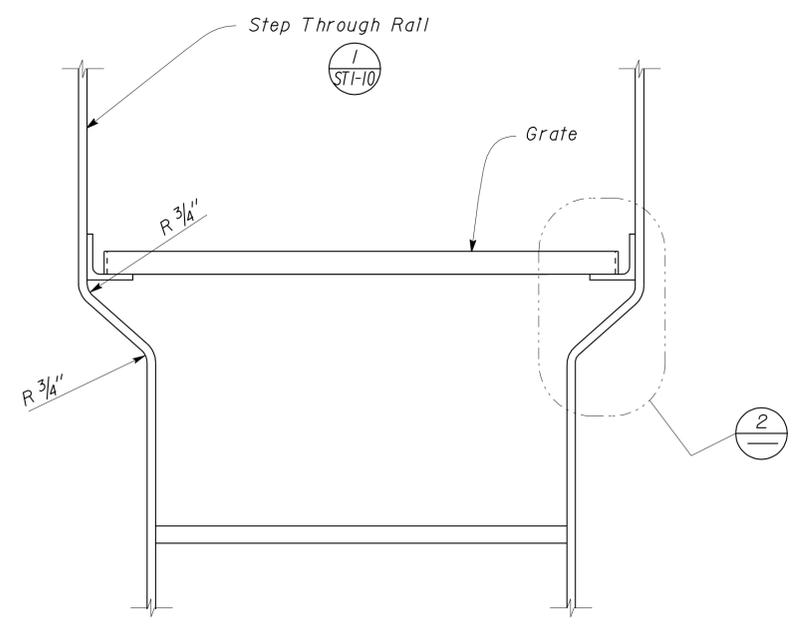
Grate shall be anchored to supports with 1/4" Ø threaded stud and "Saddle Clip" type fastener, as recommended by the manufacturer. Fasteners shall be installed maximum 4" from ends with 4 minimum per Grate.

1 WELDED STEEL GRATE PLAN
Scale 3" = 1' - 0"

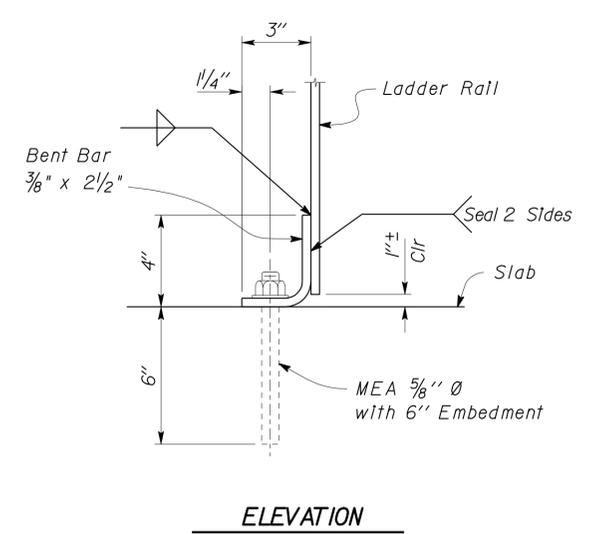


Note: Connection at Transition shown, connection at Rail Anchorage similar.

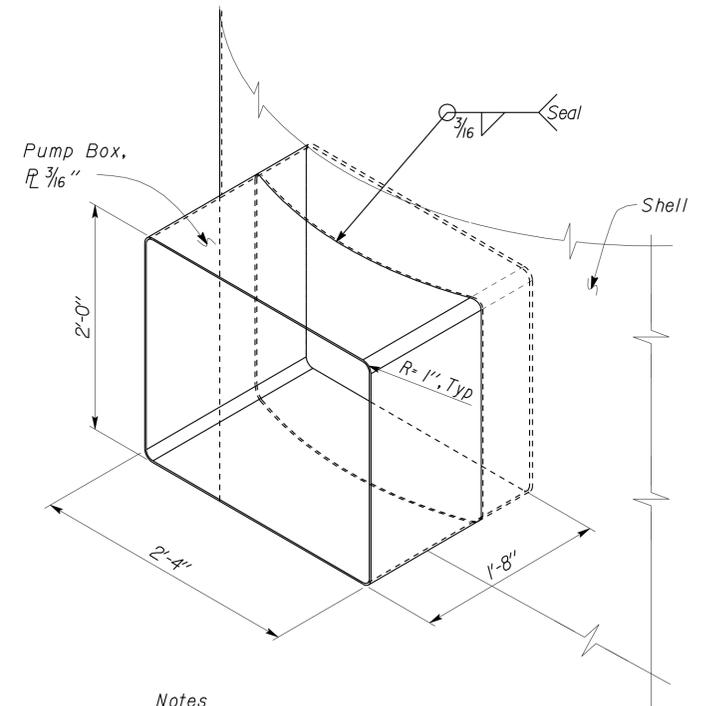
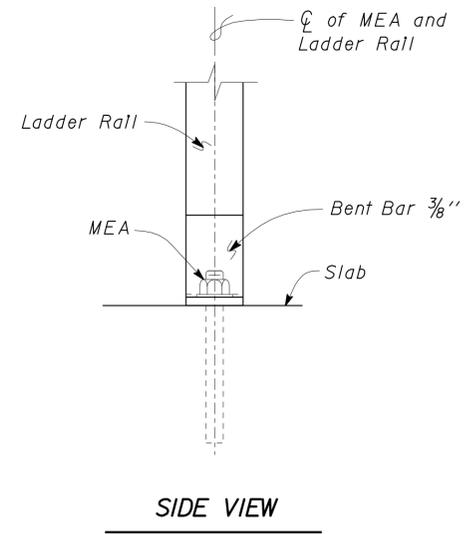
2 GRATE FRAME TO LADDER RAIL DETAIL
Scale 3" = 1' - 0"



3 STEP THROUGH RAIL DETAIL
Scale 3" = 1' - 0"



4 LADDER RAIL ANCHORAGE DETAIL
Scale 3" = 1' - 0"



- Notes
- All welds used to form Pump Box shall be liquid tight.
 - See Mechanical Plans

5 PUMP BOX DETAIL
Scale 1 1/2" = 1' - 0"

DESIGN	By Edgardo Isidro	CHECKED Tahir Rashid	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ARCHITECTURAL AND STRUCTURAL DESIGN	BRIDGE NO.	VARIOUS DISTRICT 8 MAINTENANCE STATIONS EMULSION TANK	SHEET
	DETAILS	BY Aleksey Serin			CHECKED Edgardo Isidro		POST MILE
QUANTITIES	BY	CHECKED	UNIT PROJECT NUMBER & PHASE	3581 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES	EMULSION TANK DETAILS NO. 7	REVISION DATES (PRELIMINARY STAGE ONLY)
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			0 1 2 3		11-10-10 12-03-10		SHEET OF
TAEMWW Imperial Rev. 7/10		EA 000000		D:\User\projects\dist_08\080800020059_3000gll_EmulsoIn_Tank\Expedite\st1_12.dgn		05-APR-2012 17:24	

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38,40,95,etc	Var	36	54


 REGISTERED MECHANICAL ENGINEER DATE 03-07-11
 No. 21648
 Exp. 06-30-11
 MECH
 STATE OF CALIFORNIA

4-9-12
PLANS APPROVAL DATE

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PLUMBING

- — — — — Cold Water
- A— Compressed Air
- LPG— Liquefied Petroleum Gas
- D— Equipment Drain
- RD— Roof Drain
- OD— Overflow Drain
- RW— Non Potable Water
- FW— Fire Water
- — — — — Hot Water
- — — — — Hot Water Return
- R— Relief Valve Discharge Pipe
- S— Sewer Line
- — — — — Sanitary Sewer (above grade)
- — — — — Sanitary Sewer (below grade)
- — — — — Sanitary Sewer Vent

PIPE FITTINGS AND VALVES

- — — — — Cap, Threaded
- — — — — Elbow, Turned Down
- — — — — Elbow, Turned Up
- — — — — Reducer, Concentric
- — — — — Pressure Gauge (with gage cock and Snubber)
- — — — — Strainer
- — — — — Union
- — — — — Union, Insulating
- — — — — Valve, Ball
- — — — — Valve, Check
- — — — — Valve, Gas
- — — — — Valve, Gate
- — — — — Valve, Safety Relief
- — — — — Valve, Faucet Assembly
- — — — — Valve, Pressure/Temperature Relief
- — — — — Water Hammer Arrestor

MECHANICAL ABBREVIATIONS:

- | | | | | | |
|--------|---------------------------------|------|---|------|-------------------------------|
| A/C | Air Conditioning | GA | Gauge | RE | Refrigerator |
| ABS | Acrylonitrile Butadiene Styrene | GALV | Galvanized | REG | Register |
| AC | Asphalt Concrete | GH | Ground Hydrant | RA | Return Air |
| AD | Air Drop | GLV | Globe Valve | RCP | Reinforced Concrete Pipe |
| AP | Alternative Pipe | GSP | Galvanized Steel Pipe | RD | Roof Drain |
| ATF | Automatic Transmission Fluid | GV | Gate Valve | REQ | Required |
| AWG | American Wire Gauge | GWH | Gas Water Heater | RH | Radiant Heater |
| BFP | Backflow Preventer | GYP | Gypsum | RV | Relief Valve |
| BH | Box Hydrant | H | Height | RWL | Rain Water Leader |
| BLDG | Building | HB | Hose Bibb | RW | Raw Water |
| BV | Balancing Valve | H/C | Hot Water, High Pressure Cleaner | S | Switch |
| °C | Celsius Temperature | HF | Hose Faucet | SF | Fan, Switch |
| C | Conduit | HVAC | Heating, Ventilating And Air Conditioning | S/S | Service Sink |
| Cap. | Capacity | HW | Hot Water | SA | Supply Air |
| CD | Ceiling Diffuser | HZ | Hertz | SCH | Schedule |
| CI | Cast-Iron | ID | Inside Diameter | SDS | Sanitary Dump Station |
| CO | Cleanout | IE | Invert Elevation | SF | Supply Fan |
| COTF | Cleanout Through Floor | IPS | International Pipe Standard | SHR | Shower |
| COTG | Cleanout Through Grade | KS | Kitchen Sink | SP | Static Pressure |
| COTW | Cleanout To Wall | KW | Kilowatt | SS | Sanitary Sewer |
| CV | Check Valve | LAV | Lavatory | STA | Station |
| CW | Cold Water | L/s | Liters per Second | STD | Standard |
| D | Depth | m | Meter | TBD | To Be Determined |
| DB | Dry Bulb | MAX | Maximum | TCV | Temperature Control Valve |
| DF | Drinking Fountain | MAN | Manhole | TSPV | Trap Seal Primer Valve |
| DH | Duct Heater | MIN | Minimum | TPRV | Temp., Pressure, Relief Valve |
| DI | Drain Inlet | mm | millimeter | TS | Time Switch |
| Dia | Diameter | MS | Mop Sink | Typ. | Typical |
| (E) | Existing | NIC | Not In Contract | UH | Unit Heater |
| EA | Exhaust Air | NO | Number | UR | Urinal |
| EC | Evaporative Cooler | NPS | Nominal Pipe Size | V | Vent |
| ESEW | Emergency Shower And Eye Wash | NPT | National Pipe Thread | VAC | Voltage, Alternating Current |
| EF | Exhaust Fan | NST | National Standard Thread | VB | Valve Box |
| EL | Elevation | OA | Outside Air | VR | Vent Riser |
| Elect. | Electrical | OC | On Center | VM | Vending Machine |
| ES | Evaporative Cooler Switch | OD | Outside Diameter | VTR | Vent Thru Roof |
| ESP | External Static Pressure | OG | Original Ground | W | Width |
| EWC | Electric Water Cooler | PBEF | Push-Button Exhaust Fan | W/ | With |
| EWH | Electric Water Heater | PCC | Portland Cement Concrete | W/O | Without |
| FC | Flexible Connection | PH | Phase | WB | Wet Bulb |
| FD | Floor Drain | PRV | Pressure Reducing Valve | WC | Water Closet |
| FDC | Fire Department Connection | PSI | Pounds Per Square Inch | W.C. | Water Column |
| FE | Fire Extinguisher | PVC | Polyvinyl Chloride | WH | Water Heater |
| FG | Finish Grade | | | W.H. | Wall Hydrant |
| FH | Fire Hydrant | | | WHA | Water Hammer Arrestor |
| FL | Flow Line | | | WLS | Water Level Switch |
| FS | Floor Sink | | | WP | Weatherproof |
| FTR | Flue through roof | | | WS | Wash Sink |
| | | | | WSP | Welded Steel Pipe |

HEATING, VENTILATING AND AIR CONDITIONING

- Balance Damper
- — — — — Flexible Duct
- EA— Exhaust Air
- RA— Return Air
- SA— Supply Air
- ☒ cfm Exhaust Register
- ☒ or ☒ cfm Return Register
- ☒ or ☒ cfm Supply Diffuser
- Ⓣ Thermostat
- ⓉⓈ Time Switch
- ▲ Anode Test Station
- ▲ Three Wire Test Station
- Ⓣ Exhaust Fan
- ⓉⓈ Fire Extinguisher

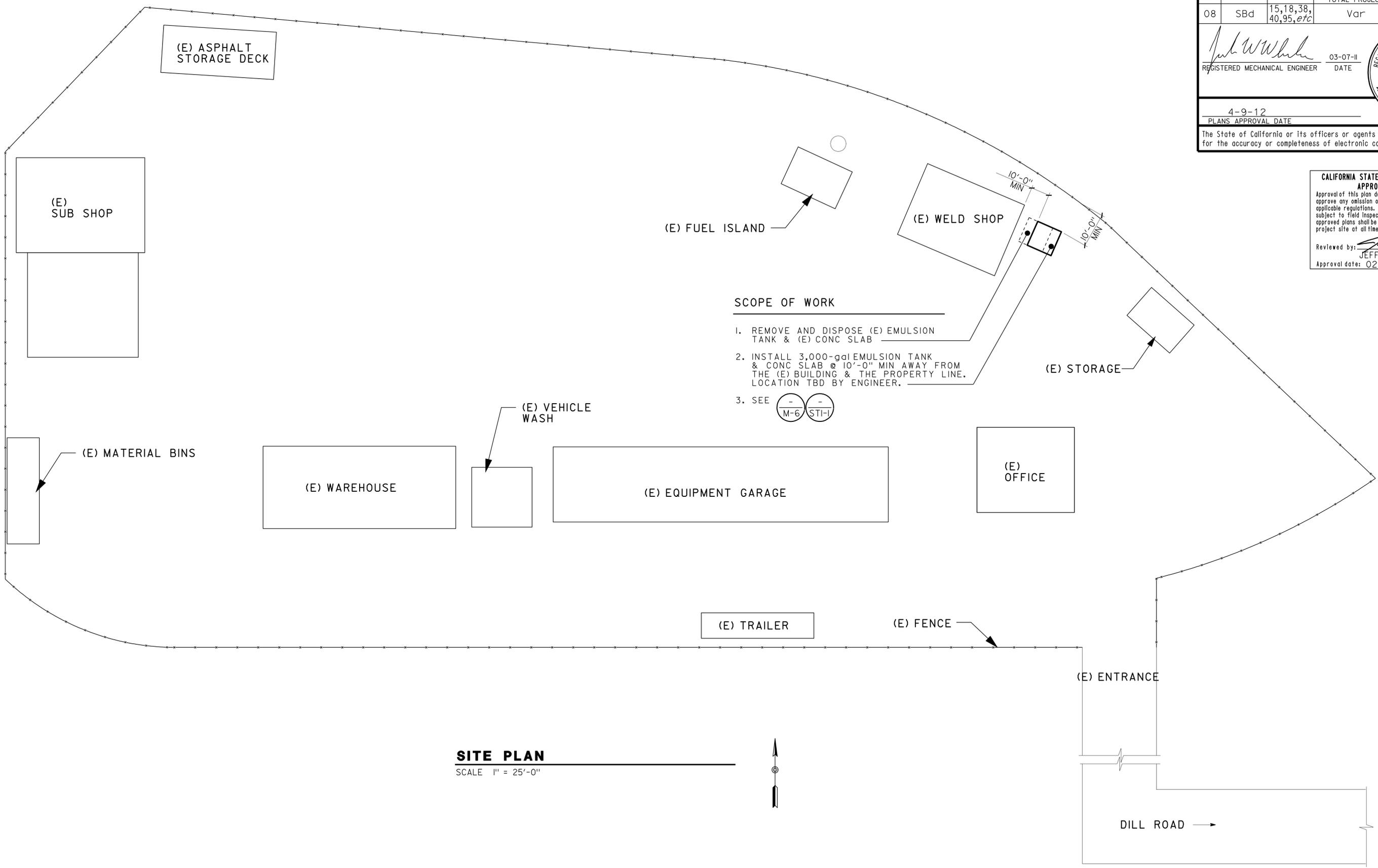
MISCELLANEOUS

- L Angle
- Ⓛ Centerline
- ∅ Diameter
- RE— (E) Duct to be Removed
- Section / Elevation Letter
- Sheet Number
- Detail Number
- Sheet Number
- 12x12 " ← NECK SIZE
- 190 cfm ← FLOW RATE

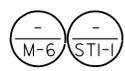
DESIGN BY <i>Alvin Kwan</i>	CHECKED <i>Jack Wheeler</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES		BRIDGE NO.	DISTRICT 8 VARIOUS MAINTENANCE STATIONS EMULSION TANK	SHEET M-0
				ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN		X		
DETAILS BY <i>X</i>	CHECKED <i>Jack Wheeler</i>					POST MILE	LEGEND	SHEET OF
QUANTITIES BY <i>Alvin Kwan</i>	CHECKED <i>Jack Wheeler</i>					X		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		UNIT PROJECT NUMBER & PHASE	3615 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)
DOES SD Imperial Rev. 1/07						12-10-11 3-07-11		

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DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	15,18,38,40,95,etc	Var	37	54
 REGISTERED MECHANICAL ENGINEER			03-07-11	DATE	
			4-9-12 PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



SCOPE OF WORK

1. REMOVE AND DISPOSE (E) EMULSION TANK & (E) CONC SLAB
2. INSTALL 3,000-gal EMULSION TANK & CONC SLAB @ 10'-0" MIN AWAY FROM THE (E) BUILDING & THE PROPERTY LINE. LOCATION TBD BY ENGINEER.
3. SEE 

CALIFORNIA STATE FIRE MARSHAL APPROVED
 Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
 Reviewed by: 
JEFFERY SCHWARTZ
 Approval date: 02-15-11

SITE PLAN

SCALE 1" = 25'-0"



DESIGN BY <i>Alvin Kwan</i> CHECKED <i>Jack Wheeler</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 54M5703	DISTRICT 8 VARIOUS MAINTENANCE STATIONS EMULSION TANK		SHEET OF M-1
			POST MILE	BARSTOW MS	SITE PLAN	
DETAILS BY <i>J.R. Stangl</i> CHECKED <i>Jack Wheeler</i>	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT PROJECT NUMBER & PHASE 3615 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF
QUANTITIES BY <i>Alvin Kwan</i> CHECKED <i>Jack Wheeler</i>					10/28/10 11/15/10 12/15/10 12/16/10 03/07/11	

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	15,18,38,40,95,etc	Var	38	54

REGISTERED MECHANICAL ENGINEER
 Jack Wheeler
 No. 21648
 Exp. 06-30-11
 MECH
 STATE OF CALIFORNIA

03-07-11
 DATE

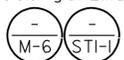
4-9-12
 PLANS APPROVAL DATE

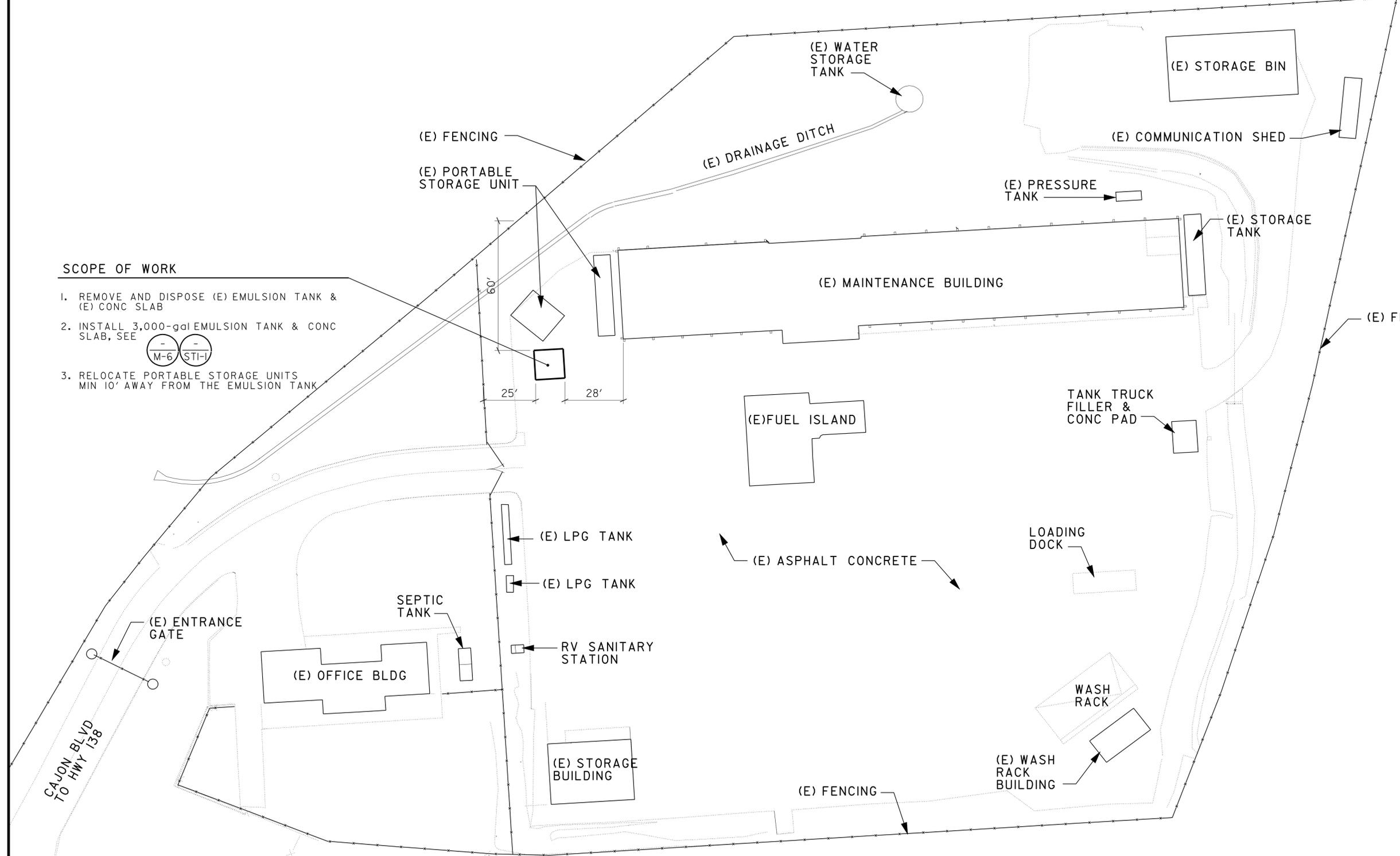
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CALIFORNIA STATE FIRE MARSHAL APPROVED
 Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by: *Jeffery Schwartz*
 JEFFERY SCHWARTZ
 Approval date: 02-22-11
 CSFM File #: 01-36-11-0036

SCOPE OF WORK

1. REMOVE AND DISPOSE (E) EMULSION TANK & (E) CONC SLAB
2. INSTALL 3,000-gal EMULSION TANK & CONC SLAB, SEE 
3. RELOCATE PORTABLE STORAGE UNITS MIN 10' AWAY FROM THE EMULSION TANK



SITE PLAN
SCALE 1" = 25'-0"



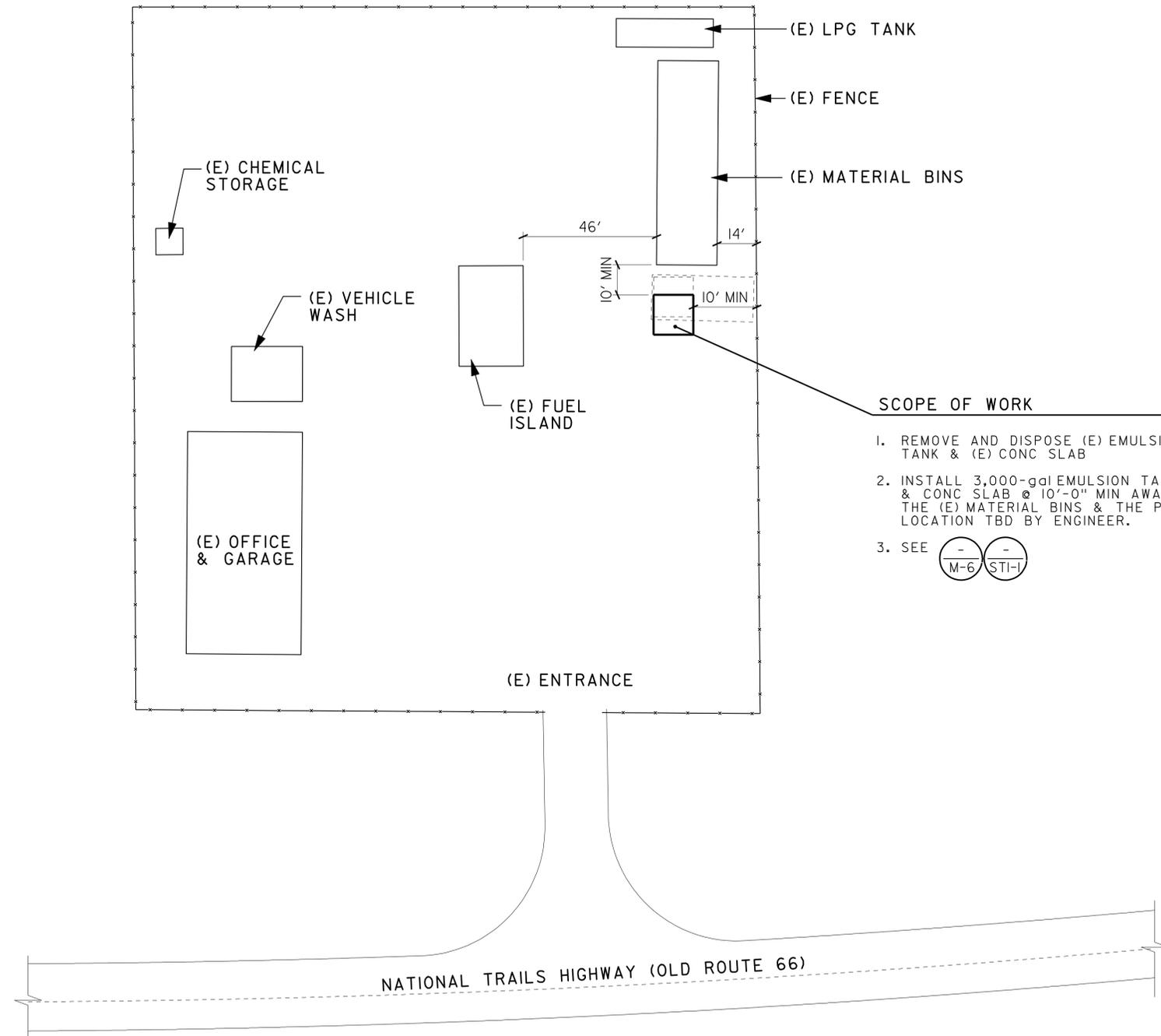
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	DETAILS	BY	J.R. Stangl	CHECKED			Jack Wheeler	POST MILE		CAJON	OF	
	QUANTITIES	BY	Alvin Kwan	CHECKED			Jack Wheeler	UNIT PROJECT NUMBER & PHASE		3615 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)

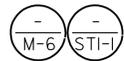
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3

DOES SD Imperial Rev.1/07

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DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	15,18,38,40,95,etc	Var	39	54
 REGISTERED MECHANICAL ENGINEER				03-07-11	DATE
				4-9-12 PLANS APPROVAL DATE	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



- SCOPE OF WORK**
1. REMOVE AND DISPOSE (E) EMULSION TANK & (E) CONC SLAB
 2. INSTALL 3,000-gal EMULSION TANK & CONC SLAB @ 10'-0" MIN AWAY FROM THE (E) MATERIAL BINS & THE PROPERTY LINE. LOCATION TBD BY ENGINEER.
 3. SEE 

CALIFORNIA STATE FIRE MARSHAL APPROVED
 Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
 Reviewed by: 
 JEFFERY SCHWARTZ
 Approval date: 02-22-11
 CSFM File #: 01-36-11-0033

SITE PLAN
 SCALE 1" = 25'-0"

DESIGN BY <i>Alvin Kwan</i>	CHECKED <i>Jack Wheeler</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 54M5713	DISTRICT 8 VARIOUS MAINTENANCE STATIONS EMULSION TANK	SHEET M-3		
				POST MILE X			ESSEX	SITE PLAN
DETAILS BY <i>J.R. Stangl</i>	CHECKED <i>Jack Wheeler</i>	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT PROJECT NUMBER & PHASE 3615 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES			REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF
QUANTITIES BY <i>Alvin Kwan</i>	CHECKED <i>Jack Wheeler</i>							

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38,40,95,etc	Var	40	54

REGISTERED MECHANICAL ENGINEER *Jack Wheeler* DATE 03-07-11
 REGISTERED PROFESSIONAL ENGINEER
 Jack Wheeler
 No. 21648
 Exp. 06-30-11
 MECH
 STATE OF CALIFORNIA

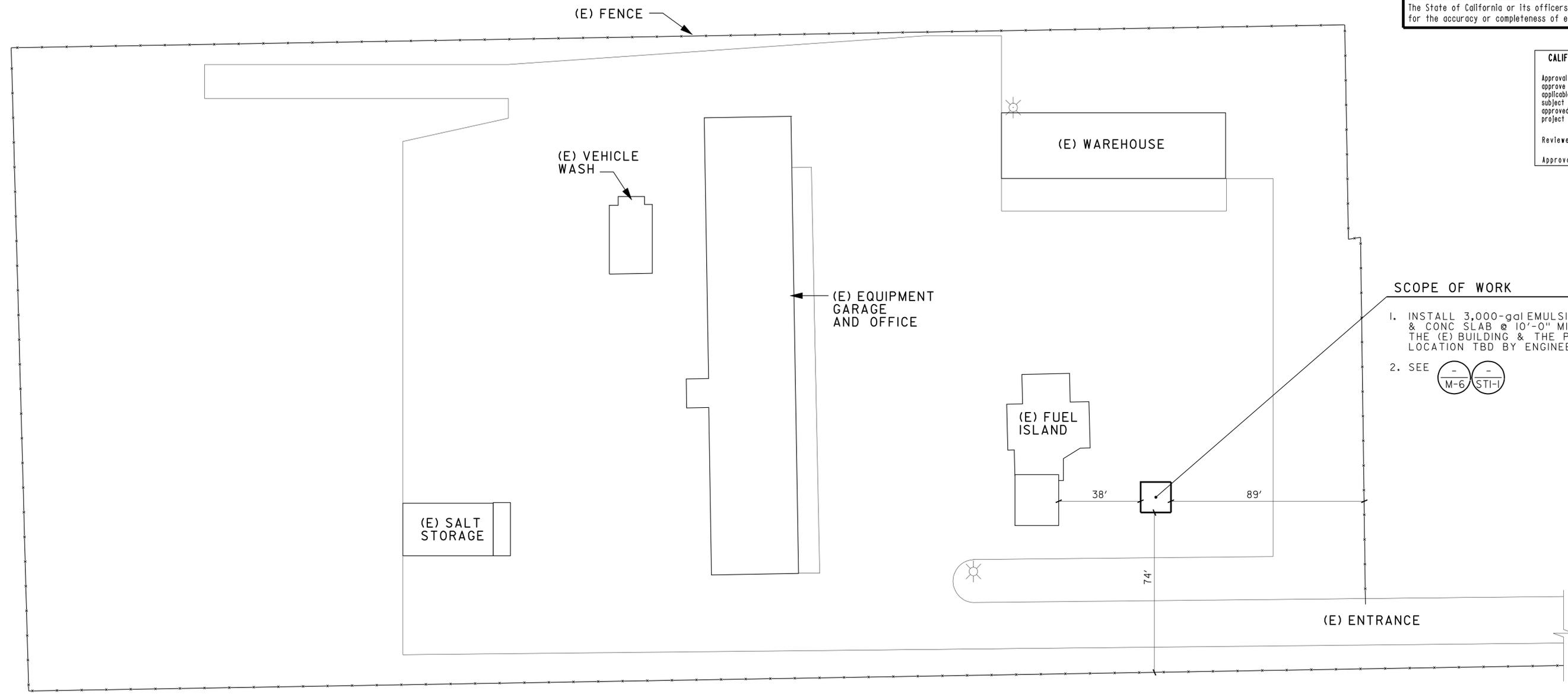
4-9-12
PLANS APPROVAL DATE

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CALIFORNIA STATE FIRE MARSHAL APPROVED

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by: *Jeffery Schwartz*
 JEFFERY SCHWARTZ
 Approval date: 02-25-11



- SCOPE OF WORK**
- INSTALL 3,000-gal EMULSION TANK & CONC SLAB @ 10'-0" MIN AWAY FROM THE (E) BUILDING & THE PROPERTY LINE. LOCATION TBD BY ENGINEER.
 - SEE $\frac{-}{M-6}$ $\frac{-}{STI-1}$

SITE PLAN
 SCALE 1" = 25'-0"

DESIGN BY <i>Alvin Kwan</i> CHECKED <i>Jack Wheeler</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 54M5714	DISTRICT 8 VARIOUS MAINTENANCE STATIONS EMULSION TANK SITE PLAN	SHEET OF M-4
			POST MILE X		
			FAWNSKIN		
DETAILS BY <i>J.R. Stangl</i> CHECKED <i>Jack Wheeler</i>	UNIT PROJECT NUMBER & PHASE 3615 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY) 10/28/10 11/15/10 12/15/10 12/16/10 03/07/11	SHEET OF	
QUANTITIES BY <i>Alvin Kwan</i> CHECKED <i>Jack Wheeler</i>	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3				

DOES SD Imperial Rev.1/07

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DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	15,18,38,40,95,etc	Var	41	54

REGISTERED MECHANICAL ENGINEER *Jack Wheeler* DATE 03-07-11
 PLANS APPROVAL DATE 4-9-12

REGISTERED PROFESSIONAL ENGINEER
 Jack Wheeler
 No. 21648
 Exp. 06-30-11
 MECH
 STATE OF CALIFORNIA

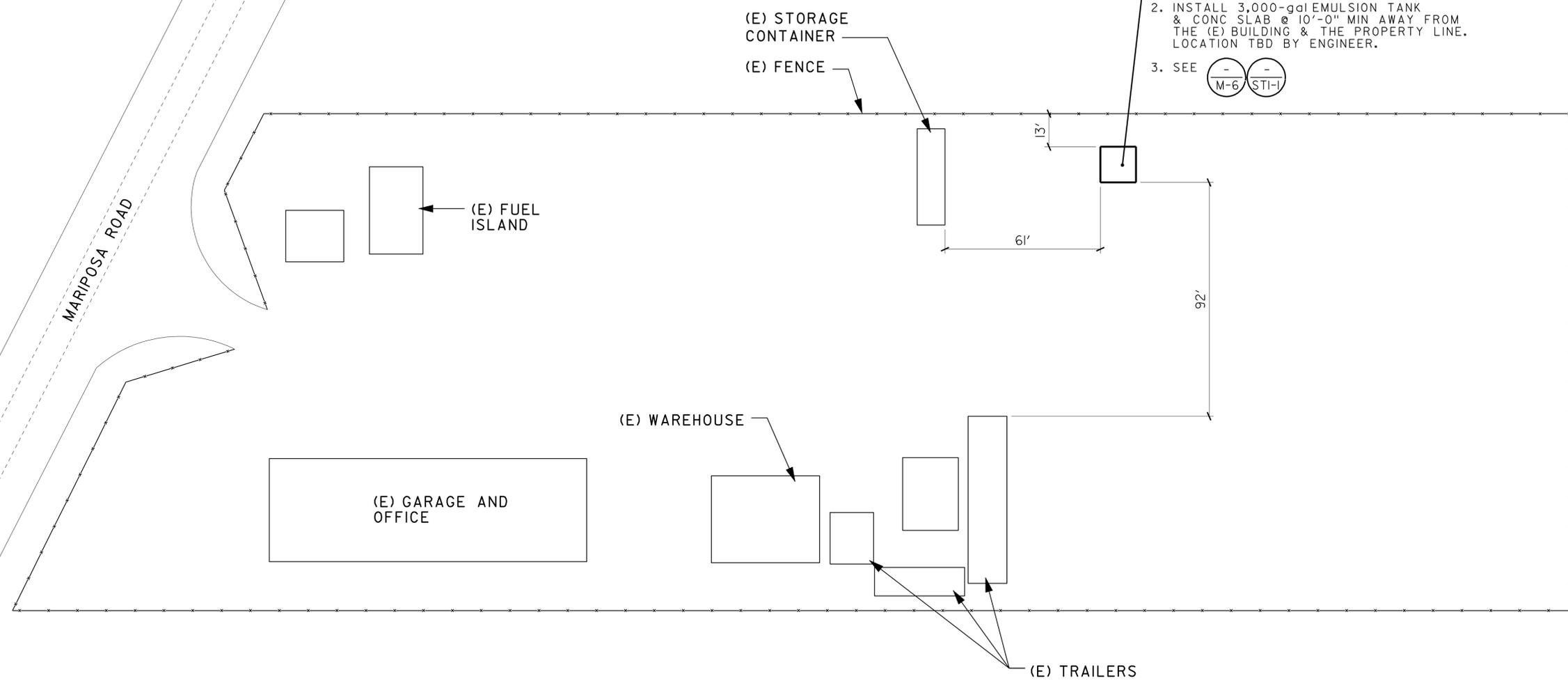
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

- SCOPE OF WORK**
- REMOVE AND DISPOSE (E) EMULSION TANK & (E) CONC SLAB
 - INSTALL 3,000-gal EMULSION TANK & CONC SLAB @ 10'-0" MIN AWAY FROM THE (E) BUILDING & THE PROPERTY LINE. LOCATION TBD BY ENGINEER.
 - SEE M-6 STI-1

CALIFORNIA STATE FIRE MARSHAL APPROVED

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Reviewed by: *Jeffery Schwartz*
 JEFFERY SCHWARTZ
 Approval date: 02-25-11



SITE PLAN
 SCALE 1" = 25'-0"

DESIGN BY <i>Alvin Kwan</i> CHECKED <i>Jack Wheeler</i> DETAILS BY <i>J.R. Stangl</i> CHECKED <i>Jack Wheeler</i> QUANTITIES BY <i>Alvin Kwan</i> CHECKED <i>Jack Wheeler</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 54M5727 POST MILE X	DISTRICT 8 VARIOUS MAINTENANCE STATIONS EMULSION TANK SITE PLAN	VICTORVILLE	SHEET M-5 OF	
	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT PROJECT NUMBER & PHASE 3615 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY) 10/28/10 11/15/10 12/15/10 12/16/10 03/07/11	SHEET OF		
	DOES SD Imperial Rev. 1/07 m_07.dgn						

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38, 40,95, etc	Var	42	54
 REGISTERED MECHANICAL ENGINEER			03-07-11 DATE		
4-9-12 PLANS APPROVAL DATE					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

This Emulsion Tank is going to be Installed at the following Maintenance Stations:

- Barstow Maintenance Station
- Cajon Maintenance Station
- Essex Maintenance Station
- Fawnskin Maintenance Station
- Victorville Maintenance Station

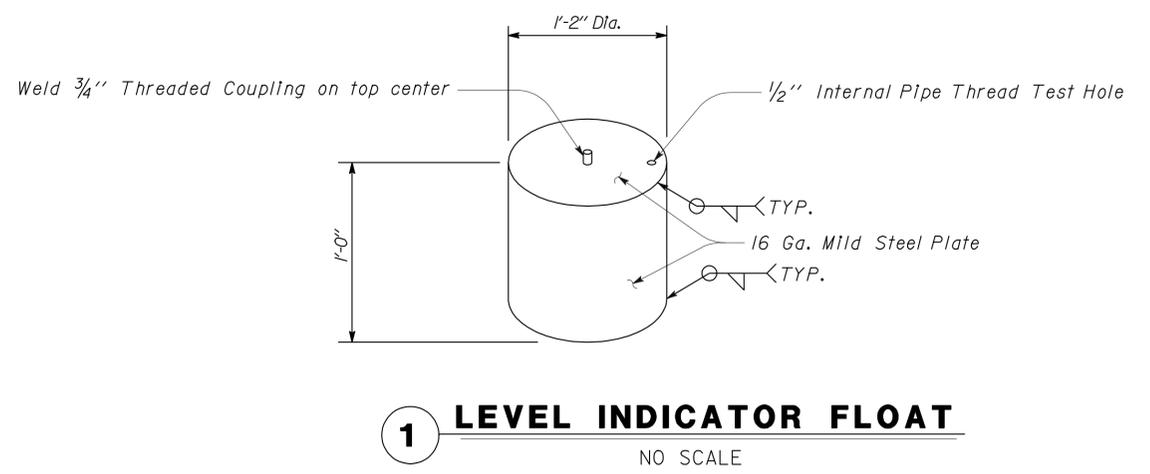
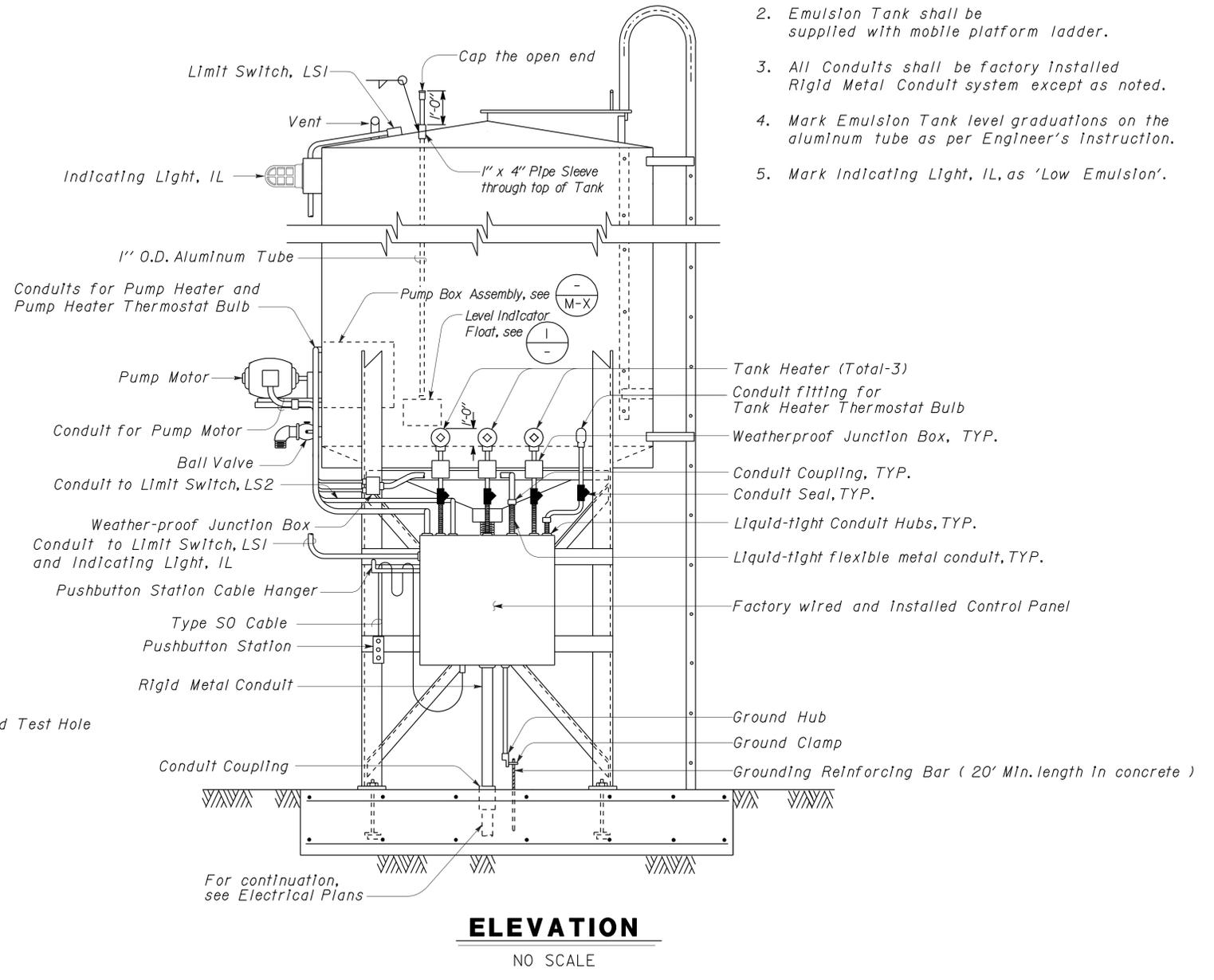
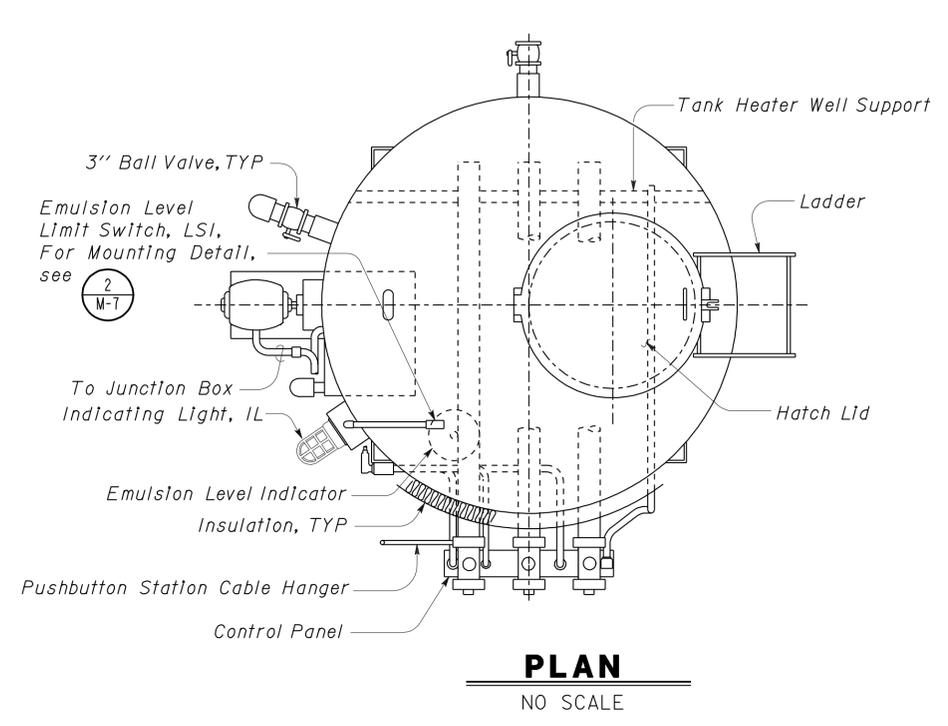
NOTES:

- For details not shown see "Structural Plans".
- Emulsion Tank shall be supplied with mobile platform ladder.
- All Conduits shall be factory installed Rigid Metal Conduit system except as noted.
- Mark Emulsion Tank level graduations on the aluminum tube as per Engineer's Instruction.
- Mark Indicating Light, IL, as 'Low Emulsion'.

CALIFORNIA STATE FIRE MARSHAL APPROVED

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Reviewed by: 
JEFFERY SCHWARTZ
 Approval date: 02-15-11



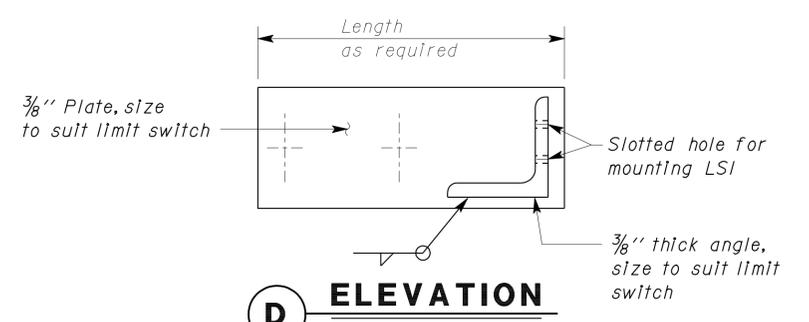
DESIGN	BY	Alvin Kwan	CHECKED	Jack Wheeler	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO.	X	DISTRICT 8 VARIOUS MAINTENANCE STATIONS EMULSION TANK EMULSION TANK DETAILS	SHEET	M-6		
	DETAILS	BY	J.R. Stangl	CHECKED			Jack Wheeler	POST MILE		X	OF		
QUANTITIES	BY	Alvin Kwan	CHECKED	Jack Wheeler	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT PROJECT NUMBER & PHASE	3615 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	10/22/10 12/13/10 12/16/10 03/07/11	SHEET	OF

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	15,18,38,40,95,etc	Var	43	54

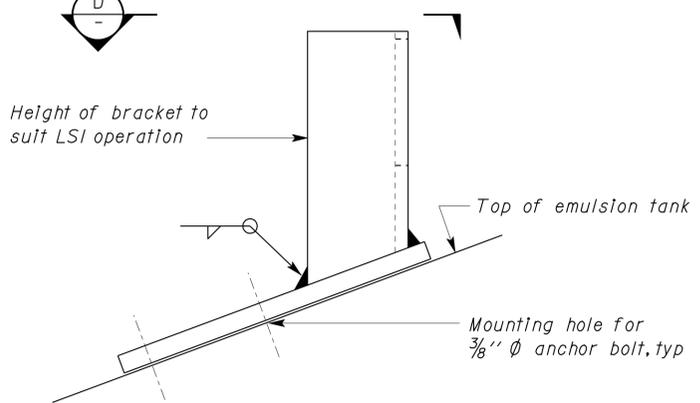
REGISTERED MECHANICAL ENGINEER	DATE	03-07-11

4-9-12
PLANS APPROVAL DATE

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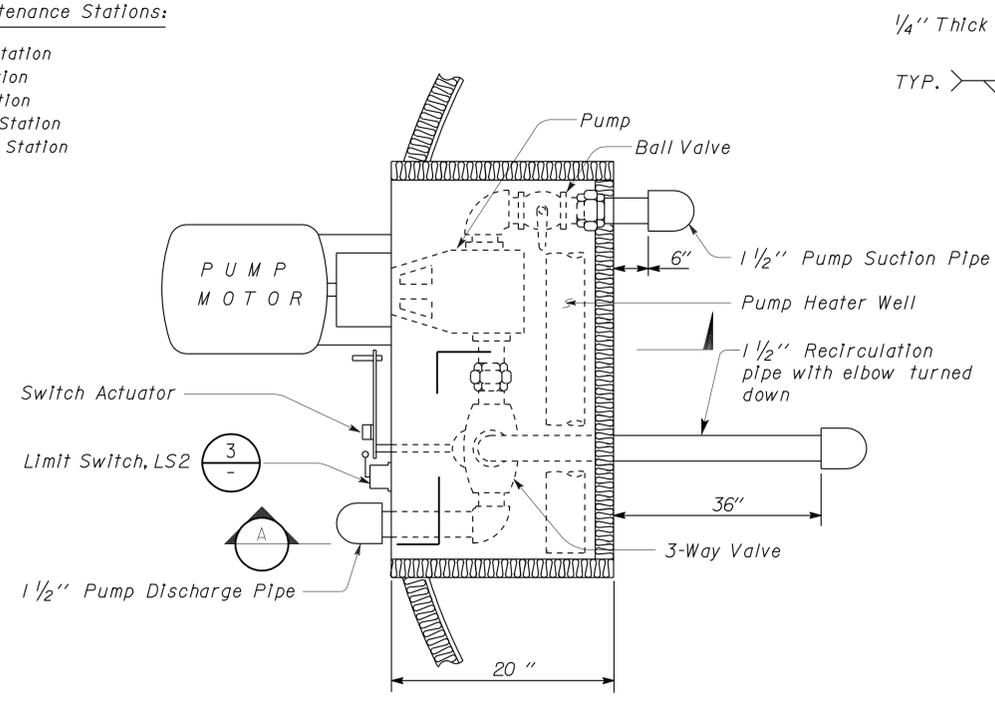


D ELEVATION

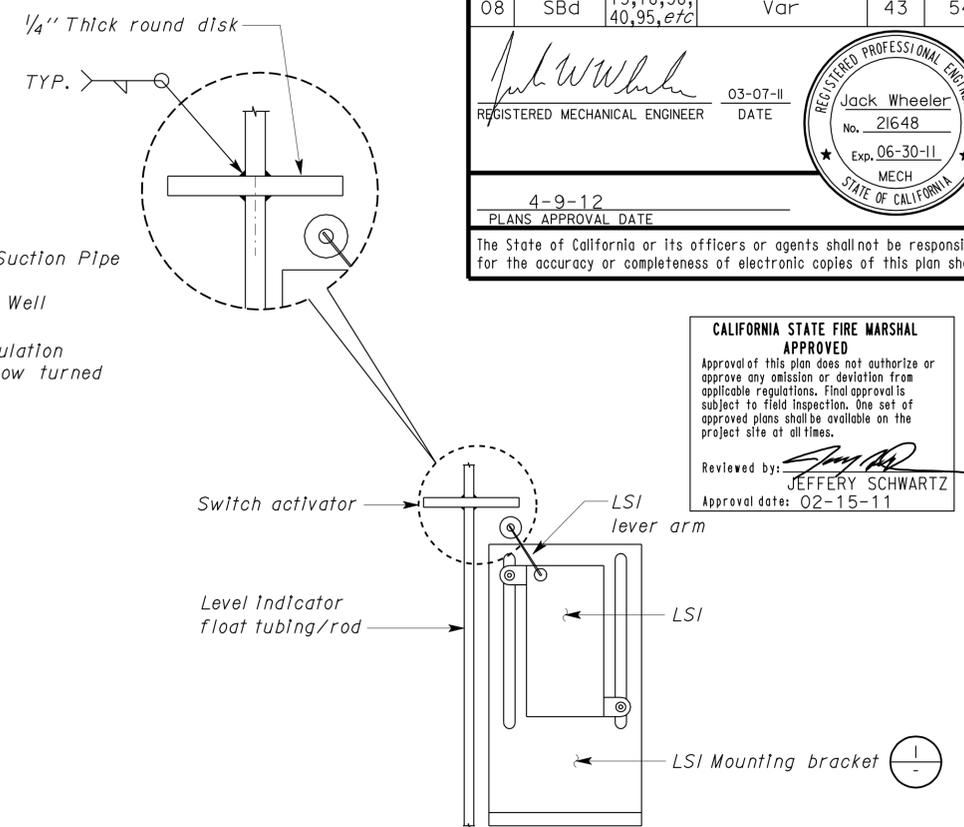


1 LIMIT SWITCH (LS1) MOUNTING BRACKET DETAIL
NO SCALE

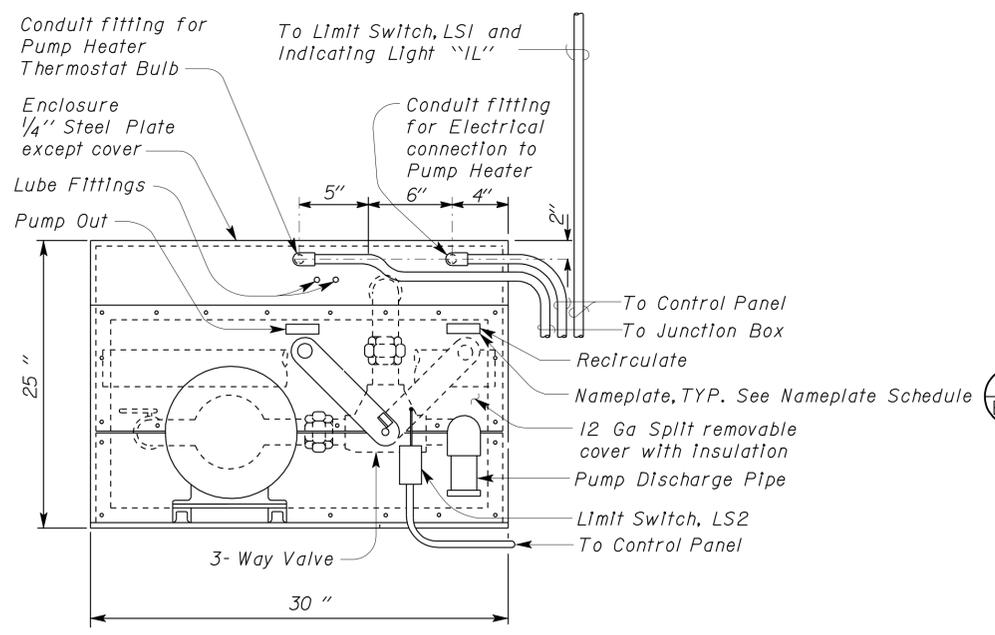
This Emulsion Tank is going to be installed at the following Maintenance Stations:
 Barstow Maintenance Station
 Cajon Maintenance Station
 Essex Maintenance Station
 Fawnskin Maintenance Station
 Victorville Maintenance Station



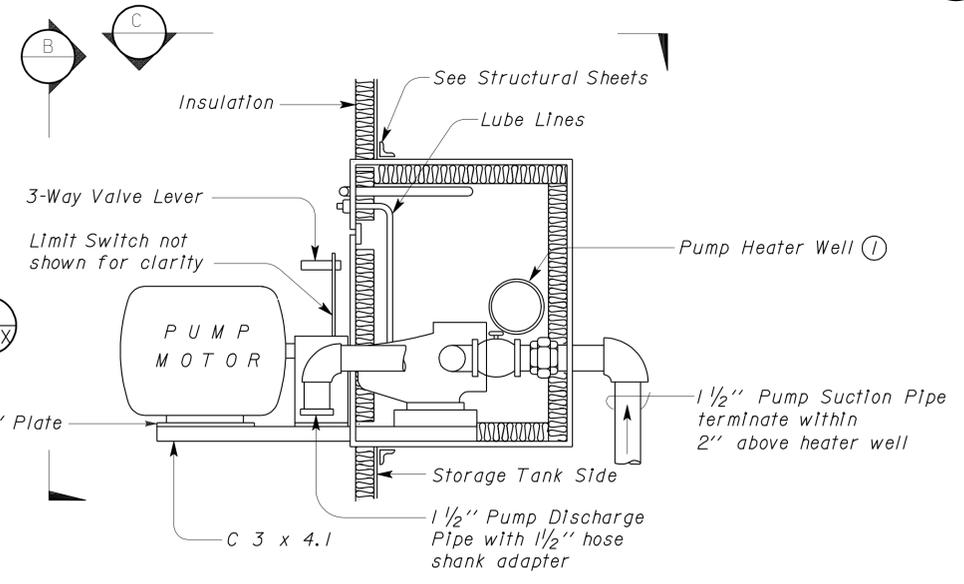
C PLAN



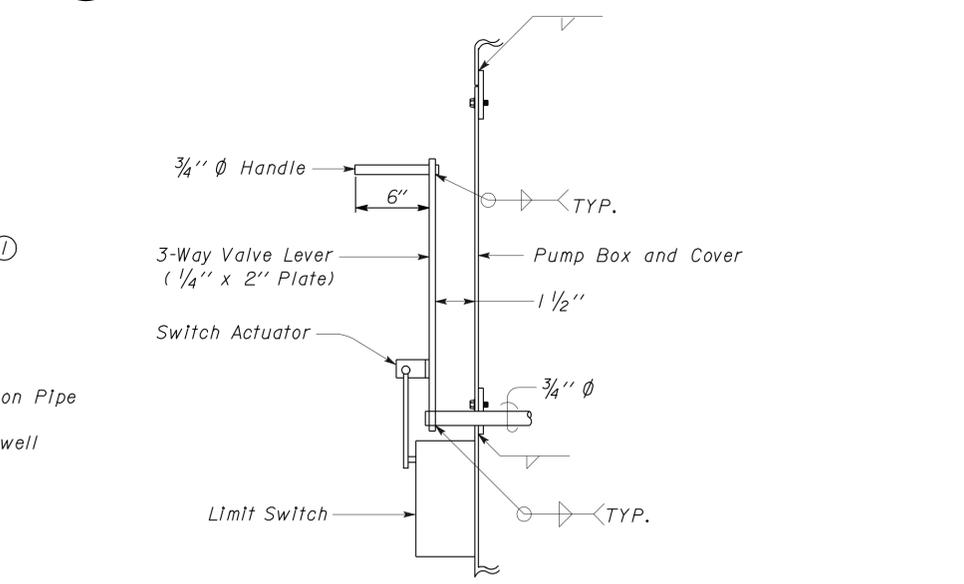
2 LIMIT SWITCH (LS1) MOUNTING DETAIL



B ELEVATION



A SECTION



3 LIMIT SWITCH (LS2) MOUNTING DETAIL

PUMP BOX

NOTES:
 1 Pump Heater Well shall be securely attached to the sides of the Pump Box Wall and shall be removable for repair through the split cover.

Switch Actuator shall be installed in the field during testing in the presence of the Engineer. Switch Actuator shall be installed with sheet metal screws.

DESIGN	BY	Alvin Kwan	CHECKED	Jack Wheeler	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. X	DISTRICT 8 VARIOUS MAINTENANCE STATIONS EMULSION TANK	LIMIT SWITCH MOUNTING DETAILS	SHEET M-7	
	DETAILS	BY	J.R. Stangl	CHECKED							Jack Wheeler
	QUANTITIES	BY	Alvin Kwan	CHECKED							Jack Wheeler

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0	1	2	3
--	---	---	---	---

UNIT PROJECT NUMBER & PHASE	3615 08000200591	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	12/26/10	12/26/10	03/07/11	SHEET OF
-----------------------------	------------------	---	---	----------	----------	----------	----------

DOES SD Imperial Rev. 1/07

17-APR-2012 10:47

m_09.dgn

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	15,18,38,40,95,etc	Var	44	54

03-07-11
Jasvinder K Sandhu
 REGISTERED ELECTRICAL ENGINEER DATE

4-9-12
 PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



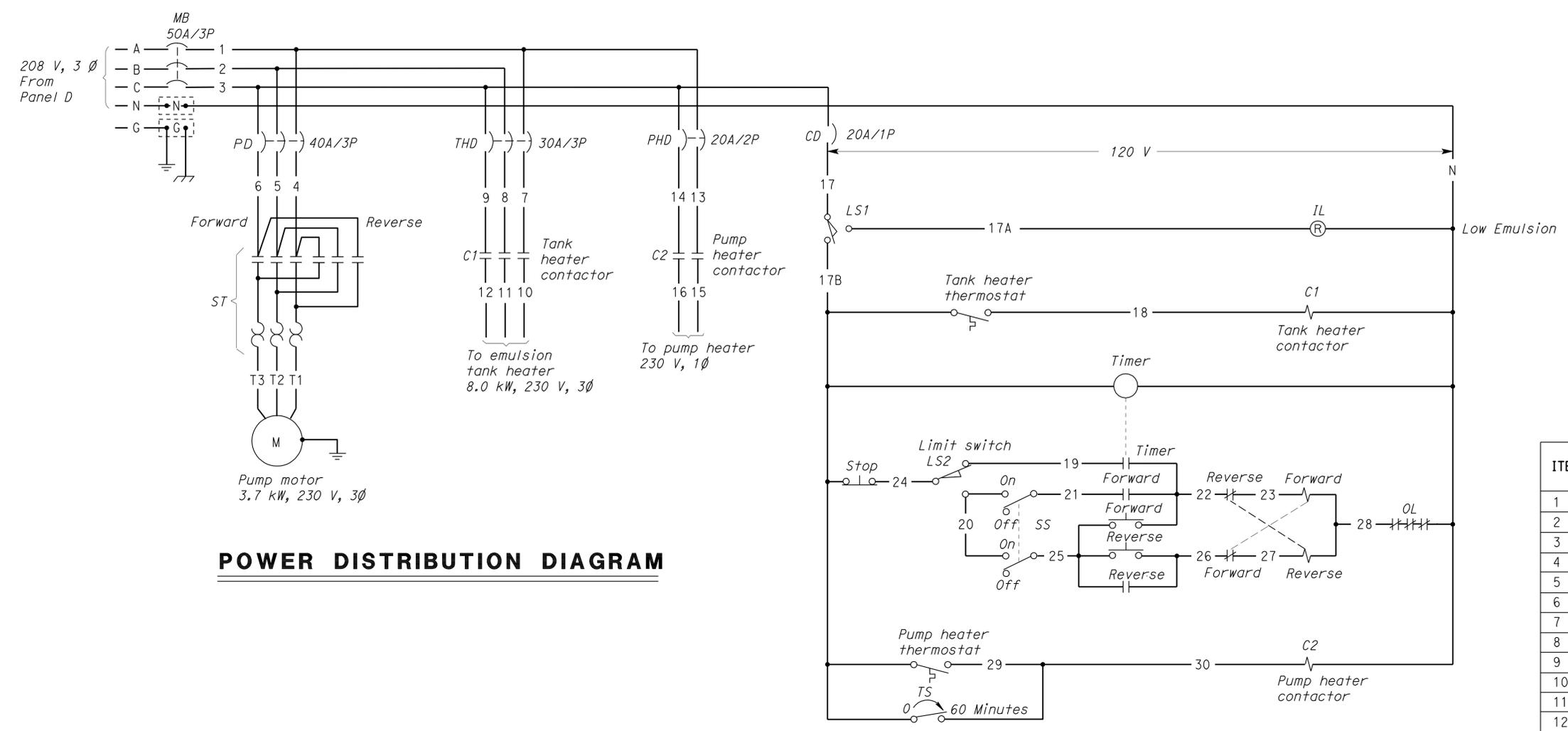
CALIFORNIA STATE FIRE MARSHAL APPROVED
 Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
 Reviewed by: *Jeffery Schwartz*
 JEFFERY SCHWARTZ
 Approval date: 02-15-11

NAMEPLATE SCHEDULE

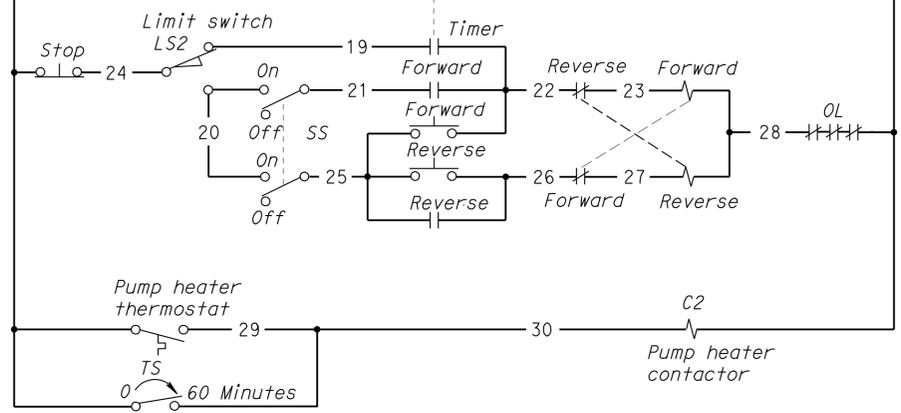
ITEM NO.	INSCRIPTION	LETTER HEIGHT (inch)
1 (MB)	MAIN CIRCUIT BREAKER	1/8
2 (PD)	PUMP MOTOR DISCONNECT	
3 (THD)	TANK HEATER DISCONNECT	
4 (PHD)	PUMP HEATER DISCONNECT	
5 (CD)	CONTROL DISCONNECT	
6 (ST)	PUMP MOTOR STARTER	
7 (C1)	TANK HEATER CONTACTOR	
8	TIMER	
9 (C2)	PUMP HEATER CONTACTOR	
10	PUMP HEATER THERMOSTAT	
11	RESET	
12	ON	
13	OFF	
14	PUMPING	↓
15 (Warning sign)	RESET THE VALVE HANDLE TO RECIRCULATION MODE AFTER PUMPING IN OR OUT	1/4
16	TANK HEATER THERMOSTAT	1/8
17	0-60 MINUTE TIMER SWITCH (PUMP HEATER)	1/8
18	EMULSION TANK CONTROL PANEL	1/4*
19	PUMP OUT	1/4**
20	RECIRCULATE	1/4**

* Installed on exterior door
 ** Install as shown on Mechanical Plans

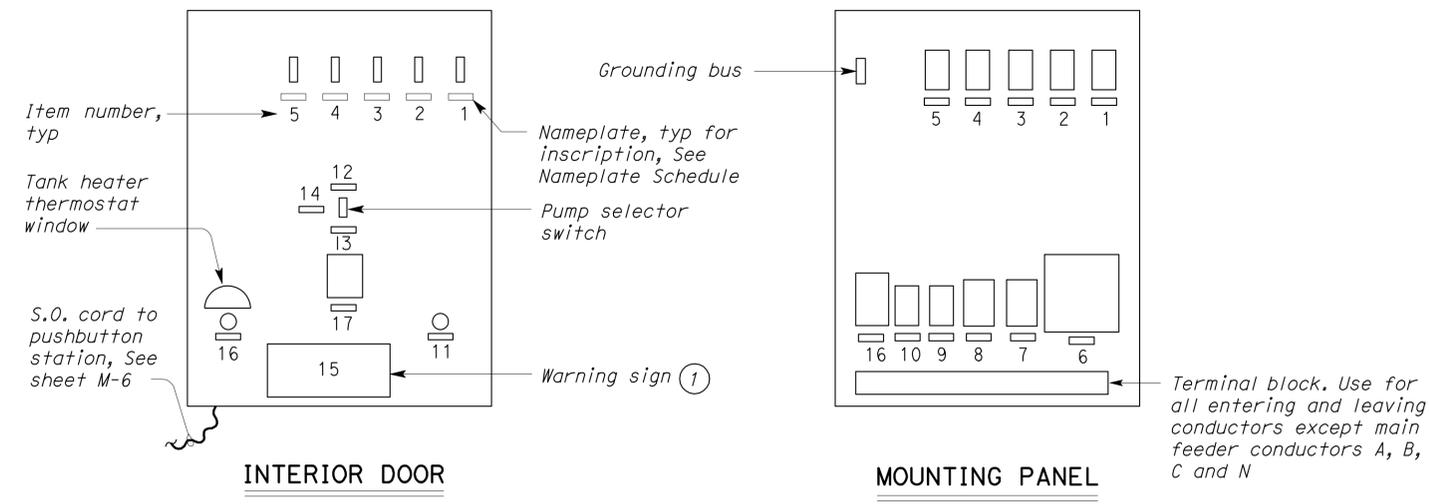
General Note:
 This sheet typical for all Maintenance Stations.



POWER DISTRIBUTION DIAGRAM



CONTROL SCHEMATIC



CONTROL PANEL
 (EXTERIOR DOOR NOT SHOWN)
 NO SCALE

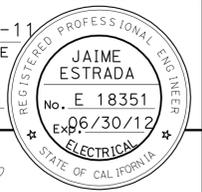
① A second warning sign with the same inscription shall be posted adjacent to the three-way valve.

DESIGN BY <i>J.S. Sandhu</i> CHECKED <i>Ed D. Tapalla</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO.	DISTRICT 8 VARIOUS MAINTENANCE STATIONS EMULSION TANK	SHEET	
			POST MILE		SCHEMATIC DIAGRAM	M-8
DETAILS BY <i>Ed D. Tapalla 12/10</i> CHECKED <i>J.S. Sandhu</i>	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT PROJECT NUMBER & PHASE	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF	
QUANTITIES BY <i>J.S. Sandhu</i> CHECKED <i>Ed D. Tapalla</i>	0 1 2 3	3615 08000200591	12/26/10 12/26/10 03/07/11		17-APR-2012 10:47	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15,18,38,40,95,etc	Var	45	54

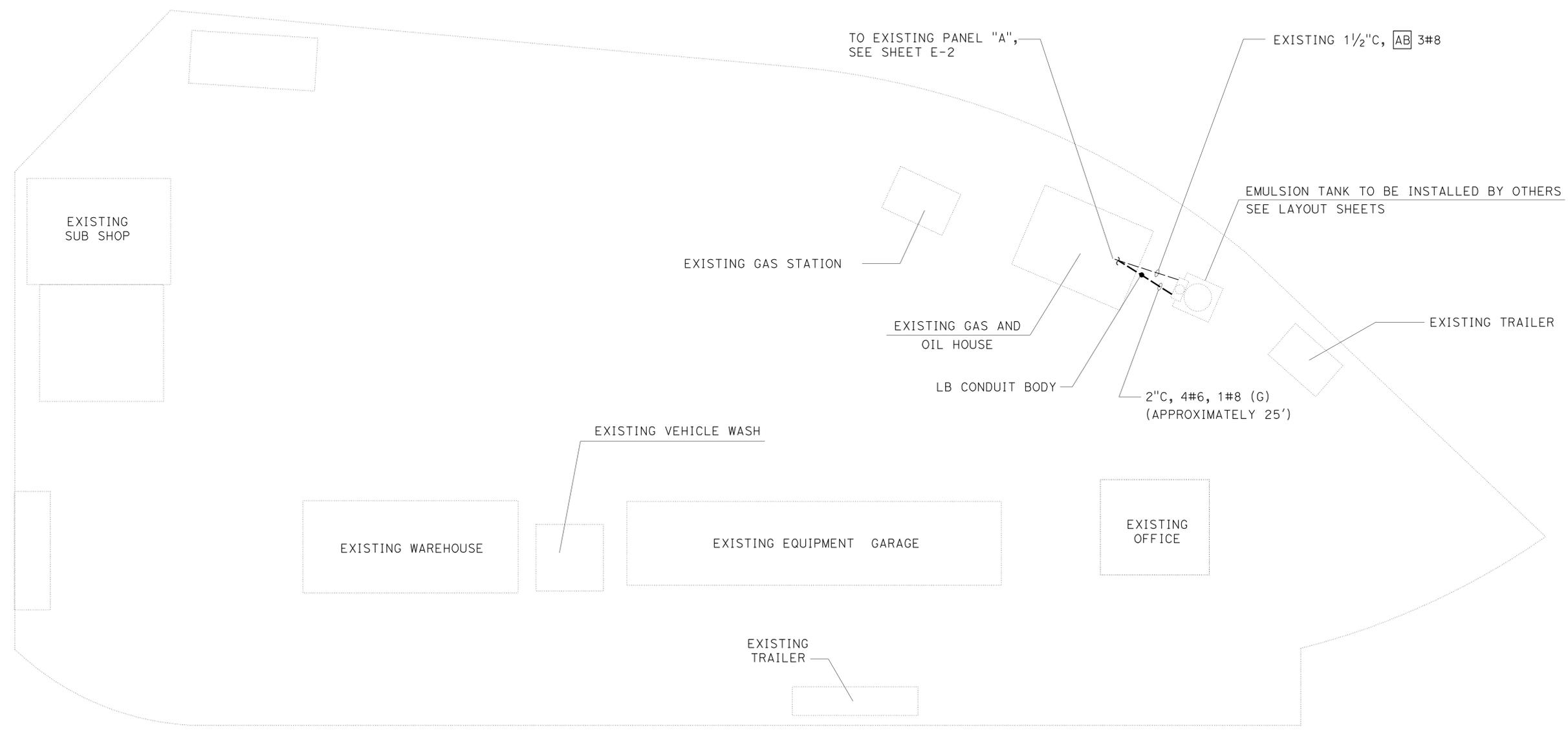
<i>Jaime Estrada</i>	11-10-11
REGISTERED ELECTRICAL ENGINEER	DATE
4-9-12	
PLANS APPROVAL DATE	

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



GENERAL NOTES:

- HOMERUN TO PANELBOARDS SHALL BE INSTALLED AS SHOWN ON THE PLANS. HOMERUNS SHALL NOT BE COMBINED UNLESS APPROVED BY THE ENGINEER.
- NOT ALL EXISTING UNDERGROUND CONDUITS ARE SHOWN. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UNDERGROUND CONDUITS PRIOR TO TRENCHING OR JACKING CONDUITS.
- VERIFY THE LOCATION OF EXISTING PANELS IN THE FIELD. INSTALL CONDUIT ALONG THE EXISTING BUILDING WALL TO MAKE ENTRY INTO THE BUILDING. CORE DRILL THE EXISTING WALL AS REQUIRED FOR CONDUIT AND CONDUCTORS ENTRY INTO THE BUILDING.
- INSTALL CONDUIT CONCEALED INSIDE OFFICES/CREW ROOMS, ETC. AND EXPOSE ELSEWHERE AS DIRECTED BY THE ENGINEER.
- TERMINATE CONDUIT AND CONDUCTORS INSIDE THE EXISTING PANEL AND TERMINATE AS REQUIRED.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B
 FUNCTIONAL SUPERVISOR: FERDINAND DE LA CRUZ
 CHECKED BY: FERDINAND DE LA CRUZ
 M.E.: 06-23-11
 REVISOR: JAIME ESTRADA
 DATE: 11-10-11

APPROVED FOR ELECTRICAL WORK ONLY



**ELECTRICAL WORK
(BARSTOW MAINTENANCE YARD)**

NO SCALE

E-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15,18,38, 40,95,etc	Var	46	54

Jaime Estrada 11-10-11
 REGISTERED ELECTRICAL ENGINEER DATE
 4-9-12
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

EXISTING PANEL "A"

MAIN 200 A/3P CB, 120/240 V, 3 PHASE, 4 WIRE									
USE SQUARE-D TYPE NQO PANELBOARD CIRCUIT BREAKERS									
DESCRIPTION	BRK	CKT	A	B	C	CKT	BRK	DESCRIPTION	
STORAGE ROOM LIGHTS	20/1	1	•			2	20/1	OFFICE CEILING LIGHTS	
PLUGS	20/1	3		•		4	20/1	CEILING LIGHTS	
COMPRESSOR	20/1	5			•	6	20/1	WALL LIGHT	
STEAM CLEANER	20/2	7	•			8	20/1	WALL AND FLOOD LIGHT	
		9		•		10	20/1	YARD LIGHT	
HEATERS	20/1	11			•	12	---	SPARE *	
BLANK	---	13	•			14	---	BLANK	
FUEL PUMPS	60/2	15		•		16	50/2	WELDER	
		17			•	18			
HOIST	20/3	19	•			20			
		21		•		22	---	BLANK *	
		23			•	24			
AIR COMPRESSOR	20/3	25	•			26	(N)	EMULSION TANK CONTROL PANEL	
		27		•		28	50/3		
		29			•	30			

(N) = NEW BREAKER TO REPLACE EXISTING CIRCUIT BREAKER.
RS EXISTING CIRCUIT BREAKER.
 * = PROVIDE CIRCUIT BREAKER COVER.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B
 FUNCTIONAL SUPERVISOR
 FERDINAND DE LA CRUZ
 CALCULATED-DESIGNED BY
 CHECKED BY
 JAIME ESTRADA
 FERDINAND DE LA CRUZ
 REVISED BY
 DATE REVISED
 JE
 00/00/00
 ME
 06-23-11

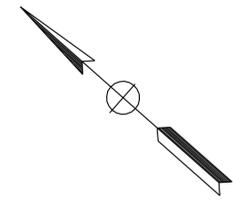
APPROVED FOR ELECTRICAL WORK ONLY

ELECTRICAL WORK (BARSTOW MAINTENANCE YARD)

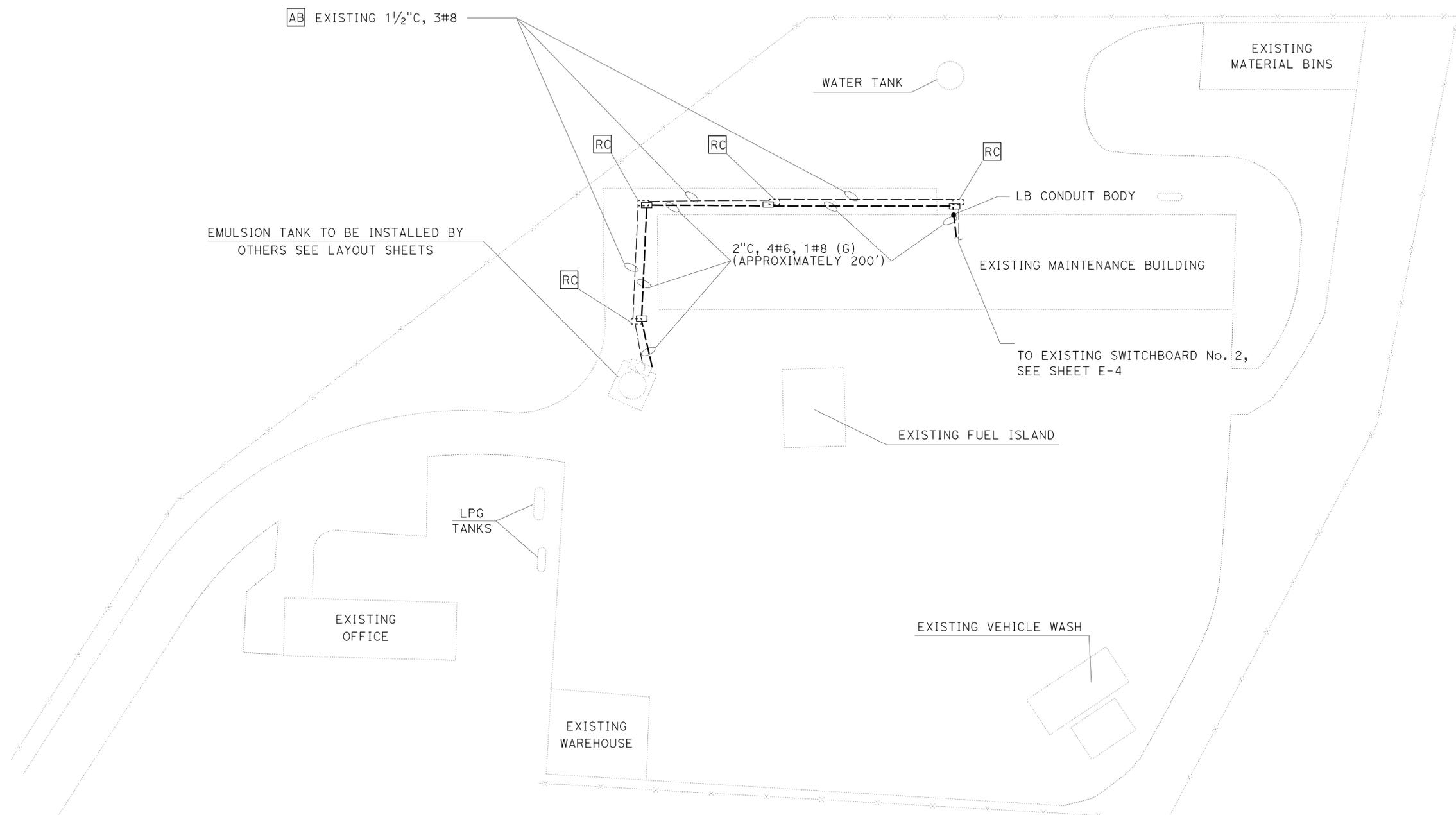
NO SCALE

E-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15,18,38, 40,95,etc	Var	47	54
<i>Jamie Estrada</i> REGISTERED ELECTRICAL ENGINEER			DATE	11-10-11	
4-9-12 PLANS APPROVAL DATE			REGISTERED PROFESSIONAL ENGINEER JAMIE ESTRADA No. E 18351 Exp. 06/30/12 ELECTRICAL STATE OF CALIFORNIA		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans ELECTRICAL DESIGN B	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	JAMIE ESTRADA	REVISOR	M.E.
	FERDINAND DE LA CRUZ	CHECKED BY	FERDINAND DE LA CRUZ	DATE REVISED	06-23-11



**ELECTRICAL WORK
(CAJON MAINTENANCE YARD)**

APPROVED FOR ELECTRICAL WORK ONLY

NO SCALE

E-3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15,18,38, 40,95,etc	Var	48	54

11-10-11
 REGISTERED ELECTRICAL ENGINEER DATE
 4-9-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 JAIME ESTRADA
 No. E 18351
 Exp 06/30/12
 ELECTRICAL
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

EXISTING SWITCHBOARD No. 2

300 A, 120/240 V, 3 PHASE, 4 WIRE								
WESTINGHOUSE SWITCHBOARD 300 A, 240 V, 3P, MAIN								
DESCRIPTION	BRK	CKT	A	B	C	CKT	BRK	DESCRIPTION
PANEL B	70/3	1	•			2	125/3	PANEL A
		3		•		4		
		5			•	6		
SWAMP COLLER MAIN BREAKER	100/3	7	•			8	50/3	EMULSION TANK CONTROL PANEL *
		9		•		10		
		11			•	12		
WELL PUMP	70/3	13	•			14	40/3	SPACE
		15		•		16		
		17			•	18		
OVERHEAD DOOR SALT STORAGE	15/3	19	•			20	100/3	SPARE
		21		•		22		
		23			•	24		
SPARE	100/3	25	•			26	100/3	PANEL C
		27		•		28		
		29			•	30		
PANEL H	150/3	31	•			32		(PART OF PANEL H)
		33		•		34		
		35			•	36		
SPACE			•					SPACE
SPACE				•				SPACE

* = REUSE EXISTING CIRCUIT BREAKER.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B
 FUNCTIONAL SUPERVISOR: FERDINAND DE LA CRUZ
 CALCULATED/DESIGNED BY: CHECKED BY:
 JAIME ESTRADA
 FERDINAND DE LA CRUZ
 REVISED BY: DATE REVISED:
 JE 00/00/00
 ME 06-23-11

APPROVED FOR ELECTRICAL WORK ONLY

ELECTRICAL WORK (CAJON MAINTENANCE YARD)

NO SCALE

E-4



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN B

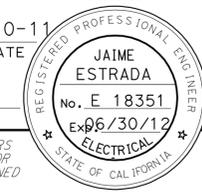
FUNCTIONAL SUPERVISOR
 FERDINAND DE LA CRUZ

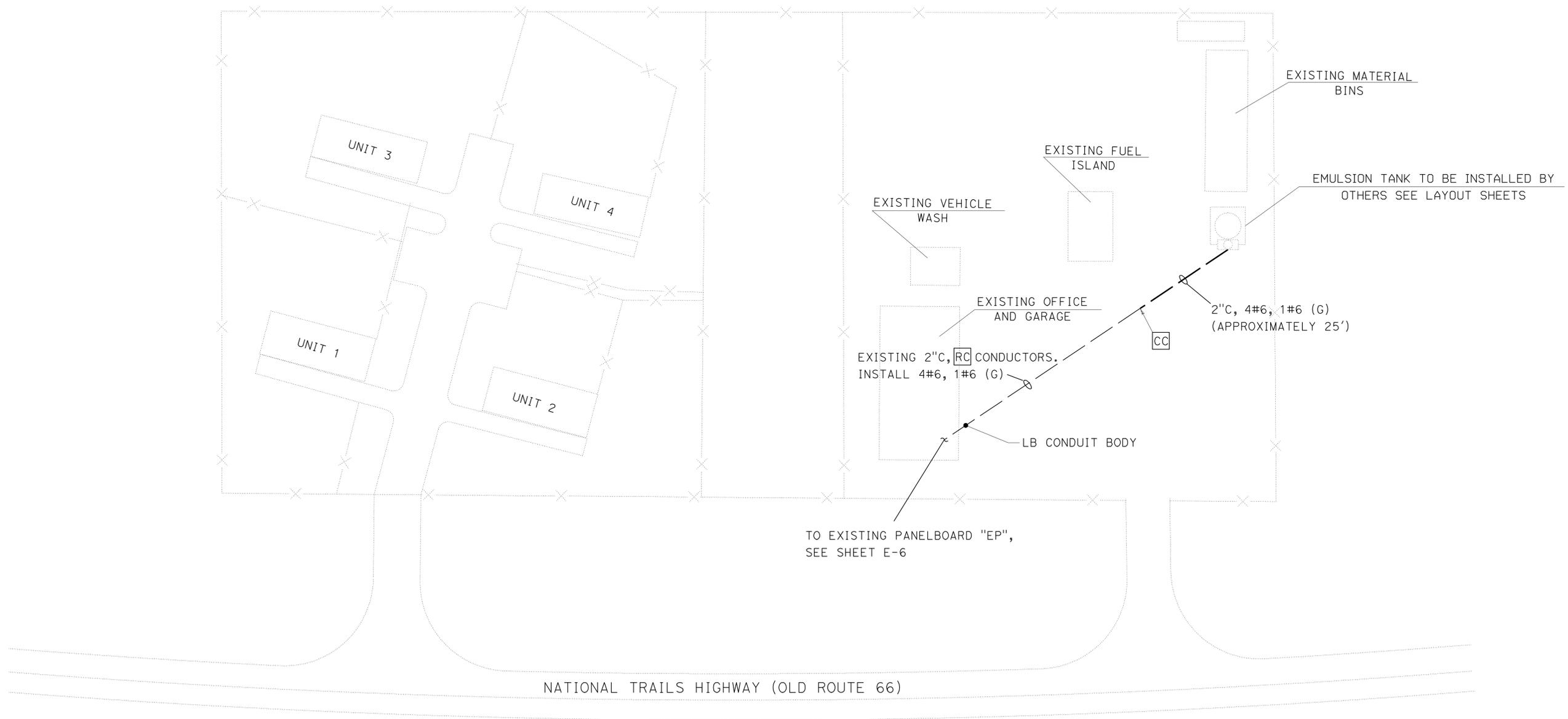
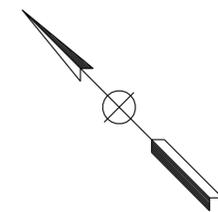
CALCULATED/DESIGNED BY
 CHECKED BY

JAI ME ESTRADA
 FERDINAND DE LA CRUZ

REVISOR BY
 DATE REVISED

ME
 06-23-11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15,18,38, 40,95,etc	Var	49	54
			11-10-11		
REGISTERED ELECTRICAL ENGINEER			DATE		
4-9-12			PLANS APPROVAL DATE		
					
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APPROVED FOR ELECTRICAL WORK ONLY

**ELECTRICAL WORK
 (ESSEX MAINTENANCE YARD)**

NO SCALE

E-5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15,18,38, 40,95,etc	Var	50	54

11-10-11
 REGISTERED ELECTRICAL ENGINEER DATE
 4-9-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 JAIME ESTRADA
 No. E 18351
 Exp 6/30/12
 ELECTRICAL
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B
 FUNCTIONAL SUPERVISOR
 FERDINAND DE LA CRUZ
 CALCULATED/DESIGNED BY
 CHECKED BY
 JAIME ESTRADA
 FERDINAND DE LA CRUZ
 REVISED BY
 DATE REVISED
 JE
 00/00/00
 ME
 06-23-11

EXISTING PANELBOARD "EP"

400 A, 120/240 V, 3 PHASE, 4 WIRE								
SQUARE-D TYPE NQOD								
DESCRIPTION	BRK	CKT	A	B	C	CKT	BRK	DESCRIPTION
AIR COMPRESSOR	30/3	1	•			2	60/3	EMULSION TANK CONTROL PANEL
		3		•		4		
		5			•	6		
SPARE	20/3	7	•			8	70/3	WELL PUMP
		9		•		10		
		11			•	12		
SPARE	15/3	13	•			14	20/3	LPG PUMP
		15		•		16		
		17			•	18		
FUEL ISLAND	40/2	19	•			20	50/2	PANEL RP
		21		•		22		
PARKING LOT LIGHTING	30/2	23			•	24	-----	SPACE
		25	•			26	15/1	LEAK DETECTION PANEL
SPARE	20/2	27		•		28	15/1	ICE MAKER
		29			•	30	-----	SPACE
COMPUTER RECEPT	15/1	31	•			32	15/1	TELEPHONE RECEPT
ELECTRICAL RM LIGHTS	15/1	33		•		34	20/1	SPARE
SPACE	-----	35			•	36	30/1	SPARE
SPACE	-----	37	•			38	-----	SPACE
SPACE	-----	39		•		40	-----	SPACE
SPACE	-----	41			•	42	-----	SPACE

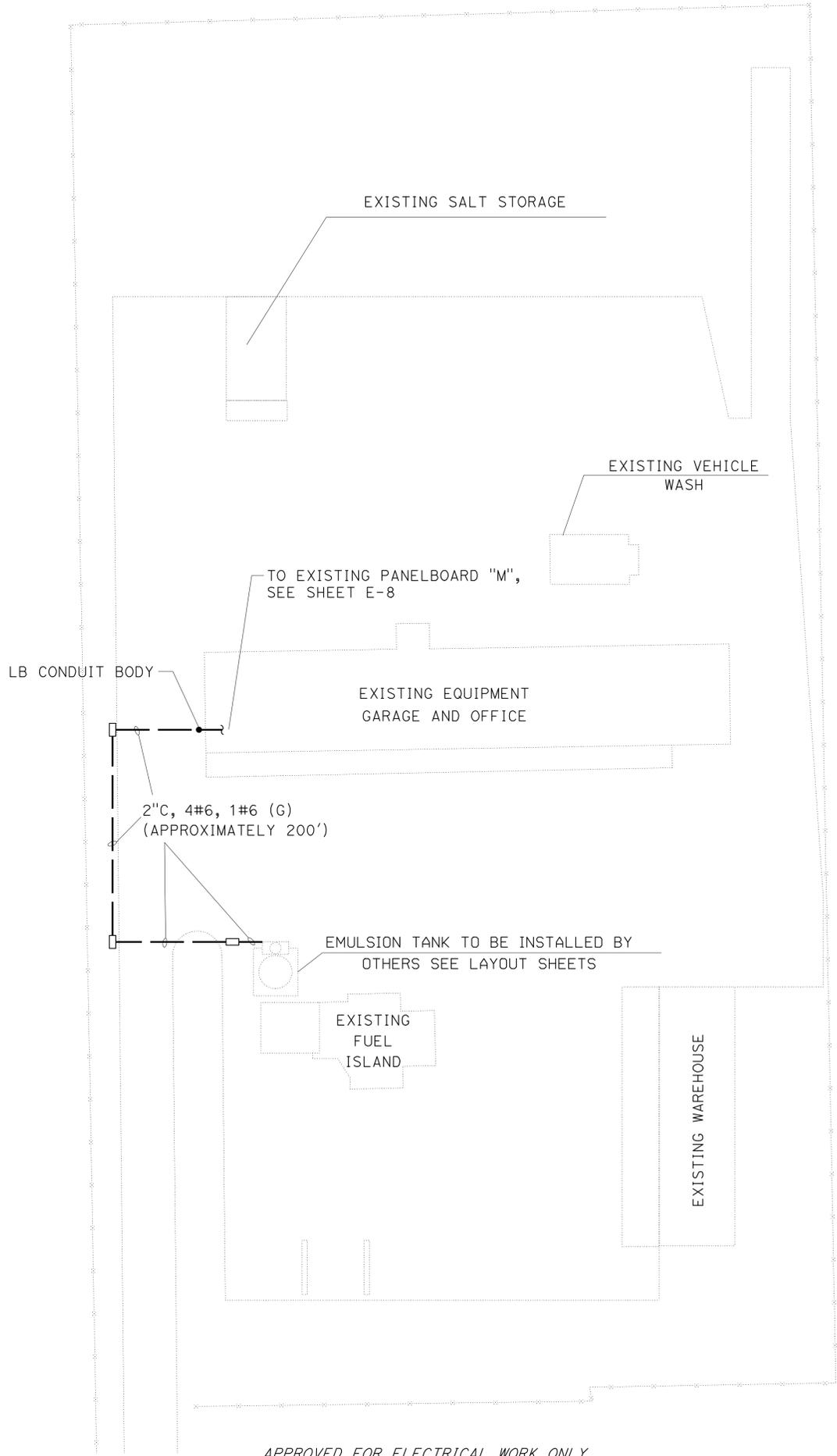
APPROVED FOR ELECTRICAL WORK ONLY

ELECTRICAL WORK (ESSEX MAINTENANCE YARD)

NO SCALE **E-6**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	JAIM E ESTRADA	REVISIED BY	JE	ME
Caltrans ELECTRICAL DESIGN B	FERDINAND DE LA CRUZ	CHECKED BY	FERDINAND DE LA CRUZ	DATE REVISED	00/00/00	06-23-11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15,18,38, 40,95,etc	Var	51	54
<i>Jaime Estrada</i> REGISTERED ELECTRICAL ENGINEER			11-10-11	DATE	
4-9-12 PLANS APPROVAL DATE					
REGISTERED PROFESSIONAL ENGINEER JAIM E ESTRADA No. E 18351 Exp. 06/30/12 ELECTRICAL STATE OF CALIFORNIA					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



**ELECTRICAL WORK
(FAWSKIN MAINTENANCE YARD)**

APPROVED FOR ELECTRICAL WORK ONLY

NO SCALE

E-7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15,18,38, 40,95,etc	Var	52	54

REGISTERED ELECTRICAL ENGINEER DATE 10-19-11
 REGISTERED ELECTRICAL ENGINEER DATE 4-9-12
 PLANS APPROVAL DATE 4-9-12

REGISTERED PROFESSIONAL ENGINEER
 JAIME ESTRADA
 No. E 18351
 Exp 06/30/12
 ELECTRICAL
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B
 FUNCTIONAL SUPERVISOR
 FERDINAND DE LA CRUZ
 CALCULATED/DESIGNED BY
 CHECKED BY
 JAIME ESTRADA
 FERDINAND DE LA CRUZ
 REVISED BY
 DATE REVISED
 JE
 00/00/00
 ME
 06-23-11

EXISTING PANELBOARD "M"

120/240 V, 3 PHASE, 4 WIRE								
SQUARE-D TYPE QO LOAD CENTER								
DESCRIPTION	BRK	CKT	A	B	C	CKT	BRK	DESCRIPTION
HOIST	50/3	1	•			2	(N) 50/3	EMULSION TANK CONTROL PANEL
		3		•		4		
		5			•	6		
SPACE	---	7	•			8	---	SPACE
		9		•		10		
		11			•	12		

(N) = NEW CIRCUIT BREAKER TO REPLACE EXISTING CIRCUIT BREAKER.
 RS EXISTING BREAKER.

ELECTRICAL WORK (FAWNSKIN MAINTENANCE YARD)

APPROVED FOR ELECTRICAL WORK ONLY

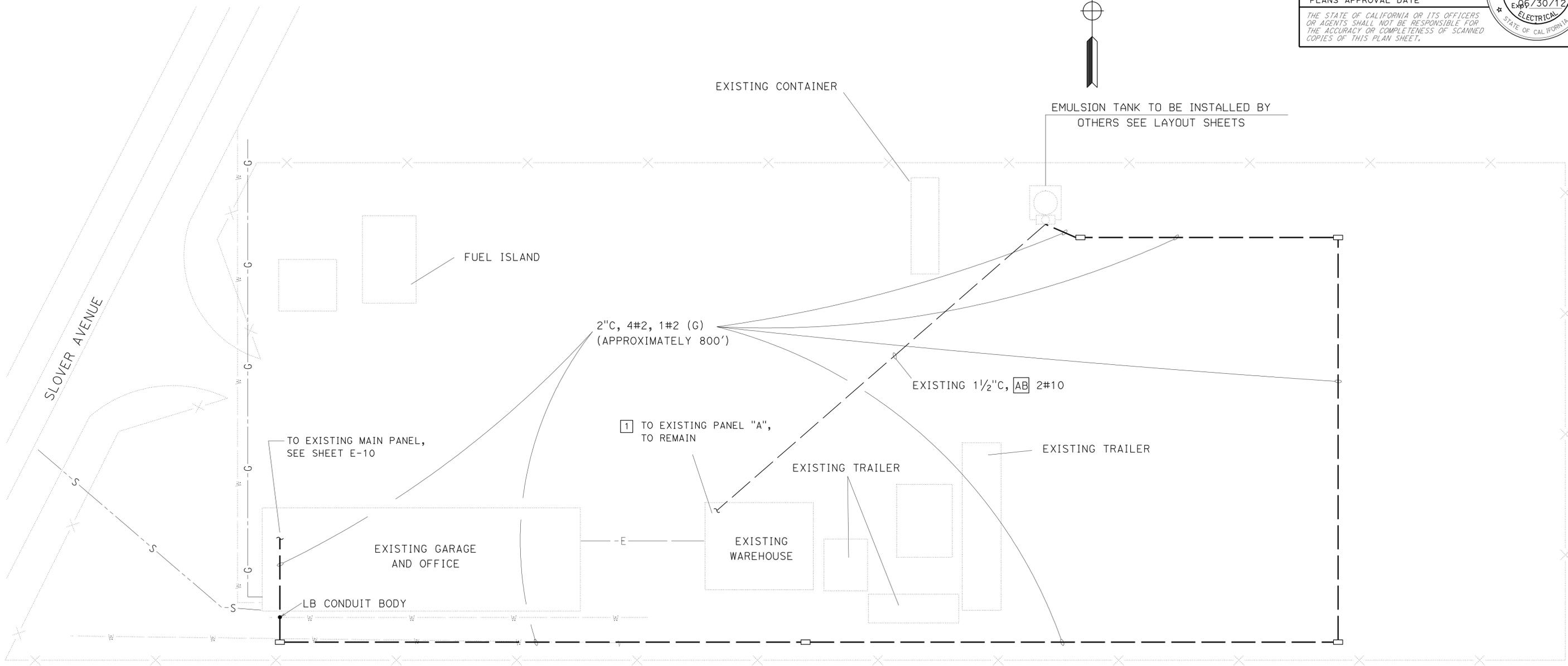
NO SCALE

E-8

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15,18,38, 40,95,etc	Var	53	54
<i>Jaime Estrada</i> REGISTERED ELECTRICAL ENGINEER			8-29-11 DATE	REGISTERED PROFESSIONAL ENGINEER JAIME ESTRADA No. E 18351 Exp. 06/30/12 ELECTRICAL STATE OF CALIFORNIA	
4-9-12 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

NOTE:

- 1 LABEL EXISTING CIRCUIT BREAKER FOR EXISTING EMULSION TANK AS "SPARE".



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE	ME
Caltrans ELECTRICAL DESIGN B	FERDINAND DE LA CRUZ	FERDINAND DE LA CRUZ	JE	00/00/00	06-23-11

**ELECTRICAL WORK
(VICTORVILLE MAINTENANCE YARD)**

NO SCALE

E-9

APPROVED FOR ELECTRICAL WORK ONLY



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15,18,38, 40,95,etc	Var	54	54

Jaime Estrada 8-29-11
 REGISTERED ELECTRICAL ENGINEER DATE
 4-9-12
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

EXISTING MAIN PANEL

MAIN 200 A/3P CB, 120/240 V, 3 PHASE, 4 WIRE								
WESTINGHOUSE PANELBOARD USE QUICKLAG P CIRCUIT BREAKERS								
DESCRIPTION	BRK	CKT	A	B	C	CKT	BRK	DESCRIPTION
HOIST	30/3	1	•			2	30/1	
		3		•		4	---	SPACE *
		5			•	6	50/2	MECHANIC OFFICE
7	•			8				
EQUIPMENT GARAGE AND OFFICE	20/2	9		•		10	---	SPACE *
		11			•	12	15/1	OFFICE COMPUTER
COOLER	20/2	13	•			14	15/1	OFFICE COMPUTER
		15		•		16	---	SPACE *
SPACE *	---	17			•	18	15/1	OUTSIDE LIGHT
SPACE *	---	19	•			20	15/1	OUTSIDE LIGHT
SPACE *	---	21		•		22	---	SPACE *
SPACE *	---	23			•	24	---	SPACE *
EMULSION TANK CONTROL PANEL	(N) 50/3	25	•			26	30/3	AIR COMPRESSOR
		27		•		28		
		29			•	30		

(N) = NEW CIRCUIT BREAKER TO BE ADDED
 * = PROVIDE CIRCUIT BREAKER COVERS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B
 FUNCTIONAL SUPERVISOR
 FERDINAND DE LA CRUZ
 CALCULATED/DESIGNED BY
 CHECKED BY
 FERDINAND DE LA CRUZ
 JAIME ESTRADA
 FERDINAND DE LA CRUZ
 REVISOR BY
 DATE REVISED
 00/00/00
 ME
 06-23-11

EMULSION TANK (VICTORVILLE MAINTENANCE YARD)

NO SCALE **E-10**

APPROVED FOR ELECTRICAL WORK ONLY