



# **LAKE BERRYESSA RECREATION AREAS IMPROVEMENT PROJECT SPANISH FLAT**

## **60% DESIGN DRAWINGS**

**JULY 2015**

PRELIMINARY  
NOT FOR  
CONSTRUCTION

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SHEET No.	DESCRIPTION
<b>GENERAL</b>	
LB-SFRA-G01	GENERAL - COVER SHEET
LB-SFRA-G02	GENERAL - INDEX SHEET
LB-SFRA-G03	GENERAL - LOCATION, VICINITY, & KEY MAP
LB-SFRA-G04	GENERAL - NOTES
LB-SFRA-G05	GENERAL - SYMBOLS
LB-SFRA-G06	GENERAL - ABBREVIATIONS

SHEET No.	DESCRIPTION
<b>CIVIL SITE PLANS</b>	
LB-SFRA-CP01	CIVIL - SITE PLAN I
LB-SFRA-CP02	CIVIL - SITE PLAN II
LB-SFRA-CP03	CIVIL - SITE PLAN III
LB-SFRA-CP04	CIVIL - SITE PLAN IV
LB-SFRA-CP05	CIVIL - SITE PLAN V
LB-SFRA-CP06	CIVIL - SITE PLAN VI
LB-SFRA-CP07	CIVIL - SITE PLAN VII
LB-SFRA-CP08	CIVIL - SITE PLAN VIII
LB-SFRA-CP09	CIVIL - SITE PLAN IX
LB-SFRA-CD01	CIVIL - GRADING AND ROAD DETAILS I
LB-SFRA-CD02	CIVIL - GRADING AND ROAD DETAILS II
LB-SFRA-CD03	CIVIL - GRADING AND ROAD DETAILS III
LB-SFRA-CD04	CIVIL - GRADING AND ROAD DETAILS IV
LB-SFRA-CD05	CIVIL - GRADING AND ROAD DETAIL V
LB-SFRA-CD06	CIVIL - GRADING AND ROAD DETAILS VI
LB-SFRA-CD07	NOT USED
LB-SFRA-CD08	NOT USED
LB-SFRA-CD09	NOT USED
LB-SFRA-CD10	CIVIL - GRADING AND ROAD DETAIL X
LB-SFRA-CR01	CIVIL - BOAT LAUNCH DEMOLITION PLAN
LB-SFRA-CR02	NOT USED
LB-SFRA-CR03	CIVIL - BOAT LAUNCH PLAN AND PROFILE
LB-SFRA-CR04	CIVIL - BOAT LAUNCH SECTIONS AND DETAILS
LB-SFRA-CR05	CIVIL - BOAT LAUNCH SECTIONS AND DETAILS
LB-SFRA-CR06	CIVIL - BOAT LAUNCH SECTIONS AND DETAILS
LB-SFRA-CR07	CIVIL - BOAT LAUNCH SECTIONS AND DETAILS

SHEET No.	DESCRIPTION
<b>INFRASTRUCTURE</b>	
LB-SFRA-IP01	INFRASTRUCTURE - PLAN I
LB-SFRA-IP02	INFRASTRUCTURE - PLAN II
LB-SFRA-IP03	INFRASTRUCTURE - PLAN III
LB-SFRA-IP04	INFRASTRUCTURE - PLAN IV
LB-SFRA-IP05	INFRASTRUCTURE - PLAN V
LB-SFRA-IP06	INFRASTRUCTURE - PLAN VI
LB-SFRA-IP07	INFRASTRUCTURE - PLAN VII
LB-SFRA-IP08	INFRASTRUCTURE - PLAN VIII
LB-SFRA-IP09	INFRASTRUCTURE - PLAN IX

SHEET No.	DESCRIPTION
<b>INFRASTRUCTURE</b>	
LB-SFRA-IS01	NOT USED
LB-SFRA-IS02	NOT USED
LB-SFRA-IS03	NOT USED
LB-SFRA-IS04	INFRASTRUCTURE - SEWER DETAILS IV
LB-SFRA-IS05	NOT USED
LB-SFRA-IS06	INFRASTRUCTURE - SEWER DETAILS VI
LB-SFRA-IS07	NOT USED
LB-SFRA-IS08	NOT USED
LB-SFRA-IS09	INFRASTRUCTURE - SEWER DETAILS IX
LB-SFRA-ISS01	INFRASTRUCTURE - STRUCTURAL GENERAL NOTES, ABBREVIATIONS, & DETAILS
LB-SFRA-ISS02	INFRASTRUCTURE - STRUCTURAL PLANS, SECTIONS, & DETAILS
LB-SFRA-IW01	INFRASTRUCTURE - WATER DETAILS I
LB-SFRA-IW02	INFRASTRUCTURE - WATER DETAILS II
LB-SFRA-IW03	INFRASTRUCTURE - WATER DETAILS III
LB-SFRA-IW04	INFRASTRUCTURE - WATER DETAILS IV
LB-SFRA-IE01	INFRASTRUCTURE - ELECTRICAL LEGEND
LB-SFRA-IE02	INFRASTRUCTURE - ELECTRICAL DETAILS
LB-SFRA-IE03	INFRASTRUCTURE - SF-PNL-1 ONELINE
LB-SFRA-IE04	INFRASTRUCTURE - SF-PNL-2 ONELINE
LB-SFRA-IE05	INFRASTRUCTURE - SF-PNL-5 ONELINE
LB-SFRA-IE06	INFRASTRUCTURE - CABLE SCHEDULES

**LEGEND**

Area: Lake Berryessa — Drawing Number

Subarea: Spanish Flat Recreation Area — Discipline

**Subarea Designations**

PCRA	Putah Canyon Recreation Area
MSRA	Monticello Shores Recreation Area
BPRA	Berryessa Point Recreation Area
SFRA	Spanish Flat Recreation Area
SCRA	Steele Canyon Recreation Area

**Discipline Legend**

G	General
CP	Civil Site Plan
CD	Civil Grading & Road Details
CR	Civil Boat Launch & Ramp Details
IP	Infrastructure Plans
IS	Infrastructure Sewer Details
ISS	Infrastructure Sewer Structural
IW	Infrastructure Water Details
IE	Infrastructure Electrical Details



ALWAYS THINK SAFETY

U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF RECLAMATION  
CENTRAL CALIFORNIA AREA OFFICE  
LAKE BERRYESSA (CALIFORNIA)  
**RECREATION AREA**  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**  
CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

CONTRACTOR

ACCEPTED  
NAME  
TITLE

STATION NAME (CITY, ST)      YYYY-MM-DD

**SPANISH FLAT  
INDEX SHEET**

**LB-SFRA-G02**  
SHEET X OF X

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YYYY-MM-DD  
105904.2330.019

ACCEPTED:  
NAME, PROF. ABRB

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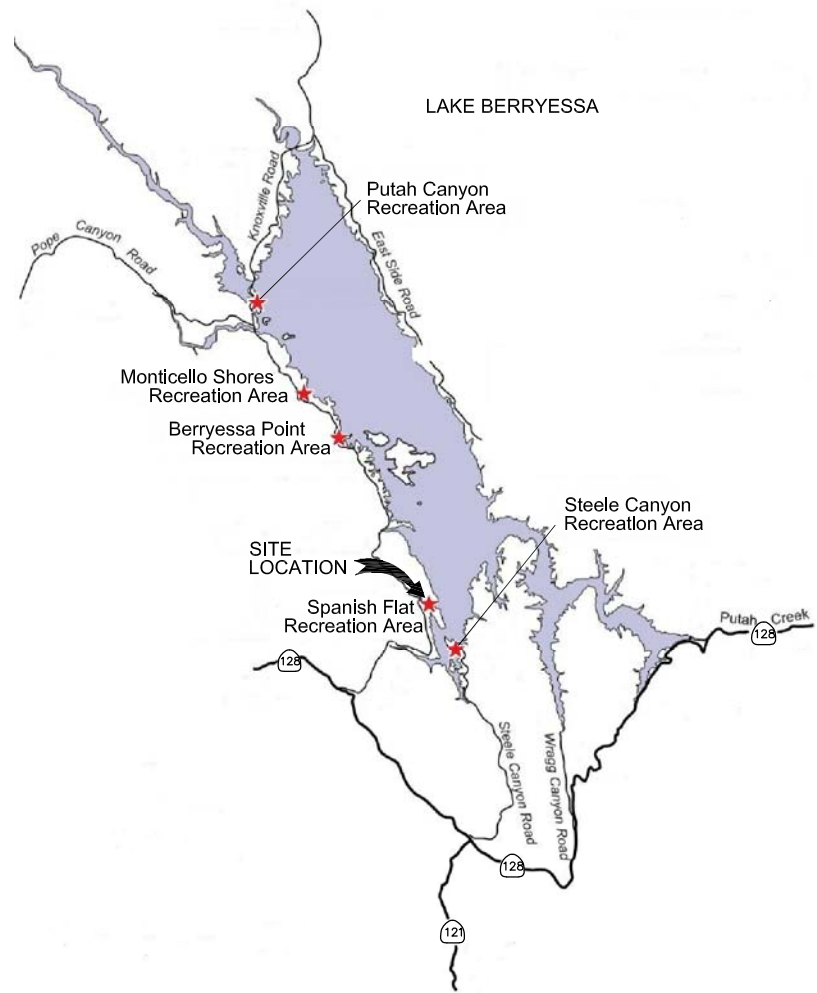
**SPANISH FLAT  
LOCATION, VICINITY,  
& KEY MAP**

LB-SFRA-G03  
SHEET X OF X

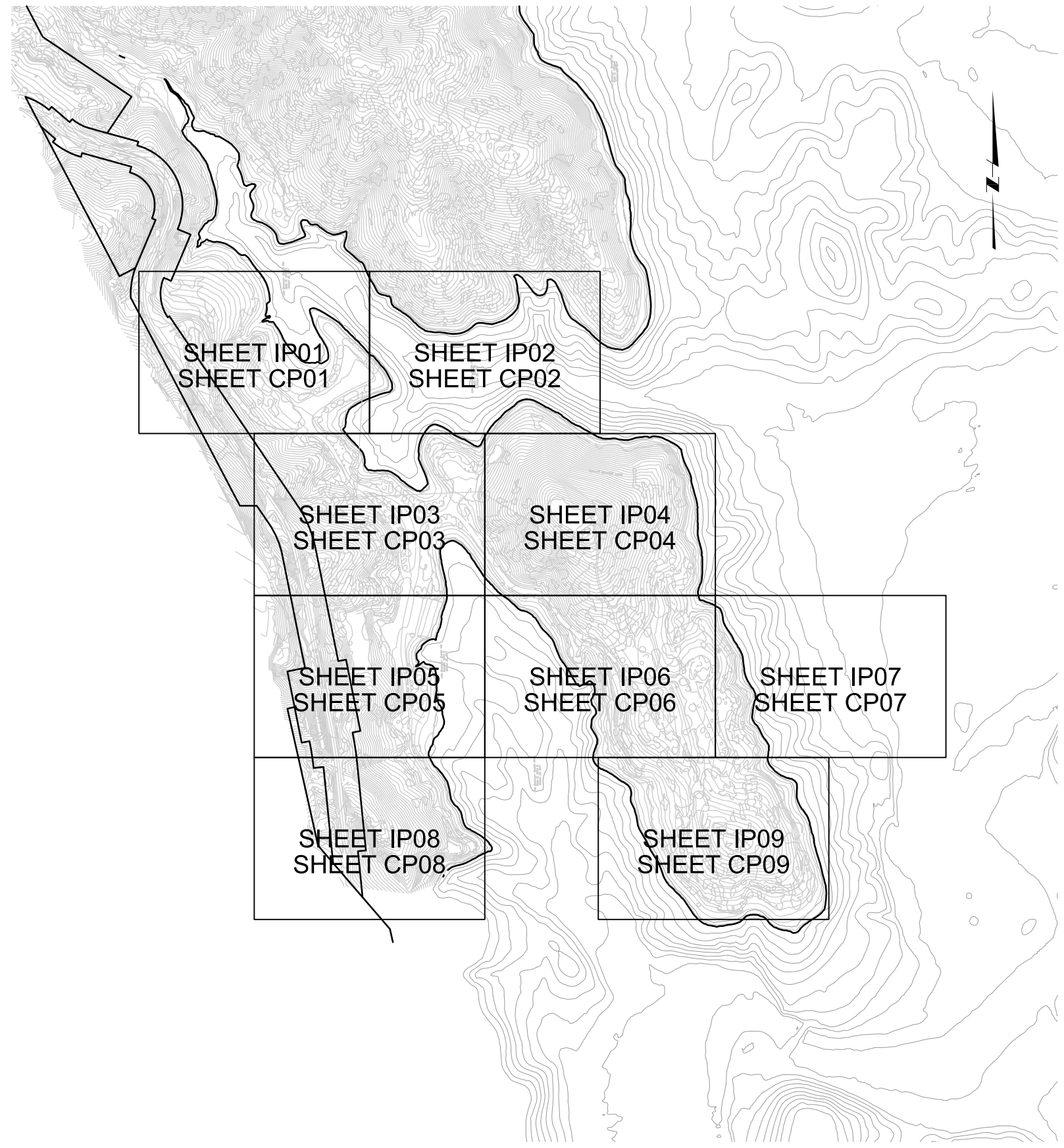
**LOCATION MAP**  
N.T.S.



**VICINITY MAP**  
N.T.S.



**KEY MAP**  
N.T.S.



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**GENERAL NOTES:**

1. GENERAL NOTES APPLY TO ALL SHEETS, EXCEPT WHERE MORE SPECIFIC REQUIREMENTS ARE PROVIDED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL THE EXISTING ITEMS WITHIN OR ADJACENT TO THE WORK OR THAT MAY BE DISTURBED BY THE WORK (AND THEIR CURRENT CONDITION). IF NECESSARY, CONTRACTOR SHALL SEEK WRITTEN CLARIFICATION FROM THE CONTRACT OFFICER.
3. UNLESS OTHERWISE NOTED, THE LOCATION, SIZE AND MATERIAL OF EXISTING UNDERGROUND UTILITIES WITHIN THE LIMITS OF THE PROJECT SITE ARE NOT SHOWN ON THESE PLANS.
4. UNLESS OTHERWISE NOTED, ALL EXISTING UNDERGROUND UTILITIES WITHIN THE PROJECT SITE ARE INACTIVE & SHALL BE REMOVED OR ABANDONED IN PLACE, WHERE REMOVAL OR ABANDONMENT ARE REQUIRED FOR INSTALLATION OF NEW FACILITIES.
5. ALL WORK (OTHER THAN SURVEYING AND MONITORING) SHALL BE RESTRICTED TO THE LIMITS OF DISTURBANCE SHOWN ON THE DRAWINGS, UNLESS DEPICTED OTHERWISE. THE LIMITS OF DISTURBANCE ARE THE LIMITS OF THE TEMPORARY CONSTRUCTION EASEMENT.
6. MAINTAIN ACCESS TO ALL PROPERTIES ADJACENT TO THE WORK THROUGHOUT THE PERIOD OF CONSTRUCTION.
7. THE CONTRACTOR SHALL RESTORE ALL DAMAGED OR DISTURBED AREAS TO THEIR ORIGINAL CONDITION AFTER COMPLETION OF THE WORK.
8. ALL EXCESS MATERIALS AND SPOIL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN OFF-SITE LOCATION, ACCORDING TO ALL APPLICABLE LAWS AND REGULATIONS.
9. MECHANICAL EQUIPMENT USED ON THIS PROJECT SHALL BE SELECTED TO MINIMIZE DAMAGE TO THE ROADS USED AS TRUCK ROUTES TO BRING MATERIAL AND EQUIPMENT TO THE PROJECT. REPLACE DAMAGED ASPHALT CONCRETE (A.C.) PAVEMENT AND CONCRETE PAVEMENT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
10. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING THE REQUIRED INSPECTIONS. THE PRESENCE OR ABSENCE OF A PROJECT REPRESENTATIVE OR OTHER INSPECTOR WILL NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR THE PROPER PERFORMANCE OF THE WORK.
11. THE TERM "ACCEPTABLE TO THE ENGINEER" SHALL MEAN WRITTEN ACCEPTANCE BY THE CONTRACT OFFICER IS TO BE RECEIVED BY THE CONTRACTOR BEFORE WORK IS STARTED. OWNER (USBR) MAY BE USED INTERCHANGEABLY FOR ENGINEER AND CONTRACT OFFICER.
12. SEE INDIVIDUAL DRAWINGS FOR ADDITIONAL ABBREVIATIONS, SYMBOLS, LEGENDS, NOTES, DETAILS, AND OTHER REQUIREMENTS, IF ANY. NOT ALL OF THESE ITEMS AND/OR "STANDARD" DETAILS SHOWN MAY BE APPLICABLE TO THIS PROJECT. UNLESS OTHERWISE NOTED, IN ALL CASES, THE INFORMATION SHOWN ON INDIVIDUAL DRAWINGS SHALL GOVERN OVER ANY GENERAL INFORMATION.
13. UNLESS NOTED OTHERWISE, ALL WORK SHOWN IN THESE DOCUMENTS IS NEW AND TO BE PERFORMED UNDER THIS CONTRACT. WORK UNDER THIS CONTRACT IS NORMALLY SHOWN IN HEAVY LINES.

**HEALTH AND SAFETY NOTES:**

1. COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES RELATING TO THE SAFETY AND CHARACTER OF WORK, EQUIPMENT AND LABOR PERSONNEL. THIS SHALL INCLUDE BUT IS NOT LIMITED TO, THE SHORING OF TRENCHES, VENTILATION OF CONFINED SPACES, CONFORMANCE TO TRAFFIC CONTROL REQUIREMENTS INCLUDING THE PROVISION AND MAINTENANCE OF BARRICADES AND THE PREPARATION AND IMPLEMENTATION OF TRAFFIC CONTROL PLANS AS REQUIRED. THE STRICTEST HEALTH AND SAFETY REGULATIONS SHALL APPLY.
2. ALL HEALTH AND SAFETY PROTECTION MEASURES SHALL BE INSTALLED AND FUNCTIONAL AT THE SITE PRIOR TO PERFORMING ANY WORK. THE CONTRACTOR SHALL MAINTAIN ALL HEALTH AND SAFETY MEASURES UNTIL FINAL COMPLETION.
3. THE CONTRACTOR IS RESPONSIBLE FOR OBSERVING AND MEETING ALL OSHA REQUIREMENTS.
4. THE CONTRACTOR SHALL PROVIDE TEMPORARY CHAINLINK FENCING AND/OR TRENCH PLATES AT THE END OF EACH DAY TO PREVENT PEOPLE AND WILDLIFE FROM ENTERING THE TRENCH.

**ENVIRONMENTAL PROTECTION AND EROSION, STORM WATER AND SEDIMENTATION CONTROL NOTES:**

1. EXCEPT AS NOTED, THE CONTRACTOR IS RESPONSIBLE FOR ALL EROSION, STORM WATER "SWPPP" AND SEDIMENTATION CONTROL AND ENVIRONMENTAL PROTECTION MEASURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL RELATED PERMITS.
2. ALL ENVIRONMENTAL PROTECTION MEASURES SHALL BE INSTALLED AND FUNCTIONAL AT THE SITE PRIOR TO PERFORMING ANY WORK, UNLESS NOTED. THE CONTRACTOR SHALL MAINTAIN ALL ENVIRONMENTAL PROTECTION MEASURES UNTIL FINAL COMPLETION.
3. SOIL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH SPECIFICATIONS, ENVIRONMENTAL PROTECTION MEASURES.
4. ALL EXISTING DRAINAGE FEATURES SHALL BE PROPERLY PROTECTED.

**DEMOLITION AND REMOVAL NOTES:**

1. ALL DEMOLITION AND REMOVAL WORK SHALL BE IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. SPECIAL ATTENTION IS DIRECTED TO THE NEED TO COORDINATE WITH EXISTING FACILITIES AND MAINTAIN ACCESS. CONTRACTOR SHALL ENSURE PUBLIC SAFETY DURING ALL ASPECTS OF DEMOLITION WORK.
2. ALL ITEMS WITHIN THE AREA SLATED FOR DEMOLITION OR REMOVAL ARE NOT WARRANTED TO BE SHOWN.

**MEASUREMENT COORDINATES, & STATIONING NOTES:**

1. WRITTEN DISTANCES AND ELEVATIONS SHALL GOVERN OVER SCALED DISTANCES AND ELEVATIONS.
2. DETAILS & DRAWINGS IDENTIFIED AS NTS (NOT-TO-SCALE) SHALL NOT BE SCALED IF DIMENSIONS ARE NOT PROVIDED.
3. PIPE LENGTHS SHOWN IN PROFILE OR PLAN ARE APPROXIMATE AND MAY VARY UP TO 5 PERCENT OF INDICATED LENGTH.
4. DIMENSIONS OF EXISTING STRUCTURES, PIPING, PAVING AND OTHER NON-STRUCTURAL ITEMS ARE APPROXIMATE. FIELD VERIFY ALL DIMENSIONS AND CONDITIONS AND REPORT ALL MAJOR DISCREPANCIES TO THE CONTRACT OFFICER AT LEAST 7 WORKING DAYS IN ADVANCE OF CONSTRUCTION IN THE AREA.
5. STATIONING SHOWN ON THESE DRAWINGS IS HORIZONTAL STATIONING MEASURED ON A LEVEL PLANE.
6. DISCREPANCIES BETWEEN COORDINATES, BEARINGS, LENGTHS, AND STATIONING SHALL BE RESOLVED IN THE FOLLOWING ORDER OF PRECEDENCE:
  - A. COORDINATES
  - B. BEARINGS AND LENGTHS
  - C. STATIONING



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DRAWN

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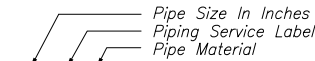
**SPANISH FLAT  
GENERAL NOTES**

LB-SFRA-G04  
SHEET X OF X

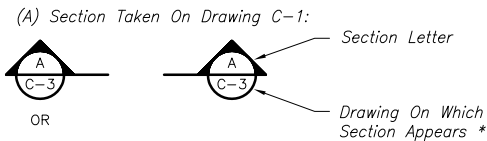
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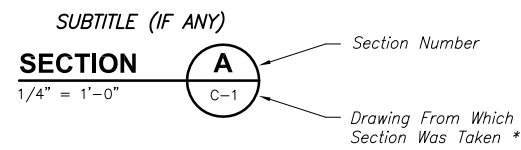
**PIPE CODE**



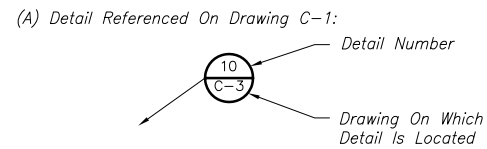
**SECTION IDENTIFICATION**



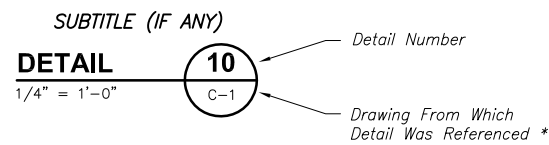
(B) On Drawing C-3 This Section Is Identified As:



**DETAIL IDENTIFICATION**

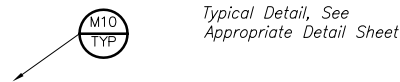


(101) On Drawing C-3 This Detail Is Identified As:



\* Note: If Section Or Detail Appears On The Same Drawing As The Call-Out, The Drawing Number Is Replaced With A Dash.

**TYPICAL DETAILS**



Typ In The Bottom Or End Of A Callout Indicates A Typical Detail. Refer To All Typical Detail Sheets In Different Disciplines. Typical Details May Not Be Shown In Numerical Order, Review All Sheets.

**SYMBOL**

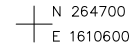
**FEATURE**



Key Note



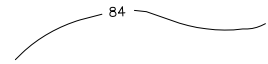
Column Or Wall Tag And Line Numbers And Letters Are Used



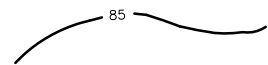
Northing And Easting Coordinates



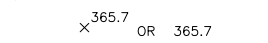
Soil Boring And Tag



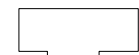
Existing Contour And Elevation



New Contour And Elevation



Spot Elevation



Existing Facility (Lighter Line Work)



New Or Modified Existing Facility (Darker Line Work)



Existing Vegetation



North Arrow



Camp Site Sewer Drop



Water/Electric Service Connection

**SYMBOL**

**FEATURE**



Existing Light Pole



Existing Overhead Electric



Existing Utility Pole Or Valve



Overhead Line



New Fire Hydrant



Yard Hydrant



Drain Inlet



Existing Fencing



New Fencing



100' Buffer Zone



Existing Water



Flood Preclude



Boundary Easement



Demolition Of Existing Improvement



Cap End/Cut End



Check Valve



Ball Valve



Plug Valve



Cleanout



Manhole



AVAR FM



AIRVAC



Blowoff Valve FM



Blowoff Valve Water



Butterfly Valve



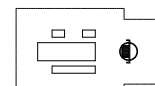
Gate Valve



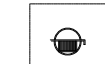
Lateral Number (See Infrastructure Plans)



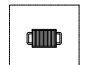
Standard Picnic Table



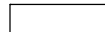
Accessible Picnic Table



Fire Ring



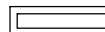
Pedestal grill



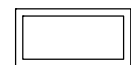
Park Model



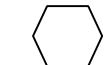
Cabin



Accessible Park Model



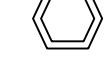
Accessible Cabin



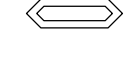
Yurt



Tent Cabin



Accessible Yurt



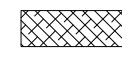
Accessible Tent Cabin



Tent Site



Accessible Tent Site



Scarify Soil



Grating Span Direction Where Applicable



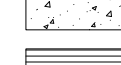
Sand



Checkered Plate



Aggregate Base, Class 2 Permeable



Concrete



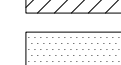
Structural Fill



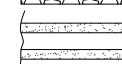
Pavement Or Sidewalk (Section)



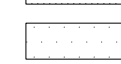
Undisturbed Earth



Impermeable Material



Drain Rock



Asphalt Concrete Pavement (Plan)



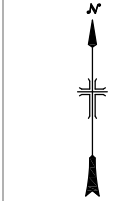
Paved Road/Gravel Shoulder



Storm Water Control Area



Gravel Road



ALWAYS THINK SAFETY

U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF RECLAMATION

CENTRAL CALIFORNIA AREA OFFICE  
LANE BERRERSSA (CALIFORNIA)

RECREATION AREA  
DEVELOPMENT PLANS 60%

SURVEY NOTES

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Compiled from photography: 201163  
Date of photography: October 20, 2011

CONTRACTOR

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STATION NAME (CITY, ST) YYYY-MM-DD

**SPANISH FLAT SYMBOLS**

**LB-SFRA-G05**  
SHEET X OF X

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**ABBREVIATIONS**

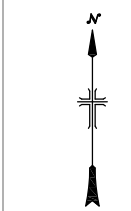
Ø	DIAMETER
#	NUMBER
@	AT
△	CENTRAL ANGLE
AB	ANCHOR BOLT, AGGREGATE BASE
ABC	AGGREGATE BASE COURSE
ABDN	ABANDON
ABV	ABOVE
AC	ASPHALTIC CONCRETE
A/C	AIR CONDITIONING
ADDL	ADDITIONAL
ADJ	ADJUSTABLE, ADJACENT
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AGG/AG	AGGREGATE
AHU	AIR HANDLING UNIT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AIT	ANALYTICAL (ANALYSIS) INDICATING TRANSMITTER
AL, ALUM	ALUMINUM
ALT	ALTERNATE, ALTERNATIVE, ALTERNATING
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATELY
ARCH	ARCHITECTURAL
ARND	AROUND
ARV	AIR VACUUM RELEASE VALVE
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASPH	ASPHALT CONCRETE
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAGE
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BOLT CIRCLE, BEGIN CURVE
B/C	BASE OF CURB OR CONCRETE
BCV	BALL CHECK VALVE
BD	BOARD
BEL	BELOW
BEV	BEVEL(ED)
BF	BLIND FLANGE
BFP	BACKFLOW PREVENTER
BFV	BUTTERFLY VALVE
BGS	BELOW GROUND SURFACE
BHP	BRAKE HORSE POWER
BITUM	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK(ING)
BM	BENCHMARK
BO	BLOWOFF, BOTTOM OF, BOTTOM OUTLET
BOD	BOTTOM OF DUCT
BOF	BOTTOM OF FOOTING
BPV	BACK PRESSURE VALVE
BR	BRASS
BRP	BRASS PIPE
BRZ	BRONZE
BS	BOTH SIDES
BTWN	BETWEEN
BV	BALL VALVE
BVC	BEGIN VERTICAL CURVE
BW	BUTT WELD
C	CUT
CATV	CABLE TV
CB	CATCH BASIN, CIRCUIT BREAKER
CBC	CALIFORNIA BUILDING CODE
CCP	CONCRETE CYLINDER PIPE
CCW	COUNTER CLOCK WISE
CDPH	CALIFORNIA DEPARTMENT OF PUBLIC HEALTH
CF	CUBIC FEET
CFE	CAP FOR FUTURE
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CHAM	CHAMFER
CHEM	CHEMICAL
CHK	CHECKERED, CHECK
CHK PL	CHECKERED PLATE
CI	CAST IRON
CIR	CIRCLE, CIRCUIT
CIRC	CIRCUMFERENTIAL
CLR	CLEAR
CJ	CONSTRUCTION JOINT, CONTROL JOINT
C/L	CHAIN LINK
CL2	CLASS 2
CL	CENTER LINE, CLASS, LEAN CLAY WITH SAND
CLR	CHLORINE RESIDUAL (ANALYZER), CLEAR(ANCE)
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CM	CENTIMETER
CM(P)	CORRUGATED METAL (PIPE)
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT, COMPANY
COMM	COMMUNICATION(S)
COMP	COMPACTION (COMPACTED), COMPRESSIBLE

CON	CONSTANT, CONCENTRIC
CONC	CONCRETE
COND	CONDUIT, CONDITION
CONT	CONTINUOUS, CONTINUATION, CONTINUED
COORD	COORDINATION
CORR	CORRUGATED
CP	CATHODIC PROTECTION
CPLG	COUPLING (ER)
CPU	CENTRAL PROCESSING UNIT
CPVC(P)	CHLORINATED POLYVINYLCHLORIDE (PIPE)
CR	CHEMICAL RESISTANT COATING
CSP	CARBON STEEL PIPE
CTR	CENTER (ED)
CTRL	CONTROL
CTS	CALCIUM THIOSULFATE
CU	CUBIC, COPPER
CU FT	CUBIC FEET
CUP	COPPER PIPE
CV	CHECK VALVE, CONTROL VALVE, CONTROL VARIABLE
CW	COLD WATER (DOMESTIC POTABLE), CLOCK WISE
CY	CUBIC YARD
D	DRAIN, DEMOLITION, DEEP, DEPTH
DBL	DOUBLE
DEG	DEGREE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET	DETAIL
DI	DROP INLET, DUCTILE IRON
DIA, DIA	DIAMETER
DIEL	DIELECTRIC
DIM	DIMENSION
DI(P)	DUCTILE IRON (PIPE)
DL	DRAIN LINE
DN	DOWN
DMPRF	DAMP PROOFING
DR	DRIVE
DTL	DETAIL
DWG	DRAWING
(E)	EXISTING, ELEVATION
E	ELECTRICAL, EASTING, EAST
EA	EACH
EC	END CURVE, EMPTY CONDUIT
ECC	ECCENTRIC
ED	EQUIPMENT DRAIN
EDB	ELECTRICAL DUCT BANK
EG	EXISTING GRADE
EL	ELEVATION
E/L	EASEMENT LINE
ELEC	ELECTRIC(AL)
ELEV	ELEVATOR, ELEVATION
ELL, EL	ELBOW(S)
EMBED	EMBEDMENT
EOP	EDGE OF PAVEMENT
EP	ELECTRICAL PANEL, EXPLOSION PROOF, EDGE OF PAVEMENT
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EQ	EQUAL
EQPT, EQUIP	EQUIPMENT
ES	EACH SIDE
ESH, ESW	EMERGENCY SHOWER AND EYEWASH
EW	EACH WAY
EX, EXIST, EXST	EXISTING
EXT	EXTERIOR, EXTENSION
(F)	FUTURE
F'C	CONCRETE COMPRESSIVE STRENGTH
F'M	MASONRY COMPRESSIVE PRISM STRENGTH
FAB	FABRICATE(D)(TION)
FC	FLEXIBLE COUPLING, FACE OF CURB, FLEXIBLE CONNECTION
FCA	FLANGE COUPLING ADAPTER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER AND CABINET, FLOW ELEMENT
FF	FINISHED FLOOR
FG	FINISH GRADE, FIBERGLASS
FH	FIRE HYDRANT
FIG	FIGURE
FIT	FLOW INDICATING TRANSMITTER
FL	FLOOR(ING)
FLA	FULL LOAD AMPERE
FLEX	FLEXIBLE
FLG	FLANGE(D)
FM	FORCE MAIN, FLOW METER
FND	FOUNDATION
FNPT, FPT	FEMALE NATIONAL PIPE THREAD
FO	FIBER OPTIC
FOC	FACE OF CONCRETE, FACE OF CURB
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FOOT, FEET
FTG	FOOTING, FITTING
FUT	FUTURE

FV	FUEL VENT (DIESEL), FIELD VERIFY
FWY	FREEWAY
G	GATE, GENERAL, GROUND, GAS
GA, GA	GAGE, GAUGE
GAL	GALLONS
GALV	GALVANIZED
GASP	GALVANIZED STEEL PIPE
GC	GENERAL CONTRACTOR, GROOVED COUPLING, CLAYEY GRAVEL
GD	GUTTER DRAIN
GEN	GENERATOR, GENERAL
GFI, GF	GROUND FAULT INTERRUPTER (ING)
GI	GALVANIZED IRON
GND	GROUND
GP	POORLY GRADED GRAVEL WITH CLAY AND SAND
GPM	GALLONS PER MINUTE
GR	GRADE
GRTG	GRATING
GV	GATE VALVE
GW	GROUNDWATER
H	HIGH, HEIGHT
HB	HOSE BIBB
HDG	HOT DIP GALVANIZE(D)
HDR	HEADER
HDPE	HIGH DENSITY POLYETHYLENE
HDWR	HARDWARE
HEX	HEXAGON(AL)
HF	HOSE FAUCET
HGL	HYDRAULIC GRADE LINE
HMC	HARNESSED MECHANICAL COUPLING
HMJ	HARNESSED MECHANICAL JOINT
HP	HORSE POWER, HIGH POINT
HV	HOSE VALVE, HVAC SYSTEM, HIGH VOLTAGE
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
HWL	HIGH WATER LEVEL
HWS	HIGH WATER SURFACE
HYD	HYDRAULIC, HYDRANT
IBC	INTERNATIONAL BUILDING CODE
ID	INNER DIAMETER
IE	INVERT ELEVATION
IF, IFC	INSIDE FACE
IN	INCH, INLET
INCL	INCLUDING
INST	INSTALL
INSTR	INSTRUMENTATION, INSTRUMENT
INSUL	INSULATE(ION), INSULATING
INT	INTERIOR, INTERNAL
INV	INVERT
IRR, IRRIG	IRRIGATION
JB	JUNCTION BOX
JF	JOINT FILLER
JT	JOINT
KO	KNOCKOUT
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
L	LENGTH
LB(S)	POUND(S)
LE	LEVEL ELECTRODE, LEVEL ELEMENT
LF	LINEAR FEET, LIGHT FIXTURE
LI	LEVEL INDICATOR
LIT	LEVEL INDICATING TRANSMITTER
LOC	LOCATION
LONG	LONGITUDINAL
LP	LOW POINT, LIGHT POLE
LR	LONG RADIUS
LSA	AIR LEVEL SENSOR (BUBBLER)
LT	LEFT, LIGHT
LVR	LOUVER
LWL	LOW WATER LEVEL
MATL	MATERIAL
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MED	MEDIUM
MFR	MANUFACTURER
MG	MILLION GALLONS
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM, MINUTE
MISC	MISCELLANEOUS EQUIPMENT
MJ	MECHANICAL JOINT
ML	SANDY SILT
MM	MILLIMETER
MOV	MOTOR OPERATED VALVE
MP	METERING PUMP
MSL	MEAN SEA LEVEL
MTL	METAL
MTR	MOTOR, MITER

(N)	NEW
N	NORTH, NORMAL, NEUTRAL, NORTHING
NA, N/A	NOT APPLICABLE
NBRID	NAPA BERRYESSA RESORT IMPROVEMENT DISTRICT
NC	NORMALLY CLOSED, NON COMBUSTIBLE
NDV	NEEDLE VALVE
NIP	NIPPLE
NO	NORMALLY OPEN, NUMBER
NOM	NOMINAL
NPS	NATIONAL PIPE SIZE
NPT	NATIONAL PIPE THREAD
NSG	NON-SHRINK GROUT
NTS	NOT TO SCALE
O/	OVER
OB	WELL OVERBOARD FLOW
OC, O.C.	ON CENTER
OD, O.D.	OUTSIDE DIAMETER
OF, O/F	OVERFLOW
OHE	OVERHEAD ELECTRICAL
OHU	OVERHEAD UTILITY
OPNG	OPENING
ORG	ORGANIZATIONAL
P	PUMP, PAVEMENT
PA	PRESSURE AREA
PC	PORTLAND CEMENT
PE (P)	POLYETHYLENE (PIPE), PLAIN END
PERP	PERPENDICULAR
PG	PRESSURE GAUGE
PG&E	PACIFIC GAS AND ELECTRIC
PH	HYDROGEN ION MEASURE
PI	PRESSURE INDICATOR
PL	PLATE
P/L OR PL	PROPERTY LINE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PLYWD	PLYWOOD
PP	POWER POLE
PR	PAIR, INSTRUMENT CABLE PAIR
PRCST	PRE-CAST
PRV	PRESSURE (REGULATING, RELIEF, REDUCING) VALVE
PS	PRESSURE SWITCH, PUMP STATION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PT	POINT, PRESSURE TREATED, PRESSURE TRANSDUCER
PTD	PAINTED
PVCH	POLYVINYL CHLORIDE HOSE
PVC(P)	POLYVINYL CHLORIDE (PIPE)
PVMT	PAVEMENT
QCV	QUICK COUPLING VALVE
QSD	QUALIFIED SWPPP DEVELOPER
R OR RAD	RADIUS
RD	ROAD
RED	REDUCE(R)
REINF	REINFORCE(D, ING, MENT)
REL	RELATIVE
REQD	REQUIRED
RFD	RECESSED FLOOR DRAIN
RPM	REVOLUTIONS PER MINUTE
RFRD	RECLAMATION RECREATION FACILITY DESIGN GUIDELINES
RT	RIGHT
RTU	REMOTE TERMINAL UNIT
RW	RECYCLED WATER
RWD	REDWOOD
RWV	RECYCLED WATER VALVE
S	STRUCTURAL, START, STOP SIGN, SOUTH
SAM	SAMPLE WATER
SC	CLAYEY SAND GRAVEL
SCH(ED)	SCHEDULE
SCL	STEEL CEMENT MORTAR LINED
SCLP	STEEL CEMENT MORTAR LINED AND PAINTED PIPE
SD	STORM DRAIN
SDDI	STORM DRAIN DROP INLET
SDCO	STORM DRAIN CLEAN OUT
SDDW	STORM DRAIN DRY WELL
SDJB	STORM DRAIN JUNCTION BOX
SECT	SECTION
SELC	STEEL EPOXY LINED AND COATED
SELM	STEEL EPOXY LINED AND MORTAR COATED
SF	SQUARE FEET
SH	SODIUM HYPOCHLORITE
SHT	SHEET
SIM	SIMILAR
SKL	SKYLIGHT
SL	SLOPE
SMLC	STEEL CEMENT MORTAR LINED AND COATED PIPE
SOG	SLAB ON GRADE
SOV	SOLENOID VALVE, SHUT OFF VALVE
SP	POORLY GRADED SAND WITH CLAY AND GRAVEL, STATIC PRESSURE, STAND PIPE, SPARE
SPEC	SPECIFICATION(S), SPECIFIED
SQ	SQUARE
SQ FT	SQUARE FEET

SS	SANITARY SEWER, STAINLESS STEEL
SSMH	SANITARY SEWER MANHOLE
SST	STAINLESS STEEL
ST	STREET
ST	SELF TAPPING
STA	STATION
STL	STEEL
STRUCT	STRUCTURE (AL)
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
T	TOP, TANK
T&B	TOP AND BOTTOM
TBD	TO BE DETERMINED
TBG	TUBING
TBM	TEMPORARY BENCH MARK
TC	TOP OF CURB, TOP OF CONCRETE
TDC	TRENCH DRAIN
TELE	TELEPHONE
TEMP	TEMPERATURE, TEMPERED, TEMPORARY
TG	TOP OF GRATE
THD	THREAD(ED)
THK	THICK(NESS)
THRU	THROUGH
TB	TRUST BLOCK
TJ	TOOLED JOINT
TM	THERMAL MAGNETIC
T.O.	TOP OF
TOC	TOP OF CONCRETE, TOP OF CURB
TOP	TOP OF PAVEMENT, TOP OF PIPE
TOR	TOP OF RESERVOIR
TOS	TOP OF SLAB
TOW	TOP OF WALL
TPZ	TREE PROTECTION ZONE
TRANS	TRANSFORMER
TRD	THREADED
T/S	TOP OF SWALE
TV	TELEVISION
TW	TREATED WATER, TOP OF WALL
TYP, TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
V	VENT, VALVE, VOLT(S)(AGE)
VAR	VARIABLE
VB	VALVE BOX
VERT	VERTICAL
VF	VENT FAN
VFD	VARIABLE FREQUENCY DRIVE
VFF	VAULT FINISH FLOOR
VIF	VERIFY IN FIELD
VP	VENT PIPE
VR	VENT RISER
VRV	VACUUM RELIEF VALVE
W	WATER, WIDE, WATTS, WEST, WIDTH
W/	WITH
W/A	WHERE APPLICABLE
WL	WATER LEVEL
WM	WATER MAIN, WATER METER
WMS	WIRE MESH SCREEN
W/O	WITHOUT
WS	WATER STOP, WATER SURFACE, WATER SUPPLY
WSE	WATER SURFACE ELEVATION
WT	WEIGHT
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
XFMR	TRANSFORMER



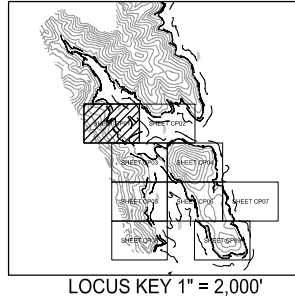
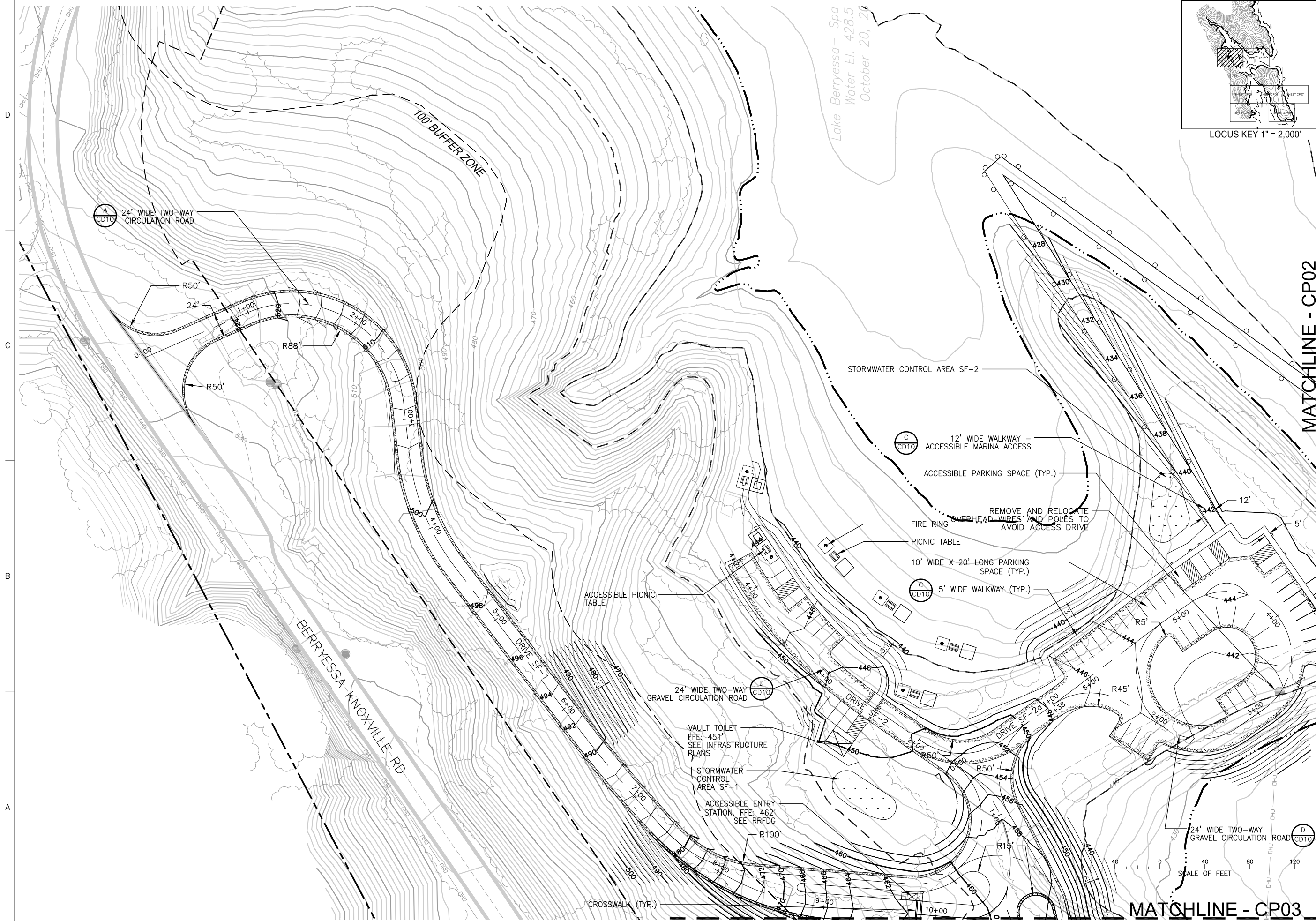
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 LAKE BERRYESSA (CALIFORNIA)  
**RECREATION AREA**  
 DEVELOPMENT PLANS 60%

**SURVEY NOTES**  
 CALIFORNIA STATE PLANE COORDINATE SYSTEM  
 ZONE 2, U.S. SURVEY FEET  
 HORIZONTAL DATUM: NAD 1983  
 VERTICAL DATUM: NAVD 1988  
 TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
 BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
 Topography by American Photomapping Services  
 Compiled from photography: 201163  
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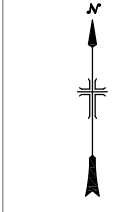
DRAWN \_\_\_\_\_ CONTRACTOR  
 ACCEPTED \_\_\_\_\_  
 NAME \_\_\_\_\_  
 TITLE \_\_\_\_\_  
 STATION NAME (CITY, ST) \_\_\_\_\_ YYYY-MM-DD

**SPANISH FLAT ABBREVIATIONS**  
 LB-SFRA-G06  
 SHEET X OF X

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Lake Berrysa - Spa  
Water El. 428.5  
October 20, 2011



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LAKE BERRYESSA (CALIFORNIA)  
**RECREATION AREA**  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
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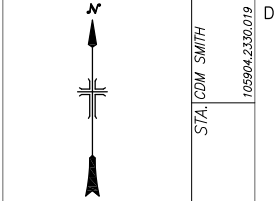
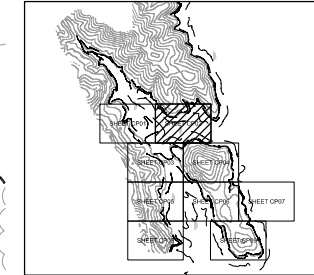
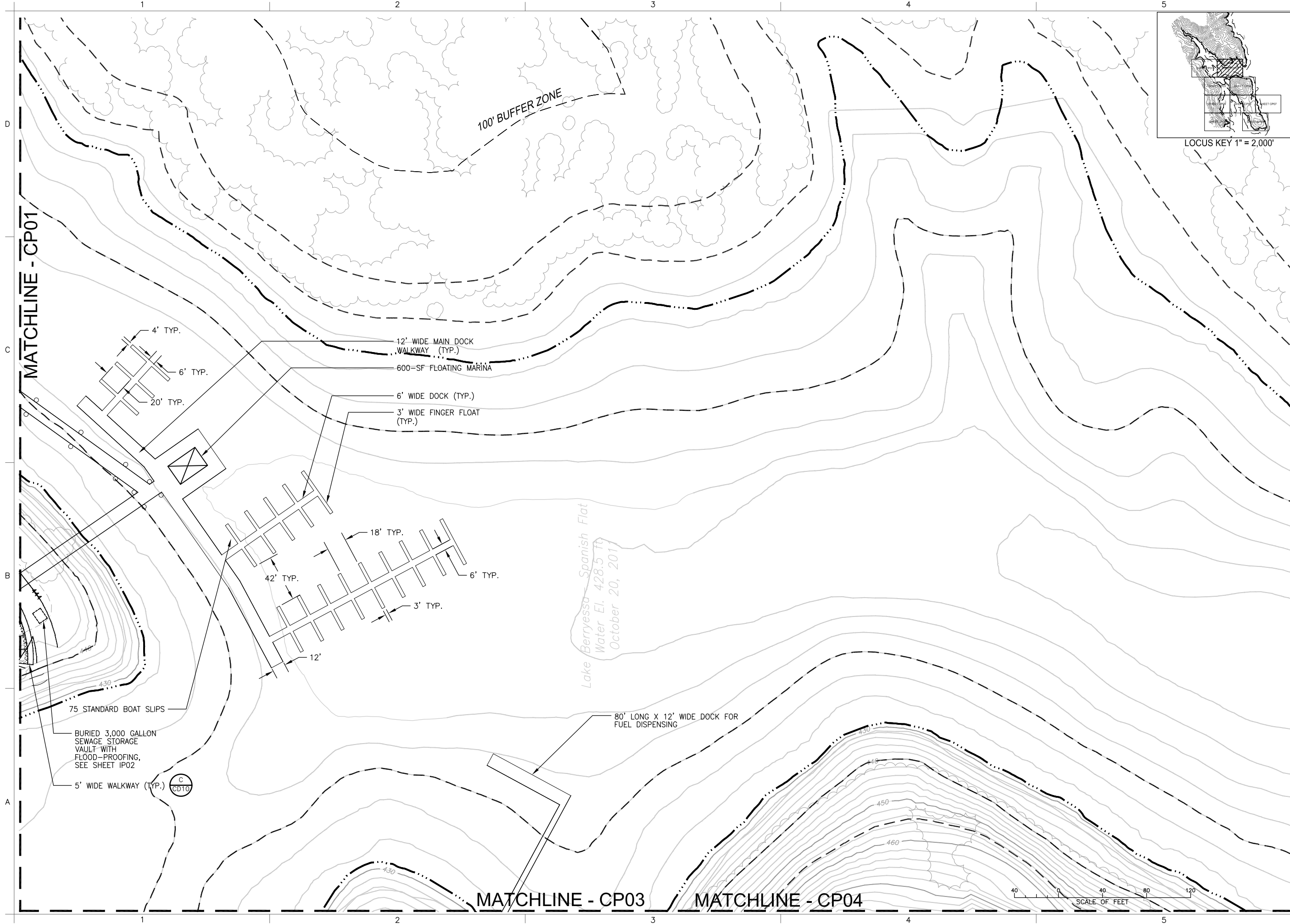
STATION NAME (CITY, ST) YYYY-MM-DD

**SPANISH FLAT  
SITE PLAN I**

LB-SFRA-CP01  
SHEET X OF X

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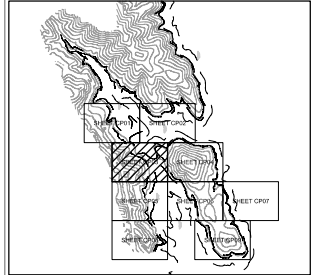
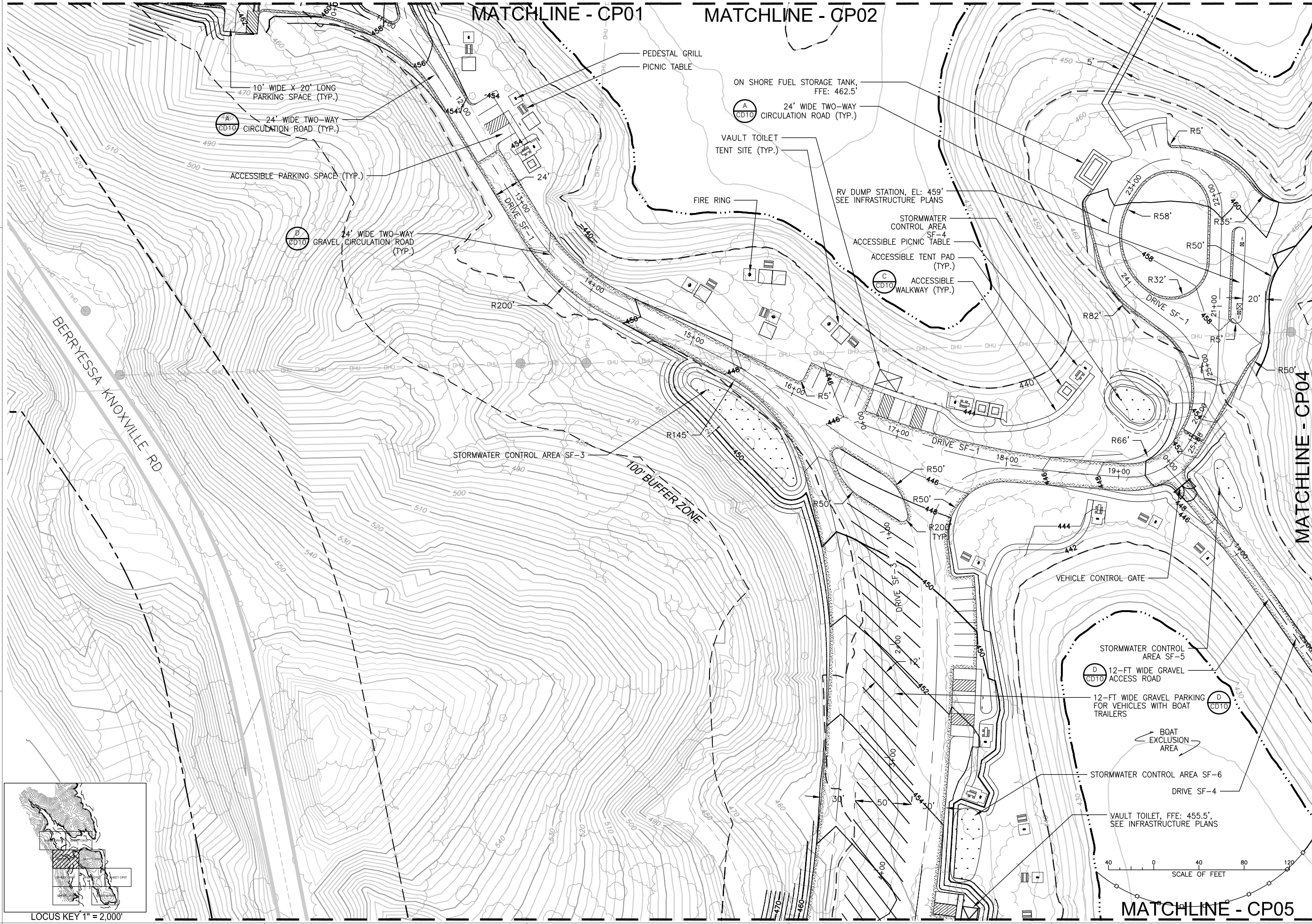
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DEVELOPMENT PLANS 60%

**SURVEY NOTES**  
CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
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VERTICAL DATUM: NAVD 1988  
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**SPANISH FLAT  
SITE PLAN II**  
LB-SFRA-CP02  
SHEET X OF X

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YYYY-MM-DD  
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LANE BERRYESSA (CALIFORNIA)  
RECREATION AREA  
DEVELOPMENT PLANS 60%

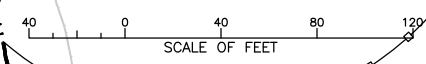
SURVEY NOTES

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
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SPANISH FLAT  
SITE PLAN III

LB-SFRA-CP03  
SHEET X OF X



MATCHLINE - CP05

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MATCHLINE - CP02

CAMP HOST SITE

MATCHLINE - CP03

100' BUFFER ZONE

DRIVE SF-4

12-FT WIDE GRAVEL ACCESS ROAD

12-FT WIDE GRAVEL ACCESS ROAD

DRIVE SF-4

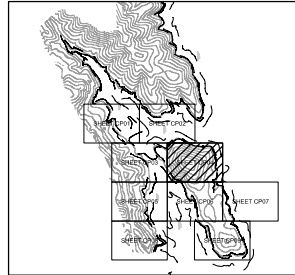
WATER STORAGE TANK, SEE INFRASTRUCTURE PLANS

12'

21'

100-FT BUFFER ZONE

MATCHLINE - CP06



LOCUS KEY 1" = 2,000'



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LANE BERRERSSA (CALIFORNIA)  
RECREATION AREA  
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SURVEY NOTES

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TITLE

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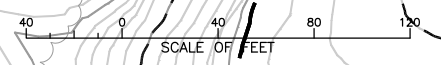
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**SPANISH FLAT  
SITE PLAN IV**

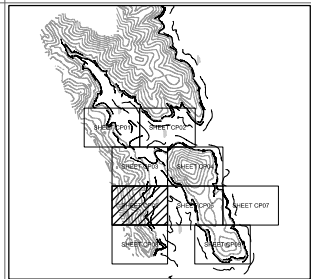
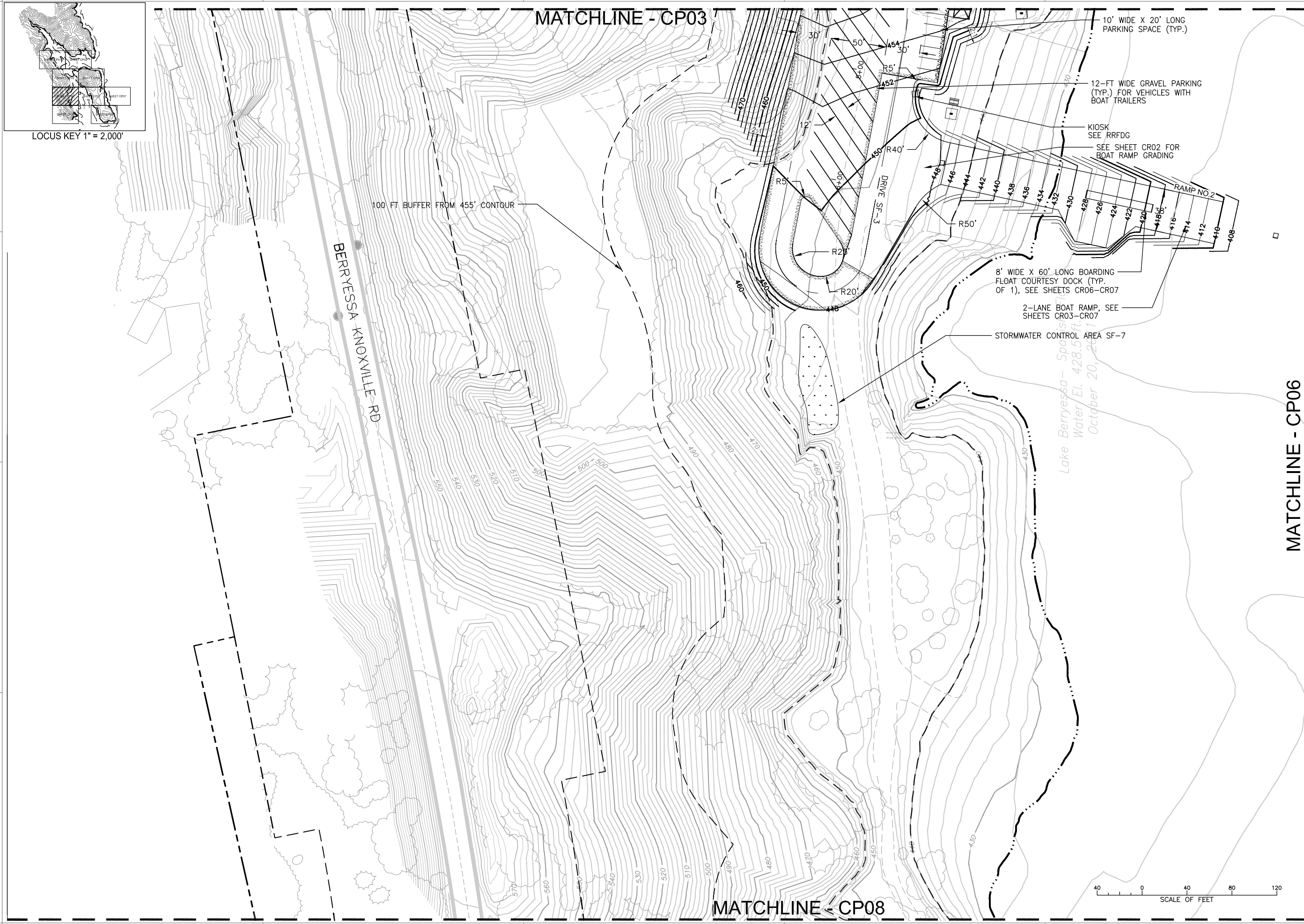
LB-SFRA-CP04

SHEET X OF X

Yyyy-MM-DD  
NAME, PROF. ABRV  
STA. CDM SMITH  
105904.2330.019



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LOCUS KEY 1" = 2,000'

MATCHLINE - CP03

MATCHLINE - CP08

10' WIDE X 20' LONG PARKING SPACE (TYP.)

12-FEET WIDE GRAVEL PARKING (TYP.) FOR VEHICLES WITH BOAT TRAILERS

KIOSK SEE RRFDC SEE SHEET CR02 FOR BOAT RAMP GRADING

8' WIDE X 60' LONG BOARDING FLOAT COURTESY DOCK (TYP. OF 1), SEE SHEETS CR06-CR07

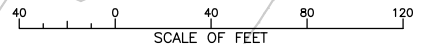
2-LANE BOAT RAMP, SEE SHEETS CR03-CR07

STORMWATER CONTROL AREA SF-7

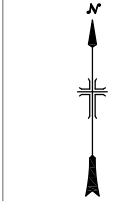
100 FT BUFFER FROM 455' CONTOUR

BERRYESSA KNOXVILLE RD

Lake Berryessa - Sp... Water El. 428.5 ft. October 20, 2011



RECLAMATION Managing Water in the West



ALWAYS THINK SAFETY

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION CENTRAL CALIFORNIA AREA OFFICE LAKE BERRYESSA (CALIFORNIA) RECREATION AREA DEVELOPMENT PLANS 60%

SURVEY NOTES

CALIFORNIA STATE PLANE COORDINATE SYSTEM ZONE 2, U.S. SURVEY FEET HORIZONTAL DATUM: NAD 1983 VERTICAL DATUM: NAVD 1988 TOPOGRAPHY CONTOUR INTERVAL: 5 FT. BATHYMETRIC CONTOUR INTERVAL: 10 FT. Topography by American Photomapping Services Compiled from photography: 201163 Date of photography: October 20, 2011

CONTRACTOR

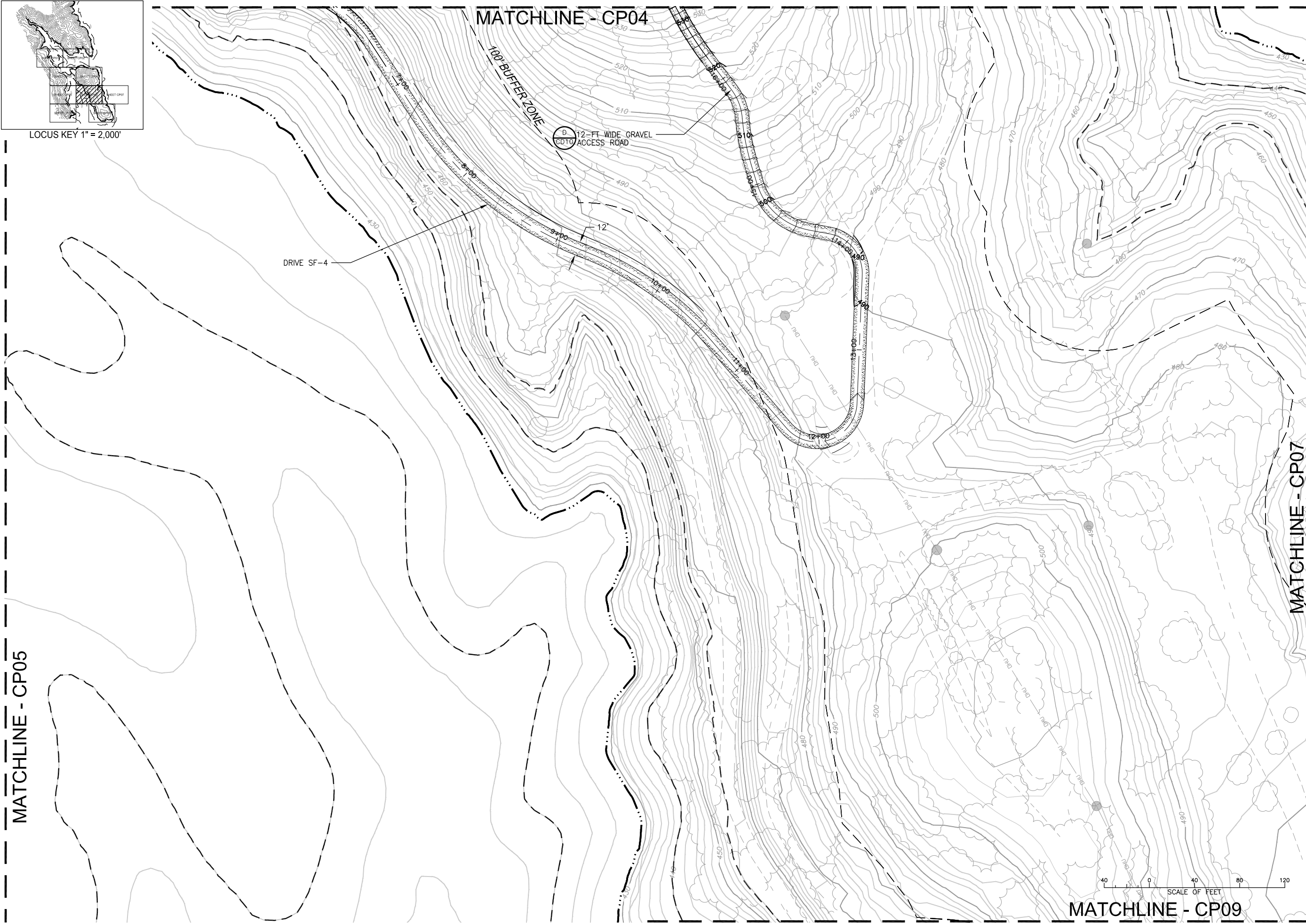
ACCEPTED NAME TITLE STATION NAME (CITY, ST) YYYY-MM-DD

SPANISH FLAT SITE PLAN V

LB-SFRA-CP05 SHEET X OF X

STA. CDM SMITH 105904.2330.019 YYY-MM-DD ACCEPTED: NAME, PROF. ABR

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LOCUS KEY 1" = 2,000'

MATCHLINE - CP05

MATCHLINE - CP04

MATCHLINE - CP07

MATCHLINE - CP09

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Managing Water in the West



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LANE BERRERSSA (CALIFORNIA)  
RECREATION AREA  
DEVELOPMENT PLANS 60%

SURVEY NOTES

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

CONTRACTOR

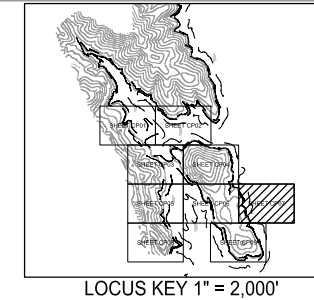
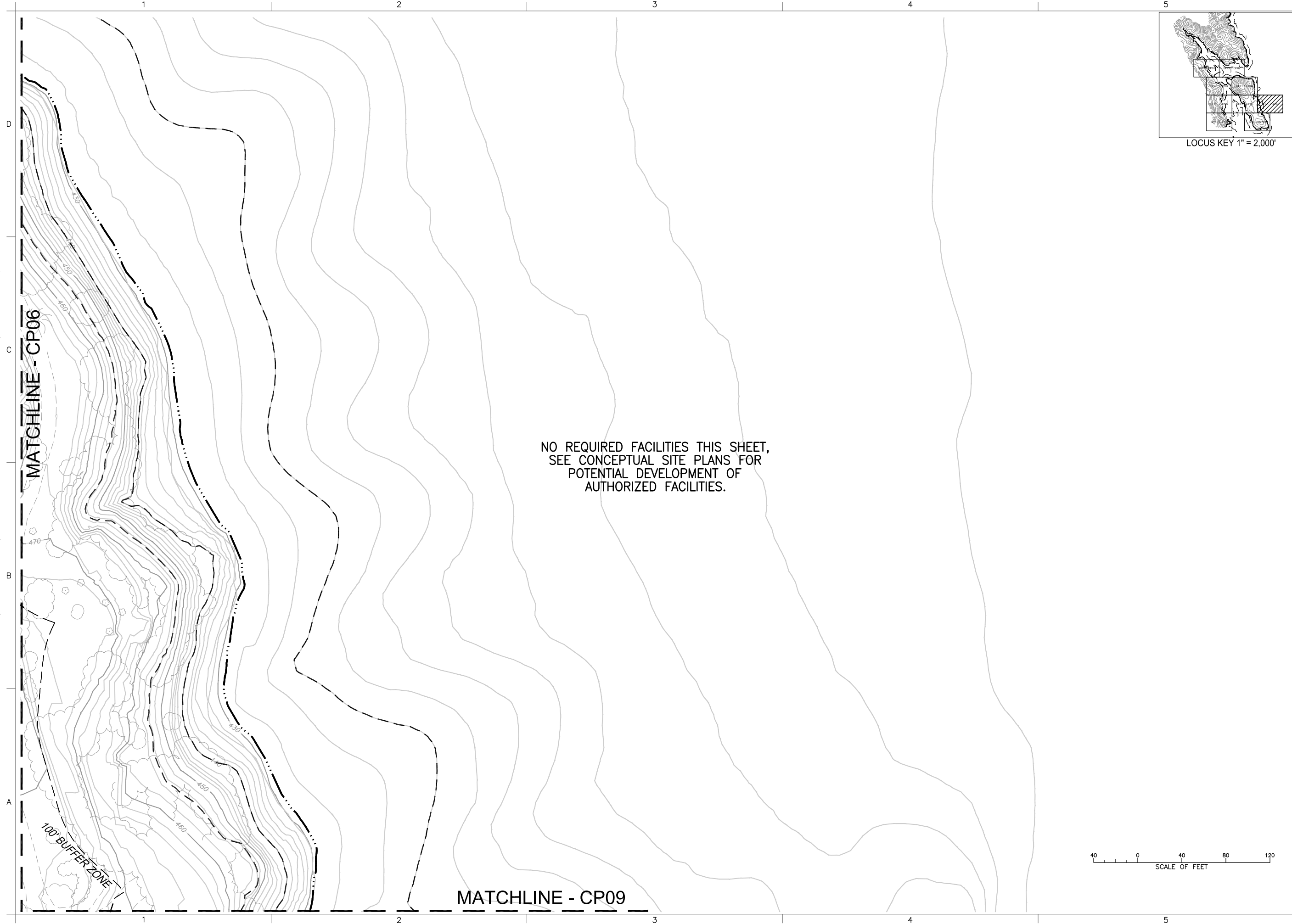
ACCEPTED  
NAME  
TITLE  
STATION NAME (CITY, ST) YYYY-MM-DD

SPANISH FLAT  
SITE PLAN VI

LB-SFRA-CP06  
SHEET X OF X

Yyyy-mm-dd  
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LAKE BERRERESA (CALIFORNIA)  
RECREATION AREA  
DEVELOPMENT PLANS 60%

SURVEY NOTES

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

DRAWN

CONTRACTOR

ACCEPTED

NAME

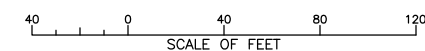
TITLE

STATION NAME (CITY, ST) Yyyy-MM-DD

**SPANISH FLAT  
SITE PLAN VII**

LB-SFRA-CP07

SHEET X OF X



MATCHLINE - CP09

MATCHLINE - CP06

100' BUFFER ZONE

NO REQUIRED FACILITIES THIS SHEET,  
SEE CONCEPTUAL SITE PLANS FOR  
POTENTIAL DEVELOPMENT OF  
AUTHORIZED FACILITIES.

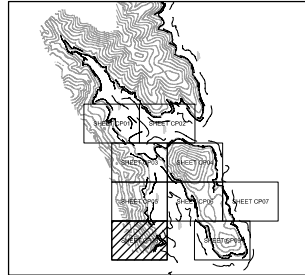
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MATCHLINE - CP05

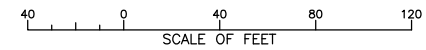
BERRYESSA-KNOXVILLE RD

NO REQUIRED FACILITIES THIS SHEET,  
SEE CONCEPTUAL SITE PLANS FOR  
POTENTIAL DEVELOPMENT OF  
AUTHORIZED FACILITIES.

100' BUFFER ZONE



LOCUS KEY 1" = 2,000'



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RECREATION AREA  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**  
CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

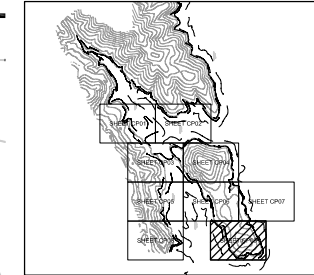
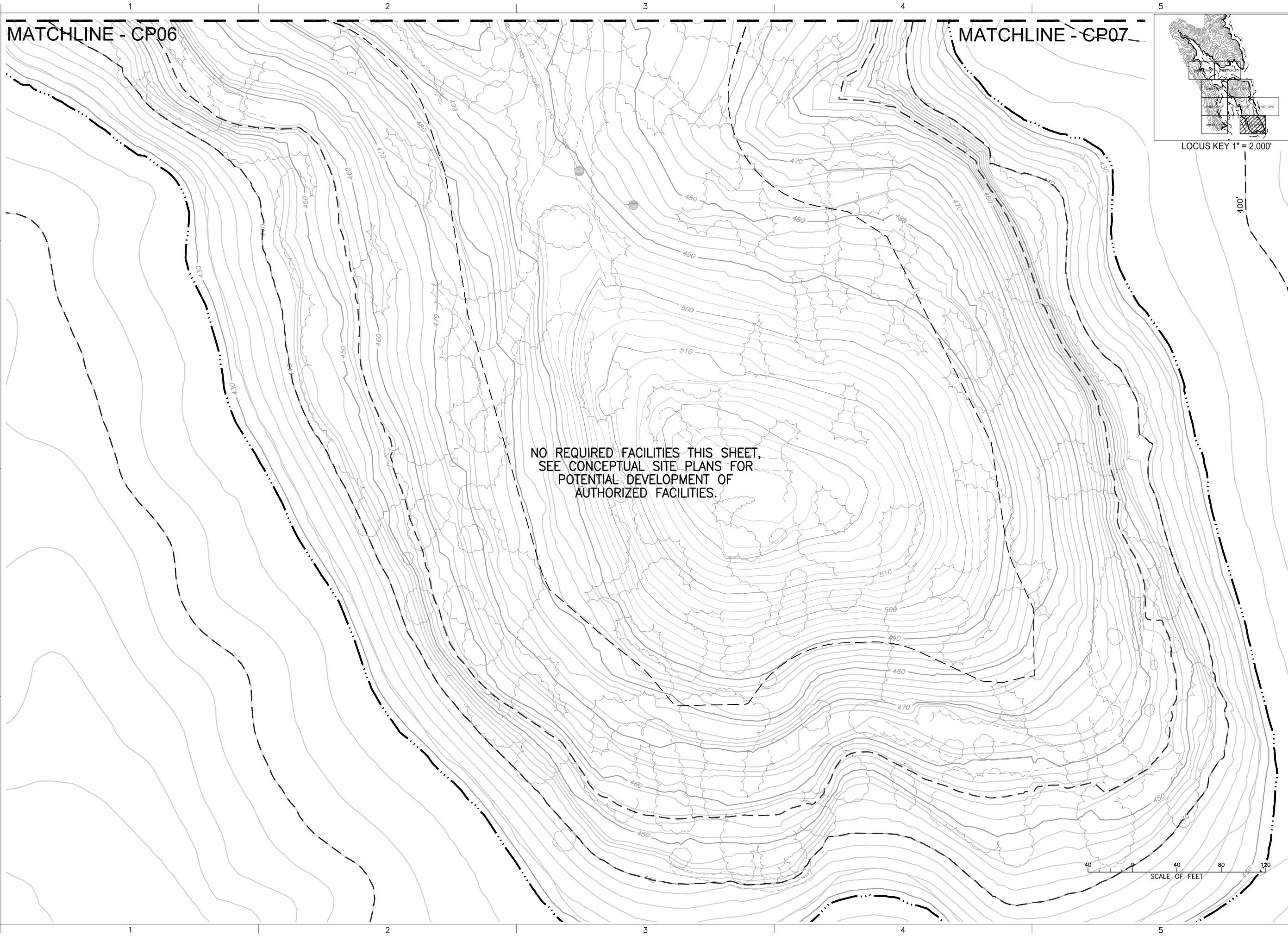
CONTRACTOR  
DRAWN  
ACCEPTED  
NAME  
TITLE  
STATION NAME (CITY, ST) YYYY-MM-DD

**SPANISH FLAT  
SITE PLAN VIII**

LB-SFRA-CP08  
SHEET X OF X

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**RECREATION AREA**  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

CONTRACTOR

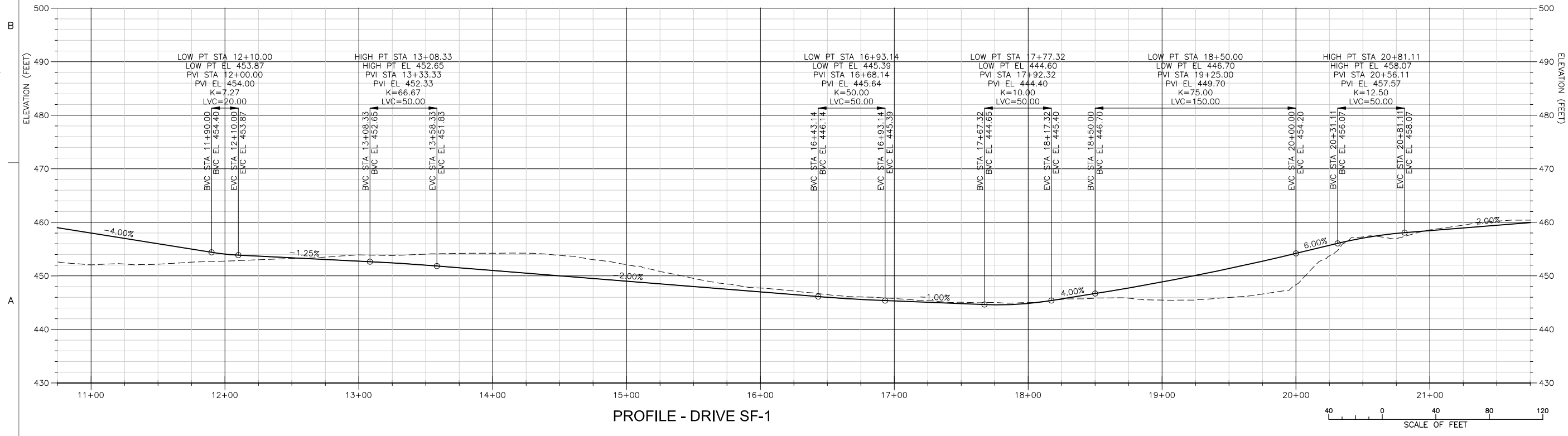
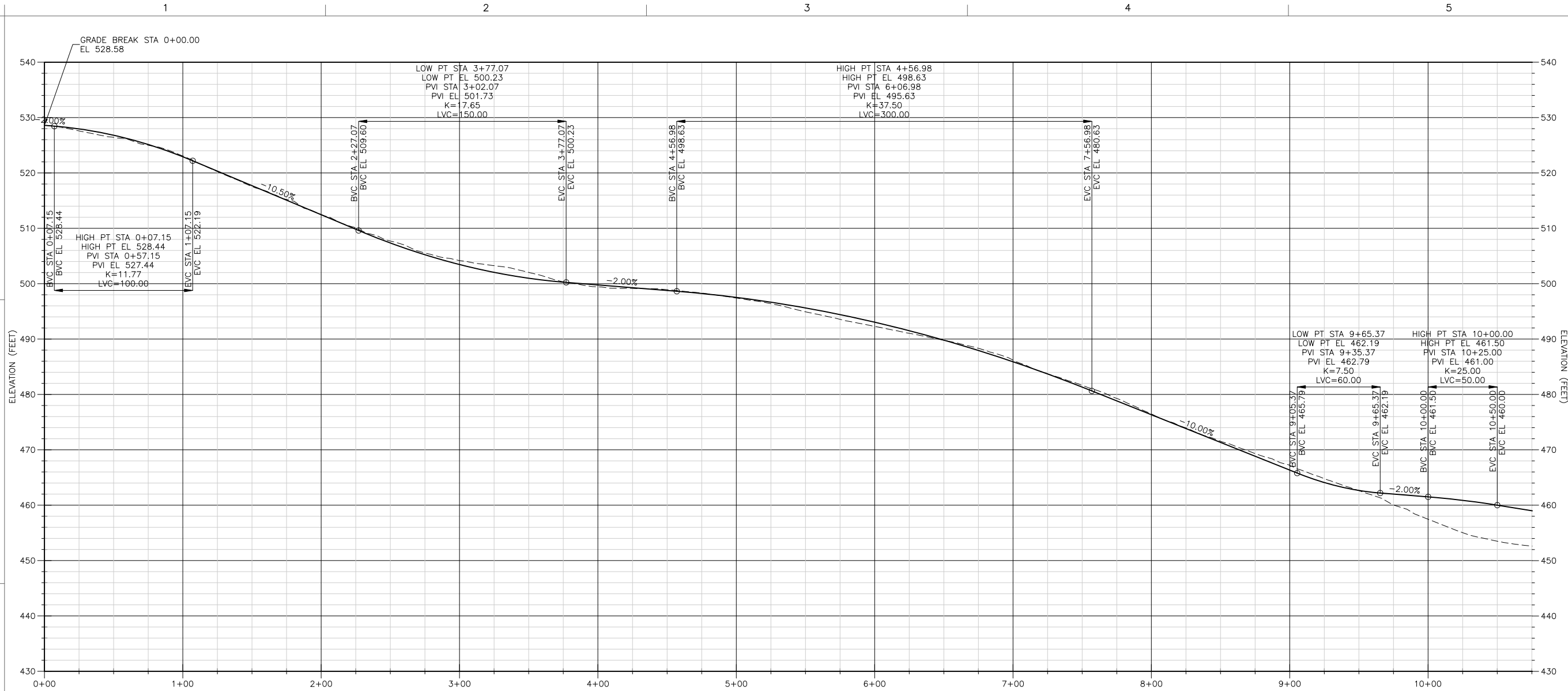
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NAME  
TITLE

STATION NAME (CITY, ST) Yyyy-MM-DD

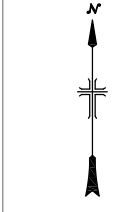
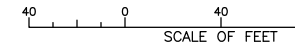
**SPANISH FLAT  
SITE PLAN IX**

**LB-SFRA-CP09**  
SHEET X OF X

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PROFILE - DRIVE SF-1



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DEVELOPMENT PLANS 60%

**SURVEY NOTES**  
CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

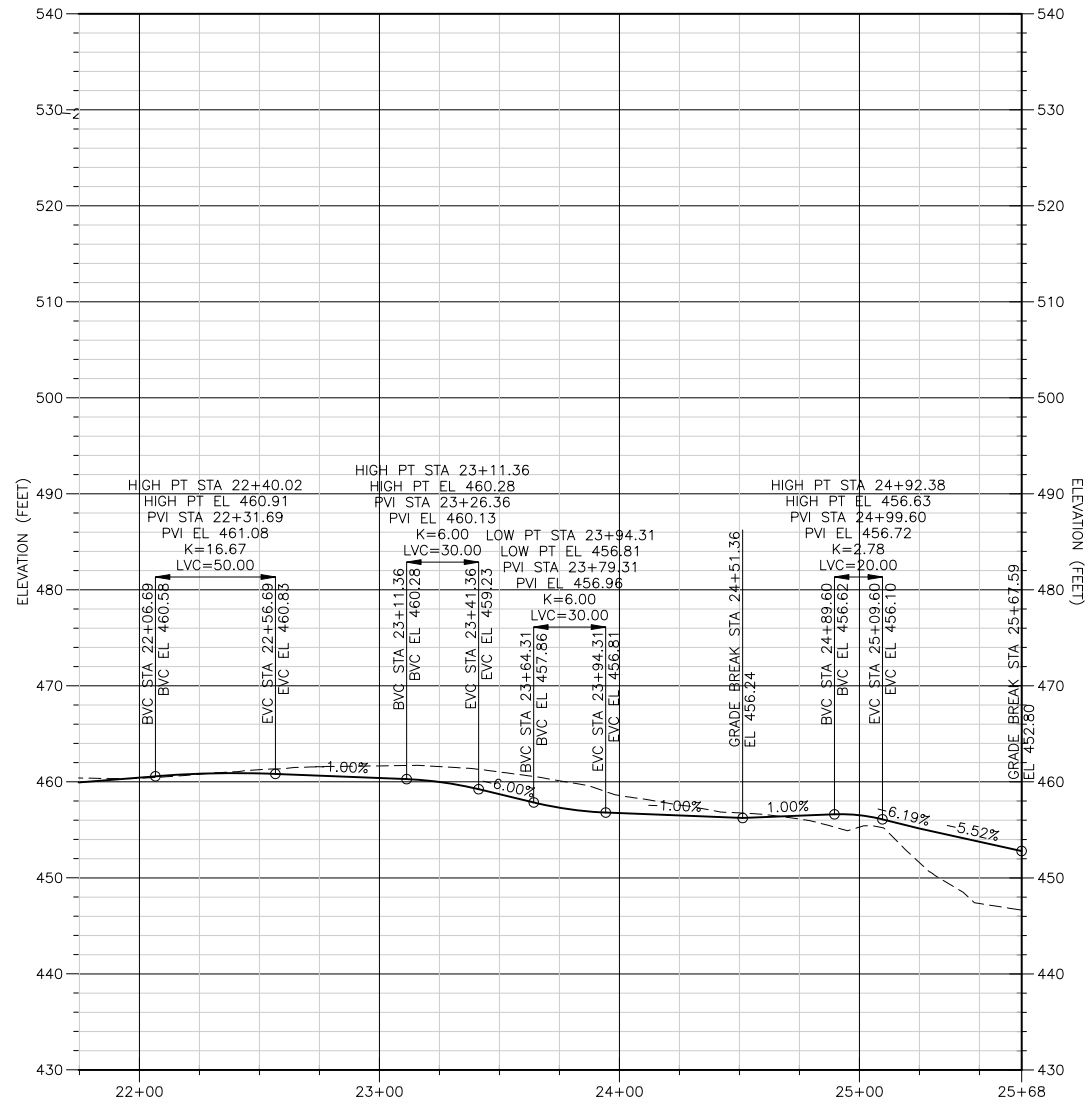
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DRAWN  
ACCEPTED  
NAME  
TITLE  
STATION NAME (CITY, ST) YYY-MM-DD

**SPANISH FLAT  
GRADING AND ROAD  
DETAILS I**

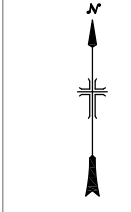
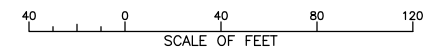
LB-SFRA-CD01  
SHEET X OF X

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PROFILE - DRIVE SF-1



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RECREATION AREA  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**  
CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

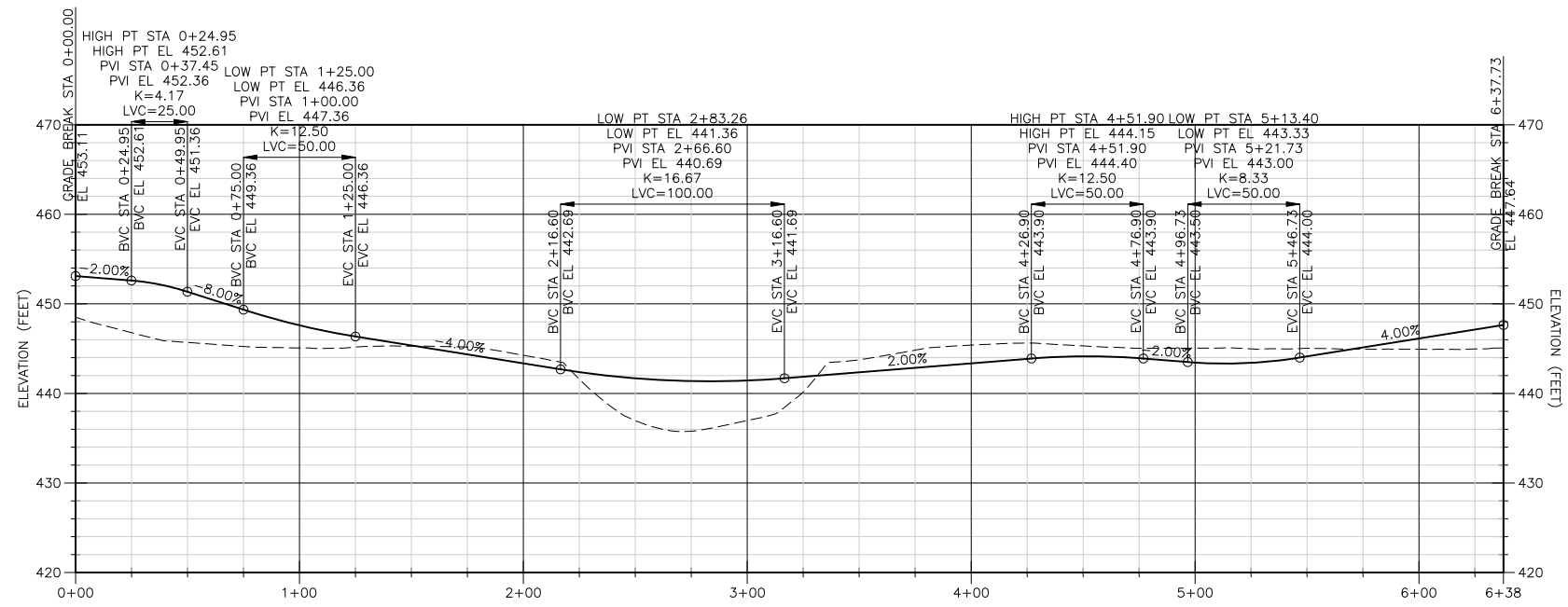
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DRAWN  
ACCEPTED  
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TITLE  
STATION NAME (CITY, ST) YYYY-MM-DD

**SPANISH FLAT  
GRADING AND ROAD  
DETAILS II**

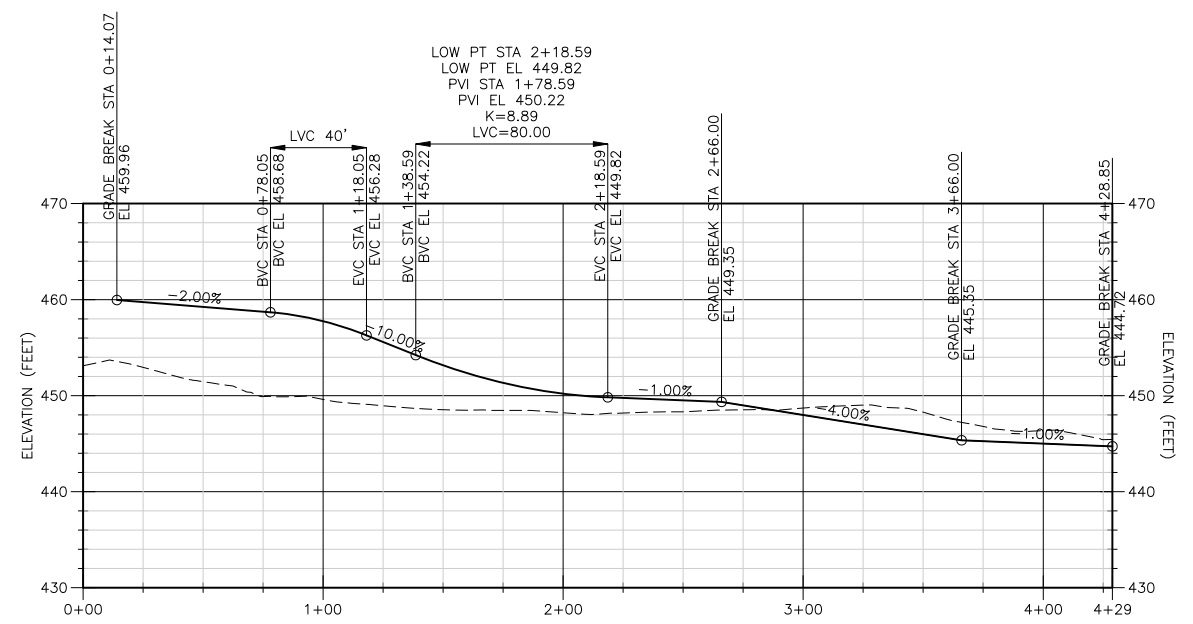
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SHEET X OF X

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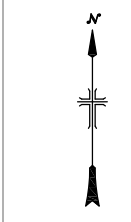
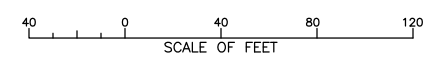
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PROFILE - DRIVE SF-2a



PROFILE - DRIVE SF-2



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RECREATION AREA  
DEVELOPMENT PLANS 60%

SURVEY NOTES

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

CONTRACTOR

ACCEPTED

NAME

TITLE

STATION NAME (CITY, ST)      YYYY-MM-DD

SPANISH FLAT  
GRADING AND ROAD  
DETAILS III

LB-SFRA-CD03  
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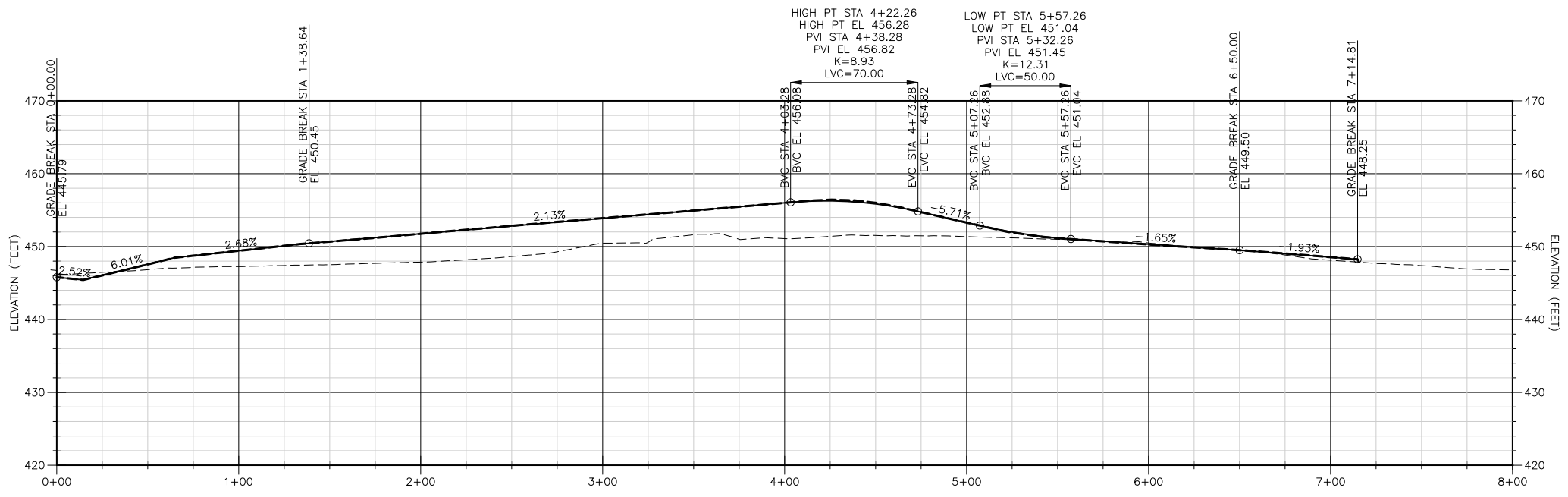
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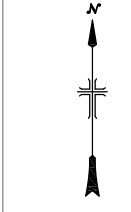
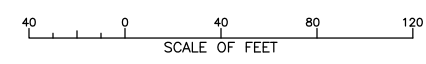
3

4

5



PROFILE - DRIVE SF-3



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**RECREATION AREA**  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**  
CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

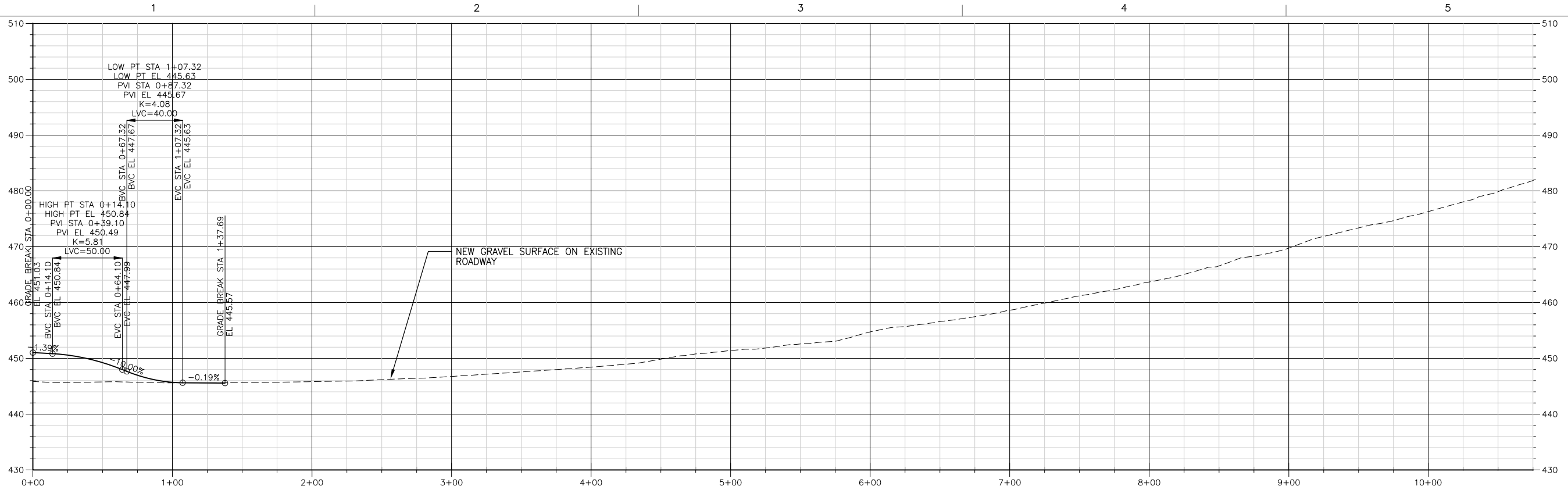
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ACCEPTED  
NAME  
TITLE  
STATION NAME (CITY, ST) YYYY-MM-DD

**SPANISH FLAT  
GRADING AND ROAD  
DETAILS IV**

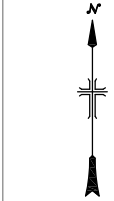
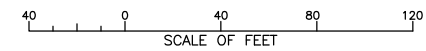
LB-SFRA-CD04  
SHEET X OF X

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PROFILE - DRIVE SF-4



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**RECREATION AREA**  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

CONTRACTOR

ACCEPTED  
NAME  
TITLE

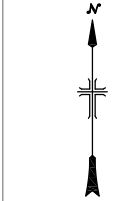
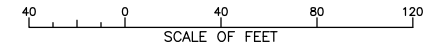
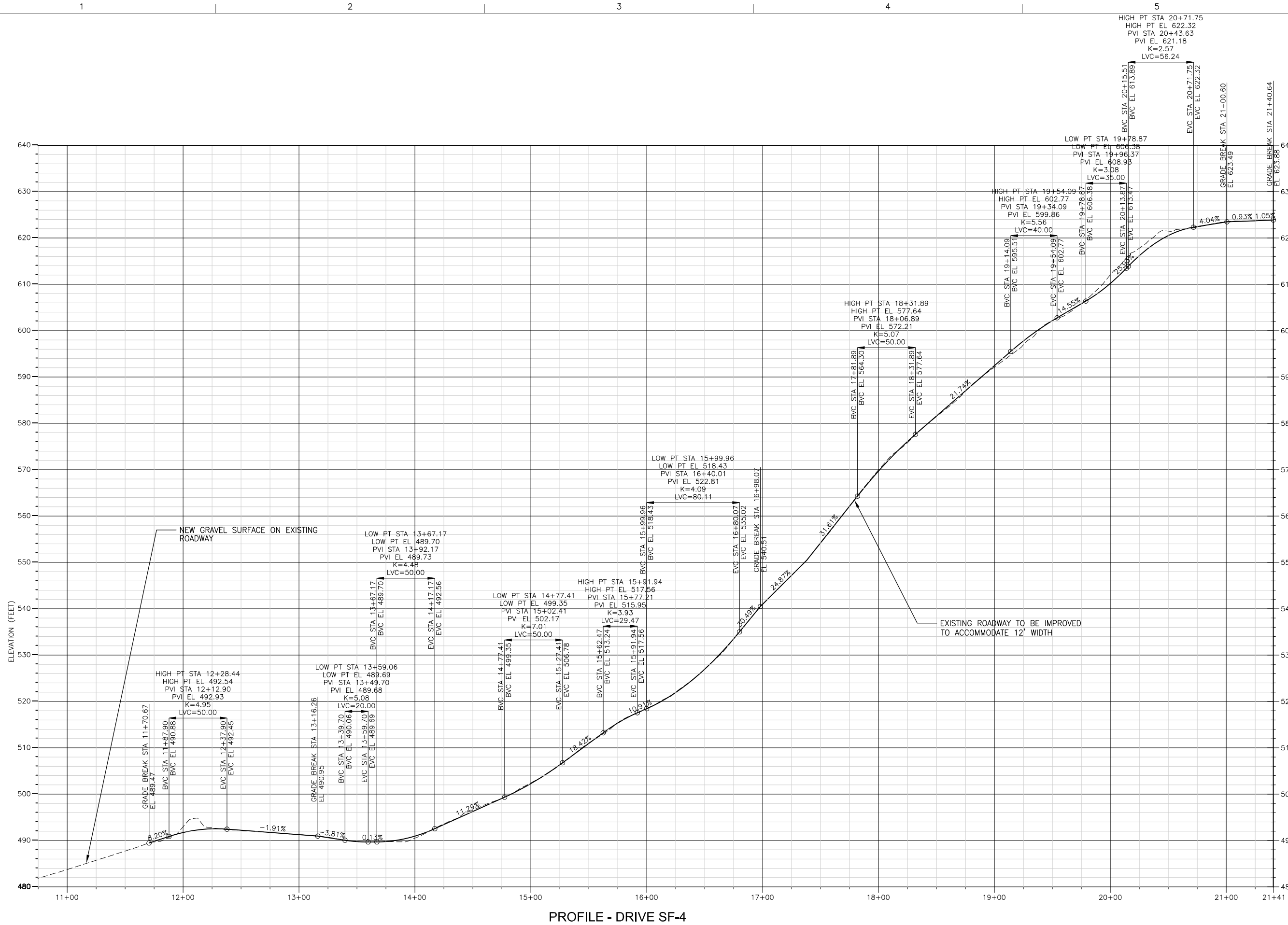
STATION NAME (CITY, ST)      YYYY-MM-DD

**SPANISH FLAT  
GRADING AND ROAD  
DETAILS V**

LB-SFRA-CD05  
SHEET X OF X

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YYYY-MM-DD

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LANE BERRERSSA (CALIFORNIA)  
**RECREATION AREA**  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photogrammetric Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

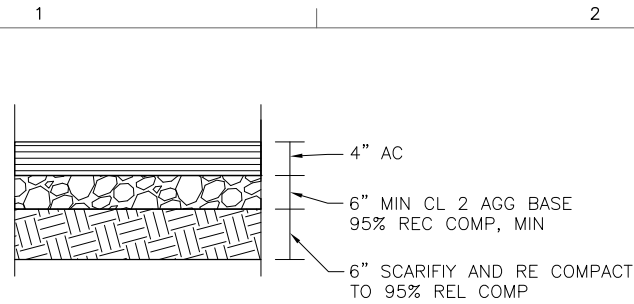
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ACCEPTED NAME TITLE  
STATION NAME (CITY, ST) YYYY-MM-DD

**SPANISH FLAT GRADING AND ROAD DETAILS VI**

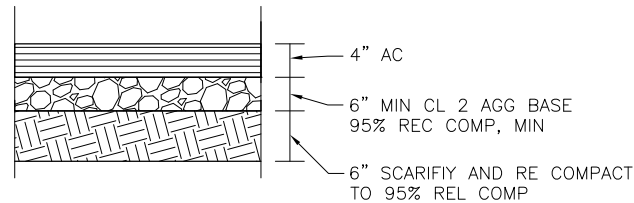
LB-SFRA-CD06  
SHEET X OF X

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YYYY-MM-DD  
ACCEPTED:  
NAME, PROF. ABRB

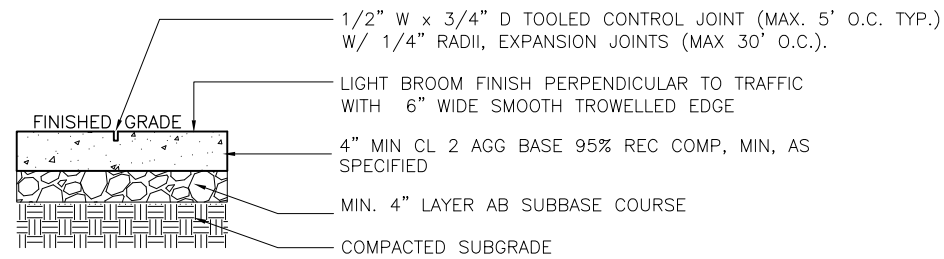
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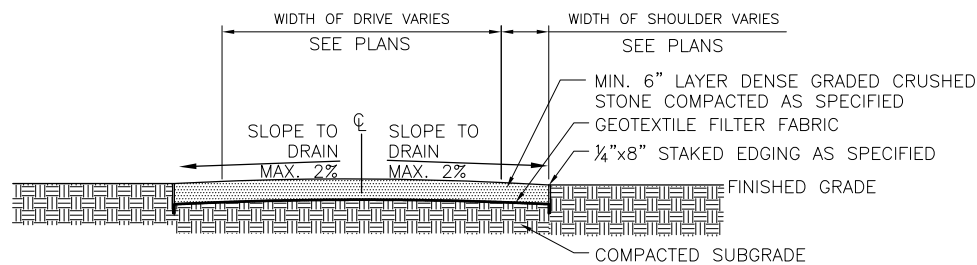
TYPICAL ACCESS DRIVE PAVEMENT  
**DETAIL A**  
NTS



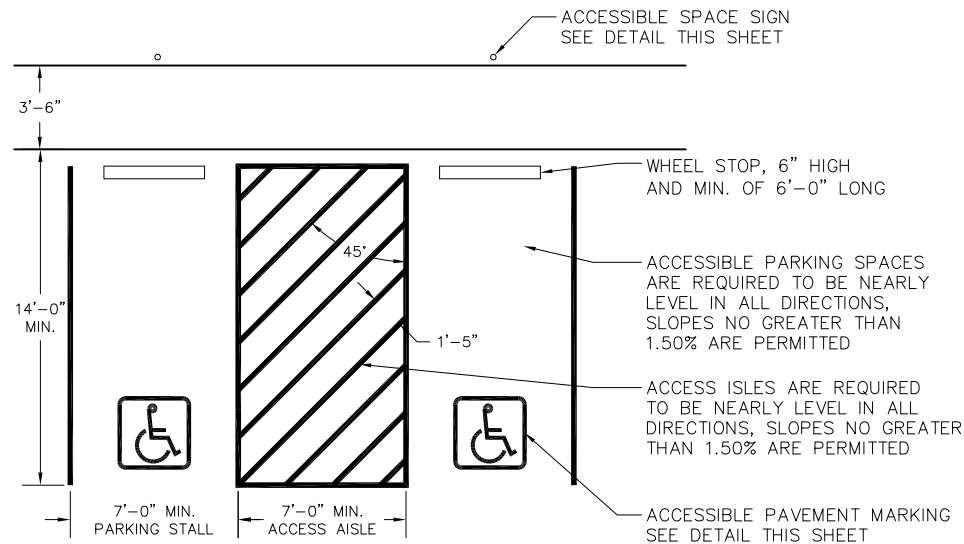
TYPICAL PARKING AREA PAVEMENT  
**DETAIL B**  
NTS



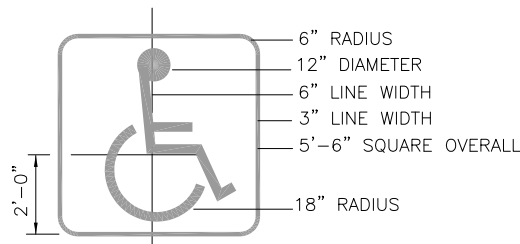
TYPICAL WALKWAY PAVEMENT  
**DETAIL C**  
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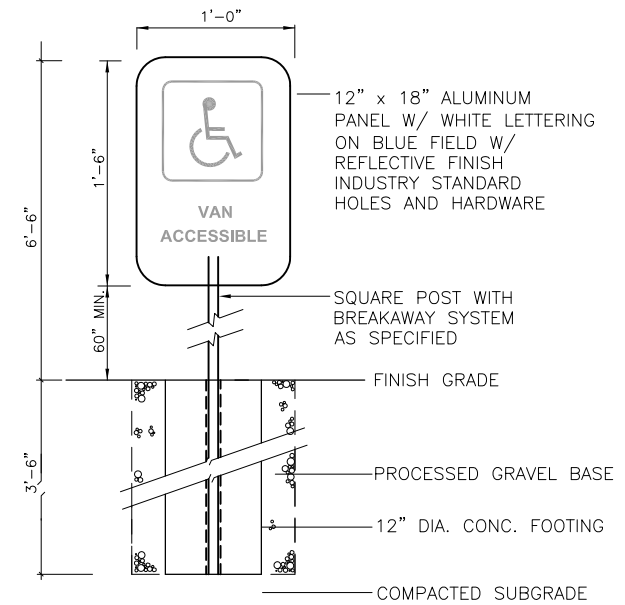
GRADED CRUSHED AGGREGATE STONE  
**DETAIL D**  
NTS



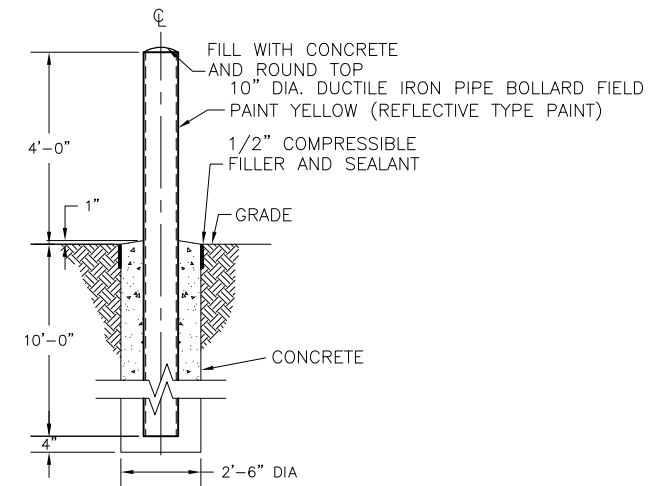
TYPICAL ACCESSIBLE PARKING LAYOUT  
**DETAIL E**  
NTS



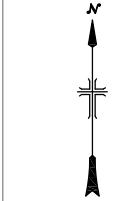
TYPICAL ACCESSIBLE PAVEMENT SYMBOL  
**DETAIL F**  
NTS



TYPICAL ACCESSIBLE PARKING SIGN  
**DETAIL G**  
NTS



BOLLARD  
**DETAIL H**  
NTS



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CENTRAL CALIFORNIA AREA OFFICE  
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RECREATION AREA  
DEVELOPMENT PLANS 60%

SURVEY NOTES  
CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

CONTRACTOR  
DRAWN  
ACCEPTED  
NAME  
TITLE  
STATION NAME (CITY, ST) YYYY-MM-DD

SPANISH FLAT  
GRADING AND ROAD  
DETAILS XI

LB-SFRA-CD10

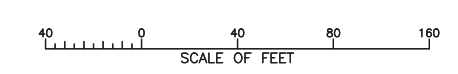
C:\pwworking\1622738\LB-SFRA-CR01.dwg, 7/1/2015 3:41:13 PM, dclanden



**RAMP 2**

REMOVE APPROXIMATELY 30,000 SF EXISTING ASPHALT/CONCRETE; CONTRACTOR TO VERIFY SQUARE FOOTAGE IN FIELD FOR PAYMENT ON A SF BASIS

Span: 428.5  
El. 428.5  
er 20, 20



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DEVELOPMENT PLANS 60%

**SURVEY NOTES**  
CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

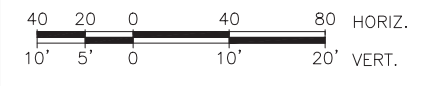
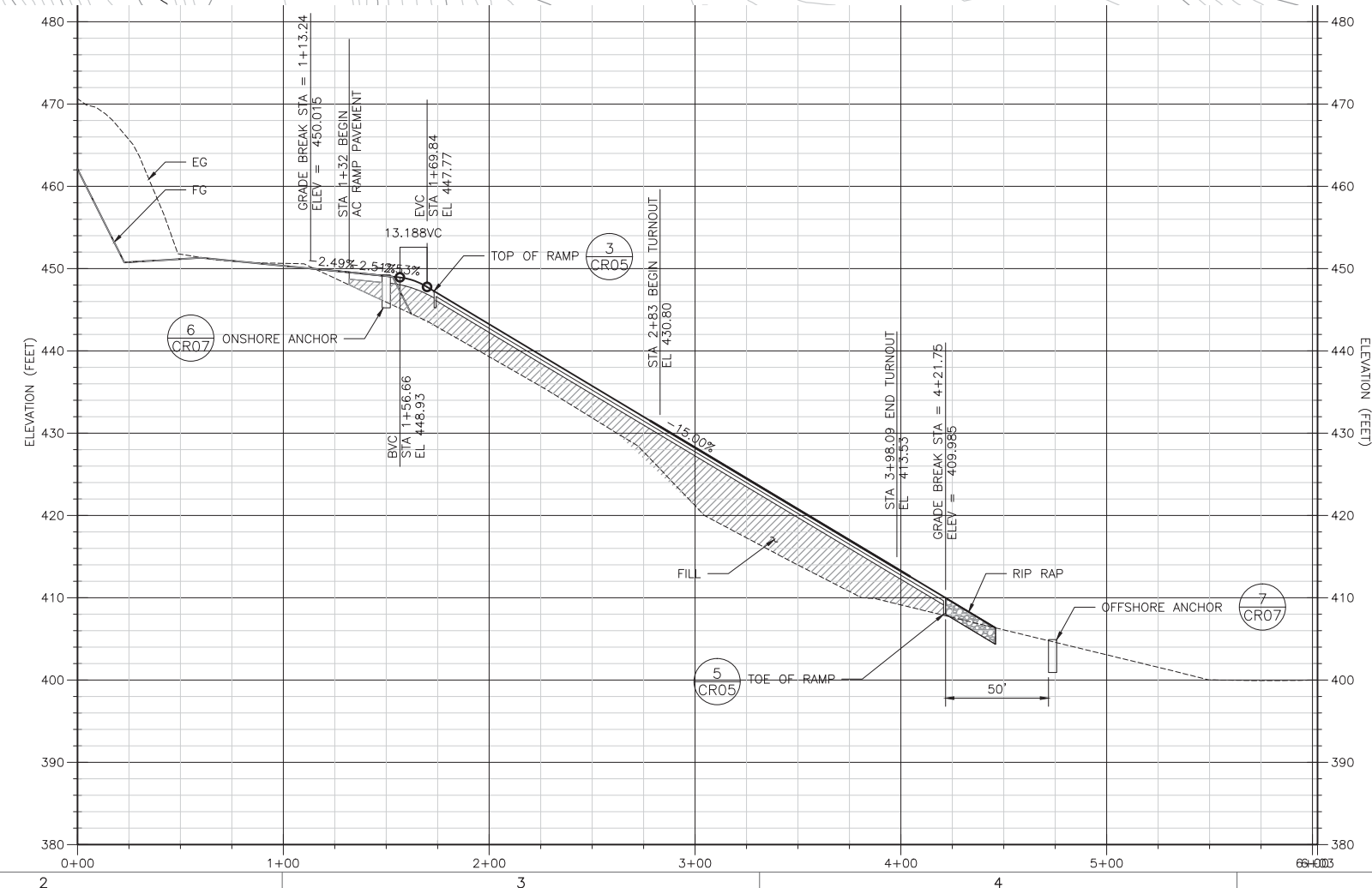
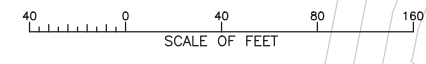
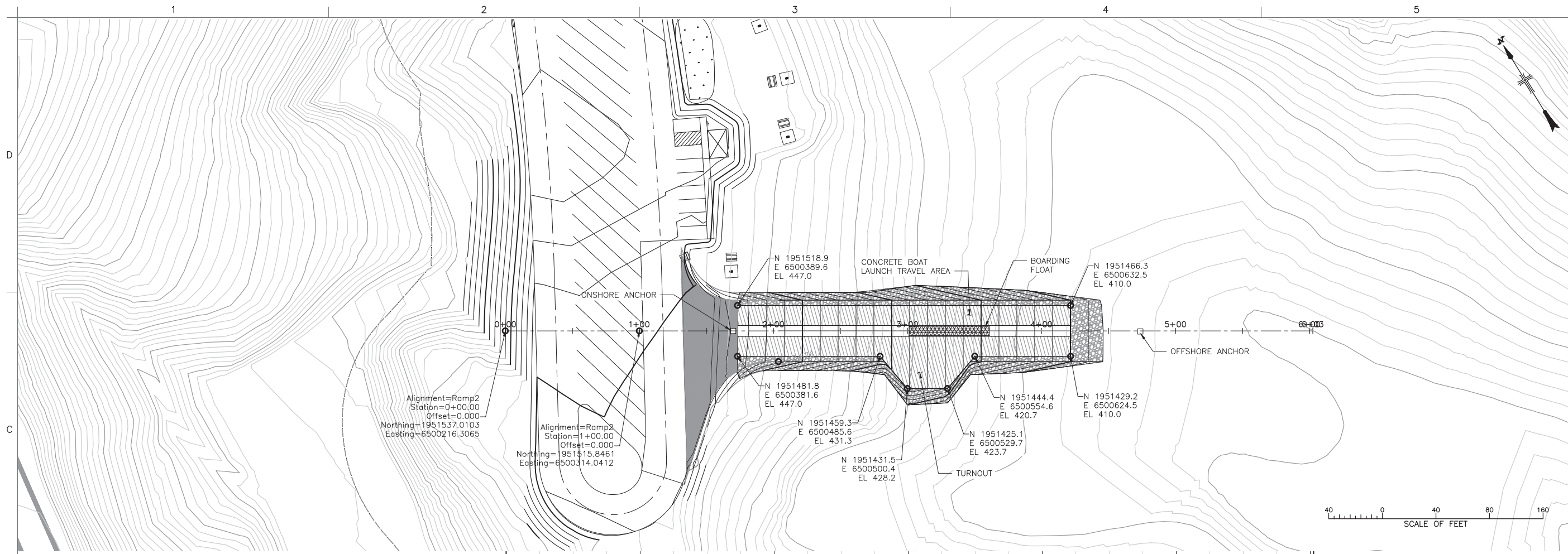
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DRAWN  
ACCEPTED  
NAME  
TITLE  
STATION NAME (CITY, ST) YYYY-MM-DD

**SPANISH FLAT  
DEMOLITION PLAN**

**LB-SFRA-CR01**  
SHEET X OF X

RON BERRY, PE  
dc  
SITA, CDM SMITH  
105904.2330.019  
ACCEPTED:  
YYYY-MM-DD

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**RECREATION AREA**  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 10 U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

CONTRACTOR

ACCEPTED  
NAME  
TITLE

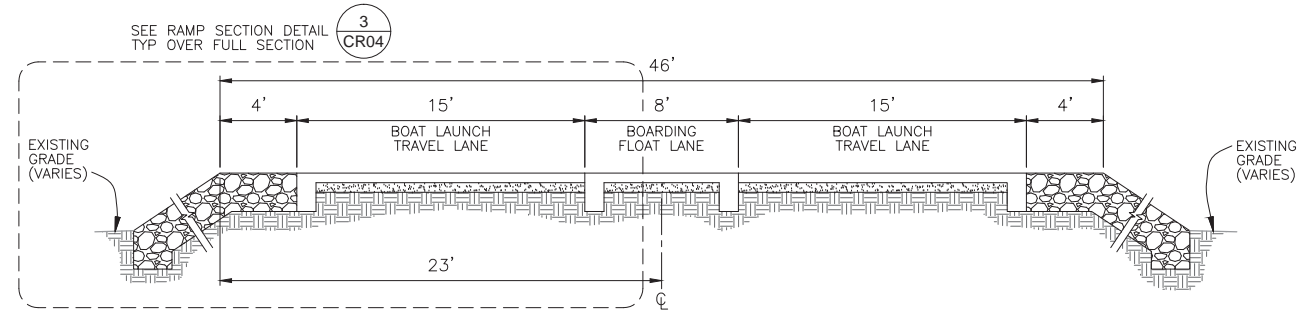
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**SPANISH FLAT  
BOAT RAMP 2  
PLAN & PROFILE**

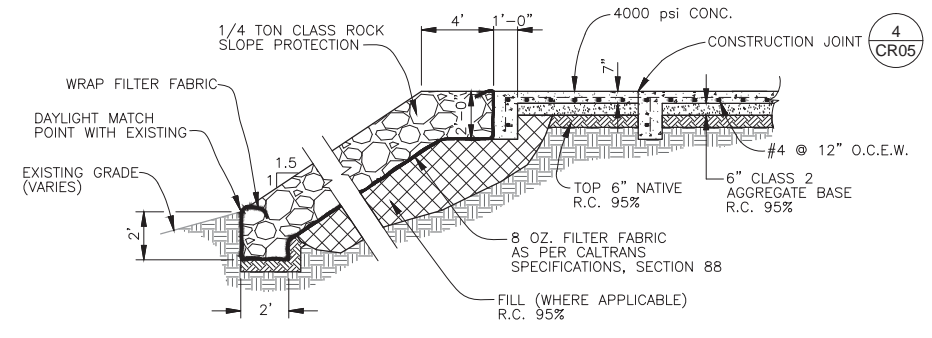
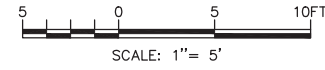
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SHEET X OF X

ROY BERRY, PE  
STA, CDM SMITH  
DC  
ACCEPTED:  
105904.2330.019

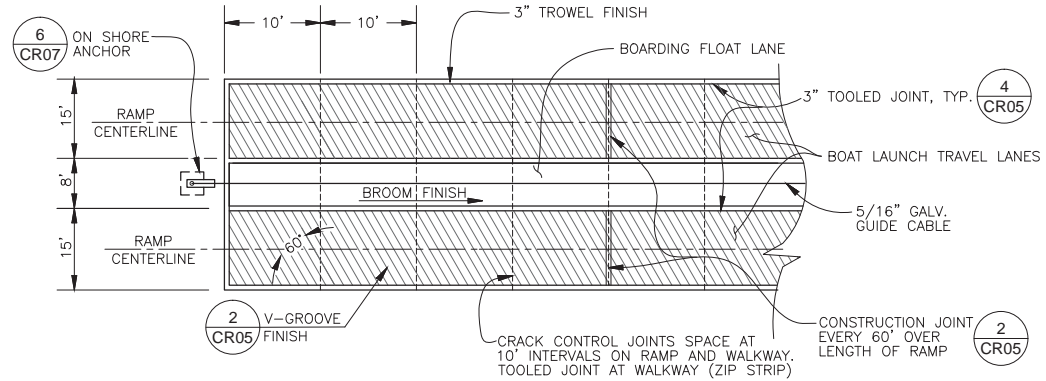
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SPANISH FLAT RAMP 1 SECTION - FACING WATER



RAMP SECTION DETAIL



PLAN VIEW - LAUNCHING RAMP FINISH SCHEDULE

ACCEPTED:  
YYYY-MM-DD  
RON BERRY, PE  
SITA COM SMITH  
DC, ES  
105904.2330.019

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RECREATION AREA  
DEVELOPMENT PLANS 60%

SURVEY NOTES

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 10  
U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photogrammetry Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

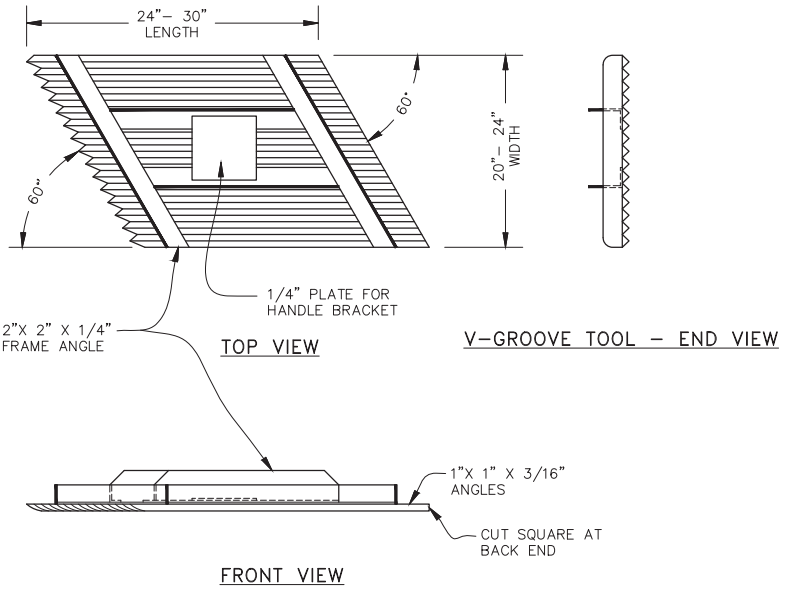
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NAME  
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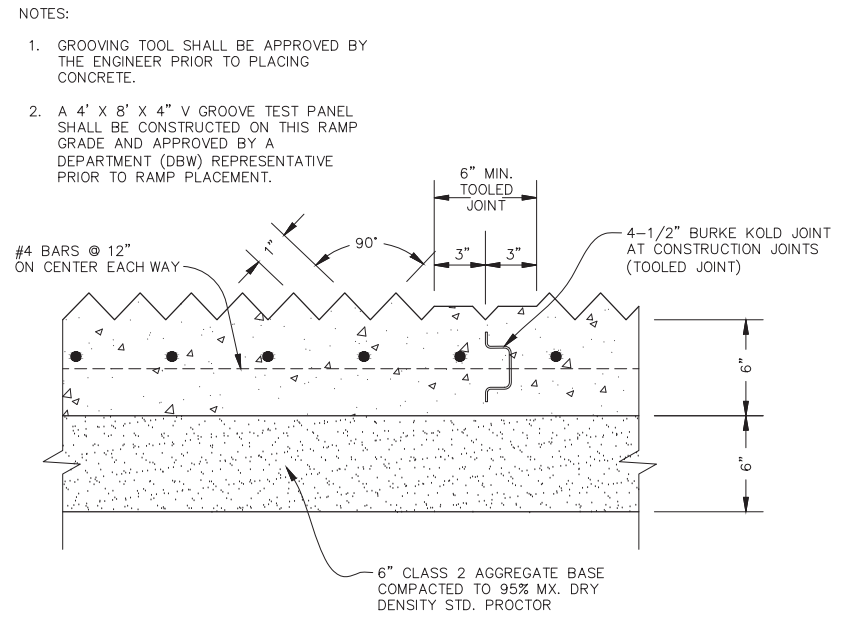
STATION NAME (CITY, ST) YYYY-MM-DD

SPANISH FLAT  
SECTIONS & DETAILS

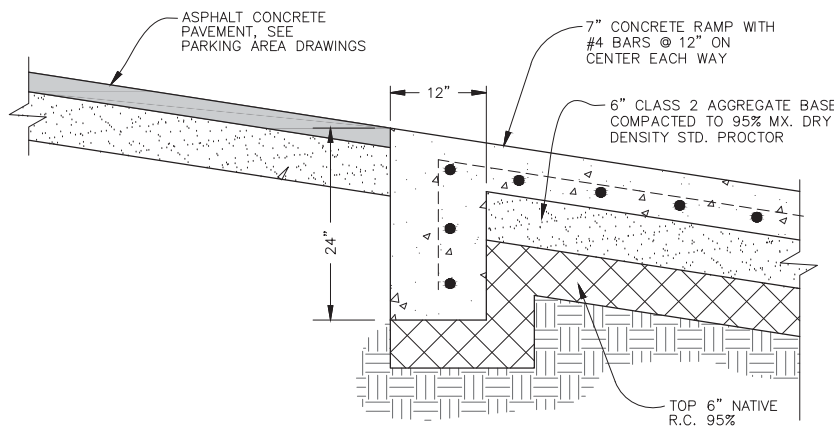
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SHEET X OF X



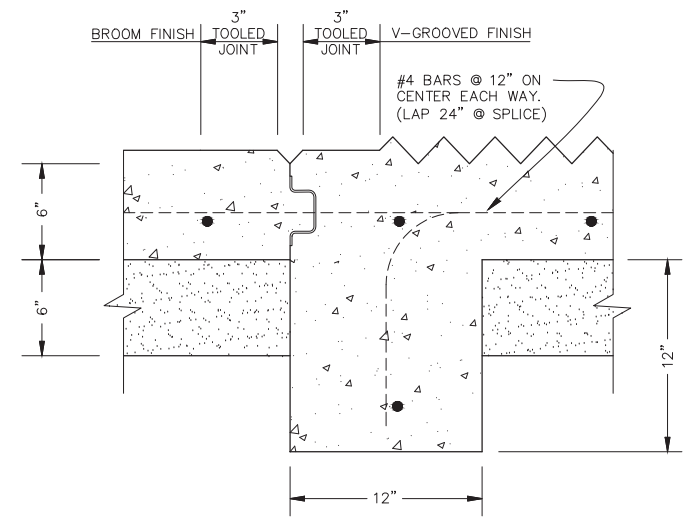
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NTS  
CR05



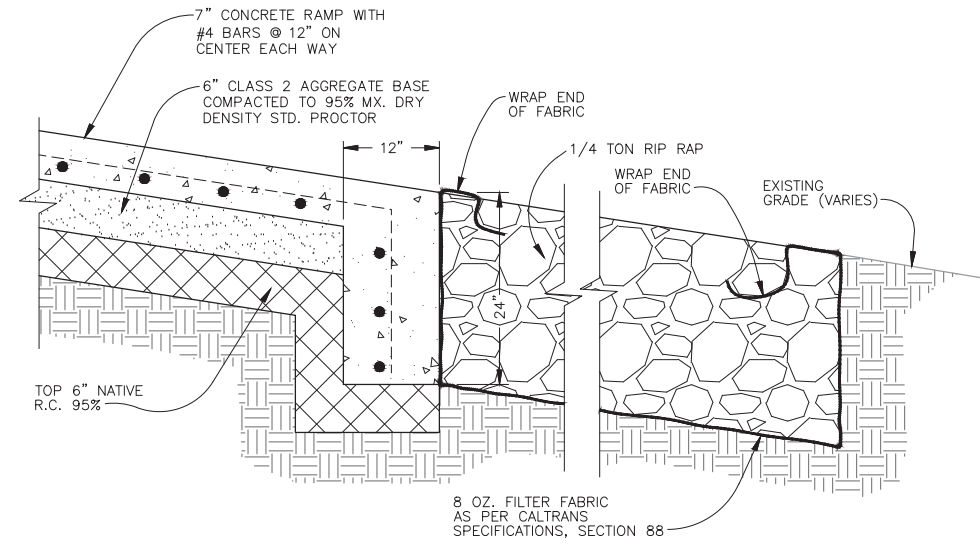
**V-GROOVE TOOL DETAIL 2**  
NTS  
CR05



**TOP OF RAMP DETAIL 3**  
NTS  
CR05



**JOINT DETAIL 4**  
NTS  
CR05



**BOTTOM OF RAMP DETAIL 5**  
NTS  
CR05

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**RECREATION AREA**  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**  
CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 10  
U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

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DRAWN  
ACCEPTED  
NAME  
TITLE  
STATION NAME (CITY, ST) YYY-MM-DD

**SPANISH FLAT SECTIONS & DETAILS**  
LB-SFRA-CR05  
SHEET X OF X

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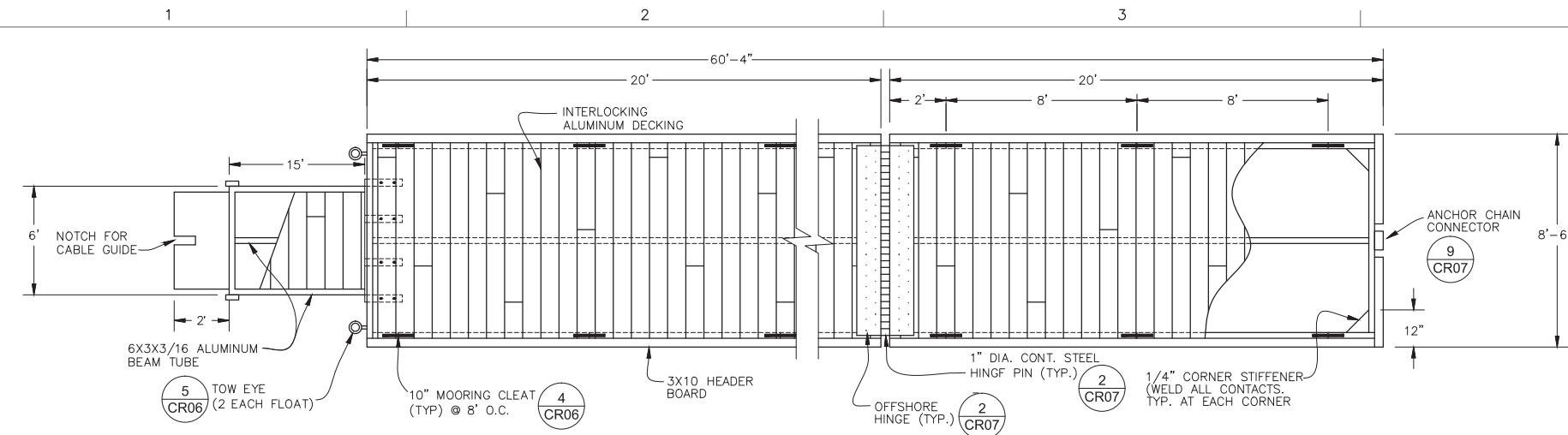
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BUREAU OF RECLAMATION  
CENTRAL CALIFORNIA AREA OFFICE  
LAKE BERRESSA (CALIFORNIA)  
RECREATION AREA  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**  
CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 10  
U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

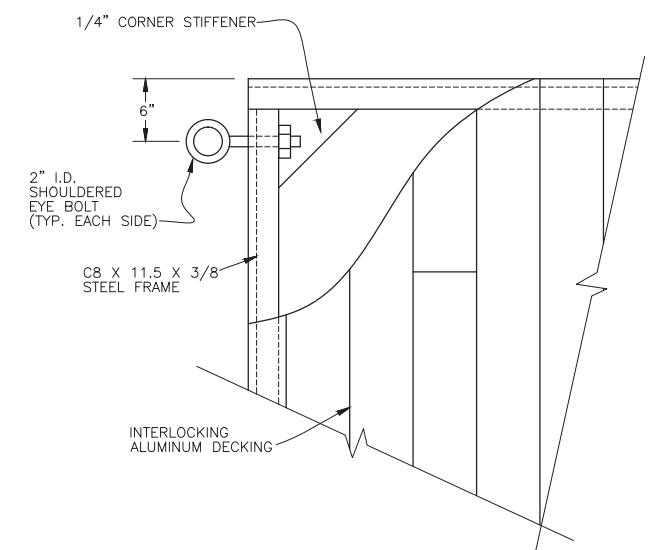
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NAME  
TITLE  
STATION NAME (CITY, ST) YYYY-MM-DD

SPANISH FLAT  
SECTIONS & DETAILS

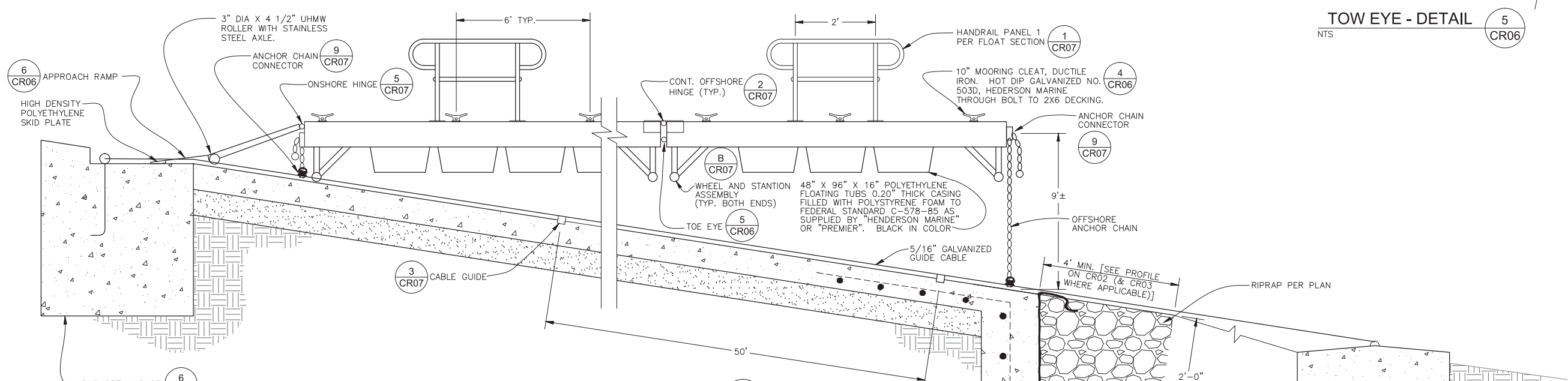
LB-SFRA-CR06  
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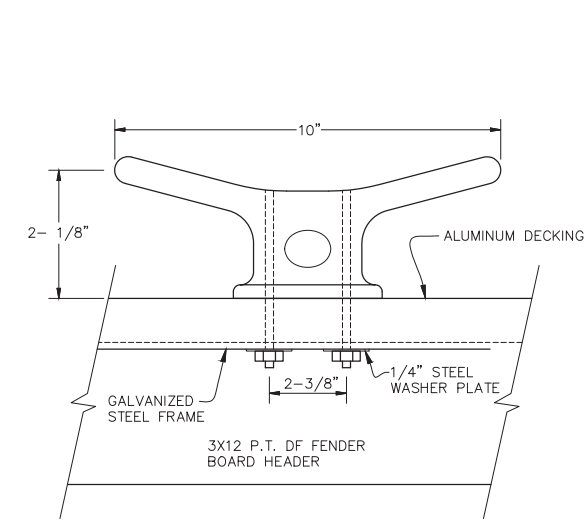
**PLAN VIEW - BOARDING FLOAT** 1  
NTS CR06



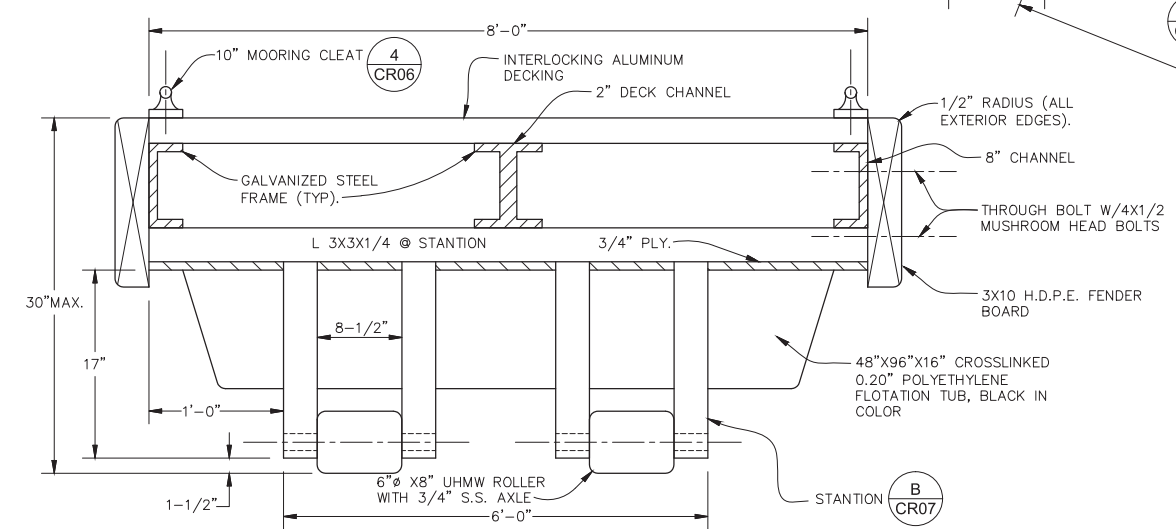
**TOW EYE - DETAIL** 5  
NTS CR06



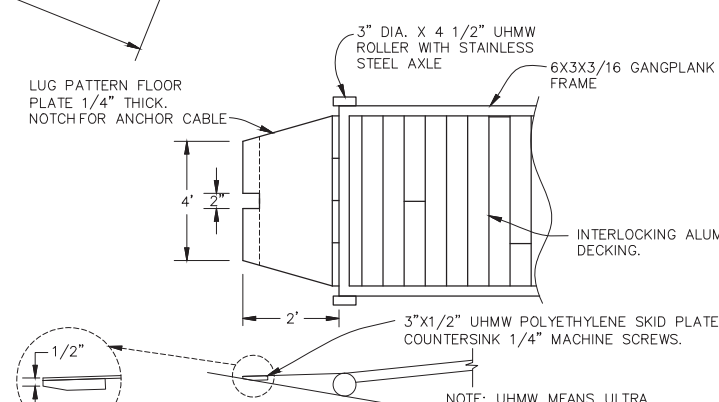
**SECTION - BOARDING FLOAT** 2  
NTS CR06



**MOORING CLEAT ATTACHMENT DETAIL** 4  
NTS CR06

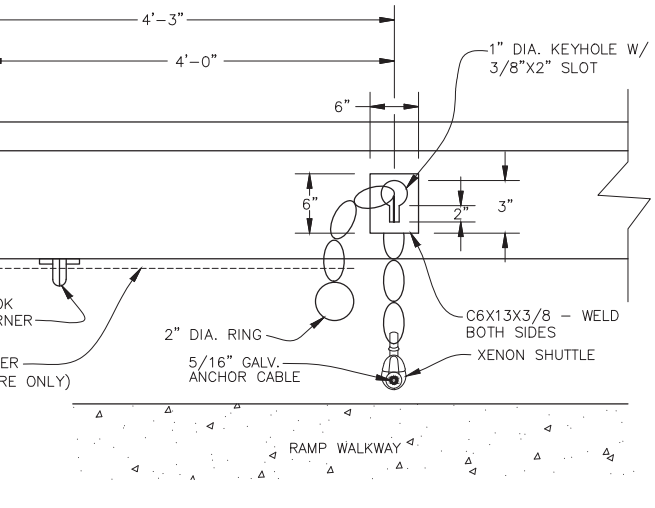
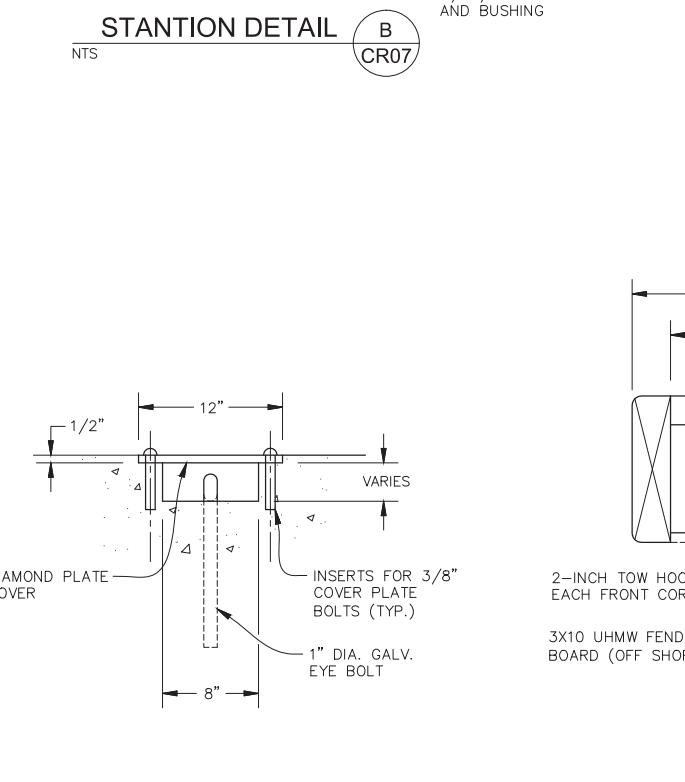
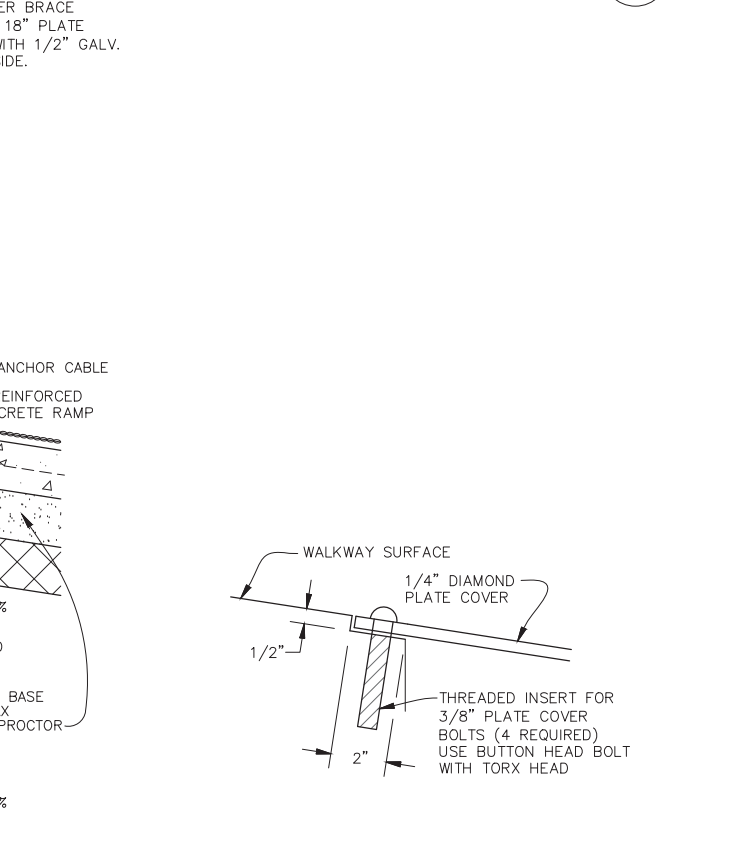
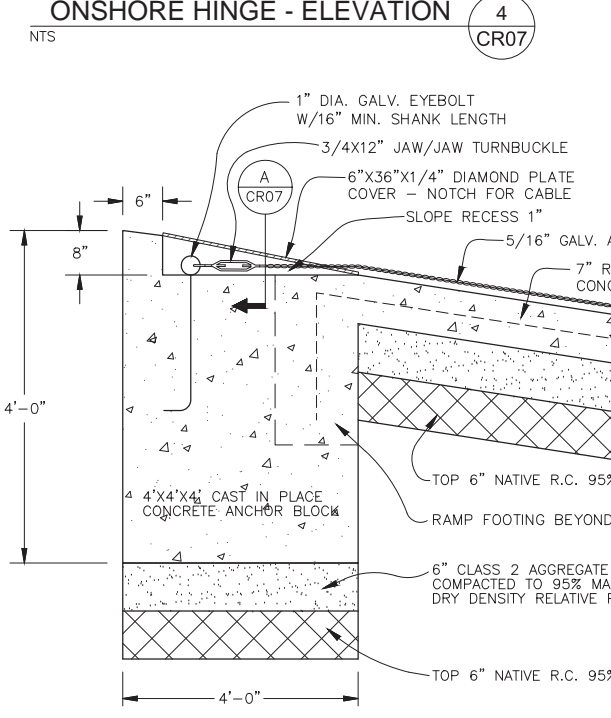
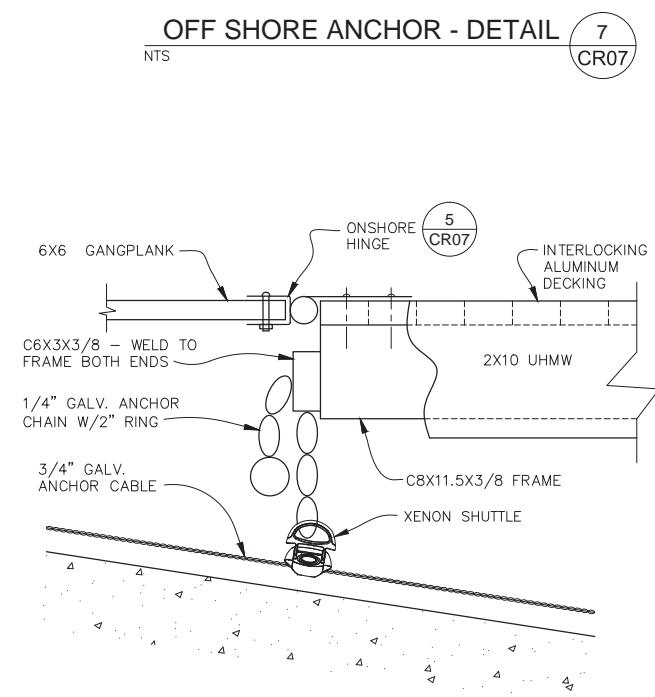
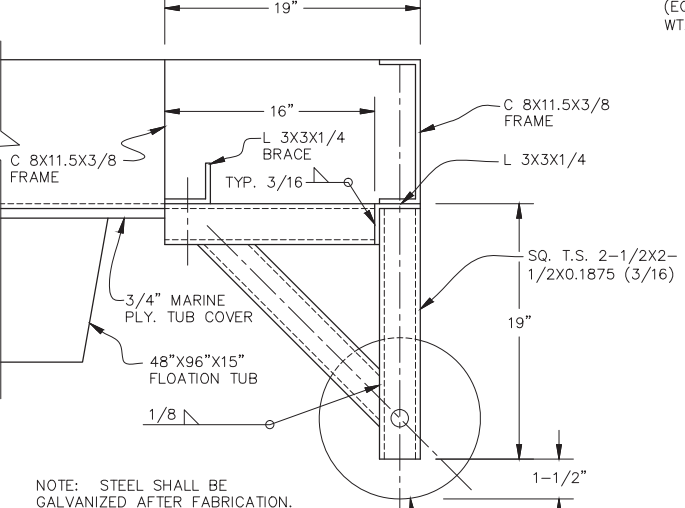
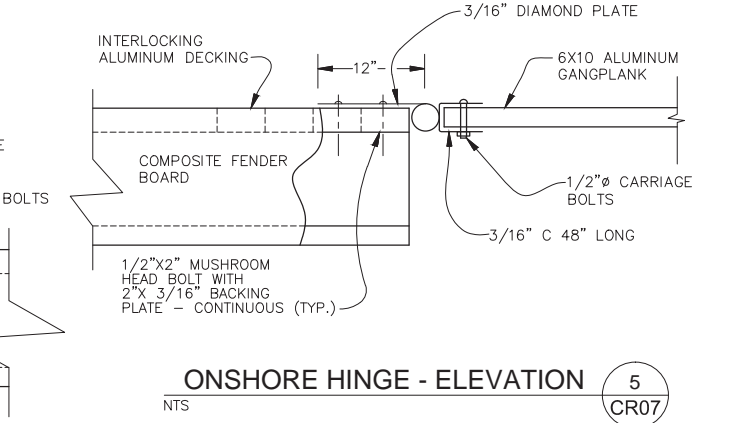
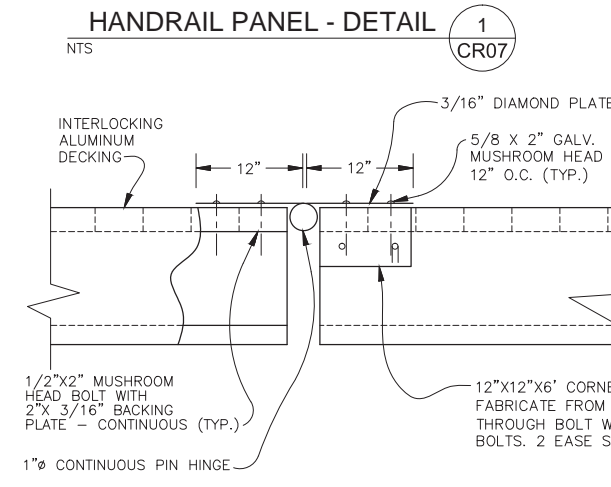
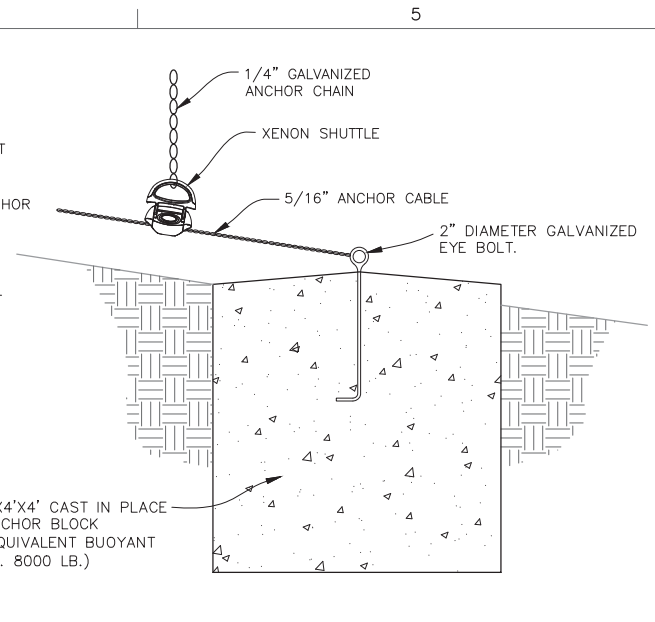
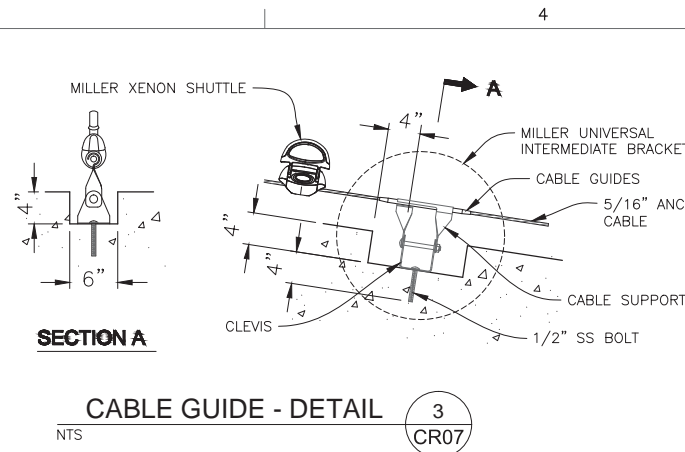
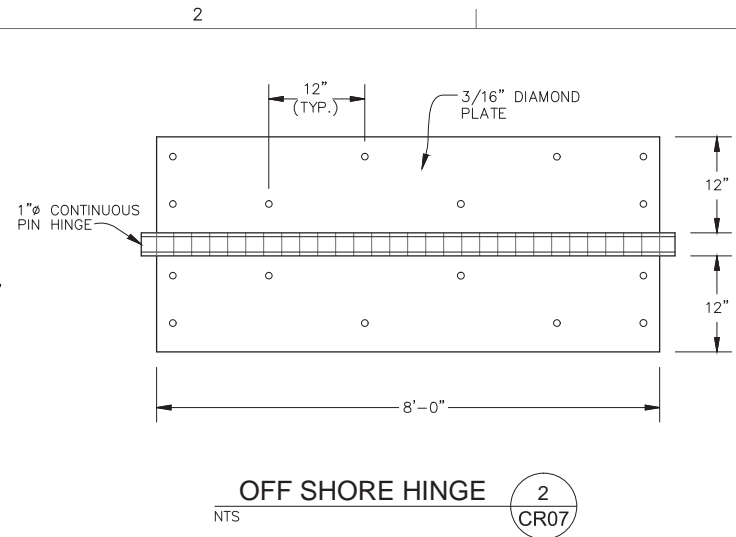
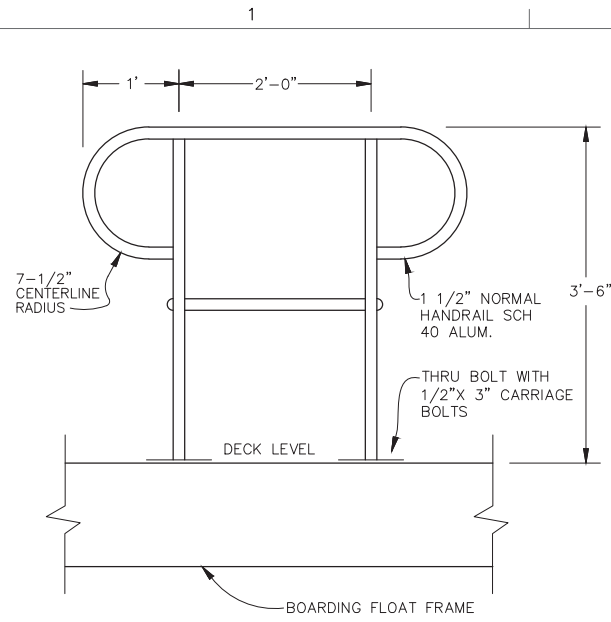


**SECTION - BOARDING FLOAT** 3  
NTS CR06



**APPROACH RAMP** 6  
NTS CR06

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SITA, COM SMITH  
DC, ES  
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CENTRAL CALIFORNIA AREA OFFICE  
LANE BERRERSSA (CALIFORNIA)  
**RECREATION AREA**  
DEVELOPMENT PLANS 60%

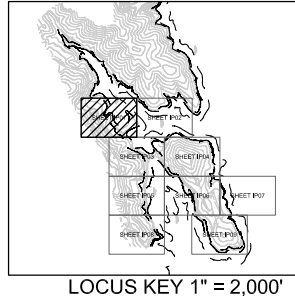
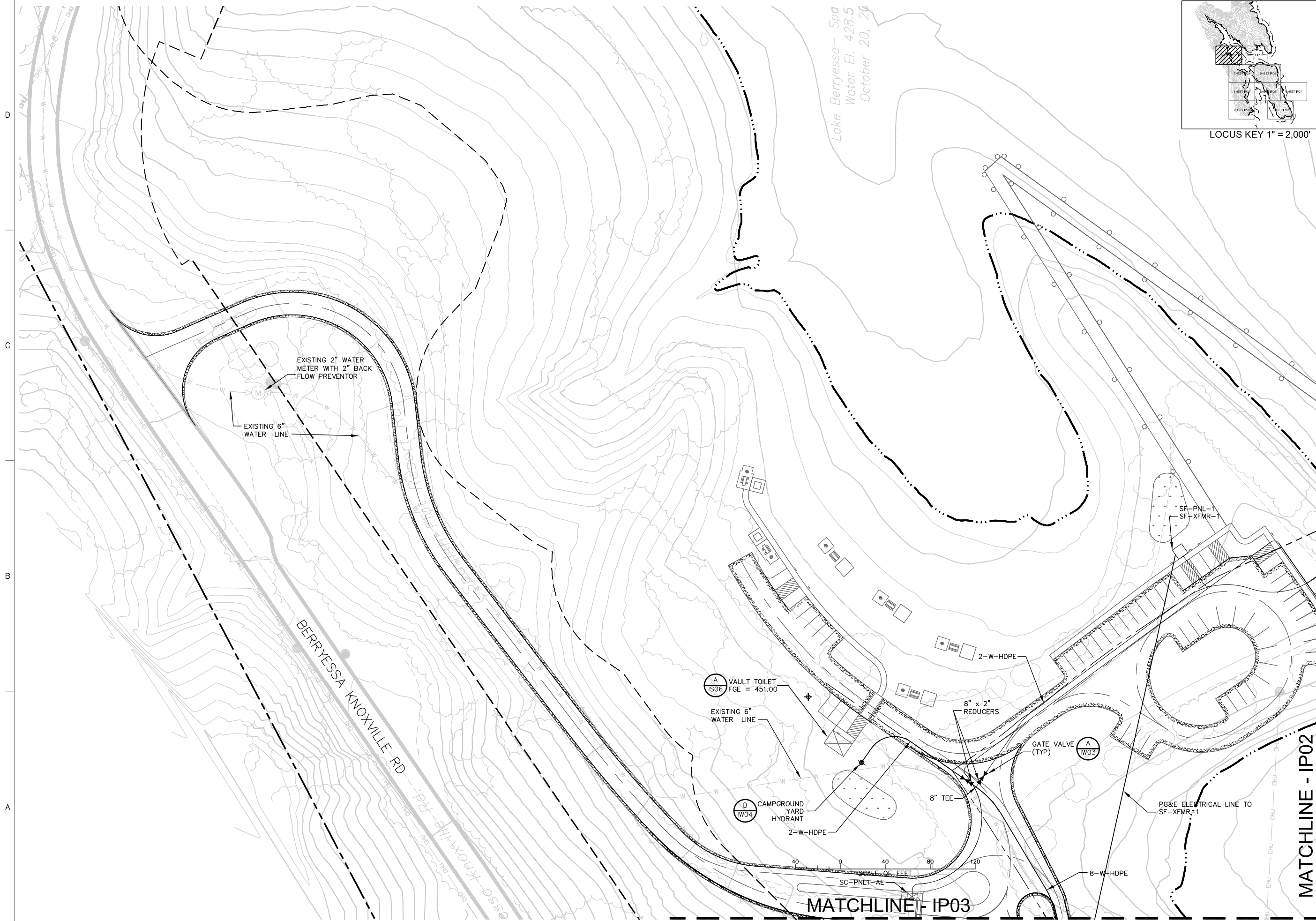
**SURVEY NOTES**

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 10  
U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

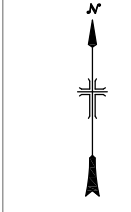
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ACCEPTED: NAME TITLE  
STATION NAME (CITY, ST): YYYY-MM-DD

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LAKE BERRYESSA (CALIFORNIA)  
**RECREATION AREA**  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

CONTRACTOR

ACCEPTED NAME TITLE  
STATION NAME (CITY, ST) YYYY-MM-DD

**SPANISH FLAT  
INFRASTRUCTURE PLAN I**

LB-SFRA-IP01  
SHEET X OF X

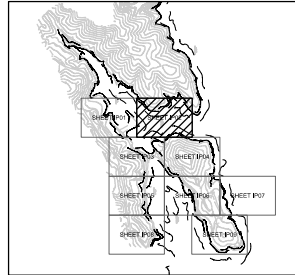
YYYY-MM-DD  
STA. CDM SMITH  
105904.2330.019  
ACCEPTED: NAME, PROF. ABBR

**MATCHLINE - IP02**

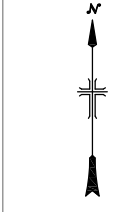
**MATCHLINE - IP03**

SCALE OF FEET  
0 40 80 120  
SC-PNLT-AE

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LAKE BERRYESSA (CALIFORNIA)  
RECREATION AREA  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

CONTRACTOR

ACCEPTED  
NAME  
TITLE

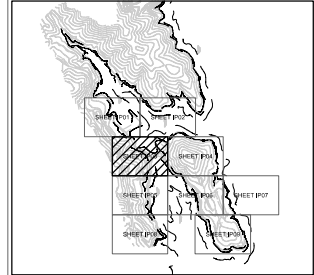
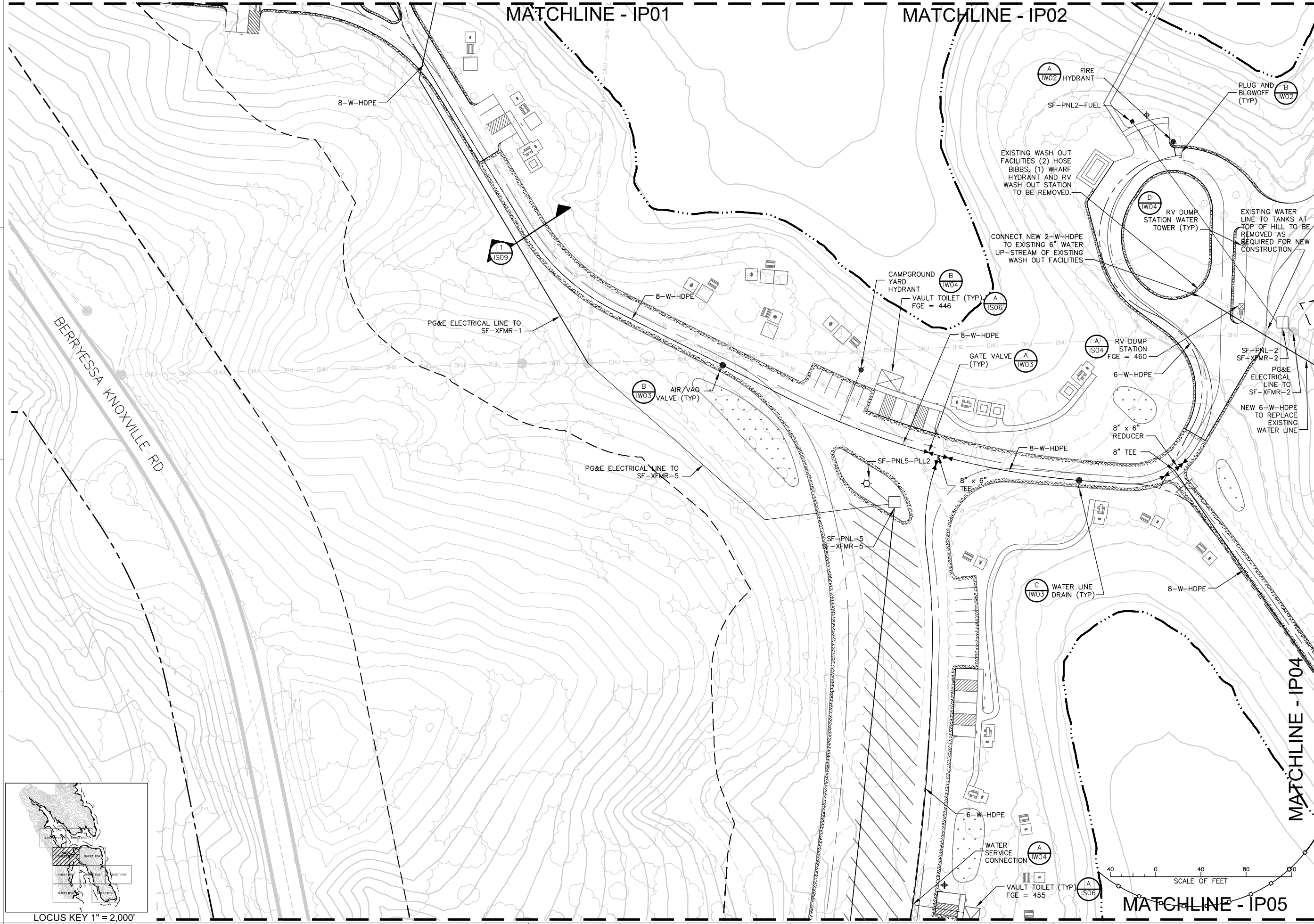
STATION NAME (CITY, ST)      YYYY-MM-DD

**SPANISH FLAT  
INFRASTRUCTURE PLAN II**

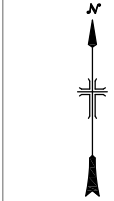
LB-SFRA-IP02  
SHEET X OF X

YYYY-MM-DD  
STA. CDM SMITH  
105904.2330.019  
ACCEPTED:  
NAME, PROF. ABRB

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LOCUS KEY 1" = 2,000'



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U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF RECLAMATION  
CENTRAL CALIFORNIA AREA OFFICE  
LANE BERRYESSA (CALIFORNIA)  
RECREATION AREA  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

CONTRACTOR

ACCEPTED  
NAME  
TITLE

STATION NAME (CITY, ST)

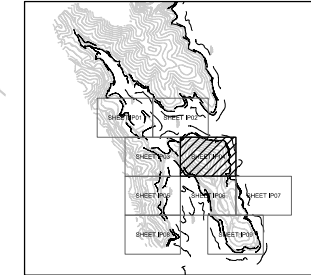
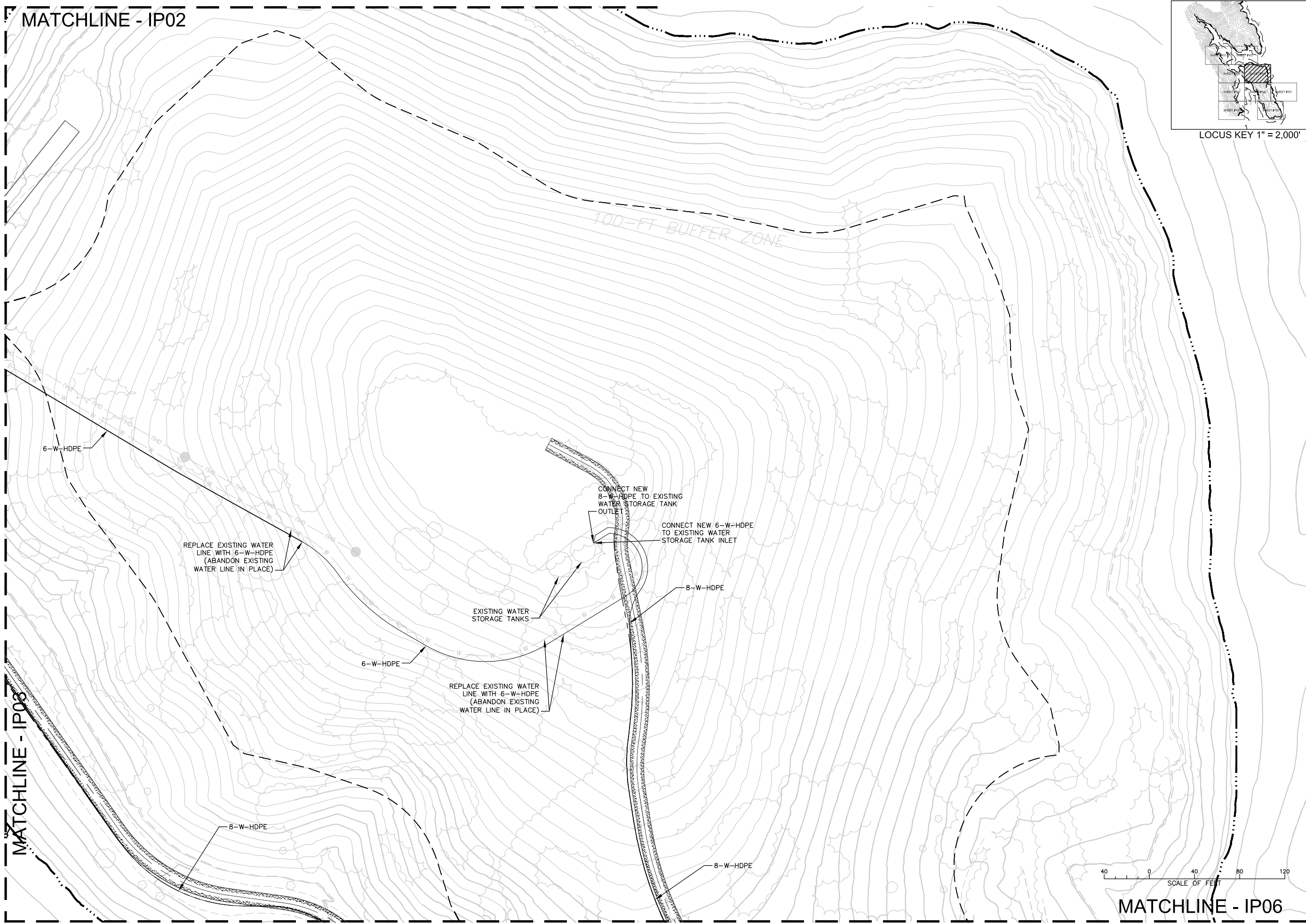
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**SPANISH FLAT  
INFRASTRUCTURE PLAN III**

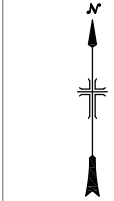
STA. CDM SMITH  
105904.2330.019  
YYYY-MM-DD  
ACCEPTED:  
NAME, PROF. ABR

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MATCHLINE - IP02



RECLAMATION  
Managing Water in the West



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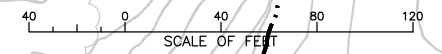
U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF RECLAMATION  
CENTRAL CALIFORNIA AREA OFFICE  
LANE BERRERSSA (CALIFORNIA)  
RECREATION AREA  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**  
CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

CONTRACTOR  
DRAWN  
ACCEPTED  
NAME  
TITLE  
STATION NAME (CITY, ST) YYYY-MM-DD

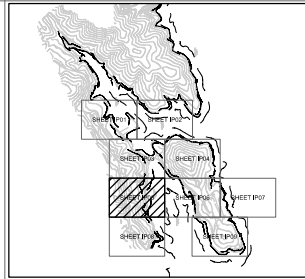
**SPANISH FLAT  
INFRASTRUCTURE PLAN IV**

LB-SFRA-IP04  
SHEET X OF X

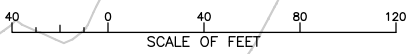


MATCHLINE - IP06

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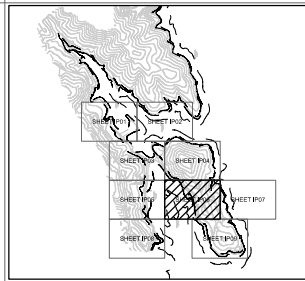
MATCHLINE - IP03

MATCHLINE - IP08

MATCHLINE - IP06

<b>RECLAMATION</b> <i>Managing Water in the West</i>	
N ↑	STA. CDM SMITH 105904.2330.019
⊕ ALWAYS THINK SAFETY	YYYY-MM-DD NAME, PROF. ABR
U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION CENTRAL CALIFORNIA AREA OFFICE LAKE BERRYESSA (CALIFORNIA) <b>RECREATION AREA</b> DEVELOPMENT PLANS 60%	
<b>SURVEY NOTES</b> CALIFORNIA STATE PLANE COORDINATE SYSTEM ZONE 2, U.S. SURVEY FEET HORIZONTAL DATUM: NAD 1983 VERTICAL DATUM: NAVD 1988 TOPOGRAPHY CONTOUR INTERVAL: 5 FT. BATHYMETRIC CONTOUR INTERVAL: 10 FT. Topography by American Photomapping Services Compiled from photography: 201163 Date of photography: October 20, 2011	
DRAWN _____ CONTRACTOR	
ACCEPTED _____	
STATION NAME (CITY, ST) YYYY-MM-DD	
<b>SPANISH FLAT INFRASTRUCTURE PLAN V</b>	
LB-SFRA-IP05 SHEET X OF X	

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LOCUS KEY 1" = 2,000'

MATCHLINE - IP05

MATCHLINE - IP07

MATCHLINE - IP04

MATCHLINE - IP09

8-W-HDPE

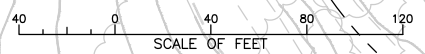
8-W-HDPE

8-W-HDPE

8" TEE

PLUG AND BLOWOFF (T&E)

B (W02)



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RECREATION AREA  
DEVELOPMENT PLANS 60%

SURVEY NOTES

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
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Compiled from photography: 201163  
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CONTRACTOR

ACCEPTED  
NAME  
TITLE

STATION NAME (CITY, ST)

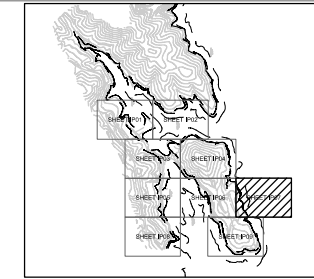
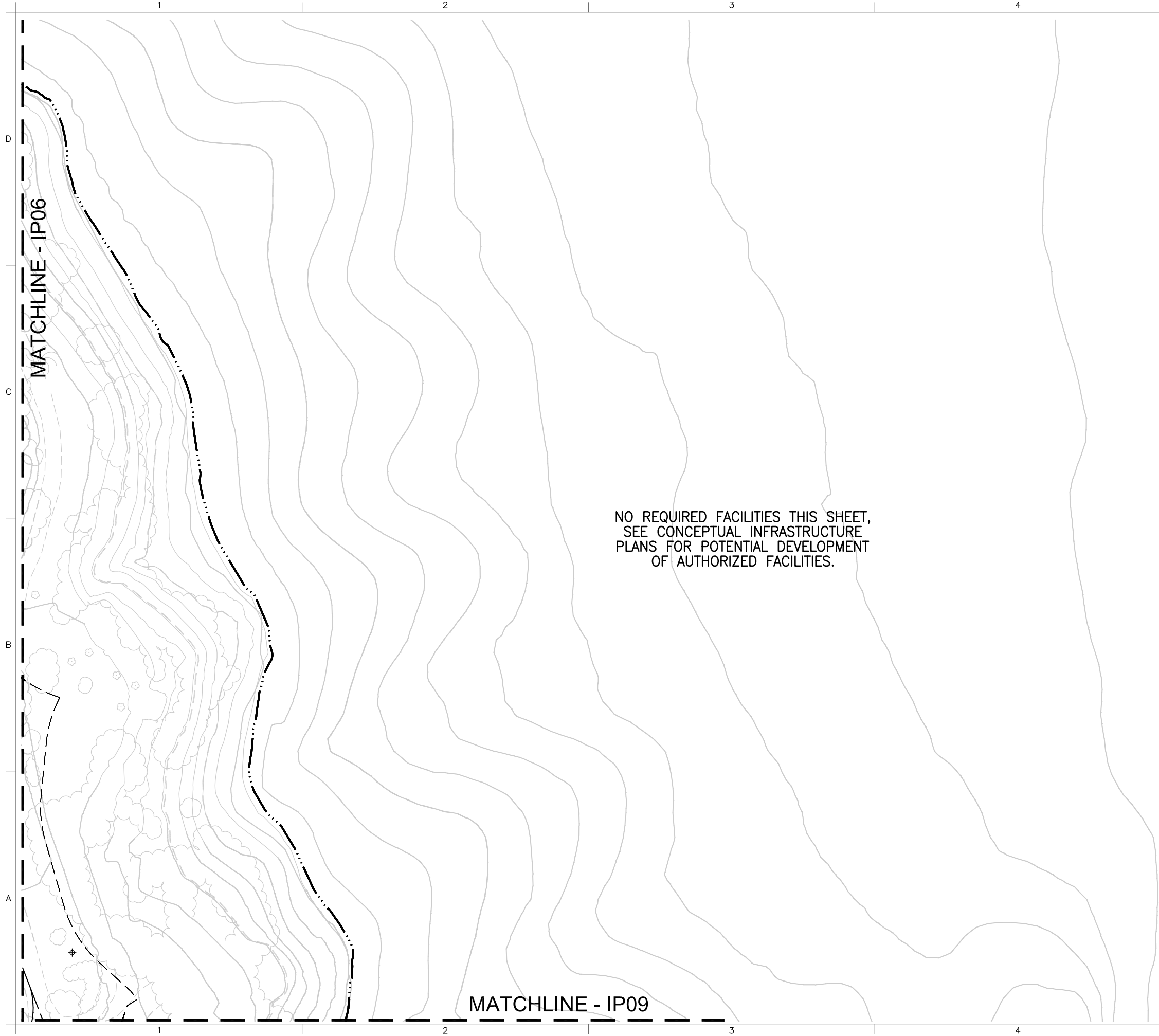
YYYY-MM-DD

**SPANISH FLAT  
INFRASTRUCTURE PLAN VI**

LB-SFRA-IP06  
SHEET X OF X

Yyyy-mm-dd  
NAME, PROF. ABBR  
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RECREATION AREA  
DEVELOPMENT PLANS 60%

**SURVEY NOTES**

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
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VERTICAL DATUM: NAVD 1988  
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BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

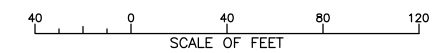
CONTRACTOR

ACCEPTED  
NAME  
TITLE

STATION NAME (CITY, ST)      YYYY-MM-DD

**SPANISH FLAT  
INFRASTRUCTURE PLAN VII**

LB-SFRA-IP07  
SHEET X OF X



Y  
M  
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MM-YY  
DD  
MM-YY  
DD  
105904.2330.019  
ACCEPTED:  
NAME, PROF. ABBR

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MATCHLINE - IP05

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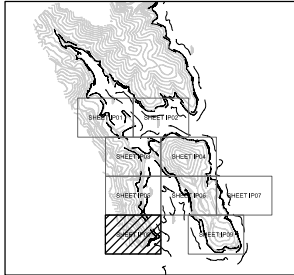
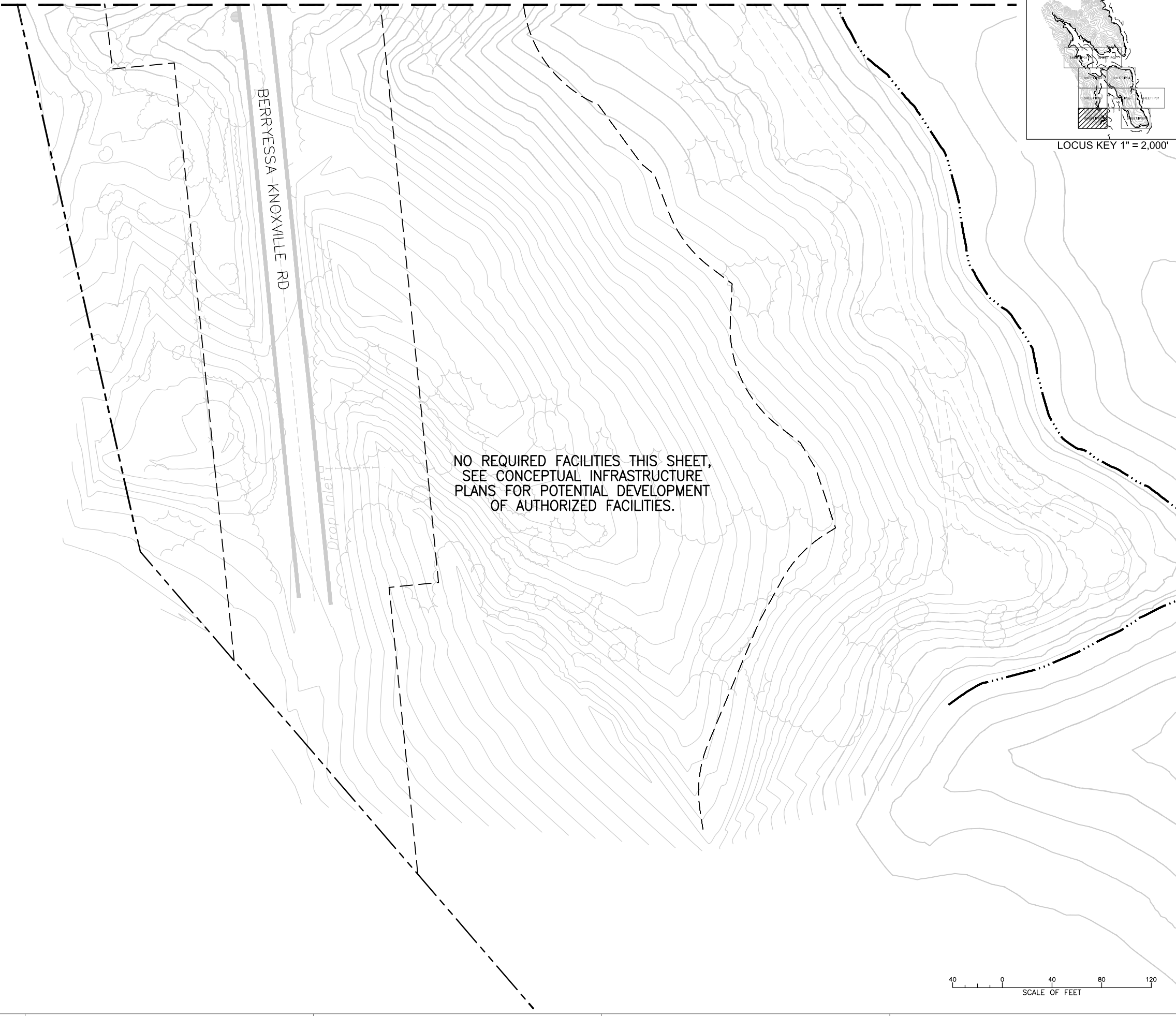
1

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SURVEY NOTES

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Compiled from photography: 201163  
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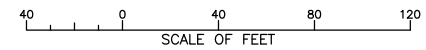
CONTRACTOR

ACCEPTED  
NAME  
TITLE

STATION NAME (CITY, ST) YYYY-MM-DD

**SPANISH FLAT  
INFRASTRUCTURE PLAN VIII**

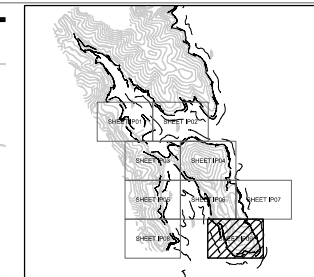
LB-SFRA-IP08  
SHEET X OF X



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MATCHLINE - IP06

MATCHLINE - IP07



LOCUS KEY 1" = 2,000'

RECLAMATION  
Managing Water in the West



Yyyy-MM-DD  
NAME, PROF. ABRV  
STA. CDM SMITH  
105904.2330.019

NO REQUIRED FACILITIES THIS SHEET,  
SEE CONCEPTUAL INFRASTRUCTURE  
PLANS FOR POTENTIAL DEVELOPMENT  
OF AUTHORIZED FACILITIES.

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LANE BERRIESTA (CALIFORNIA)  
RECREATION AREA  
DEVELOPMENT PLANS 60%

SURVEY NOTES

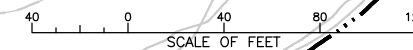
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ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
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DRAWN \_\_\_\_\_ CONTRACTOR

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NAME \_\_\_\_\_  
TITLE \_\_\_\_\_  
STATION NAME (CITY, ST) \_\_\_\_\_ YYYY-MM-DD

**SPANISH FLAT  
INFRASTRUCTURE PLAN IX**

LB-SFRA-IP09  
SHEET X OF X



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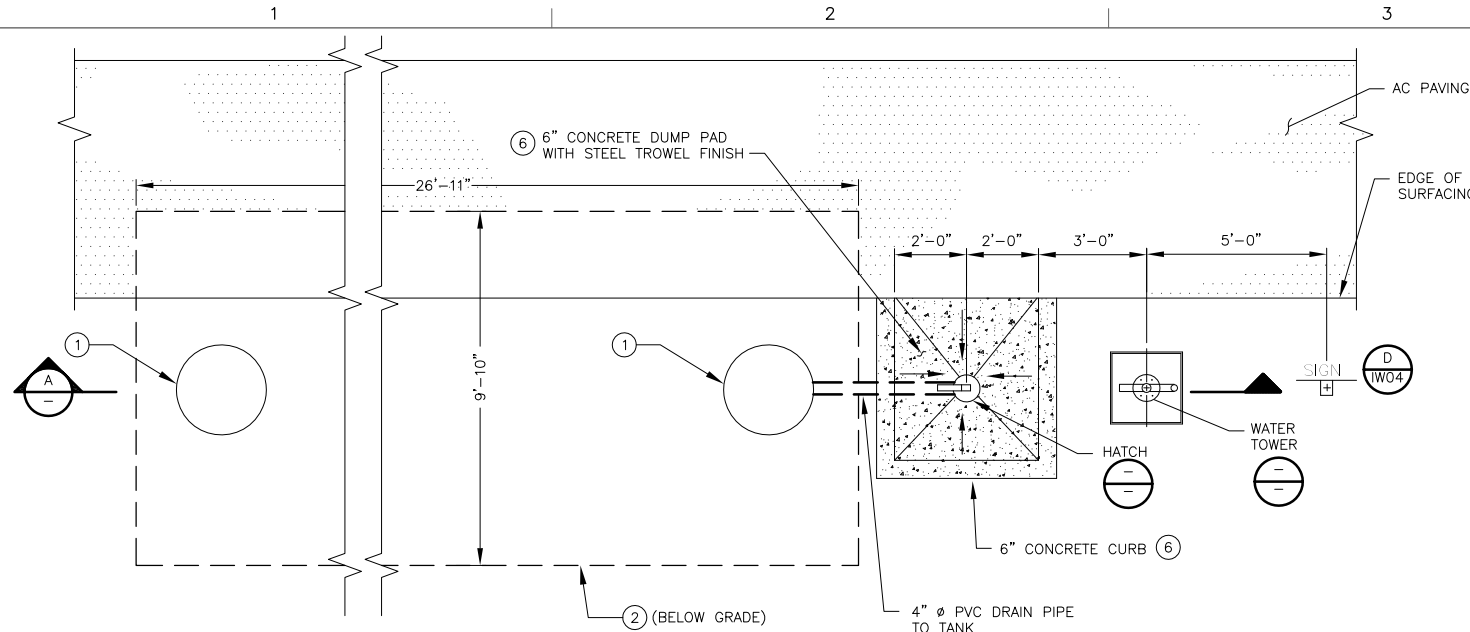
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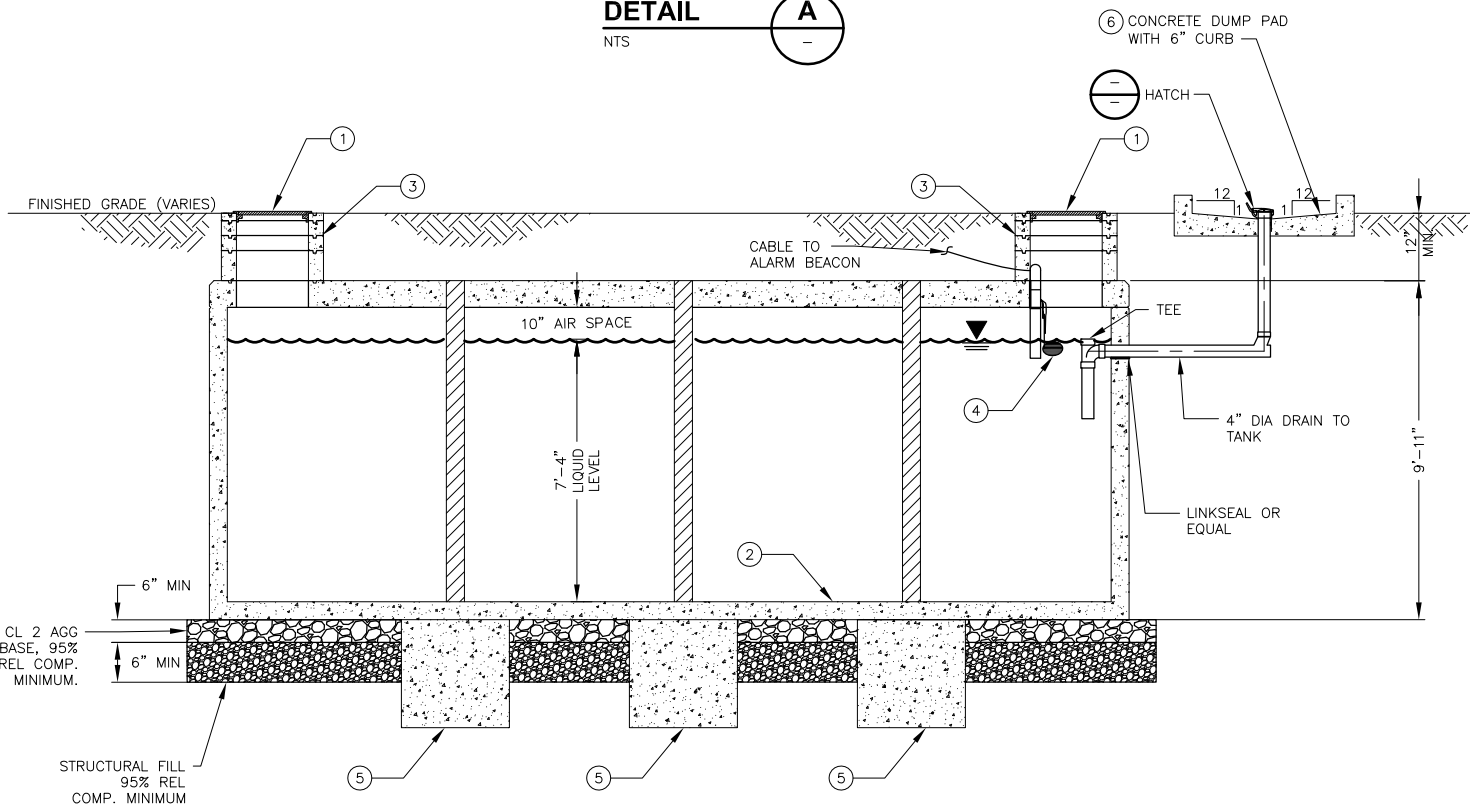
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RV DUMP STATION

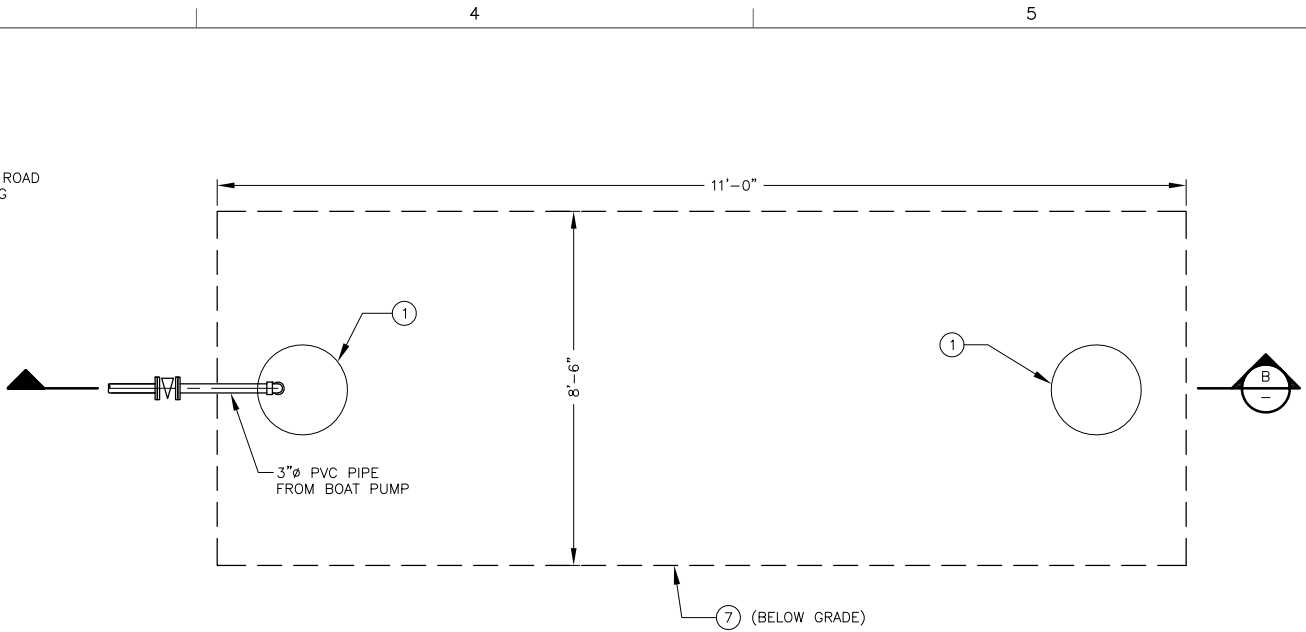
DETAIL A

NTS



SECTION A

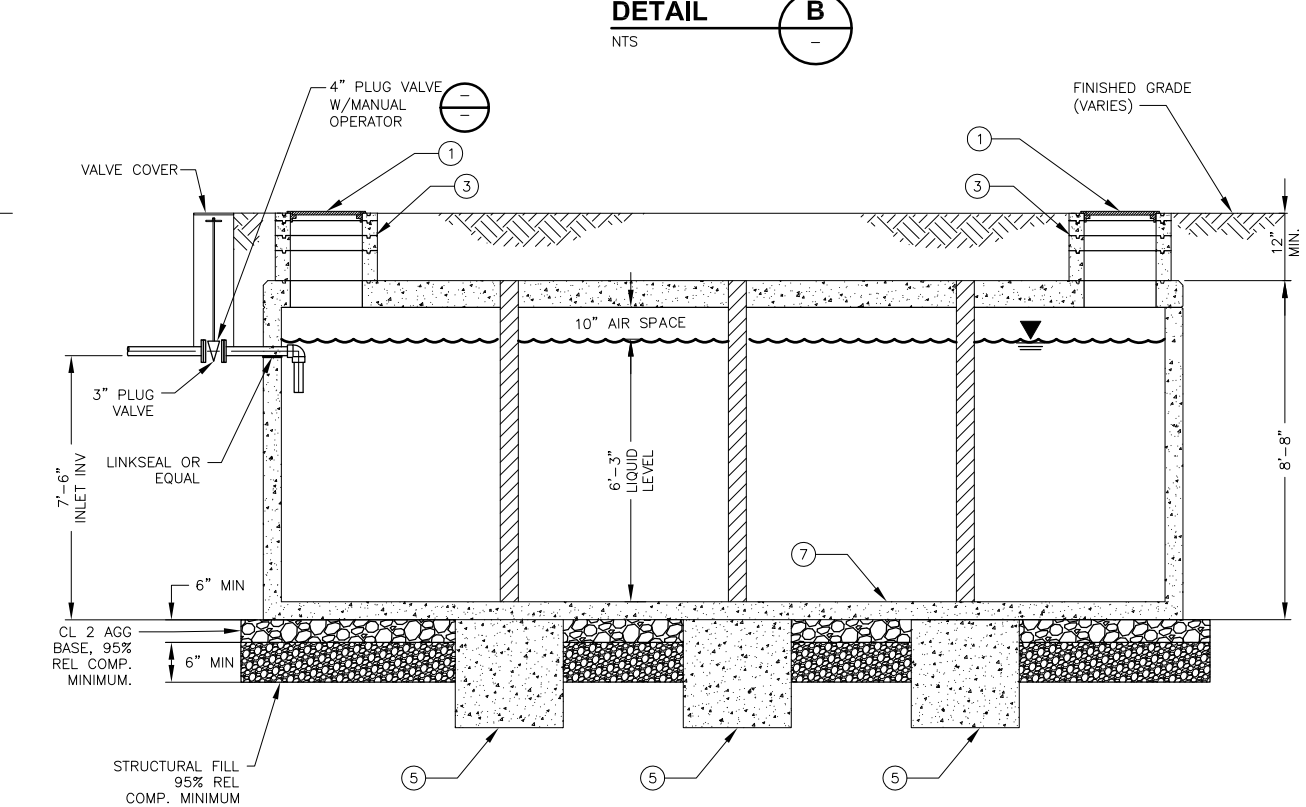
NTS



SEWAGE STORAGE VAULT

DETAIL B

NTS



SECTION B

NTS

KEY NOTES:

- ① 24-INCH DIAMETER CAST IRON LOCKING OR BOLTED FRAME AND COVER WITH GASTIGHT GASKET. COVER AND FRAME SHALL BE H-20 RATED. COVER SHALL BE WATERTIGHT WHEN FINISHED GRADE ELEVATION IS LESS THAN 455'. REFER TO PLANS FOR FINISHED GRADE ELEVATION.
- ② 11,500 GALLON PRECAST CONCRETE STORAGE TANK. JOINTS SHALL BE COATED WITH BITUMINOUS MASTIC COATING. TANKS SHALL BE WATERTIGHT AND H-20 RATED. TANK SHALL BE JENSEN PRECAST MODEL KAV11500LHT OR EQUAL.
- ③ PRECAST CONCRETE GRADE RINGS AS REQUIRED. JENSEN PRECAST MODEL GR2432 OR EQUAL.
- ④ LEVEL ALARM FLOAT SWITCH; FLOAT SWITCH SHALL ACTIVATE LOCAL ALARM. FLOAT SHALL BE LIQUID LEVEL ALARM AND FLOAT BY JENSEN PRECAST OR EQUAL.
- ⑤ PRECAST CONCRETE DEADMAN TO BE DESIGNED AND PROVIDED BY TANK MANUFACTURER TO RESIST BUOYANT FORCES. DEADMAN SHALL BE ANCHORED TO TANK USING CORROSION RESISTANT ANCHORS.
- ⑥ REFER TO STRUCTURAL DETAILS.
- ⑦ 3,000 GALLON PRECAST CONCRETE STORAGE TANK. JOINTS SHALL BE COATED WITH BITUMINOUS MASTIC COATING. TANKS SHALL BE WATERTIGHT AND H-20 RATED. TANK SHALL BE JENSEN PRECAST MODEL KAV11500LHT OR EQUAL.



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CENTRAL CALIFORNIA AREA OFFICE  
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RECREATION AREA  
DEVELOPMENT PLANS 60%

SURVEY NOTES

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
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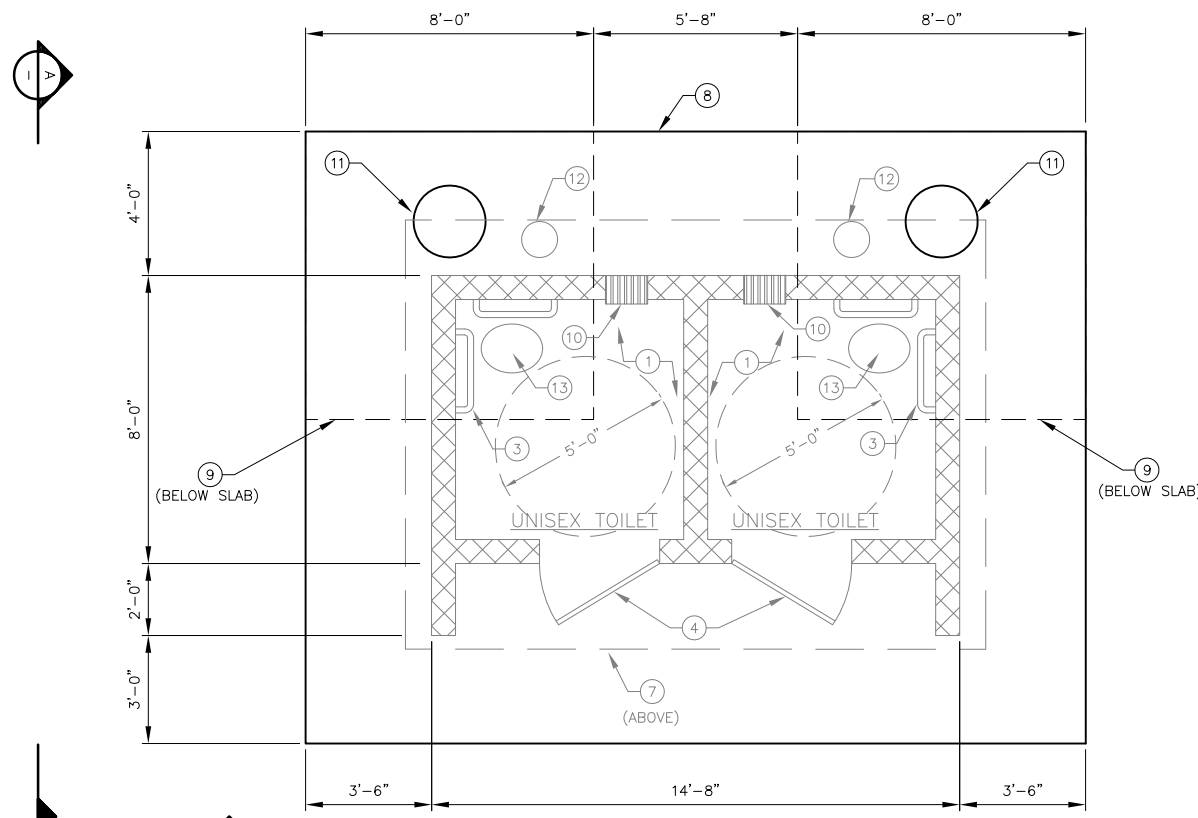
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ACCEPTED \_\_\_\_\_  
NAME \_\_\_\_\_ TITLE \_\_\_\_\_  
STATION NAME (CITY, ST) \_\_\_\_\_ YYYY-MM-DD \_\_\_\_\_

**SPANISH FLAT  
SEWER DETAIL IV**

LB-SFRA-ISO4  
SHEET X OF X

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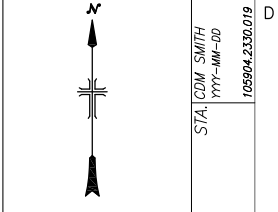
DOUBLE VAULT TOILET BUILDING FLOOR PLAN

**DETAIL A**  
3/8"=1'-0"

**KEY NOTES:**

VAULT TOILET TOTAL BUILDING SQ. FT. : 120 SF

- ① SLAB ON GRADE EXPOSED CONCRETE WITH LIGHT BROWN FINISH AND SLIP-RESISTANT EPOXY COATING. (BY OTHERS)
- ② 8" CONCRETE MASONRY UNIT WITH INTEGRAL COLOR. (BY OTHERS)
- ③ ADA COMPLIANT GRAB BARS. (BY OTHERS)
- ④ HOLLOW METAL DOORS AND FRAMES. (BY OTHERS)
- ⑤ STANDING SEAM METAL ROOF WITH SLATE GRAY OR GALVANIZE FACTORY FINISH OR RUSTIC CORRUGATED STEEL. (BY OTHERS)
- ⑥ ALL FOUR VERTICAL SIDES OF VAULT TOILET TANK ARE TO BE ENCASED IN CONCRETE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
- ⑦ ROOF LINE ABOVE. (BY OTHERS)
- ⑧ CAST-IN-PLACE CONCRETE SLAB; REFER TO STRUCTURAL DETAILS.
- ⑨ 1,000 GALLON REINFORCED LLDPE BLACK BELOW-GRADE TOILET VAULT STORAGE TANK SHALL HAVE 1 TOILET RISER CONNECTION, 1 VENT STACK CONNECTION AND 1 CLEANOUT CONNECTION. TANK BOTTOM SHALL SLOPE TOWARDS CLEANOUT CONNECTION. TANK SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN RECOMMENDATIONS. ROMTEC 1,000 GALLON VAULT WITH FOOTING KIT OR EQUAL.
- ⑩ METAL LOUVER WITH 120 SQUARE INCHES OF FREE SPACE (MIN). BOTTOM OF LOUVER SHALL BE LOCATED 12" ABOVE FINISHED FLOOR. (BY OTHERS)
- ⑪ 24" DIAMETER CLEANOUT CONNECTION WITH RISER AND BOLTED COVER. PROVIDE WATERTIGHT COVER AND GASKET WHERE FINISHED GRADE IS LESS THAN 455.00; SEE PLAN SHEETS FOR FINISHED GRADE.
- ⑫ 12" DIAMETER BLACK HDPE VENT PIPE. PIPE SHALL END 3' ABOVE HIGHEST POINT OF ROOF. ROMTEC POLY PIPE OR EQUAL. (BY OTHERS)
- ⑬ WHITE POLYETHYLENE SINGLE PIECE TOILET RISER WITH LID, SEAT AND MOUNTING HARDWARE. PROVIDE WATERTIGHT COVER AND GASKET WHERE FINISHED GRADE IS LESS THAN 455.00; SEE PLAN SHEETS FOR FINISHED GRADE ELEVATION. ROMTEC POLYETHYLENE TOILET RISER OR EQUAL. (BY OTHERS)
- ⑭ INSTALL 1.5' THICK X 9' SQUARE CAST-IN-PLACE CONCRETE DEADMAN BENEATH VAULT TOILET TANK. DEADMAN SHALL BE SECURED TO TANK WITH TWO CORROSION RESISTANT ORTHOGONAL HOLD DOWN ANCHORS CENTERED ALONG THE SIDES OF EACH TANK AND CROSSING IN THE MIDDLE OF THE TANK.
- ⑮ ABOVE GRADE STRUCTURE SHALL CONFORM TO RRFDD STANDARDS.



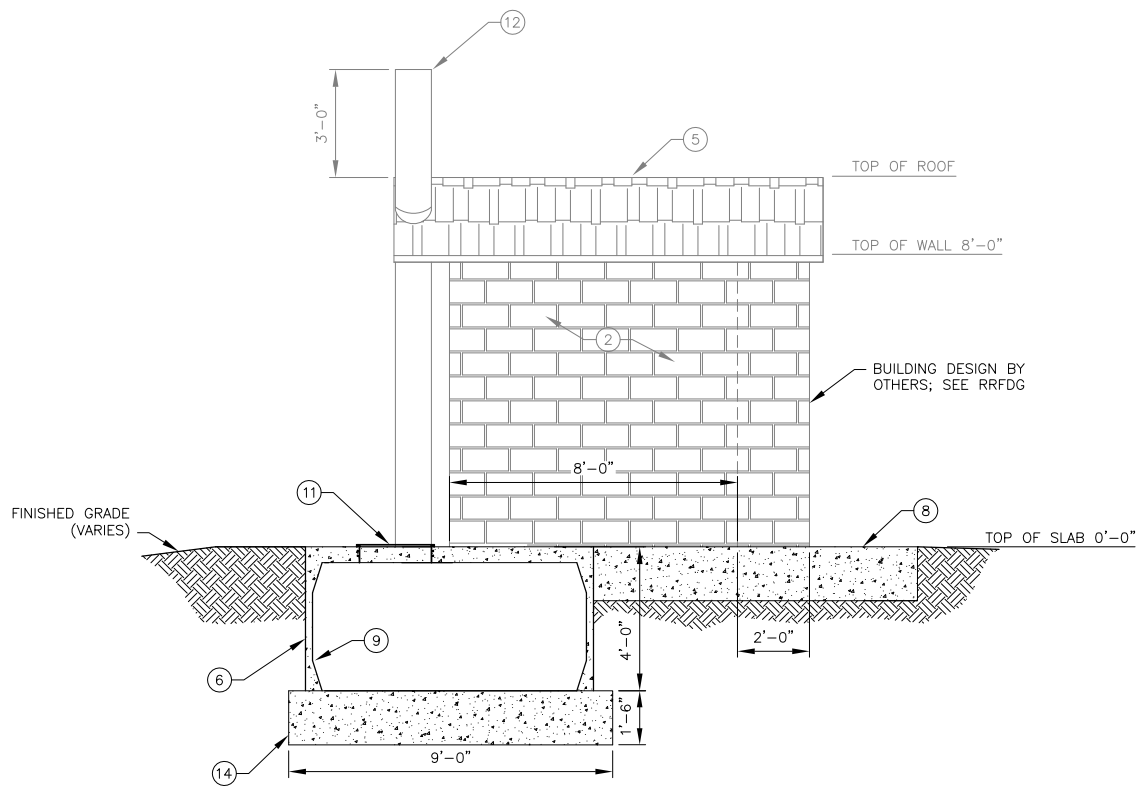
STA. CDM SMITH  
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CENTRAL CALIFORNIA AREA OFFICE  
LAKE BERRERSSA (CALIFORNIA)  
**RECREATION AREA**  
DEVELOPMENT PLANS 60%

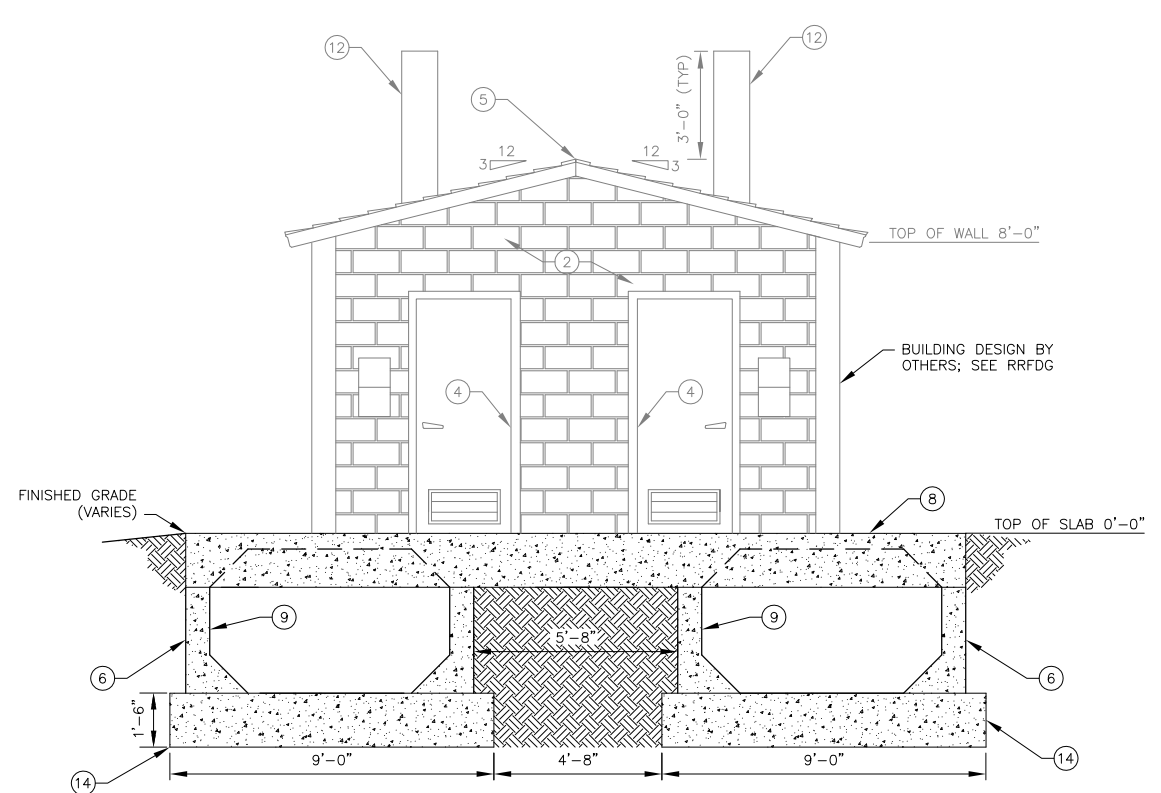
**SURVEY NOTES**  
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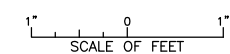
**SPANISH FLAT  
SEWER DETAILS VI**  
LB-SFRA-IS06  
SHEET X OF X



DOUBLE VAULT TOILET BUILDING SECTION  
**SECTION A**  
3/8"=1'-0"



DOUBLE VAULT TOILET BUILDING FRONT SECTION  
**SECTION B**  
3/8"=1'-0"



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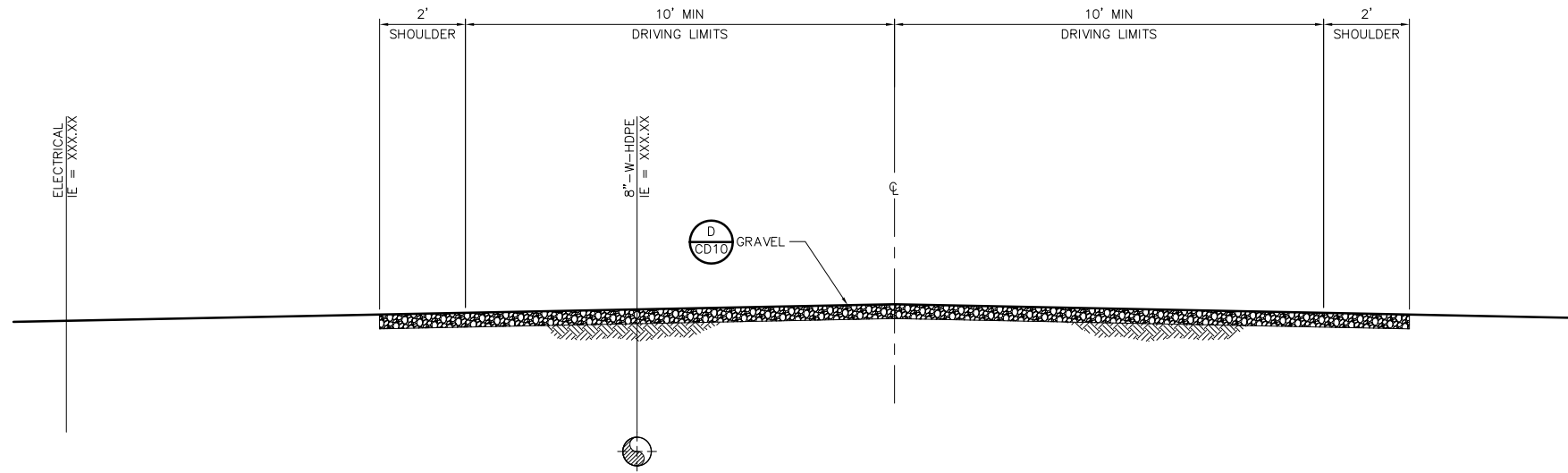
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**SECTION 1**  
1" = 2'  
IP03



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**RECREATION AREA**  
DEVELOPMENT PLANS 60%

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DRAWN  
ACCEPTED  
NAME  
TITLE  
STATION NAME (CITY, ST) YYYY-MM-DD

**SPANISH FLAT  
SEWER DETAILS IX**

LB-SFRA-IS09  
SHEET X OF X

YYYY-MM-DD  
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YYYY-MM-DD  
105904.2330.019

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**A. GENERAL NOTES**

- ALL CONSTRUCTION SHALL CONFORM TO THE 2012 INTERNATIONAL BUILDING CODE (IBC).
- ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH MECHANICAL & ELECTRICAL DRAWINGS, SHOP DRAWINGS AND THE PROJECT SPECIFICATIONS. COORDINATE REGLETS, PIPE SLEEVES, CONDUITS OR OTHER ITEMS EMBEDDED OR PASSED THROUGH CONCRETE STRUCTURES WITH ALL OTHER PROJECT DOCUMENTS. PENETRATIONS THROUGH WALLS OR SLABS LESS THAN 12" IN DIAMETER MAY NOT BE SHOWN ON STRUCTURAL DRAWINGS. REFER TO THE RELEVANT DRAWINGS OR SPECIFICATIONS FOR SIZES AND LOCATIONS.
- LOCATE CONDUIT IN MIDDLE THIRD OF SLAB.
- NO STRUCTURAL MEMBERS SHALL BE CUT FOR PIPES, DUCTS, ETC. UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED SIZES.
- USE PERTINENT STANDARD DETAILS SHOWN, EVEN THOUGH THEY MAY NOT BE CALLED OUT AT LOCATIONS WHERE THEY APPLY.
- INSTALL ALL SPECIFIED PRODUCTS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS UNLESS NOTED OTHERWISE.

**B. DESIGN LOADS**

- LATERAL:
  - SEISMIC:
    - $S_s = 2.19$
    - $S_1 = 0.88$
    - SITE CLASS: D
    - $F_a = 1.0$
    - $F_v = 1.5$
    - $S_{ps} = 1.46$
    - $S_p = 0.88$
    - RISK CATEGORY: I
    - $I_e = 1.0$
    - $I_p = 1.0$  UNLESS OTHERWISE NOTED
    - SEISMIC DESIGN CATEGORY: D
  - WIND:
    - BASIC WIND SPEED: 100 mph
    - SURFACE ROUGHNESS: D
    - EXPOSURE: D
    - RISK CATEGORY: I

**C. CAST-IN-PLACE CONCRETE NOTES**

- REINFORCED CONCRETE SHALL CONFORM TO ACI 318-11.
- MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, UNO:
  - CAST-IN-PLACE STRUCTURAL CONCRETE (CLASS D):  $f'_c = 4000$  psi
  - SIDEWALKS, PAVEMENT, CONCRETE ENCASMENT (CLASS B):  $f'_c = 3000$  psi
- REINFORCING STEEL SHALL CONFORM TO THE LATEST EDITION OF ASTM SPECIFICATION A615, GRADE 60. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- REINFORCING STEEL FABRICATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF CRSI MANUAL OF STANDARD PRACTICE.
- REINFORCING STEEL SHALL HAVE THE FOLLOWING MINIMUM CLEAR CONCRETE COVER, UNO:
 

CONDITION	COVER
UNFORMED SURFACES IN CONTACT WITH EARTH	3"
FORMED SURFACES EXPOSED TO EARTH, WATER, OR WEATHER	2"
FORMED SURFACES NOT EXPOSED TO EARTH, WATER OR WEATHER:	1 1/2"
- ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE 3/4-IN CHAMFER, UNO.
- WRITTEN SPACING AND LOCATION OF REINFORCING SHALL TAKE PRECEDENCE OVER DEPICTED SPACING AND LOCATION.

**D. CONCRETE ANCHOR AND DOWEL NOTES**

- CAST-IN ANCHORS SHALL BE HEADED BOLTS CONFORMING TO ASTM F1554, GR 36, UNO.
- POST-INSTALLED ANCHORS SHALL BE 36 ksi MIN GALVANIZED CARBON STEEL. ADHESIVE DOWELS SHALL BE 60 ksi REINFORCING STEEL CONFORMING TO ASTM A615. POST-INSTALLED ANCHORS AND DOWELS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE APPROPRIATE ICC OR IAPMO EVALUATION SERVICE REPORT. ONLY ANCHORS OR ADHESIVES WITH CURRENT ICC OR IAPMO EVALUATION SERVICE REPORTS FOR USE IN CRACKED CONCRETE SHALL BE USED. SEE SPEC SECTION 05500 FOR ADDITIONAL INFORMATION.
- THE CONTRACTOR SHALL LOCATE EXISTING CONCRETE REINFORCEMENT USING NON-DESTRUCTIVE METHODS PRIOR TO DRILLING HOLES FOR POST-INSTALLED ANCHORS OR DOWELS. ADJUST SPACING OF ANCHORS TO MISS EXISTING REINFORCING. THE TOTAL NUMBER OF ANCHORS OR DOWELS PROVIDED SHALL BE EQUAL TO WHAT IS SHOWN ON THE DRAWINGS.
- EXPANSION OR UNDERCUT ANCHORS SHALL NOT BE USED FOR VIBRATORY LOADS, UNO.

**E. CONCRETE JOINT NOTES**

- INTENTIONALLY ROUGHEN THE SURFACES OF CONSTRUCTION JOINTS AND WHERE NEW CONCRETE CONTACTS EXISTING CONCRETE TO A CONCRETE SURFACE PROFILE (CSP) 9 PER ICRI GUIDELINE 03732 WITH 1/4" MINIMUM AMPLITUDE. THIS ROUGHENED SURFACE MAY BE ACCOMPLISHED BY RAKING THE PLASTIC CONCRETE OR BY BUSHHAMMERING OR CHISELING HARDENED CONCRETE SURFACES. THOROUGHLY CLEAN JOINT SURFACES OF LOOSE OR WEAKENED MATERIALS BY WATERBLASTING OR SANDBLASTING. SATURATE SURFACE WITH WATER 12 HOURS BEFORE AND AGAIN IMMEDIATELY PRIOR TO CONCRETE PLACEMENT.

**F. DEFERRED SUBMITTALS**

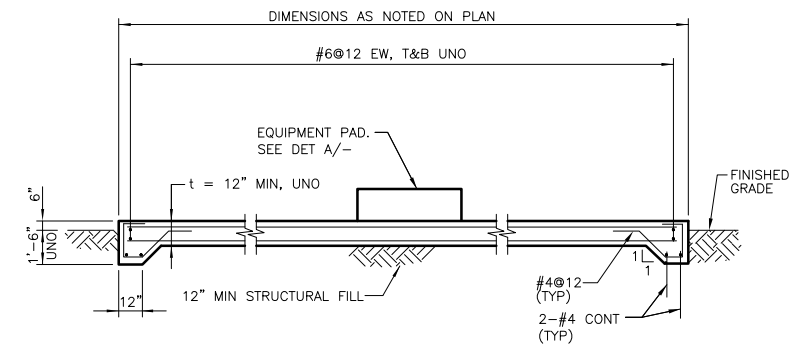
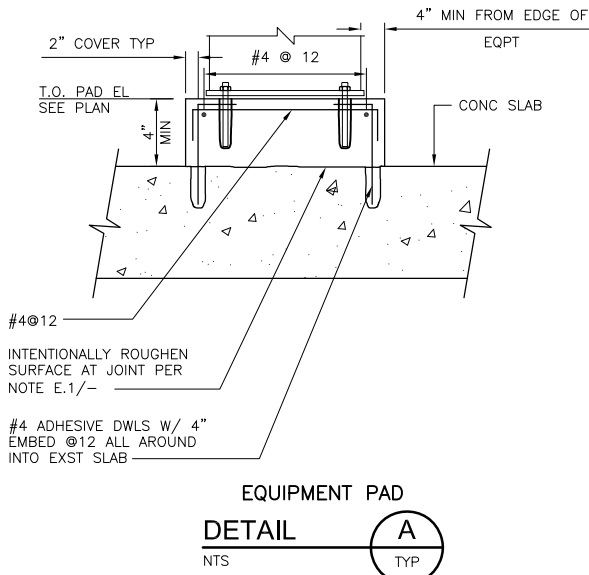
- THE FOLLOWING PORTIONS OF THE PROJECT ARE DEFERRED SUBMITTAL ITEMS AND HAVE NOT BEEN DESIGNED BY THE ENGINEER OF RECORD:
  - EQUIPMENT ANCHORAGE
  - PIPE SUPPORTS NOT DETAILED ON DRAWINGS
  - BELOW GRADE VAULTS
  - FISH CLEANING STATION SHELTER
  - VAULT TOILET STRUCTURES
- CALCULATIONS AND SHOP DRAWINGS FOR DEFERRED SUBMITTAL ITEMS SHALL BE PREPARED AND SEALED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.
- CALCULATIONS AND SHOP DRAWINGS FOR EQUIPMENT ANCHORAGE SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW DURING THE CONSTRUCTION PHASE OF THE PROJECT.
- DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE ENGINEER OF RECORD HAS REVIEWED THE SUBMITTAL DOCUMENTS AND INDICATED THAT THEY HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE STRUCTURE.

**STRUCTURAL ABBREVIATIONS:**

<p>Ø DIAMETER</p> <p>AB ANCHOR BOLT</p> <p>ADDL ADDITIONAL</p> <p>AL ALUMINUM</p> <p>ALT ALTERNATE(ING)</p> <p>APPROX APPROXIMATE(LY)</p> <p>ARND AROUND</p> <p>ASTM AMERICAN SOCIETY FOR TESTING &amp; MATERIALS</p> <p>BGS BELOW GROUND SURFACE</p> <p>BLDG BUILDING</p> <p>BLK BLOCK(ING)</p> <p>B.O. BOTTOM OF</p> <p>BOS BOTTOM OF STEEL</p> <p>BOT BOTTOM</p> <p>BTWN BETWEEN</p> <p>CJ CONSTRUCTION JOINT</p> <p>CJP COMPLETE JOINT PENETRATION</p> <p>CL, ☉ CENTERLINE</p> <p>CLR CLEAR</p> <p>COL COLUMN</p> <p>CONC CONCRETE</p> <p>CONN CONNECTION</p> <p>CONST CONSTRUCTION</p> <p>CONT CONTINUOUS</p> <p>CSP CONCRETE SURFACE PROFILE</p> <p>CTJ CONTROL JOINT</p> <p>CTR CENTER (ED)</p> <p>db BAR DIAMETER</p> <p>D DEEP, DEPTH</p> <p>DEMO DEMOLITION</p> <p>DET DETAIL</p> <p>DIA DIAMETER</p> <p>DIAG DIAGONAL</p> <p>DIM DIMENSION</p> <p>DL DEAD LOAD</p> <p>DN DOWN</p> <p>DO, DITTO</p> <p>DWG(S) DRAWING(S)</p> <p>DWL(S) DOWEL(S)</p> <p>EA EACH</p> <p>EB EXPANSION BOLT</p> <p>ECC ECCENTRIC</p> <p>EF EACH FACE</p> <p>EL ELEVATION</p> <p>EMBED EMBEDMENT</p> <p>EQ EQUAL (LY)</p> <p>EQPT EQUIPMENT</p> <p>EQUIV EQUIVALENT</p> <p>ES EACH SIDE</p> <p>ETC ETCETERA</p> <p>EW EACH WAY</p> <p>EXP EXPANSION</p> <p>EXST, (E) EXISTING</p> <p>EXT EXTERIOR</p>	<p>f'c CONCRETE COMPRESSIVE STRENGTH</p> <p>f<sub>y</sub> REINFORCEMENT YIELD STRENGTH</p> <p>FDN FOUNDATION</p> <p>FF FINISHED FLOOR</p> <p>FG FINISHED GRADE</p> <p>FIG FIGURE</p> <p>FIN FINISH (ED)</p> <p>FL FLOOR</p> <p>FS FAR SIDE</p> <p>FTG FOOTING</p> <p>GA GAGE</p> <p>GALV GALVANIZED</p> <p>GALVS GALVANIZED STEEL</p> <p>GRTG GRATING</p> <p>HDR HEADER</p> <p>H HEIGHT</p> <p>HOR(IZ) HORIZONTAL</p> <p>HP HIGH POINT</p> <p>HSB HIGH STRENGTH BOLTS</p> <p>ICC INTERNATIONAL CODE COUNCIL</p> <p>ID INSIDE DIAMETER</p> <p>IE INVERT ELEVATION</p> <p>I.F. INSIDE FACE</p> <p>INFO INFORMATION</p> <p>INT INTERIOR</p> <p>INV INVERT</p> <p>ld DEVELOPMENT LENGTH</p> <p>LG LONG</p> <p>LLH LONG LEG HORIZONTAL</p> <p>LLV LONG LEG VERTICAL</p> <p>LNTL LINTEL</p> <p>LONG. LONGITUDINAL</p> <p>LP LOW POINT</p> <p>LT LEFT</p> <p>MATL MATERIAL</p> <p>MAX MAXIMUM</p> <p>MECH MECHANICAL</p> <p>MFR MANUFACTURER</p> <p>MIN MINIMUM</p> <p>MTL METAL</p> <p>(N) NEW</p> <p>NOM NOMINAL</p> <p>NS NEAR SIDE</p> <p>NSG NON-SHRINK GROUT</p> <p>NTS NOT TO SCALE</p> <p>O/E OR EQUAL</p> <p>OC ON CENTER</p> <p>OD OUTSIDE DIAMETER</p> <p>O.F. OUTSIDE FACE</p> <p>OPNG(S) OPENING(S)</p> <p>OPP OPPOSITE</p> <p>OPP HD OPPOSITE HAND</p> <p>OPT OPTION (AL)</p>	<p>PJF PREMOLDED JOINT FILLER</p> <p>PL PLATE</p> <p>PREFAB PRE-FABRICATED</p> <p>PT POINT</p> <p>PVC POLY VINYL CHLORIDE</p> <p>RAD RADIUS</p> <p>REF REFERENCE / REFER</p> <p>REIN REINFORCE (D, ING)</p> <p>REQD REQUIRED</p> <p>REV REVISION</p> <p>RO ROUGH OPENING</p> <p>RT RIGHT</p> <p>SC SLIP CRITICAL</p> <p>SEC(T) SECTION</p> <p>SHT SHEET</p> <p>SIM SIMILAR</p> <p>SL SLOPE</p> <p>SP SPACE(S, ED)</p> <p>SPCG SPACING</p> <p>SPEC SPECIFICATION, SPECIFIED</p> <p>SQ SQUARE</p> <p>SST STAINLESS STEEL</p> <p>STD STANDARD</p> <p>STL STEEL</p> <p>STRUC STRUCTURE(S, URAL)</p> <p>SYM SYMMETRICAL</p> <p>t THICK(NESS)</p> <p>T&amp;B TOP AND BOTTOM TO BE DETERMINED</p> <p>TBD TO BE DETERMINED</p> <p>THK THICK(NESS)</p> <p>T.O. TOP OF</p> <p>TOC TOP OF CONCRETE</p> <p>TOS TOP OF STEEL</p> <p>T.O.W. TOP OF WALL</p> <p>TRNSV TRANSVERSE</p> <p>TYP TYPICAL</p> <p>UNO UNLESS NOTED OTHERWISE</p> <p>VERT(S) VERTICAL</p> <p>W WIDE</p> <p>W/ WITH</p> <p>W/O WITHOUT</p> <p>WD WIDTH / WOOD</p> <p>WP WORKING POINT</p> <p>WT WEIGHT</p> <p>WWF WELDED WIRE FABRIC</p>
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**ABBREVIATION NOTES:**

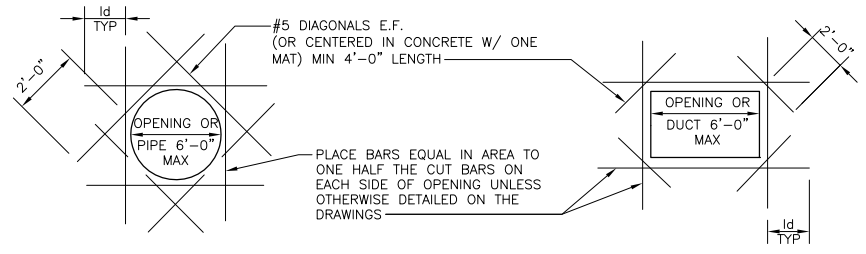
- ABBREVIATIONS AND DESIGNATIONS FOR STEEL MEMBERS MAY BE FOUND IN THE CURRENT MANUAL OF STEEL CONSTRUCTION BY AISC.
- ABBREVIATIONS AND DESIGNATIONS FOR ALUMINUM MEMBERS MAY BE FOUND IN THE CURRENT MANUAL OF ALUMINUM STANDARDS AND DATA BY THE ALUMINUM ASSOCIATION, INC.
- WELDING SYMBOLS AND ABBREVIATIONS MAY BE FOUND IN AWS 1.1 & 1.4.
- ABBREVIATIONS LISTED ARE FOR USE WITH STRUCTURAL DRAWINGS ONLY. SOME ABBREVIATIONS LISTED MAY NOT BE USED ON THE PLANS.



REINF SIZE	Id (INCHES) FOR A STRAIGHT BAR		LAP SPLICE LENGTH	
	TOP BAR	OTHER BARS	TOP BAR	OTHER BARS
# 3	20	14	25	18
# 4	26	19	34	24
# 5	32	23	42	30
# 6	39	28	50	36
# 7	45	32	58	42
# 8	52	37	62	48
# 9	58	41	75	54
# 10	64	46	83	60

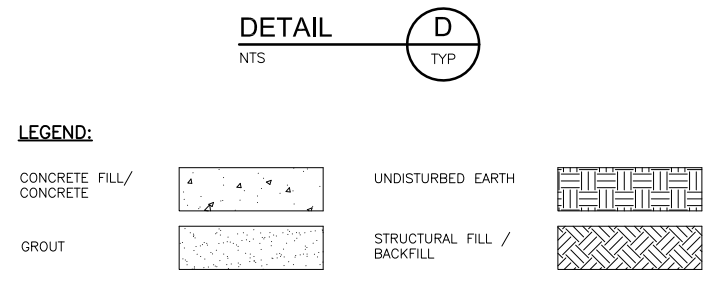
- NOTES:**
- ld = DEVELOPMENT LENGTH, db = BAR DIAMETER
  - TOP BAR IS ANY HORIZONTAL BAR IN WALLS AND SLABS WITH MORE THAN 12" CONCRETE CAST IN ONE LIFT BENEATH IT. HORIZONTAL BARS IN WALLS SHALL BE CONSIDERED AS TOP BARS. VERTICAL BARS IN WALLS MAY BE CONSIDERED AS OTHER BARS.
  - SPLICES IN HORIZONTAL BARS SHALL BE STAGGERED.
  - WHEN LAPPING DIFFERENT SIZE BARS USE LENGTH BASED ON LARGER BAR DIAMETER, UNO.

**DEVELOPMENT LENGTH AND LAP SPLICE LENGTH (UNO)**



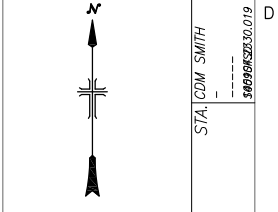
- ld = DEVELOPMENT LENGTH: PROVIDE STD HOOK IF FULL DEVELOPMENT LENGTH IS NOT POSSIBLE.
- REINFORCING STEEL IS TO BE CARRIED ACROSS ALL CONSTRUCTION JOINTS.
- DETAIL IS TYP FOR ALL OPENINGS GREATER THAN 10 INCHES AND LESS THAN OR EQUAL TO 6 FEET IN THE LARGER DIMENSION IN CONCRETE WALLS AND SLABS UNLESS OTHERWISE DETAILED ON THE DRAWINGS.
- EXTRA BARS ARE NOT REQUIRED AT AN OPENING EDGE PARALLEL TO AND WITHIN 6 INCHES OF A WALL OR BEAM.

**EXTRA REINFORCEMENT AT OPENINGS**



**LEGEND:**

CONCRETE FILL/ CONCRETE		UNDISTURBED EARTH	
GROUT		STRUCTURAL FILL / BACKFILL	



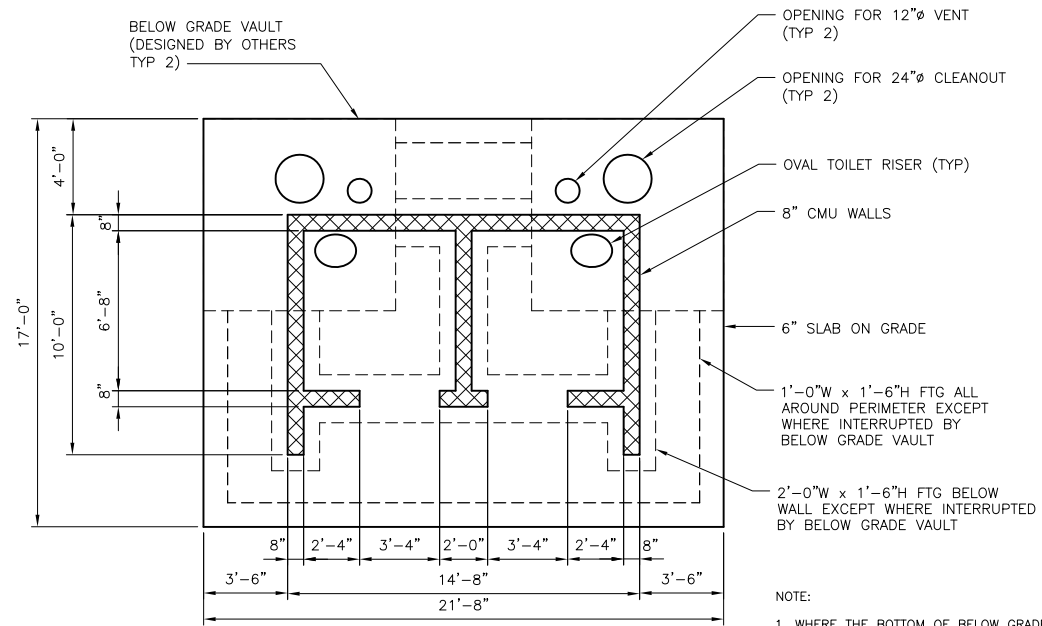
ALWAYS THINK SAFETY  
 U.S. DEPARTMENT OF THE INTERIOR  
 BUREAU OF RECLAMATION  
 CENTRAL CALIFORNIA AREA OFFICE  
 LAKE BERKESSA (CALIFORNIA)  
 RECREATION AREA  
 DEVELOPMENT PLANS 60%  
 DETAILS

SURVEY NOTES  
 CALIFORNIA STATE PLANE COORDINATE SYSTEM  
 ZONE 2 - U.S. SURVEY FEET  
 HORIZONTAL DATUM: NAD 1983  
 VERTICAL DATUM: NAVD 1988  
 TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
 BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
 Topography by American Photomapping Services  
 Compiled from photography: 201163  
 Date of photography: October 20, 2011

DRAWN \_\_\_\_\_ CONTRACTOR \_\_\_\_\_  
 ACCEPTED \_\_\_\_\_  
 NAME \_\_\_\_\_ TITLE \_\_\_\_\_  
 STATION NAME (CITY, ST) \_\_\_\_\_ YYYY-MM-DD \_\_\_\_\_

**SPANISH FLAT**  
**STRUC. GENERAL NOTES,**  
**ABBREVIATIONS, & DETAILS**

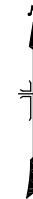
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NOTE:  
 1. WHERE THE BOTTOM OF BELOW GRADE VAULTS ARE AT ELEVATION 455.00 OR LOWER THEY SHALL BE DESIGNED TO RESIST BUOYANT FORCES ASSUMING WATER AT ELEVATION 455.00. USE LOAD COMBINATIONS IN ACCORDANCE WITH ASCE 7-10 SECTION 2.4.

VAULT TOILETS FOUNDATION PLAN

DETAIL A  
 1/4" = 1'-0"



STA. CDM SMITH  
 5-02  
 50023PFL  
 (CONTRACT NUMBER)  
 YYY-MM-DD  
 ACCEPTED:  
 NAME, PROF. ABR

ALWAYS THINK SAFETY

U.S. DEPARTMENT OF THE INTERIOR  
 BUREAU OF RECLAMATION  
 CENTRAL CALIFORNIA AREA OFFICE  
 LAKE BERRESSA (CALIFORNIA)  
 RECREATION AREA  
 DEVELOPMENT PLANS 60%  
 DETAILS

SURVEY NOTES

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
 ZONE 2 - U.S. SURVEY FEET  
 HORIZONTAL DATUM: NAD 1983  
 VERTICAL DATUM: NAVD 1988  
 TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
 BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
 Topography by American Photomapping Services  
 Compiled from photography: 201163  
 Date of photography: October 20, 2011

CONTRACTOR  
 DRAWN

ACCEPTED  
 NAME  
 TITLE

STATION NAME (CITY, ST) YYY-MM-DD

**SPANISH FLAT  
 STRUCTURAL PLANS,  
 SECTIONS, AND DETAILS**

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PIPE CROSSING NOTES:

1. WATER AND SEWER MAINS SHALL BE SEPARATED IN ACCORDANCE WITH STATE OF CALIFORNIA REQUIREMENTS IN ORDER TO PROTECT PUBLIC WATER SYSTEMS FROM POSSIBLE CONTAMINATION. ALL DISTANCES ARE MEASURED PERPENDICULARLY FROM THE OUTSIDE OF THE SEWER MAIN TO THE OUTSIDE OF THE WATER MAIN. REFER TO DETAILS D, E, & F ON SHEET IW03 FOR GRAPHICAL REPRESENTATION. SEPARATION REQUIREMENTS ARE AS FOLLOWS:
  - A. A WATER MAIN SHALL NOT BE PLACED:
    - I. WITHIN 10 FEET, HORIZONTAL DISTANCE, AND LESS THAN 2 FEET VERTICAL DISTANCE, ABOVE THE TOP OF A SEWER MAIN UNLESS EXTRA PROTECTION IS PROVIDED. EXTRA PROTECTION SHALL CONSIST OF CONSTRUCTING THE SEWER MAIN WITH MECHANICAL JOINT DUCTILE IRON PIPE OR WITH SLIP-JOINT DUCTILE IRON PIPE IF JOINT RESTRAINT IS PROVIDED. ALTERNATE EXTRA PROTECTION SHALL CONSIST OF ENCASING BOTH THE WATER AND SEWER MAINS IN AT LEAST 6 INCHES OF CONCRETE FOR AT LEAST 10 FEET BEYOND THE AREA COVERED BY THIS SUBSECTION.
  - B. NO WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF A SEWER MANHOLE. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATER MAINS AND MANHOLES SHALL BE 8 FEET, MEASURED FROM THE CENTER OF THE MANHOLE.
  - C. THE SEPARATION REQUIREMENTS DO NOT APPLY TO BUILDING, PLUMBING, OR INDIVIDUAL HOUSE SERVICE CONNECTIONS.
2. ALL BURIED WATER PIPING TO HAVE 3 FEET MINIMUM COVER, EXCEPT WHERE NOTED.
3. COORDINATE WITH USBR FOR ASSISTANCE IN LOCATING EXISTING SITE UTILITIES.
4. EXISTING UTILITIES SHALL BE FIELD LOCATED, PROTECTED, AND SUPPORTED AS REQUIRED DURING PIPELINE OR OTHER UNDERGROUND CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED TO THE SATISFACTION OF THE CONTRACTING OFFICER OR UTILITY OWNER. WHEN THE PIPELINE CROSSES BENEATH EXISTING UTILITIES, SPECIFIED PIPELINE EMBEDMENT MATERIAL SHALL EXTEND FROM BENEATH THE NEW PIPELINE TO AN ELEVATION OF 6" ABOVE THE CROSSED UTILITY.
5. REPAIR OR REPLACEMENT WORK ON EXISTING UTILITIES, INCLUDING OVERHEAD POWER LINES AND POLES, SHALL BE PERFORMED BY THE UTILITY OWNER. ALL COSTS ASSOCIATED WITH REPAIR, AND/OR REPLACEMENT OF EXISTING UTILITIES DUE TO CONTRACTORS ACTIVITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
6. ALL EXISTING UTILITIES MUST REMAIN IN SERVICE DURING AND AFTER CONSTRUCTION OR UNTIL DIRECTED BY THE CONTRACTING OFFICER.
7. ANY KNOWN SEWERS, WATER MAINS, TELEPHONE CONDUITS, ELECTRIC CABLES, AND OTHER UNDERGROUND STRUCTURES ARE SHOWN ON THE DRAWINGS ONLY TO THE EXTENT SUCH INFORMATION HAS BEEN MADE AVAILABLE OR DISCOVERED. IT IS EXPECTED THAT THERE MAY BE DISCREPANCIES AND OMISSIONS IN THE LOCATION AND QUANTITIES OF UTILITIES AND STRUCTURES SHOWN. THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR BUT IS NOT GUARANTEED TO BE EITHER CORRECT OR COMPLETE AND ALL RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS THEREOF IS EXPRESSLY DISCLAIMED. THE CONTRACTOR SHALL MAKE SUCH INVESTIGATION AS NECESSARY TO VERIFY ITS CORRECTNESS AND COMPLETENESS.

GENERAL UTILITY NOTES:

1. RETURN ALL DISTURBED SURFACE FEATURES TO ITS ORIGINAL CONDITION OR AS CALLED FOR ON THE CONTRACT DOCUMENTS, WHICHEVER IS MORE STRINGENT. ANY DISTURBANCES TO PROPERTY NOT OWNED BY THE USBR SHALL REQUIRE THE CONTRACTOR TO NOTIFY THE CONTRACTING OFFICER AND EACH PROPERTY OWNER A MIN. 72 HOURS IN ADVANCE. ANY IMPACTED PROPERTY SHALL BE RESTORED IMMEDIATELY UPON COMPLETION OF CONSTRUCTION WITHIN AREA.
2. WHEN CONTRACTOR DESIRES ANY CHANGES TO SLOPE OF PIPES CREATING HIGH OR LOW POINTS WITHIN THE PIPELINE, THE CONTRACTING OFFICER MUST BE NOTIFIED.
3. MAKE EXPLORATORY EXCAVATIONS AT ALL LOCATIONS WHERE PROPOSED WORK CROSSES, CONNECTS TO, OR RUNS ADJACENT TO EXISTING UTILITIES. THE EXPLORATORY EXCAVATION SHALL BE MADE SUFFICIENTLY IN ADVANCE OF THE WORK, SO AS NOT TO DELAY CONSTRUCTION. IF THERE IS A CONFLICT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CONTRACTING OFFICER OF THE CONFLICT'S LOCATION, ELEVATION, UTILITY TYPE AND SIZE.
4. RESIDENTIAL AND COMMERCIAL SERVICE CONNECTIONS INCLUDING TELEPHONE, ELECTRICAL, GAS, WATER, SEWER ARE NOT ALWAYS SHOWN. FIELD VERIFY LOCATIONS PRIOR TO NEW WORK.
5. SCHEDULE ALL EXISTING UTILITY LINE SHUTDOWNS WITH CONTRACTING OFFICER.
6. INSTALL TRACER WIRE AND WARNING TAPE ALONG ENTIRE LENGTH OF NEW WATERLINES.
7. ALL PLASTIC PIPE AND FITTINGS MUST BEAR THE SEAL (NSF-PW) OF THE NATIONAL SANITATION FOUNDATION.
8. ALL MATERIALS (CHEMICAL, SEALANTS, GASKETS, PIPE, ETC...) THAT COME INTO CONTACT WITH WATER OR A WATER TREATMENT CHEMICAL SHALL CONFORM TO ANSI/NSF STANDARD 61. CONFORMANCE WILL BE DETERMINED BY PROPER ANSI LABELING OF THE PRODUCT.
9. CONSTRUCTION MATERIALS AND PRODUCTS USED IN THE WATER SYSTEM SHALL BE LEAD FREE.
10. WATER LINES SHALL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA C605-94 STANDARD. ON BURIED PIPING, THE AREA AROUND FITTINGS MUST REMAIN EXPOSED, NOT BACKFILLED, IN ORDER TO VISUALLY OBSERVE IF FITTINGS ARE LEAKING DURING TESTING.
11. ALL BACKFLOW PREVENTION ASSEMBLIES SHALL MEET ?. BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED AS CLOSE AS PRACTICABLE TO ALL SERVICE CONNECTIONS.
12. PIPE, FITTINGS, VALVES, FIRE HYDRANTS, AND OTHER APPURTENANCES SHALL CONFORM TO THE CURRENT STANDARDS OF THE AMERICAN WATER WORKS ASSOCIATION, AMERICAN NATIONAL STANDARDS INSTITUTE, OR FEDERAL GOVERNMENT.
13. ALL NEW, CLEANED, OR REPAIRED ELEMENTS, INCLUDING WATER STORAGE TANKS, WATER LINES, FITTINGS, VALVES, FIRE HYDRANTS, ETC., OF THE WATER DISTRIBUTION SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA REQUIREMENTS.
14. ALL HOSE BIBBS SHALL BE PROTECTED AGAINST BACK SIPHONAGE WITH AN ATMOSPHERIC VACUUM BREAKER.
15. ALL FITTINGS AND HYDRANT LATERALS TO BE RESTRAINED.

**RECLAMATION**  
*Managing Water in the West*



STA. CDM SMITH  
105904.2530.019  
ACCEPTED:  
YYYY-MM-DD

⊕ ALWAYS THINK SAFETY

U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF RECLAMATION  
CENTRAL CALIFORNIA AREA OFFICE  
LANE BERRYESSA (CALIFORNIA)  
RECREATION AREA  
DEVELOPMENT PLANS 60%

CONTRACTOR  
DRAWN

ACCEPTED  
NAME  
TITLE

STATION NAME (CITY, ST) YYYY-MM-DD

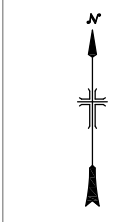
**SPANISH FLATS  
WATER DETAILS 1**

LB-SFRA-IW01



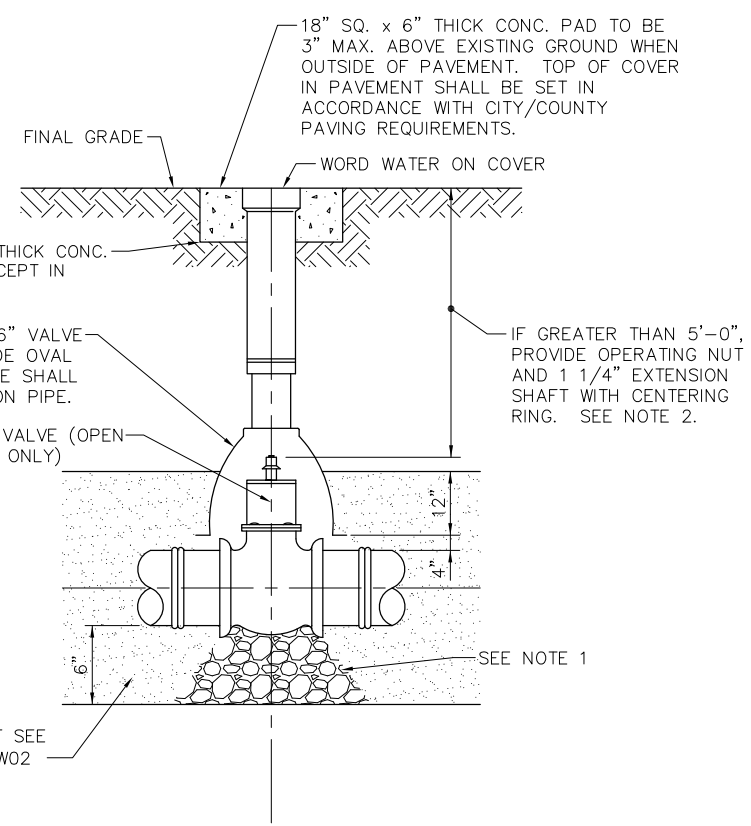
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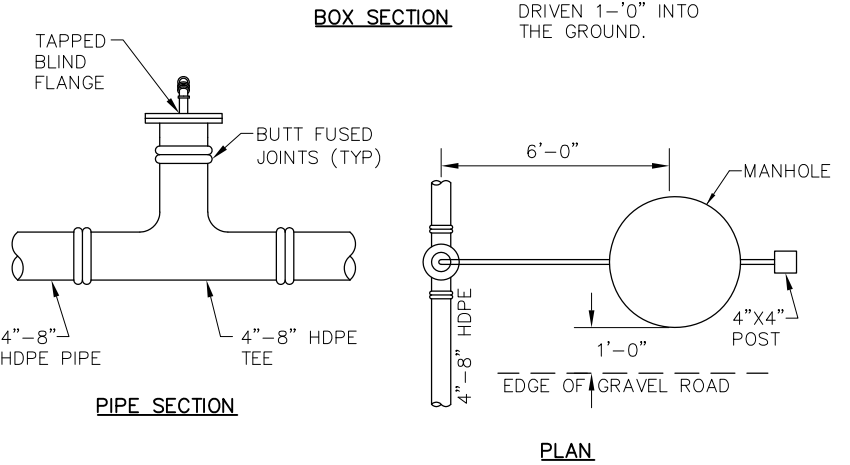
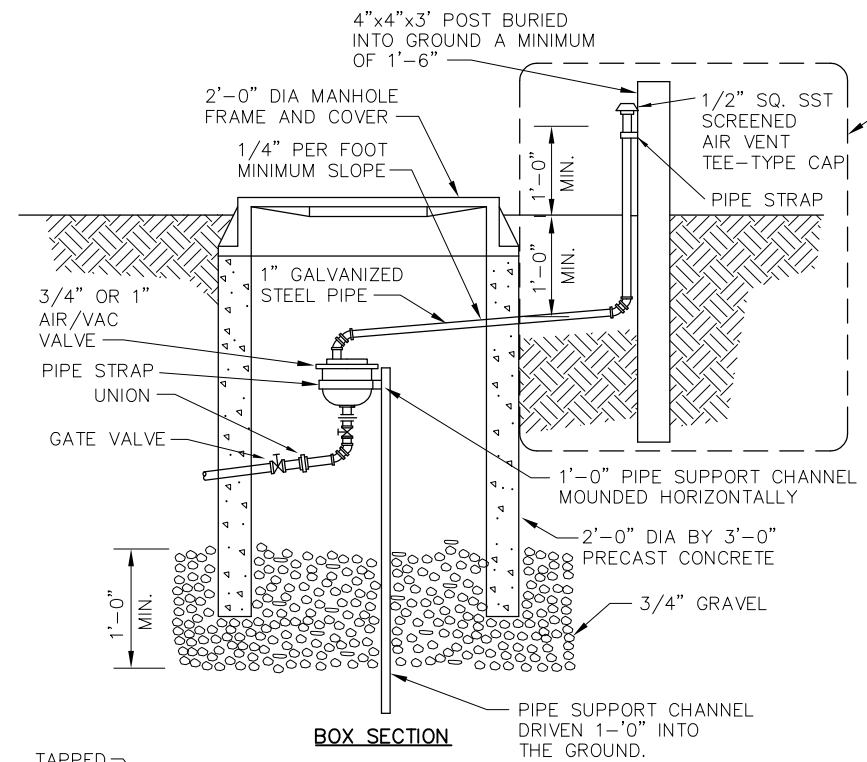
STA. CDM SMITH  
10594.2350.019  
ACCEPTED: YYYY-MM-DD

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CENTRAL CALIFORNIA AREA OFFICE  
LANE BERRYESSA (CALIFORNIA)  
RECREATION AREA  
DEVELOPMENT PLANS 60%

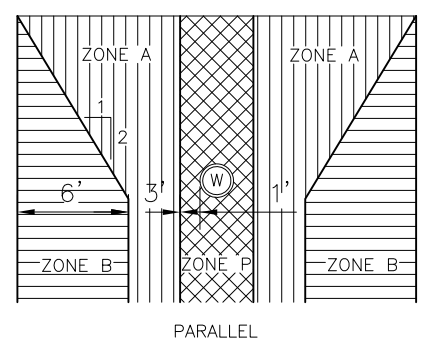


- NOTES:
- CARE SHALL BE TAKEN WHEN INSTALLING VALVES TO ASSURE PROPER SUPPORT OF THE VALVE. 3/4" CRUSHED ROCK SHALL BE INSTALLED UNDER THE VALVE TO PROVIDE PROPER SUPPORT.
  - OPERATING NUTS SHALL NOT BE SET CLOSER THAN THREE (3) FEET TO FINAL GRADE OR DEEPER THEN FIVE (5) FEET FROM FINAL GRADE. OPERATOR EXTENSIONS SHALL BE CONNECTED TO VALVE OPERATOR USING SET SCREW.
  - GATE VALVE SHALL BE POLYETHYLENE WRAPPED.

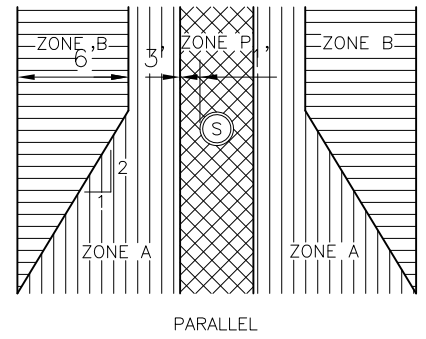
**GATE VALVE INSTALLATION**  
NO SCALE



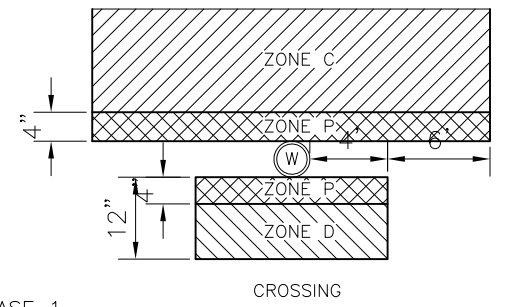
**3/4" & 1" AIR/VAC VALVE AND VAULT**  
NO SCALE



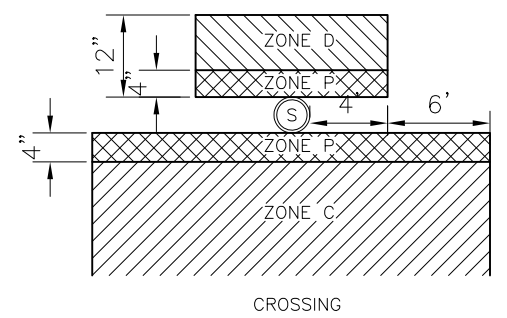
ZONE P IS A PROHIBITED ZONE.  
SECTION 64630(E)(2) CALIFORNIA  
ADMINISTRATIVE CODE, TITLE 22.



ZONE P IS A PROHIBITED ZONE.  
SECTION 64630(E)(2) CALIFORNIA  
ADMINISTRATIVE CODE, TITLE 22.



**CASE 1  
NEW SEWER MAIN  
FIGURE 1**

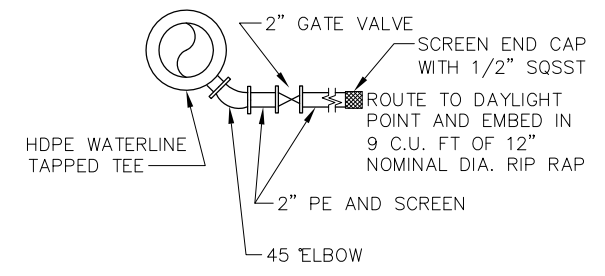


**CASE 2  
NEW WATER MAIN  
FIGURE 2**

NOTES AND DEFINITIONS

- COMPRESSION JOINT - A PUSH-ON JOINT THAT SEALS BY MEANS OF THE COMPRESSION OF A RUBBER RING OR GASKET BETWEEN THE PIPE AND A BELL OF COUPLING.
- DIMENSIONS ARE FROM THE OUTSIDE OF WATER MAIN TO OUTSIDE OF SEWER LINE OR MANHOLE.
- FUSED JOINT - THE JOINING OF SECTIONS OF PIPE USING THERMAL OR CHEMICAL BONDING PROCESSES.
- GROUND WATER - SUBSURFACE WATER FOUND IN THE SATURATION ZONE.
- HEALTH AGENCY - THE STATE DEPARTMENT OF HEALTH SERVICES. FOR THOSE WATER SYSTEMS SUPPLYING LESS THAN 200 SERVICE CONNECTIONS, THE LOCAL HEALTH OFFICER SHALL ACT FOR THE DEPARTMENT OF HEALTH SERVICES.
- HOUSE LATERAL - A SEWER PIPE CONNECTING THE BUILDING DRAIN AND THE MAIN SEWER LINE.
- LOW HEAD WATER MAIN - ANY WATER MAIN WHICH HAS A PRESSURE OF 5 PSI OR LESS AT ANY TIME AT ANY POINT IN THE MAIN.
- MECHANICAL JOINT - BOLTED JOINT
- RATED WORKING WATER PRESSURE OR PRESSURE CLASS - A PIPE CLASSIFICATION SYSTEM BASED UPON INTERNAL WORKING PRESSURE OF THE FLUID IN THE PIPE, TYPE OF PIPE MATERIAL, AND THE THICKNESS OF THE PIPE WALL.
- SLEEVE - A PROTECTIVE TUBE OF STEEL WITH A WALL THICKNESS OF NOT LESS THAN ONE-FOURTH INCH INTO WHICH A PIPE IS INSERTED.
- WATER SUPPLIER - ANY PERSON WHO OWNS OR OPERATES A PUBLIC WATER SYSTEM

**CROSSING OF WATER AND SEWER LINES**  
NO SCALE



**WATER LINE DRAIN**  
NO SCALE



CONTRACTOR  
DRAWN  
ACCEPTED  
NAME  
TITLE  
STATION NAME (CITY, ST) YYYY-MM-DD

**SPANISH FLATS  
WATER DETAILS III**

LB-SFRA-IW03

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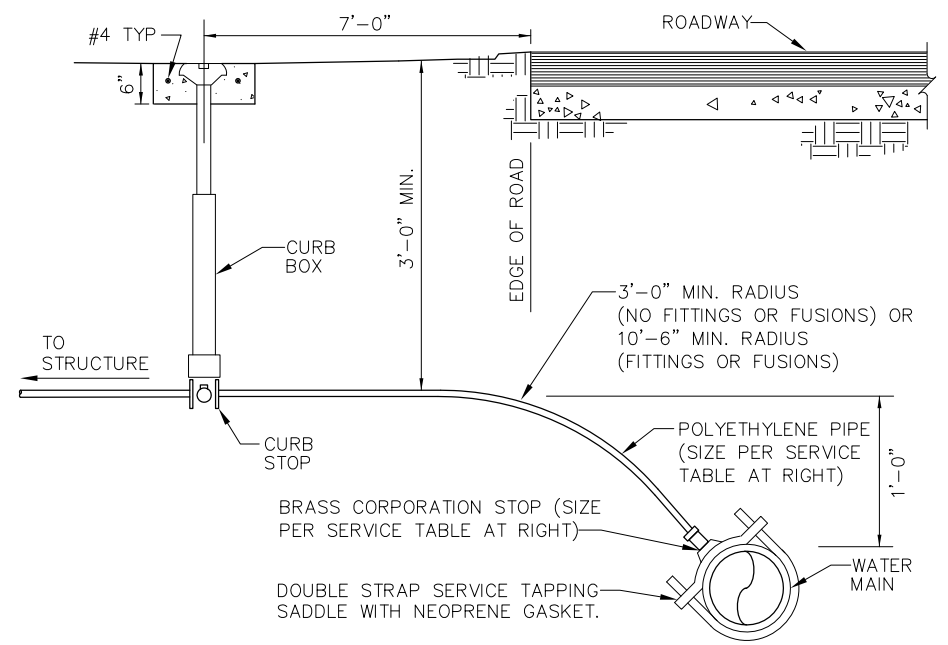
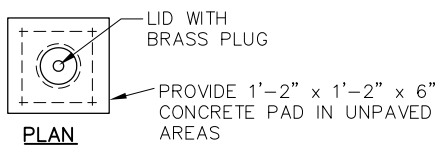
1

2

3

4

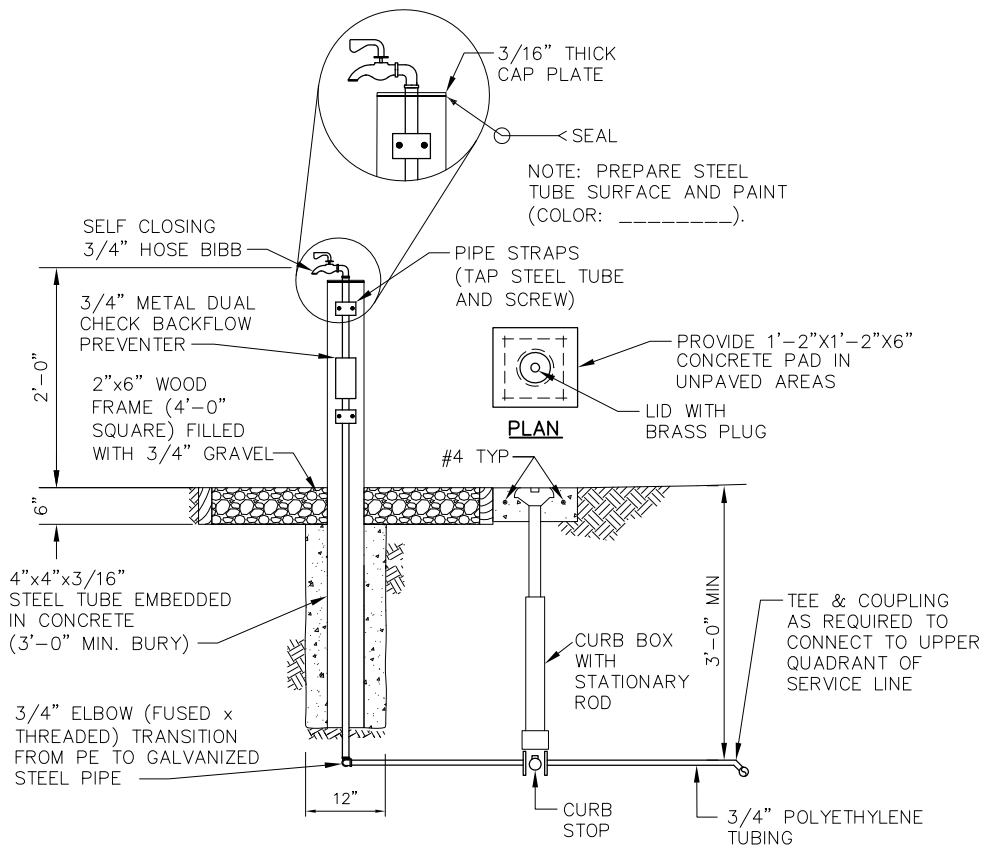
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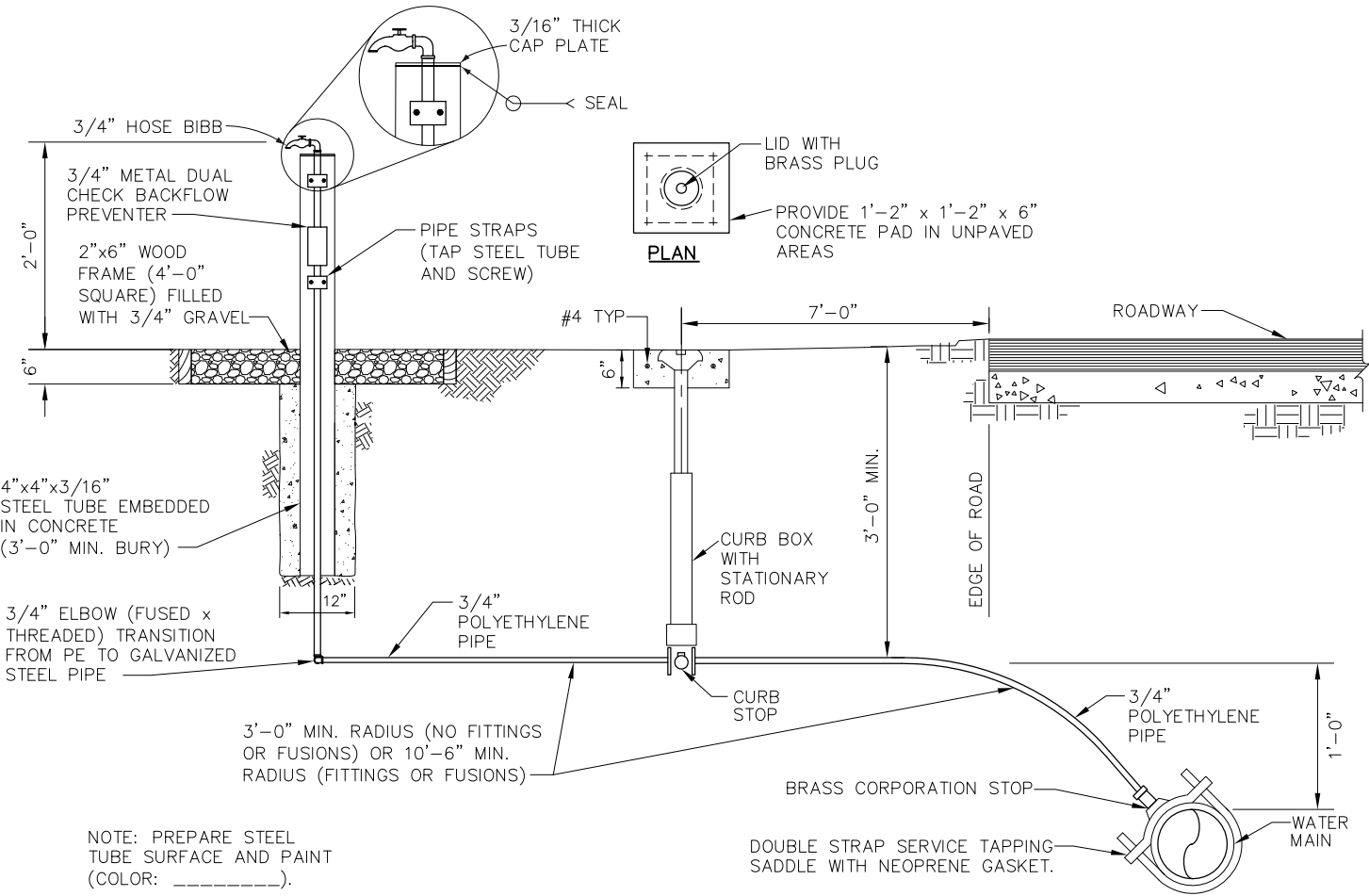
**STRUCTURE WATER SERVICE**  
NO SCALE (A) IWO4

WATER SERVICE SIZE TABLE	
FACILITY DESCRIPTION	SERVICE SIZE
PARK MODEL	2"
CABIN	2"
FISH CLEANING STATION	1 3/4"
CONCESSIONAIRE BUILDING	1 3/4"
RESTURANT	1 3/4"
RETAIL STORE	1 1/2"
COMFORT STATION	2"
RV DUMP STATION	3/4"
HOSE BIBB	3/4"
YARD HYDRANT	3/4" *

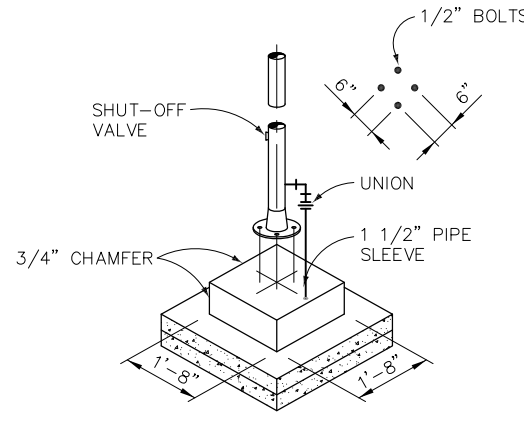
\* UNLESS NOTED OTHERWISE ON PLANS



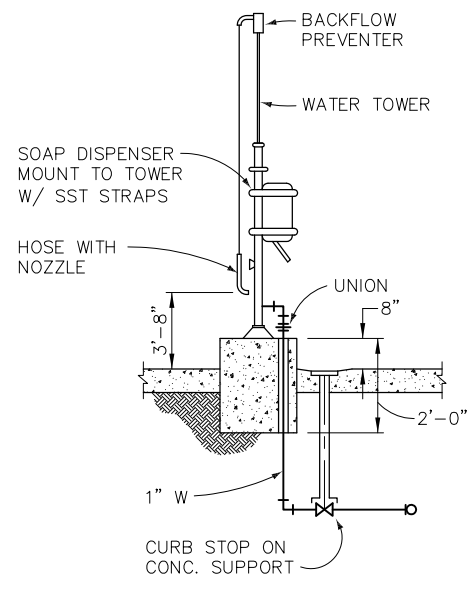
**CAMPGROUND YARD HYDRANT**  
NO SCALE (B) IWO4



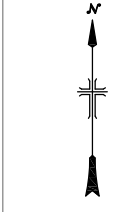
**RV PEDESTAL WATER SERVICE**  
NO SCALE (C) IWO4



**TOWER INSTALLATION**



**RV DUMP STATION WATER TOWER**  
NO SCALE (D) IWO4



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 CENTRAL CALIFORNIA AREA OFFICE  
 LAKE BERRYESSA (CALIFORNIA)  
 RECREATION AREA  
 DEVELOPMENT PLANS 60%

CONTRACTOR  
 ACCEPTED NAME TITLE  
 STATION NAME (CITY, ST) YYYY-MM-DD

**SPANISH FLATS WATER DETAILS IV**

LB-SFRA-IWO4

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 YYY-MM-DD  
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ONE-LINE SYMBOLOGY

CIRCUIT BREAKER (CB). RATING AND NO. OF POLES AS SHOWN. WHEN SPECIFIED TYPE, OTHER THAN MCCB, IS REQUIRED, X INDICATES TYPE, Y INDICATES TRIP FEATURES.

**TYPES:**  
 MCCB - MOLDED CASE  
 ICCB - INSULATED CASE  
 LVP - LOW VOLTAGE POWER  
 MCP - MOTOR CIRCUIT PROTECTOR (RATING PER CONNECTED LOAD)

**TRIP FEATURES:**  
 L - LONG  
 S - SHORT  
 I - INSTANTANEOUS  
 G - GROUND

**GFP** GROUND FAULT PROTECTION

FUSE, SIZE, AND NUMBER OF FUSES AS NOTED

FUSED CUTOUT, CURRENT RATING, FUSE SIZE, AND NUMBER OF POLES AS NOTED

FUSIBLE SWITCH, CURRENT RATING, FUSE SIZE, AND QUANTITY AS NOTED

NON-FUSED SWITCH, CURRENT RATING, AND NUMBER OF POLES AS NOTED

INDICATES THAT ALL OR PART OF CIRCUIT MAY BE ROUTED IN DUCT BANK OR UNDERGROUND

DISCONNECT OR DRAWOUT CONNECTION

**L 1A** POLE MOUNTED LIGHT

**P 50A** RV, PARK MODEL POWER PEDESTAL. 50/30/20A

**P 30A** STANDARD SITES POWER PEDESTAL. 30/20A

**CTP 60A** CONCESSIONAIRE INSTALLED SERVICE. FOR CABINS, FISH CLEANING, COMFORT STATIONS, AND ALL OTHER SERVICES, AMPERAGE AS INDICATED.

TRANSFORMER  
 Δ 3-PHASE, 3-WIRE DELTA CONNECTION  
 Y 3-PHASE, 4-WIRE GROUNDED WYE CONNECTION

**LP100 208/120V 3Ø, 4W** SWITCHBOARD OR PANELBOARD; NAME, VOLTAGE, PHASE, NUMBER OF WIRES WHEN INDICATED

ONE-LINE SYMBOLOGY

**100 KVA** NON-MOTOR LOAD WITH DESIGN KVA, KW, OR AMP

VOLTAGE TRANSFORMER (VT OR PT)

CURRENT TRANSFORMER (CT)

**KWH** UTILITY KWATT-HOUR METER PER UTILITY REQUIREMENTS

GROUND

**SPD** LOW VOLTAGE SURGE PROTECTIVE DEVICE

POWER AND LIGHTING SYMBOLOGY

FUSED DISCONNECT OR SAFETY SWITCH, 3P, X INDICATES AMP RATING GREATER THAN 30A, Y INDICATES FUSE SIZE

SEPARATELY MOUNTED CIRCUIT BREAKER; SEE ELECTRICAL ONE-LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION

CONTROL PANEL INTEGRAL OR PROVIDED WITH ASSOCIATED EQUIPMENT

CONTROL PANEL WITH DISCONNECT SWITCH INTEGRAL OR PROVIDED WITH ASSOCIATED EQUIPMENT

JUNCTION OR PULL BOX

PANELBOARD (250V TO 600V)

PANELBOARD (LESS THAN 250V)

ELECTRICAL EQUIPMENT ENCLOSURE: SWITCHBOARD, MOTOR CONTROL CENTER, CONTROL PANEL, TRANSFORMER OR OTHER EQUIPMENT AS INDICATED. ESTIMATED SIZE AS INDICATED. WHEN USED X INDICATES EQUIPMENT TYPE.

**EQUIPMENT TYPES:**  
 ATS - AUTOMATIC TRANSFER SWITCH  
 CP - CONTROL PANEL  
 MTS - MANUAL TRANSFER SWITCH  
 MCC - MOTOR CONTROL CENTER  
 UPS - UNINTERRUPTIBLE POWER SUPPLY  
 VFD - VARIABLE FREQUENCY DRIVE  
 SB - SWITCHBOARD  
 SG - SWITCHGEAR  
 T - TRANSFORMER

POWER AND LIGHTING SYMBOLOGY

POLE/STANCHION MOUNTED LUMINAIRE - LED

DOUBLE POLE/STANCHION MOUNTED LUMINAIRE - LED

CONDUIT AND WIRING SYMBOLOGY

CONDUIT TURNING UP

CONDUIT TURNING DOWN

HOME RUN TO PANEL, 2 #12, 1 #12G IN 3/4" UNLESS OTHERWISE NOTED

CIRCUIT RUN BETWEEN DEVICES EXPOSED IN NON-ARCHITECTURALLY FINISHED AREAS; CONCEALED IN ARCHITECTURALLY FINISHED AREAS. CONDUIT AND CONDUCTOR SIZES SHALL BE THE SAME AS THE HOMERUN FOR THE CIRCUIT.

CONDUIT RUN BETWEEN DEVICES CONCEALED IN NON-ARCHITECTURALLY FINISHED AREAS OR UNDER FLOOR SLAB. CONDUIT AND CONDUCTOR SIZES SHALL BE THE SAME AS THE HOMERUN FOR THE CIRCUIT.

FUTURE

CIRCUIT HASH MARKS (WHEN INDICATED); LONG, SHORT, SINGLE DOT, AND DOUBLE DOT REPRESENT PHASE, NEUTRAL, EQUIPMENT GROUND, AND ISOLATED EQUIPMENT GROUND, RESPECTIVELY. #12 IN 3/4" CONDUIT UNLESS OTHERWISE INDICATED.

CIRCUIT CONTINUATION

CONDUIT STUBBED OUT AND CAPPED

CORD AND PLUG CONNECTION

CONDUIT TAG OR CIRCUIT NUMBER - WIRE AND CONDUIT SIZE AS SPECIFIED IN CIRCUIT SCHEDULE ON THE SHEETS

GROUND CABLE

GROUND ROD

GROUND ROD IN TEST WELL

GROUND CONNECTION

SITE NAMING CONVENTION

(SITE)-(PANELBOARD #)-(TYPE)-(NUMBER)

SITE

- PC - PUTAH CANYON
- MS - MONTICELLO SHORES
- BP - BERRYESSA POINT
- SC - STEELE CANYON
- SF - SPANISH FLAT

TYPE

- AE - ACCESSIBLE ENTRY
- BOAT - BOAT REPAIR OR SERVICE
- BOOST - BOOSTER PUMP
- CAB - CABIN
- CH - CAMP HOST SITE
- COB - CONCESSIONAIRE WITH BOAT REPAIR SHOP
- CON - CONCESSIONAIRE
- CS - COMFORT STATION
- DBS - DRY BOAT STORAGE
- EH - EMPLOYEE HOUSING
- FC - FISH CLEANING STATION
- FM - FLOATING MARINA
- FUEL - FUEL STORAGE OR DISPENSING
- GW - GROUND WATER PUMP
- MARINA - MARINA
- PM - PARK MODEL
- PS - PUMP STATION
- PLL - PARKING LOT LIGHT
- RV - RECREATIONAL VEHICLE SITE
- REST - RESTAURANT
- SS - STANDARD SITE WITH UTILITIES
- WWT - WASTE WATER TREATMENT FACILITY

1. THIS IS A STANDARD ELECTRICAL SYMBOLOGY SHEET. NOT ALL SYMBOLS MAY BE USED ON THIS PROJECT.
2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.
3. SEE P&ID LEGEND SHEET FOR PROJECT-SPECIFIC EQUIPMENT SYMBOLS, EQUIPMENT ABBREVIATIONS, AND PIPING SYSTEM ABBREVIATIONS.



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 RECREATION AREA  
 DEVELOPMENT PLANS 60%

SURVEY NOTES

CALIFORNIA STATE PLANE COORDINATE SYSTEM  
 ZONE 2, U.S. SURVEY FEET  
 HORIZONTAL DATUM: NAD 1983  
 VERTICAL DATUM: NAVD 1988  
 TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
 BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
 Topography by American Photomapping Services  
 Compiled from photography: 201163  
 Date of photography: October 20, 2011

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 TITLE

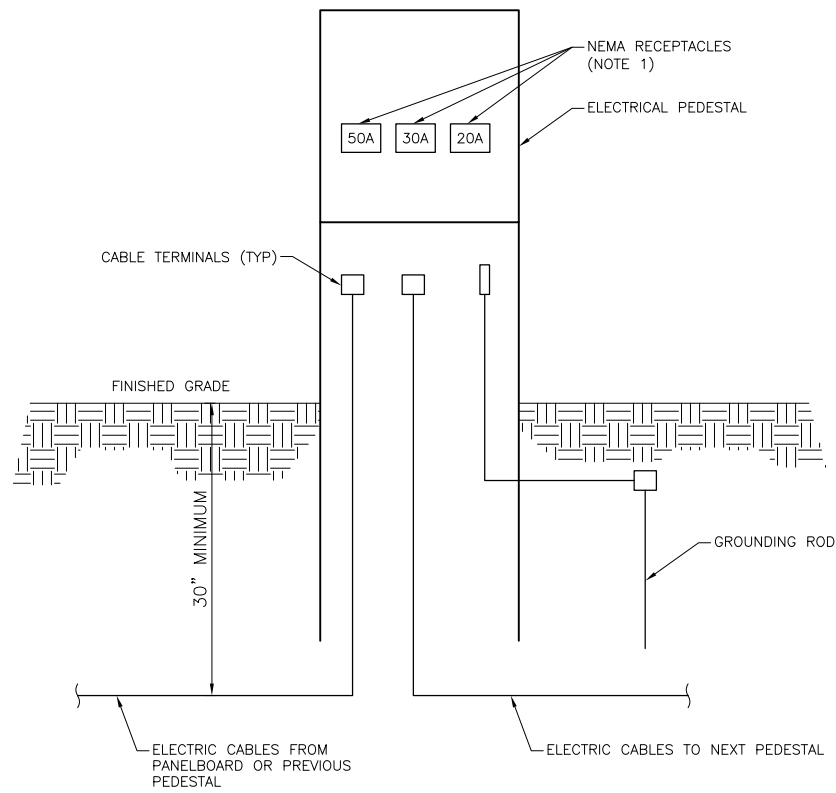
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SPANISH FLATS  
 ELECTRICAL LEGEND

LB-SFRA-IE01

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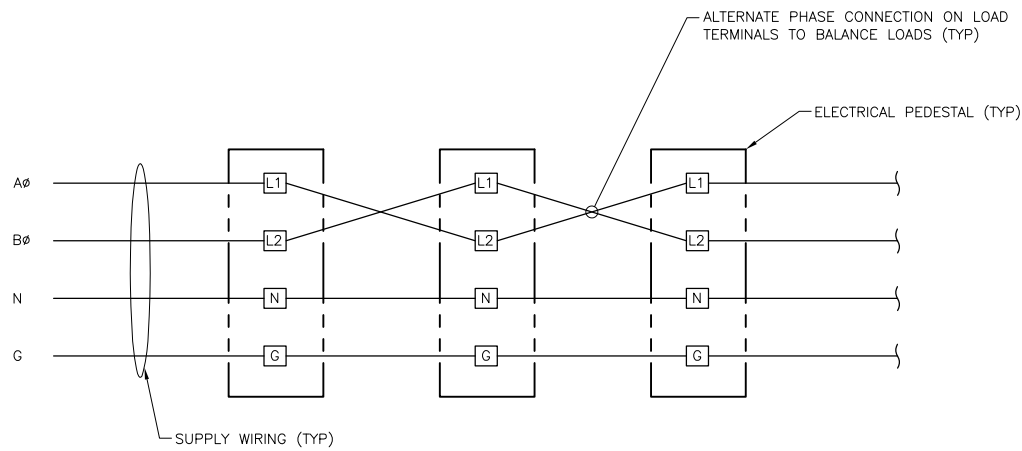


NOTES:

- 1. NO 50A RECEPTACLE AT STANDARD SITES.

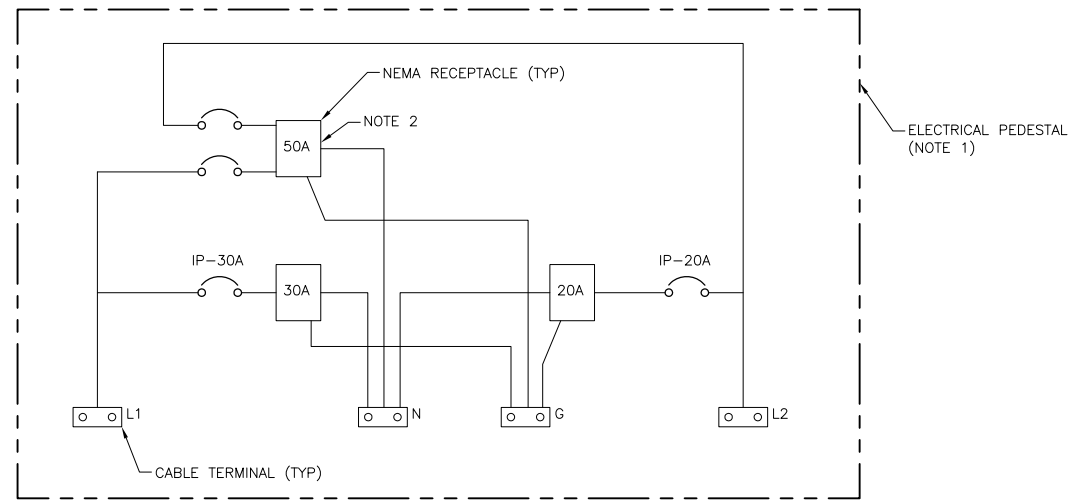
**ELECTRICAL PEDESTAL**  
NO SCALE

A  
IE02



**PEDESTAL-TO-PEDESTAL WIRING SCHEMATIC**  
NO SCALE

C  
IE02

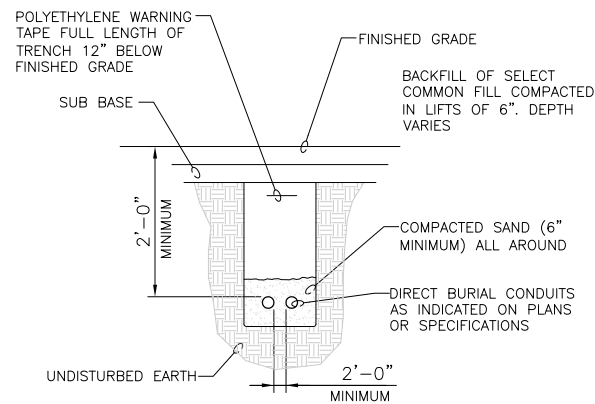


NOTES:

- 1. ELECTRICAL PEDESTAL IS ASSEMBLED BY MANUFACTURER.
- 2. 50A RECEPTACLE INCLUDED ONLY WHERE INDICATED.

**ELECTRIC PEDESTAL INTERNAL WIRING SCHEMATIC**  
NO SCALE

B  
IE02



**DIRECT-BURIED CONDUIT DETAIL**  
NO SCALE

D  
IE02



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LANE BERRERSSA (CALIFORNIA)  
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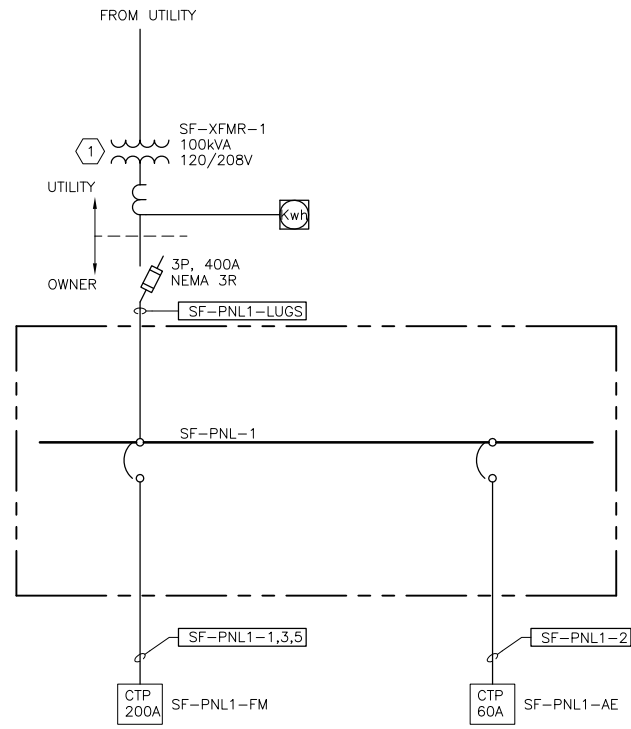
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**SPANISH FLATS  
ELECTRICAL DETAILS**

LB-SFRA-IE02

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SF-PNL-1 ONELINE

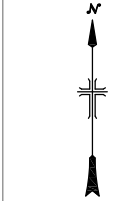
GENERAL NOTES

- SITE & SECURITY LIGHTING MAY NOT BE SHOWN ON ONE-LINES OR INFRASTRUCTURE PLANS.

KEY NOTES

- TRANSFORMER SIZE ESTIMATED. INSTALLED TRANSFORMER SIZE WILL BE DETERMINED BY PG&E.

**RECLAMATION**  
Managing Water in the West



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U.S. DEPARTMENT OF THE INTERIOR  
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RECREATION AREA  
DEVELOPMENT PLANS 60%

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105904.2330.019  
ACCEPTED:  
YYYY-MM-DD

PANELBOARD: SF-PNL-1			BUS: COPPER						MAINS: LUGS			PHASE			
SERVICE: 120/208, 3 PHASE			RATING: 400A						LOCATION: SPANISH FLAT PNL 1			"A"	"B"	"C"	
"A"	"B"	"C"	LOAD			P	BKR	CKT #		BKR	P	LOAD			
V.A.	V.A.	V.A.										V.A.	V.A.	V.A.	
24018			SF-PNL1-FM			3	200	1	2	60	1	SF-PNL1-AE	7200		
	24018			--		-	-	3	4						
		24018		--		-	-	5	6						
								7	8						
								9	10						
								11	12						
								13	14						
								15	16						
								17	18						
								19	20						
								21	22						
								23	24						
								25	26						
								27	28						
								29	30						
24018			TOTAL "A"				31218					TOTAL "A"	7200		
	24018		TOTAL "B"				24018					TOTAL "B"	0		
		24018	TOTAL "C"				24018					TOTAL "C"		0	
TOTAL LOAD =							79253								

PANELBOARD SCHEDULE SF-PNL-1

CONTRACTOR

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NAME  
TITLE

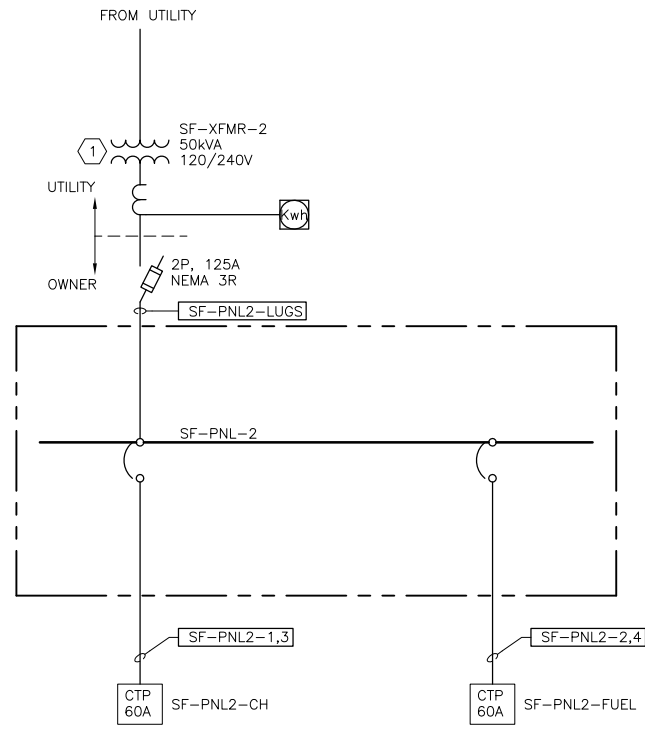
STATION NAME (CITY, ST) YYYY-MM-DD

**SPANISH FLATS  
SF-PNL-1 ONELINE**

LB-SFRA-IE03

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SF-PNL-2 ONELINE

PHASE		PANELBOARD: SF-PNL-2	BUS: COPPER						MAINS: LUGS		PHASE	
'A'	'B'	SERVICE: 120/240, 1 PHASE	RATING: 125A						LOCATION: SPANISH FLAT PNL 2		'A'	'B'
V.A.	V.A.	MOUNTING: Outdoor NEMA 3R	P	BKR	CKT #		BKR	P	LOAD	V.A.	V.A.	
7200		SF-PNL2-CH	2	60	1	2	60	2	SF-PNL2-FUEL	7200		
	7200		-	-	3	4	-	-			7200	
					5	6						
					7	8						
					9	10						
					11	12						
					13	14						
					15	16						
					17	18						
					19	20						
					21	22						
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					25	26						
					27	28						
					29	30						
					31	32						
					33	34						
					35	36						
					37	38						
					39	40						
					41	42						
7200		TOTAL 'A'	14400						TOTAL 'A'		7200	
	7200	TOTAL 'B'	14400						TOTAL 'B'			7200
TOTAL LOAD =			28800									

PANELBOARD SCHEDULE SF-PNL-2

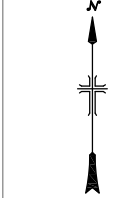
GENERAL NOTES

- SITE & SECURITY LIGHTING MAY NOT BE SHOWN ON ONE-LINES OR INFRASTRUCTURE PLANS.

KEY NOTES

- TRANSFORMER SIZE ESTIMATED. INSTALLED TRANSFORMER SIZE WILL BE DETERMINED BY PG&E.

RECLAMATION  
Managing Water in the West



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CENTRAL CALIFORNIA AREA OFFICE  
LANE BERRERSSA (CALIFORNIA)  
RECREATION AREA  
DEVELOPMENT PLANS 60%

SURVEY NOTES  
CALIFORNIA STATE PLANE COORDINATE SYSTEM  
ZONE 2, U.S. SURVEY FEET  
HORIZONTAL DATUM: NAD 1983  
VERTICAL DATUM: NAVD 1988  
TOPOGRAPHY CONTOUR INTERVAL: 5 FT.  
BATHYMETRIC CONTOUR INTERVAL: 10 FT.  
Topography by American Photomapping Services  
Compiled from photography: 201163  
Date of photography: October 20, 2011

CONTRACTOR

ACCEPTED  
NAME  
TITLE

STATION NAME (CITY, ST) YYYY-MM-DD

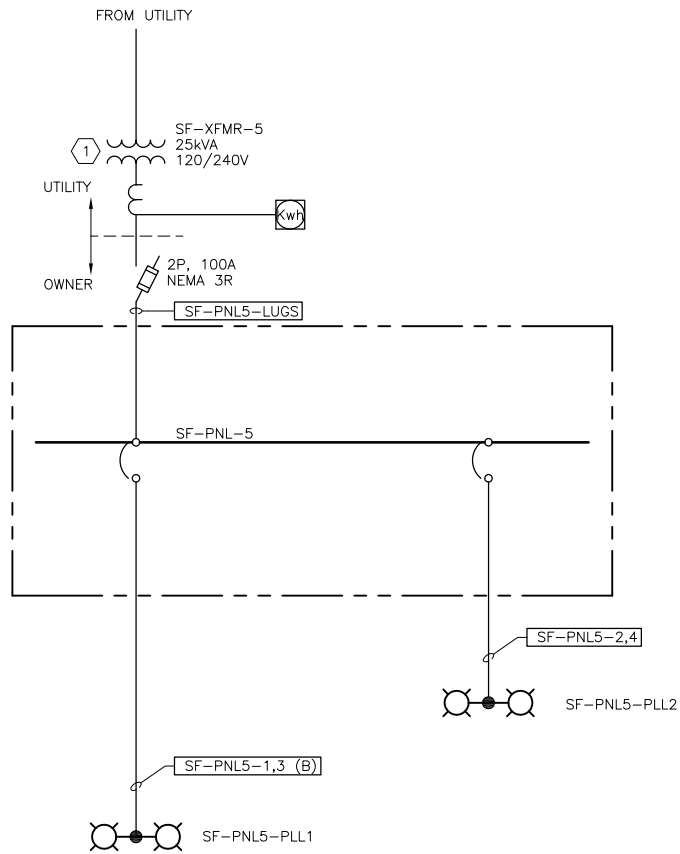
SPANISH FLATS  
SF-PNL-2 ONELINE

LB-SFRA-IE04

STA. CDM SMITH  
105904.2330.019  
YYYY-MM-DD  
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SF-PNL-5 ONELINE

PHASE		PANELBOARD: SF-PNL-5	BUS: COPPER		MAINS: LUGS				PHASE	
"A"	"B"	SERVICE: 120/240, 1 PHASE	RATING: 100A		LOCATION: SPANISH FLAT PNL 5				"A"	"B"
V.A.	V.A.	MOUNTING: Outdoor NEMA 3R	P	BKR	CKT #	BKR	P	V.A.	V.A.	
7320		SF-PNL5-PLL1	2	60	1	2	20	2		120
	7320				3	4				120
					5	6				
					7	8				
					9	10				
					11	12				
					13	14				
					15	16				
					17	18				
					19	20				
					21	22				
					23	24				
					25	26				
					27	28				
					29	30				
7320		TOTAL "A"			7440			TOTAL "A"		120
	7320	TOTAL "B"			7440			TOTAL "B"		120
TOTAL LOAD =					14880					

PANELBOARD SCHEDULE SF-PNL-5

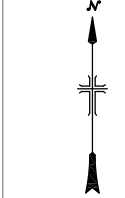
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SURVEY NOTES

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SPANISH FLATS  
SF-PNL-5 ONELINE

LB-SFRA-IE05

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FROM EQUIPMENT		TO EQUIPMENT													
Circuit Number	Tag	Name	Comment	Tag	Name	Comment	Service	Voltage(Ref)	Material	Circuit Makeup	Cable Type	Raceway Type	Voltage Drop(%)	Length	Revision
PANEL 1 (SF-PNL-1)															
SF-PNL1-LUGS	SF-XFMR-1	SPANISH XFMR 1		SF-PNL-1	SPANISH PANELBOARD 1		Power	120/208, 3 φ, 3W	Copper	2 SETS: (3#4/0+3G),4"	XHHW/XHHW-2	Direct Bury PVC(Sch 80)	0.17%	20	
SF-PNL1-1,3,5	SF-PNL-1	SPANISH PANELBOARD 1		SF-PNL1-FM	FLOATING MARINA		Power	120/208, 3 φ, 3W	Copper	3#350kcmil,#2G,3"	XHHW/XHHW-2	Direct Bury PVC(Sch 80)	1.95%	180	
SF-PNL1-2,4,6	SF-PNL-1	SPANISH PANELBOARD 1		SF-PNL1-AE	ACCESSIBLE ENTRY		Power	120/208, 3 φ, 3W	Copper	3#2,#6G,2"	XHHW/XHHW-2	Direct Bury PVC(Sch 80)	2.48%	260	
PANEL 2 (SF-PNL-2)															
SF-PNL2-LUGS	SF-XFMR-2	SPANISH XFMR 2		SF-PNL-2	SPANISH PANELBOARD 2		Power	120/240, 1 φ, 3W	Copper	3#2/0,#6G,2"	XHHW/XHHW-2	Direct Bury PVC(Sch 80)	0.19%	20	
SF-PNL2-1,3	SF-PNL-2	SPANISH PANELBOARD 2		SF-PNL2-CH	CAMP HOST SITE		Power	120/240, 1 φ, 3W	Copper	3#3,#8G,2"	XHHW/XHHW-2	Direct Bury PVC(Sch 80)	2.21%	180	
SF-PNL2-2,4	SF-PNL-2	SPANISH PANELBOARD 2		SF-PNL2-FUEL	FUEL DISPENSING		Power	120/240, 1 φ, 3W	Copper	3#3,#8G,2"	XHHW/XHHW-2	Direct Bury PVC(Sch 80)	2.70%	220	
PANEL 5(SF-PNL-5)															
SF-PNL5-LUGS	SF-XFMR-5	SPANISH XFMR 5		SF-PNL-5	SPANISH PANELBOARD 5		Power	120/240, 1 φ, 3W	Copper	3#300kcmil,#4G,3"	XHHW/XHHW-2	Direct Bury PVC(Sch 80)	0.20%	20	
SF-PNL5-1,3(B)	SF-PNL5-FC	FISH CLEANING		SF-PNL5-PLL1	PARKING LOT LIGHT		Power	120/240, 1 φ, 3W	Copper	3#1/0#4G,2"	XHHW/XHHW-2	Direct Bury PVC(Sch 80)	0.03%	220	
SF-PNL5-2,4	SF-PNL-5	SPANISH PANELBOARD 5		SF-PNL5-PLL2	PARKING LOT LIGHT		Power	120/240, 1 φ, 3W	Copper	3#1/0#4G,2"	XHHW/XHHW-2	Direct Bury PVC(Sch 80)	0.05%		



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**SPANISH FLATS  
CABLE SCHEDULES**

LB-SFRA-IE06