CALIFORNIA HIGH-SPEED TRAIN

Engineering Plans

Burbank to Los Angeles

Option B Revised Alignment

Volume 3.7

HSR Burbank Airport Station

August 2021

CALIFORNIA
High-Speed Rail Authority

FOR REFERENCE ONLY - FOR THE LATEST PLANS,
SEE HSR PALMDALE TO BURBANK SECTION

California High-Speed Rail Authority

Palmdale to Burbank Project Section

DRAFT PEPD REV01

Burbank Station Area Plans

February 2019

CALIFORNIA High-Speed Rail Authority

U.S. Department of Transportation
Federal Railroad Administration

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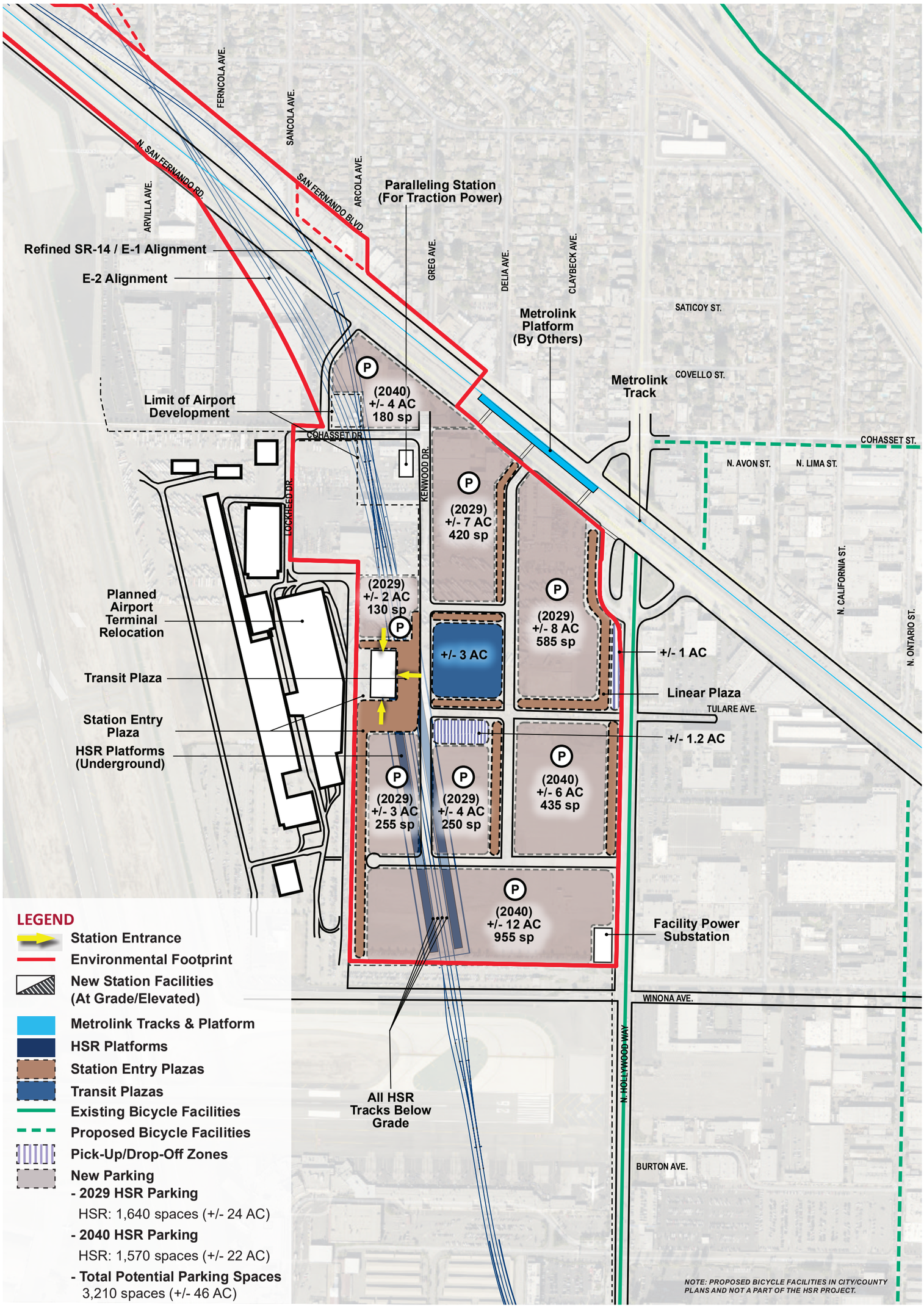
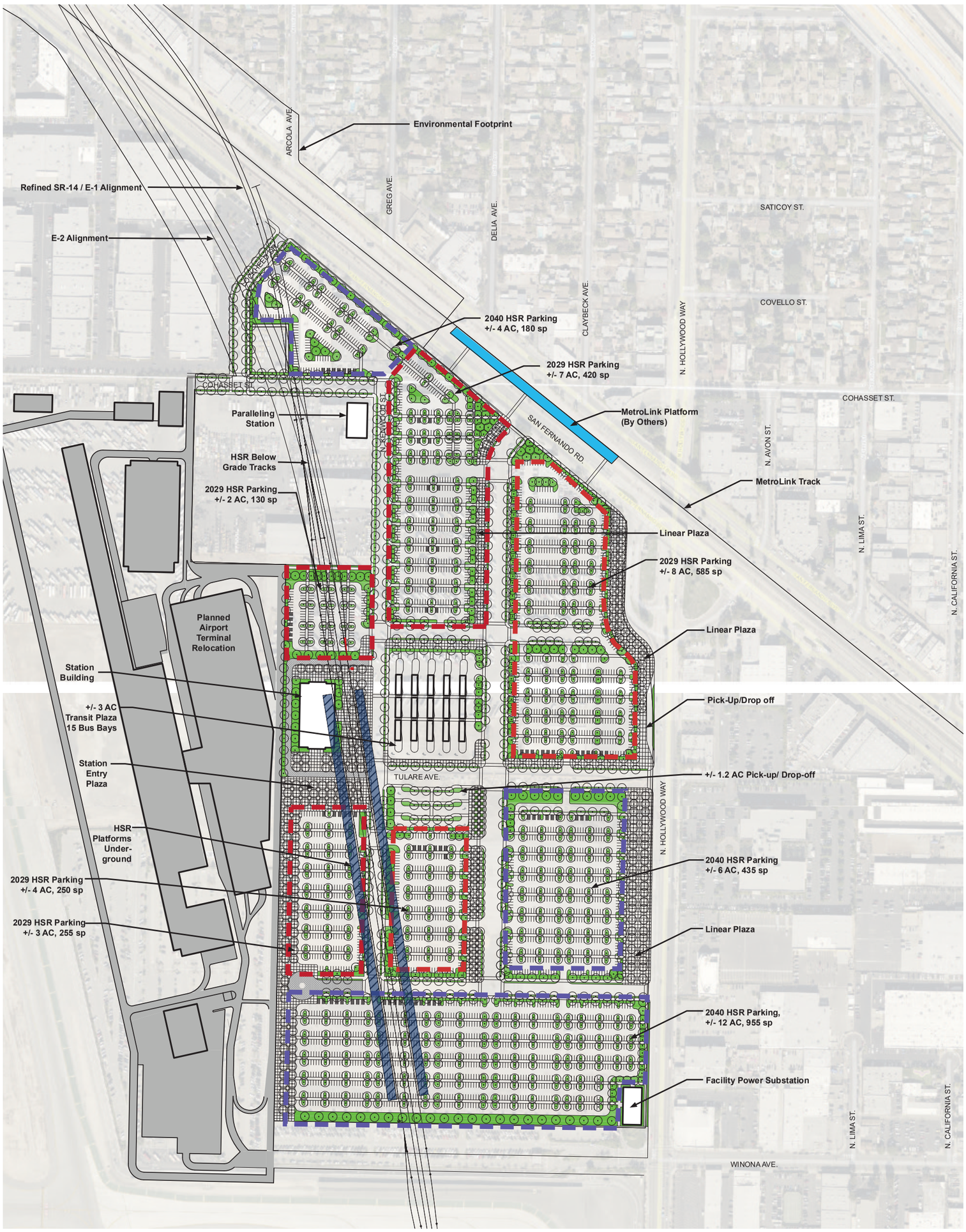
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
PALMDALE TO BURBANK PROJECT SECTION
BURBANK STATION



Burbank Station General Site Plan

0 100 200 400 N

CALIFORNIA HIGH-SPEED RAIL AUTHORITY
PALMDALE TO BURBANK PROJECT SECTION
BURBANK STATION



LEGEND

2029 HSR Parking
1,640 spaces (+/- 24 AC)

2040 HSR Parking
1,570 spaces (+/- 22 AC)

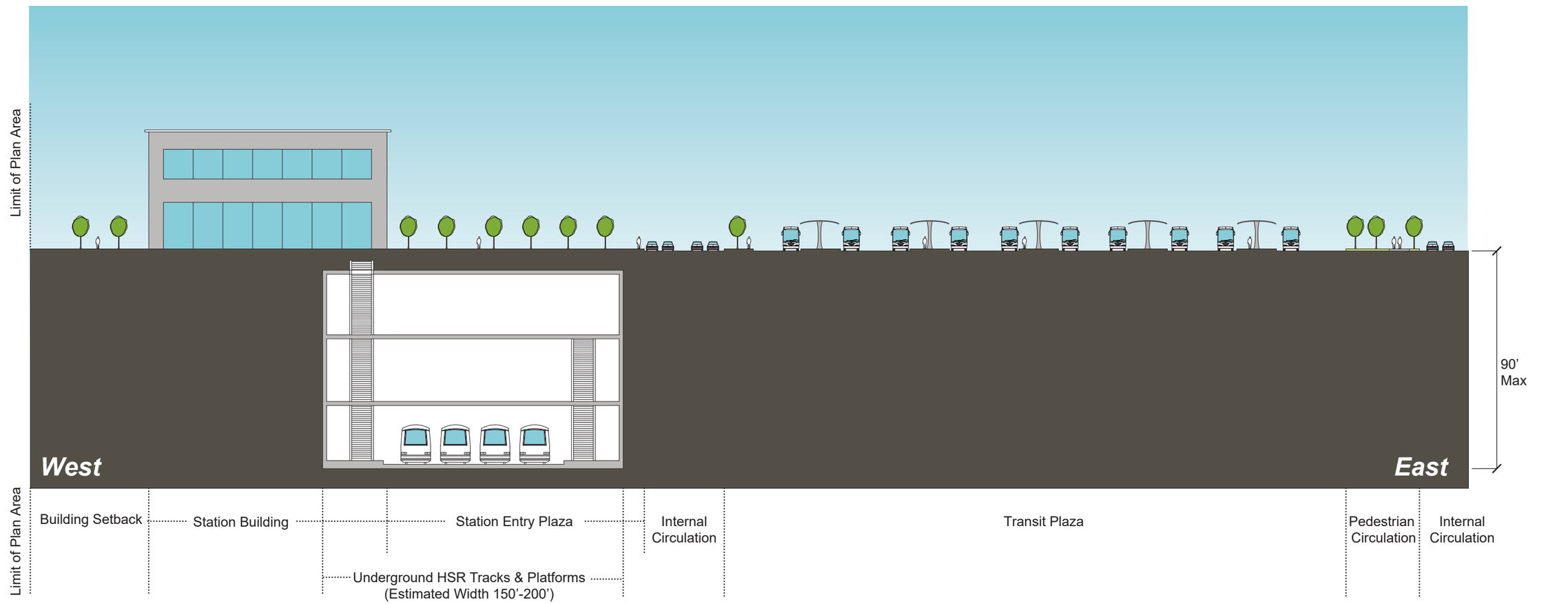
Total Potential Parking Spaces
3,210 spaces (+/- 46 AC)

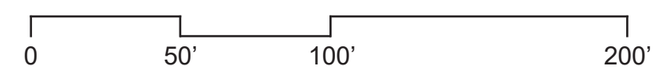
New Station Facilities
Metrolink Platform
HSR Platform (Underground)
Planned Airport Terminal Relocation
Landscaping

SCALE: 1" = 150'
0 75 150 300 N

Burbank Station Detailed Site Plan

CALIFORNIA HIGH-SPEED RAIL AUTHORITY
PALMDALE TO BURBANK PROJECT SECTION
BURBANK STATION





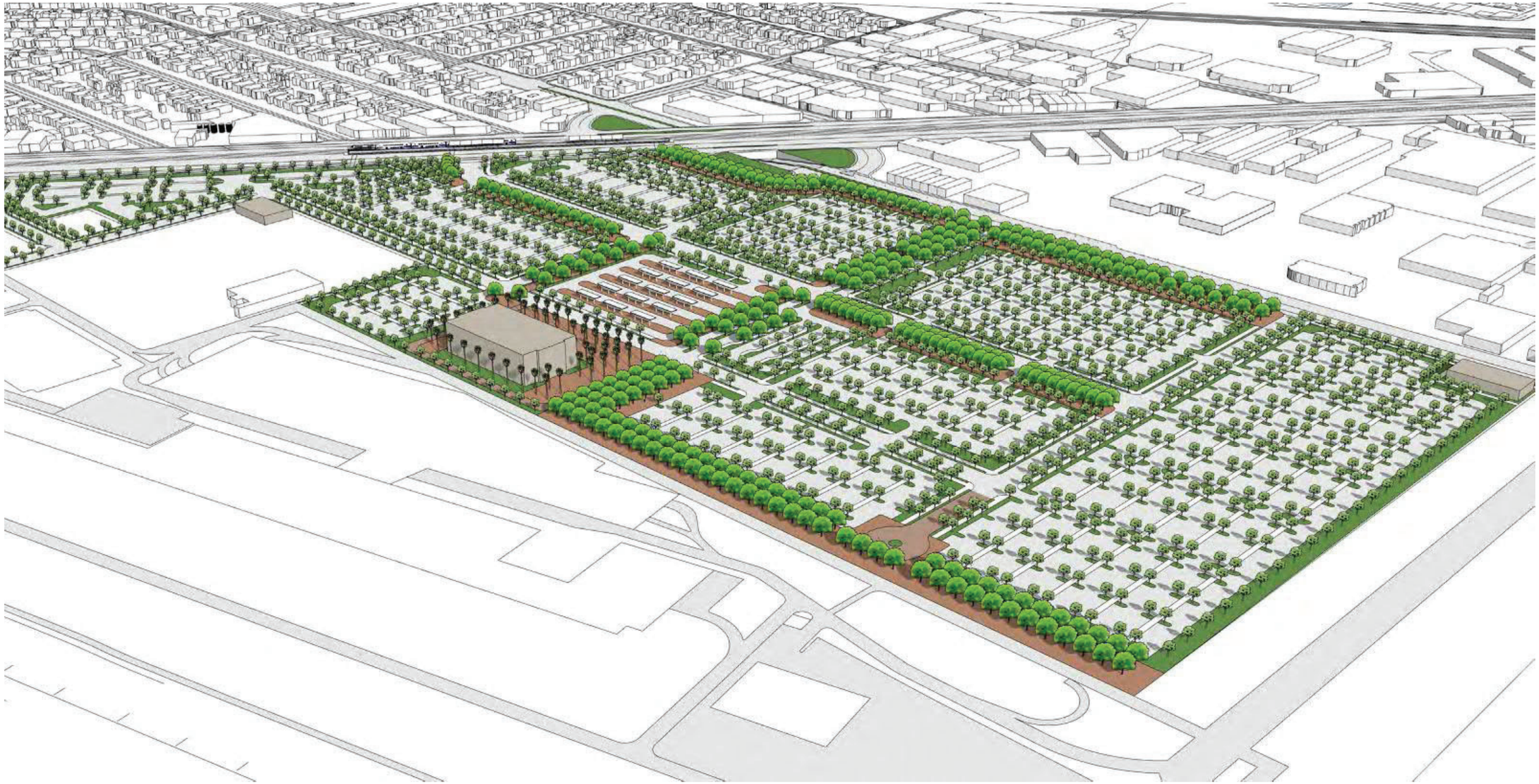
Burbank Station Cross Section | West-East Site Section Looking North

Burbank Station Massing Model | Perspective A

NOT TO SCALE

Burbank Station Massing Model | Perspective B

NOT TO SCALE



Burbank Station Massing Model | Perspective C

NOT TO SCALE

Burbank Station Programming & Area Requirements Table				
Function Name	Description	Formula	Required Area (Net SF) Minimum	Comments
Burbank Daily Peak Ridership Boardings 2040	Long distance + Short Distance Boardings	12,800	12,800	CHSR 2016 Business Plan
P360B	Highest Daily Boardings X Conversation Factor for Boardings=6hour Boardings	Highest Daily Boardings x 0.67=P360B 12,800 x 0.67	8,576	California HSTP Design Criteria, Chapter 14-Stations, Oct 2015, Working Draft, Rev.2 Table 14-1 Passenger Ridership Assumptions Table 14-3 Concourse Circulation and Waiting Areas
P360A	Peak 6 Hour Boardings X Conversation Factor for Alightings =6hour Alightings	P360B x 0.75=P360A 8576 x 0.75	6,432	
P60B	Peak 6 hour Boardings x Peak hour conversion Factor for Boardings=Peak Hour Boardings	P360B x 0.17=P60B 8576 X 0.17	1,458	
P60A	Peak Hour Boardings x Peak Hour Conversion Factor for Alightings=Peak Hour Alightings	P60B x 0.75=P60A 552 x 0.75	1,094	
P30B	Peak Hour Boardings /2 x Surge Factor = Peak 30-minute Boardings	(P60B /2) x 1.2=P30B (1458/2) x 1.2	875	
P30A	Peak 30-minute Boardings x Conversion Factor = Peak 30 minute Alightings	P30B x 0.075=P30A 875 x 0.75	656	
P15B	Peak Hour Boardings / 4 x Surge Factor = Peak 15- minute Boardings	(P60B / 4) x 1.3= P15B (1458 /4) x 1.3	474	
P15A	Peak 15-minute Boardings x Conversion Factor=Peak 15 minute Alightings	P15B x 0.75=P15A 474 x 0.75	356	
P5B	Peak Hour Boardings /12 x Surge Factor = Peak 5-minute Boardings	(P60B / 12) x 1.4= P5B (1458/12) x 1.4	170	
P5A	Peak 5-minute Boardings x Conversion Factor = Peak 5-minute Alightings	P5B x 0.75=P5A 170 x 0.75	128	
P1B	Peak Hour Boardings /60 x Surge Factor=Peak 1 Minute Boardings	(P60B /60) x 1.5=P1B (1458 /60) x 1.5	36	
P1A	Peak 1-minute Boardings x Conversion Factor for Alightings=Peak 1 Minute Alightings	P1Bx0.75 36x0.75	27	
Cf	Unobstructed Net Concourse Free Public Area Circulation Width	(P15B+P15A)/(15x10 people/ft/min) or 16 ft min. (474+356)/(15x10 people/ft/min)	476	
Wf	Net Waiting Area in Concourse Free Public Area	((P15Bx1.1) + (P15Ax0.1))x 14 square feet ((474x1.1) +(356x0.1)) x 14	7,798	
Public Restrooms	Women + Men + Unisex accessible restroom for each group	(P15B+P15A) / 2 (474+356) /2	415	14.3.4 Public Restrooms
Passenger Amenity Space Allocation	Station Design Target Year Daily Boardings	More than 10,000	9,000	Table 14-7, Chapter 14 March 2016, corrected as directed Comment 45_3-09-2017
Ticket Windows	Station Quantity	P60B/600 638:600	2	Table 14-5: HST Ticket Sales Facilities
Ticket Vending Machines		P60B/280 638/280	3	
Value Added Machines	2 Per Platform Minimum			
Fare Gates Intermediate		P1B /50 ppm 36/50 One additional gate to be provided if under 10	2	Table 14-6 Fare Gates
Emergency Gates			2	14.3.3.6
Side Platform Station	Peak- hour boarding and fully occupied train alighting	P60B + 900 p	2358	14.3.6.2
Sr	Seating at Concourse Free Waiting Area	((P15B x 1.1) + (P15A x 0.1)) x .25	139	Table 14-22: Station Seating

Burbank Station Facility Sizing Table					
Burbank Projected Daily Ridership (2040) 25,600 (12,800 Boardings + 12,800 Alightings), based on CHSR Authority 2016 Business Plan					
STATION TYPE: Intermediate, Full-Service, Large: based on Chapter 14 Stations Design Criteria, Table 14-3					
	Function Name	Required Area (Net SF) Minimum	Formula	Chapter 14:Stations	Comments
Concourse Public Free Areas	Station Concourse (Free Area - Main Hall)	29,050	P15 x 35 SF/person	14.3.5.1	P15 = P15 B + P15 A = 474 + 356 = 830 ,use 35 SF/person
	Entrances	107 Ln.Ft.	(P60B x 1.1)/15 Ln.Ft.	14.3.5.2	P60B=552, 15 ft width at least one entrance
	Mezzanine	0			N/A tracks and platform underground
	Passenger Waiting Area	7,798	((P15B x 1.1)+(P15Ax0.1)) x 14 SF	14.3.5.3.B.C Table 14-3	California HSTP Design Criteria, Chapter 14-Stations,March 2016, Rev 2 and October 2015, Working draft, Rev 2. Table 14-1 Passenger Ridership Assumptions, Table 14-3
	Ticket Vending Machines (TVM)	72	P60B/280	Table 14-5, 14.3.5.6 B	P60B = 1458, 6 TVM, Minimum 2 required
	Concessionaire	9,000		Table 14-7	More than 10,000 Boardings
	Business Lounge	600		14.3.5.7.C	
	Public Restrooms	1,100	CBC 2016, CPC 2016 (P15B + P15A)/2	14.3.5.4	P15 = 830 A-3 Assembly Occupancy, 415 Male, 415 Female: 8 Water Closets, 5 Lavatories Male: 3 Water closets, 4 Urinal, 3 Lavatories Drinking Fountains: 3
	Unisex Restrooms	100		14.3.5.4	1 Unisex (or family) accessible restroom for each group of restrooms
	Janitor Closets	60		14.3.7.1.D	
Staffed Areas	Ticket Office Counter	1		14.3.5.7A	Minimum 1 required
	Ticket Office Window Quality	3	P60B/600	14.3.5.6.B 14.3.5.7A	P60B = 552, Minimum 1 + 1 ADA accessible
Security	Police Office	500		14.3.6.2.A	Includes Lockers
	Janitor Closets	60		14.3.7.1.D	
	Security Guard Office	144		14.3.6.2.B	
Access Facilities	HSR Platform			14.3.2.1	
	Metrolink Platform			14.3.2.1	
	Station Entry Plazas (Total Area)			14.4.4.8	
	Transit Plazas (Total Area)			14.4.2.4	
	Transit Plazas (Sizing Assumptions)			14.4.2.4	
	Pick-up Drop Off (Total Area)			14.4.2.5	
	Pick-up Drop Off (Sizing Assumptions)			14.4.2.5	
	2029 Parking Totals				Sidewalks and landscaping are also included in parking area.
	2040 Parking Totals				Sidewalks and landscaping are also included in parking area.

Burbank Station Facility Sizing Table					
Burbank Projected Daily Ridership (2040) 25,600 (12,800 Boardings + 12,800 Alightings), based on CHSR Authority 2016 Business Plan					
STATION TYPE: Intermediate, Full-Service, Large: based on Chapter 14 Stations Design Criteria, Table 14-3					
	Function Name	Required Area (SF) Minimum	Formula	Chapter 14:Stations	Comments
Non-Public Station Staff Only	Ticket Sales Office	225		14.3.5.7.A	75 SF per window , 3 ticket sales windows
	Ticket Admin., Handling & Storage	260		14.3.5.6.B 14.3.5.7 14.3.6.2.C-D	Ticket Administration Office
	Lost & Found & First Aid Room	200		14.3.6.1E-F	
	Station Control Room (SCR)	1,100		14.3.6.2.E	
	SCR Dedicated Computer Room	500		14.3.6.2.F	
	Temporary Incident Command Post (CP)	300		14.3.6.2.G	
	SOR Workroom	1,100		14.3.6.2.H	
	SOR Dedicated Computer Room	500		14.3.6.2.F-H	
	Staff Lockers, Showers, Restrooms	780	CBC 2016, CPC 2016	14.3.6.1.I	2016_ Business Plan Operations and Maintenance Cost Model, Table 20- Station Service Level C, Table 21, Table 24, Table 28. Assumed administration staff, police, security and cleaning personnel 27. B Business Occupancy, 14 Male, 14 Female. Female: 2 Watercloset, 1 Lavatory Male: 1 Watercloset, 1 Urinal, 1 Lavatory 2 Staff Shower Rooms adjacent to Locker rooms and Restrooms
	Janitor Closets	60		14.3.7.1.C	
	Staff Breakroom & Meeting Rooms	675	27/shift x 25SF	14.3.6.1G-H	200 SF min or as req to provide 25 SF /staff
	Station Manager Office	270		14.3.6.1A	270 SF
	Facility Manager's Office	270		14.3.6.1C	
	Admin Office Space	270		14.3.6.1.B	
	Facilities Maintenance Office	330		14.3.6.1.C	
	Station General Storage Rooms	200		14.3.7.1.E	Add 60 SF for misc. if required.
	Platform Area Op. Mgt. Booth	200	100 SF x (2)	14.3.6.2.I	OMB shall be provided on each platform, 2 platforms
Building Services and Plant Rooms	Mech., Elec. & Plumbing Rooms	1,000		14.3.7.2	
	Battery Room	400	200 SF x (2)	14.3.7.4.B	Two rooms req, including one room at each end of station for LV batteries.
	UPS Room	1,800	900 SF x (2)	14.3.7.2.C	Two rooms req., one at each end of station for low voltage (LV) distribution, transforming, EP
	Fire Detection & Protection Rooms	100		14.3.7.2.C	
	Train Control /Communications Room	1,915		14.3.7.2.E	Table 14-8 For the train control and communications equipment
	Entrance Facility Room	240		14.3.7.2.E	Table 14-8 For entry of service cabling into the building. May be co-located with the TCC room.
	3rd Party Telecom Room	120		14.3.7.2.E	Table 14-8
	Communications Closets	390	130 SFx (3)	14.3.7.2.E	Table 14-8 Number TBD. Locate close to center of each 10,000 SF of Station Floor Area
	Renewable Energy/Stormwater	0			

Burbank Station Facility Sizing Table					
Burbank Projected Daily Ridership (2040) 25,600 (12,800 Boardings + 12,800 Alightings), based on CHSR Authority 2016 Business Plan					
STATION TYPE: Intermediate, Full-Service, Large: based on Chapter 14 Stations Design Criteria, Table 14-3					
	Function Name	Required Area (SF) Minimum	Formula	Chapter 14:Stations	Comments
Maint. Support Areas	Main Station Building Recycling/Refuse	150		14.3.7.1.A	
	Secondary Station Building Recycling	60		14.3.7.1.C	
	Landscape Maintenance Room	100		14.3.7.1.F	
	Loading Zone and Service Entrance	800		14.3.7.1.G	
	Loading Dock	480	24 Ft wide x 20 Ft deep	14.3.7.1.H	
	SUBTOTAL	**70,977 SF**			
	Efficiency Factor	**2**			
	TOTAL AREA- MAIN STATION BUILDING	**141,954 SF**			
	TOTAL AREA-Substation:	**10,000 SF**			
	TOTAL:	**151,954 SF**			

Burbank Station Facility Sizing Table

California High-Speed Rail Authority

Burbank Subsection

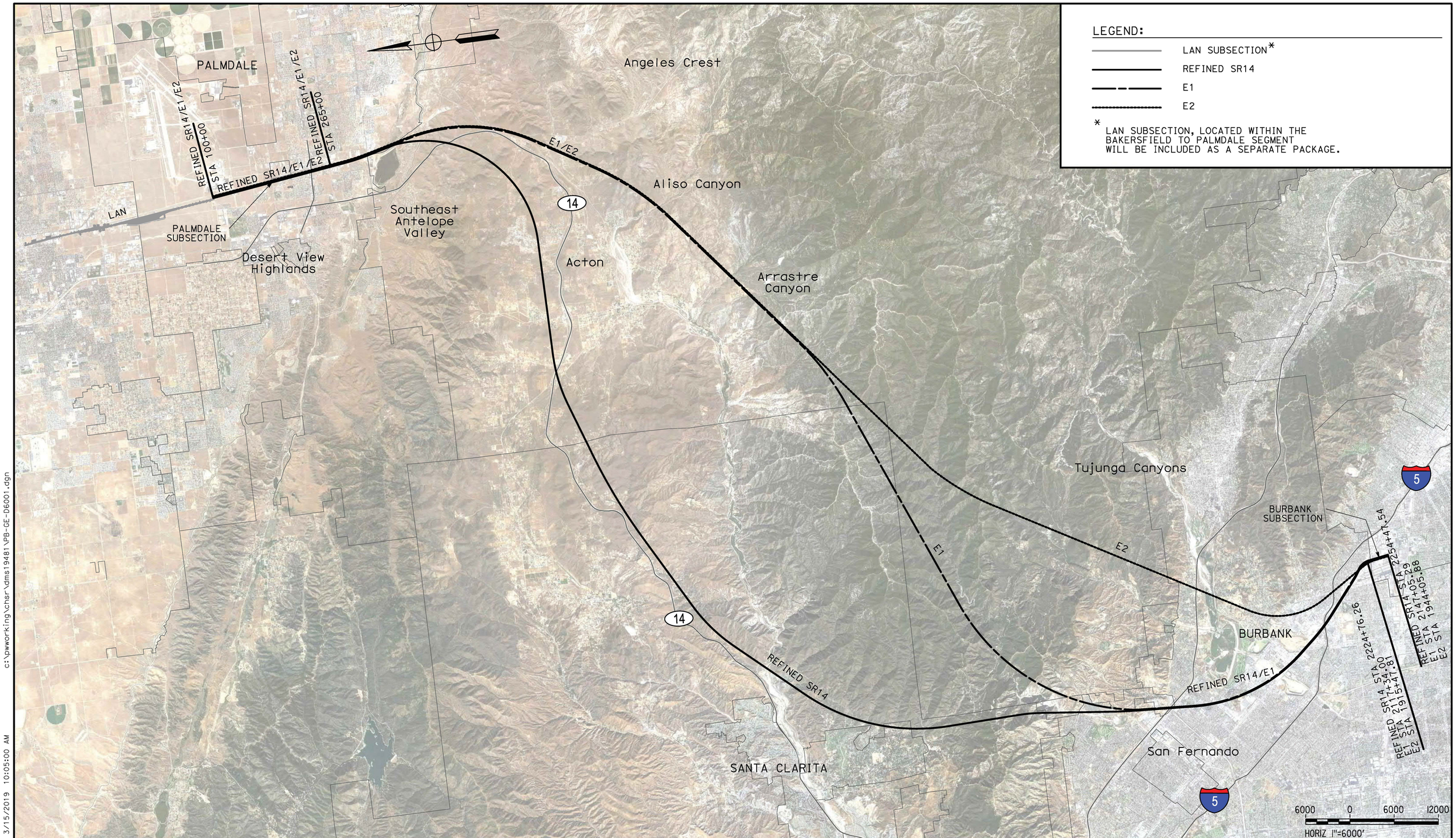
DRAFT PEPD REV01

Track Alignment Plans

February 2019

CALIFORNIA High-Speed Rail Authority

U.S. Department of Transportation Federal Railroad Administration



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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY JC ALAMILLA
DRAWN BY JC ALAMILLA
CHECKED BY R. RODRIGUEZ
IN CHARGE A. RELANO
DATE 02/01/2019

BURBANK SUBSECTION DRAFT PEPD REV 01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
OVERALL PROJECT SEGMENTS
ALIGNMENTS "REFINED SR14/E1/E2"

CONTRACT NO. HSR14-42
DRAWING NO. GE-D6001
SCALE AS SHOWN
SHEET NO.

GENERAL

DRAWING NO.	DESCRIPTION	SHEET NO.
GE-D6001	OVERALL PROJECT SEGMENTS	
TT-B0001	INDEX OF DRAWINGS	
TT-B0004	ABBREVIATIONS	
TT-B0005	ABBREVIATIONS AND LEGEND	

BURBANK AIRPORT STATION

DRAWING NO.	DESCRIPTION	SHEET NO.
TT-C6001-BUR	HIGH SPEED RAIL PLANS - KEY MAP	
TT-D1001A-BUR	PLAN AND PROFILE - STA 2226+00.00 TO STA 2254+47.54	
TT-D1002A-BUR	SB PLATFORM TRACK - PLAN AND PROFILE - STA 3220+87.48 TO STA 3254+47.54	
TT-D1003A-BUR	NB PLATFORM TRACK - PLAN AND PROFILE - STA 4230+87.49 TO STA 4296+77.55	
TT-D1004A-BUR	NB REFUGE TRACK - PLAN AND PROFILE - STA 5219+79.818 TO STA 5239+77.524	

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY JC ALAMILLA
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BURBANK SUBSECTION
DRAFT PEPD
REV 01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION

GENERAL
INDEX OF DRAWINGS

CONTRACT NO. HSR14-42
DRAWING NO. TT-B0001
SCALE NO SCALE
SHEET NO.

A

AB	AGGREGATE BASE
ABBC	ASBESTOS BONDED BITUMINOUS COATED
ABM	AIR-BLOWN MORTAR
ABN	ABANDON
ABUT	ABUTMENT
AC	ASPHALT CONCRETE
ACB	ASPHALT CONCRETE BASE
ACP	ASBESTOS CEMENT PIPE
ADL	ADDED DEAD LOAD
ADJ	ADJUST
AFES	ALTERNATIVE FLARED END SECTION
AHD	AHEAD
ALT	ALTERNATE
AM	TIME FROM MIDNIGHT TO NOON
AP	ALTERNATIVE PIPE
APC	ALTERNATIVE PIPE CULVERT
APPROX	APPROXIMATE
APU	ALTERNATIVE PIPE UNDERDRAIN
ARS	ACCELERATION RESPONSE SPECTRUM
AR	ACCESS RESTRICTION
AS	AGGREGATE SUBBASE
ASRP	ALUMINUM SPIRAL RIB PIPE
ASSY	ASSEMBLY
ATPB	ASPHALT TREATED PERMEABLE BASE
ATPM	ASPHALT TREATED PERMEABLE MATERIAL
AVE	AVENUE
AVG	AVERAGE
@	AT

B

BAGR	BRIDGE APPROACH GUARD RAILING
BB	BEGINNING OF BRIDGE
BC	BEGIN HORIZONTAL CURVE
BCC	BALANCED CANTILEVER CONSTRUCTION
BCR	BEGIN CURB RETURN
BEG	BEGIN
BIT CTD	BITUMINOUS COATED
BK	BACK
BKF	BACKFILL
BLDG	BUILDING
BLM	BRIDGE-LOG MILE
BLVD	BOULEVARD
BM	BENCH MARK
BND	BOUND
BOT	BOTTOM
BR	BRIDGE
BRG	BEARING
BTU	BRITISH THERMAL UNIT
BVC	BEGIN VERTICAL CURVE
BW	BARBED WIRE

C

CAA	CABLE ANCHOR ASSEMBLY
CAP	CORRUGATED ALUMINUM PIPE
CAPA	CORRUGATED ALUMINUM PIPE ARCH
CAS	CONSTRUCTION AREA SIGN
CB	CONCRETE BARRIER
CBW	CONCRETE BLOCK WALL
C-C	CENTER TO CENTER

C CONTINUED

CHSRA	CALIFORNIA HIGH SPEED RAIL AUTHORITY
CHST	CALIFORNIA HIGH SPEED TRAIN
CHSR	CALIFORNIA HIGH SPEED RAIL
CG	CENTER OF GRAVITY
CHNL	CHANNEL
CI	CAST IRON
CIDH	CAST-IN-DRILLED-HOLE
CIP,C-I-P	CAST-IN-PLACE, CAST IRON PIPE
CIPCP	CAST IN PLACE CONCRETE PIPE
CISS	CAST-IN-STEEL-SHELL
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE, CLASS
℄	CENTERLINE
CL2	CLASS 2
CL-6	CHAIN LINK FENCE (6 FT)
CLR	CLEAR, CLEARANCE
CM	CORRUGATED METAL
CMP	CORRUGATED METAL PIPE
CO	COUNTY
COL	COLUMN
CONC	CONCRETE
COND	CONDUIT
CONN	CONNECTOR
CONST	CONSTRUCT, CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CP	CANDLEPOWER
CR	CREEK
CRCP	CONTINUOUS REINFORCED CONCRETE PAVT
CRSP	CONCRETED ROCK SLOPE PROTECTION
CS	CURVE TO SPIRAL
CSP	CORRUGATED STEEL PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CTB	CEMENT TREATED BASE
CTPB	CEMENT TREATED PERMEABLE BASE
CTPM	CEMENT TREATED PERMEABLE MATERIAL
CTRS	CENTERS
CULV	CULVERT
CVFPB	CENTRAL VALLEY FLOOD PROTECTION BOARD

D

D	DEPTH
DD	DOWNDRAIN, DIRECTIVE DRILLING
DBL	DOUBLE
DEG	DEGREE
DEL	DELINEATOR
DET	DETAIL, DETOUR
DF	DOUGLAS FIR
DI	DRAINAGE INLET, DROP INLET
DIA	DIAMETER
DIAPH	DIAPHRAGM
DIST	DISTANCE, DISTRICT
DMBB	DOUBLE METAL BEAM BARRIER
DR	DRIVE
DTBB	DOUBLE THRIE BEAM BARRIER
DWY	DRIVEWAY

E

E	EAST, EASTING
EA	ACTUAL SUPERELEVATION
EU	UNBALANCED SUPERELEVATION

E CONTINUED

EASE	EASEMENT
EB	END OF BRIDGE, EASTBOUND
EC	END HORIZONTAL CURVE
ECR	END CURB RETURN
ED	EDGE DRAIN
EDC	EDGE DRAIN CLEANOUT
EDO	EDGE DRAIN OUTLET
EDV	EDGE DRAIN VENT
ELEC	ELECTROLIER
ELECT	ELECTRIC
ELEV	ELEVATION
ELLN	EXTRALEGAL LEAD NETWORK
EMB	EMBANKMENT
ENGR	ENGINEER
EOD	EDGE OF DECK
EP	EDGE OF PAVEMENT
EQ	EQUATION, EQUAL
ES	EDGE OF SHOULDER
ETW	EDGE OF TRAVELED WAY
EVC	END VERTICAL CURVE
EW	ENDWALL
EXC	EXCAVATION
EXIST, EX.	EXISTING
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXT	EXTERIOR
EXWY	EXPRESSWAY

F

F & C	FRAME AND COVER
F & G	FRAME AND GRATE
FB	FLOOR BEAM
F-B	FRESNO TO BAKERSFIELD
FDN	FOUNDATION
FEBT	FACING EASTBOUND TRAFFIC
FES	FLARED END SECTION
FF	FILTER FABRIC
FG	FINISHED GRADE
FH	FIRE HYDRANT
FIG	FIGURE
FL	FLOW LINE
FNBT	FACING NORTHBOUND TRAFFIC
FOC	FACE OF CONCRETE
FPLM	FULL SPAN PRECAST LAUNCHING METHOD
FR RD	FRONTAGE ROAD
FS	FAR SIDE, FINISHED SURFACE
FSBT	FACING SOUTHBOUND TRAFFIC
FT	FOOT, FEET
FTG	FOOTING
FUT	FUTURE
FWBT	FACING WESTBOUND TRAFFIC
FWY	FREEWAY

G

G	ACCELERATION DUE TO GRAVITY
GA	GAGE
GALV	GALVANIZED
GP	GRADING PLANE
GR	GUARD RAILING
GSP	GALVANIZED STEEL PIPE
GTR	GUTTER

H

H	HEIGHT
HD	HORIZONTAL DRAIN
HDC	HIGH DESERT CORRIDOR
HDWL	HEADWALL
HEX HD	HEXAGONAL HEAD
HMA	HOT MIXED ASPHALT
HORIZ	HORIZONTAL
HP	HINGE POINT, HORSEPOWER
HPS	HIGH PERFORMANCE STEEL
HR	HOUR
HS	HIGH STRENGTH
HSR	HIGH SPEED RAIL
HST	HIGH SPEED TRAIN
HW	HEADWALL, HIGH WATER
HWM	HIGH WATER MARK
HWY	HIGHWAY

I

IB	IMPORTED BORROW
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCH, INCHES
INT	INTERIOR
INV	INVERT
IRR	IRRIGATION

J

JCT	JUNCTION
JP	JOINT POLE
JPCP	JOINTED PLAIN CONCRETE PAVEMENT
JS	JUNCTION STRUCTURE
JT	JOINT

K

K	DISTANCE TO ACHIEVE 1% GRADE CHANGE

L

L	LENGTH
LAT	LATITUDE
LC	LENGTH OF CURVE
LCB	LEAN CONCRETE BASE
LMF	LIGHT MAINTENANCE FACILITY
LN	LANE
LOC	LOCATION
LOL	LAYOUT LINE
LONG	LONGITUDE
LONGIT	LONGITUDINAL
LS	LENGTH OF SPIRAL
LT	LEFT

M

MAINT	MAINTENANCE
MAX	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
MED	MEDIAN
M-F	MERCED TO FRESNO
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MISC I & S	MISCELLANEOUS IRON AND STEEL
MKR	MARKER
M/L	MAIN LINE (RAILWAY)

M CONTINUED

MOD	MODIFIED, MODIFY
MON	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MPH	MILES PER HOUR
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EARTH
MSS	MOVING SCAFFOLDING SYSTEM
MT	MAIN TRACK
MTL	MATERIAL

N

N	NORTH, NORTHING
N/A	NOT APPLICABLE
NB	NORTHBOUND
NO.	NUMBER (MUST HAVE PERIOD)
NOS.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NS	NEAR SIDE
NTS	NOT TO SCALE

O

OBLR	OBLITERATE
OC	OVERCROSSING
OCS	OVERHEAD CONTACT SYSTEM
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OH	OVERHEAD
O-O	OUT TO OUT
OPP	OPPOSITE

P

P	PAGE
PAP	PERFORATED ALUMINUM PIPE
PB	PULL BOX
PC	POINT OF CURVATURE, PRECAST
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE
PCVC	POINT OF COMPOUND VERTICAL CURVE
PED	PEDESTRIAN
PED OC	PEDESTRIAN OVERCROSSING
PED UC	PEDESTRIAN UNDERCROSSING
PERM MTL	PERMEABLE MATERIAL
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
⅊,PL	PLATE
P/L	PROPERTY LINE
PM	POST MILE, TIME FROM NOON TO MIDNIGHT
PN	PAVING NOTCH
POB	POINT OF BEGINNING
POC	POINT OF HORIZONTAL CURVE
POE	POINT OF ENDING
POT	POINT OF TANGENT
POVC	POINT OF VERTICAL CURVE
PP	PIPE PILE, PLASTIC PIPE, POWER POLE
PPL	PREFORMED PERMEABLE LINER
PPP	PERFORATED PLASTIC PIPE
PRC	POINT OF REVERSE CURVE

P CONTINUED

PRF	PAVEMENT REINFORCING FABRIC
PROP	PROPOSED
PRVC	POINT OF REVERSE VERTICAL CURVE
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES
PS, P/S	PRESTRESSED, PARALLEL STATION
PSP	PERFORATED STEEL PIPE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVP	MAINTENANCE VEHICLE PULLOUT

Q

QTY	QUANTITY

R

R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD	ROAD
REINF	REINFORCED, REINFORCEMENT, REINFORCING
REL	RELOCATE
REPL	REPLACEMENT
RET	RETAINING
REV	REVISED
RDWY	ROADWAY
RM	ROAD-MIXED
R/W, ROW	RIGHT OF WAY
RP	RADIUS POINT, REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
RTE	ROUTE
RW	REDWOOD, RETAINING WALL
RWY	RAILWAY

S

S	SOUTH, SUPPLEMENT, STATION LINE
SAE	STRUCTURE APPROACH EMBANKMENT
SALV	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SPIRAL TO CURVE
SCRRA	SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
SEC	SECOND
SECT	SECTION
SEP	SEPARATION
SG	SUBGRADE
SHLD	SHOULDER
SHT	SHEET
SIM	SIMILAR
SM	SELECTED MATERIAL
SPEC	SPECIAL, SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
SS	SLOPE STAKE, SPIRAL TO SPIRAL

S CONTINUED

SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
SR	STATE ROUTE
ST	STREET, SPIRAL TO TANGENT
STA	STATION
STBB	SINGLE THRIE BEAM BARRIER
STD	STANDARD
STR	STRUCTURE
SRS	STAND ALONE RADIO SITE
SURF	SURFACING
SW	SIDEWALK, SOUND WALL
SWR	SEWER
SWS	SWITCHING STATION
SYM	SYMMETRICAL
S4S	SURFACE 4 SIDES

T

T	SEMI-TANGENT
TAB	TABLET
TAN	TANGENT
TBB	THRIE BEAM BARRIER
TBR	TIMBER
TC	TOP OF CURB, TANGENT TO CURVE
TCB	TRAFFIC CONTROL BOX
TEL	TELEPHONE
TEMP	TEMPORARY
TG	TOP OF GRADE
TM	TECHNICAL MEMORANDUM
TOT	TOTAL
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
TPSS	TRACTION POWER SUPPLY STATION
TRANS	TRANSITION, TRANSVERSE
	TRAFFIC SIGNAL, TUBULAR STEEL, TANGENT TO SPIRAL
TSMF	TERMINAL STORAGE AND MAINTENANCE FACILITY
TYP	TYPICAL
TOR	TOP OF RAIL

U

UC	UNDERCROSSING
UD	UNDERDRAIN
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS
UPRR	UNION PACIFIC RAILROAD
USFWS	UNITED STATES FISH AND WILDLIFE SERVICE

V

V	VALVE, DESIGN SPEED
VAR	VARIABLE
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VIA	VIADUCT
VOL	VOLUME

W

W	WEST, WIDTH
WB	WESTBOUND
WH	WEEP HOLE
WM	WIRE MESH
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
WT	WEIGHT
WV	WATER VALVE
WW	WINGWALL
WWLOL	WINGWALL LAYOUT LINE
W/	WITH

X

X SEC	CROSS SECTION
XING	CROSSING

Y

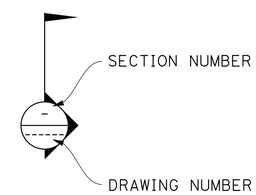
YR	YEAR
YRS	YEARS

GENERAL NOTES

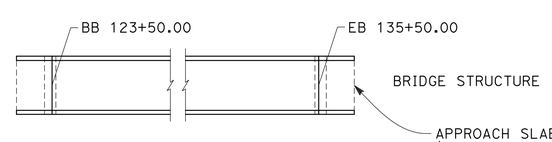
1. TRACK PROFILE IS DESIGNED AS CENTERLINE AT THE TOP OF THE SB LOW RAIL.
2. MINIMUM VERTICAL CLEARANCE REQUIREMENTS TO CANALS AND DITCHES ARE NOT KNOWN. FURTHER CONSULTATION WITH THE WATERCOURSE OWNERS WILL BE REQUIRED TO DETERMINE NECESSARY CLEARANCES. 3'-0" FREEBOARD HAS BEEN ALLOWED OVER THE 100-YEAR FLOOD LEVEL ELEVATIONS OF THE WASHES AND LA RIVER.
3. THE FOLLOWING ARE ROADWAY DESIGN STANDARD AND GUIDELINES:
   A. CALTRANS HIGHWAY DESIGN MANUAL (2006)
   B. AASHTO ROADSIDE DESIGN GUIDE (2006)
   C. APPLICABLE LOCAL DESIGN STANDARD AND GUIDELINES (I.E., CITY OF LOS ANGELES)
4. FOR ROADWAY IMPROVEMENTS, SEE ROADWAY PLANS.
5. FINAL SLOPES TO BE DEFINED AT A LATER STAGE, WHEN THE GEOTECHNICAL STUDY IS AVAILABLE.
6. STRUCTURE DIMENSIONS ARE INDICATIVE.

LEGEND

PLAN



PROPOSED RIGHT OF WAY
EXISTING RIGHT OF WAY
PROPOSED RETAINING WALL
LIMITS OF EMBANKMENT (FILL)
LIMITS OF EXCAVATION (CUT)
PROPOSED PERMANENT ENVIRONMENTAL FOOTPRINT
PROPOSED TEMPORARY ENVIRONMENTAL FOOTPRINT
-e-(oh)- EXISTING OVERHEAD HIGH VOLTAGE POWER LINES
HIGH SPEED TURNOUT
SCRRA TURNOUT
BUMPING POST
(1) CURVE DATA (HSR ALIGNMENT)
13 MILEPOST MARKER



PROFILE

PROPOSED TRACK ELEVATION
ORIGINAL GROUND (OG)
OTHER TRACKS
HIGH SPEED TURNOUT
STRUCTURAL CLEARANCE ENVELOPE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY JC ALAMILLA
DRAWN BY JC ALAMILLA
CHECKED BY R. RODRIGUEZ
IN CHARGE A. RELANO
DATE 02/01/2019

BURBANK SUBSECTION DRAFT PEPD REV 01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION

GENERAL
ABBREVIATIONS AND LEGEND

CONTRACT NO. HSR14-42
DRAWING NO. TT-B0005
SCALE NO SCALE
SHEET NO.

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3/15/2019 10:05:51 AM
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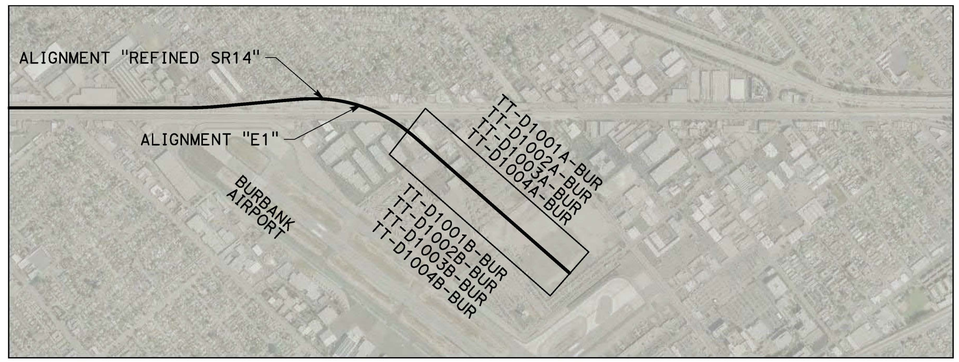
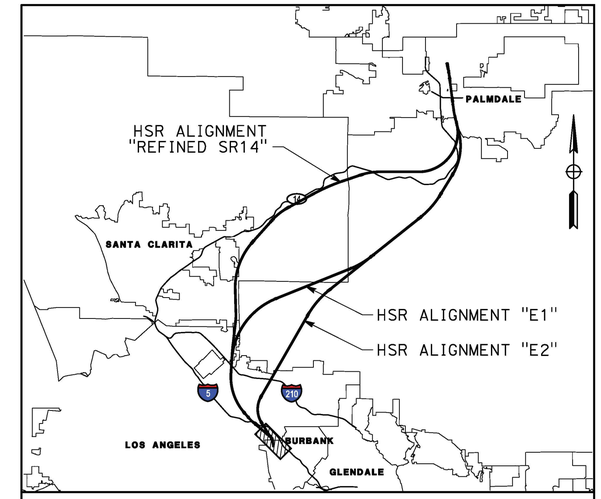
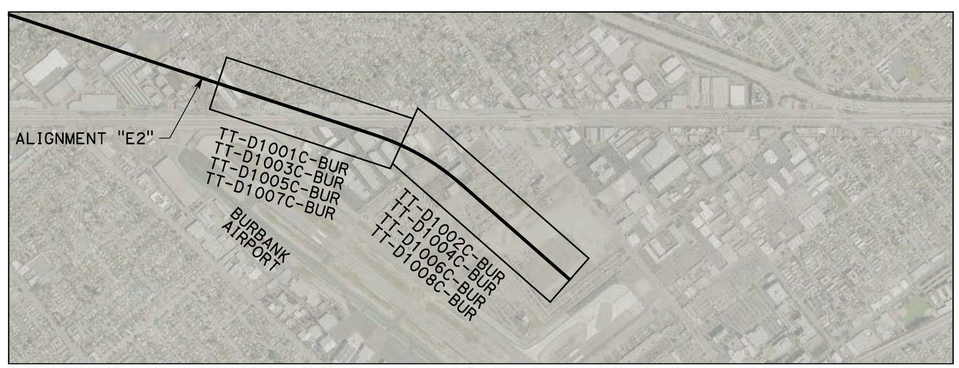


BURBANK AIRPORT STATION TRACKS



VICINITY MAP



BURBANK AIRPORT STATION TRACKS

	E1	REFINED SR14
MAINLINE	TT-D1001B-BUR	TT-D1001A-BUR
SB STATION TRACK	TT-D1002B-BUR	TT-D1002A-BUR
NB STATION TRACK	TT-D1003B-BUR	TT-D1003A-BUR
NB REFUGE TRACK	TT-D1004B-BUR	TT-D1004A-BUR
	E2	
MAINLINE	TT-D1001C-BUR	TT-D1002C-BUR
SB STATION TRACK	TT-D1003C-BUR	TT-D1004C-BUR
NB STATION TRACK	TT-D1005C-BUR	TT-D1006C-BUR
NB REFUGE TRACK	TT-D1007C-BUR	TT-D1008C-BUR

1000 0 1000 2000
1"=1000'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY JC ALAMILLA
DRAWN BY JC ALAMILLA
CHECKED BY R. RODRIGUEZ
IN CHARGE A. RELANO
DATE 02/01/2019

BURBANK SUBSECTION
DRAFT PEPD REV 01
NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION

HIGH SPEED RAIL PLANS
KEY MAP

CONTRACT NO. HSR14-42
DRAWING NO. TT-C6001-BUR
SCALE AS SHOWN
SHEET NO.

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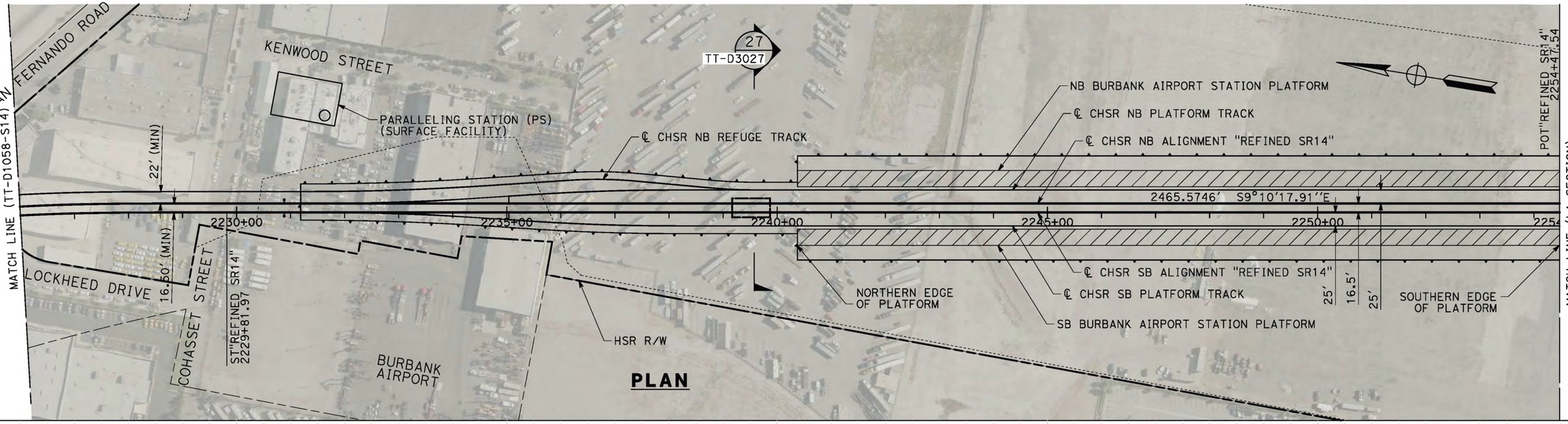

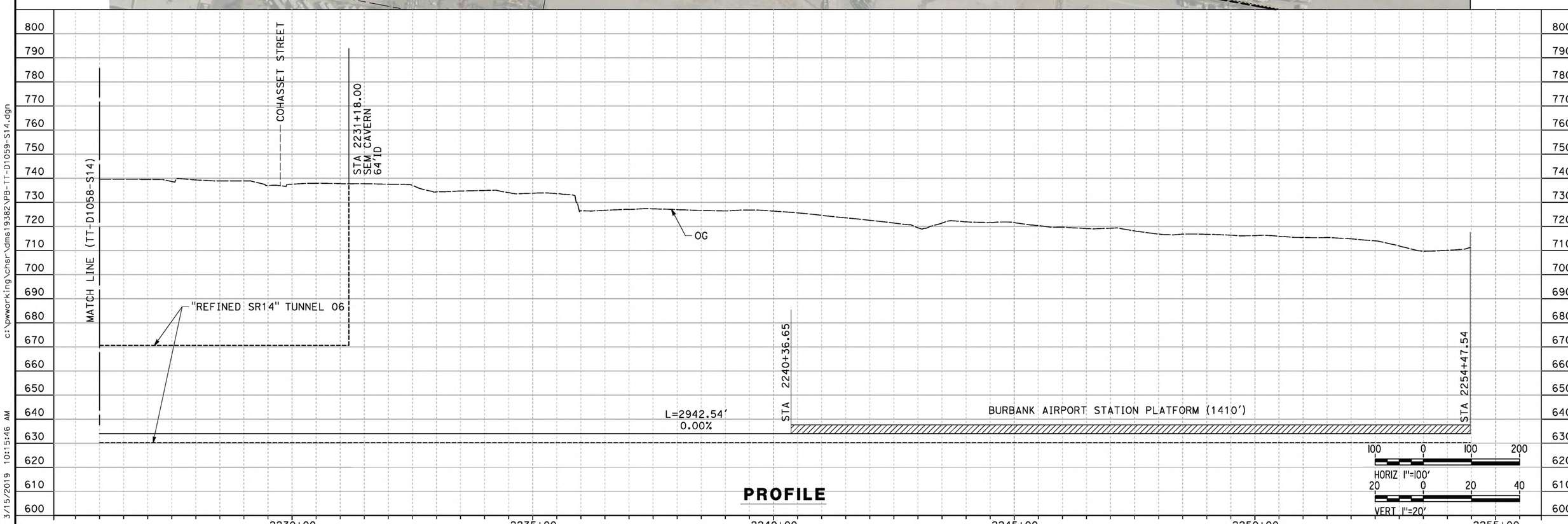

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY JC ALAMILLA
DRAWN BY JC ALAMILLA
CHECKED BY R. RODRIGUEZ
IN CHARGE A. RELANO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV 01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
ALIGNMENT "REFINED SR14"
PLAN AND PROFILE
STA 2226+00.00 TO STA 2254+47.54

CONTRACT NO. HSR14-42
DRAWING NO. TT-D1001A-BUR
SCALE AS SHOWN
SHEET NO.

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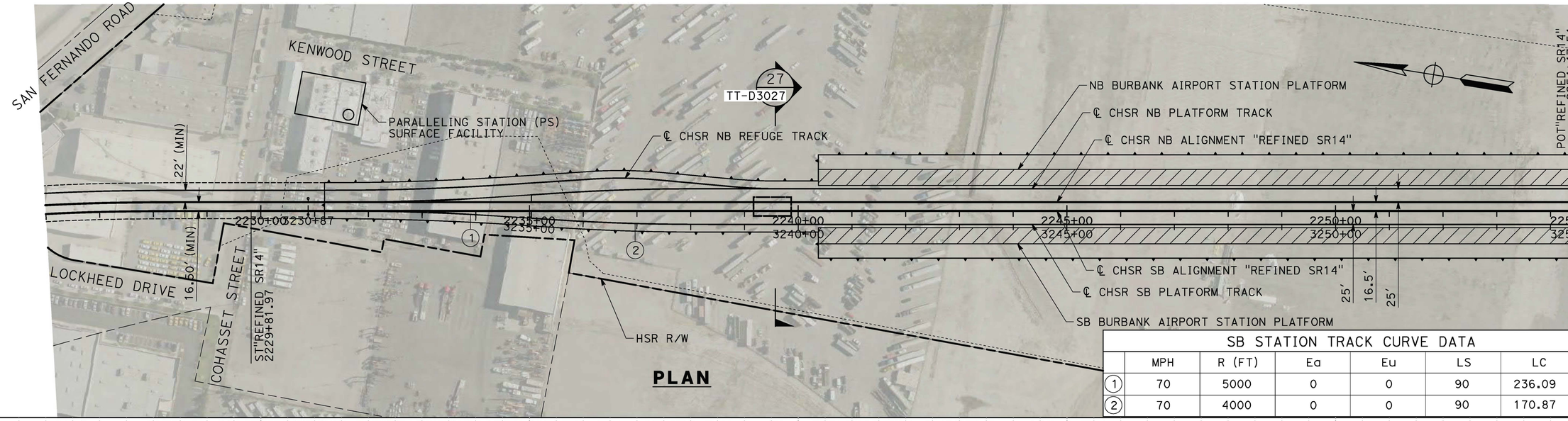
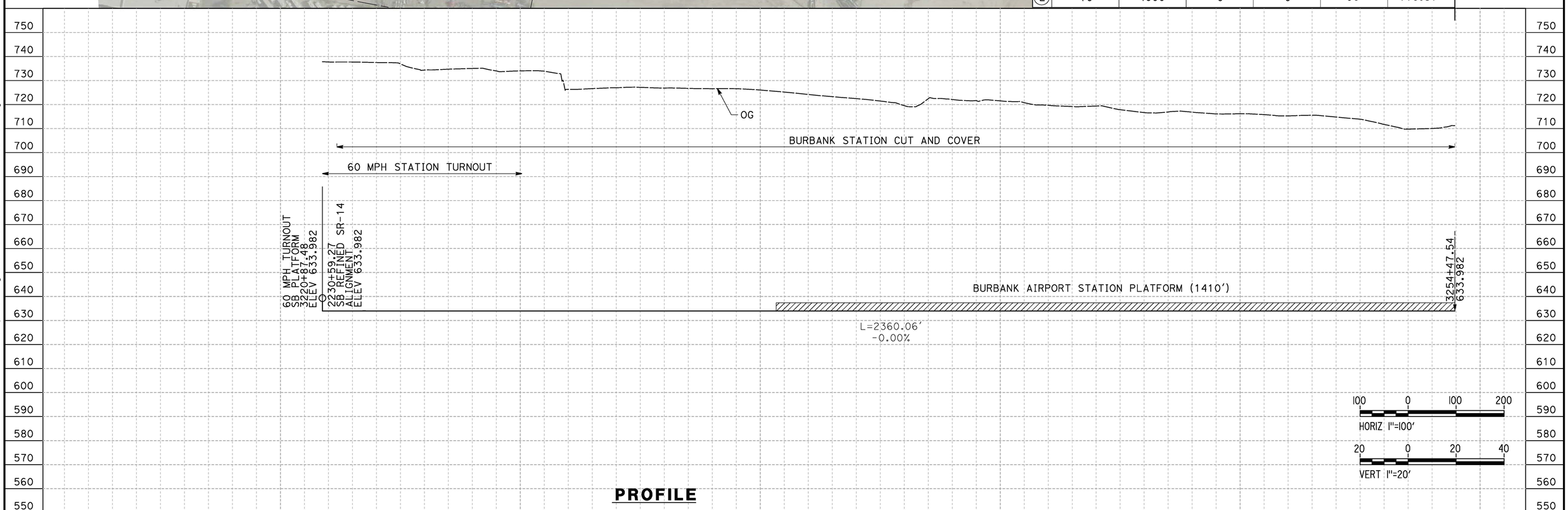


SB STATION TRACK CURVE DATA						
	MPH	R (FT)	Ea	Eu	LS	LC
1	70	5000	0	0	90	236.09
2	70	4000	0	0	90	170.87



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY JC ALAMILLA
DRAWN BY JC ALAMILLA
CHECKED BY R. RODRIGUEZ
IN CHARGE A. RELANO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV 01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
SB BURBANK AIRPORT STATION PLATFORM TRACK"REFINED SR14"
PLAN AND PROFILE
STA 3220+87.48 TO STA 3254+47.54

CONTRACT NO. HSR14-42
DRAWING NO. TT-D1002A-BUR
SCALE AS SHOWN
SHEET NO.

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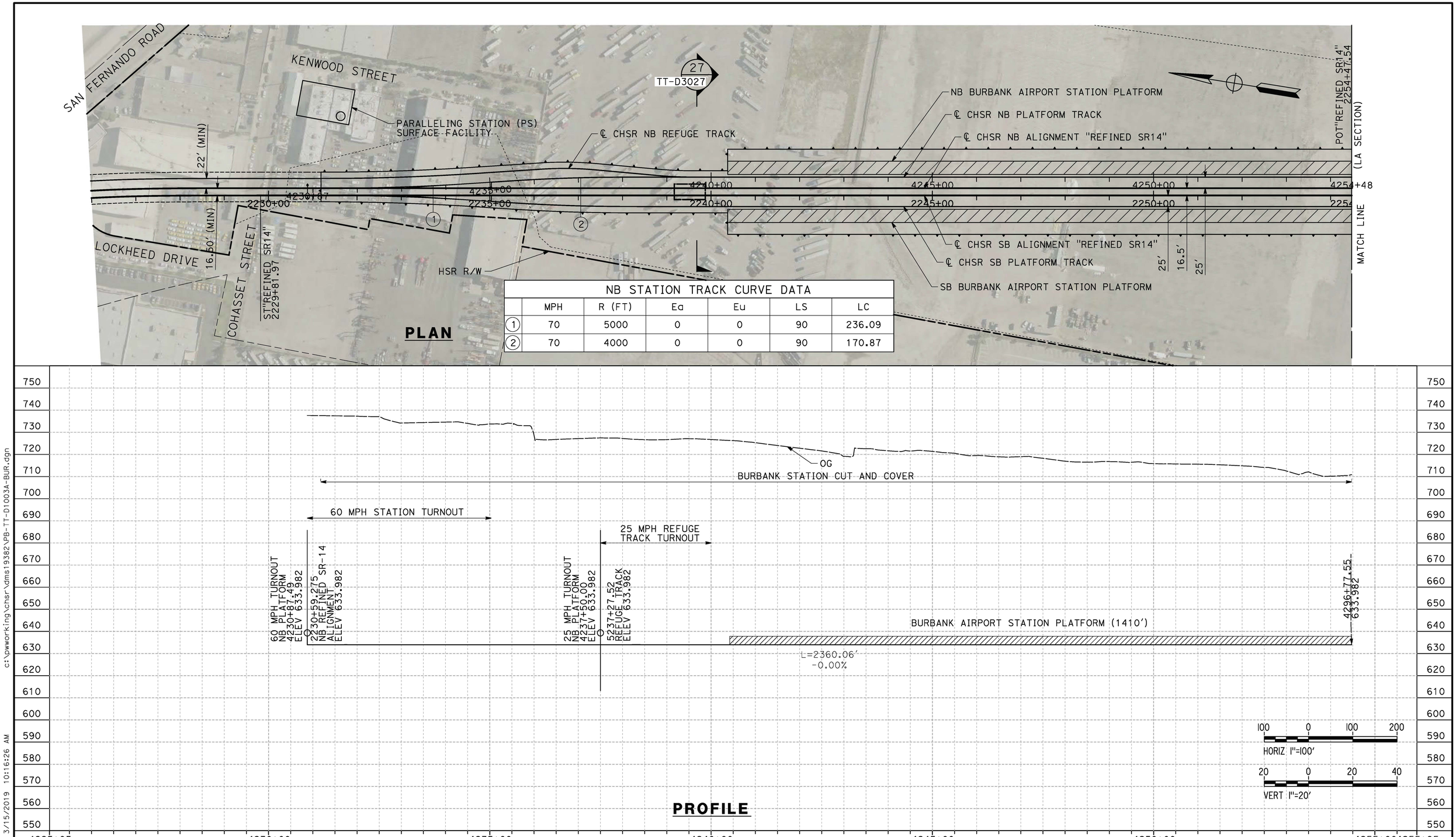

NB STATION TRACK CURVE DATA						
	MPH	R (FT)	Ea	Eu	LS	LC
1	70	5000	0	0	90	236.09
2	70	4000	0	0	90	170.87

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REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY JC ALAMILLA
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IN CHARGE A. RELANO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV 01

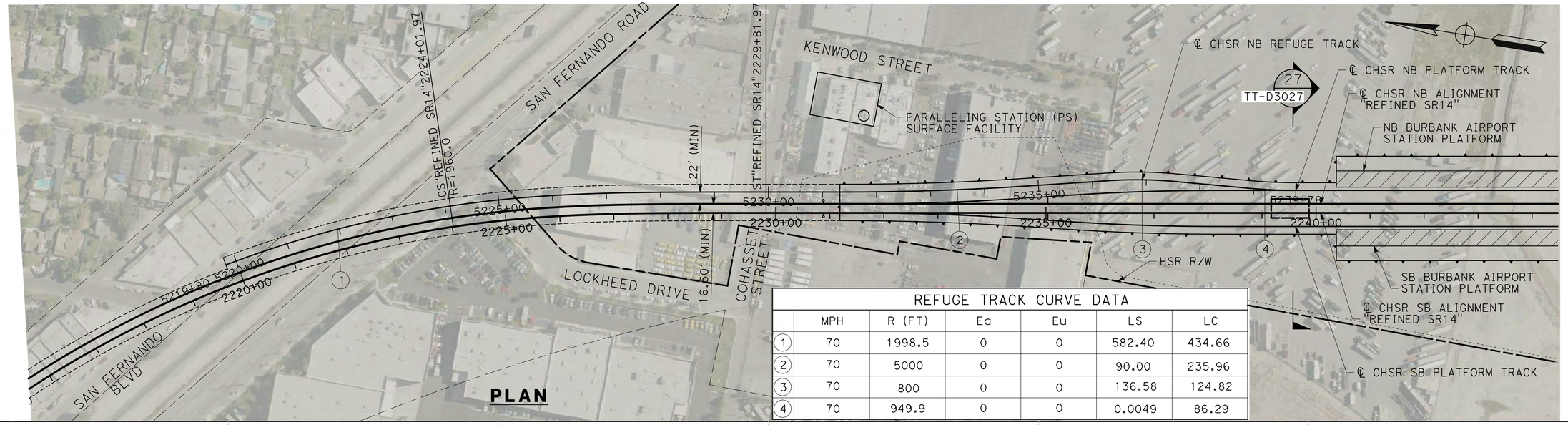
NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
NB BURBANK AIRPORT STATION PLATFORM TRACK"REFINED SR14"
PLAN AND PROFILE
STA 4230+87.49 TO STA 4296+77.55

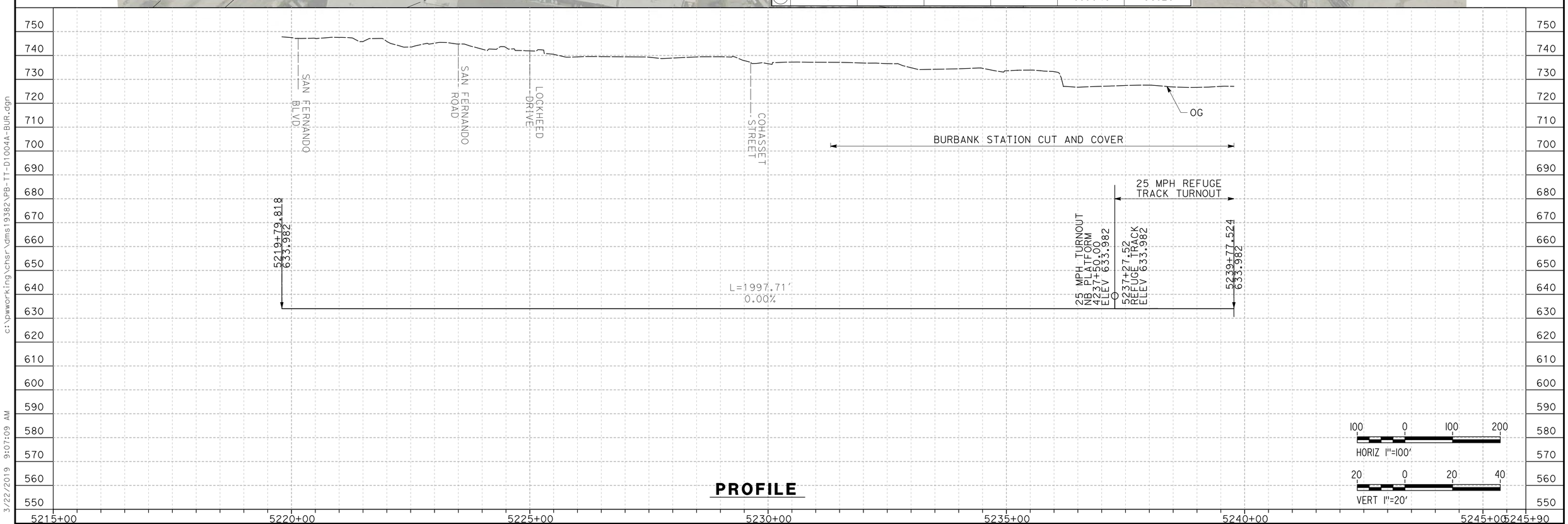
CONTRACT NO. HSR14-42
DRAWING NO. TT-D1003A-BUR
SCALE AS SHOWN
SHEET NO.



PLAN

REFUGE TRACK CURVE DATA

	MPH	R (FT)	Ea	Eu	LS	LC
1	70	1998.5	0	0	582.40	434.66
2	70	5000	0	0	90.00	235.96
3	70	800	0	0	136.58	124.82
4	70	949.9	0	0	0.0049	86.29



PROFILE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY JC ALAMILLA
DRAWN BY JC ALAMILLA
CHECKED BY R. RODRIGUEZ
IN CHARGE A. RELANO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV 01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
NB BURBANK AIRPORT STATION REFUGE TRACK"REFINED SR14"
PLAN AND PROFILE
STA 5219+79.818 TO STA 5239+77.524

CONTRACT NO. HSR14-42
DRAWING NO. TT-D1004A-BUR
SCALE AS SHOWN
SHEET NO.

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California High-Speed Rail Authority

Burbank Subsection

DRAFT PEPD REV 01

Tunnels Plans

February 2019

CALIFORNIA High-Speed Rail Authority

U.S. Department of Transportation Federal Railroad Administration

GENERAL

DRAWING NO.	DRAWING DESCRIPTION	SHEET NO.
TN-B0003	INDEX OF DRAWINGS	
TN-B0004	ABBREVIATIONS AND LEGEND	
TN-B0005	FAULT KEY MAP	
TN-B0007	SCHEMATIC LINEAR DIAGRAMS	

BURBANK AIRPORT STATION

DRAWING NO.	DRAWING DESCRIPTION	SHEET NO.
TN-B6002-S14	KEY MAP - HIGH SPEED RAIL TUNNEL PLANS	
TN-D4038-S14	PLAN	
TN-Y1021-S14	PROFILE	

TYPICAL SECTIONS AND DETAILS

DRAWING NO.	DRAWING DESCRIPTION	SHEET NO.
TN-C0902	TUNNEL TYPICAL SECTION AND DETAILS. SEM SINGLE TUNNEL, 2 TRACKS+REFUGE TRACK. CLEARANCE DIAGRAM - TANGENT & SUPERELEVATED TRACK	
TN-C0903	CONSTRUCTION SEQUENCE AND SUPPORT MEASURES - SEM SINGLE TUNNEL, 2 TRACKS+REFUGE TRACK	
TN-C1104	SINGLE CELL BOX 2 TRACKS + REFUGE TRACK CUT-AND-COVER TUNNEL. TYPICAL SECTION	
TN-C1105	SINGLE CELL 4 TRACKS + REFUGE TRACK CUT-AND-COVER TUNNEL. TYPICAL SECTION	
TN-C1106	SINGLE CELL 4 TRACKS. CUT-AND-COVER TUNNEL. TYPICAL SECTION	
TN-C1109	BURBANK STATION PLATFORM. CUT-AND-COVER TUNNEL. TYPICAL SECTION	

A

ANF	ANGELES NATIONAL FOREST
APPROX	APPROXIMATE

B

BLVD	BOULEVARD
BAR	PRESSURE UNIT

C

C	CANYON
CHSR	CALIFORNIA HIGH-SPEED RAIL
CHSTP	CALIFORNIA HIGH-SPEED TRAIN PROJECT
CL	CENTER LINE
C&C	CUT-AND-COVER
CGS	CALIFORNIA GEOLOGICAL SURVEY
CP	CROSS-PASSAGE, FOR EMERGENCY EGRESS
CT	COMMUNICATION TOWER

E

E	EASTING, EAST
E.G.	FOR EXAMPLE
EQ	EARTHQUAKE
ET	EMERGENCY TELEPHONE
ETD	ENLARGED TUNNEL DIAMETER

F

FH	FIRE HYDRANT
FT	FEET
FWY	FREEWAY

G

GC	ONE OF THE TSI REFERENCE GAUGES, USED IN DEVELOPING CLEARANCES FOR THE CHSTP
GWP	GROUND WATER PRESSURE

H

HFZ	HAZARDOUS FAULT ZONE
HSR	HIGH SPEED RAIL
HWY	HIGHWAY

I

ID	INNER DIAMETER
IW	INTERMEDIATE WINDOW (FOR CONSTRUCTION PURPOSES ONLY)
I-210	I-210 FREEWAY

K

KG	KILOGRAM

L

L	FLOOD LIGHTS, LENGTH

M

M	METER
MI	MILE, MINED TUNNEL IN ROCK
MIM	MINIMUM
MPH	MILES PER HOUR

N

N	NORTHING, NORTH
NATM	NEW AUSTRIAN TUNNELING METHOD
NB	NORTH BOUND
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION

O

OCS	OVERHEAD CATENARY SYSTEM
OG	ORIGINAL GROUND

P

P	TUNNEL PORTAL WITH PERMANENT FACILITIES
PERM.	PERMANENT
PROP.	PROPOSED
PHFZ	POTENTIALLY HAZARDOUS FAULT ZONE
POT	POINT OF TANGENT (ALIGNMENT RELATED)
PS	TRACTION POWER PARALLELLING STATION

R

R	RADIUS
RC	REINFORCED CONCRETE
RD	ROAD
R/W, ROW	RIGHT OF WAY

S

S	SOUTH
SB	SOUTH BOUND
SEM	SEQUENTIAL EXCAVATION METHOD
SQFT	SQUARE FEET
SS	TRACTION POWER SUBSTATION
ST	STREET, SINGLE TUNNEL
STA	STATION
SGFZ	SAN GABRIEL FAULT ZONE
SCRRA	SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY

T

T,†	THICKNESS
TBD	TO BE DECIDED
TBM	TUNNEL BORING MACHINE
TCSA	TEMPORARY CONSTRUCTION STAGING AREA FOR TUNNELS
TH-21, TH-29	STEEL ARCHES IN OMEGA PROFILE. FOR GROUND SUPPORT IN MINED/SEM TUNNELS
TM	TECHNICAL MEMORANDUM
TOR	TOP OF RAIL
TPPS	TRACTION POWER PARALLELLING STATION
TR	CROSS-PASSAGE, FOR TECHNICAL EQUIPMENT
TSEFZ, TSEFCZ	TRAIN SURFACE EVACUATION AND FIRE CONTROL ZONE
TSI	THE EUROPEAN UNION'S (EU) TECHNICAL SPECIFICATIONS FOR INTEROPERABILITY
TYP	TYPICAL

U

USGS	U.S. GEOLOGICAL SURVEY
UPS	UNDERGROUND PARALLELING STATION

V

V	VIADUCT
VCP	VENTILATION CONTROL PANEL
VC	VERTICAL CURVE (ALIGNMENT RELATED)

W

WPC	WAYSIDE POWER CONTROL CUBICLE
W	WASH
WWM	WELDED WIRE MESH

GENERAL NOTES

1. STRUCTURE DIMENSIONS ARE INDICATIVE. TO BE CONFIRMED.
2. TUNNEL DIMENSIONS ARE INDICATIVE. TO BE CONFIRMED.
3. TUNNEL SURFACE FACILITIES ARE INDICATIVE. TO BE CONFIRMED.
4. RAILWAY INSTALLATIONS ARE INDICATIVE. TO BE CONFIRMED.
5. FINAL SLOPES TO BE DEFINED AT A LATER STAGE, WHEN THE GEOTECHNICAL STUDY IS AVAILABLE.
6. FAULTS AND EXTENT OF FAULT ZONES SHOWN ARE ONLY ORIENTATIVE AND, ARE SUBJECT TO CHANGE, SOURCE:
   FAULT - USGS QUATERNARY FAULT AND FOLD DATABASE AND CGS GEOLOGIC MAP DATA BASES
   FAULT ZONE ACTIVITY CLASSIFICACION - CHSR 15% DRAFT FAULT HAZARD EVALUATION REPORT, 2015.
7. ALL DIMENSIONS ARE IN FEET UNLESS NOTED OTHERWISE.
8. TWIN TUNNELS CROSS-PASSAGES DISTRIBUTED ALONG ALIGNMENTS: CP FOR EMERGENCY EGRESS, EVERY 800 FT. CP FOR TECHNICALROOMS, EVERY MILE.

LEGEND

PLAN

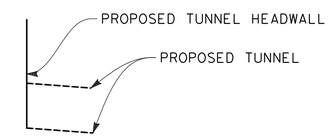
- PROPOSED PERMANENT ENVIRONMENTAL FOOTPRINT
- CONSTRUCTION STAGING AREA / PROPOSED TEMPORARY ENVIRONMENTAL FOOTPRINT
- FENCE LINE / HSR ROW
- LIMITS OF EMBANKMENT (FILL)
- LIMITS OF EXCAVATION (CUT)
- PROPOSED RETAINING WALL
- PROPOSED TUNNEL
- INCLINED DESCENDING GALLERY
- UNDERGROUND EASEMENT FOR EMERGENCY/RESCUE STATION
- TRACTION POWER FACILITY
- 100 YEAR FLOOD ZONE
- ANGELES NATIONAL FOREST BOUNDARY

CONTROL LINE EXAMPLE "A" LINE

255+00 260+00 265+00

PROFILE

- PROPOSED TRACK ELEVATION (SB TRACK)
- ORIGINAL GROUND (OG)



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. VELASCO
DRAWN BY FJ. DOMINGUEZ
CHECKED BY A. NAVARRO
IN CHARGE A. RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION

ABBREVIATIONS AND LEGEND

CONTRACT NO. HSR14-42
DRAWING NO. TN-B0004
SCALE NO SCALE
SHEET NO.

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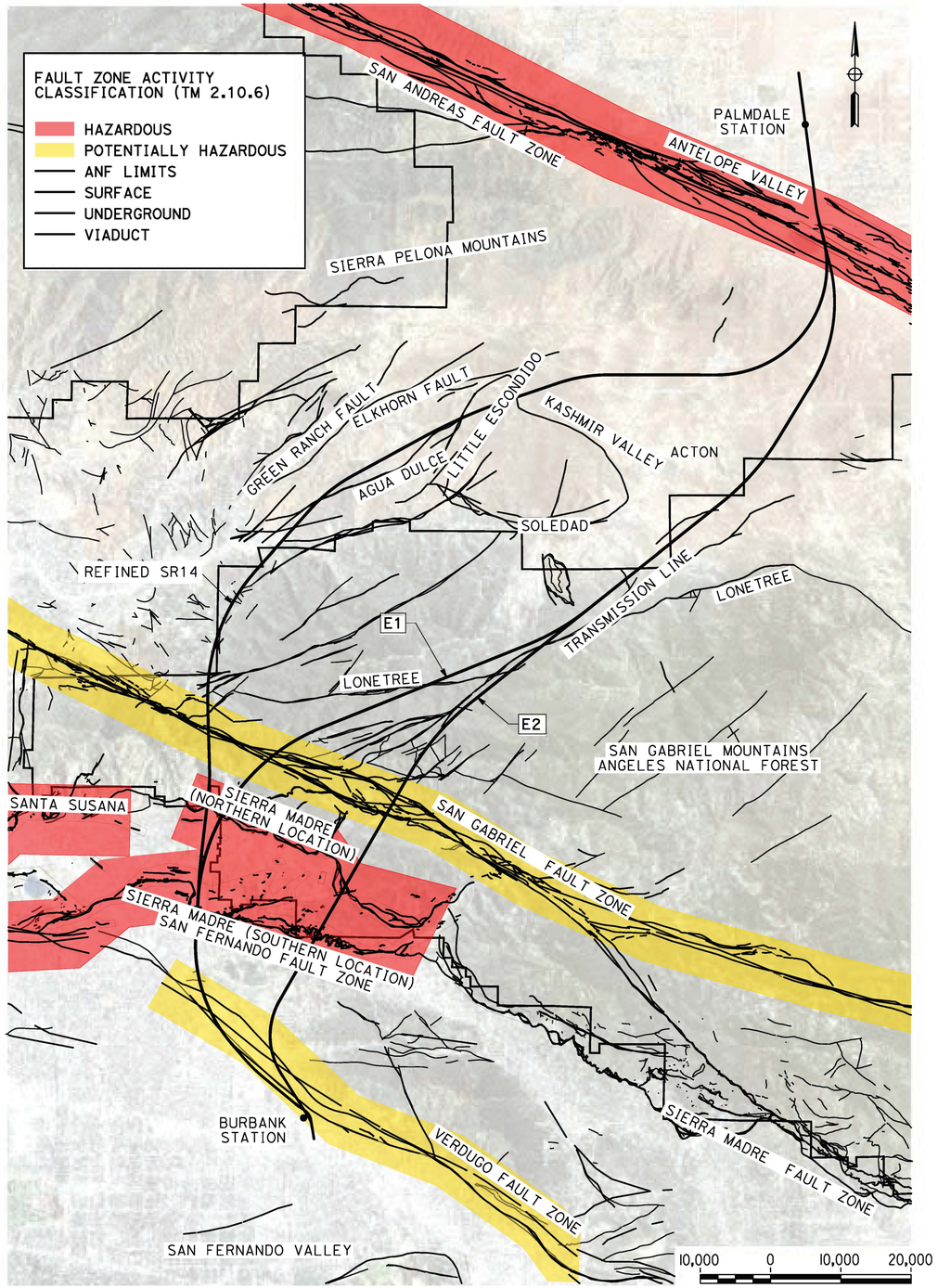

NOTE:

PRELIMINARY DRAFT/SUBJECT TO CHANGE

SOURCE:

FAULTS - USGS QUATERNARY FAULT AND FOLD DATABASE AND CGS GEOLOGIC MAP DATABASES
FAULT ZONE ACTIVITY CLASSIFICATION - CHSR 15% DRAFT FAULT HAZARD EVALUATION REPORT, 2015.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E.VELASCO
DRAWN BY FJ.DOMINGUEZ
CHECKED BY A.NAVARRO
IN CHARGE A.RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION

FAULT KEY MAP

CONTRACT NO. HSR14-42
DRAWING NO. TN-B0005
SCALE AS SHOWN
SHEET NO.

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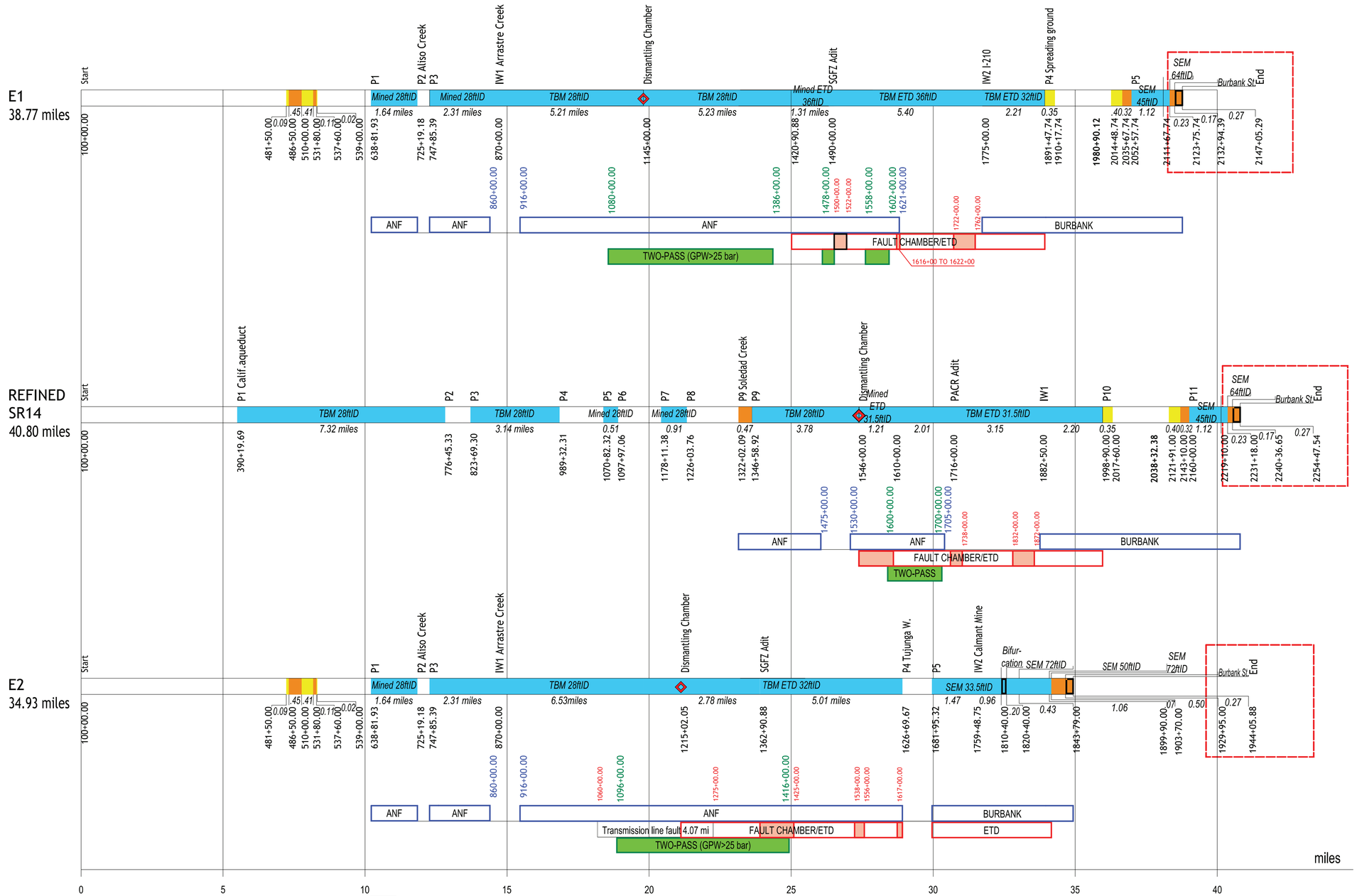

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. VELASCO
DRAWN BY FJ. DOMINGUEZ
CHECKED BY A. NAVARRO
IN CHARGE A. RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION

SCHEMATIC LINEAR DIAGRAMS

CONTRACT NO. HSR14-42
DRAWING NO. TN-B0007
SCALE AS SHOWN
SHEET NO.

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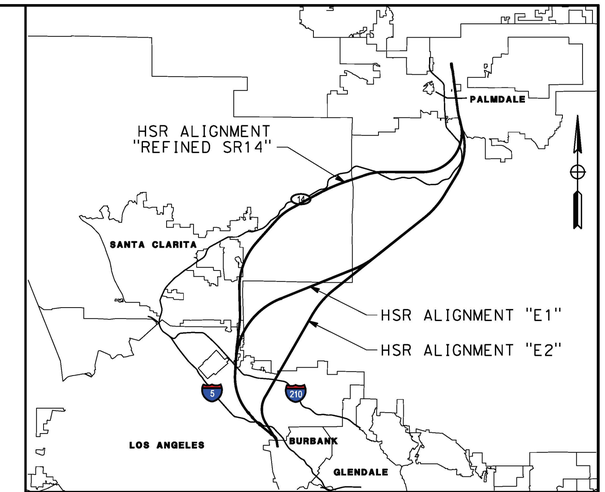
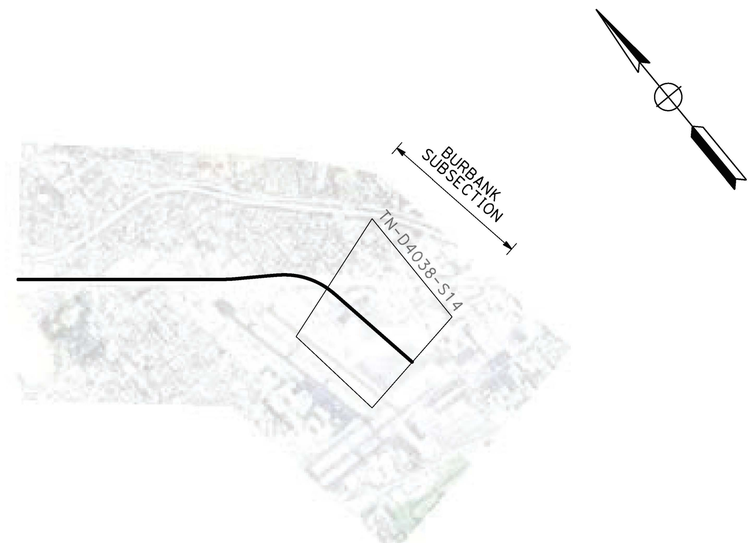


VICINITY MAP



2000 0 2000 4000

1"=2000'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E.VELASCO
DRAWN BY FJ.DOMINGUEZ
CHECKED BY A.NAVARRO
IN CHARGE A.RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION

KEY MAP
HIGH SPEED RAIL TUNNEL PLANS

CONTRACT NO. HSR14-42
DRAWING NO. TN-B6002-S14
SCALE AS SHOWN
SHEET NO.

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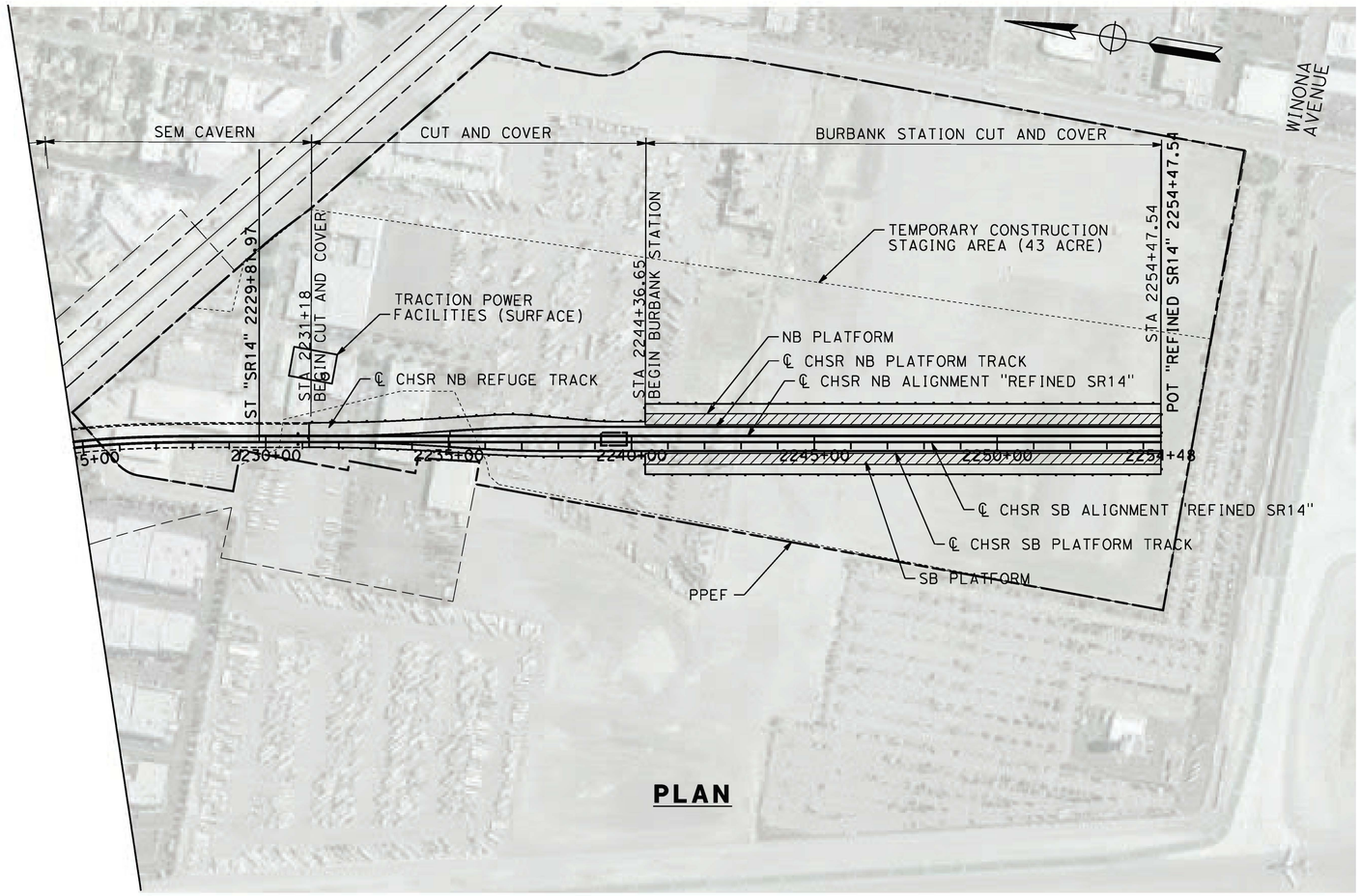

200 0 200 400
1"=200

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E.VELASCO
DRAWN BY FJ.DOMINGUEZ
CHECKED BY A.NAVARRO
IN CHARGE A.RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION

PLAN

CONTRACT NO. HSR14-42
DRAWING NO. TN-D4038-S14
SCALE AS SHOWN
SHEET NO.

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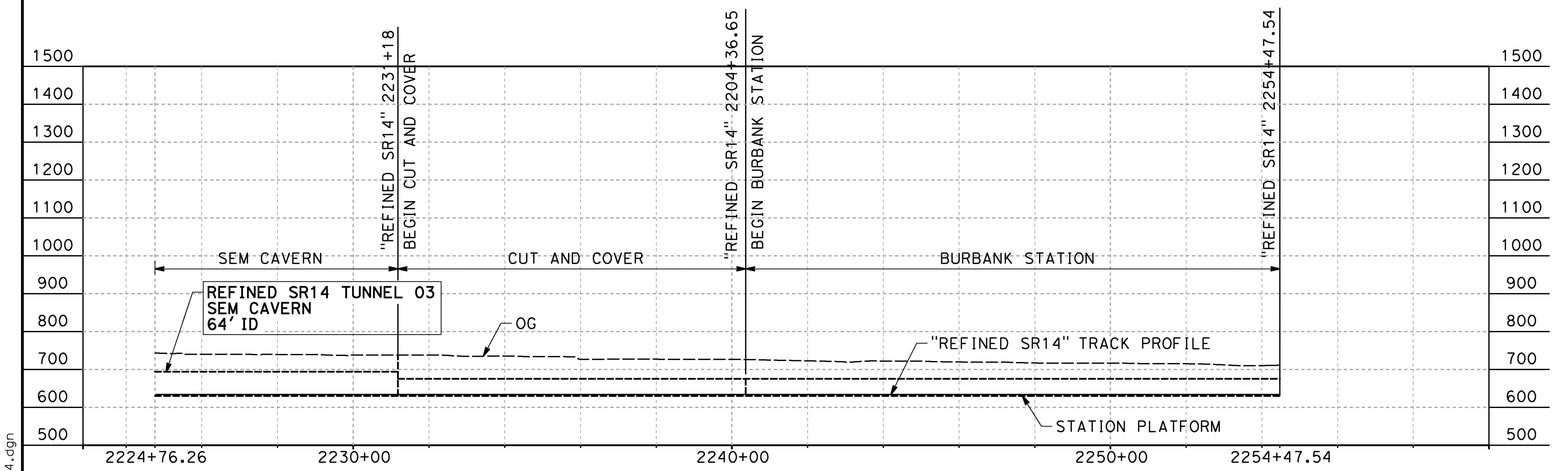

PROFILE

NOTE:

FAULT ZONES LIMITS APPROXIMATE ONLY

200 0 200 400
HORIZ 1"=200'

200 0 200 400
VERT 1"=200'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E.VELASCO
DRAWN BY FJ.DOMINGUEZ
CHECKED BY A.NAVARRO
IN CHARGE A.RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
PROFILE

CONTRACT NO. HSR14-42
DRAWING NO. TN-Y1021-S14
SCALE AS SHOWN
SHEET NO.

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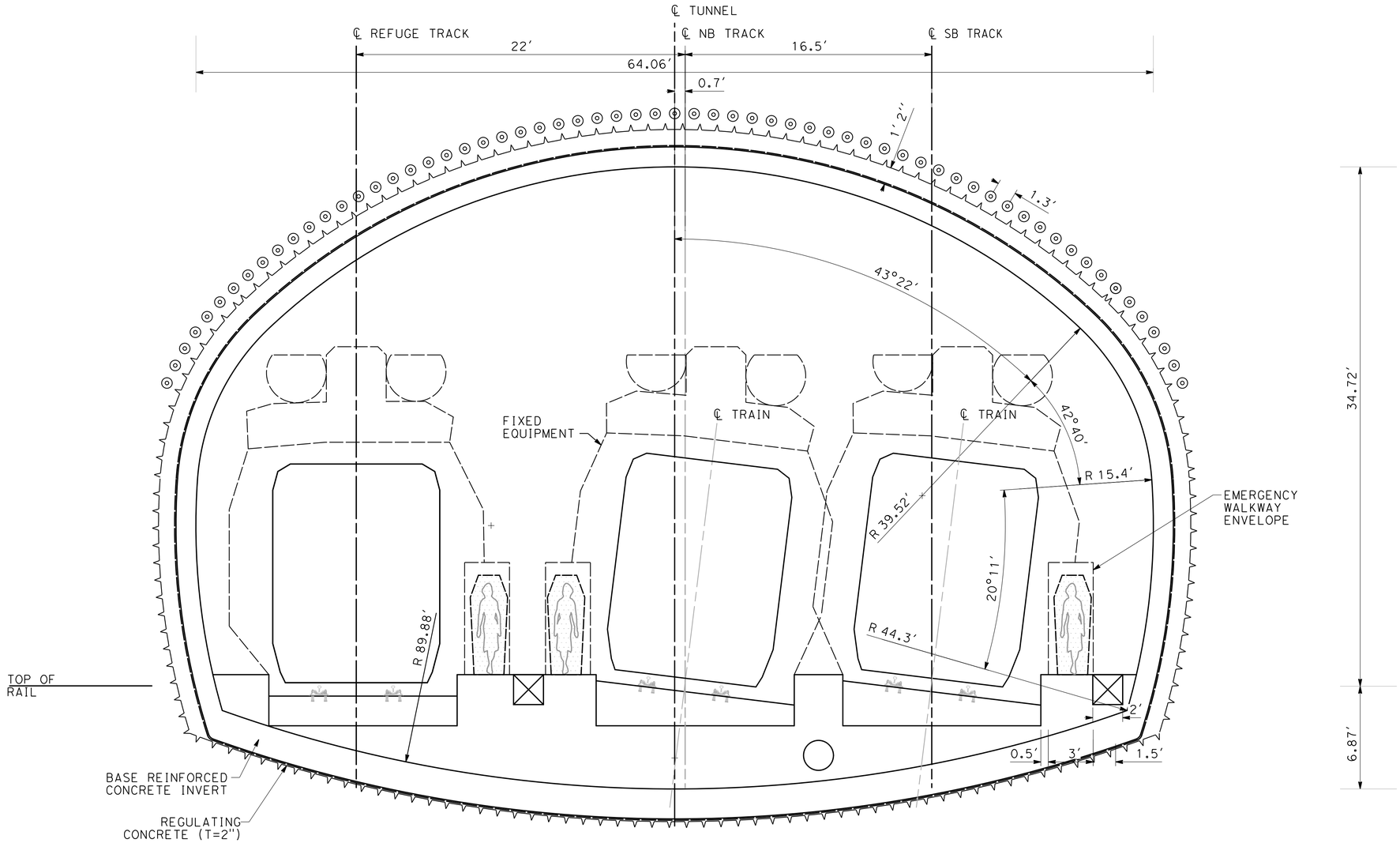
NOTES:

1. SINGLE MINED TUNNEL, DOUBLE TRACK IS AN OPTION FOR SHORT TUNNELS AT BURBANK AREA.
2. EXCAVATION, GROUND SUPPORT, DRAINAGE, TUNNEL LINING AND WATER AND GAS TIGHTNESS PROVISIONS TBD.
3. FOR EQUIPMENT STRUCTURE GAUGES, REFER TO DRAWINGS TN-C0004 TO TN-C0007.
4. SPACE PROOFING REQUIRES FARTHER STUDY TO EVALUATE DYNAMIC AIRFLOW/PRESSURE LEVELS UNDER HIGH SPEED OPERATING CONDITIONS, AND TO FARTHER DEFINE SPACE ALLOTED FOR STRUCTURES, EQUIPMENT, DRAINAGE AND EGRESS.
5. EMERGENCY EGRESS SHALL NOT BE FARTHER THAN 2500 FT APART (NFPA 130).
6. CROSS-SECTION SHOWN HAS A FREE TUNNEL CROSS-SECTIONAL AREA OF 1195 SQ FT, COMPLIANT WITH THE MINIMUM AREA OF 2x595 SQ FT REQUIRED FOR 220 MPH DESIGN SPEED AND TUNNEL LENGTH FROM 0.6 TO 22 MILES (REF. TN 2.42-C). OTHER TUNNEL LENGTH REQUIRES A DIFFERENT MINIMUM FREE CROSS-SECTIONAL AREA.
7. SPACE PROOFING REQUIRES FARTHER STUDY TO EVALUATE DYNAMIC AIRFLOW/PRESSURE LEVELS UNDER HIGH SPEED OPERATING CONDITIONS, AND TO FARTHER DEFINE SPACE ALLOTED FOR STRUCTURES, EQUIPMENT, DRAINAGE AND EGRESS.

ALIGNMENT E1 / REFINED SR14 SEM SINGLE TUNNEL 2 TRACKS + REFUGE TRACK



TUNNEL TYPICAL SECTION SEM SINGLE TUNNEL (2 TRACKS + REFUGE TRACK)
TANGENT & SUPERELEVATED TRACK

4 0 4 8
1"=4'-0"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. VELASCO
DRAWN BY FJ. DOMINGUEZ
CHECKED BY A. NAVARRO
IN CHARGE A. RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION
DRAFT PEPD REV01
NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
TUNNEL TYPICAL SECTION AND DETAILS
SEM SINGLE TUNNEL, 2 TRACKS + REFUGE TRACK
CLEARANCE DIAGRAM - TANGENT AND SUPERELEVATED TRACK

CONTRACT NO. HSR14-42
DRAWING NO. TN-C0902
SCALE AS SHOWN
SHEET NO.

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BASIC QUANTITIES PER FT OF TUNNEL	
SEM SINGLE TUNNEL	PRIMARY LINING TYPE
	SEM SINGLE TUNNEL
EXCAVATION AREA (SQ.FT.)	2641.3
TUNNEL PRIMARY LINING AREA (SQ.FT.)	155.7
REGULATING CONCRETE (2 in) (SQ.FT.) (INVERT)	10.6
LATTICE GIRDER (FT)	125/3=41.7
WATER & GAS PROOFING MEMBRANE (FT)	185.9
FORMWORK (FT)	114
SECONDARY LINING AREA CONCRETE (sides&crown) (SQ.FT.)	154
SECONDARY LINING AREA CONCRETE (invert) (SQ.FT.)	128.5
MICROPILES CANOPY (FT)	83.8
PHASE 1, 2 ,3 PRIMARY LINING (SQ.FT.)	116.4
PHASE 1, 2, 3 LATTICE GIRDER (FT)	105.1/3=35
PHASE 3 AND 4 (SQ.FT.) REGULATING CONCRETE	6.4

PRIMARY LINING (EXAMPLE ONLY, NOT ACTUAL DESIGN)					
DENOMINATION	SHOTCRETE THICKNESS (in)	STEEL ARCHES	REINFORCEMENT	ADVANCE LENGTH (ft)	PIPE CANOPY
*SOIL CONDITIONS	14	LATTICE GIRDER EVERY 3'	FIBRES & 2 LAYERS WWM	3' TOP HEADING AND PHASE1 6' BENCH	YES

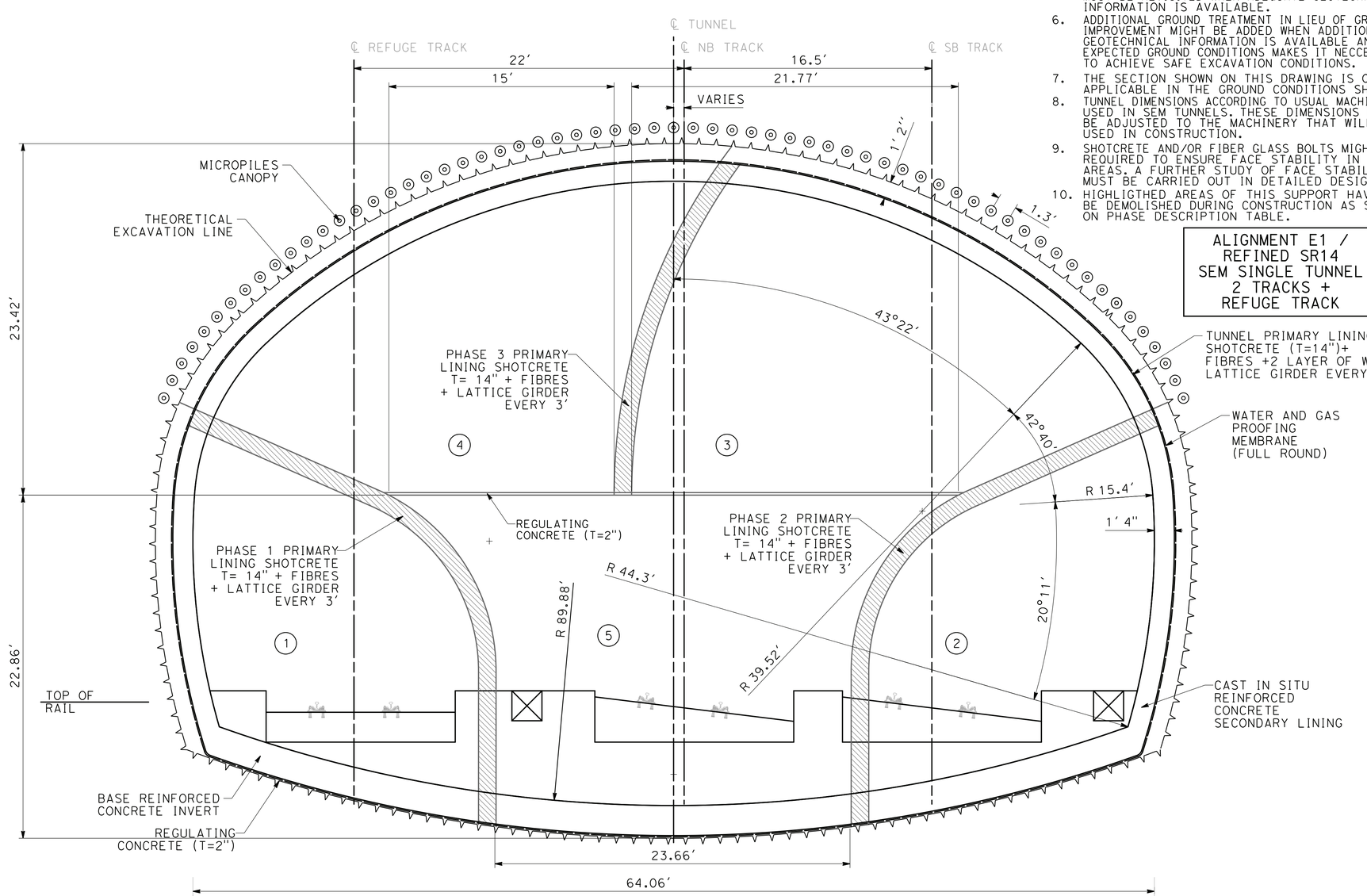
*FINE-MEDIUM GRAIN SAND WITH SILT DENSE TO VERY DENSE. NO GROUNDWATER EXPECTED.

NOTES:

1. SINGLE SEM TUNNEL, DOUBLE TRACK IS AN OPTION FOR SHORT TUNNELS AT BURBANK AREA.
2. THIS DRAWING IS NOT ACTUAL DESIGN. ITS PURPOSE IS TO BUILD UNIT PRICES AT PEPD LEVEL.
3. EXCAVATION, GROUND SUPPORT, DRAINAGE, TUNNEL LINING AND WATER AND GAS TIGHTNESS PROVISIONS TBD.
4. TYPICAL SUPPORT MEASURES AND INNER LINING THICKNESSES ARE GIVEN WITH ORIENTATIVE PURPOSES ONLY. ACTUAL DESIGN WILL REQUIRE RESULTS OF ADEQUATE GEOTECHNICAL INVESTIGATION.
5. EXCAVATION SEQUENCE AND PHASE (INCLUDING A POSSIBLE SUBDIVISION OF THE TOP HEADING) MUST BE REVISITED WHEN ADEQUATE GEOTECHNICAL INFORMATION IS AVAILABLE.
6. ADDITIONAL GROUND TREATMENT IN LIEU OF GROUND IMPROVEMENT MIGHT BE ADDED WHEN ADDITIONAL GEOTECHNICAL INFORMATION IS AVAILABLE AND EXPECTED GROUND CONDITIONS MAKES IT NECCESARY TO ACHIEVE SAFE EXCAVATION CONDITIONS.
7. THE SECTION SHOWN ON THIS DRAWING IS ONLY APPLICABLE IN THE GROUND CONDITIONS SHOWN.
8. TUNNEL DIMENSIONS ACCORDING TO USUAL MACHINERY USED IN SEM TUNNELS. THESE DIMENSIONS MUST BE ADJUSTED TO THE MACHINERY THAT WILL BE USED IN CONSTRUCTION.
9. SHOTCRETE AND/OR FIBER GLASS BOLTS MIGHT BE REQUIRED TO ENSURE FACE STABILITY IN SOME AREAS. A FURTHER STUDY OF FACE STABILITY MUST BE CARRIED OUT IN DETAILED DESIGN.
10. HIGHLIGTHED AREAS OF THIS SUPPORT HAVE TO BE DEMOLISHED DURING CONSTRUCTION AS SHOWN ON PHASE DESCRIPTION TABLE.

PHASE	DESCRIPTION
0	-MICROPILES CANOPY INSTALLATION (EVERY 30`)
1&2	-EXCAVATION OF PHASES 1 AND 2, AND APPLICATION OF A STABILIZATION LAYER OF SHOTCRETE. -INSTALLATION OF LATTICE GIRDERS OF PHASES 1 AND 2. -SPRAYING OF REINFORCING SHOTCRETE + 2 LAYERS OF WWM. -INSTALLATION OF WATER AND GAS PROOFING MEMBRANE. -INSTALLATION OF INNER LINING (SECONDARY). FIRST INVERT AND SECOND SIDE.
3	-EXCAVATION OF PHASE 3 AND APPLICATION OF A STABILIZATION LAYER OF SHOTCRETE. -INSTALLATION OF LATTICE GIRDERS OF PHASE 3. -SPRAYING OF REINFORCING SHOTCRETE + 2 LAYERS OF WWM. -INSTALLATION OF WATER AND GAS PROOFING MEMBRANE. -INSTALLATION OF INNER LINING (SECONDARY). FIRST INVERT AND SECOND SIDE.
4	-EXCAVATION OF PHASE 4, AND APPLICATION OF A STABILIZATION LAYER OF SHOTCRETE. -DEMOLITION OF TEMPORAL SUPPORT OF PHASE 3 AND INSTALLATION OF LATTICE GIRDERS OF PHASE 4. -SPRAYING OF REINFORCING SHOTCRETE + 2 LAYERS OF WWM. -DEMOLITION OF THE UPPER PART OF TEMPORAL SUPPORT OF PHASES 1 AND 2 -INSTALLATION OF WATER AND GAS PROOFING MEMBRANE. -INSTALLATION OF INNER LINING (SECONDARY) IN CROWN (PHASES 3 AND 4).
5	-EXCAVATION OF PHASE 5. -DEMOLITION OF THE UPPER PART OF TEMPORAL SUPPORT OF PHASES 1 AND 2 -INSTALLATION OF WATER AND GAS PROOFING MEMBRANE. -INSTALLATION OF INNER LINING (SECONDARY) IN INVERT.

*NOTE: DISTANCE BETWEEN EXCAVATION PHASES TO BE DEFINED.



ALIGNMENT E1 / REFINED SR14 SEM SINGLE TUNNEL 2 TRACKS + REFUGE TRACK

TUNNEL TYPICAL SECTION SEM SINGLE TUNNEL (2 TRACKS + REFUGE TRACK) FOR TANGENT & SUPERELEVATED TRACK

4 0 4 8
1"=4'-0"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. VELASCO
DRAWN BY FJ. DOMINGUEZ
CHECKED BY A. NAVARRO
IN CHARGE A. RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION
DRAFT PEPD REV01
NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION

CONSTRUCTION SEQUENCE AND SUPPORT MEASURES
SEM SINGLE TUNNEL, 2 TRACKS + REFUGE TRACK

CONTRACT NO. HSR14-42
DRAWING NO. TN-C0903
SCALE AS SHOWN
SHEET NO.

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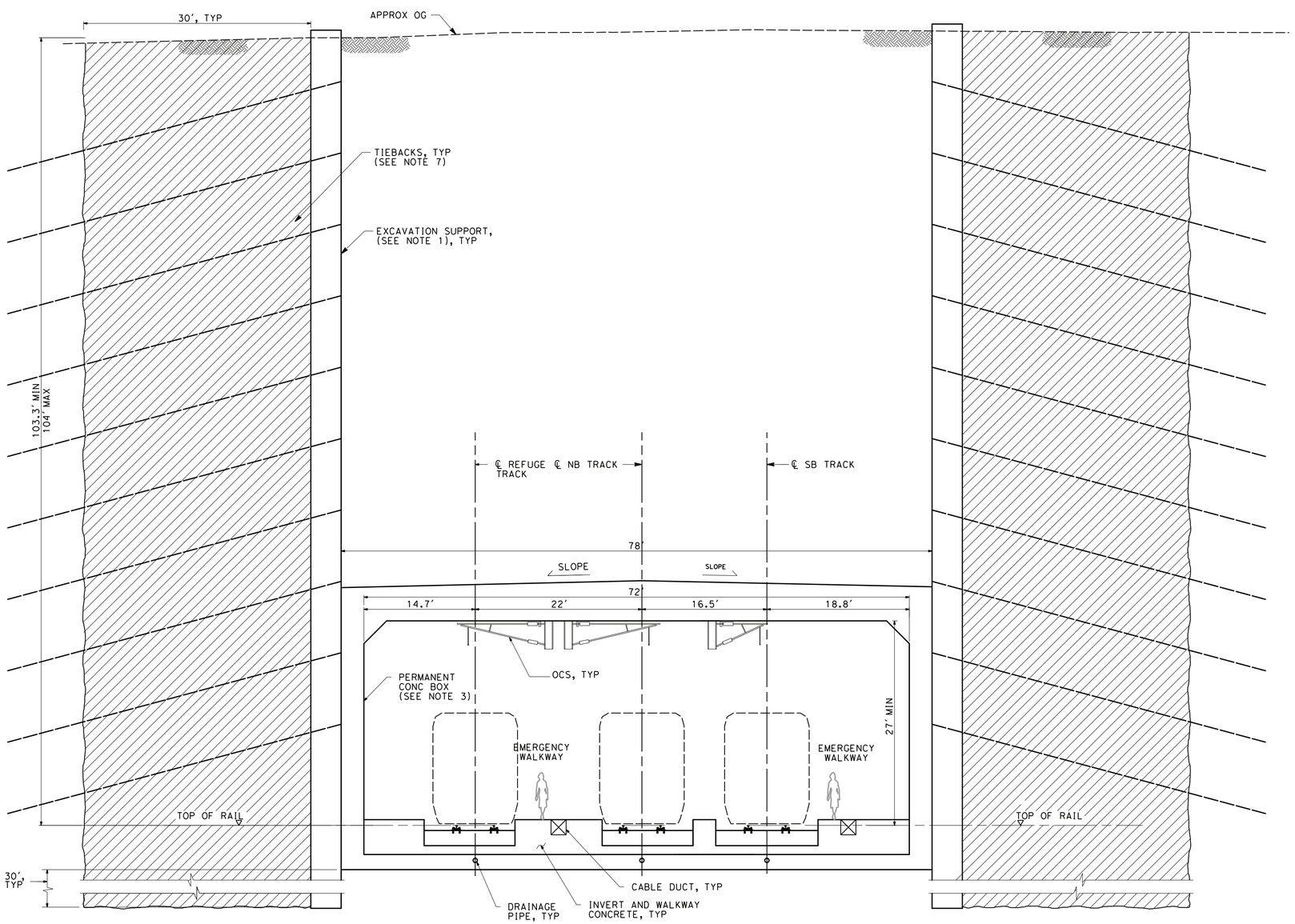

TYPICAL SECTION - 2 TRACKS + REFUGE TRACK

NOTES:

1. TYPES, LOCATIONS AND DIMENSIONS OF EXCAVATION SUPPORT NOT DESIGNED. RIGID EXCAVATION SUPPORTS WITH TIEBACKS AND TEMPORARY INTERNAL BRACING ANTICIPATED.
2. PERMANENT LINING ASSUMED WATERTIGHT/UNDRAINED IN PERMANENT CASE.
3. STRUCTURE COMPONENTS ARE NOT DESIGNED. DRAWINGS NOT BASED ON ACTUAL DESIGN AND ARE DEVELOPED FOR PRELIMINARY COST ESTIMATE.
4. TRACK, OPENINGS, PLATFORM, STATION LAYOUT, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
5. EQUIPMENT AND STRUCTURE GAUGES NOT SHOWN. REFER TO DRAWINGS TN-C0006 AND TN-C0007 FOR FIXED EQUIPMENT ENVELOPE AND STRUCTURE GAUGE.
6. GROUND IMPROVEMENT ANTICIPATED IN THIS AREA. LIMITS OF GROUND IMPROVEMENT TO BE DETERMINED AFTER GEOTECHNICAL INVESTIGATIONS ARE COMPLETED.
7. TIEBACKS OR GROUND ANCHORS ARE ANTICIPATED FOR WALLS WITH AN EXPOSED HEIGHT GREATER THAN 20 FT. CANTILEVER SOLDIER PILE WALLS ARE ANTICIPATED FOR WALLS WITH AN EXPOSED HEIGHT LESS THAN 20 FT.
8. TYPICAL SECTION ON THIS SHEET IS APPLICABLE AT THE FOLLOWING LOCATIONS:

ALIGNMENT	SUB-SECTION	BEGIN STA	END STA
REFINED SR14	BURBANK	2231+18.00	2231+77.00

CONSTRUCTION SEQUENCE:

STAGE	DESCRIPTION
0	INSTALL MOVEMENT MONITORING SYSTEMS
1	INSTALL GROUND IMPROVEMENT
2*	INSTALL RIGID EXCAVATION SUPPORT SYSTEMS USING HEAVILY REINFORCED SLURRY WALLS
3A	EXCAVATE IN LIFTS FROM ORIGINAL GROUND
3B	DEWATER AS NEEDED
3C	INSTALL TIEBACKS AND/OR TEMPORARY INTERNAL BRACING AS REQUIRED FOR THE SYSTEM STABILITY
4	REPEAT STAGE 3 TO BOTTOM OF STATION/TUNNEL GRADE SLAB
5	CONSTRUCT BOTTOM GRADE SLAB AND TIE IN TO THE EXCAVATION SUPPORT AS A PERMANENT BRACING SYSTEM
6	CONSTRUCT THE INTERIOR OF THE STATION/TUNNEL (INTERIOR WALLS, SLABS...)
7	CONSTRUCT STATION/TUNNEL ROOF SLAB AND TIE IN TO THE EXCAVATION SUPPORT SYSTEM AS PERMANENT BRACING SYSTEM
8	WATERPROOF THE ROOF SLAB, BACKFILL AND RESTORE THE GROUND

* SLURRY WALLS ARE ONE TYPE OF COMMON RIGID EXCAVATION SUPPORT SYSTEM. OTHER SUITABLE RIGID EXCAVATION SUPPORT SYSTEMS SUCH AS TANGENT/SECANT PILES MIGHT BE CONSIDERED FOR THIS LOCATION. HEAVY REINFORCEMENT WILL BE REQUIRED.

LEGEND:

GROUND IMPROVEMENT ZONE (SEE NOTE 6)

8 0 8 16
1/8"=1'-0"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E.VELASCO
DRAWN BY FJ.DOMINGUEZ
CHECKED BY A. NAVARRO
IN CHARGE A.RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION
DRAFT PEPD REV01
NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
SINGLE CELL BOX 2 TRACKS + REFUGE TRACK
CUT-AND-COVER TUNNEL
TYPICAL SECTION

CONTRACT NO. HSR14-42
DRAWING NO. TN-C1104
SCALE AS SHOWN
SHEET NO.

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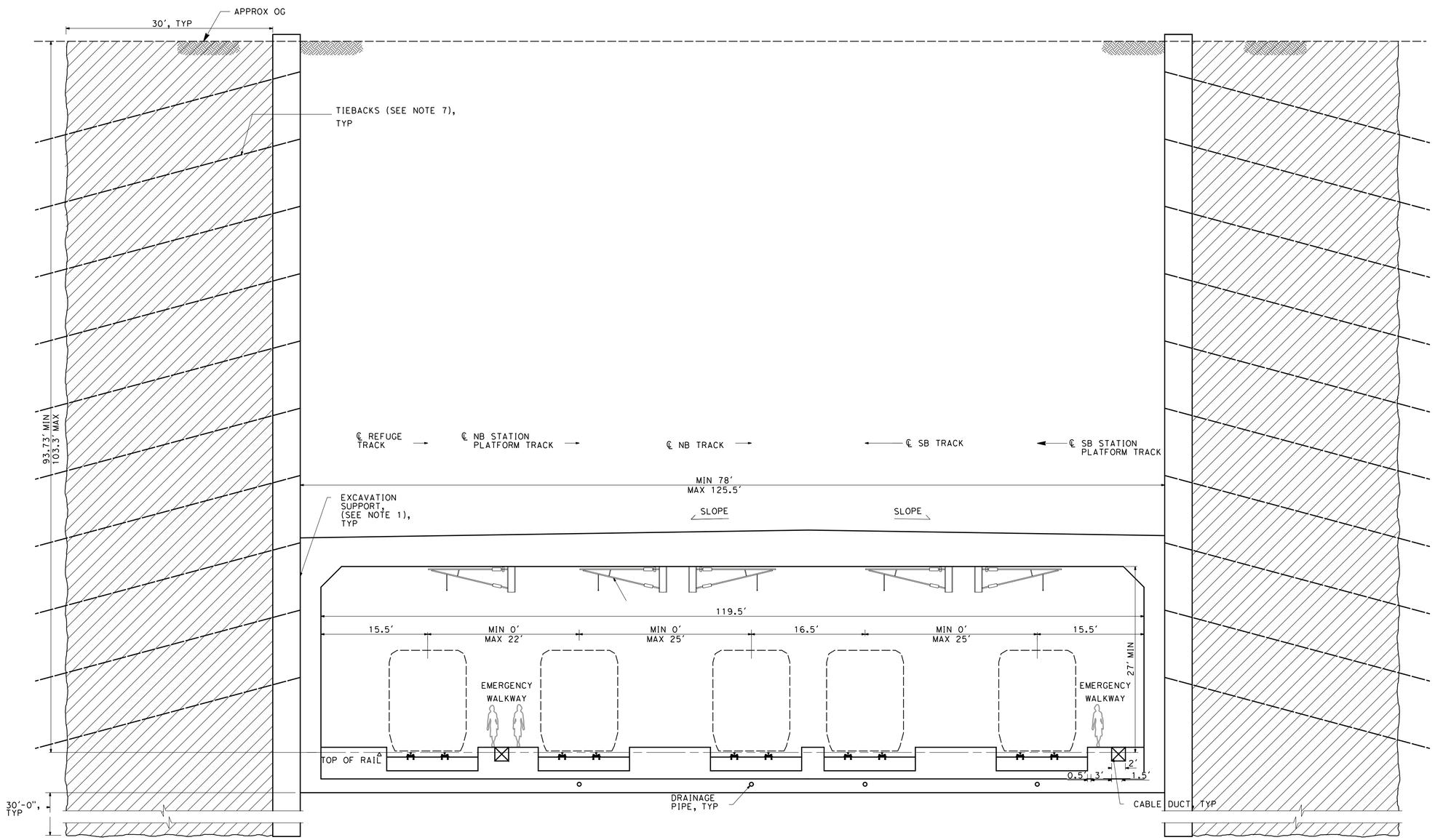

LEGEND:

GROUND IMPROVEMENT ZONE (SEE NOTE 6)

NOTES:

1. TYPES, LOCATIONS AND DIMENSIONS OF EXCAVATION SUPPORT NOT DESIGNED. RIGID EXCAVATION SUPPORTS WITH TIEBACKS AND TEMPORARY INTERNAL BRACING ANTICIPATED.
2. PERMANENT LINING ASSUMED WATERTIGHT/ UNDRAINED IN PERMANENT CASE.
3. STRUCTURE COMPONENTS ARE NOT DESIGNED. DRAWINGS NOT BASED ON ACTUAL DESIGN AND ARE DEVELOPED FOR PRELIMINARY COST ESTIMATE.
4. TRACK, OPENINGS, PLATFORM, STATION LAYOUT, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
5. EQUIPMENT AND STRUCTURE GAUGES NOT SHOWN. REFER TO DRAWINGS TN-C0006 AND TN-C0007 FOR FIXED EQUIPMENT ENVELOPE AND STRUCTURE GAUGE.
6. GROUND IMPROVEMENT ANTICIPATED IN THIS AREA. LIMITS OF GROUND IMPROVEMENT TO BE DETERMINED AFTER GEOTECHNICAL INVESTIGATIONS ARE COMPLETED.
7. TIEBACKS OR GROUND ANCHORS ARE ANTICIPATED FOR WALLS WITH AN EXPOSED HEIGHT GREATER THAN 20 FT. CANTILEVER SOLDIER PILE WALLS ARE ANTICIPATED FOR WALLS WITH AN EXPOSED HEIGHT LESS THAN 20 FT.
8. TYPICAL SECTION ON THIS SHEET IS APPLICABLE AT THE FOLLOWING LOCATIONS:

ALIGNMENT	SUB-SECTION	BEGIN STA	END STA
REFINED SR14	BURBANK	2231+18.00	2231+77.00

CONSTRUCTION SEQUENCE:

STAGE	DESCRIPTION
0	INSTALL MOVEMENT MONITORING SYSTEMS
1	INSTALL GROUND IMPROVEMENT
2*	INSTALL RIGID EXCAVATION SUPPORT SYSTEMS USING HEAVILY REINFORCED SLURRY WALLS
3A	EXCAVATE IN LIFTS FROM ORIGINAL GROUND
3B	DEWATER AS NEEDED
3C	INSTALL TIEBACKS AND/OR TEMPORARY INTERNAL BRACING AS REQUIRED FOR THE SYSTEM STABILITY
4	REPEAT STAGE 3 TO BOTTOM OF STATION/ TUNNEL GRADE SLAB
5	CONSTRUCT BOTTOM GRADE SLAB AND TIE IN TO THE EXCAVATION SUPPORT AS A PERMANENT BRACING SYSTEM
6	CONSTRUCT THE INTERIOR OF THE STATION/ TUNNEL (INTERIOR WALLS, SLABS...)
7	CONSTRUCT STATION/TUNNEL ROOF SLAB AND TIE IN TO THE EXCAVATION SUPPORT SYSTEM AS PERMANENT BRACING SYSTEM
8	WATERPROOF THE ROOF SLAB, BACKFILL AND RESTORE THE GROUND

* SLURRY WALLS ARE ONE TYPE OF COMMON RIGID EXCAVATION SUPPORT SYSTEM. OTHER SUITABLE RIGID EXCAVATION SUPPORT SYSTEMS SUCH AS TANGENT/SECANT PILES MIGHT BE CONSIDERED FOR THIS LOCATION. HEAVY REINFORCEMENT WILL BE REQUIRED.

CUT & COVER - 4 TRACKS + REFUGE TRACK

10 0 10 20

1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E.VELASCO
DRAWN BY FJ.DOMINGUEZ
CHECKED BY A.NAVARRO
IN CHARGE A.RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
SINGLE CELL 4 TRACKS + REFUGE TRACK
CUT-AND-COVER TUNNEL
TYPICAL SECTION

CONTRACT NO. HSR14-42
DRAWING NO. TN-C1105
SCALE AS SHOWN
SHEET NO.

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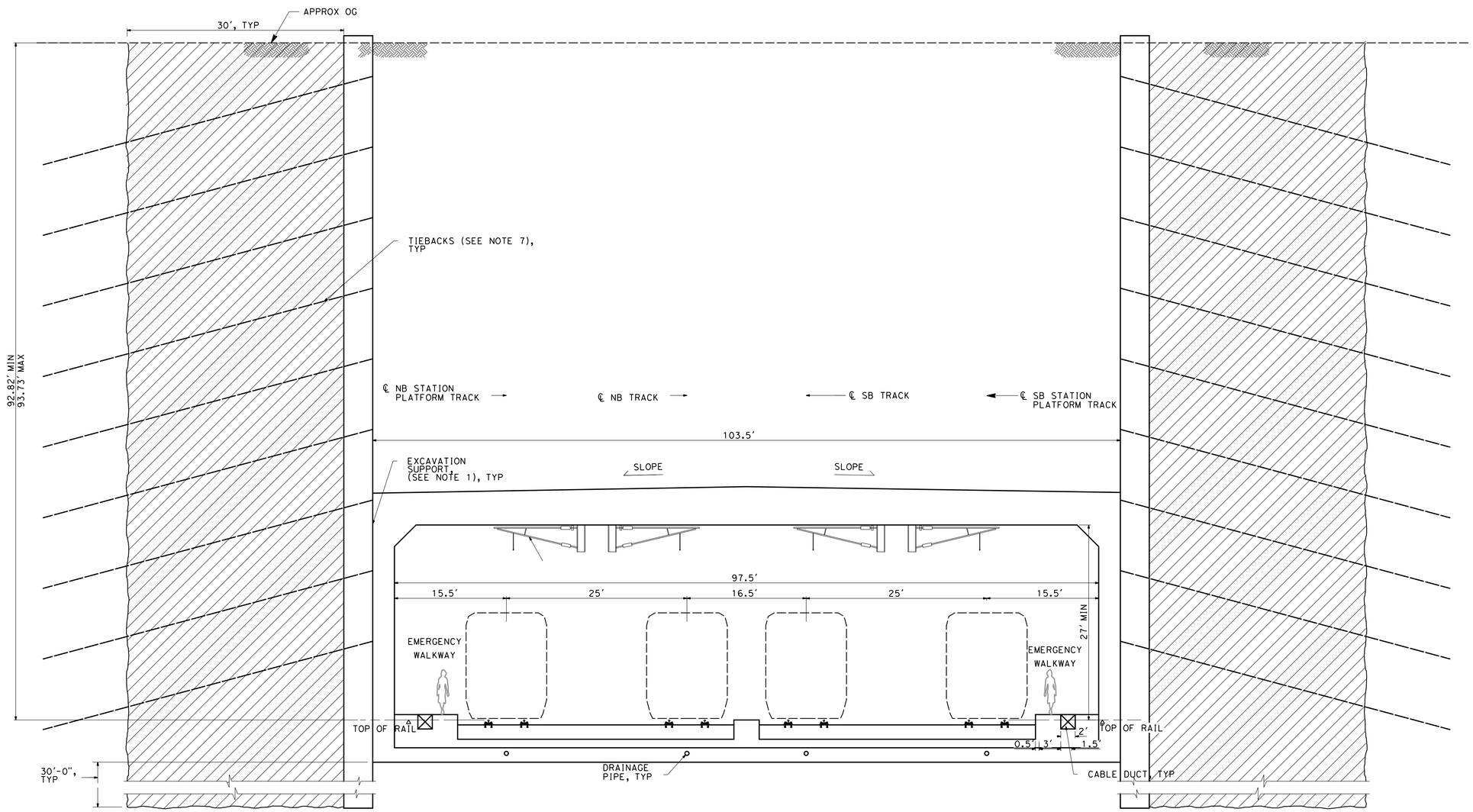
13/03/2019 16:15:53
0205240



LEGEND:

GROUND IMPROVEMENT ZONE

CUT & COVER - 4 TRACKS

NOTES:

1. TYPES, LOCATIONS AND DIMENSIONS OF EXCAVATION SUPPORT NOT DESIGNED. RIGID EXCAVATION SUPPORTS WITH TIEBACKS AND TEMPORARY INTERNAL BRACING ANTICIPATED.
2. PERMANENT LINING ASSUMED WATERTIGHT/ UNDRAINED IN PERMANENT CASE.
3. STRUCTURE COMPONENTS ARE NOT DESIGNED. DRAWINGS NOT BASED ON ACTUAL DESIGN AND ARE DEVELOPED FOR PRELIMINARY COST ESTIMATE.
4. TRACK, OPENINGS, PLATFORM, STATION LAYOUT, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
5. EQUIPMENT AND STRUCTURE GAUGES NOT SHOWN. REFER TO DRAWINGS TN-C0006 AND TN-C0007 FOR FIXED EQUIPMENT ENVELOPE AND STRUCTURE GAUGE.
6. GROUND IMPROVEMENT ANTICIPATED IN THIS AREA. LIMITS OF GROUND IMPROVEMENT TO BE DETERMINED AFTER GEOTECHNICAL INVESTIGATIONS ARE COMPLETED.
7. TIEBACKS OR GROUND ANCHORS ARE ANTICIPATED FOR WALLS WITH AN EXPOSED HEIGHT GREATER THAN 20 FT. CANTILEVER SOLDIER PILE WALLS ARE ANTICIPATED FOR WALLS WITH AN EXPOSED HEIGHT LESS THAN 20 FT.
8. TYPICAL SECTION ON THIS SHEET IS APPLICABLE AT THE FOLLOWING LOCATIONS:

ALIGNMENT	SUB-SECTION	BEGIN STA	END STA
REFINED SR14	BURBANK	2231+18.00	2231+77.00

CONSTRUCTION SEQUENCE:

STAGE	DESCRIPTION
0	INSTALL MOVEMENT MONITORING SYSTEMS
1	INSTALL GROUND IMPROVEMENT
2*	INSTALL RIGID EXCAVATION SUPPORT SYSTEMS USING HEAVILY REINFORCED SLURRY WALLS
3A	EXCAVATE IN LIFTS FROM ORIGINAL GROUND
3B	DEWATER AS NEEDED
3C	INSTALL TIEBACKS AND/OR TEMPORARY INTERNAL BRACING AS REQUIRED FOR THE SYSTEM STABILITY
4	REPEAT STAGE 3 TO BOTTOM OF STATION/ TUNNEL GRADE SLAB
5	CONSTRUCT BOTTOM GRADE SLAB AND TIE IN TO THE EXCAVATION SUPPORT AS A PERMANENT BRACING SYSTEM
6	CONSTRUCT THE INTERIOR OF THE STATION/ TUNNEL (INTERIOR WALLS, SLABS...)
7	CONSTRUCT STATION/TUNNEL ROOF SLAB AND TIE IN TO THE EXCAVATION SUPPORT SYSTEM AS PERMANENT BRACING SYSTEM
8	WATERPROOF THE ROOF SLAB, BACKFILL AND RESTORE THE GROUND

* SLURRY WALLS ARE ONE TYPE OF COMMON RIGID EXCAVATION SUPPORT SYSTEM. OTHER SUITABLE RIGID EXCAVATION SUPPORT SYSTEMS SUCH AS TANGENT/SECANT PILES MIGHT BE CONSIDERED FOR THIS LOCATION. HEAVY REINFORCEMENT WILL BE REQUIRED.

10 0 10 20

1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. VELASCO
DRAWN BY FJ. DOMINGUEZ
CHECKED BY A. NAVARRO
IN CHARGE A. RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
SINGLE CELL 4 TRACKS
CUT-AND-COVER TUNNEL
TYPICAL SECTION

CONTRACT NO. HSR14-42
DRAWING NO. TN-C1106
SCALE AS SHOWN
SHEET NO.

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NOTES:

1. TYPES, LOCATIONS AND DIMENSIONS OF EXCAVATION SUPPORT NOT DESIGNED. RIGID EXCAVATION SUPPORTS WITH TIEBACKS AND TEMPORARY INTERNAL BRACING ANTICIPATED.
2. PERMANENT LINING ASSUMED WATERTIGHT/ UNDRAINED IN PERMANENT CASE.
3. STRUCTURE COMPONENTS ARE NOT DESIGNED. DRAWINGS NOT BASED ON ACTUAL DESIGN AND ARE DEVELOPED FOR PRELIMINARY COST ESTIMATE.
4. TRACK, OPENINGS, PLATFORM, STATION LAYOUT, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
5. EQUIPMENT AND STRUCTURE GAUGES NOT SHOWN. REFER TO DRAWINGS TN-C0006 AND TN-C0007 FOR FIXED EQUIPMENT ENVELOPE AND STRUCTURE GAUGE.
6. GROUND IMPROVEMENT ANTICIPATED IN THIS AREA. LIMITS OF GROUND IMPROVEMENT TO BE DETERMINED AFTER GEOTECHNICAL INVESTIGATIONS ARE COMPLETED.
7. TIEBACKS OR GROUND ANCHORS ARE ANTICIPATED FOR WALLS WITH AN EXPOSED HEIGHT GREATER THAN 20 FT. CANTILEVER SOLDIER PILE WALLS ARE ANTICIPATED FOR WALLS WITH AN EXPOSED HEIGHT LESS THAN 20 FT.
8. TYPICAL SECTION ON THIS SHEET IS APPLICABLE AT THE FOLLOWING LOCATIONS:

ALIGNMENT	SUB-SECTION	BEGIN STA	END STA
REFINED SR14	BURBANK	2231+18.00	2231+77.00

* SLURRY WALLS ARE ONE TYPE OF COMMON RIGID EXCAVATION SUPPORT SYSTEM. OTHER SUITABLE RIGID EXCAVATION SUPPORT SYSTEMS SUCH AS TANGENT/ SECANT PILES MIGHT BE CONSIDERED FOR THIS LOCATION. HEAVY REINFORCEMENT WILL BE REQUIRED.

CONSTRUCTION SEQUENCE:

STAGE	DESCRIPTION
0	INSTALL MOVEMENT MONITORING SYSTEMS
1	INSTALL GROUND IMPROVEMENT
2	INSTALL RIGID EXCAVATION SUPPORT SYSTEMS USING HEAVILY REINFORCED SLURRY WALLS
3A	EXCAVATE IN LIFTS FROM ORIGINAL GROUND
3B	DEWATER AS NEEDED
3C	INSTALL TIEBACKS AND/OR TEMPORARY INTERNAL BRACING AS REQUIRED FOR THE SYSTEM STABILITY
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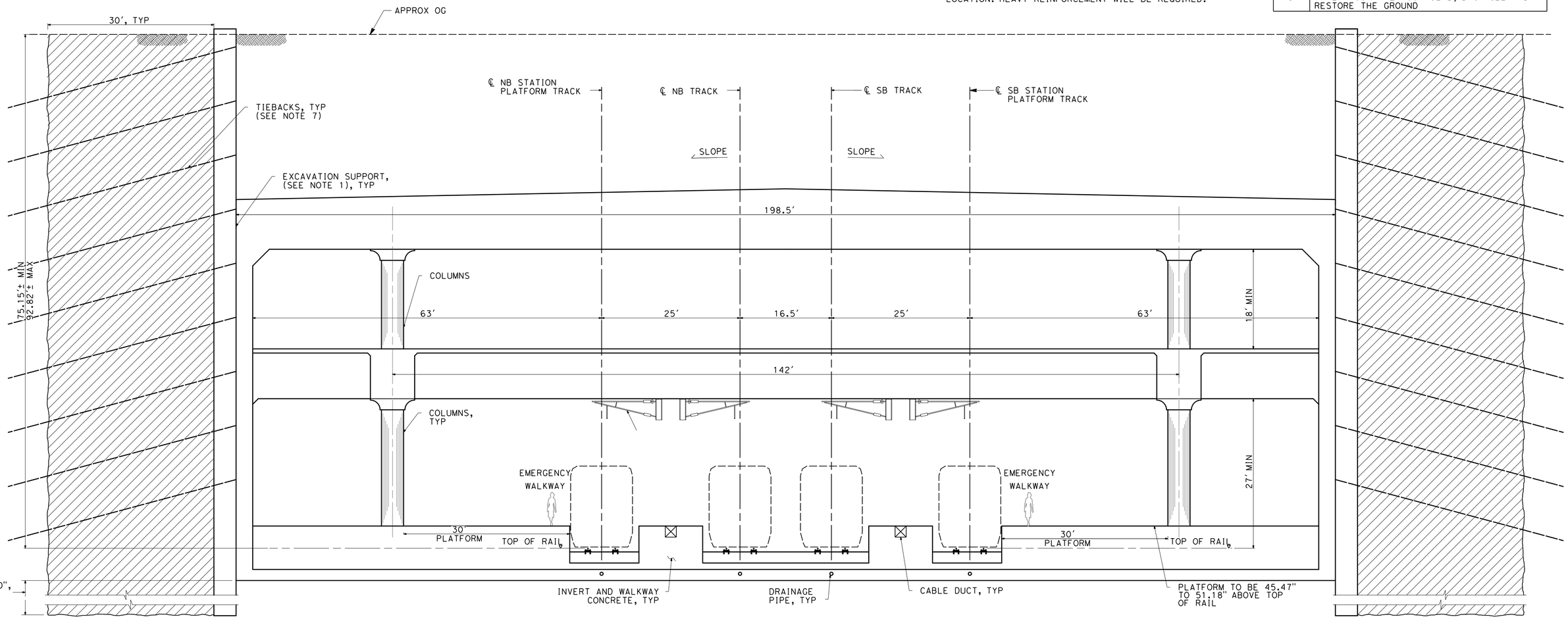
8	WATERPROOF THE ROOF SLAB, BACKFILL AND RESTORE THE GROUND



LEGEND:

GROUND IMPROVEMENT ZONE

TYPICAL SECTION - 4 TRACKS

10 0 10 20
1"=10'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. VELASCO
DRAWN BY FJ. DOMINGUEZ
CHECKED BY A. NAVARRO
IN CHARGE A. RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
BURBANK STATION PLATFORM
CUT-AND-COVER TUNNEL
TYPICAL SECTION

CONTRACT NO. HSR14-42
DRAWING NO. TN-C1109
SCALE AS SHOWN
SHEET NO.

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13/03/2019 16:26:30
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California High-Speed Rail Authority

Burbank Subsection

DRAFT PEPD REV01

Utility Relocation Plans

February 2019

CALIFORNIA High-Speed Rail Authority

U.S. Department of Transportation Federal Railroad Administration

BURBANK SUBSECTION

DRAWING NO.	DRAWING DESCRIPTION	SHEET NO.
UT-B0001-BUR	BURBANK SUBSECTION - RELOCATION UTILITY PLANS - INDEX OF DRAWINGS	
UT-B0002-BUR	BURBANK SUBSECTION - RELOCATION UTILITY PLANS - ABBREVIATIONS AND LEGEND	
UT-B0003-BUR	BURBANK SUBSECTION - RELOCATION UTILITY PLANS - KEY MAP	
UT-C4086-BUR	BURBANK SUBSECTION - RELOCATION UTILITY PLANS - STA 2215+00 TO STA 2230+00	
UT-C4087-BUR	BURBANK SUBSECTION - RELOCATION UTILITY PLANS - STA 2230+00 TO STA 2254+47.54	

LEGEND AND SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
e e	E E	ELECTRICAL UNDERGROUND
e (on)	E (OH)	ELECTRICAL OVERHEAD
fo fo	FO FO	FIBER OPTIC UNDERGROUND
fo (on)	FO (OH)	FIBER OPTIC OVERHEAD
gs gs	GS GS	GAS
g g	G G	NATURAL GAS
o o	O O	OIL
sd sd	SD SD	STORM DRAIN
s s	S S	SEWER
st st	ST ST	STEAM
tc tc	TC TC	TELECOMMUNICATION UNDERGROUND
tc (on)	TC (OH)	TELECOMMUNICATION OVERHEAD
t t	T T	TELEPHONE UNDERGROUND
t (on)	T (OH)	TELEPHONE OVERHEAD
tv tv	TV TV	TELEVISION UNDERGROUND
tv (on)	TV (OH)	TELEVISION OVERHEAD
w w	W W	WATER
		RETAINING WALL
		RIGHT-OF-WAY
		HSR RIGHT-OF-WAY
		HSR TUNNEL
	230+00	HSR TRACK CENTERLINE
		PERMANENT ENVIRONMENTAL FOOTPRINT
		TEMPORARY ENVIRONMENTAL FOOTPRINT
		FUTURE TRACK CENTERLINE
		NATIONAL FOREST BOUNDARY
		PTC TOWER
WELL		WELL LOCATION
		POWER TRANSMISSION TOWER
sd		HEADWALL
		TRACK SWITCH
		STRUCTURES (BRIDGE, VIADUCT)
	#	KEY NOTE
P		PUMP STATION

GENERAL NOTES

1. EXISTING UTILITIES IDENTIFIED WITH THE DISPOSITIONS 'RELOCATE', 'REMOVE' OR 'PROTECT IN PLACE' PERTAIN TO THAT PORTION OF THE UTILITY THAT IS LOCATED WITHIN THE PROPOSED, PERMANENT HSR RIGHT-OF-WAY

ABBREVIATIONS

ABN	ABANDON
ACP	ASBESTOS CEMENT PIPE
ALT	ALTERNATIVE
APPROX	APPROXIMATE
AVE	AVENUE
BEG	BEGIN
BLDG	BUILDING
BLVD	BOULEVARD
BO	BLOW-OFF
CB	CATCH BASIN
CD	CURB DRAIN
CHSR	CALIFORNIA HIGH-SPEED RAIL
CIP	CAST IRON PIPE
℄	CENTERLINE
CMP	CORRUGATED METAL PIPE
CTV	CABLE TELEVISION
D	DEPTH
DI	DRAINAGE INLET, DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DWG	DRAWING
ED	EDGE DRAIN
EDC	EDGE DRAIN CLEANOUT
EDO	EDGE DRAIN OUTLET
EDV	EDGE DRAIN VENT
ELEC	ELECTRIC
ELEV	ELEVATION
ENV	ENVIRONMENTAL
EXIST	EXISTING
EXP	EXPANSION
FL	FLOW LINE
FO	FIBER OPTIC
FP	FOOTPRINT
G	GAS
GALV	GALVANIZED
HDC	HIGH DESERT CORRIDOR
HSR	HIGH-SPEED RAIL
INV	INVERT
IRR	IRRIGATION
L	LENGTH
LT	LEFT
LMF	LIGHT MAINTENANCE FACILITY
MAX	MAXIMUM
MIN	MINIMUM
MT	MAIN TRACK
N	NORTH
NB	NORTHBOUND
PROP	PROPOSED
P.S.	POWER STATION
PROP	PROPOSED
PPEF	PROPOSED PERMANENT ENVIRONMENTAL FOOTPRINT
PS	POWER STATION
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REINF	REINFORCED, REINFORCEMENT, REINFORCING
REL	RELOCATE
REPL	REPLACEMENT
R/W, ROW	RIGHT OF WAY
RT	RIGHT
RTE	ROUTE
S	SOUTH
SB	SOUTHBOUND
SCRRA	SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY
SD	STORM DRAIN
SR	STATE ROUTE
ST	STREET
STA	STATION
STBB	SINGLE THRIE BEAM BARRIER
STD	STANDARD
STR	STRUCTURE
SRS	STAND ALONE RADIO SITE
SW	SIDEWALK, SOUND WALL
SWR	SEWER
TEL	TELEPHONE
TEMP	TEMPORARY
TOT	TOTAL
TP	TELEPHONE POLE
TPSS	TRACTION POWER SUPPLY STATION
TSMF	TERMINAL STORAGE AND MAINTENANCE FACILITY
TYP	TYPICAL
UG	UNDERGROUND
UNK	UNKNOWN
UPRR	UNION PACIFIC RAILROAD
W	WATER, WEST, WIDTH
WB	WESTBOUND
WM	WATER MAIN
WSP	WELDED STEEL PIPE
WT	WEIGHT
WV	WATER VALVE

UTILITY OWNERS

AIR TOUCH	AIR TOUCH CELLULAR
AVEK W	ANTELOPE VALLEY - E. KERN WATER
AT&T DIST	AT&T DISTRIBUTION
AT&T TRANS	AT&T TRANSMISSION
BURBANK AIRPORT	BURBANK GLENDALE PASADENA AIRPORT AUTHORITY
BWP	BURBANK WATER & POWER
CENTURY L	CENTURYLINK
CITY OF BURBANK	CITY OF BURBANK
CITY OF GLENDALE	CITY OF GLENDALE
CITY OF LA	CITY OF LOS ANGELES - RECORDS SECTION
CITY OF SC	CITY OF SANTA CLARITA
CITY OF PALMDALE	CITY OF PALMDALE
CITY OF S FERNANDO	CITY OF SAN FERNANDO
CLEAR CHANNEL	CLEAR CHANNEL OUTDOOR
CROWN CASTLE	CROWN CASTLE
EL DORADO MWC	EL DORADO MUTUAL WATER COMPANY
EXXON	EXXON MOBIL PIPELINE CO
LACDPW	LA COUNTY DEPARTMENT OF PUBLIC WORKS
LACDPW-WW	LA COUNTY WATER WORKS
LACSD	LOS ANGELES COUNTY SANITATION DISTRICT
LADWP	LOS ANGELES DEPARTMENT OF WATER & POWER
LEVEL 3	LEVEL 3 COMMUNICATIONS
LIBERMAN	LIBERMAN BROADCASTING
NEWHALL CW	NEWHALL COUNTY WATER
MARCUS	MARCUS CABLE
MCI	MCI (VERIZON BUSINESS)
MWD	METROPOLITAN WATER DISTRICT
PALMDALE WD	PALMDALE WATER DISTRICT
PAAP	PLAINS ALL AMERICAN PIPELINE
PPS	PACIFIC PIPELINE
PT & T	PACIFIC TEL & TELEGRAPH
QWEST	QWEST COMMUNICATION
SCWC	SANTA CLARITA WATER CO
SCE TEL	SC EDISON - TELECOM
SCE DIST	SC EDISON - DIST/TELECOM
SCE	SOUTHERN CALIFORNIA EDISON
SCG	SC GAS - LANCASTER
SCG TRANS	SC GAS - TRANSMISSION
	SC GAS VICT - TRANSMISSION
SUNESYS	SUNESYS, LLC
SPRINT	SPRINT
SPV WC	SPV WATER COMPANY
CA DWR	STATE DEPARTMENT WATER RESOURCES
TESORO	TESORO
T-MOBILE	T-MOBILE USA
TWC	TIME WARNER CABLE
VERIZON	VERIZON - IRWINDALE
WSP MWC	WEST SIDE PARK MUTUAL WATER COMPANY
WILSHIRE CONN	WILSHIRE CONNECTION LLC
XO COMM	XO COMMUNICATIONS
ZAYO	ZAYO FNA ABOVENET

$FILE$ $TIME$ $DATE$ $USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A.TRONCOSO
DRAWN BY L.GUERRERO
CHECKED BY N.TIZANI
IN CHARGE A.RELANO
DATE 02/28/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
ALIGNMENT "BUR"

RELOCATION UTILITY PLANS
ABBREVIATIONS AND LEGEND

CONTRACT NO. HSR14-42
DRAWING NO. UT-B0002-BUR
SCALE NO SCALE
SHEET NO.

2000 0 2000 4000

1"=2000'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A.TRONCOSO
DRAWN BY L.GUERRERO
CHECKED BY N.TIZANI
IN CHARGE A.RELANO
DATE 02/28/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

SENER

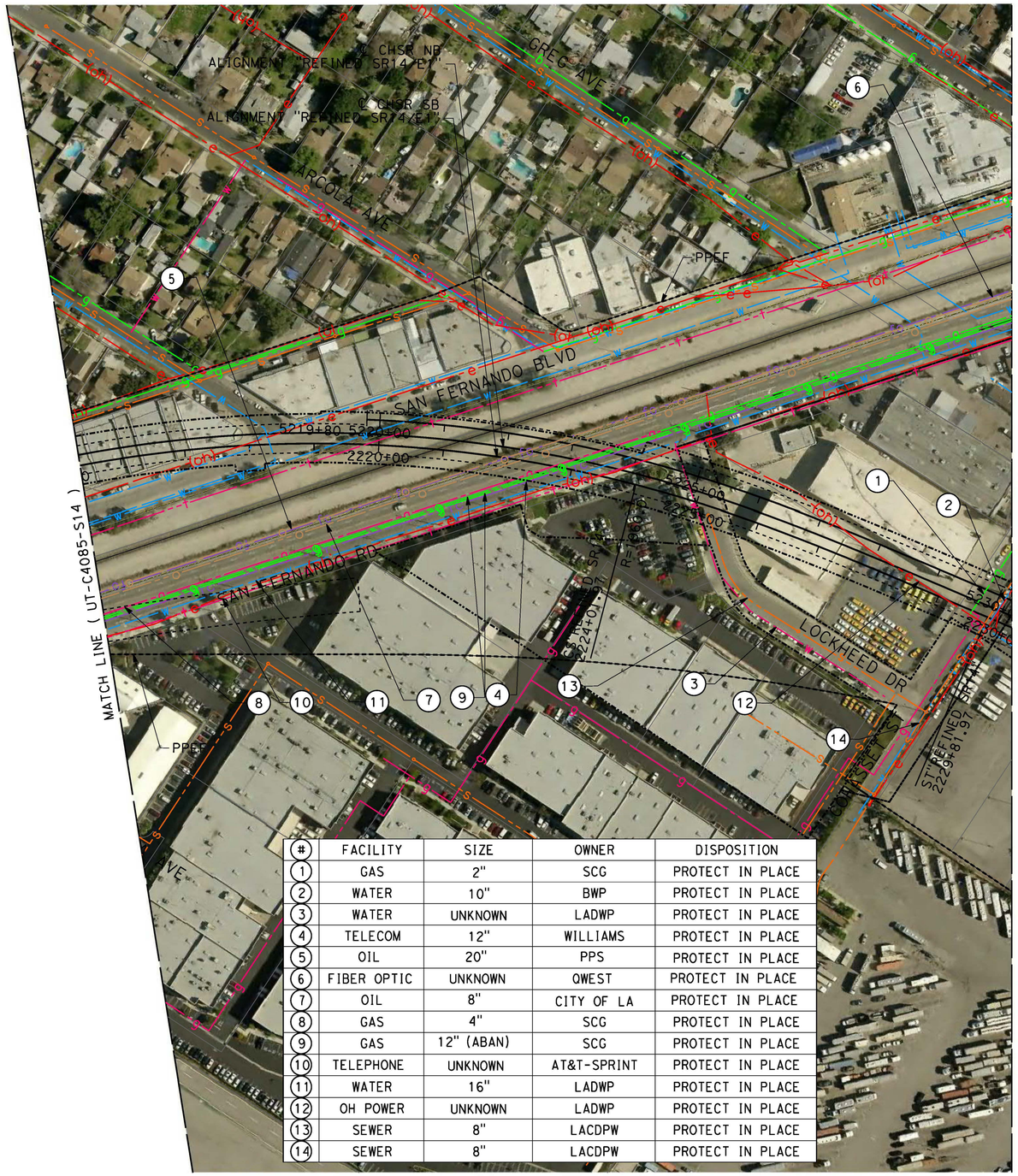
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION

RELOCATION UTILITY PLANS
KEY MAP

CONTRACT NO. HSR14-42
DRAWING NO. UT-B0003-BUR
SCALE AS SHOWN
SHEET NO.

$FILE$ $TIME$ $DATE$ $USER$



#	FACILITY	SIZE	OWNER	DISPOSITION
1	GAS	2"	SCG	PROTECT IN PLACE
2	WATER	10"	BWP	PROTECT IN PLACE
3	WATER	UNKNOWN	LADWP	PROTECT IN PLACE
4	TELECOM	12"	WILLIAMS	PROTECT IN PLACE
5	OIL	20"	PPS	PROTECT IN PLACE
6	FIBER OPTIC	UNKNOWN	QWEST	PROTECT IN PLACE
7	OIL	8"	CITY OF LA	PROTECT IN PLACE
8	GAS	4"	SCG	PROTECT IN PLACE
9	GAS	12" (ABAN)	SCG	PROTECT IN PLACE
10	TELEPHONE	UNKNOWN	AT&T-SPRINT	PROTECT IN PLACE
11	WATER	16"	LADWP	PROTECT IN PLACE
12	OH POWER	UNKNOWN	LADWP	PROTECT IN PLACE
13	SEWER	8"	LACDPW	PROTECT IN PLACE
14	SEWER	8"	LACDPW	PROTECT IN PLACE

100 0 100 200
1"=100'

$FILE$
$TIME$
$DATE$
$USER$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A.TRONCOSO
DRAWN BY L.GUERRERO
CHECKED BY N.TIZANI
IN CHARGE A.RELANO
DATE 02/28/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

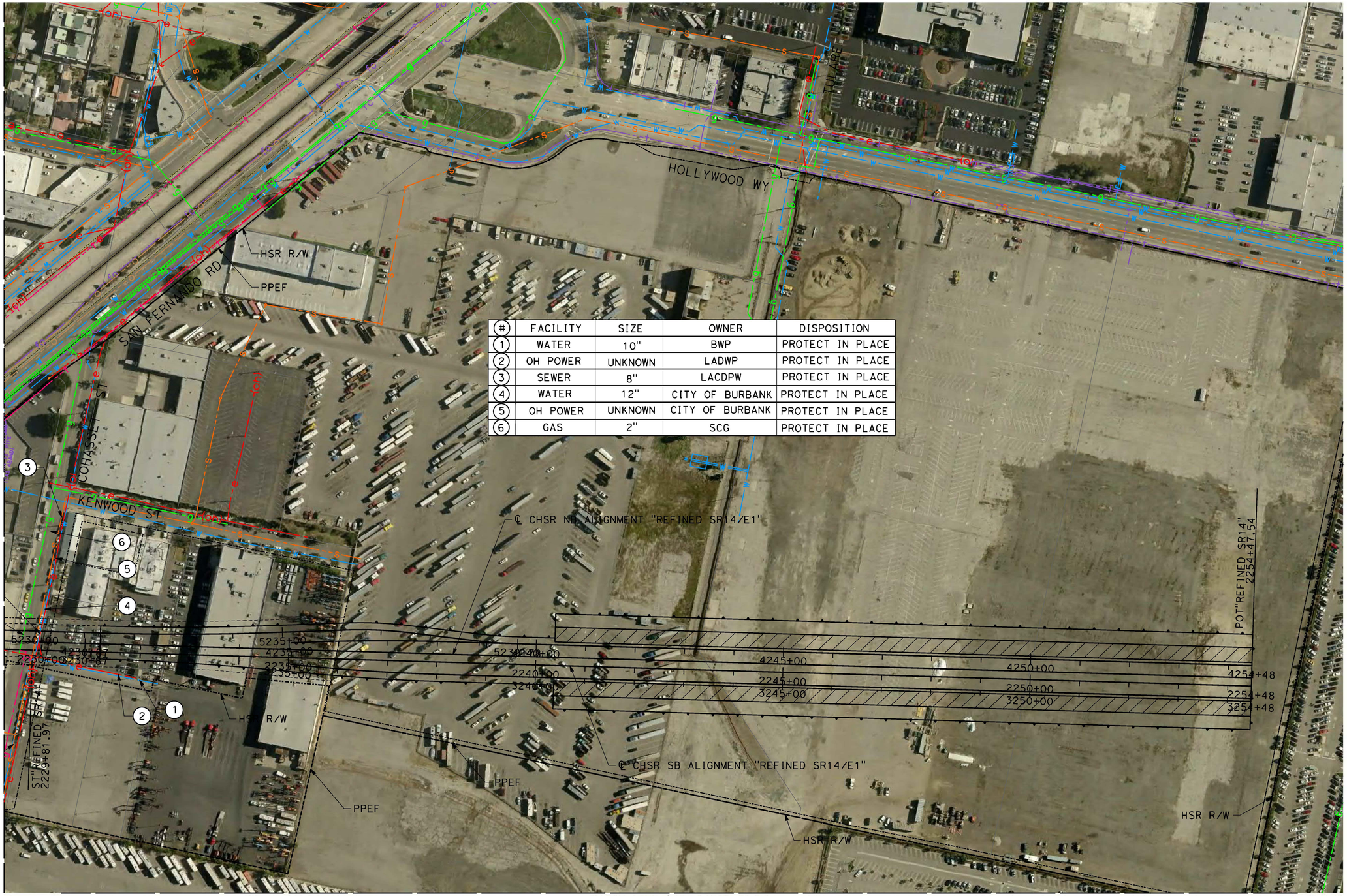
SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSTATION

RELOCATION UTILITY PLANS
STA 2215+00 TO STA 2230+00

CONTRACT NO. HSR14-42
DRAWING NO. UT-C4086-BUR
SCALE AS SHOWN
SHEET NO.



#	FACILITY	SIZE	OWNER	DISPOSITION
1	WATER	10"	BWP	PROTECT IN PLACE
2	OH POWER	UNKNOWN	LADWP	PROTECT IN PLACE
3	SEWER	8"	LACDPW	PROTECT IN PLACE
4	WATER	12"	CITY OF BURBANK	PROTECT IN PLACE
5	OH POWER	UNKNOWN	CITY OF BURBANK	PROTECT IN PLACE
6	GAS	2"	SCG	PROTECT IN PLACE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A.TRONCOSO
DRAWN BY L.GUERRERO
CHECKED BY N.TIZANI
IN CHARGE A.RELANO
DATE 02/28/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSTATION

RELOCATION UTILITY PLANS
STA 2230+00 TO STA 2254+47.54

CONTRACT NO. HSR14-42
DRAWING NO. UT-C4087-BUR
SCALE AS SHOWN
SHEET NO.

$USER$ $DATE$ $TIME$ $FILE$

California High-Speed Rail Authority

Burbank Subsection

DRAFT PEPD REV 01

Railway Systems Plans

February 2019

CALIFORNIA High-Speed Rail Authority

U.S. Department of Transportation Federal Railroad Administration

GENERAL SHEETS

DRAWING NO.	DRAWING DESCRIPTION	SHEET NO.
TP-B0001	INDEX OF DRAWINGS	
TP-B0002	ABBREVIATIONS	
TP-B0003	ABBREVIATIONS AND LEGEND	

CHSR ALIGNMENT "REFINED SR14" RAILWAY SYSTEMS AND FACILITIES

DRAWING NO.	DRAWING DESCRIPTION	SHEET NO.
TP-D0001-S14	TRACTION POWER FACILITIES - LOCATION LAYOUT	

BURBANK AIRPORT STATION TYPICAL SECTIONS AND LAYOUTS

DRAWING NO.	DRAWING DESCRIPTION	SHEET NO.
TP-O4008-S14	TRACTION POWER FACILITIES - PARALLELING STATION 7	

TRAIN CONTROL SYSTEM

DRAWING NO.	DRAWING DESCRIPTION	SHEET NO.
TC-E6005	INTERLOCKING SITES - BURBANK STATION	
TC-B6001-S14	RAILWAY SYSTEMS - KEY MAP	
TC-F5001-S14	INTERLOCKING SITES - STA 2233+00 TO STA 2245+00	

A

AB	AGGREGATE BASE
ABBC	ASBESTOS BONDED BITUMINOUS COATED
ABM	AIR-BLOWN MORTAR
ABN	ABANDON
ABUT	ABUTMENT
AC	ASPHALT CONCRETE
ACB	ASPHALT CONCRETE BASE
ACP	ASBESTOS CEMENT PIPE
ADL	ADDED DEAD LOAD
ADJ	ADJUST
AFES	ALTERNATIVE FLARED END SECTION
AHD	AHEAD
ALT	ALTERNATE
AM	TIME FROM MIDNIGHT TO NOON
AP	ALTERNATIVE PIPE
APC	ALTERNATIVE PIPE CULVERT
APPROX	APPROXIMATE
APU	ALTERNATIVE PIPE UNDERDRAIN
ARS	ACCELERATION RESPONSE SPECTRUM
AR	ACCESS RESTRICTION
AS	AGGREGATE SUBBASE
ASRP	ALUMINUM SPIRAL RIB PIPE
ASSY	ASSEMBLY
ATPB	ASPHALT TREATED PERMEABLE BASE
ATPM	ASPHALT TREATED PERMEABLE MATERIAL
AVE	AVENUE
AVG	AVERAGE
@	AT

B

BAGR	BRIDGE APPROACH GUARD RAILING
BB	BEGINNING OF BRIDGE
BC	BEGIN HORIZONTAL CURVE
BCC	BALANCED CANTILEVER CONSTRUCTION
BCR	BEGIN CURB RETURN
BEG	BEGIN
BIT CTD	BITUMINOUS COATED
BK	BACK
BKF	BACKFILL
BLDG	BUILDING
BLM	BRIDGE-LOG MILE
BLVD	BOULEVARD
BM	BENCH MARK
BND	BOUND
BOT	BOTTOM
BR	BRIDGE
BRG	BEARING
BTU	BRITISH THERMAL UNIT
BVC	BEGIN VERTICAL CURVE
BW	BARBED WIRE

C

CAA	CABLE ANCHOR ASSEMBLY
CAP	CORRUGATED ALUMINUM PIPE
CAPA	CORRUGATED ALUMINUM PIPE ARCH
CAS	CONSTRUCTION AREA SIGN
CB	CONCRETE BARRIER
CBW	CONCRETE BLOCK WALL
C-C	CENTER TO CENTER

C CONTINUED

CHSRA	CALIFORNIA HIGH SPEED RAIL AUTHORITY
CHST	CALIFORNIA HIGH SPEED TRAIN
CHSR	CALIFORNIA HIGH SPEED RAIL
CG	CENTER OF GRAVITY
CHNL	CHANNEL
CI	CAST IRON
CIDH	CAST-IN-DRILLED-HOLE
CIP,C-I-P	CAST-IN-PLACE, CAST IRON PIPE
CIPCP	CAST IN PLACE CONCRETE PIPE
CISS	CAST-IN-STEEL-SHELL
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE, CLASS
℄	CENTERLINE
CL2	CLASS 2
CL-6	CHAIN LINK FENCE (6 FT)
CLR	CLEAR, CLEARANCE
CM	CORRUGATED METAL
CMP	CORRUGATED METAL PIPE
CO	COUNTY
COL	COLUMN
CONC	CONCRETE
COND	CONDUIT
CONN	CONNECTOR
CONST	CONSTRUCT, CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CP	CANDLEPOWER
CR	CREEK
CRCP	CONTINUOUS REINFORCED CONCRETE PAVT
CRSP	CONCRETED ROCK SLOPE PROTECTION
CS	CURVE TO SPIRAL
CSP	CORRUGATED STEEL PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CTB	CEMENT TREATED BASE
CTPB	CEMENT TREATED PERMEABLE BASE
CTPM	CEMENT TREATED PERMEABLE MATERIAL
CTRS	CENTERS
CULV	CULVERT
CVFPB	CENTRAL VALLEY FLOOD PROTECTION BOARD

D

D	DEPTH
DD	DOWNDRAIN, DIRECTIVE DRILLING
DBL	DOUBLE
DEG	DEGREE
DEL	DELINEATOR
DET	DETAIL, DETOUR
DF	DOUGLAS FIR
DI	DRAINAGE INLET, DROP INLET
DIA	DIAMETER
DIAPH	DIAPHRAGM
DIST	DISTANCE, DISTRICT
DMBB	DOUBLE METAL BEAM BARRIER
DR	DRIVE
DTBB	DOUBLE THRIE BEAM BARRIER
DWY	DRIVEWAY

E

E	EAST, EASTING
EA	ACTUAL SUPERELEVATION
EU	UNBALANCED SUPERELEVATION

E CONTINUED

EASE	EASEMENT
EB	END OF BRIDGE, EASTBOUND
EC	END HORIZONTAL CURVE
ECR	END CURB RETURN
ED	EDGE DRAIN
EDC	EDGE DRAIN CLEANOUT
EDO	EDGE DRAIN OUTLET
EDV	EDGE DRAIN VENT
ELEC	ELECTROLIER
ELECT	ELECTRIC
ELEV	ELEVATION
ELLN	EXTRALEGAL LEAD NETWORK
EMB	EMBANKMENT
ENGR	ENGINEER
EOD	EDGE OF DECK
EP	EDGE OF PAVEMENT
EQ	EQUATION, EQUAL
ES	EDGE OF SHOULDER
ETW	EDGE OF TRAVELED WAY
EVC	END VERTICAL CURVE
EW	ENDWALL
EXC	EXCAVATION
EXIST, EX.	EXISTING
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXT	EXTERIOR
EXWY	EXPRESSWAY

F

F & C	FRAME AND COVER
F & G	FRAME AND GRATE
FB	FLOOR BEAM
F-B	FRESNO TO BAKERSFIELD
FDN	FOUNDATION
FEBT	FACING EASTBOUND TRAFFIC
FES	FLARED END SECTION
FF	FILTER FABRIC
FG	FINISHED GRADE
FH	FIRE HYDRANT
FIG	FIGURE
FL	FLOW LINE
FNBT	FACING NORTHBOUND TRAFFIC
FOC	FACE OF CONCRETE
FPLM	FULL SPAN PRECAST LAUNCHING METHOD
FR RD	FRONTAGE ROAD
FS	FAR SIDE, FINISHED SURFACE
FSBT	FACING SOUTHBOUND TRAFFIC
FT	FOOT, FEET
FTG	FOOTING
FUT	FUTURE
FWBT	FACING WESTBOUND TRAFFIC
FWY	FREEWAY

G

G	ACCELERATION DUE TO GRAVITY
GA	GAGE
GALV	GALVANIZED
GP	GRADING PLANE
GR	GUARD RAILING
GSP	GALVANIZED STEEL PIPE
GTR	GUTTER

H

H	HEIGHT
HD	HORIZONTAL DRAIN
HDWL	HEADWALL
HEX HD	HEXAGONAL HEAD
HMA	HOT MIXED ASPHALT
HORIZ	HORIZONTAL
HP	HINGE POINT, HORSEPOWER
HPS	HIGH PERFORMANCE STEEL
HR	HOUR
HS	HIGH STRENGTH
HSR	HIGH SPEED RAIL
HST	HIGH SPEED TRAIN
HW	HEADWALL, HIGH WATER
HWM	HIGH WATER MARK
HWY	HIGHWAY

I

IB	IMPORTED BORROW
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCH, INCHES
INT	INTERIOR
INV	INVERT
IRR	IRRIGATION

J

JCT	JUNCTION
JP	JOINT POLE
JPCP	JOINTED PLAIN CONCRETE PAVEMENT
JS	JUNCTION STRUCTURE
JT	JOINT

K

K	DISTANCE TO ACHIEVE 1% GRADE CHANGE

L

L	LENGTH
LAT	LATITUDE
LC	LENGTH OF CURVE
LMF	LIGHT MAINTENANCE FACILITY
LN	LANE
LOC	LOCATION
LOL	LAYOUT LINE
LONG	LONGITUDE
LONGIT	LONGITUDINAL
LS	LENGTH OF SPIRAL
LT	LEFT

M

MAINT	MAINTENANCE
MAX	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
MED	MEDIAN
M-F	MERCED TO FRESNO
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MISC I & S	MISCELLANEOUS IRON AND STEEL
MKR	MARKER
M/L	MAIN LINE (RAILWAY)

M CONTINUED

MOD	MODIFIED, MODIFY
MON	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MPH	MILES PER HOUR
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EARTH
MSS	MOVING SCAFFOLDING SYSTEM
MT	MAIN TRACK
MTL	MATERIAL

N

N	NORTH, NORTHING
N/A	NOT APPLICABLE
NB	NORTHBOUND
NO.	NUMBER (MUST HAVE PERIOD)
NOS.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NS	NEAR SIDE
NTS	NOT TO SCALE

O

OBLR	OBLITERATE
OC	OVERCROSSING
OCS	OVERHEAD CONTACT SYSTEM
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OH	OVERHEAD
O-O	OUT TO OUT
OPP	OPPOSITE

P

P	PAGE
PAP	PERFORATED ALUMINUM PIPE
PB	PULL BOX
PC	POINT OF CURVATURE, PRECAST
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE
PCVC	POINT OF COMPOUND VERTICAL CURVE
PED	PEDESTRIAN
PED OC	PEDESTRIAN OVERCROSSING
PED UC	PEDESTRIAN UNDERCROSSING
PERM MTL	PERMEABLE MATERIAL
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
₱,PL	PLATE
P/L	PROPERTY LINE
PM	POST MILE, TIME FROM NOON TO MIDNIGHT
PN	PAVING NOTCH
POB	POINT OF BEGINNING
POC	POINT OF HORIZONTAL CURVE
POE	POINT OF ENDING
POT	POINT OF TANGENT
POVC	POINT OF VERTICAL CURVE
PP	PIPE PILE, PLASTIC PIPE, POWER POLE
PPL	PREFORMED PERMEABLE LINER
PPP	PERFORATED PLASTIC PIPE
PRC	POINT OF REVERSE CURVE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. VELASCO
DRAWN BY FJ. DOMINGUEZ
CHECKED BY A. NAVARRO
IN CHARGE A. RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
ALIGNMENT "REFINED SR14"
GENERAL
ABBREVIATIONS

CONTRACT NO. HSR14-42
DRAWING NO. TP-B0002
SCALE NO SCALE
SHEET NO.

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P CONTINUED

PRF	PAVEMENT REINFORCING FABRIC
PROP	PROPOSED
PRVC	POINT OF REVERSE VERTICAL CURVE
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES
PS, P/S	PRESTRESSED, PARALLEL STATION
PSP	PERFORATED STEEL PIPE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVP	MAINTENANCE VEHICLE PULLOUT

Q

QTY	QUANTITY

R

R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD	ROAD
REINF	REINFORCED, REINFORCEMENT, REINFORCING
REL	RELOCATE
REPL	REPLACEMENT
RET	RETAINING
REV	REVISED
RF	RADIO FREQUENCY
RM	ROAD-MIXED
R/W, ROW	RIGHT OF WAY
RP	RADIUS POINT, REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
RTE	ROUTE
RW	REDWOOD, RETAINING WALL
RWY	RAILWAY

S

S	SOUTH, SUPPLEMENT, STATION LINE
SAE	STRUCTURE APPROACH EMBANKMENT
SALV	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SPIRAL TO CURVE
SCRRA	SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
SEC	SECOND
SECT	SECTION
SEP	SEPARATION
SG	SUBGRADE
SHLD	SHOULDER
SHT	SHEET
SIM	SIMILAR
SM	SELECTED MATERIAL
SPEC	SPECIAL, SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
SS	SLOPE STAKE, SPIRAL TO SPIRAL

S CONTINUED

SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
SR	STATE ROUTE
ST	STREET, SPIRAL TO TANGENT
STA	STATION
STBB	SINGLE THRIE BEAM BARRIER
STD	STANDARD
STR	STRUCTURE
SRS	STAND ALONE RADIO SITE
SURF	SURFACING
SW	SIDEWALK, SOUND WALL
SWR	SEWER
SWS	SWITCHING STATION
SYM	SYMMETRICAL
S4S	SURFACE 4 SIDES

T

T	SEMI-TANGENT
TAB	TABLET
TAN	TANGENT
TBB	THRIE BEAM BARRIER
TBR	TIMBER
TC	TOP OF CURB, TANGENT TO CURVE
TCB	TRAFFIC CONTROL BOX
TEL	TELEPHONE
TEMP	TEMPORARY
TG	TOP OF GRADE
TM	TECHNICAL MEMORANDUM
TOT	TOTAL
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPF	TRACTION POWER FACILITY
TPM	TREATED PERMEABLE MATERIAL
TPSS	TRACTION POWER SUPPLY STATION
TRANS	TRANSITION, TRANSVERSE
	TRAFFIC SIGNAL, TUBULAR STEEL, TANGENT TO SPIRAL
TSMF	TERMINAL STORAGE AND MAINTENANCE FACILITY
TYP	TYPICAL
TOR, T/R	TOP OF RAIL

U

UC	UNDERCROSSING
UD	UNDERDRAIN
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS
UPRR	UNION PACIFIC RAILROAD
USFWS	UNITED STATES FISH AND WILDLIFE SERVICE

V

V	VALVE, DESIGN SPEED
VAR	VARIABLE
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VIA	VIADUCT
VOL	VOLUME

W

W	WEST, WIDTH
WB	WESTBOUND
WH	WEEP HOLE
WM	WIRE MESH
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
WT	WEIGHT
WV	WATER VALVE
WW	WINGWALL
WWLOL	WINGWALL LAYOUT LINE
W/	WITH

X

X SEC	CROSS SECTION
XING	CROSSING

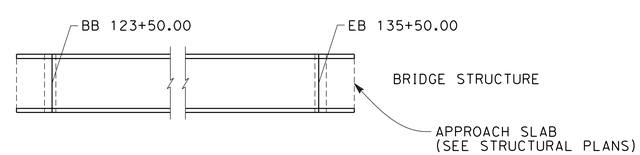
Y

YR	YEAR
YRS	YEARS

LEGEND

PLAN

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED RETAINING WALL
- LIMITS OF EMBANKMENT (FILL)
- LIMITS OF EXCAVATION (CUT)
- PROPOSED PERMANENT ENVIRONMENTAL FOOTPRINT
- PROPOSED TEMPORARY ENVIRONMENTAL FOOTPRINT
- PROPOSED TUNNEL
- -e-(oh)- EXISTING OVERHEAD HIGH VOLTAGE POWER LINES
- HIGH SPEED TURNOUT
- SCRRA TURNOUT
- (1) CURVE DATA (HSR ALIGNMENT)



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. VELASCO
DRAWN BY FJ. DOMINGUEZ
CHECKED BY A. NAVARRO
IN CHARGE A. RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION
DRAFT PEPD REV01
NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
ALIGNMENT "REFINED SR14"
GENERAL
ABBREVIATIONS AND LEGEND

CONTRACT NO. HSR14-42
DRAWING NO. TP-B0003
SCALE NO SCALE
SHEET NO.

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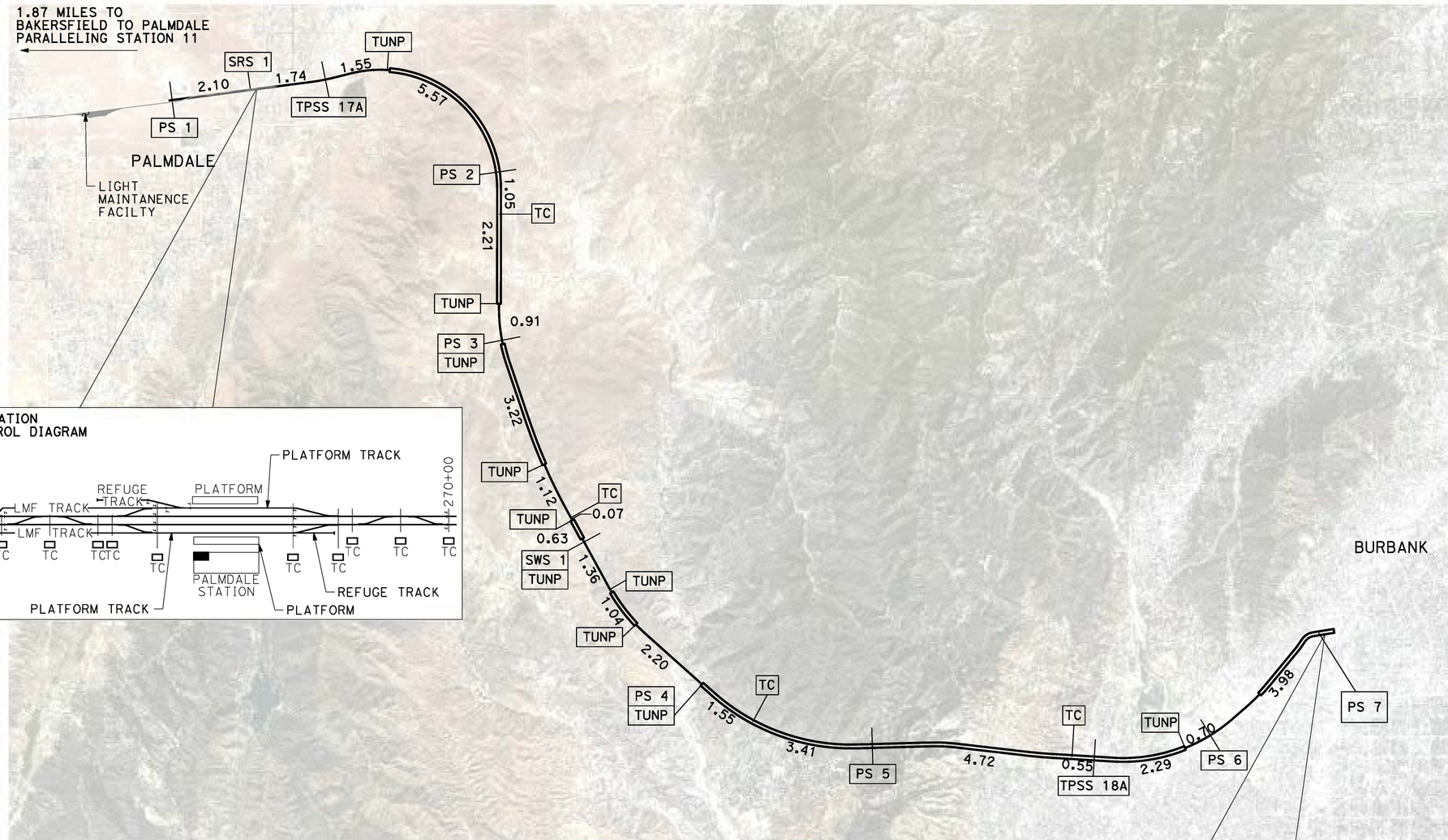

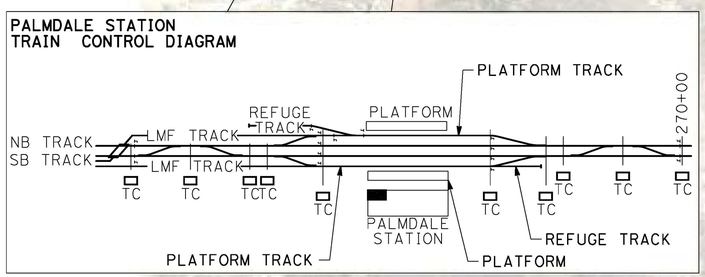

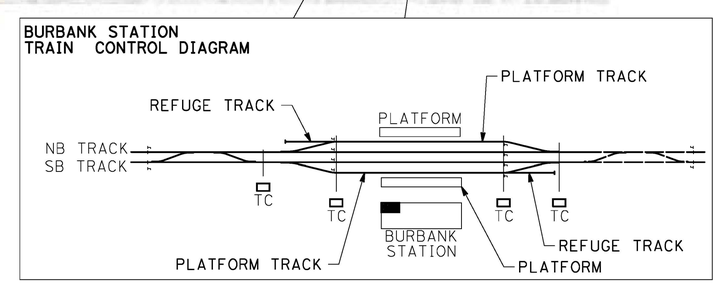

LEGEND

RAILWAY SYSTEMS FACILITY SPACING (MILES)	5.0
AT- GRADE / ELEVATED	
UNDERGROUND	

ABBREVIATIONS:

TPSS:	TRACTION POWER SUBSTATION
PS:	PARALLELING STATION
SWS:	SWITCHING STATION
TUNP:	TUNNEL PORTAL FACILITIES
SRS:	STANDALONE RADIO SITE
TC:	TRAIN CONTROL FACILITY

NOTE:

1. SITE STATIONING GIVEN IS APPROXIMATE AND WILL BE FINALIZED IN FUTURE DESIGN PHASE.
2. IN UNDERGROUND SECTIONS, RF COMMUNICATION WILL BE USING DIRECTIONAL ANTENNAS OR RADIANT CABLES.
3. TRACTION POWER FACILITIES HAVE RADIO ANTENNAS.
4. PS1 IS NEEDED IN PLACE IN CASE B-P SECTION IS NOT BUILT, AS THE LMF FACILITY WILL BE POWERED FROM TP SS 17A.
5. ALL TUNNEL PORTALS (TUNP) HAVE RADIO ANTENNAS.

8000 0 8000 16000
1"=8000'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. VELASCO
DRAWN BY FJ. DOMINGUEZ
CHECKED BY A. NAVARRO
IN CHARGE A. RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION
DRAFT PEPD REV01
NOT FOR CONSTRUCTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
ALIGNMENT "REFINED SR14"
TRACTION POWER FACILITIES
LOCATION LAYOUT

CONTRACT NO. HSR14-42
DRAWING NO. TP-D0001-S14
SCALE AS SHOWN
SHEET NO.

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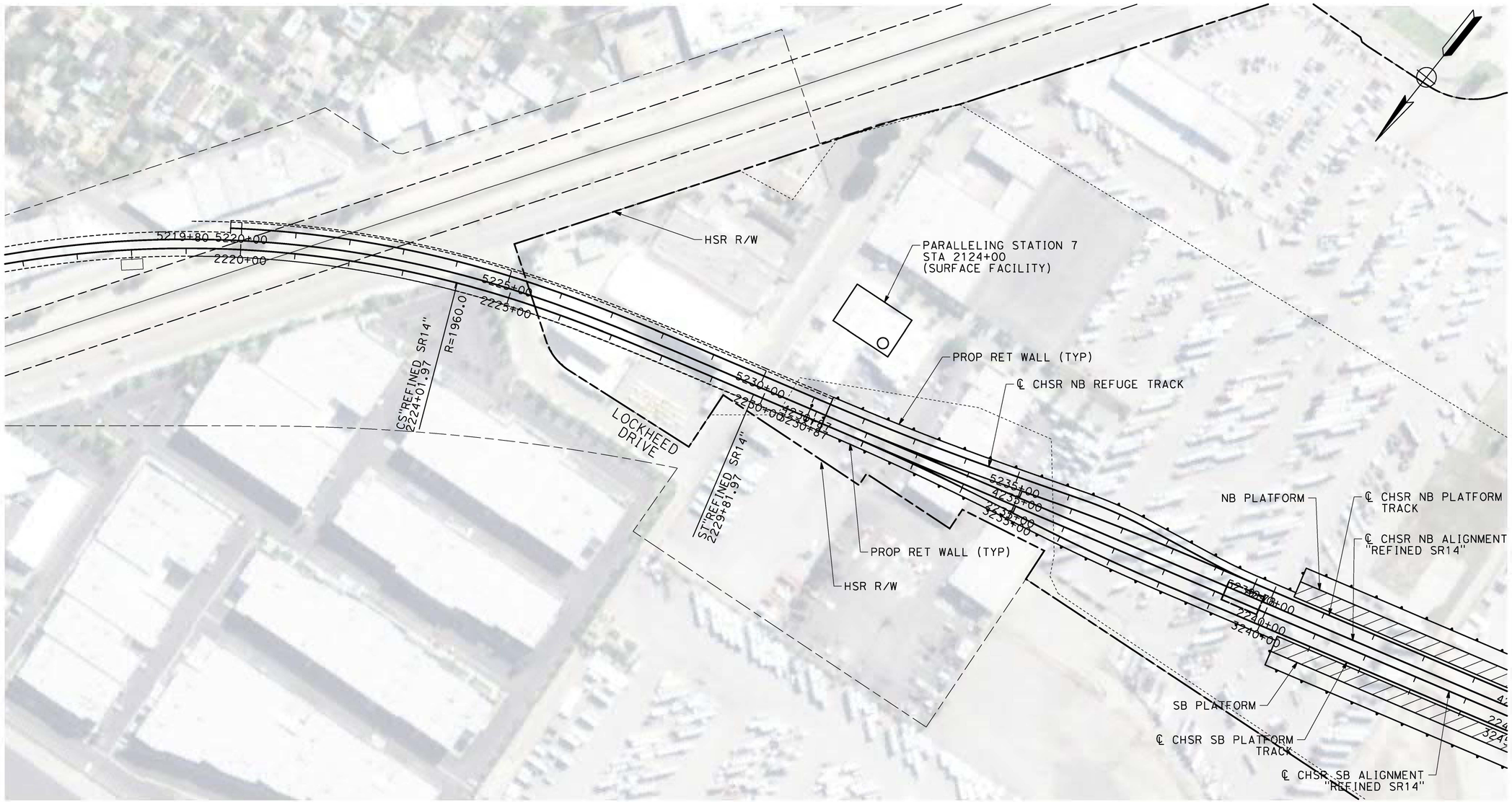

PLAN

100 0 100 200
1"=100'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. RODRIGUEZ
DRAWN BY FJ. DOMINGUEZ
CHECKED BY A. NAVARRO
IN CHARGE A .RELAÑO
DATE 02/01/2019

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
ALIGNMENT "REFINED SR14"
TRACTION POWER FACILITIES
PARALLELING STATION 7

CONTRACT NO. HSR14-42
DRAWING NO. TP-04008-S14
SCALE AS SHOWN
SHEET NO.

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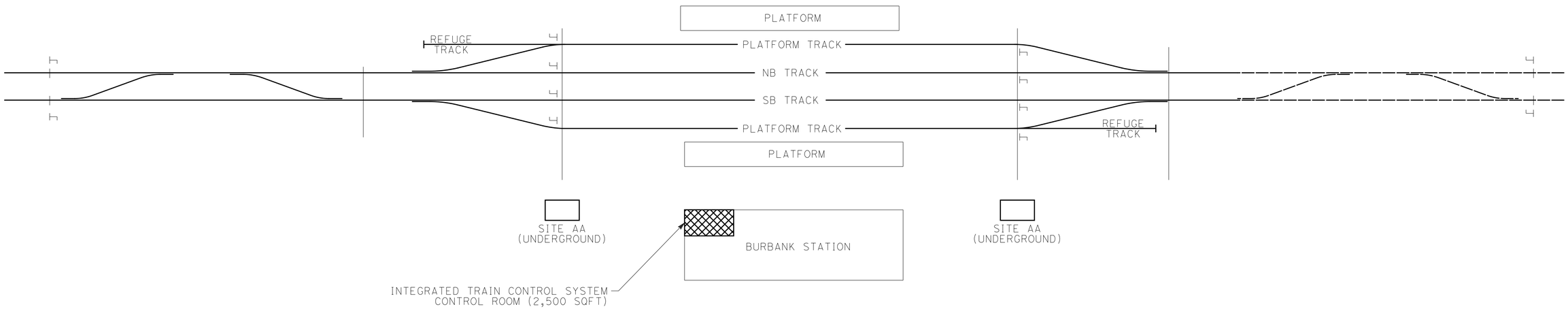

BURBANK STATION

NOTE:

1. THIS SCHEMATIC DIAGRAM IS APPLICABLE TO ALL ALTERNATIVES.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. VELASCO
DRAWN BY FJ. DOMINGUEZ
CHECKED BY A. NAVARRO
IN CHARGE A. RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
ALIGNMENT "REFINED SR14"
TRAIN CONTROL SYSTEM
INTERLOCKING SITES

CONTRACT NO. HSR14-42
DRAWING NO. TC-E6005
SCALE NOT TO SCALE
SHEET NO.

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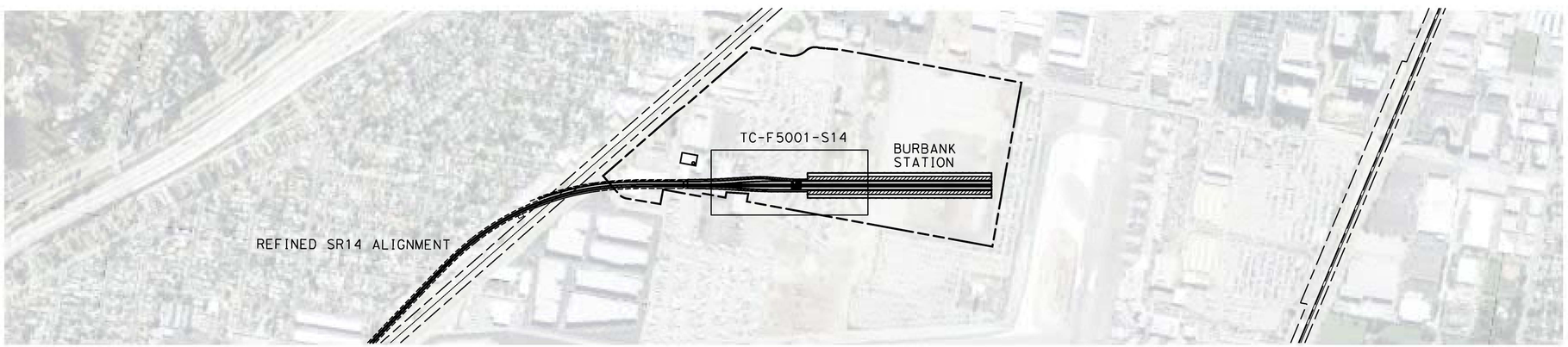

500 0 500 1000
1"=500'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. VELASCO
DRAWN BY FJ. DOMINGUEZ
CHECKED BY A. NAVARRO
IN CHARGE A. RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
ALIGNMENT "REFINED SR 14"
RAILWAY SYSTEMS
KEY MAP

CONTRACT NO. HSR14-42
DRAWING NO. TC-B6001-S14
SCALE AS SHOWN
SHEET NO.

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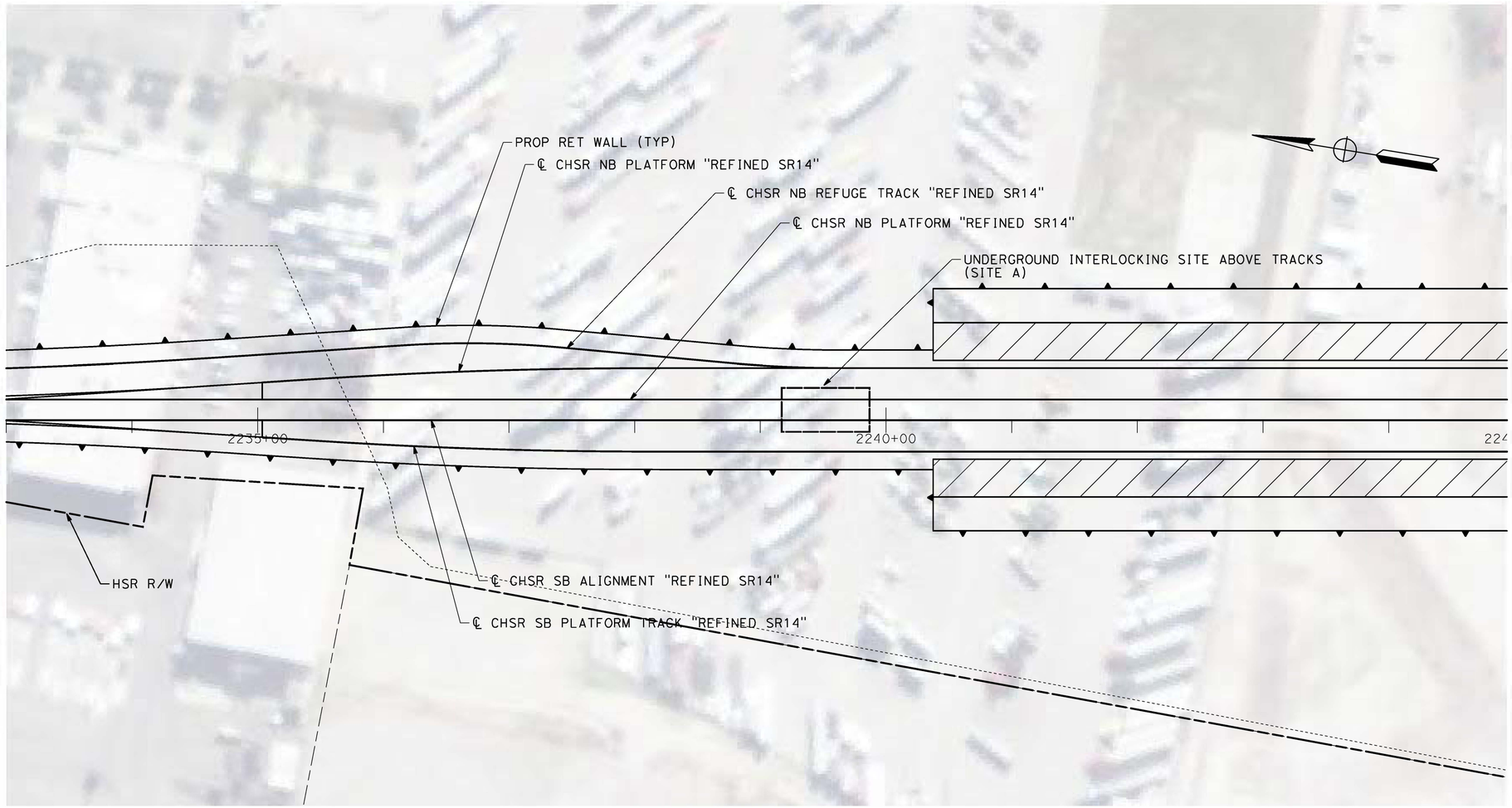

PLAN

50 0 50 100
1"=50'

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. VELASCO
DRAWN BY FJ. DOMINGUEZ
CHECKED BY A. NAVARRO
IN CHARGE A. RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
TRAIN CONTROL SYSTEM
INTERLOCKING SITES
STA 2233+00 TO STA 2245+00

CONTRACT NO. HSR14-42
DRAWING NO. TC-F5001-S14
SCALE AS SHOWN
SHEET NO.

California High-Speed Rail Authority

Burbank Subsection

DRAFT PEPD REV 01

Construction Staging

February 2019

CALIFORNIA High-Speed Rail Authority

U.S. Department of Transportation Federal Railroad Administration

GENERAL SHEETS

DRAWING NO.	DRAWING DESCRIPTION	SHEET NO.
CV-10001	INDEX OF DRAWINGS	

CONSTRUCTION STAGING SHEETS

DRAWING NO.	DRAWING DESCRIPTION	SHEET NO.
CV-14003-S14	BURBANK SUBSECTION. CONSTRUCTION STAGING	

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. VELASCO
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BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
GENERAL
INDEX OF DRAWINGS

CONTRACT NO. HSR14-42
DRAWING NO. CV-10001
SCALE NO SCALE
SHEET NO.

PHASE 1

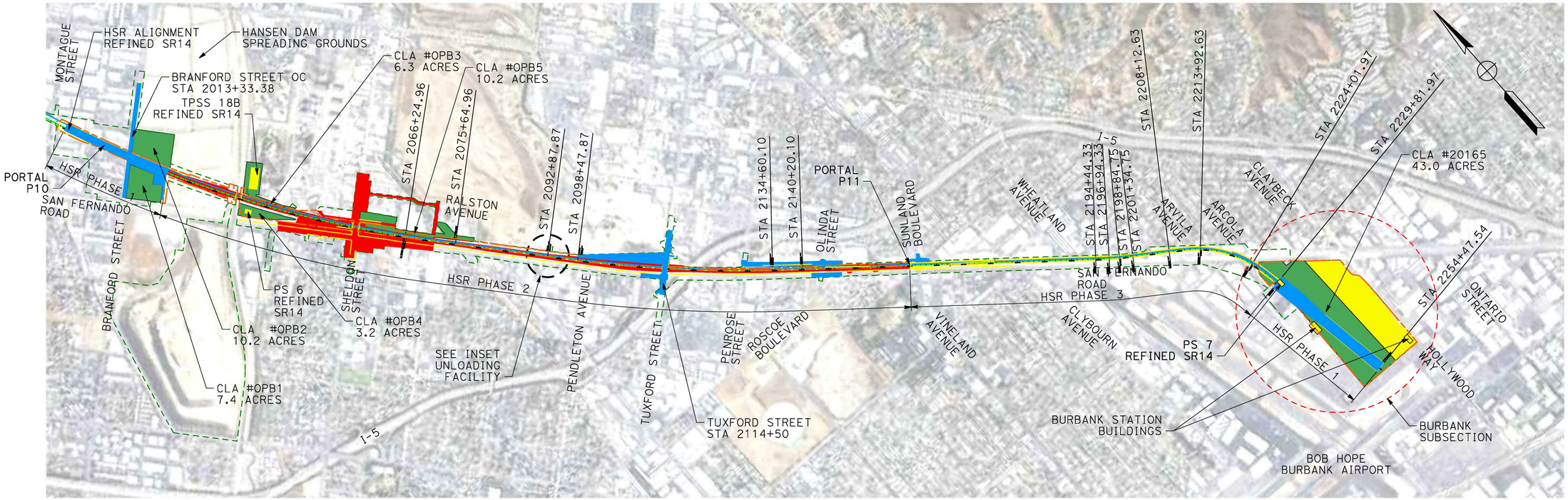
1. BUILD LOCAL ROADS, ADD UTILITIES AND DRAINAGE IMPROVEMENTS. CONSTRUCTION OF TUXFORD STREET GRADE SEPARATION IN THE VECINITY OF HSR ALIGNMENT
2. EXCAVATION OF PORTAL P10
3. BUILD PROPOSED VULCAN UNLOADING FACILITY AND PROPOSED VULCAN TRACK
4. REALIGN SAN FERNANDO BLVD BETWEEN PENROSE ST AND SUNLAND BLVD. SUN VALLEY METROLINK STATION RELOCATION SOUTH OF OLINDA ST.
5. CONSTRUCT HSR CUT AND COVER FROM COHASSET STREET TILL THE END OF PROJECT.

PHASE 2

1. SHIFT VULCAN TRAINS TRAFFIC TO NEW PROP VULCAN TRACK. BUILD NEW HSR STRUCTURE AND DRAINAGE STRUCTURE OVER UNLOADING FACILITY
2. CONSTRUCT SHELDON STREET GRADE-SEPARATION
3. PERFORM CIVIL WORKS FOR HSR INFRASTRUCTURE, INCLUDING TRENCH AND CUT AND COVER UNTIL SUNLAND BLVD
4. BUILD NEW HSR STRUCTURE OVER TUXFORD ST.

PHASE 3

1. CONSTRUCT HSR SEM TUNNEL AND CIVIL WORKS
2. CONSTRUCT HSR TRACK AND SYSTEMS FACILITIES
3. CONSTRUCT BURBANK STATION BUILDINGS
4. INSTALL ALL STATION FACILITIES, LAND-SIDE TRANSIT AMENITIES, WAY FINDING SIGNAGE, HARDSCAPING, AND LAND SCAPING AROUND STATION.



GENERAL NOTES:

1. DETAILED CONSTRUCTION SEQUENCE FOR GRADE SEPARATIONS IS NOT PROVIDED IN THIS SET OF PLANS. UTILITY RELOCATIONS ARE NOT SHOWN.
2. TRAFFIC DETOURS ARE NOT SHOWN IN THIS SET OF PLANS.
3. LAYDOWN AREAS, STAGING AREAS AND OTHER CONTRACTOR'S FACILITIES ARE INCLUDED IN THIS SET OF PLANS.
4. CONSTRUCTION PHASES WILL OVERLAP AS NEEDED TO REDUCE CONSTRUCTION DURATIONS.
5. HSR TRACK AND SYSTEMS TO BE CONSTRUCTED IN THE LAST PHASE. HATCHED AREAS ONLY REFER TO CIVIL WORKS.

TRAFFIC PHASING NOTES:

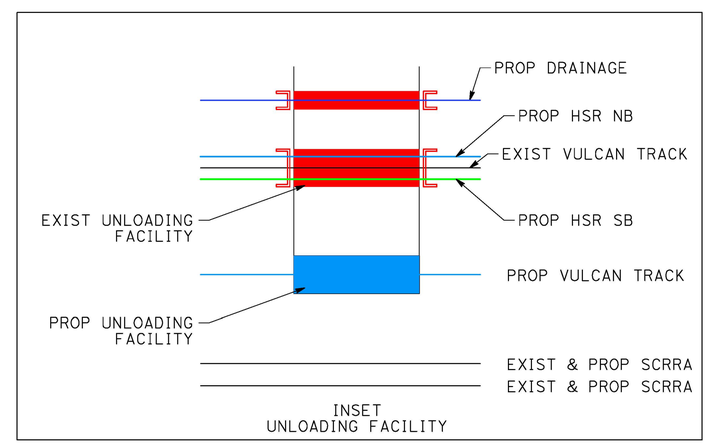
PHASE 1: E-W VEHICULAR TRAFFIC THROUGH EXISTING SHELDON ST AND PENROSE ST.
PHASE 2: E-W VEHICULAR TRAFFIC THROUGH REALIGNED BRANFORD ST, REALIGNED TUXFORD ST.
PHASE 3: E-W VEHICULAR TRAFFIC THROUGH REALIGNED ROADWAYS (BRANFORD ST, SHELDON ST, SAN FERNANDO RD, TUXFORD ST, OLINDA ST).

LEGEND :

- PHASE 1
- PHASE 2
- PHASE 3
- CONSTRUCTION STAGING/ LAYDOWN AREA (CLA)
- PROPOSED PERMANENT ENVIRONMENTAL FOOTPRINT
- PROPOSED RIGHT OF WAY

ABBREVIATIONS:

CLA	CONSTRUCTION STAGING/ LAYDOWN AREA
HSR	HIGH SPEED RAIL
OC	OVERCROSSING
SCRRA	SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY
UP	UNDERPASS
UPRR	UNION PACIFIC RAILROAD
PS	PARALLELING STATION
TPSS	TRACTION POWER SUB STATION



1000 0 1000 2000
1"=1000'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. VELASCO
DRAWN BY FJ. DOMINGUEZ
CHECKED BY A. NAVARRO
IN CHARGE A. RELAÑO
DATE 02/01/2019

BURBANK SUBSECTION

DRAFT PEPD REV01

NOT FOR CONSTRUCTION

SENER

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED RAIL PROJECT
PALMDALE TO BURBANK
BURBANK SUBSECTION
CONSTRUCTION STAGING

CONTRACT NO. HSR14-42
DRAWING NO. CV-I4003-S14
SCALE AS SHOWN
SHEET NO.

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