

Contract 19222

I-280/Foothill Expressway Off-Ramp Improvements

Volume 2 Technical Specifications

Issued for Bid
December 12, 2019



Solutions that move you

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STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TECHNICAL SPECIFICATIONS

(Final PS&E Submittal)

FOR CONSTRUCTION ON

STATE HIGHWAY

FOR CONSTRUCTION ON AND ADJACENT TO STATE HIGHWAY
IN Santa Clara COUNTY

IN AND NEAR Los Altos and CUPERTINO

FROM FOOTHILL EXPRESSWAY UNDERCROSSING TO 0.4 MILE NORTH OF
ROUTE 85/280 SEPARATION

For use in Connection with Standard Specifications **Dated 2018**,
Standard Plans **Dated 2018**, and Labor Surcharge And Equipment Rental Rates

CONTRACT NO. 04-4G6804

04-SCL-280 PM 11.2/11.5

Project ID 0413000086

Dated: December 11, 2019

CONTRACT NO. 04-4G6804

CONTRACT NO. 04-4G6804

The special provisions contained herein have been prepared by or under the direction of the following Registered Persons.

HIGHWAY and RETAINING WALLS

Mark A Wood

REGISTERED CIVIL ENGINEER



WATER POLLUTION CONTROL and EROSION CONTROL

Analette Ochoa

REGISTERED CIVIL ENGINEER



ELECTRICAL

Antonino D. Genoese

REGISTERED CIVIL ENGINEER



STANDARD PLANS LIST

The standard plan sheets applicable to this Contract include those listed below. The applicable revised standard plans (RSPs) listed below are included in the Project plans.

ABBREVIATIONS, LINES, SYMBOLS, AND LEGEND

A3A	Abbreviations (Sheet 1 of 3)
A3B	Abbreviations (Sheet 2 of 3)
A3C	Abbreviations (Sheet 3 of 3)
A10A	Legend - Lines and Symbols (Sheet 1 of 5)
A10B	Legend - Lines and Symbols (Sheet 2 of 5)
A10C	Legend - Lines and Symbols (Sheet 3 of 5)
A10D	Legend - Lines and Symbols (Sheet 4 of 5)
A10E	Legend - Lines and Symbols (Sheet 5 of 5)
A10F	Legend - Soil (Sheet 1 of 2)
A10G	Legend - Soil (Sheet 2 of 2)

PAVEMENT MARKERS, TRAFFIC LINES, AND PAVEMENT MARKINGS

A20A	Pavement Markers and Traffic Lines - Typical Details
RSP A20B	Pavement Markers and Traffic Lines - Typical Details
RSP A20C	Pavement Markers and Traffic Lines - Typical Details
RSP A20D	Pavement Markers and Traffic Lines - Typical Details
RSP A20E	Pavement Markers and Traffic Lines - Typical Detail for Contrast Striping
RSP A20F	Pavement Markers and Traffic Lines - Typical Details
A24A	Pavement Markings - Arrows
A24B	Pavement Markings - Arrows and Symbols
A24D	Pavement Markings - Words
A24F	Pavement Markings - Crosswalks
RSP A24G	Pavement Markings - Yield Lines, Limit Lines, and Wrong Way Details

EXCAVATION AND BACKFILL

A62A	Excavation and Backfill - Miscellaneous Details
A62B	Limits of Payment for Excavation and Backfill - Bridge Surcharge and Wall
A62D	Excavation and Backfill - Concrete Pipe Culverts

OBJECT MARKERS, DELINEATORS, CHANNELIZERS, AND BARRICADES

A73C	Delineators, Channelizers and Barricades
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CONCRETE BARRIER TYPE 60 SERIES

A76A	Concrete Barrier Type 60M
A76B	Concrete Barrier Type 60M

MIDWEST GUARDRAIL SYSTEM - STANDARD RAILING SECTIONS

RSP A77L1	Midwest Guardrail System - Standard Railing Section (Wood Post with Wood Block)
A77M1	Midwest Guardrail System - Standard Hardware
RSP A77N1	Midwest Guardrail System - Wood Post and Wood Block Details
RSP A77N3	Midwest Guardrail System - Typical Line Post Embedment and Hinge Point Offset Details
RSP A77N4	Midwest Guardrail System - Typical Railing Delineation and Dike Positioning Details

MINOR CONCRETE VEGETATION CONTROL - GUARDRAIL SYSTEM

A77N5	Minor Concrete Vegetation Control - Guardrail System
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	MIDWEST GUARDRAIL SYSTEM - TYPICAL LAYOUTS FOR STRUCTURES
A77Q2	Midwest Guardrail System - Typical Layouts for Structure Approach and Between Structures
	MIDWEST GUARDRAIL SYSTEM - CONNECTION DETAILS AND TRANSITION RAILING TO BRIDGE RAILINGS, ABUTMENTS AND WALLS
RSP A77U4	Midwest Guardrail System - Transition Railing (Type WB-31)
	CURBS, DRIVEWAYS, DIKES, CURB RAMPS, AND ACCESSIBLE PARKING
A87A	Curbs and Driveways
A87B	Hot Mix Asphalt Dikes
	DRAINAGE INLETS, PIPE INLETS AND GRATES
D73B	Precast Drainage Inlets - Types G1, G2, G3, G4, G5 and G6
D73C	Precast Drainage Inlets - Types G1, G2, G3, G4, G5 and G6
D73F	Precast Drainage Inlet Notes
D73G	Precast Drainage Inlet Tables
D74	Drainage Inlet Details
D77A	Grate Details No. 1
	CONSTRUCTION LOADS ON CULVERTS AND STRUT DETAILS
D88	Construction Loads on Culverts
	LANDSCAPE AND EROSION CONTROL
H1	Landscape and Erosion Control Symbols
H2	Landscape Details
RSP H6	Landscape Details
RSP H8	Landscape Details
H9	Landscape Details
RSP H51	Erosion Control Details - Fiber Roll and Compost Sock
H52	Rolled Erosion Control Product
	TEMPORARY CRASH CUSHIONS, RAILING AND TRAFFIC SCREEN
T1A	Temporary Crash Cushion, Sand Filled (Unidirectional)
T2	Temporary Crash Cushion, Sand Filled (Shoulder Installations)
T3A	Temporary Railing (Type K)
T3B	Temporary Railing (Type K)
	TEMPORARY TRAFFIC CONTROL SYSTEMS
T9	Traffic Control System Tables for Lane and Ramp Closures
T10	Traffic Control System for Lane Closure on Freeways and Expressways
T10A	Traffic Control System for Lane Closure on Freeways and Expressways
T14	Traffic Control System for Ramp Closure
	TEMPORARY WATER POLLUTION CONTROL
T51	Temporary Water Pollution Control Details (Temporary Silt Fence)
T53	Temporary Water Pollution Control Details (Temporary Cover)
T56	Temporary Water Pollution Control Details (Temporary Fiber Roll)
T58	Temporary Water Pollution Control Details (Temporary Construction Entrance)
T59	Temporary Water Pollution Control Details (Temporary Concrete Washout Facility)
T60	Temporary Water Pollution Control Details (Temporary Reinforced Silt Fence)
T61	Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)
T62	Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)

T63	Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)
T64	Temporary Water Pollution Control Details (Temporary Drainage Inlet Protection)
T65	Temporary Water Pollution Control Details (Temporary High-Visibility Fence)
	BRIDGE DETAILS
B0-3	Bridge Details
	RETAINING WALLS
B3-3A	Retaining Wall Type 1A (Case 1)
B3-5	Retaining Wall Details No. 1
	ADDITIONAL BRIDGE CONCRETE BARRIERS
RSP B11-79	Concrete Barrier Type 836 Details No. 1
RSP B11-80	Concrete Barrier Type 836 Details No. 2
	ROADSIDE SIGNS
RS1	Roadside Signs - Typical Installation Details No. 1
RS2	Roadside Signs - Wood Post - Typical Installation Details No. 2
RS4	Roadside Signs - Typical Installation Details No. 4
	OVERHEAD SIGNS (TRUSS)
RSP S1	Overhead Signs - Truss, Instructions and Examples
RSP S2	Overhead Signs - Truss, Single Post Type - Post Types II thru IX
S3	Overhead Signs - Truss, Single Post Type - Base Plate and Anchorage Details
S4	Overhead Signs - Truss, Single Post Type - Structural Frame Members Details No. 1
S5	Overhead Signs - Truss, Single Post Type - Structural Frame Members Details No. 2
S6	Overhead Signs - Truss, Gusset Plate Details
S8	Overhead Signs - Truss, Single Post Type - Round Pedestal Pile Foundation
S12	Overhead Signs - Truss, Structural Frame Details
S13	Overhead Signs - Truss, Frame Juncture Details
RSP S16	Overhead Signs - Walkway Details No. 1
RSP S17	Overhead Signs - Walkway Details No. 2
S17A	Overhead Signs - Walkway Details No. 3
S18	Overhead Signs - Walkway Safety Railing Details
	OVERHEAD AND ROADSIDE SIGNS PANELS
S93	Framing Details for Framed Single Sheet Aluminum Signs, Rectangular Shape
S94	Roadside Framed Single Sheet Aluminum Signs, Rectangular Shape
S95	Roadside Single Sheet Aluminum Signs, Diamond Shape
	ELECTRICAL SYSTEMS - LEGEND
RSP ES-1A	Electrical Systems (Legend)
RSP ES-1B	Electrical Systems (Legend)
RSP ES-1C	Electrical Systems (Legend)
	ELECTRICAL SYSTEMS - DETECTORS
ES-5A	Electrical Systems (Loop Detectors)
RSP ES-5B	Electrical Systems (Detectors)
	ELECTRICAL SYSTEMS - LIGHTING STANDARDS
ES-6E	Electrical Systems (Lighting Standard, Types 30 and 31)
RSP ES-6F	Electrical Systems (Lighting Standard, Slip Base Plate)
	ELECTRICAL SYSTEMS - SIGNAL AND LIGHTING STANDARD DETAILS
RSP ES-7M	Electrical Systems (Signal and Lighting Standard, Detail No. 1)

ES-7N	Electrical Systems (Signal and Lighting Standard, Detail No. 2)
RSP ES-7O	Electrical Systems (Signal and Lighting Standard, Detail No. 3)
	ELECTRICAL SYSTEMS - PULL BOX
RSP ES-8A	Electrical Systems (Non-Traffic Pull Box)
RSP ES-8B	Electrical Systems (Traffic Pull Box)
ES-11	Electrical Systems (Foundation Installations)
	ELECTRICAL SYSTEMS - SPLICE INSULATION METHODS, KINKING AND BANDING DETAILS
ES-13A	Electrical Systems (Splice Insulation Methods Details)
RSP ES-13B	Electrical Systems (Kinking and Banding Detail)
	ELECTRICAL SYSTEMS - SIGN ILLUMINATION EQUIPMENT AND CONTROLS
RSP ES-15D	Electrical Systems (Lighting and Sign Illumination Control)

ORGANIZATION

The State of California Department of Transportation Standard Specifications ("Caltrans Standard Specifications") dated 2018 apply to this Contract and are incorporated herein by this reference as if fully set forth herein (available to Contractor upon written request). Accordingly, the Caltrans Standard Specifications are considered to be an integral part of these Technical Specifications.

The Technical Specifications herein modify and/or supplement the Caltrans Standard Specifications. As applicable, these Technical Specifications begin with a revision clause that describes or introduces a revision to the Caltrans Standard Specifications as revised by any Caltrans Revised Standard Specification ("RSS").

The Technical Specifications herein are under headings that correspond with the main-section headings of the Caltrans Standard Specifications. A main-section heading is a heading shown in the table of contents of the Caltrans Standard Specifications.

Any paragraph added or deleted by a revision clause does not change the paragraph numbering of the Caltrans Standard Specifications for any other reference to a paragraph of the Caltrans Standard Specifications.

Additionally, the Caltrans Standard Plans dated 2018 apply to this Contract, see Standard Plans List at the front of these Technical Specifications.

Unless otherwise specified, all requirements, tasks, and obligations set forth in these Technical Specifications must be performed by and are the responsibility of Contractor.

DIVISION I GENERAL PROVISIONS

1 GENERAL

Add to section 1-1.01:

Bid Items and Applicable Sections

Item code	Item description	Applicable section
130670A	TEMPORARY REINFORCED SILT FENCE (WILDLIFE EXCLUSION)	13
046644	CONCRETE BARRIER (TYPE 836A)	83

2 BIDDING**Add between the 1st and 2nd paragraphs of section 2-1.06B:**

VTA makes the following supplemental Project information available:

Supplemental Project Information

Means	Description
Included in the <i>Information Handout</i>	<ol style="list-style-type: none">1. Geotechnical Design and Materials Report2. Preliminary Site Investigation Report3. Storm Water Data Report
Included with the Project plans	<ol style="list-style-type: none">1. Logs of test borings

6 CONTROL OF WORK

Add to section 6-1.03 of the RSS:

6-1.03B Submittals

6-1.03B(1) Work Plan

For local material, such as rock, gravel, earth, structure backfill, pervious backfill, imported borrow, and culvert bedding, obtained from a (1) noncommercial source, or (2) source not regulated under California jurisdiction, submit a local material plan for each material at least 60 days before placing the material. The local material plan must include:

1. Certification signed by Contractor and an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State stating:

I am aware local material from a noncommercial source or a source not regulated under CA jurisdiction must be sampled and analyzed for pH and lead and may require sampling and analysis under section 6-1.03B(3) for other constituents of concern based on the land use history. I am aware that local material sources must not contain ADL at concentrations greater than 80 mg/kg total lead or equal to or greater than 5 mg/L soluble lead as determined by the Waste Extraction Test (WET) Procedures, 22 CA Code of Regs § 66261.24(a)(2) App II. I am aware that a maximum quantity of material may be excavated at the site based on the minimum number of samples taken before excavating at the site under section 6-1.03B(3).

2. Land use history of the local material location and surrounding property
3. Sampling protocol
4. Number of samples per volume of local material
5. QA and QC requirements and procedures
6. Qualifications of sampling personnel
7. Stockpile history
8. Name and address of the analytical laboratory that will perform the chemical analyses
9. Analyses that will be performed for lead and pH
10. Other analyses that will be performed for possible hazardous constituents based on:
 - 10.1. Source property history
 - 10.2. Land use adjacent to source property
 - 10.3. Constituents of concern in the ground water basin where the job site is located

The plan must be sealed and signed by an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State.

If the plan requires revisions, the Engineer provides comments. Submit a revised plan within 7 days of receiving comments. Allow 7 days for the review.

6-1.03B(2) Analytical Test Results

At least 15 days before placing local material, submit analytical test results for each local material obtained from a noncommercial source or a material source not regulated under CA jurisdiction. The analytical test results must include:

1. Certification signed by an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State stating:

The analytical testing described in the local material plan has been performed. I performed a statistical analysis of the test results using the US EPA's ProUCL software with the applicable 95 percent upper confidence limit. I certify that the material from the local material source is suitable for unrestricted use at the job site, it has a pH above 5.0, does not contain soluble lead in concentrations equal to or greater than 5mg/l as determined by the Waste Extraction Test (WET) Procedures, 22 CA Code of Regs § 66261.24(a)(2) App II, does not contain lead in concentrations above 80 mg/kg total lead, and (3) is not contaminated with the other constituents of concern identified in the local material plan in excess of these constituents' respective San Francisco Bay RWQCB commercial/industrial environmental screening levels or recognized naturally occurring background concentrations in the job site area.

2. Chain of custody of samples
3. Analytical results no older than 1 year
4. Statistical analysis of the data using US EPA's ProUCL software with a 95 percent upper confidence limit
5. Comparison of sample results and 95 percent upper confidence limits to hazardous waste concentration thresholds and the applicable San Francisco Bay RWQCB environmental screening levels (ESLs) given in direct exposure human health risk levels (Table S-1), commercial/industrial: Shallow soil exposure, under ESL Summary tables (Feb. 2016, Rev 3) found at:

http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.shtml

6-1.03B(3) Sample and Analysis

Sample and analyze local material from a noncommercial source or a source not regulated under CA jurisdiction:

1. Before bringing the local material to the job site
2. As described in the local material plan
3. Under US EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)

The sample collection must be designed to generate a data set representative of the entire volume of proposed local material.

Before excavating at a noncommercial material source or a source not regulated under CA jurisdiction, collect the minimum number of samples and perform the minimum number of analytical tests for the corresponding maximum volume of local material as shown in the following table:

Minimum Number of Samples and Analytical Tests for Local Material

Maximum volume of imported borrow (cu yd)	Minimum number of samples and analytical tests
< 5,000	8
5,000–10,000	12 for the first 5,000 cu yd plus 1 for each additional 1,000 cu yd or portion thereof
10,000–20,000	17 for the first 10,000 cu yd plus 1 for each additional 2,500 cu yd or portion thereof
20,000–40,000	21 for the first 20,000 cu yd plus 1 for each additional 5,000 cu yd or portion thereof
40,000–80,000	25 for the first 40,000 cu yd plus 1 for each additional 10,000 cu yd or portion thereof
> 80,000	29 for the first 80,000 cu yd plus 1 for each additional 20,000 cu yd or portion thereof

Do not collect composite samples or mix individual samples to form a composite sample.

Analyze the samples using the US EPA's ProUCL software with a 95 percent upper confidence limit. All chemical analysis must be performed by a laboratory certified by the SWRCB's Environmental Laboratory Accreditation Program (ELAP).

The analytical test results must demonstrate that the local material:

1. Is not a hazardous waste
2. Has a pH above 5.0
3. Has an average total lead concentration, based upon the 95 percent upper confidence limit, at or below 80 mg/kg
4. Is not contaminated with local material plan-identified constituents of concern at average concentrations (95% upper confidence limits) in excess of their respective commercial/industrial San

Francisco Bay RWQCB environmental screening levels ESLs or recognized naturally occurring background concentrations in the job site area.

6-1.03C Local Material Management

Do not place local material until authorized.

If the Engineer determines the appearance, odor, or texture of any delivered local material suggests possible contamination, sample and analyze the material. The sampling and analysis is change order work unless (1) hazardous waste is discovered or (2) the analytical test results indicate the material does not comply with section 6-1.03B(3).

Dispose of noncompliant local material at an appropriately permitted CA Class I, CA Class II or CA Class III facility. Contractor is the generator of noncompliant local materials.

Add to section 6-1:

6-1.06 BUY CLEAN CALIFORNIA ACT

6-1.06A Summary

The materials or products shown in the following table are subject to the Buy Clean California Act (Pub Cont Code § 3500 et seq.):

Material or product	Material specifications
Carbon steel rebar ^a	Section 52-1.02B, "Bar Reinforcement" Excludes epoxy-coated or galvanized reinforcement uses.
Structural steel ^b	Section 55-1.02D(1), "General," – Structural Steel and Other Materials tables and Section 99, "Building Construction" For hot-rolled, plate or hollow products.
Flat glass ^c	Section 99, "Building Construction"
Mineral wool board insulation ^d	Section 99, "Building Construction"

^aFor each mill providing 20,000 pounds or more on the project

^bFor each mill providing 5,000 pounds or more on the project

^cFor each manufacturer providing 2,000 square feet or more on the project

^dFor each manufacturer providing 4,000 square feet or more on the project

For product category rules for applicable materials or products, go to the METS website. Use the product category rule in effect on the date of bid opening unless otherwise authorized. An environmental product declaration is not required for a material or product for either of the following conditions:

1. Applicable product category rule has expired without replacement as of the bid opening date.
2. Applicable product category rule was issued less than 100 days before the bid opening date.

For projects with a bid opening date before December 1, 2019, the Department collects existing environmental product declarations for applicable materials or products.

For projects with a bid opening date from December 1, 2019, through May 31, 2021, with total bid over \$1 million and 175 or more original working days, submit an environmental product declaration as an informational submittal for each applicable material or product. Submit each environmental product declaration within 15 days of initial installation of the material or product.

6-1.06B Definitions

environmental product declaration: Independently verified document created and verified under International Organization for Standardization (ISO) 14025 for Type III environmental declarations that identifies the global warming potential emissions of the facility-specific material or product through a product stage life cycle assessment.

product category rule: Program operator established rule based on the science of life cycle assessment that governs the development of the environmental product declaration for the material or product.

December 11, 2019

product stage: Boundary of the environmental product declaration that includes (1) raw material supply, (2) transportation processes, and (3) processing operations, including operations such as melting, mixing, fabrication, finishing, curing, cooling, trimming, packaging and loading for transport delivery. Commonly referred to as a "cradle-to-gate" life cycle assessment.

program operator: Independent agency that supervises and confirms the full environmental product declaration development process under ISO 14025.

raw material supply: Upstream processes which can include allocations, extraction, refinement, reclamation, handling and processing of the constituents used in producing the material or product.

transportation processes: Includes transportation of raw, reclaimed or recycled material constituents from the supplier to the gate of the manufacturer, producer or fabricator. Includes transport of related waste products.

6-1.06C Submittals

At least 15 days before submitting environmental product declarations, Contractor must register on the Department's Data Interchange for Materials Engineering. Follow the registration process at:

<https://dime.dot.ca.gov/>

Submit environmental product declarations for applicable materials or products to the Department's Data Interchange for Materials Engineering and provide PDF copies to the Engineer. Carbon steel rebar or structural steel environmental product declarations must be mill produced.

Immediately notify the Engineer if a program operator has determined their product category rule does not allow for development of a facility-specific environmental product declaration for an applicable material or product. Include written correspondence from the program operator. If the Engineer determines the development of a facility-specific environmental product declaration for an applicable material or product cannot be achieved, no environmental product declaration will be required for that specific material or product.

6-1.06D Quality Assurance

Not Used

DIVISION II GENERAL CONSTRUCTION

12 TEMPORARY TRAFFIC CONTROL

Place PCMSs at the locations shown and in advance of the 1st warning sign for each:

1. Stationary lane closure
2. Off-ramp closure
3. Shoulder closure
4. Speed reduction zone

Add between the 9th and 10th paragraphs of section 12-3.32C:

Start displaying the message on the sign 15 minutes before closing the lane or shoulder or when directed by the Engineer.

Add to the end of section 12-4.02C(1):

Keep the full width of the traveled way open to traffic when no active construction activities are occurring in the traveled way or within 6 feet of the traveled way and on:

1. Friday after 3:00 p.m.
2. Saturday
3. Sunday
4. Designated holidays

Keep the full width of the traveled way open to traffic when no active construction activities are occurring in the traveled way or within 6 feet of the traveled way.

Keep the full width of the ramp traveled way open for use by traffic on designated holidays.

Type of facility	Route	Direction or segment	Period	Liquidated damages/interval
Mainline	I-280	Northbound	1st half hour	\$1,076/10 minutes
			2nd half hour	\$1,614/10 minutes
			2nd hour and beyond	\$2,152/10 minutes
Connector	SR85 to I-280	Northbound	1st half hour	\$1,000/10 minutes
			2nd half hour	\$1,000/10 minutes
			2nd hour and beyond	\$1,023/10 minutes

Add to the list in the 1st paragraph of section 12-4.02C(3)(a):

3. Work is on the traveled way but within 6 feet of the adjacent traffic lane

Contractor may close the Foothill Expressway ramp from northbound Interstate 280 for all traffic (see sheets SC-3 through SC-5) for an extended period of time beginning at 10:00pm Friday through 4:00am the following Monday as summarized in charts nos. J2 and I2 instead of the hours shown in charts nos. J1 and I1. When the ramp is closed, place a PCMS for the duration of the closure at least 1,500 feet in advance of the off-ramp upstream from the ramp being closed with the message: Foothill Expressway / Exit / Closed. Place a PCMS at a location on the ramp and connectors for 7 days before the date of the planned closure with the message shown in the following table:

Message type	Message
Weekend	Ramp / Will Be / Closed – Next / Weekend
Weekday	Ramp / Will Be / Closed – This / Weekend
Weekend (when closed)	Foothill/ Exit/ Closed – Use / Magdalena/ Exit

NOTES:

"/" separates each line of text on the PCMS display.

"–" denotes where the PCMS display flashes the next line of text.

Replace Reserved in section 12-4.02C(3)(f) with:

Closure restrictions for designated holidays and special days are shown in the following table:

Lane Closure Restrictions For Designated Holidays And Special Days											
Thu	Fri	Sat	Sun	Mon	Tues	Wed	Thu	Fri	Sat	Sun	Mon
x	H xx	xx	xx								
	SD xx										
x	xx	H xx	xx								
		SD xx									
	x	xx	H xx	xx							
			SD xx								
	x	xx	xx	H xx	xxx						
	x	xx	xx	SD xx	xxx						
				x	H xx						
				x	SD xx						
					x	H xx					
						SD xx					
						x	H xx	xx	xx	xx	
							SD xx				

Legend:

	Refer to lane requirement charts.
x	The full width of the traveled way must be open for use by traffic after ___.
xx	The full width of the traveled way must be open for use by traffic.
xxx	The full width of the traveled way must be open for use by traffic until ___.
H	Designated holiday
SD	Special day

Replace *Reserved* in section 12-4.02C(3)(g) with:

Freeway lane closures must comply with the requirements shown in the following chart:

Chart No. G1 Freeway Lane Requirements																									
County: SCI							Route/Direction: 280 / NB							Post Mile:10.4/11.4											
Closure limits: From 0.15-mile South of SR-85 O/C to Foothill Expressway O/C																									
Hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon– Thu	1	1	1	1	2																4	3	2	2	1
Fri	1	1	1	1	2																4	3	2	2	1
Sat	1	1	1	1	1	1	2	3	3											3	3	3	3	2	1
Sun	1	1	1	1	1	1	1	2	3	4							3	3	3	3	3	3	2	1	1

Legend:

1	Provide at least 1 through freeway lane open in the direction of travel.
2	Provide at least 2 adjacent through freeway lanes open in the direction of travel.
3	Provide at least 3 adjacent through freeway lanes open in the direction of travel.
4	Provide at least 4 adjacent through freeway lanes open in the direction of travel.
	Work is allowed within the highway where a shoulder or lane closure is not required.

REMARKS:

Replace Reserved in section 12-4.02C(3)(i) with:

Comply with the requirements for the connector lane closure shown in the following chart:

Chart No. I1																									
Connector Lane Closure Requirements																									
County: SCI							Route/Direction: 85/NB							Post Mile: 18.3											
Closure limits: On the Connector Off-ramp to NB Route 280																									
Hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon– Thu	1	1	1	1	1																		1	1	1
Fri	1	1	1	1	1																		1	1	1
Sat	1	1	1	1	1	1																	1	1	1
Sun	1	1	1	1	1	1																	1	1	1
Legend:																									
<input type="checkbox"/> 1 Provide at least 1 connector lane open in the direction of travel.																									
<input type="checkbox"/> Work is allowed within the highway where a shoulder or lane closure is not required.																									
REMARKS:																									

Chart No. I2																									
Connector Lane Closure Requirements																									
County: Santa Clara							Route/Direction: 280/NB							Post Mile: 11.051											
Closure limits: SR-85 NB to NB I-280																									
Hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	1	1	1	1																					
Fri																								1	1
Sat	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sun	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Legend:																									
<input type="checkbox"/> 1 Provide at least 1 connector lane open in the direction of travel.																									
<input type="checkbox"/> Work is allowed within the highway where a shoulder or lane closure is not required.																									
REMARKS: THIS CHART IS ONLY APPLICABLE FOR THE EXTENDED WEEKEND CLOSURE OF THE FOOTHILL EXPRESSWAY OFF-RAMP.																									
See sheets SC-3 through SC-5 for traffic handling details.																									

Comply with the requirements for the complete ramp closure shown in the following chart:

Chart No. J1 Complete Ramp Closure Hours																									
County: SCI							Route/Direction: 280/NB							Post Mile: 11.3											
Closure limits: On the Off-ramp to Foothill Expwy																									
Hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon–Thu	C	C	C	C																					C
Fri	C	C	C	C																					C
Sat	C	C	C	C	C																				C
Sun	C	C	C	C	C																			C	C
Legend:																									
<input type="checkbox"/> C Ramp may be closed completely. <input type="checkbox"/> Work is allowed within the highway where a shoulder or lane closure is not required.																									
REMARKS: See Detour Plan DE-1																									

Chart No. J2 Ramp Lane Closure Requirements																									
County: Santa Clara							Route/Direction: 280/NB							Post Mile: 11.294											
Closure limits: Foothill Expressway Off-Ramp																									
Hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	C	C	C	C																					
Fri																								C	C
Sat	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Sun	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Legend:																									
<input type="checkbox"/> C Ramp may be closed completely. <input type="checkbox"/> Work is allowed within the highway where a shoulder or lane closure is not required.																									
REMARKS: THIS CHART IS ONLY APPLICABLE FOR THE EXTENDED WEEKEND CLOSURE OF THE FOOTHILL EXPRESSWAY OFF-RAMP.																									
See sheets SC-3 through SC-5 for traffic handling details.																									

13 WATER POLLUTION CONTROL

Add to the end of section 13-3.01A:

This project's risk level is 2.

Add between the 1st and 2nd paragraph of section 13-10.03E:

The fence must be Type 1.

14 ENVIRONMENTAL STEWARDSHIP

An Environmental Sensitive Area (ESA) exists on this Project. The Contractor shall notify the Engineer a minimum of 7 days before his intent to perform clearing and grubbing and request a formal delineation of the woodrat nests by the Engineer or the VTA supplied biologist. Following delineation, the Contractor shall erect a construction-phase buffer of between six and ten feet around each nest, using Temporary High Visibility Fence (type ESA), to ensure that woodrat nests are not affected by Project implementation.

Contractor shall install Temporary Reinforced Silt Fence (Wildlife Exclusion Fence; WEF) to protect California red-legged frog (CRLF) habitat, as indicated on the plans prior to the Contractor beginning any work. Wildlife Exclusion Fence (WEF) shall be installed between April 15 and October 15 as the first order of Work. A minimum of 48 hours in advance of installing WEF, the Contractor shall provide the Engineer with written notification of when Contractor will erect the WEF. Contractor shall erect a WEF a minimum of twenty feet from any construction activities or as directed by the Engineer. WEF along the right of way shall be placed against the right of way fence or silt fence. Off-road traffic outside of designated Project areas shall be prohibited. Also, any area outside of the Project limits/right of way where the Contractor establishes a lay-down area or yard shall have a wildlife exclusion fence erected around them.

Contractor shall conduct daily checks of the exclusion fencing to ensure that it is functioning correctly (e.g., without any gaps through which CRLF might enter the Work area). Contractor shall submit written inspection reports to the Engineer on a weekly basis.

Any necessary repairs to the fence shall be performed within 24 hours of discovery. Failure to conform to this requirement shall result in shut down of all Project Work until the exclusion fence is repaired. No additional contract time or compensation shall be provided therefore. WEF must be removed as a last order of Work prior to application of final erosion control, after all other construction equipment is removed from the area.

Contractor shall preserve and protect the ESA at all times and shall prohibit all entry to the fenced ESA for any purpose, unless otherwise expressly authorized by VTA in writing.

Contractor shall cooperate in allowing ESA monitoring operations during construction as directed by VTA. Contractor shall remove ESA fencing at the completion of construction.

Should Contractor encounter any wildlife species (i.e. any animal that is not a domestic pet) or as referenced in this section, Contractor shall immediately stop working in the area and notify VTA, so that the proper protective measures can be taken.

To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than 1-foot deep will be covered with plywood or similar materials at the close of each working day or provided with one or more escape ramps constructed of earth fill or wooden planks.

If at any time a listed species is discovered, the Engineer and qualified biologist, retained by VTA, will be notified immediately and the qualified biologist shall implement the species observation and handling protocol outlined below, including establishment of buffer zones around nests.

Migratory birds could nest and/or roost within the Work area. The following minimization and avoidance measures will be implemented during construction:

- a. Exclusion methods may be used to prevent migratory birds from nesting and roosting. Such methods may include the use of small mesh netting, which will be installed prior to the nesting season. The nesting season extends from February 1 to August 31 for most species.
- b. With the exception of nests of listed bird species, unoccupied nests – nests without birds or eggs will be removed to deter birds from re-establishing nests within the action area.
- c. If occupied nests – nests with birds or eggs – are present within the action area, Work within 50 feet of the nest of passerine species or 300 feet of raptor species will stop and the Contractor must immediately notify VTA. VTA will notify the California Department of Fish and Wildlife (CDFW).

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- d. Contractor will remove potential nesting substrate, such as brush, trees, grass, and forbs, during the non-breeding season (September 1st through January 31st).
- e. Contractor shall notify VTA of the initiation of construction activities, such as tree removal and ground disturbance, within 7 days. A qualified biologist, retained by VTA, will conduct preconstruction surveys if construction is during the nesting season (February 1st to August 31st).

The following site restrictions will be implemented to avoid or minimize effects on listed species and their habitats during construction operations:

- a. A speed limit of 15 miles per hour (mph) in the Project footprint in unpaved areas will be enforced to reduce dust and excessive soil disturbance.
- b. Construction access, staging, storage, and parking areas, will be located outside of the Caltrans ROW in areas environmentally cleared by the Contractor. Access routes and the number and size of staging and Work areas will be limited to the minimum necessary to construct the proposed Project. Routes and boundaries of roadwork will be clearly marked prior to initiating construction or grading.
- c. Any borrow/fill material will be certified to be non-toxic and weed free.
- d. All food and food-related trash items will be enclosed in sealed trash containers and properly disposed of off-site.
- e. No pets from Project personnel will be allowed anywhere in the Project area during construction.
- f. No firearms will be allowed on the Project site except for those carried by authorized security personnel, or local, State or Federal law enforcement officials.
- g. A Spill Response Plan will be prepared as part of the Storm Water Pollution Prevention Plan or Water Pollution Control Plan. Hazardous materials such as fuels, oils, solvents, etc. will be stored in sealable containers in a designated location that is at least 50 ft from hydrologic features.
- h. All equipment must be properly maintained and free of leaks. Servicing of vehicles and construction equipment including fueling, cleaning, and maintenance will occur at least 50 ft from any hydrologic features unless it is an existing gas station.

Prior to the start of construction, a qualified biologist, provided by VTA, will conduct an educational training program for all construction personnel including Contractor and subcontractors. The training will include, at a minimum, a description of CRLF, and migratory birds and their habitats; associated habitats of these species within the action area; an explanation of the status of these species and protection under state and federal laws; the avoidance and minimization measures to be implemented to reduce take of these species; communication and Work stoppage procedures in case a listed species is observed within the action area; and an explanation of the ESAs and WEF and the importance of maintaining these structures. Upon completion of the program, Contractor personnel will sign a form stating that they attended the program and understand all the avoidance and minimization measures and implications of the Federal Endangered Species Act (FESA).

Construction actions will be scheduled to minimize effects on listed species and habitats. Except for limited vegetation clearing necessary to minimize effects to nesting birds, Work must be conducted between April 15 and October 15.

To the extent practicable, nighttime construction will be minimized to avoid effects to nocturnally active listed species. When utilized in areas adjacent to Stevens Creek, work lights will be directed away from adjacent habitat areas.

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Storm Water Pollution Prevention Plans (SWPPP) and erosion control Best Management Practices (BMPs) must be developed and implemented to minimize any wind or water-related erosion and must be in compliance with the requirements of the Regional Water Quality Control Board (RWQCB). Protective measures must include, at a minimum:

- a. No discharge of pollutants from vehicle and equipment cleaning is allowed into any storm drains or water courses.
- b. Vehicle and equipment fueling and maintenance operations must be at least 50 ft away from watercourses, except at established commercial gas stations or established vehicle maintenance facility.
- c. Concrete wastes are collected in washouts and water from curing operations is collected and disposed. Neither will be allowed into watercourses.
- d. Spill containment kits will be maintained onsite at all times during construction operations and/or staging or fueling of equipment.
- e. Dust control measures will include use of water trucks and dust palliatives to control dust in excavation-and-fill areas, covering temporary access road entrances and exits with rock (rocking), and covering of temporary stockpiles when weather conditions require.
- f. Coir rolls or straw wattles that do not contain plastic or synthetic mono-filament netting will be installed along or at the base of slopes during construction to capture sediment.
- g. Protection of graded areas from erosion using a combination of silt fences, fiber rolls, etc. along toes of slopes or along edges of designated staging areas, and erosion control netting (such as jute or coir) as appropriate on sloped areas. No erosion control materials that use plastic or synthetic mono-filament netting will be used.

Contractor will implement permanent erosion control measures such as bio-filtration strips and swales to receive storm water discharges from the highway, or other impervious surfaces, to the maximum extent practicable.

Contractor must not manipulate hydrological features (i.e., topographic depressions, drainage ditches, culverts, etc.) outside of the Project footprint (i.e., re-routed, dredged, filled, graded, etc.).

Contractor shall only use sandbags filled with clean gravel or sand (i.e. gravel or sand free of dirt, silt, or other debris that would adversely affect water quality if released into the stream) for construction of the cofferdams. Contractor shall use a dewatering pump with ¼ inch mesh screen material during all dewatering.

Any vegetation that is within the cut and fill line or growing in locations where permanent structures will be placed (e.g., road alignment, shoulder widening, soil nail walls, etc.) will be cleared.

Vegetation will be cleared only where necessary and will be cut above soil level except in areas that will be excavated for roadway construction.

All clearing and grubbing of woody vegetation will occur by hand or using light construction equipment such as backhoes.

If clearing and grubbing occurs between February 1 and August 31, a qualified biologist(s), provided by VTA, will survey for nesting birds within the area(s) to be disturbed including a perimeter buffer of 50 feet for passerines and 300 feet for raptors before clearing activities begin.

All nest avoidance requirements of the Migratory Bird Treaty Act and California Fish and Game Code will be observed.

All cleared vegetation will be removed from the Project footprint to prevent attracting animals to the Project site.

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Contractor will be responsible for obtaining all permits, licenses and environmental clearances for properly disposing of such materials.

A qualified biologist, retained by VTA, will be present during all vegetation clearing and grubbing activities.

Prior to vegetation removal, a qualified biologist, retained by VTA, shall thoroughly survey the area for the CRLF.

Once the qualified biologist, retained by VTA, has thoroughly surveyed the area for CRLF, clearing and grubbing may continue without further restrictions on equipment; however, the qualified biologist, retained by VTA, shall remain onsite to monitor for the CRLF until all clearing and grubbing activities are complete, as directed by VTA.

After Project completion, all temporarily affected areas shall be returned to original grade and contours to the maximum extent practicable, protected with proper erosion control materials, and revegetated with native species appropriate for the region and habitat communities on site.

To reduce the spread of invasive non-native plant species and minimize the potential decrease of palatable vegetation for wildlife species, Contractor will comply with Executive Order 13112.

In the event that high- or medium-priority noxious weeds, as defined by the California Department of Food and Agriculture or the California Invasive Plant Council, are disturbed or removed during construction-related activities, the Contractor will contain the plant material associated with these noxious weeds and dispose of it in a manner that will not promote the spread of the species.

The Contractor will be responsible for obtaining all permits, licenses and environmental clearances for properly disposing of materials.

Areas subject to noxious weed removal or disturbance will be replanted with fast-growing native grasses or a native erosion control seed mixture. If seeding is not possible, the area should be covered to the extent practicable with heavy black plastic solarization material until the end of the Project.

All slopes or unpaved areas affected by the proposed action will be restored to natural conditions. Slopes and bare ground will be reseeded with native grasses and shrubs characteristic of the region where construction will occur and native local habitats to stabilize soils and prevent erosion. Where disturbance includes the removal of trees or plants, native species will be replanted and maintained until they become established.

Work must not occur during or within 24 hours following a rain event exceeding 0.2-inch as measured by the National Oceanic Atmospheric Administration (NOAA) National Weather Service. Approval to continue Work during or within 24 hours of a rain event will be considered on a case-by-case basis, as determined by Caltrans.

To prevent CRLF from becoming entangled, trapped or injured, erosion control materials that use plastic or synthetic mono-filament netting will not be used within the action area. This includes products that use photodegradable or biodegradable synthetic netting, which can take several months to decompose. Acceptable materials include natural fibers such as jute or twine, or tackified hydroseeding compounds.

Preconstruction surveys must be conducted by a qualified biologist, retained by VTA, immediately prior to the initiation of any ground disturbing activities and vegetation clearing that may result in take of CRLF as determined by Caltrans. All suitable aquatic and upland habitat including habitat such as dense vegetation, small woody debris, refuse, burrows, etc., shall be thoroughly inspected.

Qualified biologist(s), retained by VTA, shall conduct clearance surveys at the beginning of each day and regularly throughout the workday when construction activities are occurring that may result in take of CRLF, as determined by VTA. If CRLF is observed, the qualified biologist shall contact VTA.

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A qualified biologist(s), retained by VTA, shall be onsite during all activities that may result in take of CRLF, as directed by VTA.

A minimum of one qualified biologist, retained by VTA, shall be onsite throughout the Project duration, as necessary.

The specific BMPs to be utilized will be included in the mandatory SWPPP, which will be prepared by the Contractor, as required by the Construction General Permit and Caltrans National Pollution Discharge Elimination System (NPDES) permit. Typical BMPs for this type of Project will include the following:

Active paved construction areas will be swept as needed.

Silt fencing will be used to retain sediment on the Project site.

Temporary cover of disturbed surfaces or temporary slope protection measures will be provided per regulatory requirements and the Department's guidelines to help control erosion.

No debris, soil, silt, sand, bark, slash, sawdust, cement, concrete, washings, petroleum products, or other organic or earthen material shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into any waterways.

Temporary Construction Entrances shall be used to minimize the amount of soil and debris that may be tracked onto the roadway.

Temporary Concrete Washouts shall be used to preclude the introduction of concrete waste into waterways.

Temporary barriers (e.g., sandbags or bales of hay) will be placed around storm drain inlets to prevent debris/pollutants from entering the storm drainage system.

Permanent measures for reducing post-construction erosion potential include the establishment of vegetation and use of:

Fiber roll and erosion control product (netting) to reestablish the existing grass cover

Hydroseed and Hydromulch

Compost and Straw

Materials found to contain asbestos of .25% or more are considered to be designated waste if transported offsite, requiring disposal at a landfill facility designated to accept asbestos waste. Alternatively, asbestos containing materials may be reused on-site if buried beneath a minimum of 6 inches of soil.

The California Air Resources Board (CARB) specified mitigation practices for construction, grading, quarrying, and surface mining operations that contain natural occurrences of asbestos outlined in Title 17, Section 93105, Asbestos Airborne Toxic Control Measure (ATCM) 93105 for Construction, Grading, Quarrying, and Surface Mining Operations (ATCM 93105). Based on-Part (e) Subpart (2) of the ATCM an asbestos dust mitigation plan is required and must be implemented for a Project if naturally occurring asbestos (NOA) is disturbed after the start of construction. Additionally, ATCM 93105 specifies that the air pollution control district (APCD) must be notified and an asbestos dust mitigation plan submitted to the APCD. The ATCM states that air monitoring may be required on the property. NOA potentially poses a health hazards when it becomes an airborne particulate.

Dust suppression practices required to be implemented include wetting the materials being disturbed and wearing approved respirators with high-efficiency particulate air (HEPA) filters during construction activities.

Contractor shall equip all equipment with emission controls.

Add to the 1st paragraph of section 14-6.03A:

This Project is within or near habitat for the regulated species shown in the following table:

Regulated Species

Red-legged Frog
San Francisco Dusky-footed Woodrat
Migratory Nesting Birds and Raptors

Add to section 14-6.03A:

Species protection areas within the Project limits are as specified in the following table:

Species Protection Areas

Identification name	Location
California red-legged frog	STAs 415 to 400; 401+43;416+08;406+60; 407+40
San Francisco dusky footed woodrat	Vicinity of STA 407
Migratory Nesting Birds and Raptors	STA 415 to 400

Use the protocols for the corresponding regulated species shown in the following table:

Regulated species name	Protocol
California red-legged frog	Federal Endangered Species Act
San Francisco dusky footed woodrat	California Fish and Game Code
Migratory Nesting Birds and Raptors	Migratory Bird Treaty Act; California Fish and Game Code 3505 and 3503.5

Monitor regulated species according to the schedule shown in the following table:

Monitoring type	Schedule
Migratory Nesting Birds and Raptors	February 1st to August 31st
California red-legged frog	Prior to ground disturbing activities
San Francisco dusky footed woodrat	Prior to ground disturbing activities

Replace *Reserved* in Section 14-11.08 with:**14-11.08A General**

Section 14-11.08 includes specifications for management of regulated material containing ADL. Management of the material includes:

1. Excavating
2. Loading and unloading containers or trucks
3. Transporting
4. Disposal

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The Department entered into agreement Docket No. ESPO-SMA 15/16-001 Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils with the DTSC (ADL Agreement) regarding the management of regulated material containing ADL. As the responsible entity and the generator of waste, only the Department determines material classification. The ADL Agreement is available at:

<http://www.dot.ca.gov/env/hazwaste/adl.html>

Regulated material containing ADL is present within the Project limits and the ADL Agreement applies. Management of regulated material containing ADL exposes workers to health hazards that must be addressed in Contractor's lead compliance plan under 7-1.02K(6)(j)(ii).

14-11.08B Definitions

average ADL concentration: Average ADL concentration calculated using the 95 percent upper confidence limit.

regulated material: ADL-contaminated material that has average ADL concentrations over 80 mg/kg total lead or equal to or greater than 5 mg/L soluble lead tested using the California Waste Extraction Test (CA-WET) or equal to or greater than 5 mg/L soluble lead tested using the Toxicity Characteristic Leaching Procedure (TCLP).

Type Z-2: Regulated material that is a Department-generated California hazardous waste that must be disposed of at an appropriately permitted California Class I disposal facility. Type Z-2 material has average ADL concentrations greater than or equal to 1,000 mg/kg total lead or 5.0 mg/l soluble lead as tested using the CA-WET.

14-11.08C Site Conditions

Concentration data and sample location maps for regulated material are included in the *Information Handout*.

Type Z-2 material exists from the surface to below the existing grade as shown and listed in the following table:

Location	Elements of Work	Depth
"FE2" Sta 401+14+ to Sta 415+08 Lt	Lane/Shoulder widening	0' to 1'
"FE2" Sta 401+14+ to Sta 411+00 Rt	Lane/Shoulder widening Maintenance vehicle pullout	0' to 1'

14-11.08D Submittals

14-11.08D(1) General

Not Used

14-11.08D(2) Perimeter Air Monitoring Requirements

Not Used

14-11.08D(3) Excavation and Transportation Plan

Within 15 days of Contract award, submit 3 copies of an excavation and transportation plan for regulated material. Allow 10 days for review. If the plan requires revisions, the Department provides comments. Submit a revised plan within 7 days of receiving comments. The Engineer may allow construction to proceed while minor revisions or amendments are being completed.

The excavation and transportation plan must comply with:

1. DTSC regulations
2. ADL Agreement
3. Cal/OSHA regulations

The excavation and transportation plan must include:

1. Procedures for managing the material.
2. Excavation schedule by location and date.
3. Air monitoring locations.
4. Transportation equipment and routes.
5. Method for preventing spills and tracked material onto public roads.
6. Truck waiting and staging areas.
7. Name and address of the California Class I disposal facility where hazardous waste will be disposed of.

14-11.08D(4) Burial Location Report

Not Used

14-11.08D(5) Bill of Lading

Not Used

14-11.08D(6) Disposal Documentation

Submit documentation from the receiving property owner or disposal facility confirming appropriate disposal within 5 business days of transporting Type Com material from the job site.

Submit documentation from the receiving disposal facility confirming appropriate disposal within 5 business days of transporting Type Z-2 material from the job site.

14-11.08E Dust Control

Prevent visible dust migration under section 14-11.04 during management of regulated material.

14-11.08F Air Monitoring

Not Used

14-11.08G Stockpiling

Do not stockpile Type Z-2 material. Transfer Type Z-2 directly from the excavation to containers or trucks for transportation to the disposal facility.

14-11.08H Placement

Not Used

14-11.08I Surveying Burial Site

Not Used

14-11.08J Material Transportation

Before traveling on public roads outside the controlled access construction zone, remove loose and extraneous regulated material from outside surfaces of containers and the cargo areas of trucks. Place tarpaulins or other cover over the cargo as described in the authorized excavation and transportation plan. Contractor is responsible for costs due to spillage of regulated material during transport.

Transport excavated Type Z-2 material using:

1. Hazardous waste manifest
2. Hazardous waste transporter with a current DTSC registration certificate and CA Highway Patrol (CHP) Basic Inspection of Terminals (BIT) Program documentation with a satisfactory rating.

14-11.08J Disposal

14-11.08J(1) General

Laws and regulations that govern disposal of regulated material include:

1. Health & Safety Code § 25100 et seq
2. 22 CA Code of Regs § 66250 et seq
3. 8 CA Code of Regs

The Department does not pay for additional sampling and analysis required by disposal facilities.

14-11.08J(2) Type Com Material

Not Used

Add to the 1st paragraph of section 14-11.14A:

Wood removed from guardrail and roadside sign is treated wood waste.

15 EXISTING FACILITIES

Add to the end of section 15-1.03C:

At least 2 business days before hauling the material to the salvaged material stockpile location, notify the Engineer.

The salvage storage location is:

Caltrans Cupertino Maintenance
Yard, 10130 Bubb Rd., Cupertino
95014

DIVISION III EARTHWORK AND LANDSCAPE

17 GENERAL

Add to section 17-2.03A:

Clear and grub State-owned property. Do not use the State-owned property after clearing and grubbing is complete unless authorized.

Replace section 17-2.03D with:

Contractor may place vegetation in embankment areas. Comply with section 19-6.

Place vegetation as specified for either Method I or Method II described below:

Method I:

1. Place vegetation outside of the 1:1 inclined plane sloping out and down from the outside edge of the shoulder of the planned roadbed. Do not place vegetation within 5 feet of the finished slope line measured normal to the slope.
2. Mix brush and debris with at least 50 percent earth. Place the mixture in uniform layers.
3. Do not use vegetation material where it will interfere with planned work.

Method II:

1. Place vegetation at least:
 - 1.1. 15 feet beneath the grading plane.
 - 1.2. 10 feet from the surface of any embankment slope.
 - 1.3. 6 feet horizontally from and not beneath any planned structure including abutments, walls, footings, foundations, piles, drainage structures, and utility installations.
2. Chip brush, grass, weeds, slash, and limbs or logs under 4 inches in diameter. Place chips on the completed embankment slopes and mix with the underlying earth so that the vegetation will not support combustion.

19 EARTHWORK

Replace the 2nd, 3rd, and 4th paragraphs of section 19-2.03B with:

Dispose of surplus material. Ensure enough material is available to complete the embankments before disposing of it.

Add between the 8th and 9th paragraphs of section 19-2.03G:

Roughen embankment slopes to receive erosion control materials by either track-walking or rolling with a sheepsfoot roller. Track-walk slopes by running track-mounted equipment perpendicular to the slope contours.

Roughen excavation slopes and flat surfaces to receive erosion control materials by scarifying to a depth of 1 to 2 inches.

Add to section 19-3.04:

Pervious backfill material placed within the limits of payment for retaining walls will be paid for as structure backfill (retaining wall).

21 EROSION CONTROL

Add to section 21-2.02H:

Straw must be certified weed free under the Department of Food and Agriculture.

Replace section 21-2.02K with:

21-2.02K Compost

Compost must be derived from one or a combination of the following types of materials:

1. Green material consisting of chipped, shredded, or ground vegetation or clean, processed, recycled wood products
2. Biosolids
3. Manure
4. Mixed food waste

Compost must not be derived from mixed municipal solid waste and must not contain paint, petroleum products, pesticides, or other chemical residues harmful to plant or animal life. Metal concentrations in compost must not exceed the maximum listed under 14 CA Code of Regs § 17868.2.

Process compost materials under 14 CA Code of Regs § 17868.3.

The quality characteristics of compost must have the values shown in the following table:

Compost			
Quality characteristic	Test method ^a	Requirement	
		Fine	Medium/Coarse
pH	TMECC 04.11-A	6–8.5	6-8.5
Soluble salts (dS/m)	TMECC 04.10-A	0–10	0-10
Moisture content (% wet weight)	TMECC 03.09-A	25–60	25-60
Organic matter content (% dry weight)	TMECC 05.07-A	30–70	30-100
Maturity (seed emergence) (% relative to positive control)	TMECC 05.05-A	80 or above	80 or above
Maturity (seedling vigor) (% relative to positive control)	TMECC 05.05-A	80 or above	80 or above
Stability (mg CO ₂ -C/g OM per day)	TMECC 05.08-B	5 or below	8 or below
Pathogen Salmonella (most probable number per 4 grams dry weight basis)	TMECC 07.01-B	< 3	< 3
Pathogen Fecal coliform (most probable number per gram dry weight basis)	TMECC 07.01-B	< 1,000	< 1,000
Physical contaminants (% dry weight) Plastic, glass, and metal	TMECC 02.02-C	combined total: < 0.5	combined total: < 1.0
Film plastic (% dry weight)	TMECC 02.02-C	Combined total: < 0.1%	Combined total: < 0.1%

^a TMECC refers to *Test Methods for the Examination of Composting and Compost*, published by the United States Department of Agriculture and the United States Compost Council (USCC).

The particle size must comply with the requirements shown in the following table:

Compost Gradation			
Quality characteristic	Test method ^a	Requirement	
		Min	Max
Gradation Fine:(dry weight % passing) 1-inch sieve 3/8-inch sieve	TMECC 02.02-B	100 95	-- --
Gradation Medium:(dry weight % passing) 2-inch sieve 3/8-inch sieve	TMECC 02.02-B	95 40	-- 55
Gradation Coarse:(dry weight % passing) 3-inch sieve 3/8-inch sieve	TMECC 02.02-B	95 25	-- 35

^a TMECC refers to *Test Methods for the Examination of Composting and Compost*, published by the United States Department of Agriculture and the United States Compost Council (USCC).

Add to section 21-2.02P:

Straw for fiber roll must be certified weed free under the Department of Food and Agriculture.

DIVISION V SURFACINGS AND PAVEMENTS

39 ASPHALT CONCRETE

Replace section 39-2.01C(3)(c) with:

39-2.01C(3)(c) Prime Coat

Apply a slow-setting asphaltic emulsion as a prime coat to AB areas designated by the Engineer and at a spread rate from 0.15 to 0.40 gal/sq yd. Do not apply more prime coat than can be absorbed completely by the AB in 24 hours.

Contractor may modify the prime coat application rates if authorized by VTA.

Close areas receiving prime coat to traffic. Do not allow tracking the prime coat onto pavement surfaces beyond the job site.

Delete the 2nd and 3rd paragraphs and replace the 1st sentence of the 4th paragraph of section 39-2.01C(4)(a) with:

Place HMA on adjacent traveled way lanes such that at the end of each work shift, the distance between the ends of HMA layers on adjacent lanes is from 5 to 10 feet.

Delete section 39-2.01C(4)(b).

Replace *Reserved* in section 39-2.02B(3) with:

The grade of asphalt binder for Type A HMA must be PG 64-10.

For Type A HMA using RAP substitution of greater than 15 percent of the aggregate blend, the virgin binder grade must comply with the PG binder grade specified above with 6 degrees C reduction in the upper and lower temperature classification.

For Type A HMA using RAP substitution of 15 percent or less of the aggregate blend, the grade of the virgin binder must comply with the PG binder grade specified above.

DIVISION VI STRUCTURES

56 OVERHEAD SIGN STRUCTURES, STANDARDS, AND POLES

Replace *Reserved* in section 56-2.03B(2) with:

Section 56-2.03B(2) includes specifications for removing a sign structure.

Removing an overhead sign structure includes removing:

1. Frames, braces, supports, and brackets
2. Portions of foundations
3. Sign panels
4. Mounting hardware for light fixtures
5. Walkways, safety railing, gutter
6. Electrical equipment for sign lighting
7. Hardware
8. Posts

Contractor may abandon concrete foundations in place, except remove the top portion of the foundation, including anchor bolts, reinforcing steel, and conduits, to a depth of at least 4 feet below the adjacent finished grade. Backfill and compact the resulting holes with material at least equal in quality to the surrounding material.

Remove the sign's conduit and wiring to the nearest pull box. Remove fuses within spliced connections in the pull box.

DIVISION VIII MISCELLANEOUS CONSTRUCTION

73 CONCRETE CURBS AND SIDEWALKS

Add to section 73-1.02A:

Concrete must be minor concrete complying with section 90-2 and may contain returned plastic concrete complying with section 90-9.

DIVISION IX TRAFFIC CONTROL FACILITIES

83 RAILINGS AND BARRIERS

Replace *Reserved* in section 83-2.01B with:

83-2.01B(1) General

83-2.01B(1)(a) Summary

Section 83-2.01B includes specifications for constructing vegetation control around railing and barrier posts.

Constructing minor concrete vegetation control includes clearing and excavation.

83-2.01B(1)(b) Definitions

Not Used

83-2.01B(1)(c) Submittals

Submit a mix design for the minor concrete to be used for vegetation control. The mix design must show proportions of:

1. Coarse aggregate
2. Fine aggregate
3. Cementitious material
4. Reinforcing fiber
5. Water

Include compressive strength test results with the mix design.

Submit a certificate of compliance for the crumb rubber aggregate, if used. Include the quantity in pounds of crumb rubber.

83-2.01B(1)(d) Quality Assurance

Not Used

83-2.01B(2) Materials

83-2.01B(2)(a) General

Not Used

83-2.01B(2)(b) Minor Concrete

83-2.01B(2)(b)(i) General

Concrete for vegetation control must comply with the specifications for minor concrete, except the concrete:

1. Must include reinforcing fibers
2. May include crumb rubber aggregate
3. Must contain:
 - 3.1. At least 505 pounds of cementitious material per cubic yard, if crumb rubber aggregate is used
 - 3.2. At least 400 pounds of cementitious material per cubic yard, if crumb rubber aggregate is not used
4. Must have a maximum aggregate size of 3/8 inch

All ingredients must be added at the concrete plant before delivery to the job site.

Contractor may use volumetric proportioning complying with ASTM C685/C685M or as specified.

The minor concrete must have a 28-day compressive strength from 1,400 to 2,500 psi.

83-2.01B(2)(b)(ii) Crumb Rubber Aggregate

Crumb rubber aggregate must consist of ground or granulated scrap tire rubber from automobile and truck tires. Do not use tire buffings.

Crumb rubber aggregate must be ground and granulated at ambient temperature.

The crumb rubber aggregate gradation must comply with the requirements shown in the following table:

Sieve size	Percentage passing
1/2"	100
3/8"	90–100
1/4"	35–45
No. 4	5–15
No. 8	0–5
No. 16	0

Crumb rubber aggregate must not contain more than 0.01 percent of wire by mass and must be free of oils and volatile organic compounds.

Do not commingle crumb rubber from different sources.

The crumb rubber aggregate must be 3.5 ± 0.5 percent by weight of the concrete.

83-2.01B(2)(b)(iii) Reinforcing Fibers

Reinforcing fibers for minor concrete must be:

1. Manufactured specifically for use as concrete reinforcement from one of the following:
 - 1.1. Polypropylene, polyethylene, or a combination of both.
 - 1.2. Copolymer of polypropylene and polyethylene.
2. Blended ratio from 4 to 5.67 parts by weight of macro synthetic fibers to 1 part by weight of micro synthetic fibers. Synthetic fibers must be:
 - 2.1. Nonfibrillated macro fibers with individual fiber lengths less than $2 \pm 1/2$ inches.
 - 2.2. Fibrillated or monofilament micro fibers of various lengths and thicknesses.
3. Supplied in sealed, degradable bags of appropriate size for adding whole bags to concrete batches.
4. From a commercial source.

The reinforcing fiber content of the minor concrete must be from 5 to 6 lb/cu yd.

83-2.01B(2)(b)(iv) Coloring Agent

Not Used

83-2.01B(2)(c) Block-Out Material

The block-out material must be a commercially available expanded polystyrene foam with a compressive strength of 13 ± 5 psi at 10 percent deformation when tested under ASTM D1621.

If authorized by VTA, Contractor may substitute an alternative block-out material that complies with the compressive strength requirements of the expanded polystyrene foam.

83-2.01B(2)(d) Backfill Material

Backfill material must be Class 2 aggregate base complying with section 26.

83-2.01B(3) Construction

83-2.01B(3)(a) General

Not Used

83-2.01B(3)(b) Clearing

Clear areas to receive vegetation control of vegetation, trash, and debris. Dispose of the removed material.

83-2.01B(3)(c) Earthwork

Excavate or backfill areas to receive vegetation control.

If the vegetation control abuts the existing surfacing and the edge of the existing surfacing is not on a neat line, cut the surfacing on a neat line to a minimum depth of 2 inches before removing the surfacing.

Perform grading so that the finished elevation of the vegetation control maintains the existing or planned flow lines, slope gradients, contours, and existing surfacing.

Grade the areas to receive vegetation control to a smooth, uniform surface and compact to a relative compaction of at least 90 percent.

83-2.01B(3)(d) Block Outs

For block-out material supplied in more than 1 piece, tape the pieces together to make a smooth surface on the top and sides.

Ensure that the block-out material does not move during concrete placement.

83-2.01B(3)(e) Forming

Forming must comply with section 73-1.03C.

Leave forms in place for at least 12 hours after surface finishing.

83-2.01B(3)(f) Minor Concrete

Strike off and compact the minor concrete until a layer of mortar is brought to the surface. Match the finished grade to the adjacent section of vegetation control, pavement, shoulder, or existing grade.

Construct contraction joints by scoring concrete with a grooving tool and rounding corners with an edger tool.

83-2.01B(3)(g) Backfill Material

Backfill material required for vegetation control under existing guardrail or barrier is change order work. Excavate or backfill areas to receive vegetation control.

83-2.01B(4) Payment

Not Used

Replace *Reserved* in section 83-2.02C(3) with:

The offset from the face of the Type WB-31 transition railing to the hinge point must be at least 3'-6".

The offset from the face of the adjacent midwest guardrail system to the hinge point must be transitioned from the offset at the Type WB-31 transition railing to 4'-0" using a ratio of 6:1.

DIVISION X ELECTRICAL WORK

87 ELECTRICAL SYSTEMS

Add to the beginning of section 87-1.03B(3)(a):

Use Type 3 conduit for underground installation.

Replace the 2nd paragraph of the RSS for section 87-1.03C(2)(a) with:

Install a pull box on a bed of crushed rock.

Add to the end of section 87-21.03C:

Modifying a lighting system includes removing, adjusting, or adding:

1. Foundations
2. Pull boxes
3. Conduit
4. Conductors
5. Standards
6. Luminaires
7. Service equipment enclosure
8. Photoelectric control
9. Fuse splice connectors
10. High mast lighting assemblies

Modifying a signal and lighting system includes removing, adjusting, or adding detectors

Add to the end of section 87-21.03D:

Removing a lighting system includes removing:

1. Foundations
2. Pull boxes
3. Conduit
4. Conductors
5. Standards
6. Luminaires
7. Service equipment enclosure
8. Photoelectric control
9. High mast lighting assemblies

Removing a sign illumination system includes removing:

1. Foundations
2. Pull boxes
3. Conduit
4. Conductors
5. Overhead Sign luminaires
6. Enclosure for the disconnect circuit breaker
7. Service equipment enclosure
8. Photoelectric control