



CONSTRUCTION DIVISION
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DATE: February 9, 2012

TO: All Prospective Bidders

SUBJECT: Addendum No. 2
U.S. 50 HOV Lanes (Phase 2A)
Bass Lake Road Undercrossing to Cameron Park Drive
Contract No. PW 09-30408, CIP No. 53113

Submit proposals for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are essential parts of the Contract.

ITEM NO.	LOCATION, PAGE OR DRAWING NO.	DESCRIPTION OF CHANGE
2.01	Section 10-1.32 SP-146	<p>Question: Do the Contract Documents allow for blasting as described in Section 10-1.32?</p> <p>Answer: Yes. In Section 10-1.32 Rock Excavation delete “(if allowed by the Contract Documents)”. See 2.02</p>
2.02	TOC-4 and SP-195	<p>Section 10-1.68 “Controlled Blasting” is added to the Table of Contents.</p> <p>Section 10-1.68 “Controlled Blasting” is added to the special provisions and is included as Attachment A attached to this addendum.</p>
2.03	TOC-4 and SP-195	<p>Section 10-1.69 “Cooperation” is added to the Table of Contents.</p> <p>Section 10-1.69 “Cooperation” is added to the special provisions and is included as Attachment B attached to this addendum.</p>
2.04	Page P-5 R from Addendum No. 1	<p>Bidders are instructed to replace page P-5 R issued with Addendum No. 1 for the Proposal Pay Items and Bid Price Schedule with Page P-5 Rev 2 attached to this addendum.</p>

2.05	Plan Sheets 138 and 153	Bidders are instructed to replace Plan Sheet SC-15 (138 of 218) and Plan Sheet SC-30 (153 of 218) with revised SC-15 and revised SC-30 attached to this addendum.
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Page P-5 Rev 2, Proposal Pay Items and Bid Price Schedule, shall be attached to page P-5 R issued with Addendum No. 1 and page P-5 in the original Proposal in the Contract Document booklet. The remaining pages of this addendum, excluding the revised plan sheets, shall be attached to the Contract Documents booklet.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the proposal.

Holders who have already mailed their proposal can contact Janel Gifford at (email: Janel.Gifford@edcgov.us) to arrange return of their proposal.

Inform all suppliers and subcontractors as necessary.

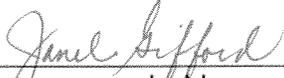
The DOT is only sending this addendum by posting on the following website: <http://www.edcgov.us/Government/DOT/Bids.aspx>.

If you are not a Contract Documents Holder, but request a set of documents to bid on this project, you must comply with the requirements of this addendum when submitting your bid.

Attachments:

Attachment A – Controlled Blasting	5 pages
Attachment B - Cooperation	1 page
Page P-5 Rev 2 of Proposal Pay Items and Bid Price Schedule	1 page
Revised Plan Sheet SC-15 (138 of 218)	1 page
Revised Plan Sheet SC-30 (153 of 218)	1 page

End of Addendum No. 2



Recommended by:
Janel Gifford, P.E.
Office Engineer

2/9/12
Date



Approved by:
James W. Ware, P.E.
Director of Transportation

2/10/12
Date

10-1.68 CONTROLLED BLASTING

Controlled blasting shall conform to all Federal, State, and local regulations, Sections 7-1.10, "Use Of Explosives," and 19-2.03, "Blasting," of the Standard Specifications, "Maintaining Traffic" of these special provisions, these special provisions and as directed by the Engineer.

No blasting operation, including drilling, shall start until the Engineer has reviewed and approved the controlled blasting plan in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications.

The Contractor shall control project blasting so that fly rock, ground vibrations, air noise levels do not exceed the requirements of these special provisions.

The Contractor shall be responsible for all damage resulting from blasting.

Controlling fly rock, ground vibrations, air noise levels as specified herein shall not relieve the Contractor of the responsibility for assuring the complete safety of the operation.

Personnel Qualifications

Blasting supervisors (blaster in charge) shall have a minimum of 10 years of documented experience directly related to the specific types of blasting they are supervising.

All blasters and supervisors shall be properly qualified and licensed in conformance with applicable federal, state, and local government regulations.

The Contractor shall retain the services of a professional geologist, certified engineering geologist, certified geophysicist or licensed engineering consultant with at least 10 years documented experience in monitoring blasting operations and interpreting ground vibration, air overpressure and blasting noise for similar construction projects.

The Contractor shall retain the services of professional geologist, certified engineering geologist, certified geophysicist or licensed engineering consultant as a licensed blasting consultant with a minimum of 10 years documented experience in preparing controlled blasting designs to review and approve with a signed cover letter including the reviewer's professional stamp, of the proposed controlled blasting plan prior to submittal of the controlled blasting plan to the Engineer.

Controlled blasting plan

The Contractor shall submit a written controlled blasting plan to the Engineer for approval.

The controlled blasting plan shall include provisions for performing and monitoring test blasting and controlled blasting.

The controlled blasting plan shall include copies of required licensing and documentation for blasting supervisors, blasting personnel and blasting consultant.

Within the controlled blasting plan, all individual controlled blasting plans, (including test blasting), and revisions to these plans shall be reviewed by and covered with a signed and stamped review letter by the blasting consultant. The blasting consultant will not be required to sign individual controlled blasting plans provided they are signed by an on-site licensed blaster.

Controlled blasting, including test blasting and drilling, shall not commence until the Contractor has received written approval from the Engineer for the Contractor's controlled blasting plan.

The controlled blasting plan shall provide for limiting the maximum peak particle velocity of any one of the three mutually perpendicular components of ground motion in the vertical and horizontal directions, or their resultant, to 2 in/second, air noise to 125 dBc and for controlling fly rock during blasting.

The Contractor shall use appropriate blast hole patterns, detonation systems, and stemming to prevent venting of blasts, to control air noise and fly rock produced by blasting operations.

The controlled blasting plan shall indicate the type and method of instrumentation proposed to determine maximum peak particle velocity and air noise levels.

The controlled blasting plan shall contain pre-blast survey reports in conformance with "Pre-Blast Condition Survey" of this special provision.

Within 20 days after approval of the contract, the Contractor shall submit 3 copies of the controlled blasting plan to the Engineer. The Engineer will have 10 days to review the controlled blasting plan. If revisions are required, as determined by the Resident Engineer, the Contractor shall revise and resubmit the

controlled blasting plan within 10 days of receipt of the Engineer's comments. The Engineer will have 10 days to review the revisions. Upon the Engineer's approval of the controlled blasting plan, 3 additional copies of the controlled blasting plan incorporating the required changes shall be submitted to the Engineer. Minor changes or clarifications to the initial submittal may be made and attached as amendments to the controlled blasting plan. An updated signed and stamped review letter from the blasting consultant shall be attached to any updates, revisions or amendments to the controlled blasting plan.

Approval of the Contractor's controlled blasting plan or blasting procedures shall not relieve the Contractor of any responsibilities under the contract for assuring the complete safety of all project operations or for the successful completion of the work in conformity with the requirements of the plans and specifications.

Pre-Blast Condition Survey

The Contractor shall make and document a pre-blast survey of all structures and buildings within a 1200 foot radius of the blast site(s) and provide this documentation as a portion of the controlled blasting plan.

The survey method used shall be acceptable to the Contractor's insurance company.

The Contractor shall make updates of the pre-blast survey within 45 calendar days in advance of the planned commencement or resumption of blasting operations. The updates shall include surveys of any new structures or additions to existing structures within 1200 feet of the blast site(s) or deletion of any previous existing structures within the 1200 foot radius from the blast site(s). Updated Pre-blast records shall be made available to the Engineer for review 10 days prior to the commencement or resumption of blasting.

All updates of the pre-blast survey shall be reviewed and covered by a signed and stamped cover letter from the licensed blasting consultant.

An updated pre-blast survey may not be required if the controlled blasting operations commence within 45 days from the completion of the original pre-blast survey completed for the submittal of the controlled blasting plan.

The Contractor shall give written notice of controlled blasting to occupants of local buildings a minimum of 7 days in advance of starting or restarting blasting operations.

The pre-blast survey shall, as a minimum, contain the following:

- A. The name of the person making the inspection.
- B. The names of the property owner and occupants, the addresses of the property, the date and time of the inspection.
- C. A complete description of the structure(s) or other improvement(s) including culverts, retaining walls and bridges.
- D. A detailed interior inspection with each interior room (including attic and basement spaces) designated and described. All existing conditions of the walls, ceiling and floor such as cracks, holes and separations shall be noted.
- E. A detailed exterior inspection fully describing the existing conditions of all foundations, walls, roofs, doors, windows, and porches.
- F. A detailed listing, inspection and documentation of existing conditions of garages, outbuildings, sidewalks and driveways.
- G. A detailed inspection of the completed portions of the structure. All existing conditions such as cracks, holes, and separations shall be noted.
- H. A detailed listing of highway signposts, light fixtures and overhead power lines and support structures for overhead power lines.
- I. A survey of any wells or other private water supplies including total depth and existing water surface levels.
- J. Scaled map(s) or aerial photo(s) depicting the locations of all structures and/or properties reviewed for the pre-blast survey and location of all proposed blasting sites. Properties surveyed shall be identified by their physical street address. Other structures shall be identified by structure name or type.

The Contractor shall perform a re-survey of all locations whenever blasting operations are either suspended longer than 45 calendar days, additional un-surveyed structures are identified within a 1200 foot radius of a proposed blast site(s) or the job is terminated.

The documentation may consist of either a written report, or videotape with voice narration. The videotape, if used, must include date and time displayed on the image.

The Contractor shall provide copies of the pre-blast inspection report or videotape documentation to the Engineer at the time that the controlled blasting plan is submitted.

Monitoring

The Contractor shall monitor all blasts for fly rock, ground motion and air noise.

The results of test blast shall contain adequate information for estimating the peak particle velocity and air noise that will be produced by controlled blasting.

Production blasting shall not start until a test blast meets the peak particle velocity and air noise limits in the controlled blasting plan and this special provision.

The Contractor shall furnish a permanent, signed and dated monitoring record of peak particle velocity readings and air noise readings to the Engineer for review and approval within 24 hours after the test blast or production blast. The next blast shall not be performed until after the Engineer has approved the monitoring record.

Blasting monitoring records shall include the following:

- A. Identification of instrument used.
- B. Name of qualified observer and interpreter.
- C. Distance and direction of recording station from blast area.
- D. Type of ground at recording station and material on which instrument is sitting.
- E. Maximum peak particle velocity in each component.
- F. A dated and signed copy of seismograph readings record.
- G. Air noise readings.

Fly Rock Control

Before the firing of any blast the Contractor shall cover the rock to be blasted with approved blasting mats, soil, or other equally serviceable material, to prevent fly rock.

If fly rock leaves the blast site all blasting operations shall immediately cease until a qualified blasting consultant hired by the Contractor reviews the site and determines the cause and solution to the fly rock problem. Before blasting is restarted, the Contractor shall submit to the Engineer for approval a written report revising the controlled blasting plan. Revised controlled blasting plan shall conform to the requirements of this special provision. Blasting shall not be restarted until the Engineer approves controlled blasting plan revisions.

If fly rock leaves the blasting site and lands on the adjacent roadway the Contractor will be responsible for immediately clearing all lanes of fly rock.

Shot Guarding

During controlled blasting operations, the Contractor shall restrict construction equipment and roadway traffic through the blasting area.

The Contractor shall provide blasting guards and station them around the blasting area during controlled blasting.

Ground Vibration Control

The Contractor shall control ground vibrations by the use of properly designed delay sequences and allowable charge weights per delay.

Allowable charge weights per delay shall be based on ground vibration levels that will not cause damage. The Contractor shall perform test blasts to select allowable charge weights per delay by measuring peak particle velocity levels.

The test blast and production blasting shall be required to limit ground vibrations to a peak particle velocity of 2 in/second.

The Contractor shall select proper control methods to limit over-break. The Contractor shall have full responsibility to control over-break.

During blasting, the Contractor shall employ a qualified seismologist, subject to the approval of the Engineer. The seismologist shall interpret the seismograph records after each blast to ensure that the seismograph data are utilized effectively in the control of the blasting operations.

During blasting operations at least one seismograph shall be used. The seismograph used shall be capable of recording particle velocities for three mutually perpendicular components of vibration in the range generally found with controlled blasting. The instrument shall be placed between the nearest structure and the blast site. The Contractor shall furnish a permanent, signed and dated record of ground vibration readings to the Engineer immediately after each shot.

Air Noise Control

The Contractor shall use appropriate blast hole patterns, detonation systems, and stemming to prevent venting of blasts and to limit air noise levels produced by controlled blasting operations.

The equipment used to make air noise measurements shall be the type specifically manufactured for that purpose.

Air noise measuring equipment shall be installed in the same locations as seismographs, between the main blasting area and the nearest structure or at locations directed by the Engineer.

Air noise levels shall be held below 125 dBC (decibels) at the nearest structure or designated location.

The decibel level limit specified herein shall be lowered if property damage or unresolved public complaints are received after each test blast or controlled blast.

The Contractor shall furnish a permanent, signed and dated record of air noise readings to the Engineer immediately after each shot.

Suspension of Work

The Engineer may immediately suspend controlled blasting operations for any of the following:

- A. Safety precautions, monitoring equipment or traffic control measures are inadequate.
- B. Ground motion particle velocity or air noise levels exceed the limits specified.
- C. Controlled blasting plan or revisions have not been approved.
- D. Required records are not being kept.
- E. Monitoring reporting is not being performed as specified.
- E. Excessive over-break as determined by the Engineer.
- F. Flyrock leaves the blast site.

Suspension of controlled blasting operations shall in no way relieve the Contractor of responsibilities under the terms of this contract.

Controlled blasting operations shall not resume until modifications have been made to the controlled blasting plan to correct the conditions that resulted in the suspension **and any resulting delays in the Contractor's operations shall be at the Contractors expense.**

Public Complaints

Public complaints concerning blasting shall be accurately recorded and immediately addressed by the Contractor and shall include the following:

- A. Name and address of complainant.
- B. Date, time, and nature of complaint.
- C. Dated photo or video documentation if physical damage complaint is involved.
- D. Name of person receiving complaint.
- E. Complaint investigation conducted.
- F. Resolution of complaint.

The Contractor shall make the written complaint report available to the Engineer as soon as practical, but no later than at the beginning of the following day's work shift.

Project Blasting Records

The Contractor shall keep accurate records of each blast. Project blasting records shall be made available to the Engineer at all times and shall contain the following data as a minimum:

- A. Blast identification by numerical and chronological sequence.
- B. Location (referenced to stationing), date and time of blast
- C. Type of material blasted.
- D. Number of holes.
- E. Diameter, depth and spacing of holes.
- F. Logs of drill hole characteristics.
- G. Height or length of stemming.
- H. Types of explosives used.
- I. Type of caps used and delay periods used.
- J. Total amount of explosives used.
- K. Maximum amount of explosives per delay period of 9 milliseconds or greater.
- L. Powder factor (pounds of explosive per cubic meter of material blasted).
- M. Method of firing type.
- N. Weather conditions, including wind direction.
- O. Direction and distance to nearest structure or structures of concern.
- P. Type and method of instrumentation.
- Q. Location and placement of instruments.
- R. Instrumentation records and calculations for determination of peak particle velocity and air noise.
- S. Measures taken to limit peak particle velocity, air noise and fly rock.
- T. Any unusual circumstances or occurrences during blast.
- U. Measures to limit over-break.
- V. Name of Contractor.
- W. Name and signature of responsible blaster.

Completed complaint reports shall be attached to corresponding blast records.

Project blasting records shall include complete pre-blasting and post-blasting survey records.

Within 10 days of conclusion of controlled blasting operations the Contractor shall furnish 3 copies of all project blasting records to the Engineer.

Payment for controlled blasting as described herein during the course of performing work under any contract item shall be considered paid for by the contract item that necessitates the controlled blasting, and no additional compensation shall be provided therefor.

10-1.69 COOPERATION

It is anticipated that work by another contractor may be in progress adjacent to or within the limits of this project during progress of the work on this contract. The following table lists contracts anticipated to be in progress during this contract.

Contract No.	Co-Rte-PM	Location	Type of Work
03-2F0204	03-ED-50-R4.1/R14.2	On US 50 between approximately Cameron Park Drive to approximately Missouri Flat Road	AC overlay and PCC repair

Comply with Section 7-1.14, "Cooperation," of the Standard Specifications.

36		203026	MOVE-IN/MOVE-OUT (EROSION CONTROL)	EA	3		
37		203031	EROSION CONTROL (HYDROSEED) (SQFT)	SQFT	157,000		
38		203034	ROLLED EROSION CONTROL PRODUCT (NETTING)	SQFT	65		
39		207099	PLANT ESTABLISHMENT WORK	LS	LUMP SUM		
40		208000	IRRIGATION SYSTEM	LS	LUMP SUM		
41		260201	CLASS 2 AGGREGATE BASE	CY	48,800		
42		374207	CRACK TREATMENT	LNMI	5		
43		390131	HOT MIX ASPHALT (TYPE A)	TON	43,810		
44		390138	RUBBERIZED HOT MIX ASPHALT (OPEN GRADED)	TON	6,380		
45		394053	SHOULDER RUMBLE STRIP (HMA, GROUND-IN INDENTATIONS)	STA	580		
46		394074	PLACE HOT MIX ASPHALT DIKE (TYPE C)	LF	680		
47		394076	PLACE HOT MIX ASPHALT DIKE (TYPE E)	LF	1,120		
48		394077	PLACE HOT MIX ASPHALT DIKE (TYPE F)	LF	260		
49		394090	PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)	SQYD	6,340		
50		397005	TACK COAT	TON	39		
51		41105	INDIVIDUAL SLAB REPLACEMENT (RSC)	CY	19		
52	(F)	510502	MINOR CONCRETE (MINOR STRUCTURE)	CY	13		
53	(F-P)	560203	FURNISH SIGN STRUCTURE (BRIDGE MOUNTED WITH WALKWAY)	LB	5,315		
54	(F)	560204	INSTALL SIGN STRUCTURE (BRIDGE MOUNTED WITH WALKWAY)	LB	5,315		

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED	50	R2.9/6.7	138	218

REGISTERED CIVIL ENGINEER	DATE
11-5-11	
PLANS APPROVAL DATE	
11-8-11	

REGISTERED PROFESSIONAL ENGINEER	SCOTT MANN
No. 72005	Exp 6-30-12
CIVIL	STATE OF CALIFORNIA

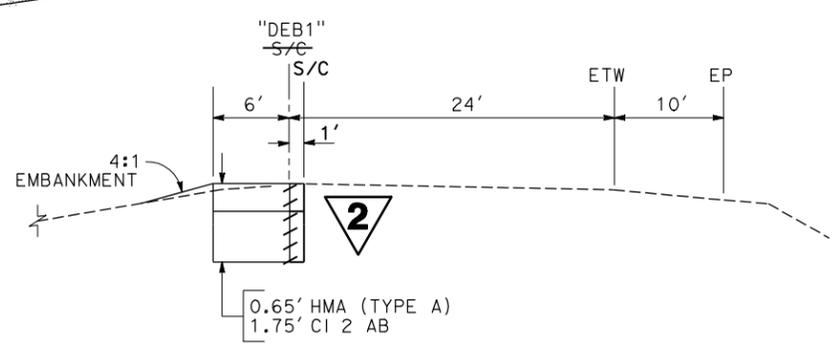
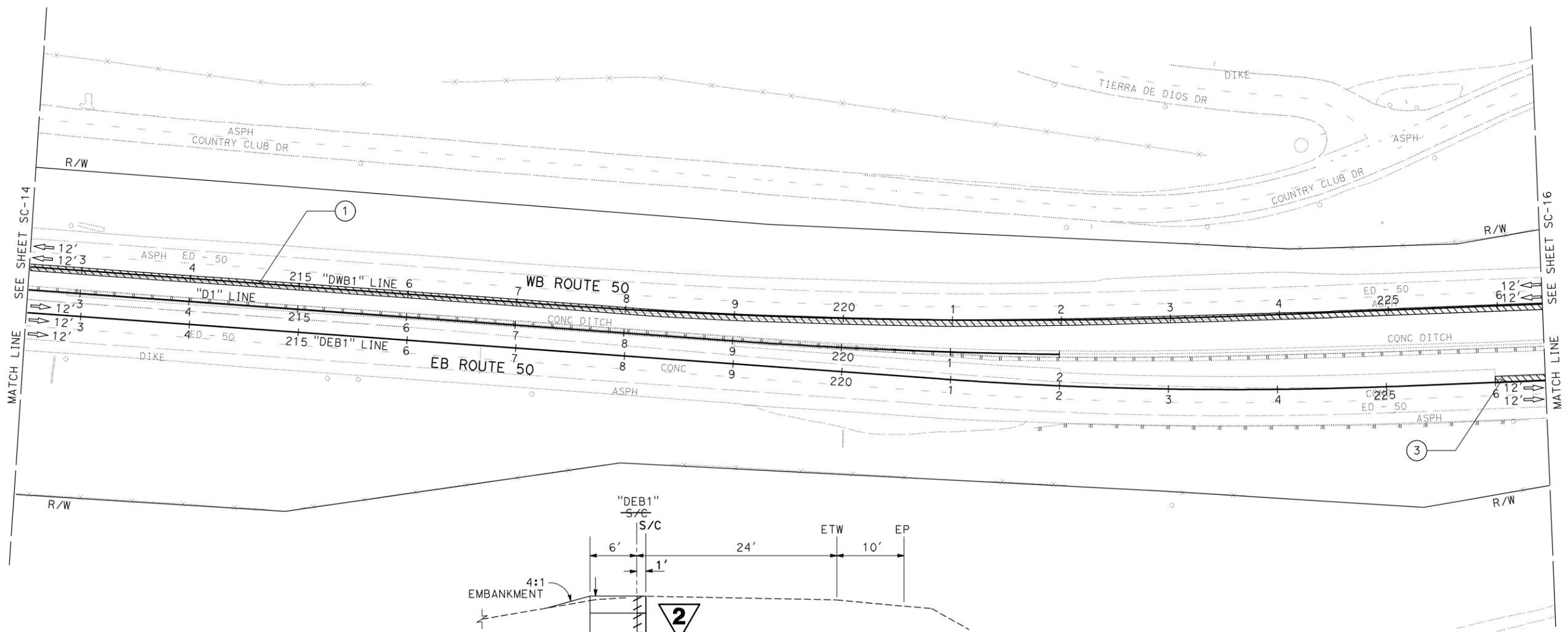
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NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 NORTH REGION DIVISION OF ENGINEERING DESIGN SECTION S4

FUNCTIONAL SUPERVISOR: SCOTT W. MANN
 CHECKED BY: ARMANDO CRUZ
 DESIGNED BY: LUZ VILLANUEVA
 REVISIONS: REVISED BY: DATE REVISED:



2 REVISED PER ADDENDUM No. 2 DATED FEBRUARY 8, 2012
 APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
 STAGE 2
 SCALE: 1" = 50'
SC-15
 11-1446.3D.11

LAST REVISION: 09-14-11 DATE PLOTTED => 08-FEB-2012 TIME PLOTTED => 10:09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED	50	R2.9/6.7	153	218

REGISTERED CIVIL ENGINEER	DATE
11-5-11	
PLANS APPROVAL DATE	
11-8-11	

REGISTERED PROFESSIONAL ENGINEER
SCOTT MANN
No. 72005
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

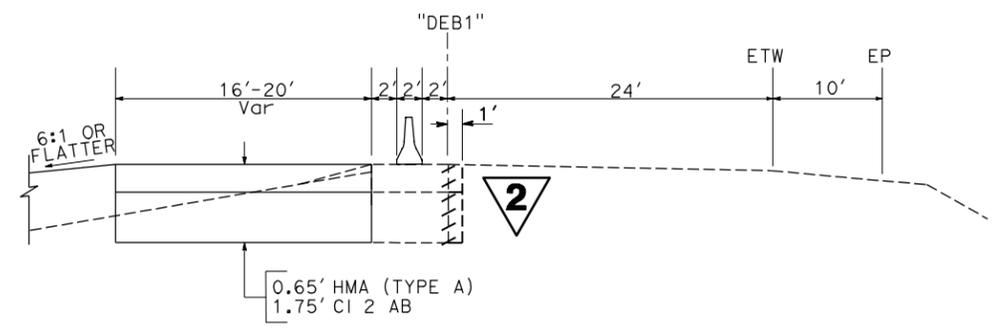
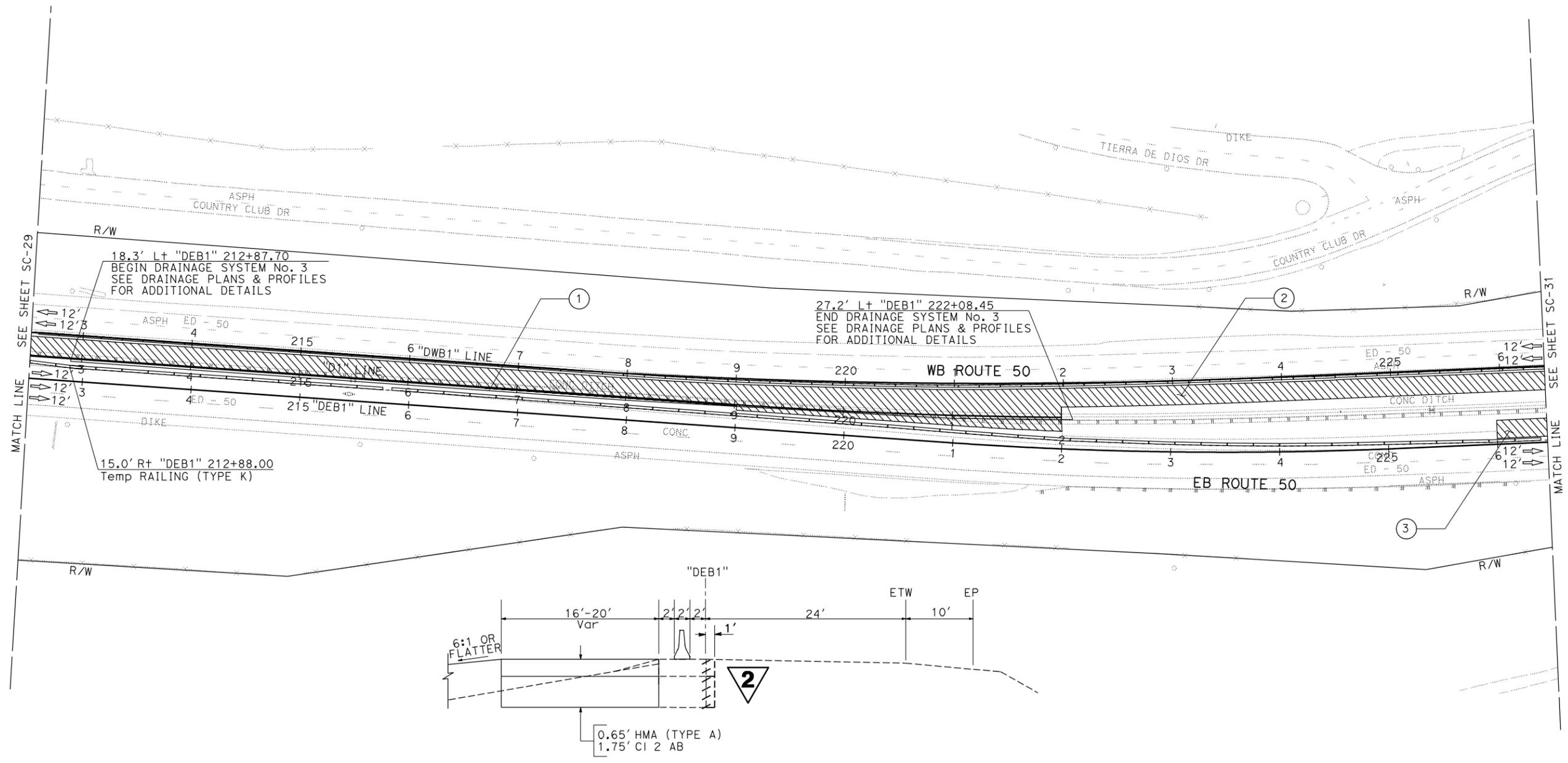
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FUNCTIONAL SUPERVISOR: SCOTT W. MANN
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 DESIGNED BY: LUZ VILLANUEVA
 REVISIONS: REVISED BY: DATE REVISED:



TYPICAL SECTION
 (3) "DEB1" 226+00 TO 351+00
 NO SCALE

2 REVISED PER ADDENDUM No. 2 DATED FEBRUARY 8, 2012

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

STAGE 3
 SCALE: 1" = 50'

SC-30

11-1446.3D.12