TOWN OF PARADISE
DEPARTMENT OF PUBLIC WORKS

5555 SKYWAY, PARADISE, CALIFORNIA 95969

BID BOOK

NOTICE TO BIDDERS, SPECIAL PROVISIONS, BID DOCUMENTS, AND CONTRACT

FOR CONSTRUCTION ON

MEASURE "C" PEARSON RD IMPROVEMENTS PROJECT

ON PEARSON ROAD, EAST OF CLARK ROAD INTERSECTION TO THE INTERSECTION OF PENTZ ROAD, PARADISE, CALIFORNIA

FEDERAL PROJECT NUMBER: HSIP 5425(027)

TOWN PROJECT NUMBER: 14-04.CON

FOR USE IN CONNECTION WITH
STANDARD SPECIFICATIONS AND STANDARD PLANS DATED MAY 2010 OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION, REVISED STANDARD SPECIFICATIONS DATED 05-15-2015 ARE INCORPORATED IN PART WITH THESE SPECIAL PROVISIONS , GENERAL PREVAILING WAGE RATES AND LABOR SURCHARGE, AND EQUIPMENT RENTAL RATES IN EFFECT ON THE DATE THE PROJECT WORK IS ACCOMPLISHED.

BID OPENING: March 29, 2016, 11:00 AM (PST)

VOID BID SET

Contractors submitting bids must purchase an official set of plans and bid book from the Clerk's Office.
Contact Dina Volenski at (530) 872-6291x102

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ENGINEER SIGNATURE/ TOWN APPROVAL PAGE
MEASURE "C" PEARSON RD IMPROVEMENTS PROJECT

FUNDED WITH FEDERAL HIGHWAY SAFETY IMPROVEMENT PROGRAM FUNDS

FEDERAL-AID PROJECT #: HSIP 5425(027)

TOWN PROJECT #: 14-04.CON

THE SPECIAL PROVISIONS CONTAINED HEREIN HAVE BEEN PREPARED UNDER THE DIRECTION OF THE FOLLOWING REGISTERED PERSON:

REGISTERED PROFESSIONAL ENGINEER
RADLEY M. OTT
C 76166
EXP. 06/10/16
CIVIL
STATE OF CALIFORNIA

REGISTERED CIVIL ENGINEER — DATED 2/4/2016

THE SPECIAL PROVISIONS CONTAINED HEREIN HAVE BEEN REVIEWED BY AND APPROVED BY THE FOLLOWING TOWN REPRESENTATIVE:

TOWN ENGINEER — *DATED* 2/4/2016

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IMPORTANT SPECIAL NOTICE

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- Bidders are advised that, as required by federal law, the Town of Paradise is implementing Disadvantaged Business Enterprise requirements for Disadvantaged Business Enterprises (DBE). Refer to Section 2.H , "Disadvantaged Business Enterprises" of these Special Provisions for more information.
- The Bid Documents are bound in a book together with the Notice to Bidders, Special Provisions, and Contract. The project plans are a separate attachment. **The entire Bid Book does not need to be submitted with the Bid. It is the Bidder's responsibility to confirm the Bid includes all applicable forms, bonds and other attachments to remain a responsive bidder.** This includes all DBE related bid forms. Refer to Section 2.J "Bid Document Completion and Submittal" of these Special Provisions for more information.
- DBE commitment forms and/or "Good Faith Effort" submittals shall be submitted on the SECOND BUSINESS DAY AFTER BID OPENING. Refer to Section 2.J-2.c "Good Faith Effort Submittal" of these Special Provisions for more information.
- Submittal of a complete Subcontractors List must be submitted at bid opening. Refer to Section 2.G of these Special Provisions for more information.
- This is a federally funded project and attention is directed to Section 7.G "Federal Laws for Federal-Aid Contracts" of these special provisions for more information, in particular, Section 7.G-2, "I. General", which requires all sub-contracts to physically have the "Required Contract Provisions, Federal-Aid Construction Contracts" (Form 1273) inserted, and Part-IV-1(a) which requires persons to be paid on a weekly basis.
- The Department has revised its Water Pollution Control requirements. Refer to Section 13 "Water Pollution Control" of these special provisions for more information.
- Attention is directed to Section 26, "Aggregate Bases" of these Special Provisions; additional material qualities have been specified.
- Attention is directed to Sections 37 and 39 of these Special Provisions, as compensation for Tack Coat material shall be considered as included in the prices paid for Seal Coat or Hot Mix Asphalt and no additional compensation will be allowed therefor.
- Attention is directed to Section 39 of these Special Provisions, as payment for Place Asphalt Dike includes Hot Mix Asphalt material.
- Attention is directed to Section 37 of these Special Provisions as seal coats are measured and paid based on area, and no additional compensation will be allowed therefor.
- Attention is directed that Section 12-1.03 "Flagging Costs" of the Standard Specifications is hereby deleted. All flagging costs will be totally (100%) borne by the contractor and no division of costs will be made therefor.
- Attention is directed to Section 13.D-1, "Maintenance of Temporary Items" of these Special Provisions as all costs to maintain temporary sediment and erosion control measures will be totally (100%) borne by the contractor and no division of costs will be made therefor.
- Attention is directed to Section 70.B "Grated Line Drains" of these Special Provisions as there are special materials involved that may require lead times to acquire. Additionally, attention is directed to Section 6.C "Buy America" that apply to steel and metal materials.
- Attention is directed to Section 3.B-2, "Bid Evaluation" of these Special Provisions as there are additive/ alternate bid items associated with this project.
- Attention is directed to Section 7.G-6 "Use of United States –flag vessels" as this is a new federal-aid provision.

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NOTICE TO BIDDERS

TOWN OF PARADISE
DEPARTMENT OF PUBLIC WORKS

Sealed bids for the work shown in the plans and specifications entitled:

MEASURE "C" PEARSON RD IMPROVEMENTS PROJECT

PROJECT PLANS AND SPECIAL PROVISIONS

FED PROJ NO.: HSIP 5425(027)
TOWN PROJECT NO. **14-04.CON**

will be received at the Office of the Town of Paradise Town Clerk at 5555 Skyway, Paradise, California 95969 until 11:00 AM (PST) on March 29, 2016 at which time they will be publicly opened and read aloud in the conference room at the aforementioned address. The envelope enclosing the bid submittal shall be clearly marked "Bid for Contract No. **14-04.CON**, Measure "C" Pearson Rd Improvements Project" and the date and hour for opening of bids. Bid forms for the project work are included herein.
No bid will be considered unless it is made on the bid form purchased from and furnished by the Department of Public Works. **Bids are required for the entire work described herein.**

Each bid must be accompanied by cash, cashier's check, certified check, or a bidder's bond executed by an admitted surety insurer made payable to the Town of Paradise for an amount equal to at least ten percent (10%) of the total bid amount, such guaranty to be forfeited should the bidder to whom the contract is awarded fail to enter into the contract.

DESCRIPTION OF WORK
Installation of either SAMI-R or Microsurface (Additive/Alternate Bid Items), RHMA-G Overlay, remove & replace HMA Dike, roadway excavation, and Drainage Culvert Replacements and other items of work as indicated by the project plans and specifications.

ENGINEER'S ESTIMATE
The Engineer's Estimate for this contract is $865,000.00 (Base Bid).

DISADVANTAGED BUSINESS ENTERPRISE GOAL
The DBE Contract goal is **7.0%**

TRAINEES OR APPRENTICES
The number of trainees or apprentices for this contract is **-0-**. The project has 50 Working Days.

LIQUIDATED DAMAGES
Liquidated damages for the project are $4,500 per working day delay

PRE-BID MEETING
A mandatory pre-bid meeting is scheduled for March 10, 2016, 10:00 AM at the offices of Town of Paradise Public Works, 5555 Skyway, Paradise, California 95969. This meeting is to inform bidders and potential subcontractors of project requirements, arranging solicitations, times for the presentation of bids, quantities, specifications, and delivery schedules in ways that facilitate DBE, and other small businesses participation (e.g., unbundling large contracts to make them more accessible to small businesses, requiring or encouraging prime contractors to subcontract portions of work that they might otherwise perform with their own forces) of subcontracting and material supply opportunities. The Town will also answer any questions pertaining to the Plans, Contract, and Specifications including the Alternative bid procedures, if any. Bidder's attendance at this meeting will be mandatory.

BUY AMERICA PROVISIONS
THIS PROJECT IS SUBJECT TO THE "BUY AMERICA" PROVISIONS OF THE SURFACE TRANSPORTATION ASSISTANCE ACT OF 1982 AS AMENDED BY THE INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991.

CONTRACTOR'S LICENSE CLASSIFICATION
The contractor shall possess a California Class A license or a combination of classes required by the categories and types of project work included in this contract at the time this contract is awarded. This contract is subject to state contract nondiscrimination and compliance requirements pursuant to Government Code, Section 12990.

Inquiries or questions based on alleged patent ambiguity of the plans, specifications or estimate must be communicated as a bidder inquiry prior to bid opening. Any such inquiries or questions, submitted after bid opening, will not be treated as a bid protest.

OBTAINING OR INSPECTING CONTRACT DOCUMENTS

The Project Bid Book and Construction Plans may be inspected at no cost at the Department's offices, or copies of these documents may be obtained for a NONREFUNDABLE FEE OF $ 75.00 PER SET. An additional fee of $10.00 will be charged for mailing of documents. These documents can be obtained from:

TOWN OF PARADISE Clerk's Department
5555 SKYWAY, PARADISE, CALIFORNIA 95969

Copies of the referenced Standard Specifications issued by the State of California, Department of Transportation, may be obtained from the State of California, Department of Transportation, Publications Distribution Unit, 1900 Royal Oaks Drive, Sacramento, CA 95819.
Technical questions should be directed to the office of the Town Engineer, Marc Mattox; telephone (530) 872-6291.

The successful bidder, at bidder's own expense, shall furnish a faithful performance bond and a payment bond each in an amount of one hundred percent (100%) of the total bid, respectively, and in the form prescribed for use by the Town of Paradise. The bonds shall be provided to the Town at the time of contract execution. The Town of Paradise affirms that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation.

FEDERAL AND CALIFORNIA PREVAILING WAGE REQUIREMENTS

The Project requires the payment of prevailing wage rates. Pursuant to California Labor Code Section 1770 et seq, the general prevailing wage rates in the county in which the project work is to be done have been determined by the Director of the California Department of Industrial Relations. These wages are set forth in the General Prevailing Wage Rates for this project, available at Town of Paradise and available from the California Department of Industrial Relations' Internet web site at http://www.dir.ca.gov/DLSR/PWD. Future effective general prevailing wage rates, which have been predetermined and are on file with the California Department of Industrial Relations are referenced but not printed in the general prevailing wage rates.
Attention is directed to the Federal minimum wage rate requirements in the Special Provisions. The Federal minimum wage rates set forth in this project as predetermined by the United States Secretary of Labor are set forth in the books entitled "Notice to Contractors, Special Provisions, and Contract Documents". The Federal minimum wage rates for this project may be obtained directly from the Department of Labor home page at www.gpo.gov/davisbacon. Click on "Browse All Determinations By State", then click on "California", and then click on the "Highway" determination for Butte County. Addenda to modify the Federal minimum wage rates, if necessary, will be issued to holders of the plans and specifications.
If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California Department of Industrial Relations for similar classifications of labor, the Contractor and subcontractors shall pay not less than the higher wage rate. The Department will not accept lower State wage rates not specifically included in the Federal minimum wage determinations. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by the Contractor and subcontractors, the Contractor and subcontractors shall pay not less than the Federal minimum wage rate, which most closely approximates the duties of the employees in question.

The U.S. Department of Transportation (DOT) provides a toll-free "hotline" service to report bid rigging activities. Bid rigging activities can be reported Mondays through Fridays, between 8:00 a.m. and 5:00 p.m., Eastern Time, Telephone No. 1-800-424-9071. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report these activities. The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.
In its sole discretion, the Town of Paradise or its designee may reject any and all bids presented, may accept an item or group of items of any bid, may modify or cancel in whole or in part the notice inviting bids, and may determine to re-advertise for bids. Similarly, the Town Council or its designee reserves the right to waive non-material informalities and non-material irregularities in any bids received.

If two or more bids received are for the same total amount or unit price, quality and service being equal, the Town Council or its designee may accept the one it chooses or accept the lowest bid made after negotiation with tie bidders pursuant to Public Contract Code 20166.

The Town officer or employee conducting the bidding procedure shall present the bid tabulation to the Town Council or its designee for consideration and award if deemed appropriate.

Bids will be required to set forth the price of the items bid upon, the total sales and use taxes that will be due on the purchase or use of the items bid upon, and a total figure for the price plus tax. Any difference between the taxes shown on the bid as the total figure and that actually due shall be the responsibility of the bidder.

No charge for delivery, shipping, parcel post, packing, insurance, license fees, permits, or for any other purpose will be paid by the Town of Paradise unless expressly included and itemized in the bid.

PUBLIC CONTRACT CODE SECTION 7201

Pursuant to Public Contract Code Section 7201, Town will withhold five percent (5%) from each payment to contractor until completion of the project. Town will release such retention amount to the contractor 35 days after the recordation of the Notice of Completion for the Project, provided there are no pending stop notices.

PUBLIC CONTRACT CODE SECTION 22300

Pursuant to Public Contract Code Section 22300, for monies earned by the Contractor and withheld by the Town to ensure the performance of the Contract, the Contractor, may, at its option, choose to substitute securities meeting the requirements of said Public Contract Code Section 22300. Such securities shall be valued by the Town Treasurer, whose decision shall be final. Securities not listed under Public Contract Code Section 22300 or Government Code Section 16430 must be pre-qualified by the Town Treasurer before bid opening in order to be accepted by the Town as security.

TOWN OF PARADISE

BY: Town Manager

Feb 18, 2016
Date

Advertisement #1 02-20-16
Advertisement #2 03-02-16

BID ITEM SECTION REFERENCE

SECTION REFERENCE	ITEM NO.	ITEM DESCRIPTION	UNIT MEAS.
9	1	Mobilization	LS
5	2	Construction Survey	LS
12	3	Traffic Control System	LS
13	4	Prepare and Implement Water Pollution Control Program	LS
16	5	Clearing and Grubbing	LS
15	6	Remove AC Dike	LF
15	7	Remove Culvert	EA
15	8	Reconstruct Guardrail (Wood Post)	LF
15	9	Adjust Water Valve Box To Grade	EA
15	10	Adjust Storm Drain Manhole To Grade	EA
15	11	Adjust Monument Cover	EA
15	12	Reset Mailbox	EA
81	13	Preserve Survey Monument	EA
81	14	Reconstruct Survey Monument	EA
15	15	Cold Plane Asphalt Concrete Pavement	SY
15	16	Salvage Cold Plane Grindings	LS
19	17	Roadway Excavation	LS
26	18	Aggregate Base (Class II, 3/4")	CY
70	19	Grated Line Drains-15"	LF
70	20	Grated Line Drains-18"	LF
64	21	18" Polyethylene Culvert- Type S	LF
70	22	18" Polyethylene Culvert-FES	EA
19	23	Shoulder Backing	TON
39	24	Minor Hot Mix Asphalt-Mainline	TON
39	25	Minor Hot Mix Asphalt-Conform	TON
39	26	RHMA-G (0.15' Thick/ Section A)	TON
39	27	RHMA-G (0.10' Thick/ Section B)	TON
72	28	Rock Slope Protection (Method B, No.2)	CY
39	29	Place Asphalt Dike (Type A)	LF
39	30	Place Asphalt Dike (Type E)	LF
56	31	Roadside Signs	EA
82	32	Delineator (Class 1, Type E)	EA
82	33	Guardrailing Delineator (Class 1, Type E)	EA
84	34	4" Thermoplastic Pavement Stripe	LF
84	35	6" Thermoplastic Pavement Stripe	LF
84	36	8" Thermoplastic Pavement Stripe	LF
82	37	Pavement Marker (Retroreflective)	EA
84	38	Thermoplastic Pavement Marking	SF
84	39	Painted Pavement Markings (2-Coat)	SF
37	ALT-1	SAMI-R	SY
37	ALT-2	Type 3 Microsurfacing	SY

STANDARD PLANS LIST

The Standard Plan sheets and Town of Paradise Standard Details applicable to this contract include, but are not limited to those indicated below and are provided in the Appendix to the Special Provisions. Applicable Revised Standard Plans (RSP) and New Standard Plans (NSP) indicated below are also included in the Appendix to the Special Provisions.

PLAN NO.	ABBREVIATIONS, LINES, SYMBOLS AND LEGEND
A10A	Abbreviations (Sheet 1 of 2)
RSP A10B	Abbreviations (Sheet 2 of 2)
A10C	Lines and Symbols (Sheet 1 of 3)
A10D	Lines and Symbols (Sheet 2 of 3)
A10E	Lines and Symbols (Sheet 3 of 3)
A10F	Legend - Soil (Sheet 1 of 2)
A10G	Legend - Soil (Sheet 2 of 2)
A10H	Legend - Rock
	PAVEMENT MARKERS, TRAFFIC LINES, AND PAVEMENT MARKINGS
A20A	Pavement Markers and Traffic Lines, Typical Details
A20B	Pavement Markers and Traffic Lines, Typical Details
RSP A20C	Pavement Markers and Traffic Lines, Typical Details
A20D	Pavement Markers and Traffic Lines, Typical Details
RSP A24A	Pavement Markings - Arrows
A24B	Pavement Markings - Arrows and Symbols
RSP A24C	Pavement Markings - Symbols and Numerals
A24D	Pavement Markings - Words
RSP A24E	Pavement Markings - Words, Limit and Yield Lines
RSP A24F	Pavement Markings - Crosswalks
	EXCAVATION AND BACKFILL
A62A	Excavation and Backfill - Miscellaneous Details
A62F	Excavation and Backfill - Metal and Plastic Culverts
	OBJECT MARKERS, DELINEATORS, CHANNELIZERS AND BARRICADES
A73A	Object Markers
A73B	Markers
A73C	Delineators, Channelizers and Barricades
	SURVEY MONUMENTS
A74	Survey Monuments
	MIDWEST GUARDRAIL SYSTEM STANDARD RAILING SECTIONS
RSP A77L1	Midwest Guardrail System Standard Railing Section (Wood Post with Wood Block)
RSP A77L3	Metal Beam Guard Railing Reconstruct Installation
RSP 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
	MIDWEST GUARDRAIL SYSTEM TYPICAL LAYOUTS FOR EMBANKMENTS
RSP A77P2	Midwest Guardrail System Typical Layouts for Embankments
	MIDWEST GUARDRAIL SYSTEM END ANCHORAGE AND RAIL TENSIONING ASSEMBLY
RSP A77S1	Midwest Guardrail System End Anchor Assembly (Type SFT)
	CURBS, DRIVEWAYS, DIKES, CURB RAMPS AND ACCESSIBLE PARKING
RSP A87A	Curbs and Driveways
RSP A87B	Hot Mix Asphalt Dikes
	PAVEMENTS
P70	Hot Mix Asphalt Paving (Longitudinal Tapered Notched Wedge Joint)
RSP P74	Pavement Edge Treatments

RSP P75	Pavement Edge Treatments - Overlays

GUTTER AND INLET DEPRESSIONS

D78A	Gutter Depressions
D78C	Inlet Depressions - Hot Mix Asphalt Shoulders

FLARED END SECTIONS

D94A	Metal and Plastic Flared End Sections
D94B	Concrete Flared End Sections

LANDSCAPE AND EROSION CONTROL

RSP H1	Landscape and Erosion Control Abbreviations
RSP H2	Landscape and Erosion Control Symbols
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)
T1B	Temporary Crash Cushion, Sand Filled (Bidirectional)
T2	Temporary Crash Cushion, Sand Filled (Shoulder Installations)
T3A	Temporary Railing (Type K)
T3B	Temporary Railing (Type K)
T4	Temporary Traffic Screen
T5	Temporary Terminal Section (Type K)

TEMPORARY TRAFFIC CONTROL SYSTEMS

RSP T9	Traffic Control System Tables for Lane and Ramp Closures
RSP T13	Traffic Control System for Lane Closure on Two Lane Conventional Highways
RSP T17	Traffic Control System for Moving Lane Closure on Two Lane Highways

TEMPORARY WATER POLLUTION CONTROL

T51	Temporary Water Pollution Control Details (Temporary Silt Fence)
T52	Temporary Water Pollution Control Details (Temporary Straw Bale Barrier)
T53	Temporary Water Pollution Control Details (Temporary Cover)
T54	Temporary Water Pollution Control Details (Temporary Erosion Control Blanket)
T55	Temporary Water Pollution Control Details (Temporary Erosion Control Blanket)
T56	Temporary Water Pollution Control Details (Temporary Fiber Roll)
T57	Temporary Water Pollution Control Details (Temporary Check Dam)
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 Fence (Type ESA)]
T66	Temporary Water Pollution Control Details (Temporary Large Sediment Barrier)
T67	Temporary Water Pollution Control Details (Temporary Construction Roadway)

ROADSIDE SIGNS

RS1	Roadside Signs, Typical Installation Details No. 1
RS2	Roadside Signs - Wood Post, Typical Installation Details No. 2
RS3	Roadside Signs - Laminated Wood Box Post Typical Installation Details No. 3
RS4	Roadside Signs, Typical Installation Details No. 4

OVERHEAD AND ROADSIDE SIGNS PANELS

S82	Roadside Laminated Sign - Single or Multiple Panel, Type B (1" Thick)
S83	Roadside Laminated Sign - Single or Multiple Panel, Type B (2-1/2" Thick)
S84	Roadside Laminated Sign - Single or Multiple Panel, Type H (2-1/2" Thick)
S85	Seam Closure, "H" Section Extrusion and Post Spacing Tables, Multi-Horizontal Laminated Panel Aluminum Signs
S86	Laminated Panel Details - Extrusions for Type A, B and H Panels

S89	Roadside Sign - Formed Single Sheet Aluminum Panel
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

SPECIAL PROVISIONS

SECTION 1 GENERAL

1.A PROJECT SPECIFICATIONS AND PLANS

The work embraced herein shall conform to the provisions in the Standard Specifications dated 2010, and the Standard Plans dated 2010, of the Department of Transportation insofar as the same may apply, and these Special Provisions (which incorporate Revised Standard Specifications).

In case of conflict between the Standard Specifications and these Special Provisions, these Special Provisions shall take precedence over and shall be used in lieu of the conflicting portions.
Amendments to the Standard Specifications set forth in these Special Provisions shall be considered as part of the Standard Specifications for the purposes set forth in Section 1, "General," of the Standard Specifications. Whenever either the term "Standard Specifications is amended" or the term "Standard Specifications are amended" is used in the special provisions, the text or table following the term shall be considered an amendment to the Standard Specifications. In case of conflict between such amendments and the Standard Specifications, the amendments shall take precedence over and be used in lieu of the conflicting portions.

1.A-1 REFERENCES

Refer to Section 1-1.05, “References” of the Standard Specifications.

Replace "current" in the 2nd paragraph of section 1-1.05 with:
most recent

Add to the 4th paragraph of section 1-1.05:
Any reference directly to a revised standard specification section is for convenience only. Lack of a direct reference to a revised standard specification section does not indicate a revised standard specification for the section does not exist.

1.B ABBREVIATIONS

Refer to Section 1-1.06, “Abbreviations” of the Standard Specifications.

Delete the abbreviation and its meaning for UDBE in the 1st table of section 1-1.06

1.C DEFINITIONS AND TERMS

Wherever in the Standard Specifications, Special Provisions, Notice to Bidders, Bid, Contract, or other contract documents the following terms are used; the intent and meaning shall be interpreted as follows:

Town - Town of Paradise, California, a legal entity organized and existing in the State of California, where reference is made to the agency administering the Contract.

Bid Package – Bid Book including Notice to Bidders, Bid Documents, Contract, Special Provisions and Project Plans.

Contract Documents – Refers collectively to the Contract, Special Provisions, Project Plans, Notice to Bidders, Bid Documents, and Standard Specifications.

Contract Time - Number of original working days as adjusted by any time adjustment.

Day – 24 consecutive hours running from midnight to midnight; calendar day.

1. **business day:** Day on the calendar except Saturday, Sunday or holiday.
2. **working day:** Time measure unit for work progress. A working day is any day except:
   2.1. Saturday, Sunday and holiday.

2.2. Day when you cannot perform work on the controlling activity for at least 50 percent of the day with at least 50 percent of the normal labor and equipment due to any of the following:

2.2.1. Adverse weather-related conditions that cause the Contractor to dismiss the crew.

2.2.2. Maintaining traffic under the Contract.

2.2.3. Engineer's direction to suspend the controlling activities for reasons unrelated to the Contractor's performance.

2.2.4. Unanticipated event not caused by either party such as:

2.2.4.1. Act of God

2.2.4.2. Act of a public enemy.

2.2.4.3. Epidemic.

2.2.4.4. Fire.

2.2.4.5. Flood.

2.2.4.6. Governor-declared state of emergency.

2.2.4.7. Landslide.

2.2.4.8. Quarantine restriction.

2.2.5. Issue involving a third party, including:

2.2.5.1. Industry or area-wide labor strike.

2.2.5.2. Material shortage.

2.2.5.3. Freight embargo.

2.2.5.4. Jurisdictional requirement of a law enforcement agency.

2.2.5.5. Workforce labor dispute of a utility or nonhighway facility owner resulting in a nonhighway facility rearrangement not described and not solely for the Contractor's convenience. Rearrangement of a nonhighway facility includes installation, relocation, alteration, or removal of the facility.

Department or **Department of Transportation -** Department of Public Works of the Town of Paradise, California.

Director or Director of Transportation - The Town Council of the Town of Paradise, California.

Disadvantaged Business Enterprise: Disadvantaged Business Enterprise as defined in 49 CFR 26.5.

Engineer - The Director of Public Works of the Town of Paradise, California, acting either directly or through duly authorized agents or consultants.

Early Completion Time - Difference in time between an early scheduled completion date and the Contract completion date.

Highway - Highway, roadway, street, avenue, lane, boulevard, or other public thoroughfare for vehicular traffic.

Job Site Activities – Work done within the physical limits of the Contract.

Laboratory or **Transportation Laboratory -** The established laboratory of the Town of Paradise Department of Public Works or laboratories authorized by the Town to test materials and work involved in the contract.

Liquidated Damages - The amount prescribed in the Special Provisions, pursuant to the authority of Government Code Section 53069.85 to be paid to the Town of Paradise or to be deducted from any payments due or to become due the Contractor for each day of delay in completing the whole or any specified portion of the work beyond the time allowed in the Special Provisions.

Mobilization: Preparatory work that must be performed or costs incurred before starting work on the various items on the job site (Pub Cont Code § 10104).

Scheduled Completion Date: Planned work completion date shown on the current schedule.

Standard Specifications – The 2010 edition of the Standard Specifications of the State of California, Department of Transportation. Any reference therein to the State of California or a State agency, office or officer shall be interpreted to refer to the Town of Paradise or its corresponding agency, office, or officer acting under this contract.

State - Town of Paradise, California, a legal entity organized and existing in the State of California, where reference is made to the agency administering the Contract.

State Contract Act - All applicable provisions of the Public Contract Code (excluding Chapter 1, Division 2, Part 2, therein), Government Code, Labor Code, Civil Code, Business & Professions Code, as they apply to contracts with local public agencies, as defined in said codes. No provision of the Standard Specifications or these special provisions shall be construed as an election under Public Contract Code section 20396 to have this project performed under the provisions of the State Contract Act. Individual provisions of the State Contract Act shall apply only as specifically referenced in these specifications or special provisions.

State Highway Engineer – The Town Engineer of the Town of Paradise, State of California

Transportation Building – Sacramento – Department of Public Works, Town of Paradise State of California.

END OF SECTION

SECTION 2 BIDDING

The bidder's attention is directed to the provisions in Section 2, "Bidding" of the Standard Specifications. Section 2 is amended as deleted and replaced with the following provisions:

2.A GENERAL

Section 2 includes specifications related to bid eligibility and the bidding process.

The electronic bid specifications in section 2 apply if *Electronic Bidding Contract* is shown on the cover of the *Notice to Bidders and Special Provisions*.

2.B BID INELIGIBILITY

A firm that has provided architectural or engineering services to the Department for this contract before bid submittal for this contract is prohibited from any of the following:

1. Submitting a bid
2. Subcontracting for a part of the work
3. Supplying materials

2.C CONTRACTOR REGISTRATION

No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

2.D BID DOCUMENTS

2.D-1 GENERAL

The *Bid* book includes bid forms and certifications.

The *Notice to Bidders and Special Provisions* includes the *Notice to Bidders*, revised standard specifications, and special provisions.

Bid Books and project contract documents may be obtained at the Town of Paradise Department of Public Works, 5555 Skyway, Paradise, California 95969; refer to the Notice to Bidders for more information.

The Bid Documents are bound in a book together with the Notice to Bidders, special provisions, and contract. The project plans are a separate attachment. **The entire Bid Book does not need to be submitted with the Bid. It is the Bidder's responsibility to confirm the Bid includes all applicable forms, bonds and other attachments to remain a responsive bidder.** This includes all DBE related bid forms.

2.D-2 SUPPLEMENTAL PROJECT INFORMATION

The Department makes supplemental information available as specified in the special provisions.

Logs of test borings are supplemental project information.

If an *Information Handout* or cross sections are available, you may view them at the Contract Plans and Special Provisions link at the Bidders' Exchange website.

If rock cores are available, you may view them by sending a request to Coreroom@dot.ca.gov.

If other supplemental project information is available for inspection, you may view it by phoning in a request.

Make your request at least 7 days before viewing. Include in your request:

1. District-County-Route
2. Contract number

3. Viewing date
4. Contact information, including telephone number

For rock cores, also include the bridge number in your request.

2.E JOB SITE AND DOCUMENT EXAMINATION

Examine the job site and bid documents. Notify the Department of apparent errors and patent ambiguities in the plans, specifications, and Bid Item List. Failure to do so may result in rejection of a bid or rescission of an award.

Bid submission is your acknowledgment that you have examined the job site and bid documents and are satisfied with:

1. General and local conditions to be encountered
2. Character, quality, and scope of work to be performed
3. Quantities of materials to be furnished
4. Character, quality, and quantity of surface and subsurface materials or obstacles
5. Requirements of the contract

2.F BID ITEM LIST

Submit a bid based on the bid item quantities the Department shows on the Bid Item List.

2.G SUBCONTRACTOR LIST

On the Subcontractor List form, list each subcontractor to perform work in an amount in excess of 1/2 of 1 percent of the total bid or $10,000, whichever is greater (Pub Cont Code § 4100 et seq.).

For each subcontractor listed, the Subcontractor List form must show:

1. Business name and the location of its place of business.
2. California contractor license number for a non-federal-aid contract.
3. Public works contractor registration number
4. Portion of work it will perform. Show the portion of the work by:
   - 4.1. Bid item numbers for the subcontracted work
   - 4.2. Dollar amount associated with the subcontracted work for each bid item listed
   - 4.3. Description of the subcontracted work if the percentage of the bid item listed is less than 100 percent

In accordance with Public Contract Code § 4104 (a)(2)(B), the Town requires a completed subcontractor list at the bid opening. An incomplete subcontractors list results in a non-responsive bid. Submittals after the bid opening will not be accepted.

2.H DISADVANTAGED BUSINESS ENTERPRISES

2.H-1 GENERAL

In accordance with Public Contract Code § 4104 (a)(2)(B), the Town requires a completed subcontractor list at the bid opening. An incomplete subcontractors list results in a non-responsive bid. Submittals after the bid opening will not be accepted.

Disadvantaged Business Enterprises" applies to a federal-aid contract.

Relevant forms are provided with the Bid Documents.

Under 49 CFR 26.13(b):

The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out

these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

1. Withholding monthly progress payments;
2. Assessing sanctions;
3. Liquidated damages; and/or
4. Disqualifying the contractor from future bidding as non-responsible.

Each subcontract signed by the bidder must include this assurance.

2.H-2 DISADVANTAGED BUSINESS ENTERPRISE GOAL

2.H-2.a GENERAL

Section 2-1.12B applies if a DBE goal is shown on the *Notice to Bidders*.

The Department shows a goal for DBEs to comply with the DBE program objectives provided in 49 CFR 26.1.

Make work available to DBEs and select work parts consistent with available DBEs, including subcontractors, suppliers, service providers, and truckers.

Meet the DBE goal shown on the *Notice to Bidders* or demonstrate that you made adequate good faith efforts to meet this goal.

You are responsible to verify at bid opening the DBE firm is certified as a DBE by the California Unified Certification Program and possess the work codes applicable to the type of work the firm will perform on the Contract.. For a list of DBEs certified by the California Unified Certification Program, go to: http://www.dot.ca.gov/hq/bep/find_certified.htm.

Determine that selected DBEs perform a commercially useful function for the type of work the DBE will perform on the Contract as provided in 49 CFR 26.55(c)(1)–(4). Under 49 CFR 26.55(c)(1)–(4), the DBE must be responsible for the execution of a distinct element of work and must carry out its responsibility by actually performing, managing, and supervising the work.

All DBE participation will count toward the Contract DBE goal.

Credit for materials or supplies you purchase from DBEs will be evaluated on a contract-by-contract basis and counts toward the goal in the following manner:

1. 100 percent if the materials or supplies are obtained from a DBE manufacturer.
2. 60 percent if the materials or supplies are obtained from a DBE regular dealer.
3. Only fees, commissions, and charges for assistance in the procurement and delivery of materials or supplies, if they are obtained from a DBE that is neither a manufacturer nor regular dealer. 49 CFR 26.55 defines "manufacturer" and "regular dealer."

You receive credit toward the goal if you employ a DBE trucking company that is performing a commercially useful function. The Department uses the following factors in determining whether a DBE trucking company is performing a commercially useful function:

- The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.
- The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
- The DBE receives credit for the total value of the transportation services it provides on the Contract using trucks it owns, insures, and operates using drivers it employs.
- The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the Contract.

- The DBE may lease trucks without drivers from a non-DBE truck leasing company. If the DBE leases trucks from a non-DBE truck leasing company and uses its own employees as drivers, it is entitled to credit for the total value of these hauling services.
- A lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

[49 Fed Reg 59595 (10/2/14) (to be codified at 49 CFR 26.55(d)]

2.H-2.b DBE COMMITMENT SUBMITTAL

Submit DBE information under section2.J-2 of these Special Provisions.

Submit written confirmation from each DBE stating that it is participating in the contract. Include confirmation with the DBE Commitment form. A copy of a DBE's quote will serve as written confirmation that the DBE is participating in the contract. Confirmation shall describe the type and dollar amount of work shown on the form. If a DBE is participating as a joint venture partner, submit a copy of the joint venture agreement.

2.H-2.c DBE GOOD FAITH EFFORTS SUBMITTAL

You can meet the DBE requirements by either documenting commitments to DBEs to meet the Contract goal or by documenting adequate good faith efforts to meet the Contract goal. An adequate good faith effort means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal that, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to meet the DBE goal.

If you have not met the DBE goal, complete and submit the DBE Good Faith Efforts Documentation form under section 2.J-2.c of these Special Provisions showing that you made adequate good faith efforts to meet the goal. Only good faith efforts directed toward obtaining participation by DBEs are considered.

Submit good faith efforts documentation within the specified time to protect your eligibility for award of the contract in the event the Department finds that the DBE goal has not been met.

Refer to 49 CFR 26 app A for guidance regarding evaluation of good faith efforts to meet the DBE goal.

Good faith efforts documentation must include the following information and supporting documents, as necessary:

1. Items of work you have made available to DBE firms. Identify those items of work you might otherwise perform with your own forces and those items that have been broken down into economically feasible units to facilitate DBE participation. For each item listed, show the dollar value and percentage of the total contract. It is your responsibility to demonstrate that sufficient work to meet the goal was made available to DBE firms.
2. Names of certified DBEs and dates on which they were solicited to bid on the project. Include the items of work offered. Describe the methods used for following up initial solicitations to determine with certainty if the DBEs were interested, and the dates of the follow-up. Attach supporting documents such as copies of letters, memos, facsimiles sent, telephone logs, telephone billing statements, and other evidence of solicitation. You are reminded to solicit certified DBEs through all reasonable and available means and provide sufficient time to allow DBEs to respond.
3. Name of selected firm and its status as a DBE for each item of work made available. Include name, address, and telephone number of each DBE that provided a quote and their price quote. If the firm selected for the item is not a DBE, provide the reasons for the selection.
4. Name and date of each publication in which you requested DBE participation for the project. Attach copies of the published advertisements.
5. Names of agencies and dates on which they were contacted to provide assistance in contacting, recruiting, and using DBE firms. If the agencies were contacted in writing, provide copies of supporting documents.
6. List of efforts made to provide interested DBEs with adequate information about the plans, specifications, and requirements of the contract to assist them in responding to a solicitation. If you have provided

information, identify the name of the DBE assisted, the nature of the information provided, and date of contact. Provide copies of supporting documents, as appropriate.

7. List of efforts made to assist interested DBEs in obtaining bonding, lines of credit, insurance, necessary equipment, supplies, and materials, excluding supplies and equipment that the DBE subcontractor purchases or leases from the prime contractor or its affiliate. If such assistance is provided by you, identify the name of the DBE assisted, nature of the assistance offered, and date assistance was provided. Provide copies of supporting documents, as appropriate.
8. any additional data to support demonstration of good faith efforts.

The Department considers DBE commitments of other bidders in determining whether the low bidder made good faith efforts to meet the DBE goal.

2.H-2.c(i) Data Used To Determine Contract Goal

To better serve bidder's ability to meet the DBE contract goal and conduct searches for qualified firms, the Town used a "Market Area" consisting Caltrans Districts 3 to search for DBE firms. Additionally, the Town used the following Work Category Codes (WCC) to determine the contract goal:

C1601 Clearing & Grubbing
C2066 Temporary Erosion Control
C3990 Recycle, Reclaim Asphalt Concrete
C1522 Reset, Adjust Roadway Items
C1910 Grading;
C2602 Aggregate Base
C0639 Asphalt
C5620 Roadside Sign
C7200 Rock Slope Protection
C8405 Thermoplastic Traffic Stripe & Marking
C1201 Traffic Control System
C2030 Erosion Control
C9774 Trucker
C1901 Roadway Excavation
C0625 Sand & Gravel
C3901 Asphalt Concrete
C9602 Bottom Dump Trucking
C7000 Plastic Pipe
C8201 Object Marker
C0685 Pavement Markers

This information is provided to help contractors with solicitation of qualified DBE firms, and in no way shall serve to limit the search effort or range of qualified DBE firms for this project. Contractors shall extend search parameters to solicit available firms if needed. For more information on how the Town prepared the Contract Goal, please contact the Department.

2.I OPT OUT OF PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS

You may opt out of the payment adjustments for price index fluctuations specified in section 9-1.07. To opt out, submit a completed Opt Out of Payment Adjustments for Price Index Fluctuations form under Section Required Items for Bid of these Special Provisions.

2.J BID DOCUMENT COMPLETION AND SUBMITTAL

2.J-1 GENERAL

Complete the forms provided in the Bid book.

Use the forms provided by the Department except as otherwise noted for a bidder's bond.

Submit the forms to the Office of the Town of Paradise Town Clerk at 5555 Skyway, Paradise, California 95969 until 4:00 PM (PST) on March 29, 2016

Do not fax forms.

All Bids must be made on the required Bid form(s). All blank spaces for Bid prices must be filled in, in ink or typewritten, and the Bid form must be fully completed and executed when submitted. Any corrections to entries made on Bid forms must be initialed by the person signing the Bid. In case of discrepancy between words and figures, words will prevail. Only one copy of the Bid form is required.

If an agent other than the authorized corporate officer or a partnership member signs the bid, file a Power of Attorney with the Department either before opening bids or with the bid. Otherwise, the bid may be nonresponsive.

Submit your bid and any *Bid* book forms after you submit your bid:

1. Under sealed cover
2. Marked as a bid
3. Identifying the contract number and the bid opening date

Failure to submit the forms and information as specified may result in a nonresponsive bid.

2.J-2 REQUIRED ITEMS FOR BID

In conformance with Public Contract Code Section 7106, a Noncollusion Affidavit is included in the Bid Book. Signing the Bid Book shall also constitute signature of the Noncollusion Affidavit.

Failure of the bidder to fulfill the requirements of the Special Provisions for submittals required to be furnished after bid opening, including but not limited to escrowed bid documents, where applicable, may subject the bidder to a determination of the bidder's responsibility in the event it is the apparent low bidder on a future public works contract. Incomplete submittal of bid documents will result in a non-responsive bid. **The entire Bid Book does not need to be submitted with the Bid. It is the Bidder's responsibility to confirm the Bid includes all applicable forms, bonds and other attachments to remain a responsive bidder..**

2.J-2.a LIST OF REQUIRED ITEMS FOR BID

The following lists of items are required to submitted with the Bid

1. Bid Cover Page
2. Bid Item List
3. List of Subcontractors (if needed).
4. Bidder's List of Subcontractors (DBE and Non-DBE)- Part I & II; Exhibit 12-B
5. Equal Employment Opportunity Certification
6. Non-Lobbying Certification For Federal-Aid Contracts
7. Standard Form – LLL, "Disclosure of Lobbying Activities", if needed. Refer to Section 7.G-2, "FHWA- Form 1273", Part XI of these Special Provisions for more information.
8. Public Contract Code Statements and Questionnaire
9. Noncollusion Affidavit
10. Debarment And Suspension Certification
11. Opt-Out Form
12. Bid Signature Page
13. Bidder's Security
14. Local Agency Bidder DBE Commitment (Construction Contracts) Exhibit 15-G(Can be submitted as directed in Section 2.J-2.b "DBE Commitment Submittal" of these Special Provisions)
15. Exhibit 15-H DBE Information- Good Faith Efforts (Can be submitted as directed in Section 2.J-2.c of these Special Provisions)

2.J-2.b DBE COMMITMENT SUBMITTAL

If the form is not submitted with the bid, make a copy of the form before submitting your bid. Forms shall not be removed. The DBE commitment form must be received by the Engineer no later than 4:00pm on the **second** business day after bid opening.

2.J-2.c GOOD FAITH EFFORT SUBMITTAL

If good faith efforts documentation is not submitted with the bid, it must be received by the Office Engineer no later than 4:00 p.m. on the **second** business day after bid opening.

2.J-2.d DBE / NON-DBE LISTING OF SUBCONTRACTORS

Pursuant to Title 49, Section 26.11 of the Code of Federal Regulations, the Contractor must provide information on the list of subcontractors (regardless of amount of work performed). This information is required at the time bids are due.

2.J-3 BID FORM SUBMITTAL SCHEDULES

2.J-3.a GENERAL

The *Bid* book includes forms specific to the contract. The deadlines for the submittal of the forms vary depending on the requirements of each contract. Determine the requirements of the contract and submit the forms based on the applicable schedule specified as follows:

Submit all documents at the time of bid, with the exception of the provisions in Sections 2.J-2.b and 2.J-2.c of these special provisions

2.J-4 BIDDER'S SECURITY

Submit one of the following forms of bidder's security equal to at least 10 percent of the bid:

1. Cash
2. Cashier's check
3. Certified check
4. Signed bidder's bond by an admitted surety insurer
5. For an electronic bid, electronic bidder's bond by an admitted surety insurer submitted using an electronic registry service approved by the Department.

Submit cash, cashier's check, certified check, or bidder's bond to the Department at the Bidders Exchange before the bid opening time.

Submit electronic bidder's bond with the electronic bid.

If using a bidder's bond, you may use the form in the Bid book. If you do not use the form in the Bid book, use a form containing the same information.

The bidder's bond must conform to either the bond form page in this Bid Book, or on a form that conforms to it.

Attorneys-in-fact who sign bid bonds, payment bonds or performance bonds must file with each bond a certified and effective dated copy of their power of attorney.

2.K BID WITHDRAWAL

For a submitted bid:

1. An authorized agent may withdraw a bid before the bid opening date and time by submitting a written bid withdrawal request at the location where the bid was submitted. Withdrawing a bid does not prevent you from submitting a new bid.
2. After the bid opening time, you cannot withdraw a bid.

2.L BID OPENING

The Department publicly opens and reads bids at the time and place shown on the Notice to Bidders.

2.M DEPARTMENT'S DECISION ON BID

The Department's decision on the bid amount is final.

The Department may reject:

1. All bids
2. A nonresponsive bid

2.N BID RELIEF

The Department may grant bid relief under Pub Cont Code § 5100 et seq. Submit any request for bid relief to the Office Engineer. The Relief of Bid Request form is available at the Department's website.

2.O SUBMITTAL FAILURE HISTORY

The Department considers a bidder's past failure to submit documents required after bid opening in determining a bidder's responsibility.

2.P BID RIGGING

This Section applies to a federal-aid contract.

The U.S. Department of Transportation (DOT) provides a toll-free hotline to report bid rigging activities. Use the hotline to report bid rigging, bidder collusion, and other fraudulent activities. The hotline number is (800) 424-9071. The service is available 24 hours 7 days a week and is confidential and anonymous.. The hotline is part of the DOT's effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General.

2.Q MANDATORY PRE-BID MEETING

The Department will conduct a mandatory pre-bid meeting for this contract. Pre-bid meeting will be held on March 10, 2016, 10:00 AM. The purpose of the meeting is to:

1. Describe and discuss the project
2. Provide DBE firms the opportunity to meet and interact with prospective bidders and increase their participation in the performance of contracts.
3. Address any bidder questions or concerns for the project, including any addenda issued or pending.

Each bidder must attend the mandatory pre-bid meeting. The bidder's representative must be a company officer, project superintendent, or project estimator. For a joint venture, one of the parties must attend the mandatory pre-bid meeting. The Department does not accept a bid from a bidder who did not attend the meeting.

A sign-up sheet is used to identify each prospective bidder. Each bidder is required to include the name and title of the company representative attending the mandatory pre-bid meeting. The Department may hold a single pre-bid meeting for more than 1 contract. Sign the sign-up sheet for the contract you intend to bid on. If you are bidding on multiple contracts, sign each sign-up sheet for each contract you intend to bid on.

2.R ADDENDA AND EXPLANATIONS TO BIDDERS

Any explanation regarding the meaning or interpretation of Plans, Specifications, or other Contract Documents must be requested in writing, with sufficient allowance of time for receipt of reply before the time set for opening of Bids. Any such explanations or interpretations shall be made in the form of Addenda to the Documents and shall be furnished to all Bidders, who shall acknowledge receipt of all Addenda in their Bids. Oral explanations and interpretations shall not be binding.

When obtaining and making payment for the Bid Book, bidder shall sign a bidders list, and provide contact information (address, fax number, email address and phone number) for the sole purpose of providing any addenda for the project. Bidder should put the contact information of where addenda should be sent/ received.

An addendum will be issued no sooner than ten (10) days prior to Bid Opening and no later than three (3) days before Bid Opening to document and memorialize the federal wage determination for the project.

Confirmation of bidder accepting addenda is required.

END OF SECTION

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SECTION 3 CONTRACT AWARD AND EXECUTION

3.A GENERAL

The bidder's attention is directed to the provisions in Section 3, "Contract Award and Execution" of the Standard Specifications and these special provisions for the requirements and conditions concerning award and execution of contract.

Sections 3-1.08 of the Standard Specifications shall not apply.

3.B CONTRACT AWARD

Refer to Section 3-1.04 “Contract Award” of the Standard Specification s is amended to read:

If the Department awards the contract, the award is made to the lowest responsible bidder within 60 days after bid opening. The Department may extend the specified award period if the bidder agrees.

3.B-1 BID PROTEST

Submit any bid protest to the Engineer. Bid protests are to be delivered to the following address:

DIRECTOR OF PUBLIC WORKS
5555 SKYWAY, PARADISE, CALIFORNIA 95969

3.B-1.a BID PROTEST PROCEDURE

a. The initial bid protest must be submitted in writing to the above address no later than 5PM of the 5th business day following bid opening.

   i. The initial protest shall refer to both the Contract number and the specific portion of the document which forms the basis for the protest.

   ii. The initial protest shall include the name, address, telephone number and signature of the person representing the protesting party.

   iii. The party filing the initial protest shall concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest which may be adversely affected by the outcome of the protest. Such parties shall include all other Bidders or proposers who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.

b. The protesting bidder shall submit to the Department a full and complete written statement specifying the grounds for the protest no later than 5 PM of the 5th business day following the submittal of the initial protest.

c. The Department will issue a proposed decision on the protest. The final decision on any protest shall be made by the Town of Paradise Town Council prior to the award of the Contract. If the Board determines that a protest is frivolous, the party originating the protest may be determined to be irresponsible and that party may be determined to be ineligible for future contract awards.

d. The procedure and time limits set forth in this paragraph are mandatory and are the Bidder’s sole and exclusive remedy in the event of Bid protest and failure to comply with these procedures shall constitute a failure to exhaust administrative remedies and a waiver of any right to further pursue the bid protest or otherwise challenge the bid award, including filing a Government Code Claim or legal proceedings.

3.B-2 BID EVALUATION

This project is bid as a Base Project with two additive-alternate Bituminous Seal items of work which may be added depending on the cost of bids for the Base Project and each Alternate Item separately.

Approximately $1,052,488 is expected to be available for this project. Additionally, the Town may use its discretion and supplement the budgeted amount with other available Town funds. The specific funding amount

upon which the contract will be awarded will be publicly disclosed by the Department before the first bid is opened, and will be announced at the bid opening.

The Town will evaluate all bids for this project based on the Base Project, followed by the Base Project plus an Alternate Bid Item, prioritized to determine which bid provides the greatest structural section as determined by the Town within the specified Funding Amount. The contract, if awarded, will be awarded to the responsive and responsible bidder who submitted the lowest bid, as determined by the method set forth in Public Contract Code section 20103.8, subdivision (c), which provides that:

- The lowest bid shall be the lowest total of the bid prices on the base contract and those additive or deductive items that when taken in order from a specifically identified list of those items in the solicitation, and added to, or subtracted from, the base contract, are less than, or equal to, a funding amount publicly disclosed by the local agency before the first bid is opened.

The award of the contract, if it be awarded, will be to the lowest responsible, responsive bidder based upon the base bid, and any additive bid items chosen by the Town, whose bid complies with all the requirements prescribed.

If, at the time the contract is to be awarded, the total of the lowest acceptable Bid exceeds the funds then estimated by the Town as available, the Town may reject all bids or take such other action as best serves the Town's interests. In any case, the Town reserves the right to reject all bids.

3.B-3 INVESTIGATION OF BIDDER

The Town may make such investigations as it deems reasonably necessary to determine the ability of the Bidder to perform the project work, and the Bidder shall furnish to the Town all such information and data for this purpose as the Town may request. The Town reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Town that such Bidder is properly qualified to carry out the obligations of the Agreement and to complete the project work contemplated therein.

3.C CONTRACT BONDS

The provisions of Section 3-1.05 of the Standard Specifications shall not apply.

The successful bidder shall furnish two bonds for the contract. As required under Section 9550 of the Civil Code, the successful bidder shall furnish a Payment Bond; provided that the bond shall be in the amount of one-hundred percent (100%) of the contract price to guarantee the payment of claims of laborers, mechanics, or material men employed to work under the contract.

In addition, the bidder shall furnish a Performance Bond in the amount of one-hundred percent (100%) of the contract price to guarantee the faithful performance of the contract.

All alterations, extensions of time, extra and additional work, and other changes authorized by these specifications or any part of the contract may be made without securing the consent of the surety or sureties on the contract bonds.

Bond forms are provided with the Contract Documents.

Sureties on each of said bonds shall be satisfactory to the Town Attorney

3.D DBE INFORMATION FORM

A "Local Agency Bidder-DBE Commitment (Construction Contracts), Exhibit 15-G" form is included in the Bid Book to be executed by the successful bidder. The purpose of the form is to collect data required under 49 CFR 26. Even if no DBE participation will be reported, the successful bidder must execute and return the form.

The successful bidder's "Local Agency Bidder- Information (Construction Contracts), Exhibit 15-G" form should include the names, addresses and phone numbers of DBE firms that will participate, with a complete description of work or supplies to be provided by each, and the dollar value of each DBE transaction. When 100 percent of a contract item of work is not to be performed or furnished by a DBE, a description of the exact

portion of that work to be performed or furnished by that DBE should be included in the DBE information, including the planned location of that work. A successful bidder certified as a DBE should describe the work it has committed to performing with its own forces as well as any other work that it has committed to be performed by DBE subcontractors, suppliers and trucking companies.

The successful bidder is to provide written confirmation from each DBE that the DBE is participating in the contract. A copy of a DBE's quote serves as written confirmation that the DBE is participating in the contract. If a DBE is participating as a joint venture partner, the successful bidder is to submit a copy of the joint venture agreement.

The "Local Agency Bidder-DBE Information (Construction Contracts), Exhibit 15-G" form shall be completed and returned to the Agency by the successful bidder with the executed contract and contract bonds.

3.E CONTRACT EXECUTION

The provisions of Section 3-1.18, "Contract Execution" of the Standard Specifications shall be changed to read as follows:

The successful bidder must sign the *Contract* form included in the Bid Book.

After Award of the Contract by the Town, the Engineer will issue a "Notice of Award", which includes applicable contract documents. Upon Receipt of the Notice of Award, deliver to the Engineer:

1. Signed Contract form
2. Contract bonds
3. Documents identified in Section 3-1.07 of the Standard Specifications, "Insurance Policies"
4. Payee Data Record
5. For a federal-aid contract, Caltrans Bidder - DBE Information form

These contract documents must be received by the Engineer before the 10th business day after the bidder receives the contract.

Executed contract documents shall be delivered to the following address:

TOWN OF PARADISE DEPARTMENT OF PUBLIC WORKS
ATTENTION PROJECT #14-04.CON
5555 SKYWAY, PARADISE, CALIFORNIA 95969

The bidder's security may be forfeited for failure to execute the contract within the time specified.

3.F BIDDER'S SECURITIES

The provisions of Section 3-1.19, "Bidders' Securities" of the Standard Specifications shall be changed to read as follows:

Failure of the lowest responsible bidder, the second lowest responsible bidder, or the third lowest responsible bidder to execute the contract as required in Section 3.E "Contract Execution," within 10 business days of receiving the contract for execution shall be just cause for the forfeiture of the Bid guaranty. The successful bidder may file with the Department a written notice, signed by the bidder or the bidder's authorized representative, specifying that the bidder will refuse to execute the contract if it is presented. The filing of this notice shall have the same force and effect as the failure of the bidder to execute the contract and furnish acceptable bonds within the time specified.

END OF SECTION

SECTION 4 SCOPE OF WORK

4.A GENERAL

The bidder's attention is directed to the provisions in Section 4, "Scope of Work" of the Standard Specifications and these special provisions for the requirements and conditions concerning scope of work.

4.B LOCATION OF WORK

On Pearson Road, east of Clark Road intersection to the intersection of Pentz Road, Paradise, California

4.B-1 NATIONAL HIGHWAY SYSTEM

This project is **not** on the National Highway System (NHS). Refer to Section 7.G-2, "FHWA- Form 1273".

4.C DESCRIPTION OF WORK

This Bid Book and contract includes the construction of two separate federally funded, safety related, roadway construction projects which are located approximately two miles apart. All labor and materials are to be segregated by project. All correspondence and references shall include appropriate and correct project name and project number(s).

Construct auxiliary turning lanes on South Avenue and Hoag/Hall Road Curve and minor realignment of Hall Road. Work includes clearing/ grubbing, placement and maintenance of stormwater BMPs, removal and profile grinding of existing asphalt roadway, salvage/relocation/removal of roadside objects, import and placement of fill material(s), extension of existing culverts, placement of rock slope protection/ rip-rap at culvert ends, grading of roadway, import and placement of aggregate base, placement of hot mix asphalt, placement of shoulder backing and/or salvage asphalt, installation of signs, object markers, guard rail, thermoplastic striping and markings.

4.D CONTRACT DOCUMENTS PROVIDED TO CONTRACTOR

The Engineer will furnish to the Contractor, upon request and free of charge, three (3) copies of Contract Documents. Additional copies of Contract Documents or Plans may be obtained upon request by paying appropriate costs for reproduction.

4.E CHANGE ORDERS - GENERAL

The provisions of Section 4-1.05A, "General" of the Standard Specifications shall be changed to read as follows:

The Department may make changes within the scope of work and add extra work, subject to the limitations of Section 20395, subdivision (d) of the Public Contract Code. The Engineer describes the changes and extra work, the payment basis, and any time adjustment in a Change Order.

A Change Order is approved when the Department signs the Change Order.

Until the Department approves a Change Order, continue to perform the work under the Contract. If ordered in writing by the Engineer, you shall proceed with the work so ordered prior to actual receipt of an approved contract change order therefor. In those cases, the Engineer will, as soon as practicable, issue an approved contract change order for the ordered work.

Submit detailed cost data for a unit price adjustment for a bid item if:

1. the Engineer requests the data or,
2. you request a unit price adjustment resulting from a change of more than 25 percent in the bid item's quantity.

Refer to Section 5-1.27E, "Change Order Bills".

4.F WORK CHARACTER CHANGES

The provisions of Section 4-1.05B, "Work Character Changes" of the Standard Specifications shall be changed to read as follows:

The Department may, in its sole discretion, issue a Change Order to adjust the unit price for an item if:

1. An ordered plan or specification change materially changes the character of a work item from that on which the bid price was based; and
2. The unit cost of the changed item differs when compared to the unit cost of that item under the original plans and specifications.

4.G DIFFERING SITE CONDITIONS

The provisions of Section 4-1.06, "Differing Site Conditions" of the Standard Specifications shall be changed to read as follows:

4.G-1 SUBSURFACE CONDITIONS

In the event the work hereunder requires digging trenches or excavation deeper than four (4) feet, the Contractor shall promptly, and before the following conditions are disturbed, notify the Department by written notice of:

1. Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.
2. Subsurface or latent physical conditions at the site differing from those indicated.
3. Unknown physical conditions at the site of an unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this contract.

Upon such notification, the Department shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for performance of any part of the work, shall issue a change order under the procedures described in the Standard Specifications and these Special Provisions.

In the event that a dispute arises between the Department and the Contractor whether the conditions do materially so differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the work, the Contractor shall not be excused from any scheduled completion date provided for by this contract, but shall proceed with all work to be performed under this Contract. Contractor shall retain any and all rights provided either by contract or by law, which pertain to the resolution of disputes and protests between the contracting parties.

4.G-2 OTHER CONDITIONS

With respect to differing site conditions, other than those to which Section 4-7.A applies, the following procedures shall apply:

Promptly notify the Engineer if you find either of the following conditions:

1. Physical conditions differing materially from either of the following:
   1.1. Contract documents
   1.2. Job site examination
2. Physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the Contract

Include details explaining the information you relied on and the material differences you discovered.

If you fail to promptly notify the Engineer, you waive the differing site condition claim for the period between your discovery of the differing site condition and your notification to the Engineer.

If you disturb the site after discovery and before the Engineer's investigation, you waive the differing site condition claim.

Upon your notification, the Engineer investigates job site conditions and:

1. Notifies you whether to resume affected work
2. Decides whether the condition differs materially and is cause for an adjustment of time, payment, or both.

END OF SECTION

SECTION 5 CONTROL OF WORK

5.A GENERAL

The bidder's attention is directed to the provisions in Section 5"Control of Work" of the Standard Specifications and these Special Provisions.

Add between "million" and ", professionally" in the 3rd paragraph of section 5-1.09A:
and 100 or more working days

Add to the list in the 4th paragraph of section 5-1.09A:
9. Considering discussing with and involving all stakeholders in evaluating potential VECPs

Add to the end of item 1.1 in the list in the 7th paragraph of section 5-1.09A:
, including VECPs

Sections 5-1.13C and 5-1.13D of the Standard Specifications shall not apply and are deleted.

5.B SUBCONTRACTING

5.B-1 GENERAL

Refer to Section 5-1.13A, "General" of the Standard Specifications.

Replace the 8th paragraph of section 5-1.13A with:
Each subcontractor must have an active and valid:

1. State contractor license with a classification appropriate for the work to be performed (Bus & Prof Code § 7000 et seq.)
2. Public works contractor registration number with the Department of Industrial Relations.

5.B-2 DISADVANTAGED BUSINESS ENTERPRISE

Refer to Section 5-1.13B, "Disadvantaged Business Enterprise" of the Standard Specifications.

Replace section 5-1.13B with:

5-1.13B Disadvantaged Business Enterprises

5-1.13B(1) General

Section 5-1.13B applies to a federal-aid contract.

Use each DBE as listed on the DBE Commitment form unless you receive authorization for a substitution. Ensure that all subcontracts and agreements with DBEs to supply labor or materials are performed under 49 CFR 26.

Maintain records, including:

1. Name and business address of each 1st-tier subcontractor
2. Name and business address of each DBE subcontractor, DBE vendor, and DBE trucking company, regardless of tier
3. Date of payment and total amount paid to each business

If you are a DBE contractor, include the date of work performed by your own forces and the corresponding value of the work.

Before the 15th day of each month for the previous month's work, submit:

1. Monthly DBE Trucking Verification form
2. Monthly DBE Payment form

If a DBE is decertified before completing its work, the DBE must notify you in writing of the decertification date. If a business becomes a certified DBE before completing its work, the business must notify you in writing of the certification date. Submit the notifications. Upon work completion, complete a Disadvantaged Business Enterprises (DBE) Certification Status Change form. Submit the form within 30 days of Contract acceptance.

Upon work completion, complete a Final Report – Utilization of Disadvantaged Business Enterprises (DBE), First-Tier Subcontractors form. Submit it within 30 days of Contract acceptance. The Department withholds $10,000 until the form is submitted. The Department releases the withhold upon submission of the completed form.

5-1.13B(2) Performance of Disadvantaged Business Enterprises

Section 5-1.13(B)(2) applies if a DBE goal is shown on the Notice to Bidders.

DBEs must perform work or supply materials as listed on the DBE Commitment form.

Do not terminate or substitute a listed DBE for convenience and perform the work with your own forces or those of an affiliate, a non-DBE firm, or another DBE firm or obtain materials from other sources without authorization from the Department.

The Department authorizes a request to use other forces or sources of materials if it shows any of the following justifications:

1. Listed DBE fails or refuses to execute a written contract based on the plans and specifications for the project.
2. You stipulated that a bond is a condition of executing the subcontract and the listed DBE fails to meet your bond requirements.
3. Work requires a contractor license and the listed DBE does not have a valid license under the Contractors License Law.
4. Listed DBE fails or refuses to perform the work or furnish the listed materials.
5. Listed DBE's work is unsatisfactory and not in compliance with the Contract.
6. Listed DBE is ineligible to work on the project because of suspension or debarment.
7. Listed DBE becomes bankrupt or insolvent.
8. Listed DBE voluntarily withdraws with written notice from the Contract.
9. Listed DBE is ineligible to receive credit for the type of work required.
10. Listed DBE owner dies or becomes disabled resulting in the inability to perform the work on the Contract.
11. Department determines other documented good cause under 49 CFR 26.53.

Notify the original DBE of your intent to use other forces or material sources and provide the reasons. Provide the DBE with 5 business days to respond to your notice and advise you and the Department of the reasons why the use of other forces or sources of materials should not occur. Your request to use other forces or material sources must include:

1. 1 or more of the reasons listed in the preceding paragraph
2. Notices from you to the DBE regarding the request
3. Notices from the DBE to you regarding the request

If the Department authorizes the termination or substitution of a listed DBE, make good faith efforts to find another DBE. The substitute DBE must (1) perform at least the same dollar amount of work as the original DBE under the Contract to the extent needed to meet the DBE goal and (2) be certified as a DBE with the work code applicable to the type of work the DBE will perform on the Contract at the time of your request for substitution. Submit your documentation of good faith efforts within 7 days of your request for authorization of the substitution. The Department may authorize a 7-day extension of this submittal period at your request. Refer to 49 CFR 26 app A for guidance regarding evaluation of good faith efforts to meet the DBE goal.

Unless the Department authorizes a request to terminate or substitute a listed DBE, the Department does not pay for work unless it is performed or supplied by the DBE listed on the DBE Commitment form. You may be subject to other sanctions under 49 CFR 26.

5.B-2.a REFERENCE FORMS

In addition to the provisions in Section 5-1.13B of the Standard Specifications, the following forms and respective instructions are provided for reference.

5.B-2.a(i) Disadvantaged Business Enterprises (Dbe) Certification Status Change, Exhibit 17-O

CP-CEM-2403(F) (New. 10/99) STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION

CONTACT NUMBER	COUNTY	ROUTE	POST MILES	ADMINISTERING AGENCY	CONTRACT COMPLETION DATE
PRIME CONTRACTOR			BUSINESS ADDRESS		ESTIMATED CONTRACT AMOUNT

Prime Contractor: List all DBEs with changes in certification status (certified/decertified) while in your employ, whether or not firms were originally listed for good credit
Attach DBE certification/Decertification letter in accordance with the Special Provisions.

CONTRACT ITEM NO.	SUBCONTRACT NAME AND BUSINESS ADDRESS	BUSINESS PHONE	CERTIFICATION NUMBER	AMOUNT PAID WHILE CERTIFIED	CERTIFICATION/ DECERTIFICATION DATE Letter attached
				$	
				$	
				$	
				$	
				$	
				$	
				$	
				$	
				$	

Comments:

I CERTIFY THAT THE ABOVE INFORMATION IS COMPLETE AND CORRECT

CONTRACTOR REPRESENTATIVE SIGNATURE	TITLE	BUSINESS PHONE NUMBER	DATE

TO THE BEST OF MY KNOWLEDGE, THE ABOVE INFORMATION IS COMPLETE AND CORRECT

RESIDENT ENGINEER	BUSINESS PHONE NUMBER	DATE

DISTRIBUTION Original copy -DLAE
Copy -1) Business Enterprise Program 2) Prime Contactor 3) Local Agency 4) Resident Engineer 12-12-11

Form CP-CEM 2403(F) (New 10/99)

DISADVANTAGED BUSINESS ENTERPRISES (DBE) CHANGE IN CERTIFICATION STATUS REPORT

The top of the form requires specific information regarding the construction project: Contract Number, County, Route, Post Miles, the Administering Agency, the Contract Completion Date, and the Estimated Contract Amount. It requires the Prime Contractor's name and Business Address. The focus of the form is to substantiate and verify the actual DBE dollar amount paid to contractors on federally funded projects that had a changed in Certification status during the course of the completion of the contract. The two situations that are being addressed by CP-CEM 2403(F) are, if a firm certified as a DBE and doing work on the contract during the course of the project becomes Decertified, and if a non-DBE firm doing work on the contract during the course of the project becomes Certified as a DBE.

The form has a column to enter the Contract Item No (or Item Nos.) as well as a column for the Subcontractor's Name, Business Address, Business Phone, and contractor's Certification Number.

The column entitled Amount Paid While Certified will be used to enter the actual dollar value of the work performed by those contractors who meet the conditions as outlined above during the time period they are Certified as a DBE. This column on the CP-CEM-2403(F) should only reflect the dollar value of work performed while the firm was Certified as a DBE.

The column called Certification/Decertification Date (Letter attached) will reflect either the date of the Decertification Letter sent out by the Civil Rights Program or the date of the Certification Certificate mailed out by the Civil Rights Program. There is a box to check that support documentation is attached to the CP-CEM-2403 (F) form.

There is a Comments section for any additional information that may need to be provided regarding any of the above transactions.

The CEM-2403(F) has an area at the bottom where the Contractor and the Resident Engineer sign and date that the information provided is complete and correct.

There is a Comments section for any additional information that may need to be provided regarding any of the above transactions.

The CEM-2403(F) has an area at the bottom where the Contractor and the Resident Engineer sign and date that the information provided is complete and correct.

5.B-2.a(ii) Final Report - Utilization of Disadvantaged Businesses Exhibit 17-F

FINAL REPORT-UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES (DBE), FIRST-TIER SUBCONTRACTORS

ADA Notice

For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814

CEM-2402F (REV 02/2008)

CONTRACT NUMBER	COUNTY	ROUTE	POST MILES	FEDERAL-AID PROJECT NO.	ADMINISTERING AGENCY	CONTRACT COMPLETION DATE

PRIME CONTRACTOR	BUSINESS ADDRESS	ESTIMATED CONTRACT AMOUNT$

ITEM NO.	DESCRIPTION OF WORK PERFORMED AND MATERIAL PROVIDED	COMPANY NAME AND BUSINESS ADDRESS	DBE CERT. NUMBER	CONTRACT PAYMENTS		DATE WORK COMPLETE	DATE OF FINAL PAYMENT
				NON-DBE	DBE		
				$	$		
				$	$		
				$	$		
				$	$		
				$	$		
				$	$		
				$	$		
				$	$		
				$	$		
				$	$		
				$	$		
				$	$		
				$	$		
ORIGINAL DBE COMMITMENT $			TOTAL	$	$		

List all First-Tier Subcontractors, Disadvantaged Business Enterprises (DBEs) regardless of tier, whether or not the firms were originally listed for goal credit. If actual DBE utilization (or item of work) was different than that approved at time of award, provide comments on back of form. List actual amount paid to each entity.

I CERTIFY THAT THE ABOVE INFORMATION IS COMPLETE AND CORRECT

CONTRACTOR REPRESENTATIVE'S SIGNATURE	BUSINESS PHONE NUMBER	DATE

TO THE BEST OF MY INFORMATION AND BELIEF, THE ABOVE INFORMATION IS COMPLETE AND CORRECT

RESIDENT ENGINEER'S SIGNATURE	BUSINESS PHONE NUMBER	DATE

Copy Distribution-Local Agency contracts: **Original** - District Local Assistance Engineer (submitted with the Report of Expenditure **Copy-** District Local Assistance Engineer **Copy-** Local Agency file

FINAL REPORT – UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES (DBE), FIRST-TIER SUBCONTRACTORS

CEM 2402(F) (Rev. 07/2012-By Town)

The form requires specific information regarding the construction project: Contract Number, County, Route, Post Miles, Federal-aid Project No., the Administering Agency, the Contract Completion Date and the Estimated Contract Amount. It requires the prime contractor name and business address. The focus of the form is to describe who did what by contract item number and descriptions, asking for specific dollar values of item work completed broken down by subcontractors who performed the work both DBE and non-DBE work forces. DBE prime contractors are required to show the date of work performed by their own forces along with the corresponding dollar value of work.

The form has a column to enter the Contract Item No. (or Item No's) and description of work performed or materials provided, as well as a column for the subcontractor name and business address. For those firms who are DBE, there is a column to enter their DBE Certification Number. The DBE should provide their certification number to the contractor and notify the contractor in writing with the date of the decertification if their status should change during the course of the project.

The form has two columns for the dollar value to be entered for the item work performed by the subcontractor.

- The Non-DBE column is used to enter the dollar value of work performed for firms who are not certified DBE.
- The DBE column is used to enter the dollar value of work performed for firms who are certified DBE. This program status is determined by the California Unified Certification Program by ethnicity, gender, ownership, and control issues at time of certification. To confirm the certification status and program status, access the Department of Transportation Civil Rights web site at: http://www.dot.ca.gov/hq/bep or by calling (916) 324-1700 or the toll free number at (888) 810-6346.

If a contractor performing work as a DBE on the project becomes decertified and still performs work after their decertification date, enter the total dollar value performed by this contractor under the appropriate DBE identification column.

If a contractor performing work as a non-DBE on the project becomes certified as a DBE, enter the dollar value of all work performed after certification as a DBE under the appropriate identification column.

Enter the total of each of the six columns in Form CEM-2402(F).

Any changes to DBE certification must also be submitted on Form-CEM 2403(F).

Enter the Date Work Completed as well as the Date of Final Payment (the date when the prime contractor made the "final payment" to the subcontractor for the portion of work listed as being completed).

The contractor and the resident engineer sign and date the form indicating that the information provided is complete and correct.

5.B-2.a(iii) Monthly DBE Trucking Verification

Per Section 5-1.13B(1) of the Standard Provisions, the Monthly DBE Trucking Verification form may be found online at http://www.dot.ca.gov/hq/construc/forms/CEM2404F.pdf.

5.C COORDINATION WITH UTILITIES

Refer to Section 5-1.20 "Coordination with Other Entities" of the Standard Specifications, the following provision are added:

Contractor is to coordinate with utility companies for the relocation of existing, and construction of new utility facilities, if applicable. Specifically, the Contractor's attention is directed to existing PG&E (gas & electric)

overhead and underground facilities, AT&T overhead and underground facilities, Comcast, and Paradise Irrigation District facilities.

Contractor shall especially coordinate AT&T manhole adjustments to be performed by their crews. Contact information for AT&T project work is Gail Welch at (530) 891-2273.

Contractor shall coordinate PG&E Gas Valve adjustments performed by their crews. Contact information for PG&E gas is Scott McPherren at (530) 892-4539.

Contractor shall especially coordinate PID fire hydrant and water meter relocations to be performed by their crews, if applicable. Contact information for PID is Keith O'Brien at (530) 521-4802.

5.D CONSTRUCTION WATER

The Contractor can obtain construction water for construction by making arrangements with Paradise Irrigation District (530) 877-4971 for a temporary hydrant meter.

Full compensation for developing, maintaining, and distributing construction water will be considered as included in the contract price paid for the various items of project work and no additional compensation will be allowed therefor.

5.E PERMITS, LICENSES, AGREEMENTS, AND CERTIFICATIONS - AFTER AWARD

The provisions of Section 5-1.20B(3), "After Award" of the Standard Specifications shall be changed to read as follows:

Confirm with the Engineer which after-award PLACs are obtained by the Department and which are obtained by the Contractor. Unless otherwise specified by the Engineer in writing, all after-award PLACs are to be obtained by the Contractor.

To make a change to an after-award PLAC obtained by the Department, submit the proposed change. The Department sends the proposed change to the appropriate authority for consideration.

Obtain those PLACs to be issued to you and pay fees and costs associated with obtaining them. Submit copies of Contractor-obtained after-award PLACs for review.

Permits from the Town will be of no-charge to the Contractor.

5.F SUBMITTALS

Refer to Section 5-1.23, "Submittals" of the Standard Specifications and the following provisions.

5.F-1 GENERAL

Section 5-1.23A, "General" is amended as follows:

Add between the 2nd and 3rd paragraphs of section 5-1.23A:
Submit action and informational submittals to the Engineer.

Replace the 3rd paragraph of Section 5-1.23A with:
Each sheet of a submittal must include a cover sheet with the following information:

1. Contract number
2. Local Agency–Route–Post Mile/ Station (if applicable)
3. Contractor's name and contact information
4. Date of Submittal
5. Submittal Number
6. Numbered in reference to the Bid Item Number/ List. If there is no bid item that applies to the submittal, the submittal shall be appropriately identified as to the subject matter.
7. Structure name and number, if any

5.F-2 ACTION SUBMITTALS

Section 5-1.23B, "Action Submittals" is amended with the following provisions:

Except for shop drawings and test samples, provide two (2) copies of the submittal.

Add between the 5th and 6th paragraphs of section 5-1.23B(1):
For a revised submittal, allow the same number of days for review as for the original submittal.

Delete the 1st sentence in the 10th paragraph of section 5-1.23B(2).

5.F-3 AS-BUILT PLANS

Contractor shall provide the Town with a set of As-Built drawings at the end of the project. As-Built drawings shall be maintained and updated throughout construction, at the end of the project. As-Built drawings shall identify at a minimum all installations of typical and non-typical materials.

5.G CONSTRUCTION SURVEYING

Refer to Section 5-1.26, "Construction Surveys" of the Standard Specifications, which is deleted and replaced with the following provisions:

The Contractor must provide stakes and marks under Chapter 12, "Construction Surveys," of Caltrans's *Surveys Manual*, or as needed and approved by the Engineer. The survey manual may be obtained at the Town Department of Public Works or at the following web address:
http://www.dot.ca.gov/hq/row/landsurveys/SurveysManual/Manual_TOC.html

Section 12.5 "Typical State-Furnished Control Stakes" of the Survey's Manual is amended as follows:
12.5-1 Clearing Stakes may be placed less than 100 feet longitudinally as needed.

Preserve stakes and marks placed by your forces. If the stakes or marks are destroyed, the Department will not replace or pay for replacement staking. Re-staking costs will be borne by the Contractor.

5.H RECORDS

Section 5-1.27E "Change Order Bills" of the Standard Specifications is amended to delete any reference to on-line or "internet change order billing system". Change order bills shall be submitted hard copy and shall adhere to Section 5-1.23 "Submittals" of the Standard Specifications.

5.I CONSTRUCTION LIMITS

The Contractor shall confine his operations to designated property, road rights-of-way, existing easements, or as identified and designated on the Plans. Any encroachment onto lands outside of these aforementioned areas will require the contractor to supply, in writing, an agreement which shows a right-of-entry, temporary construction easement, proof of ownership or other form of right to use such land(s) PRIOR to the encroachment or use of such lands. Contractor shall also acknowledge, understand and comply with the limitations of activities relating to the approved CEQA and NEPA environmental documents which may limit scope of impacts. Failure to comply with the provisions for construction limits shall result in the immediate suspension of all work until the provisions have been met.

5.J VANDALISM

The Contractor is responsible for the protection of the entire jobsite, including protecting the fresh concrete against vandalism and damage. Any damaged concrete will be repaired or replaced as determined by the Engineer. Any additional security measures required to protect against vandalism will be included in the respective individual items and no additional compensation will be allowed.

Full compensation for vandalism control will be considered as included in the contract price paid for the various items of work and no additional compensation will be allowed therefor.

5.K PROPERTY AND FACILITY PRESERVATION

Refer to Section 5-1.36 "Property and Facility Preservation" of the Standard Specifications which are amended as follows.

Add to the list in the 1st paragraph of section 5-1.36A:

10. Survey monuments

Add to section 5-1.36:

5-1.36E Survey Monuments

Protect survey monuments on and off the highway. Upon discovery of a survey monument not identified and located immediately:

1. Stop work near the monument
2. Notify the Engineer

Do not resume work near the monument until authorized.

5.K-1 NONHIGHWAY FACILITIES

Section 5-1.36D "Nonhighway Facilities" are amended as follows:

Add to section 5-1.36D:

No valves or other controls on existing utility systems shall be operated for any purpose by the Contractor without prior approval of the Engineer and/or the utility company.

The utility owner is scheduled to perform a utility replacement and maintenance project shown in the following table before the corresponding date shown:

Table 1: Utility Owner Replacement and Maintenance Project; pre-project

UTILITY RELOCATION AND DATE OF THE RELOCATION

Utility	Location	Date
PID/ Water Main, Hydrant, and Services Replacement	In Pearson, Sawmill to Edgewood (72+75 - 86+50	6/1/2016
PID/ Water Main, Hydrant, and Services Replacement	In Pearson, Cherry Lane to Stearns (95+75 – 100+00)	6/1/2016

Coordinate with utility owner to confirm their project schedule and completion date. Coordinate the start date and your work schedule with the utility's project completion schedule.

Installation of the utilities shown in the following table requires coordination with your activities. Make the necessary arrangements with the utility company through the Engineer and submit a schedule:

1. Verified by a representative of the utility company
2. Allowing at least the time shown for the utility owner to complete its work

Table 2: Utility Owner Relocations

UTILITY RELOCATION AND CONTRACTOR-ARRANGED TIME FOR THE RELOCATION

Utility	Utility Owner	Location		Days
		(project station)	CL offset	
Gas Valve Box	PG&E	30+31	19.5 R	15

Gas Valve Box	PG&E	72+97	13.3 R	15
Water Meter	PID	76+55	27.8 R	15
Water Meter	PID	76+57	28.1 R	15

5.L POTENTIAL CLAIMS AND DISPUTE RESOLUTION

Replace "working days" in the 1st paragraph of section 5-1.43E(1)(a) with:
original working days

Replace "settled" in the last paragraph of section 5-1.43E(1)(d) with:
resolved

Replace items 3.1 and 3.2 in the list in the paragraph of section 5-1.43E(3)(b) with:
3.1. One-time objection to the other's candidate without stating a reason

3.2. Objection to any of the other's subsequent candidates based on a specific breach of the candidate's responsibilities or qualifications under items 1 and 2 above

5.M FINAL INSPECTION AND CONTRACT ACCEPTANCE

Attention is directed to the provisions in Section 5-1.46 “Final Inspection and Contract Acceptance” of the Standard Specifications, which is amended to read:

When you complete the work, request the Engineer's final inspection. The Engineer will promptly inspect the project work.

If the Engineer determines that the work is complete, the Engineer recommends Contract acceptance. Immediately after Contract acceptance, you are relieved from:

1. Maintenance and protection duties.
2. Responsibility for injury to persons or property or damage to the work occurring after Contract acceptance except as specified in section 6-3.06 of the Standard Specifications.

If the Engineer determines that the work is not complete, the Engineer will develop a final punch list, and the Contractor will be notified in writing of any defects or deficiencies to be remedied. When notified that this project work has been completed, the Engineer will again inspect the project work and when satisfied that all project work has been done in accordance with the contract drawings and these Special Provisions, he will recommend to the Town Council that they formally accept the contract as complete. The completion date, for purposes of computing “Time for Completion” and liquidated damages, if any, will be considered to be the date of Contractor’s first written completion notice, provided that, in the Engineer’s judgment, the project work is substantially complete and operational at that time.

END OF SECTION

SECTION 6 CONTROL OF MATERIALS

6.A GENERAL

The bidder's attention is directed to the provisions in Section 6 ”Control of Materials” of the Standard Specifications and these special provisions.

6.B AUTHORIZED MATERIALS LIST

The Department adopts Caltrans’s maintained Pre-Qualified Products List (Authorized Materials List) for various construction materials, and can be found at:

http://www.dot.ca.gov/hq/esc/approved_products_list/

Materials may be used or specified to be on this maintained list. The Engineer shall not be precluded from sampling and testing products on the Pre-Qualified Products List.

The manufacturer of products on the list of Prequalified and Tested Signing and Delineation Materials shall furnish the Engineer a Certificate of Compliance in conformance with the provisions in Section 6-3.05E, "Certificates of Compliance," of the Standard Specifications for each type of material supplied that applies to this list.

For those categories of materials included on the Pre-Qualified Products List, only those products shown within the listing may be used in the work. Other categories of products, not included on the list of Prequalified and Tested Signing and Delineation Materials, may be used in the work provided they conform to the requirements of the Standard Specifications.

Materials and products may be added to the Pre-Qualified Products List if the manufacturer submits a New Product Information Form to the New Product Coordinator at the Transportation Laboratory. Upon a Departmental request for samples, sufficient samples shall be submitted to permit performance of required tests. Approval of materials or products will depend upon compliance with the specifications and tests the Department may elect to perform.

6.C BUY AMERICA

Attention is directed to the provisions in Section 6-2-.05 “Buy America” of the Standard Specifications. Section 6-2.05C Steel and Iron Materials are amended as follows:

Steel and iron materials must be melted and manufactured in the United States except:

1. Foreign pig iron and processed, pelletized, and reduced iron ore may be used in the domestic production of the steel and iron materials
2. If the total combined cost of the materials does not exceed the greater of 0.1 percent of the total bid or $2,500, materials produced outside the United States may be used if authorized

Production includes:

1. Processing steel and iron materials, including smelting or other processes that alter the physical form or shape (such as rolling, extruding, machining, bending, grinding, and drilling) or chemical composition;
2. Coating application, including epoxy coating, galvanizing, and painting, that protects or enhances the value of steel and iron materials.

Furnish steel and iron materials to be incorporated into the work with certificates of compliance and certified mill test reports. Mill test reports must indicate where the steel and iron were melted and manufactured.

All melting and manufacturing processes for these materials, including an application of a coating, must occur in the United States. Coating includes all processes that protect or enhance the value of the material to which the coating is applied.

A Certificate of Compliance, conforming to the provisions in Section 6-3.05E, Certificates of Compliance, of the Standard Specifications, shall be furnished for steel and iron materials subject to Buy America provisions in Section 6-2-.05C.

6.D QUALITY ASSURANCE

The eighth paragraph of Section 6-3.05A "General" of the Quality Assurance subsection of the Standard Specifications which refers to typical Caltrans Test Methods shall be replaced with:

For a material to comply with a property show in the following table, the Department tests under the corresponding test methods shown:

Table 3: Typical Test Methods

PROPERTY	TEST METHOD
Relative Compaction	ASTM D2922 and D3017
Sand Equivalent	CT 217
Resistance (R-Value)	CT 301
Grading (sieve analysis)	CT 202
Durability Index	CT 229

The Agency uses a Quality Assurance Program (QAP) to ensure a material is produced to comply with the Contract. The Quality Assurance Program is formally incorporated to this contract. A copy of the QAP may be requested at any time.

You may examine the records and reports of tests the Agency performs if they are available at the job site.

Schedule project work to allow time for QAP

END OF SECTION

SECTION 7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

7.A GENERAL

Attention is directed to the provisions in Section 7, ”Legal Relations and Responsibility to the Public” of the Standard Specifications and these special provisions.

7.B PREVAILING WAGE

Refer to Section 7-1.02K, “Labor Code” of the Standard Specifications are amended to modify the following provisions:

Replace "§§ 1727 and 1770–1815" in the 1st sentence of the 1st paragraph of section 7-1.02K(1) with:
§ 1720 et seq.

In conjunction with all other Labor Code provisions, special attention is made to Labor Code §§ 1771.1 which has been changed to require registration of contractors and subcontractors to be eligible for bidding, as follows:

1771.1. (a) A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

Contractor and subcontractors are directed to the Department of Industrial Relations website for further information and online registration information; http://www.dir.ca.gov/Public-Works/PublicWorks.html .

In accordance with §§ 1771.4 (a) (1), this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

The Department does not utilize a Labor Compliance Plan, and therefore California Labor Code1771.4 and 1771.6 shall apply to this project.

7.B-1 WAGES

Refer to Section 7-1.02K(2), “Wages” of the Standard Specifications are amended to include the following provisions:

Replace "$50" in the 1st sentence in the 6th paragraph of section 7-1.02K(2) with:
$200

If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California Department of Industrial Relations for similar classifications of labor the Contractor and subcontractors shall pay not less than the higher wage rate. See Section IV of the Federal provisions. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by the Contractor and subcontractors, the Contractor and subcontractors shall pay not less than the Federal minimum wage rate, which most closely approximates the duties of the employees in question.

The general prevailing wage rates determined by the Director of Industrial Relations, for the county or counties in which the work is to be done, are available at the Department of Public Works address. Changes, if any, to the general prevailing wage rates will be available at the same location.

The federal minimum wage rates are available directly from Department of Labor Home Page at:
http://www.wdol.gov/dba.aspx#0

The minimum wage rates for the Director of the California Department of Industrial Relations can be found at:
http://www.dir.ca.gov/DLSR/PWD/index.htm

The Contractor's attention is directed to California Labor Code 1815 regarding overtime pay and the requirement that penalties in accordance with current applicable Labor Codes will be levied for each workman for each calendar day during which the overtime pay provision is not met. The Contractor's attention is also directed to the requirements for travel and subsistence payments to all workers needed to execute the Contract.

7.B-2 CERTIFIED PAYROLL RECORDS (LABOR CODE § 1776).

Refer to Section 7-1.02K(3), "Certified Payroll Records" of the Standard Specifications are amended to include the following provisions:

Replace "$25" in the 2nd sentence in the 13th paragraph of section 7-1.02K(3) with:
$100

Electronic submittal of certified payroll records in Section 7-1.02K(3) "Certified Payroll Records" of the Standard Specifications are amended to delete electronic (email) submittal provisions. Electronic submittals of certified payroll records will not be accepted. Submittals shall be original hard copies of required documents. Submittal of payroll records shall continue to be submitted on a weekly basis as specified in the Standard Specifications.

In accordance with Labor Code §§ 1771.4, all CPRs must be submitted electronically to DIR in addition to original hard copies to the Department. Refer to the DIR website for electronic submittal instructions.

7.C PUBLIC CONVENIENCE

Refer to Section 7-1.034, "Public Convenience" of the Standard Specifications are amended to include the following provisions

7.C-1 WORKING HOURS RESTRICTIONS

Reference Section 7-5 Traffic Control of the Standard Specification and as amended in these Special Provisions.

Work on Saturdays, Sundays, or Holidays will not be allowed, unless otherwise stated or approved in advance by the Engineer and the Contractor is willing to pay the fully burdened rate for the Town Construction Inspector costs. The Contractor shall decide the working hours for General Work for the project. The Contractor shall notify the Engineer in writing of Contractor's project work schedule including hours to be worked and days off. The Contractor's representative shall be available at the project work site during the hours indicated in the project work schedule. The project work schedule will be used by the Engineer to schedule construction observation personnel. No project work shall be permitted outside the hours and days indicated by the schedule unless otherwise approved by the Engineer.

For both daytime and night-time project work, the contractor shall submit a detailed traffic plan that demonstrates that their operations will not interfere with or cause undue traffic delays (> 10 minutes).

The Contractor shall present their traffic control plan to the Engineer for approval during the pre-job conference. Contractor may propose performance of other operations of project work during night time hours for approval of the Engineer.

The Contractor shall present their traffic control plan to the Engineer for approval during the pre-job conference. Contractor may propose performance of other operations of project work during night time hours for approval of the Engineer.

7.D PUBLIC SAFETY

Refer to Section 7-1.04, "Public Safety" of the Standard Specifications are amended so that all work related to covering, maintaining and removing sign covers on all signs shall not be change order work, but shall be

included in the contract price paid for various bid items and no additional compensation will be allowed therefor.

Section 7-1.04, "Public Safety" of the Standard Specifications are amended as follows:

Add between the 18th and 19th paragraphs of section 7-1.04:
Temporary facilities that could be a hazard to public safety if improperly designed must comply with design requirements described in the Contract for those facilities or, if none are described, with standard design criteria or codes appropriate for the facility involved. Submit shop drawings and design calculations for the temporary facilities and show the standard design criteria or codes used. Shop drawings and supplemental calculations must be sealed and signed by an engineer who is registered as a civil engineer in the State.

Section 7-1.04, "Public Safety" of the Standard Specifications are amended to include the following:

The duty of the Engineer to conduct construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's safety measures in, on or near the construction site.

If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the Engineer and the Owner. In addition, the Contractor must promptly report in writing to the Engineer all accidents whatsoever arising out of, or in connection with, the performance of the project work whether on, or adjacent to the site, giving full details and statements of witnesses.

Personal vehicles of the Contractor's employees shall not be parked on the traveled way or shoulders, including any section closed to the public

The Contractor shall ensure and guarantee that any traffic control devices removed or damaged by Contractor's operation are reinstalled and in good repair before leaving the project work site.

Contractor shall assume full responsibility for clearing the streets of parked vehicles or other obstructions located within the area of project work.

7.E INDEMNIFICATION - GENERAL

The provisions of Section 7-1.05A, "General" of the Standard Specifications shall be changed to read as follows:

The Town of Paradise and all officers and employees thereof connected with the project work, including but not limited to the Director and the Engineer, shall not be answerable or accountable in any manner for any loss or damage that may happen to the project work or any part thereof; for any loss or damage to any of the materials or other things used or employed in performing the project work; for injury to or death of any person, either workers or the public; or for damage to property from any cause which might have been prevented by the Contractor, or Contractor's workers, or anyone employed by Contractor.

The Contractor shall be responsible for any liability imposed by law and for injuries to or death of any person, including but not limited to workers and the public, or damage to property resulting from defects or obstructions or from any cause whatsoever during the progress of the project work or at any time before its completion and final acceptance.

The Contractor shall indemnify and save harmless the Town of Paradise and all officers and employees thereof connected with the project work, including but not limited to the Director and the Engineer, from all claims, suits or actions of every name, kind and description, brought forth, or on account of, injuries to or death of any person, including but not limited to workers and the public, or damage to property resulting from the performance of a contract, except as otherwise provided by statute. The duty of the Contractor to indemnify and save harmless includes the duties to defend as set forth in Section 2778 of the Civil Code.

With respect to third party claims against the Contractor, the Contractor waives any and all rights to any type of express or implied indemnity against the Town, its officers or employees.

<u>You must, at your own expense, defend any suit or action founded upon a claim of the foregoing.</u>

7.F INSURANCE

Attention is directed to the provisions in Section 7-1.06 "Insurance". Sections 7-1.06C thru 7-1.06F are replaced with the following provisions:

The Contractor, in advance of performing any project work on the project under the contract between the Town and the Contractor, shall, at no expense to the Town:

The Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the project work hereunder by the Contractor, Contractor's, her or its agents, representatives, employees or subcontractors.

Coverage shall be at least as broad as:

1. Insurance Services Office Commercial General Liability coverage (occurrence form CG0001), including products and completed operations.
2. Insurance Services Office form number CA0001 (Ed. 1/87) covering Automobile Liability, code 1 (any auto).
3. Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance.
4. Course of Construction insurance covering for all risks of loss.

Contractor shall maintain limits no less than:

1. General Liability: $2,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
2. Automobile Liability: $2,000,000 per accident for bodily injury and property damage.
3. Employer's Liability: $1,000,000 or more per accident for bodily injury or disease.
4. Course of Construction: Completed value of the project.

Any deductibles or self-insured retention must be declared to and approved by the Town. At the option of the Town, either: the insurer shall reduce or eliminate such deductibles or self-insured retention as respects the Town, its officers, officials, employees and volunteers; or the Contractor shall provide a financial guarantee satisfactory to the Town guaranteeing payment of losses and related investigations, claim administration and defense expenses.

The general liability and automobile liability policies shall contain, or be endorsed to contain, the following provisions:

1. The Town, its officers, officials, employees, and volunteers shall be covered as additional insured with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the contractor; and with respect to liability arising out of project work or operations performed by or on behalf of the Contractor including materials, parts or equipment furnished in connection with such project work or operations. General liability coverage can be provided in the form of an endorsement to the Contractor's insurance, or as a separate owner's policy.
2. For any claims related to this project, the Contractor's insurance coverage shall be primary insurance as respects the Town, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the Town, its officers, officials, employees, or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.
3. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled by either party, except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the Town.

Course of construction policies shall contain the following provision:

1. The Town shall be named as loss payee.

Insurance shall be placed with insurers with a current A.M. Best's rating of no less than A:VII.

Contractor shall furnish the Town with original certificates and amendatory endorsements effecting coverage required by this clause. The endorsements should be on forms provided by the Town or on other than the Town's forms, provided those endorsements or policies conform to the requirements. All certificates and endorsements are to be received and approved by the Town before project work commences. The Town reserves the right to require complete, certified copies of all required insurance policies, including endorsements effecting the coverage required by these specifications at any time.

Contractor shall include all subcontractors as insured under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverage for subcontractors shall be subject to all of the requirements stated herein.

All liability insurance policies shall be maintained for the duration of project construction and for 3 years after completion of the project.

Contractor hereby agrees to waive rights of subrogation that any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss. Contractor agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the Town for all project work performed by the Contractor, its employees, agents and subcontractors.

7.G FEDERAL LAWS FOR FEDERAL-AID CONTRACTS

Replace Section 7-1.11, "Federal Laws for Federal-Aid Contacts" of the Standard Specifications with the provisions within this section.

This project is funded with federal Federal Highway Safety Improvement Program, Federal Project No. HSIP 5425(027).

A copy of form FHWA-1273 is included in this section. The training and promotion section of section II refers to training provisions as if they were included in the special provisions. The Department specifies the provisions in section 7-1.11D of the Standard Specifications. If a number of trainees or apprentices is required, the Department shows the number on the Notice to Bidders. Interpret each FHWA-1273 clause shown in the following table as having the same meaning as the corresponding Department clause:

FHWA-1273 Nondiscrimination Clauses

FHWA-1273 section	FHWA-1273 clause	Department clause
Training and Promotion	In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.	If section 7-1.11D applies, section 7-1.11D supersedes this subparagraph.
Records and Reports	If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.	If the Contract requires on-the-job training, collect and report training data.

7.G-1 FEDERAL REQUIREMENTS FOR FEDERAL-AID CONSTRUCTION PROJECTS

GENERAL.—The work herein proposed will be financed in whole or in part with Federal funds, and therefore all of the statutes, rules and regulations promulgated by the Federal Government and applicable to work financed in whole or in part with Federal funds will apply to such work. The "Required Contract Provisions, Federal-Aid Construction Contracts, "Form FHWA 1273, are included in this Section 7. Whenever in said required contract provisions references are made to "SHA contracting officer," "SHA resident engineer," or "authorized representative of the SHA," such references shall be construed to mean "Engineer" as defined in Section 1.C "Definitions and Terms" of these Special Provisions.

PERFORMANCE OF PREVIOUS CONTRACT.—In addition to the provisions in Section II, "Nondiscrimination," and Section VII, "Subletting or Assigning the Contract," of the required contract provisions, the Contractor shall comply with the following:

The bidder shall execute the CERTIFICATION WITH REGARD TO THE PERFORMANCE OF PREVIOUS CONTRACTS OR SUBCONTRACTS SUBJECT TO THE EQUAL OPPORTUNITY CLAUSE AND THE FILING OF REQUIRED REPORTS located in the proposal. No request for subletting or assigning any portion of the contract in excess of $10,000 will be considered under the provisions of Section VII of the required contract provisions unless such request is accompanied by the CERTIFICATION referred to above, executed by the proposed subcontractor.

NON-COLLUSION PROVISION.—The provisions in this section are applicable to all contracts except contracts for Federal Aid Secondary projects.

Title 23, United States Code, Section 112, requires as a condition precedent to approval by the Federal Highway Administrator of the contract for this work that each bidder file a sworn statement executed by, or on behalf of, the person, firm, association, or corporation to whom such contract is to be awarded, certifying that such person, firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the submitted bid. A form to make the non-collusion affidavit statement required by Section 112 as a certification under penalty of perjury rather than as a sworn statement as permitted by 28, USC, Sec. 1746, is included in the proposal.

PARTICIPATION BY DISADVANTAGED BUSINESS ENTERPRISES IN SUBCONTRACTING.—Part 26, Title 49, Code of Federal Regulations applies to this Federal-aid project. Pertinent sections of said Code are incorporated in part or in its entirety within other sections of these special provisions.

Schedule B—Information for Determining Joint Venture Eligibility

(This form need not be filled in if all joint venture firms are DBE owned.)

1. Name of joint venture _____

_____

2. Address of joint venture _____

_____

3. Phone number of joint venture _____

_____

4. Identify the firms which comprise the joint venture. (The DBE partner must complete Schedule A.) _____

_____

a. Describe the role of the DBE firm in the joint venture. _____

_____

b. Describe very briefly the experience and business qualifications of each non-DBE joint venturer: _____

_____

5. Nature of the joint venture's business _____

_____

6. Provide a copy of the joint venture agreement.
7.

7. What is the claimed percentage of DBE ownership? _____

_____

8. Ownership of joint venture: (This need not be filled in if described in the joint venture agreement, provided by question 6.).

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a. Profit and loss sharing.
b. Capital contributions, including equipment.
c. Other applicable ownership interests.

9. Control of and participation in this contract. Identify by name, race, sex, and "firm" those individuals (and their titles) who are responsible for day-to-day management and policy decision making, including, but not limited to, those with prime responsibility for:

a. Financial decisions _____

_____

b. Management decisions, such as:

1. Estimating _____

_____

2. Marketing and sales _____

_____

3. Hiring and firing of management personnel _____

_____

4. Purchasing of major items or supplies _____

_____

c. Supervision of field operations

_____

_____

Note.—If, after filing this Schedule B and before the completion of the joint venture's work on the contract covered by this regulation, there is any significant change in the information submitted, the joint venture must inform the grantee, either directly or through the prime contractor if the joint venture is a subcontractor.

Affidavit

"The undersigned swear that the foregoing statements are correct and include all material information necessary to identify and explain the terms and operation of our joint venture and the intended participation by each joint venturer in the undertaking. Further, the undersigned covenant and agree to provide to grantee current, complete and accurate information regarding actual joint venture work and the payment therefor and any proposed changes in any of the joint venture arrangements and to permit the audit and examination of the books, records and files of the joint venture, or those of each joint venturer relevant to the joint venture, by authorized representatives of the grantee or the Federal funding agency. Any material misrepresentation will be grounds for terminating any contract which may be awarded and for initiating action under Federal or State laws concerning false statements."

_____

Name of Firm Name of Firm

_____

Signature Signature

_____

Name Name

_____

Title Title

_____

Date Date

Date _____

State of _____

County of _____

On this ____ day of _____, 19 __, before me appeared (Name) _____, to me personally known, who, being duly sworn, did execute the foregoing affidavit, and did state that he or she was properly authorized by (Name of firm) _____ to execute the affidavit and did so as his or her free act and deed.

Notary Public _____

Commission expires _____

[Seal]

Date _____

State of _____

County of _____

On this ___ day of _____, 19 __, before me appeared (Name) _____ to me personally known, who, being duly sworn, did execute the foregoing affidavit, and did state that he or she was properly authorized by (Name of firm) _____ to execute the affidavit and did so as his or her free act and deed.

Notary Public _____

Commission expires _____

[Seal]

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7.G-2 FHWA- FORM 1273

FHWA-1273 -- Revised May 1, 2012

I. General
II. Nondiscrimination
III. Nonsegregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms

and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may

reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a “Statement of Compliance,” signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the “Statement of Compliance” required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to

submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the

contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the

submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer,

Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

7.G-3 FEMALE AND MINORITY GOALS

To comply with Section II, "Nondiscrimination," of "Required Contract Provisions Federal-Aid Construction Contracts," the following female and minority utilization goals for Federal-aid construction contracts and subcontracts that exceed $10,000.

The nationwide goal for female utilization is 6.9 percent.

The goals for minority utilization [45 Fed Reg 65984 (10/3/1980)] are as follows:

MINORITY UTILIZATION GOALS

ECONOMIC AREA		GOAL (PERCENT)
174	Redding CA: Non-SMSA Counties: CA Lassen; CA Modoc; CA Plumas; CA Shasta; CA Siskiyou; CA Tehama	6.8
175	Eureka, CA Non-SMSA Counties: CA Del Norte; CA Humboldt; CA Trinity	6.6
176	San Francisco-Oakland-San Jose, CA: SMSA Counties: 7120 Salinas-Seaside-Monterey, CA CA Monterey 7360 San Francisco-Oakland CA Alameda; CA Contra Costa; CA Marin; CA San Francisco; CA San Mateo 7400 San Jose, CA CA Santa Clara, CA 7485 Santa Cruz, CA CA Santa Cruz 7500 Santa Rosa CA Sonoma 8720 Vallejo-Fairfield-Napa, CA CA Napa; CA Solano Non-SMSA Counties: CA Lake; CA Mendocino; CA San Benito	28.9 25.6 19.6 14.9 9.1 17.1 23.2
177	Sacramento, CA: SMSA Counties: 6920 Sacramento, CA CA Placer; CA Sacramento; CA Yolo Non-SMSA Counties CA Butte; CA Colusa; CA El Dorado; CA Glenn; CA Nevada; CA Sierra; CA Sutter; CA Yuba	16.1 14.3
178	Stockton-Modesto, CA: SMSA Counties: 5170 Modesto, CA CA Stanislaus 8120 Stockton, CA CA San Joaquin Non-SMSA Counties CA Alpine; CA Amador; CA Calaveras; CA Mariposa; CA Merced; CA Toulumne	12.3 24.3 19.8
179	Fresno-Bakersfield, CA SMSA Counties: 0680 Bakersfield, CA CA Kern 2840 Fresno, CA CA Fresno Non-SMSA Counties:	19.1 26.1 23.6

	CA Kings; CA Madera; CA Tulare	
180	Los Angeles, CA: SMSA Counties: 0360 Anaheim-Santa Ana-Garden Grove, CA CA Orange 4480 Los Angeles-Long Beach, CA CA Los Angeles 6000 Oxnard-Simi Valley-Ventura, CA CA Ventura 6780 Riverside-San Bernardino-Ontario, CA CA Riverside; CA San Bernardino 7480 Santa Barbara-Santa Maria-Lompoc, CA CA Santa Barbara Non-SMSA Counties CA Inyo; CA Mono; CA San Luis Obispo	11.9 28.3 21.5 19.0 19.7 24.6
181	San Diego, CA: SMSA Counties 7320 San Diego, CA CA San Diego Non-SMSA Counties CA Imperial	16.9 18.2

For each July during which work is performed under the contract, you and each non-material-supplier subcontractor with a subcontract of $10,000 or more must complete Form FHWA PR-1391 (Appendix C to 23 CFR 230). Submit the forms by August 15.

7.G-4 FEDERAL TRAINEE PROGRAM

For the Federal training program, the number of trainees or apprentices is **-0-**.

This section applies if a number of trainees or apprentices is specified in the special provisions. There are **-0-** number of trainees or apprentices specified for this contract.

As part of your equal opportunity affirmative action program, provide on-the-job training to develop full journeymen in the types of trades or job classifications involved.

You have primary responsibility for meeting this training requirement.

If you subcontract a contract part, determine how many trainees or apprentices are to be trained by the subcontractor.

Include these training requirements in your subcontract.

Where feasible, 25 percent of apprentices or trainees in each occupation must be in their 1st year of apprenticeship or training.

Distribute the number of apprentices or trainees among the work classifications on the basis of your needs and the availability of journeymen in the various classifications within a reasonable recruitment area.

Before starting work, submit to the Town of Paradise_:

1. Number of apprentices or trainees to be trained for each classification
2. Training program to be used
3. Training starting date for each classification

Obtain the Town of Paradise's approval for this submitted information before you start work. The Town of Paradise credits you for each apprentice or trainee you employ on the work who is currently enrolled or becomes enrolled in an approved program.

The primary objective of this section is to train and upgrade minorities and women toward journeymen status. Make every effort to enroll minority and women apprentices or trainees, such as conducting systematic and direct recruitment through public and private sources likely to yield minority and women apprentices or trainees, to the extent they are available within a reasonable recruitment area. Show that you have made the efforts. In making these efforts, do not discriminate against any applicant for training.

Do not employ as an apprentice or trainee an employee:

1. In any classification in which the employee has successfully completed a training course leading to journeyman status or in which the employee has been employed as a journeyman
2. Who is not registered in a program approved by the US Department of Labor, Bureau of Apprenticeship and Training

Ask the employee if the employee has successfully completed a training course leading to journeyman status or has been employed as a journeyman. Your records must show the employee's answers to the questions.

In your training program, establish the minimum length and training type for each classification. The Town of Paradise and FHWA approves a program if one of the following is met:

1. It is calculated to:
    - 1.1. Meet the your equal employment opportunity responsibilities
    - 1.2. Qualify the average apprentice or trainee for journeyman status in the classification involved by the end of the training period
2. It is registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training and it is administered in a way consistent with the equal employment responsibilities of federal-aid highway construction contracts

Obtain the State's approval for your training program before you start work involving the classification covered by the program.

Provide training in the construction crafts, not in clerk-typist or secretarial-type positions. Training is allowed in lower level management positions such as office engineers, estimators, and timekeepers if the training is oriented toward construction applications. Training is allowed in the laborer classification if significant and meaningful training is provided and approved by the division office. Off-site training is allowed if the training is an integral part of an approved training program and does not make up a significant part of the overall training.

The Town of Paradise reimburses you 80 cents per hour of training given an employee on this contract under an approved training program:

1. For on-site training
2. For off-site training if the apprentice or trainee is currently employed on a federal-aid project and you do at least one of the following:
    - 2.1. Contribute to the cost of the training
    - 2.2. Provide the instruction to the apprentice or trainee
    - 2.3. Pay the apprentice's or trainee's wages during the off-site training period
3. If you comply with this section.

Each apprentice or trainee must:

1. Begin training on the project as soon as feasible after the start of work involving the apprentice's or trainee's skill
2. Remain on the project as long as training opportunities exist in the apprentice's or trainee's work classification or until the apprentice or trainee has completed the training program

Furnish the apprentice or trainee:

1. Copy of the program you will comply with in providing the training
2. Certification showing the type and length of training satisfactorily completed

7.G-5 TITLE VI ASSURANCES

During the performance of this Agreement, the contractor, for itself, its assignees and successors in interest (hereinafter collectively referred to as CONTRACTOR) agrees as follows:

1. Compliance with Regulations: CONTRACTOR shall comply with the regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation, Title 49, Code of

Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the REGULATIONS), which are herein incorporated by reference and made a part of this agreement.

2. Nondiscrimination: CONTRACTOR, with regard to the work performed by it during the AGREEMENT, shall not discriminate on the grounds of race, color, sex, national origin, religion, age, or disability in the selection and retention of sub-applicants, including procurements of materials and leases of equipment. CONTRACTOR shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the agreement covers a program set forth in Appendix B of the Regulations.
3. Solicitations for Sub-agreements, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by CONTRACTOR for work to be performed under a Sub-agreement, including procurements of materials or leases of equipment, each potential sub-applicant or supplier shall be notified by CONTRACTOR of the CONTRACTOR'S obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
4. Information and Reports: CONTRACTOR shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the California Department of Transportation or FHWA to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of CONTRACTOR is in the exclusive possession of another who fails or refuses to furnish this information, CONTRACTOR shall so certify to the California Department of Transportation or the FHWA as appropriate, and shall set forth what efforts CONTRACTOR has made to obtain the information.
5. Sanctions for Noncompliance: In the event of CONTRACTOR's noncompliance with the nondiscrimination provisions of this agreement, the California Department of Transportation shall impose such agreement sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
   a) withholding of payments to CONTRACTOR under the Agreement within a reasonable period of time, not to exceed 90 days; and/or
   b) cancellation, termination or suspension of the Agreement, in whole or in part.
6. Incorporation of Provisions: CONTRACTOR shall include the provisions of paragraphs (1) through (6) in every sub-agreement, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

CONTRACTOR shall take such action with respect to any sub-agreement or procurement as the California Department of Transportation or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance, provided, however, that, in the event CONTRACTOR becomes involved in, or is threatened with, litigation with a sub-applicant or supplier as a result of such direction, CONTRACTOR may request the California Department of Transportation enter into such litigation to protect the interests of the State, and, in addition, CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

MAINTAIN RECORDS AND SUBMIT REPORTS DOCUMENTING YOUR PERFORMANCE UNDER THIS SECTION.

7.G-6 USE OF UNITED STATES –FLAG VESSELS

The contractor agrees –

1. To utilize privately owned United State-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for Unites States-flag commercial vessels.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.
3. To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

END OF SECTION

SECTION 8 PROSECUTION AND PROGRESS

8.A GENERAL

Attention is directed to the provisions in Section 8 "Prosecution and Progress" of the Standard Specifications and these special provisions.

8.B SCHEDULE

Contractor shall adhere to "Level 1 Critical Path Method Schedule" provisions in Section 8-1.02B of the Standard Specifications.

8.C PRECONSTRUCTION CONFERENCE

Attend a preconstruction conference with key personnel, including your assigned representative, at a time and location determined by the Engineer. Submit documents as required before the preconstruction conference. You may start work before the preconstruction conference.

Be prepared to discuss the topics and documents shown in the following table:

Table 4: Preconstruction Topic Table

TOPICS	DOCUMENT OR DESCRIPTION
Potential claim and dispute resolution	Potential claim forms
Contractor's representation	Assignment of Contractor's representative
DBE	Final utilization reports and other requirements
Equipment	Equipment list
Labor compliance and equal employment opportunity	Job site posters and benefit and payroll reports
Material inspection	Notice of Materials to be Used
Materials on hand	Request for Payment for Materials on Hand
Measurements	--
Landscape Materials	Material changes
Quality control	QC plans and protocol
Safety	Injury and Illness Prevention Program and job site posters
Schedule	Baseline critical path schedule and Weekly Statement of Working Days
Subcontracting	Subcontracting Request
Surveying	--
Traffic control	Traffic contingency plan and traffic control plans
Auxiliary Changeable Message Boards	Purpose, Message, Timing, Placement, Duration,
Utility work	Locating, potholing, timing of work, Adjusting
Project Limits/ Adjacent Properties	--
Water pollution control	SWPPP or WPCP
Weight limitations	
Work restrictions	PLACs (Permits, License, Approvals, and Certificates)
Jobsite Photographs	--
24 Hour Emergency Contact Information	Contact information
Record drawings	--
Action submittals	--

8.D START OF JOB SITE ACTIVITIES

Section 8-1.04B does not apply.

Start job site activities within 15 calendar days of the issuance of a Notice to Proceed. The Notice to Proceed will be issued on **June 1, 2016**, or on a date mutually agreed upon in between the Contractor and Engineer.

Contract time will start after the issuance of the Notice to Proceed and this first working day will be THE EARLIER OF EITHER the start of job site activities, OR 15 calendar days after the issuance of a Notice to Proceed.

Contractor is encouraged to start the pre-construction submittal and approval process after the issuance of the Notice of Award.

Do not start job site activities until the Department authorizes or accepts your submittal for:

1. Contractor-supplied biologist, if applicable.
2. Biological resource information program, , if applicable.
3. CPM baseline schedule
4. WPCP or SWPPP, whichever applies
5. Notification DRA or DRB nominee and disclosure statement
6. Natural resource protection plan

If the submittals for Contractor-supplied biologist and biological resource information program are authorized, you may enter the job site only to measure controlling field dimensions and locating utilities.

You may enter the job site only to measure controlling field dimensions and locating utilities.

Do not start other job site activities until all the submittals from the above list are authorized or accepted and the following information is received by the Engineer:

1. Notice of Materials To Be Used.
2. Contingency plan for reopening closures to public traffic.
3. Written statement from the vendor that the order for the sign panels has been received and accepted by the vendor. The statement must show the dates that the materials will be shipped.
4. Written statement from the vendor that the order for electrical material has been received and accepted by the vendor. The statement must show the dates that the materials will be shipped.
5. Written statement from the vendor that the order for structural steel has been received and accepted by the vendor. The statement must show the dates that the materials will be shipped.

Submit a notice 72 hours before starting job site activities. If the project has more than 1 location of work, submit a separate notice for each location.

If the Contract is not approved, leave the job site in a neat condition. If a facility has been changed, restore it to its former condition or an equivalent condition. The Department does not pay for the restoration.

8.E TIME

This work shall be diligently prosecuted to completion before the expiration of 50 working days after the date provided in Section 8.D , "Start of Job Site Activities".

Replace the 2nd paragraph of section 8-1.05 of the Standard Specifications with:
Complete the work within the Contract time.

8.F SUSPENSIONS

Refer to Section 8-1.06, "Suspensions" of the Standard Specifications.

Replace the headings and paragraphs in section 8-1.06 with:
The Engineer may suspend work wholly or in part due to conditions unsuitable for work progress. Provide for public safety and a smooth and unobstructed passageway through the work zone during the suspension as specified under sections 7-1.03 and 7-1.04. Providing the passageway is force account work. The Department makes a time adjustment for the suspension due to a critical delay.

The Engineer may suspend work wholly or in part due to your failure to (1) fulfill the Engineer's orders, (2) fulfill a Contract part, or (3) perform weather-dependent work when conditions are favorable so that weather-related unsuitable conditions are avoided or do not occur. The Department may provide for a smooth and

unobstructed passageway through the work during the suspension and deduct the cost from payments. The Department does not make a time adjustment for the suspension.

Upon the Engineer's order of suspension, suspend work immediately. Resume work when ordered.

8.G DELAYS

Refer to Section 8-1.07, "Delays" of the Standard Specifications.

Replace the 1st sentence in the 1st paragraph of section 8-1.07B with:
For a critical delay, the Department may make a time adjustment.

Add to the end of section 8-1.07C:
The Department does not make a payment adjustment for overhead incurred during non–working days that extend the Contract into an additional construction season.

Replace the 1st paragraph of section 8-1.07C with:
For an excusable delay that affects your costs, the Department may make a payment adjustment.

Replace "8-1.08B and 8-1.08C" in the 1st paragraph of section 8-1.10A with:
8-1.10B and 8-1.10C

8.G-1 WILDLAND FIRE AREA

The Contractor is advised that the Town of Paradise is in a Wildland Fire Area and during the summer months the fire hazard is EXTREME. Fire safe conduct by the contractor and Contractor's employees is to be observed at all times. Fire extinguishers or other approved fire suppressants are to be available at all times while contract operations are underway.

At any time during the progress of this contract it may be necessary to shut down operations due to Emergency Operations by the Town in response to a wildland fire. If a shutdown should occur during the Contractor's normal operations, contractor may request delay-related time or payment adjustment by per Section 8-1.07, of the Standard Specifications and as amended in these Special Provisions.

8.H LIQUIDATED DAMAGES

The provisions of Section 8-1.10A, "General" of the Standard Specifications shall be changed to read as follows:

The Contractor shall pay to the Town of Paradise the sum of Three Thousand Dollars ($4,500) per day, for each and every calendar day's delay in finishing the work in excess of the number of working days prescribed herein. Liquidated damages, if any, accrue starting on the 1st day after the expiration of the working days through the day of Contract acceptance except as specified in sections 8-1.10B and 8-1.10C. The Department withholds liquidated damages before the accrual date if the anticipated liquidated damages may exceed the value of the remaining work.

If all work except plant establishment is complete and the total number of working days have expired, liquidated damages are $950 per day.

END OF SECTION

SECTION 9 PAYMENT

9.A GENERAL

Attention is directed to the provisions in Section 9, "Payment" of the Standard Specifications and these special provisions.

9.B PAYMENT SCOPE

Attention is directed to the provisions in Section 9-1.03 "Payment Scope" of the Standard Specifications, and the following amendments:

Add to the list in the 1st paragraph of section 9-1.03:
3. Any royalties and costs arising from patents, trademarks, and copyrights involved in the work

Replace item 1 in the 3rd paragraph of section 9-1.03 which describes payments with:
1. Full compensation for all work involved in each bid item shown on the Bid Item List by the unit of measure shown for that bid item

Replace "10" in the last paragraph of section 9-1.03 with:
7

9.C FORCE ACCOUNT

Attention is directed to the provisions in Section 9-1.04A "Force Account" of the Standard Specifications, and the following amendments:

Replace "in" in the 3rd paragraph of section 9-1.04A with:
for

Add to the end of section 9-1.04A:
For nonsubcontracted work paid by force account for a contract with a TRO bid item, the markups are those shown in the following table instead of those specified in sections 9-1.04B–D:

COST	PERCENT MARKUP
Labor	15
Materials	12
Equipment rental	12

Replace the heading and the 1st paragraph of section 9-1.04D(3) with:
9-1.04D(3) Equipment Not On the Job Site and Not Required for Original Contract Work

For equipment not on the job site at the time required to perform work paid by force account and not required for original Contract work, the time paid is the time the equipment is operated to perform work paid by force account and the time to return the equipment to its source when the work paid by force account is completed.

Replace item 2 in the 3rd paragraph of section 9-1.04D(3) with:
2. Operated less than 4 hours is paid as 1/2 day

9.D PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS

Attention is directed to the provisions in Section 9-1.07 of the Standard Specifications for payment adjustments, and the following amendments.

Delete ", Huntington Beach," in the 3rd paragraph of section 9-1.07A.

Replace the formula in section 9-1.07B(2) with:
$Qh = HMATT \times Xa$

Replace "weight of dry aggregate" in the definition of the variable Xa in section 9-1.07B(2) with:

total weight of HMA

Replace the formula in section 9-1.07B(3) with:
Qrh = RHMATT x 0.80 x *Xarb*

Replace "weight of dry aggregate" in the definition of the variable Xarb in section 9-1.07B(3) with:
total weight of rubberized HMA

Replace the heading of section 9-1.07B(4) with:
Hot Mix Asphalt with Modified Asphalt Binder

Add between "in" and "modified" in the introductory clause of section 9-1.07B(4):
HMA with

Replace the formula in section 9-1.07B(4) with:
Qmh = MHMATT x [(100 - *Xam*) / 100] x *Xmab*

Replace "weight of dry aggregate" in the definition of the variable Xmab in section 9-1.07B(4) with:
total weight of HMA

Replace the formula in section 9-1.07B(5) with:
Qrap = HMATT x *Xaa*

Replace "weight of dry aggregate" in the definitions of the variables Xaa and Xta in section 9-1.07B(5) with:
total weight of HMA

Add after the variable definitions in section 9-1.07B(9):
The quantity of extender oil is included in the quantity of asphalt.

9.E PROGRESS PAYMENTS

In addition to the provisions in Section 9-1.16A "General" in the Standard Specifications, "Retention" is additionally reflected in progress payments.

Attention is directed to Section 9-1.16D "Mobilization" of the Standard Specifications and is amended to include the provisions in this Section.

The Department makes partial payments for Mobilization costs which shall adhere to Public Contract Code § 10264 as follows and not to exceed the following:

- When 5 percent of the original contract amount is earned, 50 percent of the amount bid for mobilization, or 5 percent of the original contract amount, whichever is lesser, may be paid.
- When 10 percent of the original contract amount is earned, 75 percent of the amount bid for mobilization or 7.5 percent of the original contract amount, whichever is lesser, may be paid.
- When 20 percent of the original contract amount is earned, 95 percent of the amount bid for mobilization, or 9.5 percent of the original contract amount, whichever is lesser, may be paid.
- When 50 percent of the original contract amount is earned, 100 percent of the amount bid for mobilization, or 10 percent of the original contract amount, whichever is lesser, may be paid.

Upon completion of all work on the project, payment of any amount bid for mobilization in excess of 10 percent of the original contract amount will be paid.

The adjustment provisions in Section 4-1.05 "Changes and Extra Work" of the Standard Specifications and the retention of payment provisions in Section 9.E-1 "Retention" shall not apply to the contract lump sum item of mobilization.

When other contract bid item(s) are adjusted as provided in Section 4-1.05 "Changes and Extra Work" of the Standard Specifications, if the costs applicable to an item of work include mobilization costs, those mobilization costs will be deemed to have been recovered by the Contractor by the payments made for mobilization, and will be excluded from consideration in determining compensation under said Section 4-1.05.

If the Contract does not include a mobilization bid item, mobilization is included in the payment of the various bid items involved.

9.E-1 RETENTION

Section 9-1.16F "Retentions" of the Standard Specifications is replaced with the following:

Pursuant to Public Contract Code § 7201, the Town shall retain **five percent (5%)** of Progress Payments as part security for the fulfillment of the contract by the Contractor, and shall monthly pay to the Contractor, while carrying on the work, the balance not retained as aforesaid, after deducting therefrom all previous payments and all sums to be kept or retained under the provision of the contract. No such estimate or payment shall be required to be made when, in the judgment of the Engineer, the work is not proceeding in accordance with the provisions of the contract.

For federally funded projects, release of retention shall adhere to Section 9.F , "Prompt Payment of Funds Withheld to Subcontractors" of these Special Provisions.

9.F PROMPT PAYMENT OF FUNDS WITHHELD TO SUBCONTRACTORS

The agency shall hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by the agency, of the contract work, and pay retainage to the prime contractor based on these acceptances. The prime contractor, or subcontractor, shall return all monies withheld in retention from a subcontractor within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the agency. Federal law (49CFR26.29) requires that any delay or postponement of payment over 30 days may take place only for good cause and with the agency's prior written approval. Any violation of this provision shall subject the violating prime contractor or subcontractor to the penalties, sanctions and other remedies specified in Section 7108.5 of the Business and Professions Code. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the prime contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor.

9.G PROMPT PROGRESS PAYMENT TO SUBCONTRACTORS

A prime contractor or subcontractor shall pay any subcontractor not later than 10 days of receipt of each progress payment in accordance with the provision in Section 7108.5 of the California Business and Professions Code concerning prompt payment to subcontractors. The 10 days is applicable unless a longer period is agreed to in writing. Any delay or postponement of payment over 30 days may take place only for good cause and with the agency's prior written approval. Any violation of Section 7108.5 shall subject the violating contractor or subcontractor to the penalties, sanction and other remedies of that section. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor.

9.H FINAL PAYMENT AND CLAIMS

Attention is directed to Section 9-1.17 "Payment After Contract Acceptance" of the Standard Specifications. Section 9.1.17D "Final Payment and Claims" of the Standard Specifications is amended to include the following provisions:

The final payment will not be due and payable until the expiration of thirty-five (35) days from the date of recordation of the notice of acceptance of completion in the Office of the County Recorder of Butte County.

It is mutually agreed between the parties to the contract that no payments made under the contract shall be conclusive evidence of the performance of the contract, either wholly or in part, against any claim of the Town, and no payment shall be construed to be acceptance of any defective project work or improper material.

9.I QUANTITIES OF AGGREGATE AND OTHER ROADWAY MATERIALS

Attention is directed to Section 9-1.02D "Quantities of Aggregate and Other Roadway Materials" of the Standard Specifications. This section will not be used unless the Engineer deems necessary to determine water weight of material.

9.J ARBITRATION

Section 9-1.22 "Arbitration" of the Standard Specifications is deleted in its entirety. All unresolved claims shall be resolved in a court of competent jurisdiction located in the County of Butte. Any reference in the Standard Specifications to arbitration shall be deemed to refer to such litigation in a court of competent jurisdiction

END OF SECTION

SECTION 10 GENERAL

10.A ORDER OF WORK

In general, the following items of work shall commence in this order:

1. Preconstruction Conference
2. Order Grated Line Drain Frames and Grates
3. Submit Project Schedule
4. Coordinate with Utilities
5. Submit Temporary Traffic Control Plan
6. Submit IIPP
7. Submit WPCP
8. Complete and/or submit PLAC's prior to starting work
9. Agency and Public Advanced Notice
10. USA utility locates
11. Place Auxiliary Changeable Message Boards
12. Mobilization
13. Traffic Control System
14. Place temporary BMP's
15. Construction Survey/ Layout
16. Reference Tie Existing Utilities for Adjustment
17. Locate Monument(s)
18. Clear and Grub
19. Reset Mailbox-
20. Remove Culvert
21. Place Culvert/ Grated Line Drains s
22. Backfill Culvert/ Grated Line Drains
23. Roadway Excavation- roadside drainage swales
24. Install RSP
25. Sawcut asphalt
26. Remove Asphalt Dike
27. Cold-plane/ Salvage existing asphalt
28. Adjust Utilities
29. Adjust Monument Covers
30. Place Survey Monument Rings and Covers
31. Place Minor HMA- Mainline
32. Place Micro-surface OR SAMI-R
33. Place RHMA-G- Mainline

34. Place Minor HMA for Conform
35. Place Asphalt Dike
36. Place Shoulder Backing
37. Reconstruct Guardrail
38. Install Thermoplastic Markings and Striping
39. Install Painted Pavement Markings
40. Install Reflective Pavement Markers
41. Install Object Markers
42. Install Delineator
43. Install Roadside Sign

10.B WORK SEQUENCING

Coordinate work activities such that will garbage pick-up will not disrupt access to garbage bins. Do not place seals or paving during days of garbage pick-up. Refer to Section 10.C "Advanced Notification".

Before obliterating any traffic stripes, pavement markings, and pavement markers to be replaced at the same location, reference the stripes, markings, and markers. Include limits and transitions with control points to reestablish the new stripes, markings, and markers.

Construction of the new structural section adjacent to the existing traveled way must be performed in successive and once all operations are under way concurrent operations of excavating, preparing subgrade, placing base materials, and paving. Excavation within 8 feet of the existing traveled way must not precede the paving operation by more than 2 working days unless:

1. Authorized
2. Material is placed and compacted against the vertical cuts within 8 feet of the existing traveled way. During excavation operations, native material may be used for this purpose except once the placing of the structural section starts, structural material must be used. Place the material up to the top of the existing pavement and taper at a slope of 4:1 (horizontal:vertical) or flatter to the bottom of the excavation. Do not use treated base for the taper.

At the end of each working day if a difference in excess of 8 feet exists between the elevation of the existing pavement and the elevation of an excavation within 8 feet of the traveled way, place and compact material against the vertical cut adjacent to the traveled way. During the excavation operation, you may use native material for this purpose except once the placing of the structural section starts, structural material must be used. Place the material up to the top of the existing pavement and taper at a slope of 4:1 (horizontal:vertical) or flatter to the bottom of the excavation. Do not use treated base for the taper.

Before any paving operation that may cover existing utility or monument, reference and record the location of all utility covers and monument.

10.C ADVANCED NOTIFICATION

10.C-1 ADVANCE NOTIFICATION OF AGENCIES

Contractor shall have available at all times during Contractor's working hours, a public relations person to deal with public and business concerns and shall report to the Engineering Division, Department of Public Works.

The Contractor shall notify all agencies which may be affected by the construction. Notification shall be in writing and at least 72 hours prior to construction. The notice shall include the project limits, starting date, scheduled date of completion, Contractor contact person and Contractor telephone number. The agencies shall include, but not be limited to:

AGENCY	FAX NO:	AGENCY	FAX NO:
Northern Recycling	(530) 877-	Cal Fire	(530) 877-5957
Paradise Irrigation District	(530) 876-	U. S. Postal Service (Paradise Post	(530) 872-9045

Paradise Unified School District	(530) 872-	First Responder	(530) 891-5854
Butte County Transit (BCAG B-Line)	(530) 879-	The Paradise Post	(530) 877-1326
Paradise Express	(530) 342-		
Town of Paradise Police Department	(530) 872-		

The Contractor shall keep current and notify the local Police and Fire Departments of Contractor's construction operation and traffic control changes three (3) days before project work is to begin or traffic changes are made. The Contractor shall cooperate with local authorities relative to handling traffic through the area and shall make Contractor's own arrangements in keeping the project work area clear of parked vehicles

Failure to comply with the provisions for notification shall result in the suspension of all project work until the provisions have been met.

10.C-2 ADVANCED NOTIFICATION TO RESIDENTS

The Contractor shall notify all residents, businesses, and tenants that may be affected by or are in the immediate vicinity of the construction at least 72 hours prior to construction. Notification shall be in writing and include a brief description of the project work, starting date, planned date of completion, Contractor contact person and Contractor phone number. Notice shall be hand carried by Contractor Representative. Should a change in the project work schedule occur after the residents and/or businesses have been notified the Contractor shall notify the residents and/or businesses of the change in schedule within 24 hours of the originally scheduled starting date.

Contractor shall have at the job site, at all times during Contractor's working hours, a full time public relations person to deal with public and business concerns and shall report to the Town Engineer.

When the construction requires prohibiting parking, "No Parking" signs shall be posted along the construction routes. The signs shall include the dates and times that no parking periods will be in effect. "No Parking" signs shall be mounted on Class I barricades and placed in the gutter pan not more than 500 feet apart. Signs shall be posted a minimum of 24 hours in advance of construction and immediately removed upon completion. Should the Contractor not commence project work after 24 hours from placement of the signs, the signs shall be removed. If a vehicle is parked in a properly posted no parking area and is prohibiting the progression of project work, the Contractor shall notify the Paradise Police Department to arrange for removal of the vehicle.

Failure to comply with the provisions for notification shall result in the suspension of all project work until the provisions have been met.

10.D WATER USAGE

Replace Section 10-4 of the Standard Specifications with:

10-4 WATER USAGE

Section 10-4 includes general specifications for your use of water for construction activities.

The Department encourages you to conserve water in all construction activities.

The Engineer notifies you of any (1) water shortage or (2) mandate from a local water authority to ration water. Within 10 days of the notification, submit a water conservation plan. The plan must include:

1. List of construction activities that require water
2. Measures you will implement for each activity to conserve water
3. Method for curing concrete other than the water method if included in the work
4. Dust palliative you will use for dust control

Any unavailability of water that delays a controlling activity is a material shortage.

END OF SECTION

SECTION 11 QUALITY CONTROL AND ASSURANCE

Attention is directed to Section 11 "Quality Control and Assurance" of the Standard Specifications.

END OF SECTION

SECTION 12 TEMPORARY TRAFFIC CONTROL

Attention is directed to Section 12 "Temporary Traffic Control" of the Standard Specifications.

12.A GENERAL

Section 12-1.01 "General" of the Standard Specifications is amended to include the following:

12.B TEMP TRAFFIC CONTROL PLAN

Prepare and submit to the Engineer a Temporary Traffic Control Plan for approval. The Temporary Traffic Control Plan must adhere to the California Manual on Uniform Traffic Control Devices. Refer to Section 5-1.23B of the Standard Specifications and as amended in these special provisions for submittal requirements.

The Contractor or Contractor's representative and all subcontractors shall have a copy of the approved Temporary Traffic Control Plan pertinent to the project work in progress at all times. Failure to adhere to the Traffic Control Plan shall be grounds for the Town of Paradise to require the Contractor to stop the project work until traffic control is in compliance with the approved Temporary Traffic Control Plan

12.C FLAGGING COSTS

Section 12-1.03 "Flagging Costs" of the Standard Specifications is hereby deleted. All flagging costs will be totally (100%) borne by the contractor and no division of costs will be made therefor.

12.D TRAFFIC-HANDLING EQUIPMENT AND DEVICES

Refer to Section 12-3, "Traffic-Handling Equipment and Devices" of the Standard Specifications and the following amendments.

Replace the 5th paragraph of section 12-3.01A(1) with:
Repair or replace traffic-handling equipment and devices damaged from any cause during the Contract, including repainting if necessary. The condition of temporary traffic control devices must comply with the current American Traffic Safety Services Association publication "Quality Guidelines for Temporary Traffic Control Devices and Features."

Replace the 1st paragraph of section 12-3.01A(4) with:
Category 2 temporary traffic control devices must be on FHWA's list of acceptable, crashworthy Category 2 hardware for work zones. This list is available on FHWA's Safety Program Web site.

Replace "project" in the 4th paragraph of section 12-3.02C with:
Work

Add after "Display" in item 4 in the list in the 2nd paragraph of section 12-3.03B:
or Alternating Diamond

Replace "project" in the 3rd paragraph of section 12-3.07C with:
work

12.D-1 PORTABLE CHANGEABLE MESSAGE SIGNS

Refer to Section 12-3 "Traffic-Handling Equipment and Devices" of the Standard Specifications.

12.D-1.a CONSTRUCTION

Section 12-3.12C "Construction" of the Standard Specifications for Changeable Message Boards is amended to add the following:

Start displaying the message on the portable changeable message sign **60** minutes before closing the lane.

If shown or directed, place the portable changeable message sign in advance of the 1st warning sign for each:

1. Stationary lane closure

2. Off-ramp closure
3. Connector closure
4. Shoulder closure
5. Speed reduction zone

12.D-2 AUXILIARY CHANGEABLE MESSAGE BOARDS

Refer to Section 12-3 "Traffic-Handling Equipment and Devices" of the Standard Specifications.

Provide changeable message boards (CMB) as shown that will provide the public a minimum of seven (7) days advance notification of the proposed road project work at all times. CMBs shall remain in place the duration of work, unless otherwise approved by the Engineer.

The sign placement and message shall be approved by the Engineer and included in the Temporary Traffic Control Plan. Message will be current to describe work activities and traffic control activities.

12.E MAINTAINING TRAFFIC

Refer to Section 12-4, "Maintaining Traffic" of the Standard Specifications and the following amendments or additions.

12.E-1 GENERAL

Section 12-4.01 "General" is amended to include the following provisions:

Emergency vehicles shall be permitted to pass through project work area without delay at all times.

12.E-2 CLOSURE REQUIREMENTS

12.E-2.a GENERAL

Section 12-4.02A "General" of the Standard Specifications are amended as follows:

Replace the 7th through 9th paragraphs of section 12-4.02A with:
If pedestrian traffic is allowed to pass through construction areas, provide a temporary pedestrian facility through the construction areas within the highway. Include protective overhead covering as necessary to ensure protection from falling objects and drippings from overhead structures.

Temporary pedestrian facilities must comply with section 12-7.

If an activity requires a closure of a walkway, another walkway must be made available nearby, off of the traveled way.

Delete the 12th paragraph of section 12-4.02A.

Add the following provisions to Section 12-4.02A "General" of the Standard Specifications:
At the end of the day's project work and when construction operations are suspended, all equipment and other obstructions shall be removed from the roadway.

During Contractor non-working hours all traveled lanes and on-street parking shall remain open

The full width of the traveled way must be open to traffic when there are no active construction activities in the traveled way or within 6 feet of the traveled way and on:

1. Fridays after 3:00 p.m.
2. Saturdays
3. Sundays
4. Designated holidays
5. Special days

Designated holidays are shown in the following table:

DESIGNATED HOLIDAYS

HOLIDAY	DATE OBSERVED

New Year's Day	January 1st
Washington's Birthday	3rd Monday in February
Memorial Day	Last Monday in May
Independence Day	July 4th
Labor Day	1st Monday in September
Veterans Day	November 11th
Thanksgiving Day	4th Thursday in November
Christmas Day	December 25th

If a designated holiday falls on a Sunday, the following Monday is a designated holiday. If November 11th falls on a Saturday, the preceding Friday is a designated holiday.

For a one-way reversing traffic-control lane closure, traffic may be stopped in 1 direction for periods not to exceed **10** minutes. After each stoppage, all accumulated traffic for that direction must pass through the work zone before another stoppage is made.

The maximum length of a single stationary one-way reversing traffic-control lane closure is 1 mile between flaggers, or unless otherwise approved by the Engineer.

Not more than 2 stationary lane closures will be allowed at one time. Concurrent stationary closures in the same direction of travel must be spaced no closer than 1 mile apart. Closure in the same direction of travel on alternating inside lane/outside lanes must be spaced by an additional 1/2 mile.

Personal vehicles of your employees must not be parked on the traveled way or shoulders, including sections closed to traffic.

If work vehicles or equipment are parked within 6 feet of a traffic lane, close the shoulder area as shown.

If work vehicles or equipment are parked within 6 feet of a traffic lane, close the shoulder area with fluorescent orange traffic cones or portable delineators. Place the cones or delineators on a taper in advance of the parked vehicles or equipment and along the edge of the traveled way at 25-foot intervals to a point not less than 25 feet past the last vehicle or piece of equipment. Use at least 9 cones or delineators for the taper. Use a W20-1, "Road Work Ahead," W21-5b, "Right/Left Shoulder Closed Ahead," or C24(CA), "Shoulder Work Ahead," sign mounted on a crashworthy, portable sign support with flags. The sign must be 48 by 48 inches and placed as ordered by the Engineer. If a cone or delineator is displaced or overturned, immediately restore the device to its original position or location.

A minimum of 1 paved traffic lane not less than 10 feet wide must be open for use by traffic.

Maintain all-weather access to all residences and businesses at all times. If a parcel has two driveways, a minimum of one driveway must be open at all times. Contractor shall coordinate with property owners, residents, and business operators as necessary should a driveway closure be required. All businesses are to stay open and operating during the construction.

12.E-3 CLOSURE SCHEDULE AND CONDITIONS

Replace Section 12-4.03 of the Standard Specifications with the following:

12-4.03A General

Submit closure schedule requests and closure schedule amendments to the Engineer to show the locations and times of the requested closures.

12-4.03B Closure Schedules

Every Monday by noon, submit a closure schedule request of planned closures for the next week period. The next week period is defined as Sunday noon through the following Sunday noon.

Submit a closure schedule request not less than 25 days and not more than 125 days before the anticipated start of any activity that reduces:

1. Horizontal clearances of traveled ways, including shoulders, to 2 lanes or less due to activities such as temporary barrier placement and paving
2. Vertical clearances of traveled way, including shoulders, due to activities such as pavement overlays, overhead sign installation, falsework, or girder erection

Submit closure schedule amendments, including adding additional closures, by noon at least 3 business days before a planned closure.

Cancel closure requests at least 48 hours before the start time of the closure.

The Engineer may reschedule a closure cancelled due to unsuitable weather.

If a closure is not opened to traffic by the specified time, suspend work. No further closures are allowed until the Engineer has reviewed and authorized a work plan submitted by you that ensures that future closures will be opened to traffic by the specified time. Allow 2 business days for review of your proposed work plan. The Department does not compensate you for your losses due to the suspension of work resulting from the late opening of closures.

Notify the Engineer of delays in your activities caused by:

1. Your closure schedule request being denied although your requested closures are within the specified time frame allowed for closures. The Department does not compensate you for your losses due to amendments to the closure schedule that are not authorized.
2. Your authorized closure being denied.

If you are directed to remove a closure before the time designated in the authorized closure schedule, you will be compensated for the delay.

12-4.03C Contingency Plan

Section 12-4.03C applies if a contingency plan is specified in the special provisions or if a contingency plan is requested.

If a contingency plan is requested, submit the contingency plan within 1 business day of the request.

The contingency plan must identify the activities, equipment, processes, and materials that may cause a delay in the opening of a closure to traffic. The plan must include:

1. List of additional or alternate equipment, materials, or workers necessary to ensure continuing activities and on-time opening of closures if a problem occurs. If the additional or alternate equipment, materials, or workers are not on site, specify their location, the method for mobilizing these items, and the required time to complete mobilization.
2. General time-scaled logic diagram displaying the major activities and sequence of planned operations. For each activity, identify the critical event when the contingency plan will be activated.

Based on the Engineer's review, additional materials, equipment, workers, or time to complete activities from that specified in the contingency plan may be required.

Submit revisions to a contingency plan at least 3 business days before starting the activity requiring a contingency plan. Allow 2 business days for review of the revised contingency plan.

Provide a general time-scaled logic diagram displaying the major activities and sequence of planned operations that comply with the requirements of section 12-4.03. For each operation, identify the critical event when the contingency plan will be activated.

12.E-4 SUBMITTALS

The 5th paragraph of section 5-1.23B(1) of the Standard Specifications does not apply to reviewing contingency plans:

12.F TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE

Replace Section 12-5 "Traffic Control System For Lane Closure" of the Standard Specifications with the following:

12.F-1 GENERAL

Section 12-5 includes specifications for closing traffic lanes with stationary and moving lane closures on 2-lane, 2-way highways. The traffic control system for a lane closure must comply with the details shown.

Traffic control system includes signs.

12.F-2 MATERIALS

12.F-3 CONSTRUCTION

12.F-3.a GENERAL

During traffic striping and pavement marker placement using bituminous adhesive, control traffic with a stationary or a moving lane closure. During other activities, control traffic with stationary lane closures.

Whenever components of the traffic control system are displaced or cease to operate or function as specified from any cause, immediately repair the components to the original condition or replace the components and restore the components to the original location.

12.F-3.b STATIONARY LANE CLOSURES

For a stationary lane closure made only for the work period, remove components of the traffic control system from the traveled way and shoulder, except for portable delineators placed along open trenches or excavation adjacent to the traveled way at the end of each work period. You may store the components at selected central locations designated by the Engineer within the limits of the highway.

Additional advance flaggers are required. Additional flaggers shall be provided at major intersections to control ingress and egress of traffic into lane closure(s).

For traffic under 1-way control on unpaved areas, the cones shown along the centerline need not be placed.

You may use a pilot car to control traffic. If a pilot car is used for traffic control, the cones shown along the centerline need not be placed. The pilot car must have radio contact with personnel in the work area. Operate the pilot car through the traffic control zone at a speed not greater than 25 miles per hour.

12.F-3.c MOVING LANE CLOSURES

A changeable message sign used in a moving lane closure must comply with section 12-3.12 except the sign must be truck-mounted. The full operational height to the bottom of the sign may be less than 7 feet above the ground but must be as high as practicable.

A flashing arrow sign used in a moving lane closure must be truck-mounted. Operate the flashing arrow sign in the caution display mode whenever it is being used on a 2-lane, 2-way highway.

12.F-4 PAYMENT

Traffic control system for lane closure is paid for as traffic control system.

12.G TEMPORARY PAVEMENT DELINEATION

Replace Section 12-8 "Temporary Pavement Delineation" of the Standard Specifications with the following:

12.G-1 GENERAL

Section 12-8 includes specifications for placing, applying, maintaining, and removing temporary pavement delineation.

Painted traffic stripe used for temporary delineation must comply with section 84-3. Apply 1 or 2 coats.

Temporary signing for no–passing zones must comply with section 12-3.06.

12.G-2 MATERIALS

12.G-2.a GENERAL

Not Used

12.G-2.b TEMPORARY LANE LINE AND CENTERLINE DELINEATION

Temporary pavement markers must be the same color as the lane line or centerline markers being replaced. Temporary pavement markers must be one of the temporary pavement markers on the Authorized Material List for short-term day or night use, 14 days or less, or long-term day or night use, 180 days or less.

12.G-2.c TEMPORARY EDGE LINE DELINEATION

Temporary, removable, construction-grade striping and pavement marking tape must be one of the types on the Authorized Material List. Apply temporary, removable, construction-grade striping and pavement marking tape under the manufacturer's instructions.

12.G-3 CONSTRUCTION

12.G-3.a GENERAL

Whenever work activities obliterate pavement delineation, place temporary or permanent pavement delineation before opening the traveled way to traffic. Place lane line and centerline pavement delineation for traveled ways open to traffic. On multilane roadways, freeways, and expressways, place edge line delineation for traveled ways open to traffic.

Establish the alignment for temporary pavement delineation, including required lines or markers. Surfaces to receive an application of paint or removable traffic tape must be dry and free of dirt and loose material. Do not apply temporary pavement delineation over existing pavement delineation or other temporary pavement delineation. Maintain temporary pavement delineation until it is superseded or you replace it with a new striping detail of temporary pavement delineation or permanent pavement delineation.

Place temporary pavement delineation on or adjacent to lanes open to traffic for a maximum of 14 days. Before the end of the 14 days, place the permanent pavement delineation. If the permanent pavement delineation is not placed within the 14 days, replace the temporary pavement markers with additional temporary pavement delineation equivalent to the striping detail specified for the permanent pavement delineation for the area. The Department does not pay for the additional temporary pavement delineation.

When the Engineer determines the temporary pavement delineation is no longer required for the direction of traffic, remove the markers, underlying adhesive and removable traffic tape from the final layer of surfacing and from the existing pavement to remain in place. Remove temporary pavement delineation that conflicts with any subsequent or new traffic pattern for the area.

12.G-3.b TEMPORARY LANE LINE AND CENTERLINE DELINEATION

Whenever lane lines or centerlines are obliterated, the minimum lane line and centerline delineation must consist of temporary pavement markers placed longitudinally at intervals not exceeding 24 feet. The temporary pavement markers must be temporary pavement markers on the Authorized Material List for short-term day or night use, 14 days or less, or long-term day or night use, 180 days or less. Place temporary pavement markers under the manufacturer's instructions. Cement the markers to the surfacing with the adhesive recommended by the manufacturer, except do not use epoxy adhesive to place pavement markers in areas where removal of the markers will be required.

For temporary lane line or centerline delineation consisting entirely of temporary pavement markers, place the markers longitudinally at intervals not exceeding 24 feet.

Where no-passing centerline pavement delineation is obliterated, install the following temporary no-passing zone signs before opening lanes to traffic. Install a W20-1, "Road Work Ahead," sign from 1,000 feet to 2,000 feet in advance of a no-passing zone. Install a R4-1, "Do Not Pass," sign at the beginning of a no-passing zone and at 2,000-foot intervals within the no-passing zone. For continuous zones longer than 2 miles, install a W7-3a or W71(CA), "Next ___ Miles," sign beneath the W20-1 sign. Install a R4-2, "Pass With Care," sign at the end of the no-passing zone. The Engineer determines the exact location of temporary no-passing zone signs. Maintain the temporary no-passing zone signs in place until you place the permanent no-passing centerline

pavement delineation. Remove the temporary no-passing zone signs when the Engineer determines they are no longer required for the direction of traffic.

12.G-3.c TEMPORARY EDGE LINE DELINEATION

Whenever edge lines are obliterated on multilane roadways, freeways, and expressways, place edge line delineation for that area adjacent to lanes open to traffic consisting of (1) solid, 4-inch wide traffic stripe tape of the same color as the stripe being replaced, (2) traffic cones, (3) portable delineators or channelizers placed longitudinally at intervals not exceeding 100 feet. You may apply temporary painted traffic stripe where removal of the 4-inch wide traffic stripe will not be required.

The Engineer determines the lateral offset for traffic cones, portable delineators, and channelizers used for temporary edge line delineation. If traffic cones or portable delineators are used for temporary pavement delineation for edge lines, maintain the cones or delineators during hours of the day when the cones or delineators are being used for temporary edge line delineation.

Channelizers used for temporary edge line delineation must be an orange surface-mounted type. Cement channelizer bases to the pavement as specified in section 85 for cementing pavement markers to pavement except do not use epoxy adhesive to place channelizers on the top layer of the pavement. Channelizers must be one of the 36-inch, surface-mounted types on the Authorized Material List.

Remove the temporary edge line delineation when the Engineer determines it is no longer required for the direction of traffic.

12.G-4 PAYMENT

Not Used

END OF SECTION

SECTION 13 WATER POLLUTION CONTROL

13.A GENERAL

Attention is directed to Section 13 “Water Pollution Control” of the Standard Specifications.

13.A-1 SUMMARY

Each job site or project are to be separate in the permitting of water pollution control. Each project qualifies for an Erosivity Waiver because the soil disturbance area for each project separately is anticipated to be between 1 and 5 acres and the R-factor is less than 5. The Erosivity Waiver and R-factor are described in the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002, as amended by 2010-0014-DWQ).

Schedule all soil disturbing activities, for both projects, such as but not limited to clearing and grubbing, roadway excavation, and embankment construction, to occur from August 13, 2013 to October 23, 2013. Deviation from this schedule may void the Erosivity Waiver and subject the Contractor to perform corrective measures to be compliant with the Permit.

THIS JOB IS RISK LEVEL FOR EACH PROJECT IS 2.

Discharges of storm water from the project must comply with most current NPDES General Permit for "Storm Water Discharges Associated with Construction and Land Disturbance Activities" (Order No. 2009-009-DWQ, NPDES No. CAS000002, as amended by 2010-0014-DWQ).

13.B DEFINITIONS AND ABBREVIATIONS

active and inactive areas: (1) Active areas have soil disturbing work activities occurring at least once within 14 days, and (2) Inactive areas are areas that have not been disturbed for at least 15 days.

BMPs: Best Management Practices are water pollution control practices.
construction phase: Construction phases are (1) Highway Construction including work activities for building roads and structures, (2) Plant Establishment including maintenance on vegetation installed for final stabilization, and (3) Suspension where work activities are suspended and areas are inactive.
CSMP: Construction Site Monitoring Program.
NAL: Numeric Action Level
NEL: Numeric Effluent Limit
NPDES: National Pollutant Discharge Elimination System
NOI: Notice of Intent
normal working hours: The hours you normally work on this project
Preparation Manual: The Department's "Storm Water Pollution Prevention Plan and Water Pollution Control Program Preparation Manual."
QSD: Qualified SWPPP Developer
QSP: Qualified SWPPP Practitioner
REAP: Rain Event Action Plan.
RWQCB: Regional Water Quality Control Board.
SAP: Sampling and Analysis Plan
SSC: Suspended Sediment Concentration
SWRCB: State Water Resources Control Board
SWPPP: Storm Water Pollution Prevention Plan
WDID: Waste Discharge Identification Number
WPC: Water Pollution Control
WPC Manager: Water Pollution Control Manager. The WPC Manager implements water pollution control work described in the SWPPP and oversees revisions and amendments to the SWPPP.

13.C JOB SITE MANAGEMENT

Contractor must maintain a clean job site and comply with the provision of Section 13-4 of the Standard Specifications as needed.

13.D PAYMENT

13.D-1 MAINTENANCE OF TEMPORARY ITEMS

Sections 13-5.04, 13-6.04, 13-7.04 of the Standard Specifications entitled “Payment” of the temporary sediment and erosion control measures is amended to delete cost sharing of maintaining temporary items. All costs to maintain temporary sediment and erosion control measures will be totally (100%) borne by the contractor and no division of costs will be made therefor.

END OF SECTION

SECTION 14 ENVIRONMENTAL STEWARDSHIP

Attention is directed to Section 14 “Environmental Stewardship” of the Standard Specifications.

14.A DUST CONTROL

In addition to the provisions in Section 14-9.03A “Dust Control” of the Standard Specifications, the Contractor must comply with the requirements of the Butte County Air Pollution Control District. If required, compliance may include submitting Dust Control Plan(s) and/or obtaining necessary permits.

14.A-1 PAYMENT

A fee may be required to obtain a fugitive dust permit. Full compensation for conforming to the provisions in the Section and the requirements of the permit, including the cost of the permit, shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

END OF SECTION

SECTION 15 EXISTING FACILITIES

Refer to Section 15 "Existing Facilities" of the Standard Specifications.

15.A REMOVE CULVERT

Remove culverts as shown. Removal of culverts must be immediately followed by new culvert or other drainage item shown. Allowances for emergency access across culvert trench must be made at all time. Contractor shall own the removed material.

At locations where new drainage facilities will not match removal areas, backfill in accordance with Section 19 of these Special Provisions. Place six (6) inches minimum of Aggregate Base on top of backfill to sub-base grade in preparation for paving.

15.B RELOCATE CULVERT

Relocate culverts as shown. Relocation of culverts must be conducted immediately. Allowances for emergency access across culvert trench must be made at all time.

Installation of relocated culverts shall comply with Section 66 of the Standard Specifications and with these Special Provisions.

15.C SALVAGE ASPHALT CONCRETE

15.C-1 GENERAL

Salvage Asphalt Concrete shall include the removal of existing asphalt concrete as shown for roadway re-grading or widened, transporting, stockpiling, and placement as shoulder backing.

15.C-2 MATERIALS

If applicable, use the same quality of HMA for temporary tapers that is used for the HMA overlay or comply with the specifications for minor HMA in Section 39.

Salvaged asphalt concrete shall comply with the materials specifications for Shoulder Backing in Section 19-9.02 of the Standard Specifications.

15.C-3 DEPARTMENT SALVAGE LOCATION

Replace section 15-2.03A(2)(b) with:

15-2.03A(2)(b) Department Salvage Location

A minimum of 3 business days before hauling salvaged material to the Department salvage storage location, notify:

1. Engineer
2. Public Works Manager, Mike Houdek, (530) 872-6291 x107

For Cold Plane Asphalt Concrete Pavement, the Department salvage storage location is:

The Town of Paradise Public Works Corporation Yard on American Way in Paradise.

15.C-4 CONSTRUCTION

15.C-4.a REMOVAL

Removal shall comply with Section 15-2.02B(4) "Remove Subbase, Base, and Bituminous Surfacing" of the Standard Specifications. Remove asphalt concrete as shown.

15.C-4.b STOCKPILE

Salvaged material shall be stockpiled either onsite or another site approved by the Engineer. Stockpiling shall comply with water pollution control provisions and Standard Specifications.

15.C-4.c PLACEMENT

Placement of salvaged asphalt concrete shall comply with the Construction specifications for Shoulder Backing in Section 19-9.03 of the Standard Specifications.

15.C-4.d SAWCUT

Payment for Remove Asphalt Concrete includes conducting neat sawcut if a clean vertical edge is not provided or maintained prior to paving operations. Engineer must approve exclusion of sawcutting. Failure to get approval from the Engineer may result in performance withhold(s).

15.D COLD PLANING ASPHALT CONCRETE PAVEMENT

Replace Section 15-2.02B(3) "Cold Planing Asphalt Concrete Pavement" of the Standard Specifications with the following:

15.D-1 GENERAL

Cold Planning Asphalt Concrete shall include conform taper grinding and profile grinding of existing asphalt concrete roadway to achieve specified cross-slopes, grades and smoothness. Cold Planning shall also include the transporting of ground material, stockpiling, and placement of grinding as shoulder backing.

If conform taper grinding is not performed immediately prior to paving operations, Schedule cold planing activities so that not more than 7days elapses between the time the pavement is cold planed and the HMA is placed, unless otherwise approved by the Engineer.

15.D-2 MATERIALS

Use the same quality of HMA for temporary tapers that is used for the HMA overlay or comply with the specifications for minor HMA in Section 39.

Salvaged asphalt concrete shall comply with the materials specifications for Shoulder Backing in Section 19-9.02 of the Standard Specifications.

15.D-3 CONSTRUCTION

15.D-3.a COLD PLANE

15.D-3.a(i) General

Do not use a heating device to soften the pavement.

The cold planing machine must be:

1. Equipped with a cutter head width that matches the planing width. If the cutter head width is wider than the cold plane area shown, submit to the Engineer a request for using a wider cutter head. Do not cold plane unless the Engineer approves your request.
2. Equipped with automatic controls for the longitudinal grade and transverse slope of the cutter head and:

2.1. If a ski device is used, it must be at least 30 feet long, rigid, and a 1-piece unit. The entire length must be used in activating the sensor.

2.2. If referencing from existing pavement, the cold planing machine must be controlled by a self-contained grade reference system. The system must be used at or near the centerline of the roadway. On the adjacent pass with the cold planing machine, a joint-matching shoe may be used.

3. Equipped to effectively control dust generated by the planing operation
4. Operated so that no fumes or smoke is produced.

Replace broken, missing, or worn machine teeth.

15.D-3.a(ii) Grade Control and Surface Smoothness

Furnish, install, and maintain grade and transverse slope references.

The depth, length, width, and shape of the cut must be as shown or as ordered. The final cut must result in a neat and uniform surface. Do not damage the remaining surface.

The completed surface of the planed asphalt concrete pavement must not vary more than 0.02 foot when measured with a 12-foot straightedge parallel with the centerline. With the straightedge at right angles to the centerline, the transverse slope of the planed surface must not vary more than 0.03 foot.

Where lanes are open to traffic, the drop-off of between adjacent lanes must not be more than 0.15 foot.

15.D-3.a(iii) Temporary HMA Tapers

If a drop-off between the existing pavement and the planed area at transverse joints cannot be avoided before opening to traffic, construct a temporary HMA taper. The HMA temporary taper must be:

1. Placed to the level of the existing pavement and tapered on a slope of 30:1 (horizontal:vertical) or flatter to the level of the planed area, or as shown.
2. Compacted by any method that will produce a smooth riding surface

Completely remove temporary tapers before placing permanent surfacing.

15.D-3.a(iv) Remove Planed Material

Remove cold planed material concurrent with planing activities so that removal does not lag more than 50 feet behind the planer.

15.D-3.b STOCKPILE

Salvaged material shall be stockpiled either onsite or another site approved by the Engineer. Stockpiling shall comply with water pollution control provisions and Standard Specifications.

15.D-3.c PLACEMENT

Placement of salvaged asphalt concrete shall comply with the Construction specifications for Shoulder Backing in Section 19-9.03 of the Standard Specifications. If salvaged material exceeds the required amount of Shoulder Backing for the project, haul and stockpile material at location directed by the Engineer.

15.D-4 PAYMENT

Payment for removal of pavement markers, thermoplastic traffic stripe, painted traffic stripe, and pavement marking within the area of cold planeing is included in the payment for cold plane asphalt concrete pavement of the types shown in the Bid Item List.

15.E REMOVE PAVEMENT MARKERS

Refer to Section 15-2.02D of the Standard Specifications. Remove all Pavement Markers prior to any surface treatment work.

15.F REMOVE ASPHALT CONCRETE DIKES

Replace section 15-2.02F of the Standard Specifications with:

15-2.02F Remove Asphalt Concrete Dikes

Remove asphalt concrete dikes as shown.

15.G LOOP DETECTORS

Replace section 15-1.03C with:

15-1.03C Loop Detectors

The existing inductive loop detectors shown at station ±12+00 must remain in place and operational.

If you damage part of a loop conductor including an adjacent loop and the portion leading to the adjacent pull box, replace the entire loop detector.

15.H RESET MAILBOXES

Refer to Section 15-2.08B of the Standard Specifications. Mailboxes shall be relocated as shown.

15.I ADJUST FRAMES, COVERS, GRATES AND MANHOLES

Refer to Section 15-2.10B of the Standard Specifications. Adjust Frames, Covers, Grates and Manholes as shown. Attention is directed to Section 5.K-1 Nonhighway Facilities of these Special Provisions. Review the project site to confirm and tie existing locations prior to roadway construction. A schedule of Frames, Covers, Grates and Manholes are provided in Table 3 for reference only. This information does not relieve the Contractor from field verification.

Table 5: Preliminary Schedule of Frames, Covers and Manholes to be adjusted

FRAMES, COVERS, GRATES AND MANHOLES FOR ADJUSTMENT

Utility	Utility Owner	Location	
		project CL station	CL offset
Water Valve Box	PID	12+33	20.9 R
SD Manhole Cover	Town	13+08	13.7 R
Water Valve Box	PID	14+60	11.1 R
Water Valve Box	PID	25+00	13.6 L
Water Valve Box	PID	25+01	16.4 R
Water Valve Box	PID	25+20	13.8 L
Water Valve Box	PID	29+16	10.2 L
Water Valve Box	PID	29+38	4.5 L
Water Valve Box	PID	29+39	9.4 L
Water Valve Box	PID	29+96	14.2 L
Water Valve Box	PID	29+97	32.8 L
Water Valve Box	PID	30+07	33.9 L
Water Valve Box	PID	30+40	14.4 L
Water Valve Box	PID	35+88	14.0 L
Water Valve Box	PID	35+89	15.3 L
Water Valve Box	PID	36+36	15.8 L
Water Valve Box	PID	37+80	28.4 R
Water Valve Box	PID	39+66	12.6 L
Water Valve Box	PID	39+70	14.1 L
Water Valve Box	PID	43+60	12.9 L
Water Valve Box	PID	43+68	13.1 L
Water Blow-off Valve	PID	45+97	16.3 L
Water Valve Box	PID	45+98	11.9 L
Water Valve Box	PID	66+44	24.4 L
SD Manhole Cover	Town	72+91	24.0 L
Survey Monument	Town	73+01	0.00 R
Water Valve Box	PID	73+23	22.2 R
Water Valve Box	PID	73+32	19.7 R
Water Valve Box	PID	78+70	16.3 R
Water Valve Box	PID	82+20	7.3 R

Water Valve Box	PID	82+40	10.5 R
Water Valve Box	PID	86+01	13.8 R
Water Valve Box	PID	89+68	18.7 L
Water Valve Box	PID	89+70	17.3 L
Water Valve Box	PID	89+76	17.3 L
Water Valve Box	PID	96+02	13.3 L
Water Valve Box	PID	98+39	13.9 L
Water Valve Box	PID	99+92	18.2 L
Water Valve Box	PID	99+97	16.8 L
Water Valve Box	PID	125+45	11.5 R
Water Valve Box	PID	126+36	12.4 R

Refer to Section 81 for additional provisions pertaining to Survey Monuments.

Replace the 4th paragraph of section 15-2.10B with:
Instead of using new materials similar in character to those in the existing structure, you may use raising devices to adjust a manhole to grade. Before starting paving work, measure and fabricate raising devices. Raising devices must:

1. Comply with the specifications for section 75 except that galvanizing is not required
2 Have a shape and size that matches the existing frame
3. Be match marked by painting identification numbers on the device and corresponding structure
4. Result in an installation that is equal to or better than the existing one in stability, support, and nonrocking characteristics
5. Be fastened securely to the existing frame without projections above the surface of the road or into the clear opening

15.J RECONSTRUCT GUARDRAIL

Replace section 15-2.04D of the Standard Specifications with:
15-2.04D Reconstruct Guardrail

Cable anchor assemblies or terminal anchor assemblies, including concrete anchors and steel foundation tubes, must be completely removed.

Add new posts, blocks, and hardware. Comply with the post spacing shown. Alternate new posts and blocks with the existing posts and blocks. Comply with section 83-1.02B.

Posts, blocks, and hardware must comply with section 83-1.02B.

END OF SECTION

SECTION 16 CLEARING AND GRUBBING

Refer to Section 16, “Clearing and Grubbing” of the Standard Specifications and the following provisions.

Clear and grub before performing work covered in Section 15

END OF SECTION

SECTION 17 WATERING

Refer to Section 17, "Watering" of the Standard Specifications.

END OF SECTION

SECTION 19 EARTHWORK

19.A GENERAL

Refer to Section 19, "Earthwork" of the Standard Specifications.

Replace "20-3.03B(4)" in the 2nd paragraph of section 19-1.01A with:
20-2.02C(2)

Quantity calculations for Roadway Excavation and Import Borrow do not consider shrinkage and/or compaction.

19.B ROADWAY EXCAVATION

Replace the 3rd paragraph in section 19-2.01A with:
Pavement removal within the limits of roadway excavation must comply with section 15-2.02B.

Add to the 2nd paragraph of section 19-2.03D:
Topsoil must comply with section 21.

19.B-1 SLOPES

Add the following to section 19-2.03G "Slopes" of the Standard Specifications:
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 slope contours.

19.B-2 PAYMENT

Section 19-2.04 is revised to delete the first three paragraphs. Payment is based on a lump sum basis.

19.C COMPACTION

In addition to the provisions in Section 19-5.03A "General" of the Construction subsection, the following provisions shall apply.

Relative compaction shall mean the ratio of the field dry density to the laboratory maximum dry density expressed as a percentage.

19.D SHOULDER BACKING

Refer to Section 19-9 "Shoulder Backing" of the Standard Specifications.

Shoulder backing material shall be supplemented with salvaged asphalt pavement. Refer to Section 15.C "Salvage Asphalt Concrete" of these Special Provisions.

Salvaged asphalt pavement material shall comply with the material provisions in the Standard Specification for Shoulder Backing.

19.D-1 PAYMENT

Payment for placement of supplemental Salvaged Asphalt Concrete is paid for as Salvaged Asphalt Concrete.

END OF SECTION

SECTION 20 LANDSCAPE

Refer to Section 20, "Landscape" of the Standard Specifications.

END OF SECTION

SECTION 21 EROSION CONTROL

21.A GENERAL

Refer to Section 21, "Erosion Control" of the Standard Specifications and the amended provisions within this section. All other provisions in the Standard Specifications shall apply.

21.A-1 MATERIALS

Refer to Section 21-1.02 "Materials" of Erosion Control items in the Standard Specifications and the following amendments.

Replace the paragraph in section 21-1.02P with:

Fiber roll must be a premanufactured roll filled with rice or wheat straw, wood excelsior, or coconut fiber. Fiber roll must be covered with biodegradable jute, sisal, or coir fiber netting secured tightly at each end and must be one of the following:

1. 8 to 10 inches in diameter and at least 1.1 lb/ft
2. 10 to 12 inches in diameter and at least 3 lb/ft

Fiber roll must have a minimum functional longevity of 1 year.

21.A-2 CONSTRUCTION

Refer to Section 21-1.03 "Construction" of Erosion Control items in the Standard Specifications and the following amendments.

Add between the 1st and 2nd paragraphs of section 21-1.03A:

Remove and dispose of trash, debris, and weeds in areas to receive erosion control materials.

Remove and dispose of loose rocks larger than 2-1/2 inches in maximum dimension unless otherwise authorized.

Protect the traveled way, sidewalks, lined drainage channels, and existing vegetation from overspray of hydraulically-applied material.

21.B PAYMENT

21.B-1 MOVE-IN/ MOVE-OUT

Full compensation for the move-in and move-out of **permanent** erosion control items shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

END OF SECTION

SECTION 22 FINISHING ROADWAY

Refer to Section 22, "Finishing Roadway" of the Standard Specifications.

END OF SECTION

SECTION 24 STABILIZED SOILS

Refer to Section 24, "Stabilized Soils" of the Standard Specifications.

END OF SECTION

SECTION 26 AGGREGATE BASES

Refer to Section 26, "Aggregate Bases" of the Standard Specifications.

26.A MATERIALS

Aggregate base shall be Class 2, ¾ inch maximum gradation.

In addition to the aggregate qualities in the Standard Specifications, aggregate base shall also conform to the quality requirements as follows:

Table 6: Angularity Requirements for Aggregate Base

SPECIFICATION	CALIFORNIA TEST	REQUIREMENT
Percentage crushed particles (%, min.) [1]		
One fractured face	205	75
Two fractured faces		50

[1] Applies to material retained on No. 4 sieve only

26.B CONSTRUCTION

26.B-1 COMPACTING

The first line of Section 26-1.03D of the Standard Specifications shall be replaced with:

Compact each AB layer to at least 95 percent relative dry compaction under ASTM D2922 and D3017 or others as required. Relative compaction shall mean the ratio of the field dry density to the laboratory maximum dry density expressed as a percentage.

26.C PAYMENT

The second paragraph of Section 26-1.04 of the Standard Specifications shall be replaced with:

If AB is paid for by weight, and if the Engineer deems necessary to determine water weight, the Engineer may adjust the weight in the weighmaster certificate of the delivered AB by deducting the water weight over one percent plus the optimum moisture content. The Engineer determines the AB water content under California Test 226 and AB optimum moisture content under California Test 216. The Engineer does not pay for the deducted water weight.

END OF SECTION

SECTION 37 BITUMINOUS SEALS

Refer to Section 37 of the Standard Specifications and the following revised and additional provisions.

37.A GENERAL

This section provides specifications for both Micro-surfacing and SAMI-R. These are additive-alternate Bid Items where only one application may be performed. Refer to Section 3.B-2 "Bid Evaluation" of these Special Provisions for additional information.

Replace section 37-1.01 with:

37-1.01 GENERAL

37-1.01A Summary

Section 37-1 includes general specifications for applying bituminous seals.

37-1.01B Definitions

Reserved

37-1.01C Submittals

Reserved

37-1.01D Quality Control and Assurance

37-1.01D(1) General

Reserved

37-1.01D(2) Prepaving Conference

For seal coats and micro-surfacing, schedule a prepaving conference at a mutually agreed upon time and place to meet with the Engineer.

Prepaving conference attendees must sign an attendance sheet provided by the Engineer. The prepaving conference must be attended by your:

1. Project superintendent
2. Paving construction foreman
3. Traffic control foreman

Be prepared to discuss:

1. Quality control
2. Acceptance testing
3. Placement
4. Training on placement methods
5. Checklist of items for proper placement
6. Unique issues specific to the project, including:
   - 6.1. Weather
   - 6.2. Alignment and geometrics
   - 6.3. Traffic control issues
   - 6.4. Haul distances
   - 6.5. Presence and absence of shaded areas
   - 6.6. Any other local issues

37-1.02 MATERIALS

Not Used

37-1.03 CONSTRUCTION

Not Used

37-1.04 PAYMENT

Not Used

37.B SEAL COATS

Refer to Section 37-2 of the Standard Specifications and the following revised and additional provisions.

Replace section 37-2 with:

37-2 SEAL COATS

37.B-1 37-2.01 GENERAL

37-2.01A General

37-2.01A(1) Summary

Section 37-2 includes specifications for applying seal coats.

37-2.01A(2) Definitions

Reserved

37-2.01A(3) Submittals

Reserved

37-2.01A(4) Quality Control and Assurance

The following personnel must attend the prepaving conference:

1. Aggregate suppliers
2. Chip spreader operators
3. Emulsion and binder distributor
4. Coated chips producer if coated chips are used

37-2.01B Materials

Screenings must be broken stone, crushed gravel, or both. At least 90 percent of screenings by weight must be crushed particles as determined under California Test 205.

Screenings for seal coats must have the properties specified in the following table:

Seal Coat Screenings

Properties	Test method	Specification
Los Angeles Rattler, %, max Loss at 100 revolutions. Loss at 500 revolutions.	California Test 211	 10 40
Film stripping, %, max	California Test 302	25

37-2.01C Construction

37-2.01C(1) General

Wherever final sweeping or brooming of the seal coat surface is complete, place permanent traffic stripes and pavement markings within 10 days.

If you fail to place the permanent traffic stripes and pavement markings within the specified time, the Department withholds 50 percent of the estimated value of the seal coat work completed that has not received permanent traffic stripes and pavement markings.

37-2.01C(2) Equipment

Equipment for seal coats must include and comply with the following:

1. Screenings haul trucks. Haul trucks must have:
   1.1. Tailgates that discharge screenings
   1.2. Devices to lock onto the rear screenings spreader hitch
   1.3. Dump beds that will not push down on the spreader when fully raised
   1.4. Dump beds that will not spill screenings on the roadway when transferred to the spreader hopper
   1.5. Tarpaulins to cover precoated screenings when haul distance exceeds 30 minutes or ambient temperature is less than 65 degrees F
2. Self-propelled screenings spreader. The spreader must have:
   2.1. Screenings hopper in the rear
   2.2. Belt conveyors that carry the screenings to the front
   2.3. Spreading hopper capable of providing a uniform screening spread rate over the entire width of the traffic lane in 1 application.
3. Self-propelled power brooms. Do not use gutter brooms or steel-tined brooms. Brooms must be capable of removing loose screenings adjacent to barriers that prevent screenings from being swept off the roadway, including curbs, gutters, dikes, berms, and railings.
4. Pneumatic-tired rollers. Pneumatic-tired rollers must be an oscillating type at least 4 feet wide. Each roller must be self-propelled and reversible. Pneumatic tires must be of equal size, diameter, type, and ply. The roller must carry at least 3,000 lb of load on each wheel and each tire must have an air pressure of 100 ± 5 psi.

37-2.01C(3) Surface Preparation

Before applying seal coat, cover manholes, valve and monument covers, grates, or other exposed facilities located within the area of application, using a plastic or oil resistant construction paper secured by tape or adhesive to the facility being covered. Reference the covered facilities with a sufficient number of control points to relocate the facilities after the application of the seal coat.

After completion of the seal coat operation, remove covers from the facilities.

Immediately before applying seal coat, clean the surface to receive seal coat by removing extraneous material and drying. Cleaning the existing pavement includes the use of brooms.

37-2.01C(4) Applying Emulsion and Asphalt Binder

Prevent spray on existing pavement not intended for seal coat or on previously applied seal coat using a material such as building paper. Remove the material after use.

Align longitudinal joints between seal coat applications with designated traffic lanes.

For emulsion, overlap longitudinal joints by not more than 4 inches. You may overlap longitudinal joints up to 8 inches if authorized.

For areas not accessible to a truck distributor bar, apply the emulsion with a squeegee or other authorized means. For asphalt binder, hand spray nonaccessible areas. You may overlap the emulsion or asphalt binder applications before the application of screenings at longitudinal joints.

Do not apply the emulsion or asphalt binder unless there are sufficient screenings at the job site to cover the emulsion or asphalt binder.

Discontinue application of emulsion or asphalt binder early enough to comply with lane closure specifications and darkness. Apply to 1 lane at a time and cover the lane entirely in 1 operation.

37-2.01C(5) Spreading Screenings

Prevent vehicles from driving on asphaltic emulsion or asphalt binder before spreading screenings.

Spread screenings at a uniform rate over the full lane width in 1 application.

Broom excess screenings at joints before spreading adjacent screenings.

Operate the spreader at speeds slow enough to prevent screenings from rolling over after dropping.

If the spreader is not moving, screenings must not drop. If you stop spreading and screenings drop, remove the excess screenings before resuming activities.

37-2.01C(6) Finishing

Remove piles, ridges, or unevenly distributed screenings. Repair permanent ridges, bumps, or depressions in the finished surface. Spread additional screenings and roll if screenings are picked up by rollers or vehicles.

Seal coat joints between adjacent applications of seal coat must be smooth, straight, uniform, and completely covered. Longitudinal joints must be at lane lines and not overlap by more than 4 inches. Blend the adjacent applications by brooming.

A coverage is the number of passes a roller needs to cover the width. A pass is 1 roller movement parallel to the seal coat application in either direction. Overlapping passes are part of the coverage being made and are not part of a subsequent coverage. Do not start a coverage until completing the previous coverage.

Before opening to traffic, finish seal coat in the following sequence:

1. Perform initial rolling consisting of 1 coverage with a pneumatic-tired roller
2. Perform final rolling consisting of 3 coverages with a pneumatic-tired roller
3. Broom excess screenings from the roadway and adjacent abutting areas
4. Apply flush coat if specified

The Engineer may order salvaging of excess screenings.

Dispose of excess screenings the Engineer determines are not salvageable. Dispose of screenings in any of the following ways or locations:

1. Under section 14-10
2. On embankment slopes
3. In authorized areas

Salvaging and stockpiling excess screenings is change order work.

37-2.01C(7) Seal Coat Maintenance

Seals coat surfaces must be maintained for 4 consecutive days from the day screenings are applied. Maintenance must include brooming to maintain a surface free of loose screenings, to distribute screenings over the surface so as to absorb any free asphaltic material, to cover any areas deficient in cover coat material, and to prevent formation of corrugations.

After 4 consecutive days, excess screenings must be removed from the paved areas. Brooming must not displace screenings set in asphaltic material.

The exact time of brooming will be determined by the Engineer. As a minimum, brooming will be required at the following times:

1. On 2-lane 2-way roadways, from 2 to 4 hours after traffic, controlled with pilot cars, has been routed on the seal coat
2. On multilane roadways, from 2 to 4 hours after screenings have been placed
3. In addition to previous brooming, immediately before opening any lane to public traffic, not controlled with pilot cars
4. On the morning following the application of screenings on any lane that has been open to public traffic not controlled with pilot cars and before starting any other activities

For 2-lane 2-way roadways under 1-way traffic control, upon completion of secondary rolling, public traffic must be controlled with pilot cars and routed over the new seal coat for a period of 2 to 4 hours. The Engineer will determine the exact period of time.

Schedule the operations so that seal coat is placed on both lanes of the traveled way each work shift and so that 1-way traffic control is discontinued 1 hour before darkness. At the end of the work shift, the end of the seal coat on both lanes must generally match.

On multilane roadways, initial brooming must begin after the screenings have been in place for a period of 2 to 4 hours. If the initial brooming is not completed during the work shift in which the screenings were placed, the initial brooming must be completed at the beginning of the next work shift.

Public traffic must be controlled with pilot cars and be routed on the new seal coat surface of the lane for a minimum of 2 hours after completion of the initial brooming and before opening the lane to traffic not controlled with pilot cars. When traffic is controlled with pilot cars, a maximum of 1 lane in the direction of travel must be open to public traffic. Once traffic controlled with pilot cars is routed over the seal coat at a particular location, continuous control must be maintained at that location until the seal coat placement and brooming on adjacent lanes to receive seal coat is completed.

37-2.01D Payment

If there is no bid item for a traffic control system, furnishing and using a pilot car is included in the various items of the work involved in applying the seal coat.

If test results for the screenings grading do not comply with specifications, you may remove the seal coat represented by these tests or request that it remain in place with a payment deduction. The deduction is $1.75 per ton for the screenings represented by the test results.

37.B-2 37-2.02 FOG SEAL

Not Used

37.B-3 37-2.03 FLUSH COATS

37-2.03A General

Flush coat includes applying a fog seal coat to the surface, followed by sand.

37-2.03B Material

The Engineer selects the grade of slow-setting or quick-setting asphaltic emulsion to be used.

Sand for flush coat must comply with the material specifications for fine aggregate grading in section 90-1.02C(3). Sand must not include organic material or clay.

37-2.03C Construction

Apply asphaltic emulsion for flush coat at a residual asphalt rate from 0.02 to 0.06 gal/sq yd. The Engineer determines the exact rate.

During flush coat activities, close adjacent lanes to traffic. Do not track asphaltic emulsion on existing pavement surfaces.

Apply sand immediately after the asphaltic emulsion application.

Spread sand with a self-propelled screenings spreader equipped with a mechanical device that spreads sand at a uniform rate over the full width of a traffic lane in a single application. Spread sand at a rate from 2 to 6 lb/sq yd. The Engineer determines the exact rate.

37-2.03D Payment

The Department does not adjust the unit price for an increase or decrease in the sand cover for the flush coat quantity.

37.B-4 37-2.04 ASPHALTIC EMULSION SEAL COAT

Not Used

37.B-5 37-2.05 ASPHALT BINDER SEAL COATS

37-2.05A General

Reserved

37-2.05B Asphalt Rubber Binder Seal Coats

37-2.05B(1) General

37-2.05B(1)(a) Summary

Section 37-2.05B includes specifications for applying asphalt rubber binder seal coat. Asphalt rubber seal coat includes applying heated asphalt rubber binder, followed by heated screenings precoated with asphalt binder, followed by a flush coat.

37-2.05B(1)(b) Definitions

crumb rubber modifier: Ground or granulated high natural crumb rubber or scrap tire crumb rubber.

descending viscosity reading: Subsequent viscosity reading at least 5 percent lower than the previous viscosity reading.

high natural crumb rubber: Material containing 40 to 48 percent natural rubber.

scrap tire crumb rubber: Any combination of:

1. Automobile tires
2. Truck tires
3. Tire buffing

37-2.05B(1)(c) Submittals

For each delivery of asphalt rubber binder ingredients and asphalt rubber binder to the job site, submit a certificate of compliance and a copy of the specified test results.

Submit MSDS for each asphalt rubber binder ingredient and the asphalt rubber binder.

At least 15 days before use, submit:

1. Four 1-quart cans of mixed asphalt rubber binder
2. Samples of each asphalt rubber binder ingredient
3. Asphalt rubber binder formulation and data as follows:
   - 3.1. For asphalt binder and asphalt modifier submit:
     - 3.1.1. Source and grade of asphalt binder
     - 3.1.2. Source and type of asphalt modifier
     - 3.1.3. Percentage of asphalt modifier by weight of asphalt binder
     - 3.1.4. Percentage of combined asphalt binder and asphalt modifier by weight of asphalt rubber binder
     - 3.1.5. Test results for the specified quality characteristics
   - 3.2. For crumb rubber modifier submit:
     - 3.2.1. Each source and type of scrap tire crumb rubber and high natural rubber
     - 3.2.2. Percentage of scrap tire crumb rubber and high natural rubber by total weight of asphalt rubber binder
     - 3.2.3. Test results for the specified quality characteristics
   - 3.3. For asphalt rubber binder submit:
     - 3.3.1. Test results for the specified quality characteristics
     - 3.3.2. Minimum reaction time and temperature

At least 5 business days before use, submit the permit issued by the local air quality agency for asphalt rubber binder:

1. Field blending equipment
2. Application equipment

If an air quality permit is not required by the local air quality agency for producing asphalt rubber binder or spray applying asphalt rubber binder, submit verification from the local air quality agency that an air quality permit is not required for this Contract.

Submit a certified volume or weight slip for each delivery of asphalt rubber binder ingredients and asphalt rubber binder.

Submit a certificate of compliance and accuracy verification of test results for viscometers.

When determined by the Engineer, submit notification 15 minutes before each viscosity test or submit a schedule of testing times.

Submit the log of asphalt rubber binder viscosity test results each day of asphalt rubber seal coat work.

37-2.05B(1)(d) Quality Control and Assurance

Equipment used in producing asphalt rubber binder must be permitted for use by the local air quality agency. Equipment used in spreading asphalt rubber binder must be permitted for use by the local air quality agency.

Each asphalt rubber binder ingredient must be sampled and tested for compliance with the specifications by the manufacturer.

Test and submit results at least once per project or the following, whichever frequency is greater:

1. For crumb rubber modifier except for grading, at least once per 250 tons. Samples of scrap tire crumb rubber and high natural crumb rubber must be sampled and tested separately. Test each delivery of crumb rubber modifier for grading.
2. For asphalt binder, test and submit at least once per 200 tons of asphalt binder production.
3. For asphalt modifier, test and submit at least once per 25 tons of asphalt modifier production.

Scrap tire crumb rubber and high natural crumb rubber must be delivered to the asphalt rubber production site in separate bags.

Take viscosity readings of asphalt rubber binder under ASTM D7741 during asphalt rubber binder production. Start taking viscosity readings of samples taken from the reaction vessel at least 45 minutes after adding crumb rubber modifier and continue taking viscosity readings every 30 minutes until 2 consecutive descending viscosity readings have been obtained and the final viscosity meets the specification requirement. After meeting the 2 descending viscosity readings requirement, continue to take viscosity readings hourly and within 15 minutes before use. Log the test results, including time of testing and temperature of the asphalt rubber binder.

37-2.05B(2) Material

37-2.05B(2)(a) General

Reserved

37-2.05B(2)(b) Asphalt Binder

Asphalt binder must comply with the specifications for asphalt binder. Do not modify asphalt binder with polymer.

Asphalt binder for asphalt rubber binder seal coat must be Grade PG 64-16.

37-2.05B(2)(c) Asphalt Modifier

Asphalt modifier must be a resinous, high flash point, and aromatic hydrocarbon. Asphalt modifier must have the values for the quality characteristics shown in the following table:

Asphalt Modifier for Asphalt Rubber Binder

Quality characteristic	Test method	Value
Viscosity, m^2/s (x 10^{-6}) at 100 °C	ASTM D 445	X ± 3 [a]
Flash point, CL.O.C., °C	ASTM D 92	207 min
Molecular analysis		
Asphaltenes, percent by mass	ASTM D 2007	0.1 max
Aromatics, percent by mass	ASTM D 2007	55 min

[a] "X" denotes the proposed asphalt modifier viscosity from 19 to 36. A change in "X" requires a new asphalt rubber binder submittal.

37-2.05B(2)(d) Crumb Rubber Modifier

Crumb rubber modifier must be ground or granulated at ambient temperature.

Scrap tire crumb rubber and high natural crumb rubber must be delivered to the asphalt rubber binder production site in separate bags.

Steel and fiber must be separated. If steel and fiber are cryogenically separated, it must occur before grinding and granulating. Cryogenically-produced crumb rubber modifier particles must be large enough to be ground or granulated.

Wire must not be more than 0.01 percent by weight of crumb rubber modifier. Crumb rubber modifier must be free of contaminants except fabric, which must not exceed 0.05 percent by weight of crumb rubber modifier. Method for determining the percent weight of wire and fabric is available under Laboratory Procedure 10 at the following METS Web site:

http://www.dot.ca.gov/hq/esc/Translab/ofpm/fpmlab.htm

The length of an individual crumb rubber modifier particle must not exceed 3/16 inch.

Crumb rubber modifier must be dry, free-flowing particles that do not stick together. A maximum of 3 percent calcium carbonate or talc by weight of crumb rubber modifier may be added. Crumb rubber modifier must not cause foaming when combined with the asphalt binder and asphalt modifier.

Specific gravity of crumb rubber modifier must be from 1.1 to 1.2 determined under California Test 208.

When tested under ASTM D 297, crumb rubber modifier must comply with the requirements shown in the following table:

Crumb Rubber Modifier

Quality characteristic	Scrap tire crumb rubber (percent)		High natural rubber (percent)	
	Min	Max	Min	Max
Acetone extract	6.0	16.0	4.0	16.0
Rubber hydrocarbon	42.0	65.0	50.0	--
Natural rubber content	22.0	39.0	40.0	48.0
Carbon black content	28.0	38.0	--	--
Ash content	--	8.0	--	--

Scrap tire crumb rubber must have the gradation shown in the following table:

Scrap Tire Crumb Rubber Gradation
Percentage passing

Sieve size	Gradation limit	Operating range	Contract compliance
No. 8	100	100	100
No. 10	98–100	95–100	90–100
No. 16	45–75	35–85	32–88
No. 30	2–20	2–25	1–30
No. 50	0–6	0–10	0–15
No. 100	0–2	0–5	0–10
No. 200	0	0–2	0–5

High natural crumb rubber must have the gradation shown in the following table:

High Natural Crumb Rubber Gradation
Percentage passing

Sieve size	Gradation limit	Operating range	Contract compliance
No. 10	100	100	100
No. 16	95–100	92–100	85–100
No. 30	35–85	25–95	20–98
No. 50	10–30	6–35	2–40
No. 100	0–4	0–7	0–10
No. 200	0–1	0–3	0–5

Test the crumb rubber modifier gradation under ASTM C 136 except

1. Split or quarter 100 ± 5 g from the crumb rubber modifier sample and dry to a constant mass at a temperature from 57 to 63 degrees C and record the dry sample mass. Place the crumb rubber modifier sample and 5 g of talc in a 1/2-liter jar. Seal the jar, then shake the jar by hand for at least 1 minute to mix the crumb rubber modifier and the talc. Continue shaking or open the jar and stir until the particle agglomerates and clumps are broken and the talc is uniformly mixed.
2. Place 1 rubber ball on each sieve. Each ball must weigh 8.5 ± 0.5 g, measure 24.5 ± 0.5 mm in diameter, and have a Shore Durometer "A" hardness of 50 ± 5 determined under ASTM D 2240. After sieving the combined material for 10 ± 1 minutes, disassemble the sieves. Brush material adhering to the bottom of a sieve into the next finer sieve. Weigh and record the mass of the material retained on the 2.36-milimeter sieve and leave this material (do not discard) on the scale or balance. Fabric balls must remain on the scale or balance and

be placed together on the side to prevent them from being covered or disturbed when the material from finer sieves is placed onto the scale or balance. The material retained on the 2.00-milimeter sieve must be added to the scale or balance. Weigh and record that mass as the accumulative mass retained on the 2.00-milimeter sieve. Continue weighing and recording the accumulated masses retained on the remaining sieves until the accumulated mass retained in the pan has been determined. Before discarding the crumb rubber modifier sample, separately weigh and record the total mass of fabric balls in the sample.

3. Determine the mass of material passing the 75-micrometer sieve by subtracting the accumulated mass retained on the 75-micrometer sieve from the accumulated mass retained in the pan. If the material passing the 75-micrometer sieve has a mass of 5 g or less, cross out the recorded number for the accumulated mass retained in the pan and copy the number recorded for the accumulated mass retained on the 75-micrometer sieve and record that number, next to the crossed out number, as the accumulated mass retained in the pan. If the material passing the 75-micrometer sieve has a mass greater than 5 g, cross out the recorded number for the accumulated mass retained in the pan, subtract 5 g from that number and record the difference next to the crossed out number. The adjustment to the accumulated mass retained in the pan accounts for the 5 g of talc added to the sample. For calculation purposes, the adjusted total sample mass is the same as the adjusted accumulated mass retained in the pan. Determine the percent passing based on the adjusted total sample mass and record to the nearest 0.1 percent.

37-2.05B(2)(e) Asphalt Rubber Binder

Asphalt rubber binder must be a combination of:

1. Asphalt binder
2. Asphalt modifier
3. Crumb rubber modifier

Asphalt rubber binder blending equipment must be authorized under the Department's material plant quality program.

The blending equipment must allow the determination of weight percentages of each asphalt rubber binder ingredient.

Asphalt rubber binder must be 79 ± 1 percent by weight asphalt binder and 21 ± 1 percent by weight of crumb rubber modifier. The minimum percentage of crumb rubber modifier must be 20.0 percent and lower values may not be rounded up.

Crumb rubber modifier must be 76 ± 2 percent by weight scrap tire crumb rubber and 24 ± 2 percent by weight high natural rubber.

Asphalt modifier and asphalt binder must be blended at the production site. Asphalt modifier must be from 2.5 to 6.0 percent by weight of the asphalt binder in the asphalt rubber binder. The asphalt rubber binder supplier determines the exact percentage.

If blended, the asphalt binder must be from 375 to 440 degrees F when asphalt modifier is added and the mixture must circulate for at least 20 minutes. Asphalt binder, asphalt modifier, and crumb rubber modifier may be proportioned and combined simultaneously.

The blend of asphalt binder and asphalt modifier must be combined with crumb rubber modifier at the asphalt rubber binder production site. The asphalt binder and asphalt modifier blend must be from 375 to 440 degrees F when crumb rubber modifier is added. Combined ingredients must be allowed to react at least 45 minutes at temperatures from 375 to 425 degrees F except the temperature must be at least 10 degrees F below the flash point of the asphalt rubber binder.

After reacting, the asphalt rubber binder must have the values for the quality characteristics shown in the following table:

Asphalt Rubber Binder

Quality characteristic	Test method	Requirement	
		Min	Max
Cone penetration @ 25 °C, 1/10 mm	ASTM D 217	25	60
Resilience @ 25 °C, percent rebound	ASTM D 5329	18	50
Field softening point, °C	ASTM D 36	55	88
Viscosity @190 °C, Pa • s ($x10^{-3}$)	ASTM D 7741	1500	2500

Maintain asphalt rubber binder at a temperature from 375 to 415 degrees F.

Stop heating unused asphalt rubber binder 4 hours after the 45-minute reaction period. Reheating asphalt rubber binder that cools below 375 degrees F is a reheat cycle. Do not exceed 2 reheat cycles. If reheating, asphalt rubber binder must be from 375 to 415 degrees F before use.

During reheating, you may add scrap tire crumb rubber. Scrap tire crumb rubber must not exceed 10 percent by weight of the asphalt rubber binder. Allow added scrap tire crumb rubber to react for at least 45 minutes. Reheated asphalt rubber binder must comply with the specifications for asphalt rubber binder.

37-2.05B(2)(f) Screenings

Before precoating with asphalt binder and when tested under California Test 202, screenings for asphalt rubber seal coat must have the gradation shown in the following table:

Asphalt Rubber Seal Coat Screenings Gradation

Sieve sizes	Percentage passing by weight		
	Coarse 1/2" max	Medium 1/2" max	Fine 3/8" max
3/4"	100	100	100
1/2"	75–90	85–90	95–100
3/8"	0–20	0–30	70–85
No. 4	0–2	0–5	0–15
No. 8	--	--	0–5
No. 200	0–1	0–1	0–1

Screenings must have the values for the properties shown in the following table:

Seal Coat Screenings

Properties	Test method	Value
Cleanness value, min	California Test 227	80
Durability, min	California Test 229	52

37-2.05B(3) Construction

37-2.05B(3)(a) General

Reserved

37-2.05B(3)(b) Equipment

Self-propelled distributor truck for applying asphalt rubber binder must have the following features:

1. Heating unit
2. Internal mixing unit
3. Pumps that spray asphalt rubber binder within 0.05 gal/sq yd of the specified rate

4. Fully circulating spray bar that applies asphalt rubber binder uniformly
5. Tachometer
6. Pressure gages
7. Volume measuring devices
8. Thermometer
9. Observation platform on the rear of the truck for an observer on the platform to see the nozzles and unplug them if needed

37-2.05B(3)(c) Precoating Screenings

For asphalt rubber seal coat, do not recombine fine materials collected in dust control systems except cyclone collectors or knock-out boxes with any other aggregate used in the production of screenings.

For asphalt rubber seal coat, screenings must be preheated from 260 to 325 degrees F. Coat with any of the asphalts specified in the table titled "Performance Graded Asphalt Binder" in section 92. Coat at a central mixing plant. The asphalt must be from 0.5 to 1.0 percent by weight of dry screenings. The Engineer determines the exact rate.

Plant must be authorized under the Department's material plant quality program.

Do not stockpile preheated or precoated screenings.

37-2.05B(3)(d) Asphalt Rubber Binder Application

Apply asphalt rubber binder immediately after the reaction period. At the time of application, the temperature of asphalt rubber binder must be from 385 to 415 degrees F.

Apply asphalt rubber binder at a rate from 0.55 to 0.65 gal/sq yd. The Engineer determines the exact rate.

Apply asphalt rubber binder when the atmospheric temperature is from 60 to 105 degrees F and the pavement surface temperature is at least 55 degrees F.

Do not apply asphalt rubber binder unless there are sufficient screenings available to cover the asphalt rubber binder within 2 minutes. Intersections, turn lanes, gore points, and irregular areas must be covered within 15 minutes.

Do not apply asphalt rubber binder when weather or road conditions are unsuitable, including high wind or when the pavement is damp. In windy conditions you may adjust the distributor bar height and distribution speed, and use shielding equipment, if the Engineer authorizes your request.

37-2.05B(3)(e) Screenings Application

During transit, cover precoated screenings for asphalt rubber seal coat with tarpaulins if the ambient air temperature is below 65 degrees F or the haul time exceeds 30 minutes.

At the time of application, screenings for asphalt rubber seal coat must be from 225 to 325 degrees F.

Spread screenings at a rate from 28 to 40 lb/sq yd. The exact rate is determined by the Engineer. Spread to within 10 percent of the determined rate.

37-2.05B(3)(f) Rolling and Sweeping

Perform initial rolling within 90 seconds of spreading screenings. Do not spread screenings more than 200 feet ahead of the initial rolling.

For final rolling, you may request use of a steel-wheeled roller weighing from 8 to 10 tons, static mode only.

Perform a final sweeping before Contract acceptance. The final sweeping must not dislodge screenings.

Dispose of swept screenings at least 150 feet from any waterway.

37-2.05B(4) Payment

Screenings for asphalt rubber seal coat are measured by coated weight after they are preheated and precoated with asphalt binder. The weight of screenings must be the coated weight.

If recorded batch weights are printed automatically, the bid item for screenings for asphalt-rubber seal coat are measured using the printed batch weights, provided:

1. Total aggregate weight for screenings per batch is printed
2. Total asphalt binder weight per batch is printed
3. Each truckload's zero tolerance weight is printed before weighing the first batch and after weighing the last batch
4. Time, date, mix number, load number and truck identification are correlated with a load slip
5. A copy of the recorded batch weights is certified by a licensed weighmaster and submitted to the Engineer

Screenings for asphalt rubber seal coat is paid for as precoated screenings.

Asphalt-rubber binder is measured under the specifications for asphalts.

If test results for gradation tests do not comply with the specifications, deductions are taken.

Each gradation test for scrap tire crumb rubber represents 10,000 lbs or the amount used in that day's production, whichever is less.

Each gradation test for high natural rubber represents 3,400 lbs or the amount used in that day's production, whichever is less.

For each gradation test, the following pay deductions will be taken from the asphalt rubber bid item:

Gradation Test

Material	Test result [a]	Deduction
Scrap tire crumb rubber	Operating range < TR < Contract compliance	$250
Scrap tire crumb rubber	TR > Contract compliance	$1,100
High natural crumb rubber	Operating range < TR < Contract compliance	$250
High natural crumb rubber	TR > Contract compliance	$600

[a] Test Result = TR

37-2.05C Modified Asphalt Binder Seal Coat

Reserved

37.B-6 37-2.06 STRESS ABSORBING MEMBRANE INTERLAYER-RUBBER

37-2.06A General

Section 37-2.06 applies where a stress absorbing membrane interlayer with Asphalt Binder (SAMI-R) is shown.

SAMI-R must comply with section 37-2.05 except as specified in this section 37-2.06

.Comply with section 37-2.05B except a flush coat is not required.

37-2.06B Materials

For SAMI-R, screenings must comply with the 3/8-inch maximum gradation.

37-2.06C Construction

For SAMI, section 37-2.01C(7) does not apply.

Final rolling and sweeping are not required for SAMI.

37-2.06D Payment

Payment for SAMI-R includes materials, labor, and equipment associated with this work, including Pre-Coated Screening, Asphalt Rubber Binder, Sand Cover, and Asphalt Emulsion (flush), and no other compensation will be made.

37-2.07–37-2.10 RESERVED

37.C SLURRY SEAL AND MICRO-SURFACING

Refer to Section 37-3 of the Standard Specifications and the following revised and additional provisions.

37.C-1 MATERIALS

Add the following to Section 37-3-02A:
Aggregate for micro-surfacing must be Type III.

Add to section 37-3.02B(1):
Asphaltic emulsion for slurry seal must be polymer modified asphaltic emulsion.

37.C-2 CONSTRUCTION

Replace the 1st paragraph of section 37-3.03C(5)(a) with:
Use a continuous self-loading mixing machine except you may use truck mounted mixer spreaders on any of the following:

1. Radii'
2. Side streets
3. Gore areas
4. Areas requiring hand work

37.C-3 PLACING

Replace "Reserved" in section 37-3.03D(3)(c) with:
Construct a micro-surfacing test strip:

1. From 300 to 450 feet long
2. The same as the full production micro-surfacing
3. On one of the application courses specified at an authorized location
4. At the same time of day or night the full production micro-surfacing is to be applied

If multiple application courses are specified, you may construct test strips over 2 days or nights.

The Engineer evaluates the test strip after traffic has used it for 12 hours. If the Engineer determines the mix design or placement procedure is unacceptable, make modifications and construct a new test strip for the Engineer's evaluation.

37.C-4 PAYMENT

Section 37-3.04A "General" is deleted. Payment for Tack Coat is not paid for by a separate Bid Items.

Section 37-3.04C "Micro-surfacing" is replaced with the following:

Micro-surfacing is measured by the area of the finished product including aggregate and micro-surfacing emulsion, including test strips.

If test results for aggregate grading or sand equivalent do not comply with the specifications, you may remove the installed micro-surfacing represented by the test results or request it remain in place with a payment deduction. The deduction is $0.03 per square yard.

If test results for both aggregate grading and sand equivalent do not comply with the specifications, both deductions are made.

END OF SECTION

SECTION 39 HOT MIX ASPHALT

Replace Section 39, "Hot Mix Asphalt" of the Standard Specifications with the following provisions within this section.

39.A 39-1 GENERAL

39.A-1 39-1.01 GENERAL

39-1.01A Summary

Section 39-1 includes general specifications for producing and placing hot mix asphalt.

HMA includes one or more of the following types:

1. Type A HMA
2. RHMA-G
3. OGFC
4. BWC
5. Minor HMA

If a warm mix asphalt technology is specified, the warm mix asphalt technology to be used must be authorized. For Department-authorized warm mix asphalt technologies, go to the METS website.

39-1.01B Definitions

binder replacement: Binder from RAP expressed as a percent of the total binder in the mix.

coarse aggregate: Aggregate retained on a no. 4 sieve.

fine aggregate: Aggregate passing the no. 4 sieve.

leveling course: Thin layer of HMA used to correct minor variations in the longitudinal and transverse profile of the pavement before placement of other pavement layers.

lower course: Layer of HMA below 0.2 feet from finished grade exclusive of OGFC.

miscellaneous areas: Areas outside the traveled way such as:

1. Median areas not including inside shoulders
2. Island areas
3. Sidewalks
4. Gutters
5. Ditches
6. Overside drains
7. Aprons at ends of drainage structures

processed RAP: RAP that has been fractionated.

supplemental fine aggregate: Aggregate passing the no. 30 sieve, including hydrated lime, portland cement, and fines from dust collectors.

surface course: Upper 0.2 feet of HMA exclusive of OGFC.

top layer: Final riding surface.

39-1.01C Submittals

39-1.01C(1) General

Reserved

39-1.01C(2) Job Mix Formula

39-1.01C(2)(a) General

Except for the HMA to be used in miscellaneous areas and dikes, submit your proposed JMF for each type of HMA to be used. The JMF must be submitted on the Contractor Job Mix Formula Proposal form along with:

1. Mix design documentation on Contractor Hot Mix Asphalt Design Data form dated within 12 months of submittal
2. JMF verification on a Caltrans Hot Mix Asphalt Verification form, if applicable
3. JMF renewal on a Caltrans Job Mix Formula Renewal form, if applicable
4. MSDS for:
   - 4.1. Asphalt binder
   - 4.2. Supplemental fine aggregate except fines from dust collectors
   - 4.3. Antistrip additives

The Contractor Hot Mix Asphalt Design Data form must show documentation on aggregate quality.

If you cannot submit a Department-verified JMF on a Caltrans Hot Mix Asphalt Verification form dated within 12 months before HMA production, the Engineer verifies the JMF.

Submit a new JMF if you change any of the following:

1. Target asphalt binder percentage greater than ±0.2 percent
2. Asphalt binder supplier
3. Combined aggregate gradation
4. Aggregate sources
5. Liquid antistrip producer or dosage
6. Average binder content in a new fractionated RAP stockpile by more than ±2.0 percent from the average RAP binder content reported on page 4 of your Contractor Hot Mix Asphalt Design Data form
7. Average maximum specific gravity in a new fractionated RAP stockpile by more than ±0.060 from the average maximum specific gravity value reported on page 4 of your Contractor Hot Mix Asphalt Design Data form
8. Any material in the JMF

Allow the Engineer 5 business days from a complete JMF submittal for document review of the aggregate qualities, mix design, and JMF. The Engineer notifies you if the proposed JMF submittal is accepted.

If your JMF fails verification testing, submit an adjusted JMF based on your testing. An adjusted JMF requires a new Contractor Job Mix Formula Proposal form and Contractor Hot Mix Asphalt Design Data form and verification of a plant-produced sample.

You may submit an adjusted aggregate gradation TV on a Contractor Job Mix Formula Proposal form before verification testing. Aggregate gradation TV must be within the TV limits specified.

39-1.01C(2)(b) Job Mix Formula Renewal

You may request a JMF renewal by submitting:

1. Proposed JMF on a Contractor Job Mix Formula Proposal form
2. Previously verified JMF documented on a Caltrans Hot Mix Asphalt Verification form dated within 12 months
3. Mix design documentation on a Contractor Hot Mix Asphalt Design Data form used for the previously verified JMF

39-1.01C(2)(c) Job Mix Formula Modification

For an authorized JMF, submit a modified JMF if you change any of the following:

1. Asphalt binder supplier
2. Liquid antistrip producer
3. Liquid antistrip dosage

You may change any of the above items only once during the Contract.

Submit your modified JMF request a minimum of 15 days before production. Each modified JMF submittal must consist of:

1. Proposed modified JMF on Contractor Job Mix Formula Proposal form, marked *Modified*.
2. Mix design records on Contractor Hot Mix Asphalt Design Data form for the authorized JMF to be modified.
3. JMF verification on Hot Mix Asphalt Verification form for the authorized JMF to be modified.
4. Test results for the modified JMF in compliance with the mix design specifications. Perform tests at the mix design OBC as shown on the Contractor Asphalt Mix Design Data form.

With an accepted modified JMF submittal, the Engineer verifies each modified JMF within 10 days of receiving all verification samples.

39-1.01C(3) Quality Control Plan

With your proposed JMF submittal, submit a QC plan for HMA.

The QC plan must describe the organization and procedures for:

1. Controlling HMA quality characteristics
2. Taking samples, including sampling locations
3. Establishing, implementing, and maintaining QC
4. Determining when corrective actions are needed
5. Implementing corrective actions
6. Methods and materials for backfilling core locations

The QC plan must address the elements affecting HMA quality including:

1. Aggregate
2. Asphalt binder
3. Additives
4. Production
5. Paving

The QC plan must include aggregate QC sampling and testing during lime treatment.

The Engineer reviews the QC plan within 5 business days from the submittal. Do not start HMA production until the Engineer authorizes the plan.

If QC procedures, personnel, tester qualifications, sample testing locations, or lab accreditation status change, submit a QC plan supplement at least 3 business days before implementing the proposed change. Do not implement the change without authorization.

39-1.01C(4) Test Results

For mix design, JMF verification, production start-up, and each 10,000 tons, submit AASHTO T 283 and AASHTO T 324 (Modified) test results to the Engineer and electronically to:

Moisture_Tests@dot.ca.gov

Submit all QC test results, except AASHTO T 283 and AASHTO T 324 (Modified), within 3 business days of a request. Submit AASHTO T 283 QC tests within 15 days of sampling.

For tests performed under AASHTO T 324 (Modified), submit test data and 1 tested sample set within 5 business days of sampling.

If coarse and fine durability index tests are required, submit test results within 2 business days of testing.

If tapered notched wedge is used, submit test result values within 24 hours of testing.

39-1.01C(5) Reserved

39-1.01C(6) Liquid Antistrip Treatment

If liquid antistrip treatment is used, submit the following with your proposed JMF submittal:

1. One 1-pint sample
2. Infrared analysis including copy of absorption spectra
3. Certified copy of test results
4. Certificate of compliance for each liquid antistrip shipment. On each certificate of compliance, include:
   - 4.1. Your signature and printed name
   - 4.2. Shipment number
   - 4.3. Material type
   - 4.4. Material specific gravity
   - 4.5. Refinery
   - 4.6. Consignee
   - 4.7. Destination
   - 4.8. Quantity
   - 4.9. Contact or purchase order number
   - 4.10. Shipment date
6. Proposed proportions for liquid antistrip

For each delivery of liquid antistrip to the HMA production plant, submit a 1-pint sample to METS. Submit shipping documents. Label each liquid antistrip sampling container with:

1. Liquid antistrip type
2. Application rate
3. Sample date
4. Contract number

At the end of each day's production shift, submit production data in electronic and printed media. Present data on electronic media in tab delimited format. Use line feed carriage return with 1 separate record per line for each production data set. Allow sufficient fields for the specified data. Include data titles at least once per report. For each HMA mixing plant type, submit the following information in the order specified:

1. For batch plant mixing:
   - 1.1. Production date
   - 1.2. Time of batch completion
   - 1.3. Mix size and type
   - 1.4. Each ingredient's weight
   - 1.5. Asphalt binder content as a percentage of the total weight of mix
   - 1.6. Liquid antistrip content as a percentage of the asphalt binder weight
2. For continuous mixing plant:
   - 2.1. Production date
   - 2.2. Data capture time
   - 2.3. Mix size and type
   - 2.4. Flow rate of wet aggregate collected directly from the aggregate weigh belt
   - 2.5. Aggregate moisture content as percentage of the dry aggregate weight
   - 2.6. Flow rate of asphalt binder collected from the asphalt binder meter
   - 2.7. Flow rate of liquid antistrip collected from the liquid antistrip meter
   - 2.8. Asphalt binder content as percentage of the total weight of mix calculated from:
     - 2.8.1. Aggregate weigh belt output
     - 2.8.2. Aggregate moisture input
     - 2.8.3. Asphalt binder meter output
   - 2.9. Liquid antistrip content as percentage of the asphalt binder weight calculated from:
     - 2.9.1. Asphalt binder meter output
     - 2.9.2. Liquid antistrip meter output

39-1.01C(7) Lime Treatment

If aggregate lime treatment is used, submit the following with your proposed JMF submittal and each time you produce lime-treated aggregate:

1. Exact lime proportions for fine and coarse virgin aggregate
2. If marination is required, the averaged aggregate quality test results within 24 hours of sampling
3. For dry lime aggregate treatment, a treatment data log from the dry lime and aggregate proportioning device in the following order:
   - 3.1. Treatment date
   - 3.2. Time of day the data is captured
   - 3.3 Aggregate size being treated
   - 3.4. HMA type and mix aggregate size
   - 3.5. Wet aggregate flow rate collected directly from the aggregate weigh belt
   - 3.6. Aggregate moisture content, expressed as a percent of the dry aggregate weight
   - 3.7. Flow rate of dry aggregate calculated from the flow rate of wet aggregate
   - 3.8. Dry lime flow rate
   - 3.9. Lime ratio from the authorized JMF for each aggregate size being treated
   - 3.10. Lime ratio from the authorized JMF for the combined aggregate
   - 3.11. Actual lime ratio calculated from the aggregate weigh belt output, the aggregate moisture input, and the dry lime meter output, expressed as a percent of the dry aggregate weight
   - 3.12. Calculated difference between the authorized lime ratio and the actual lime ratio
4. For lime slurry aggregate treatment, a treatment data log from the slurry proportioning device in the following order:
   - 4.1. Treatment date
   - 4.2. Time of day the data is captured
   - 4.3. Aggregate size being treated
   - 4.4. Wet aggregate flow rate collected directly from the aggregate weigh belt
   - 4.5. Moisture content of the aggregate just before treatment, expressed as a percent of the dry aggregate weight
   - 4.6. Dry aggregate flow rate calculated from the wet aggregate flow rate
   - 4.7. Lime slurry flow rate measured by the slurry meter
   - 4.8. Dry lime flow rate calculated from the slurry meter output
   - 4.9. Authorized lime ratio for each aggregate size being treated
   - 4.10. Actual lime ratio calculated from the aggregate weigh belt and the slurry meter output, expressed as a percent of the dry aggregate weight
   - 4.11. Calculated difference between the authorized lime ratio and the actual lime ratio
   - 4.12. Dry lime and water proportions at the slurry treatment time

Each day during lime treatment, submit the treatment data log on electronic media in tab delimited format on a removable CD-ROM storage disk. Each continuous treatment data set must be a separate record using a line feed carriage return to present the specified data on 1 line. The reported data must include data titles at least once per report.

39-1.01C(8) Warm Mix Asphalt Technology

If a warm mix asphalt technology is used, submit the following with your proposed JMF submittal:

1. MSDS for warm mix asphalt technology
2. For warm mix asphalt water injection foam technology:
   - 2.1. Name of technology
   - 2.2. Proposed foaming water content
   - 2.3. Proposed HMA production temperature range
   - 2.4. Certification from binder supplier stating no antifoaming agent is used.
3. For warm mix asphalt additive technology:
   - 3.1. Name of technology
   - 3.2. Percent admixture by weight of binder and percent admixture by total weight of HMA as recommended by the manufacturer

3.3. Methodology for inclusion of admixture in laboratory-produced HMA
3.4. Proposed HMA production temperature range

Collect and hold data for the duration of the contract and submit the electronic media, daily and upon request. The snapshot of production data must include the following:

1. Date of production
2. Production location
3. Time of day the data is captured
4. HMA mix type being produced and target binder rate
5. HMA additive type, brand, and target rate
6. Temperature of the binder and HMA mixture
7. For a continuous mixing plant, the rate of flow of the dry aggregate calculated from the wet aggregate flow rate as determined by the conveyor scale
8. For a continuous mixing plant, the rate of flow of the asphalt meter
9. For a continuous mixing plant, the rate of flow of HMA additive meter
10. For batch plant mixing, actual batch weights of all ingredients
11. Dry aggregate to binder ratio calculated from metered ingredient output
12. Dry aggregate to HMA additive ratio calculated from metered output

At the end of each day's production shift, submit electronic and printed media from the HMA plant process controller. Present data on electronic media in comma-separated values or tab-separated values format. The captured data for the ingredients represented by production snapshot must have allowances for sufficient fields to satisfy the amount of data required by these specifications and include data titles at least once per report.

39-1.01C(9) Samples

For the samples taken for JMF verification, submit 3 parts to the Engineer and use 1 part for your testing.

At production start-up and within 1000 tons of the halfway point of production of HMA, submit samples split from your HMA production sample for AASHTO T 283 and AASHTO T 324 (Modified) tests to the Engineer.

For production samples taken, submit 3 parts to the Engineer and use 1 part for your testing.

39-1.01C(10)–39-1.01C(11) Reserved

39-1.01C(12) Data Cores

Section 39-1.01C(12) applies if a bid item for data core is shown on the Bid Item List.

Submit a summary of data cores taken and a photograph of each data core to the Engineer and to:

Coring@dot.ca.gov

For each data core, the summary must include:

1. Project identification number
2. Date cored
3. Core identification number
4. Type of materials recovered
5. Type and approximate thickness of unstabilized material not recovered
6. Total core thickness
7. Thickness of each individual material to within:
   7.1. For recovered material, 1/2 inch
   7.2. For unstabilized material, 1.0 inch
8. Location including:
   8.1. County
   8.2. Route
   8.3. Post mile
   8.4. Lane number
   8.5. Lane direction

8.6. Station

Each data core digital photograph must include a ruler laid next to the data core. Each photograph must include:

1. Core
2. Project identification number
3. Core identification number
4. Date cored
5. County
6. Route
7. Post mile
8. Lane number
9. Lane direction

39-1.01C(13) Pavement Smoothness

39-1.01C(13)(a) General

Reserved

39-1.01C(13)(b) Straightedge Measurements

Within 2 business days of performing straightedge measurements, submit areas requiring smoothness correction. Identify locations of smoothness correction by:

1. Location Number
2. District-County-Route
3. Beginning station or post mile to the nearest 0.01 mile
4. For correction areas within a lane:
   4.1. Lane direction as NB, SB, EB, or WB
   4.2. Lane number from left to right in direction of travel
   4.3. Wheel path as "L" for left, "R" for right, or "B" for both
5. For correction areas not within a lane:
   5.1. Identify pavement area (i.e., shoulder, weight station, turnout)
   5.2. Direction and distance from centerline as "L" for left or "R" for right
6. Estimated size of correction area

39-1.01C(13)(c) Inertial Profiler Certification

At least 5 business days before the start of initial profiling or changing profiler or operator, submit:

1. Inertial profiler certification issued by the Department.
2. Operator certification for the inertial profiler issued by the Department.
3. List of manufacturer's recommended test procedures for the inertial profiler calibration and verification.

Within 2 business days after cross-correlation testing, submit ProVAL profiler certification analysis report for cross-correlation test results performed on test section to the Engineer and to the electronic mailbox address:

smoothness@dot.ca.gov

39-1.01C(13)(d) Inertial Profiler Data

Within 2 business days after each day of inertial profiling, submit profile information to the Engineer and to the electronic mailbox address:

smoothness@dot.ca.gov

The profile information must include:

1. Raw profile data for each lane.
2. ProVAL ride quality analysis report for the International Roughness Index of left and right wheel paths of each lane. Submit this report in pdf file format.

3. ProVAL ride quality analysis report for the Mean Roughness Index of each lane. Submit this report in pdf file format.
4. ProVAL smoothness assurance analysis report for the International Roughness Index of left wheel path. Submit this report in pdf file format.
5. ProVAL smoothness assurance analysis report for the International Roughness Index of right wheel path. Submit this report in pdf file format.
6. ProVAL smoothness assurance analysis report for grinding locations of left wheel path. Submit this report in pdf file format.
7. ProVAL smoothness assurance analysis report for grinding locations of right wheel path. Submit this report in pdf file format.
8. GPS data file for each lane in GPS eXchange. Submit data file in GPS eXchange file format.
9. Manufacturer's recommended inertial profiler calibration and verification test results.
10. Inertial profiler calibration and verification test results including bounce, block, and distance measurement instrument.

Submit the raw profile data in unfiltered electronic pavement profile file (PPF) format. Name the PPF file using the following naming convention:

YYYYMMDD_TTCCCRRR_D_L_W_B_E_X_PT.PPF

where:
YYYY = year
MM = Month, leading zero
DD = Day of month, leading zero
TT = District, leading zero
CCC = County, 2 or 3 letter abbreviation as shown in section 1-1.08
RRR = Route number, no leading zeros
D = Traffic direction as NB, SB, WB, or EB
L = Lane number from left to right in direction of travel
W = Wheel path as "L" for left, "R" for right, or "B" for both
B = Beginning station to the nearest foot (i.e., 10+20) or beginning post mile to the nearest hundredth (i.e., 25.06) no leading zero
E = Ending station to the nearest foot (i.e., 14+20) or ending post mile to the nearest hundredth (i.e., 28.06) no leading zero
X = Profile description as "EXIST" for existing pavement, "INTER" for after prepaving smoothness correction, "PAVE" for after paving, and "CORR" for after final surface pavement correction
PT = HMA pavement type

39-1.01C(13)(e) Reserved

39-1.01C(14)–39-1.01C(15) Reserved

39-1.01D Quality Control and Assurance

39-1.01D(1) General

When testing under AASHTO T 324 (Modified), test under AASHTO T 324 with the following parameters:

1. Target air voids must equal 7 ± 1 percent
2. Specimen height must be 60 ± 1 mm
3. Number of test specimens must be 4 (2 test sets)
4. Do not average test sets
5. Test specimen must be a 150 mm gyratory compacted specimen
6. Test temperature must be set at:
   6.1. 113 ± 2 degrees F for PG 58
   6.2. 122 ± 2 degrees F for PG 64
   6.3. 131 ± 2 degrees F for PG 70 and above
7. Measurements for impression must be taken at every 100 passes along the total length of sample

8. Inflection point defined as the number of wheel passes at the intersection of the creep slope and the stripping slope at maximum rut depth
9. Testing shut off must be set at 25,000 passes
10. Submersion time for samples must not exceed 4 hours

Take samples under California Test 125.

HMA samples may be heated a maximum of 2 times for up to 4 hours each.

39-1.01D(2) Job Mix Formula Verification

The Engineer verifies the JMF from samples taken from HMA produced by the plant to be used. The production set point at the plant must be within ±0.2 from the asphalt binder percentage target value shown in your Contractor Job Mix Formula Proposal form. Notify the Engineer at least 2 business days before sampling materials. Samples may be taken from a different project including a non-Department project if you make arrangements for the Engineer to be present during sampling.

In the Engineer's presence and from the same production run, take samples of:

1. Aggregate. Coarse, fine, and supplemental fine aggregate must be taken from the combined cold feed belt, or hot bins. If lime treatment is required, samples must be taken from individual stockpiles before lime treatment. Samples must be at least 120 lb for each coarse aggregate, 80 lb for each fine aggregate, and 10 lb for each type of supplemental fines. For hot bin samples, the Department combines these aggregate samples to comply with the TV submitted on a Contractor Job Mix Formula Proposal form.
2. Asphalt binder. Take 2 samples minimum. Each sample must be in a 1-quart cylindrical-shaped can with an open top and friction lid. If the asphalt binder is modified or rubberized, the asphalt binder must be sampled with the components blended in the proportions to be used.
3. RAP. RAP samples must be at least 50 lb from each fractionated stockpile used or 100 lb from the belt.
4. Plant-produced HMA. The HMA samples must be at least 250 lb.

For aggregate, RAP, and HMA, split the samples into at least 4 parts and label their containers. Three parts are for the Department's verification testing and 1 part is for your testing.

After acceptance of the JMF submittal, the Engineer verifies each proposed JMF within 20 days of receiving all verification samples.

For JMF verification, the Engineer tests the following for compliance with the specifications:

1. Aggregate quality
2. Aggregate gradation
3. Voids in mineral aggregate on laboratory-produced HMA must comply with the mix design specifications for voids in mineral aggregate
4. HMA quality characteristics for Department acceptance

To verify the HMA for air voids, voids in mineral aggregate, and dust proportion, the Engineer uses an average of 3 briquettes. The Engineer tests plant-produced material.

If the Engineer verifies the JMF, the Engineer furnishes you a Hot Mix Asphalt Verification form.

If the Engineer's test results on plant-produced samples do not show compliance with the specifications, the Engineer notifies you. Adjust your JMF based on your testing unless the Engineer authorizes reverification without adjustments. JMF adjustments may include a change in:

1. Asphalt binder content target value up to ±0.2 percent from the OBC value submitted on Contractor Hot Mix Asphalt Design Data form
2. Aggregate gradation target values within the target value limits specified in the aggregate gradation table

You may adjust the JMF only once due to a failed verification test.

For each HMA type and aggregate size specified, the Engineer verifies up to 2 proposed JMF submittals including a JMF adjusted after verification failure. If you submit more than 2 JMFs for each type of HMA and aggregate size, the Engineer deducts $3,000 from payments for each verification exceeding this limit. This deduction does not apply to verifications initiated by the Engineer or if a JMF expires while HMA production is stopped longer than 30 days.

A verified JMF is valid for 12 months.

39-1.01D(3) Job Mix Formula Authorization

You may start HMA production if:

1. The Engineer's review of the JMF shows compliance with the specifications
2. The Department has verified the JMF within 12 months before HMA production
3. The Engineer authorizes the verified JMF

39-1.01D(4) Job Mix Formula Renewal

For a JMF renewal and upon request, in the Engineer's presence and from the same production run, take samples of:

1. Aggregate. Coarse, fine, and supplemental fine aggregate must be taken from combined cold-feed belt, or hot bins. If lime treatment is required, samples must be taken from individual stockpiles before lime treatment. Samples must be at least 120 lb for each coarse aggregate, 80 lb for each fine aggregate, and 10 lb for each type of supplemental fines. For hot bins, the Department combines these aggregate samples to comply with the TV submitted on a Contractor Job Mix Formula Proposal form.
2. Asphalt binder. Take 2 samples minimum. Each sample must be in a 1-quart cylindrical-shaped can with an open top and friction lid. If the asphalt binder is modified or rubberized, the asphalt binder must be sampled with the components blended in the proportions to be used.
3. RAP. RAP samples must be at least 50 lb from each fractionated stockpile.
4. Plant-produced HMA. The HMA samples must be at least 250 lb.

Notify the Engineer at least 2 business days before sampling materials. For aggregate, RAP, and HMA, split samples into at least 4 parts. Submit 3 parts to the Engineer and use 1 part for your testing.

Allow the Engineer 5 business days from a complete JMF reverification submittal for document review of the aggregate qualities, mix design, and JMF.

The most recent aggregate quality test results within the past 12 months may be used for verification of JMF renewal or upon request, the Engineer may perform aggregate quality tests for verification of JMF renewal.

The Engineer verifies the JMF for renewal under section 39-1.01D(2) except:

1. The Engineer keeps the samples until you provide test results for your part on a Contractor Job Mix Formula Renewal form.
2. The Department tests samples of materials obtained from the HMA production unit after you submit test results that comply with the mix design specifications.
3. After completion of the JMF verification renewal document review, the Engineer verifies each proposed JMF within 20 days of receiving the verification renewal samples and the complete Contractor Job Mix Formula Renewal form.
4. You may not adjust the JMF due to a failed verification.
5. For each HMA type and aggregate gradation specified, the Engineer verifies at no cost to you 1 proposed JMF renewal within a 12-month period.

If the Engineer verifies the JMF renewal, the Engineer furnishes you a Hot Mix Asphalt Verification form. The Hot Mix Asphalt Verification form is valid for 12 months.

39-1.01D(5) Job Mix Formula Modification

The Engineer verifies the modified JMF after the modified JMF HMA is placed on the project and verification samples are taken within the first 750 tons. The Engineer tests verification samples for compliance with:

1. Hamburg wheel track mix design specifications
2. Air void content
3. Voids in mineral aggregate on plant-produced HMA mix design specifications
4. Dust proportion mix design specifications

The Engineer may test for moisture susceptibility for compliance with the mix design specifications.

If the modified JMF is verified, the Engineer revises your Hot Mix Asphalt Verification form to include the new asphalt binder source, new liquid antistrip producer, or new liquid antistrip dosage. Your revised form will have the same expiration date as the original form.

If a modified JMF is not verified, stop production and any HMA placed using the modified JMF is rejected.

The Engineer deducts $2,000 from payments for each JMF modification.

39-1.01D(6) Certifications

39-1.01D(6)(a) General

Laboratories testing aggregate and HMA qualities used to prepare the mix design and JMF must be qualified under AASHTO Materials Reference Laboratory program and the Department's Independent Assurance Program.

39-1.01D(6)(b) Hot Mix Asphalt Plants

Before production, the HMA plant must have a current qualification under the Department's Material Plant Quality Program.

39-1.01D(6)(c) Inertial Profiler Certifications

The inertial profiler equipment must display a current certification decal with expiration date.

The inertial profiler operator and device certifications must be not more than 12 months old.

The operator must be certified for each different model of inertial profiler device operated.

39-1.01D(6)(d)–39-1.01D(6)(e) Reserved

39-1.01D(7) Prepaving Meeting

Meet with the Engineer at a prepaving meeting at a mutually agreed time and place. Discuss the QC plan and the methods of performing HMA production and paving work.

The following personnel must attend the prepaving meeting:

1. Project manager
2. Superintendent
3. HMA plant manager
4. HMA paving foreman

If a warm mix asphalt technology is used, a technical representative for warm mix asphalt technology must attend the prepaving meeting.

39-1.01D(8) Quality Control

39-1.01D(8)(a) General

QC test results must comply with the specifications for Department acceptance.

Prepare 3 briquettes for air voids content and voids in mineral aggregate determination. Report the average of 3 tests.

Except for smoothness, if 2 consecutive QC test results or any 3 QC test results for 1 day's production do not comply with the materials specifications:

1. Stop HMA production
2. Notify the Engineer

3. Take corrective action
4. Demonstrate compliance with the specifications before resuming production and placement

For QC tests performed under AASHTO T 27, results are considered 1 QC test regardless of number of sieves out of compliance.

Do not resume production and placement until the Engineer authorizes your corrective action proposal.

39-1.01D(8)(b) Reserved

39-1.01D(8)(c) Aggregate

39-1.01D(8)(c)(i) General

Reserved

39-1.01D(8)(c)(ii) Aggregate Lime Treatments

If lime treatment is required, sample coarse and fine aggregate from individual stockpiles before lime treatment. Combine aggregate in the JMF proportions. Test the aggregate under the test methods and frequencies shown in the following table:

Aggregate Quality Control During Lime Treatment

Quality characteristic	Test method	Minimum sampling and testing frequency
Sand equivalent[a, b]	AASHTO T 176	1 per 750 tons of untreated aggregate
Percent of crushed particles	AASHTO T 335	1 per 10,000 tons or 2 per project whichever is greater
Los Angeles Rattler	AASHTO T 96	
Fine aggregate angularity	AASHTO T 304 Method A	
Flat and elongated particles	ASTM D4791	

[a]Report test results as the average of 3 tests from a single sample.
[b]Use of a sand reading indicator is required as shown in AASHTO T 176, Figure 1. Sections 4.7, 4.8, 7.1.2, and 8.4.3 do not apply.

For lime slurry aggregate treatment, determine the aggregate moisture content at least once every 2 hours of treatment. Calculate moisture content under AASHTO T 329 and report it as a percent of dry aggregate weight. Use the moisture content calculations as a set point for the proportioning process controller.

The device controlling lime and aggregate proportioning must produce a treatment data log. The log consists of a series of data sets captured at 10-minute intervals throughout daily treatment. The data must be a treatment activity register and not a summation. The material represented by a data set is the quantity produced 5 minutes before and 5 minutes after the capture time. For the duration of the Contract, collected data must be stored by the controller.

If 3 consecutive sets of recorded treatment data indicate a deviation of more than 0.2 percent above or below the lime ratio in the accepted JMF, stop treatment and take corrective action.

If a set of recorded treatment data indicates a deviation of more than 0.4 percent above or below the lime ratio in the accepted JMF, stop treatment and do not use the material represented by that set of data in HMA.

If 20 percent or more of the total daily treatment indicates a deviation of more than 0.2 percent above or below the lime ratio in the accepted JMF, stop treatment and do not use that day's treated aggregate in HMA.

The Engineer may order you to stop aggregate treatment activities for any of following:

1. You fail to submit treatment data log
2. You fail to submit aggregate QC data for marinated aggregate

3. You submit incomplete, untimely, or incorrectly formatted data
4. You do not take corrective actions
5. You take late or unsuccessful corrective actions
6. You do not stop treatment when proportioning tolerances are exceeded
7. You use malfunctioning or failed proportioning devices

If you stop treatment for noncompliance, notify the Engineer of any corrective actions taken and conduct a successful 20-minute test run before resuming treatment.

39-1.01D(8)(d) Liquid Antistrip Treatment

For continuous mixing or batch-plant mixing, sample asphalt binder before adding liquid antistrip. For continuous mixing, sample the combined asphalt binder and liquid antistrip after the static mixer.

39-1.01D(8)(e) Production Start-up Evaluation

You and the Engineer evaluate HMA production and placement at production start-up.

Within the first 750 tons produced on the 1st day of HMA production, in the Engineer's presence, and from the same production run, take samples of:

1. Aggregate
2. Asphalt binder
3. RAP
4. HMA

Sample aggregate from the combined cold-feed belt or hot bin. Take RAP samples from the RAP system.

For aggregate, RAP, and HMA, split the samples into at least 4 parts and label their containers. Submit 3 parts to the Engineer and keep 1 part.

You and the Engineer must test the samples and report test results, except for AASHTO T 324 (Modified) and AASHTO T 283 test results, within 5 business days of sampling. For AASHTO T 324 (Modified) and AASHTO T 283 test results, report test results within 15 days of sampling. If you proceed before receipt of the test results, the Engineer may consider the HMA placed to be represented by these test results.

Take one 4- or 6-inch diameter density core for each 250 tons or portion thereof of HMA placed. For each density core, the Engineer reports the bulk specific gravity determined under AASHTO T 275, Method A, in addition to the percent of theoretical maximum density.

39-1.01D(8)(f) Hot Mix Asphalt Density

During HMA placement determine HMA density using a nuclear gauge. On the 1st day of production, develop a correlation factor between cores and nuclear gauge under California Test 375.

Test for in-place density using cores and a nuclear gauge. Test at random locations you select and include the test results in your QC production tests reports.

39-1.01D(8)(g) Tapered Notched Wedge

Perform QC testing on the completed tapered notched wedge joint as follows:

1. Perform field compaction tests at the rate of 1 test for each 750-foot section along the joint. Select random locations for testing within each 750-foot section.
2. Perform field compaction tests at the centerline of the joint, 6 inches from the upper vertical notch, after the adjacent lane is placed and before opening the pavement to traffic.
3. Determine theoretical maximum density.
4. Determine percent compaction of the longitudinal joint as the ratio of the daily average of the field compaction values and the maximum density test results.

Determine percent compaction values each day the tapered notched wedge joint is completed. If the percent compaction of 1 day's production is less than 91 percent, that day’s notched wedge joint is rejected. Discontinue

placement of the tapered notched wedge and notify the Engineer of changes you will make to your construction process in order to comply with the specifications.

39-1.01D(8)(h) Density Cores

To determine density, take 4- or 6-inch diameter density cores at least once every 5 business days. Take 1 density core for every 250 tons of HMA from random locations the Engineer designates. Take density cores in the Engineer's presence and backfill and compact holes with authorized material. Before submitting a density core, mark it with the density core's location and place it in a protective container.

If a density core is damaged, replace it with a density core taken within 1 foot longitudinally from the original density core. Relocate any density core located within 1 foot of a rumble strip to 1 foot transversely away from the rumble strip.

For a tapered notched wedge joint, take 4- or 6-inch diameter density cores 6 inches from the upper vertical notch of the completed longitudinal joint for every 3,000 feet at locations designated by the Engineer. Take cores after the adjacent lane is placed and before opening the pavement to traffic. Cores must be taken in the presence of the Engineer and backfill and compact holes with authorized material. Before submitting a density core, mark it with the core's location and place it in a protective container.

39-1.01D(8)(i) Reserved

39-1.01D(8)(j) Pavement Smoothness

39-1.01D(8)(j)(i) General

Test pavement smoothness using an inertial profiler except use a 12-foot straightedge for the HMA pavement at the following locations:

1. Traffic lanes less than 1,000 feet in length including ramps, turn lanes, and acceleration and deceleration lanes
2. HMA pavement within 3 feet from and parallel to the construction joint formed between curbs, gutters, or existing pavement
3. Areas within 15 feet of manholes
4. Shoulders
5. Weigh-in-motion areas
6. Miscellaneous areas such as medians, gore areas, turnouts, and maintenance pullouts

Where inertial profiler testing is required, pavement smoothness for each lane must be determined by the International Roughness Index for the left and right wheel paths in an individual lane and then averaging the results. The average of the International Roughness Index values from the left and right wheel paths for the same lane is the Mean Roughness Index of the lane. The wheel paths are a pair of lines 3 feet from and parallel to the edge of a lane. Left and right wheel paths are based on the direction of travel.

Where inertial profiler testing is required, identify areas of localized roughness. Areas of localized roughness must be identified using the FHWA's engineering software ProVAL smoothness assurance analysis by calculating continuous International Roughness Index values for each wheel path with a 25-foot interval using a 250 mm filter.

Collect profiling data under AASHTO R 56 and analyze data using 250 mm and International Roughness Index filters.

39-1.01D(8)(j)(ii) Inertial Profiler Calibration and Verification Tests

Operate the inertial profiler according to the manufacturer's instructions and AASHTO R 57 at 1-inch recording intervals.

Notify the Engineer 2 business days before performing inertial profiler calibration and verification testing.

Conduct the following inertial profiler calibration and verification tests in the Engineer's presence each day before performing inertial profiling:

1. Block test. Verify the height sensor accuracy under California Test 387.

2. Bounce test. Verify the combined height sensor and accelerometer accuracy under California Test 387.
3. Distance measurement instrument test. Calibrate the accuracy of the testing procedure under California Test 387.
4. Manufacturer's recommended tests.

Conduct cross-correlation inertial profiler verification test in the Engineer's presence before performing initial profiling. Verify cross-correlation inertial profiler verification test at least annually. Conduct 5 repeat runs of the inertial profiler on an authorized test section. The test section must be on an existing asphalt concrete pavement surface 0.1 mile long. Calculate a cross-correlation to determine the repeatability of your device under California Test 387 using ProVAL profiler certification analysis with a 3 feet maximum offset. The cross-correlation must be a minimum of 0.92.

For each 0.1 mile section, your International Roughness Index values must be within 10 percent of the Department's International Roughness Index values. The Engineer may order you to recalibrate your inertial profiler equipment and reprofile. If your results are inaccurate due to operator error, the Engineer may disqualify your inertial profiler operator.

39-1.01D(8)(j)(iii) Smoothness Testing

Notify the Engineer of start location by station and start time at least 2 business days before profiling.

Remove foreign objects on the pavement surface before profiling.

Mark the beginning and ending station on the pavement shoulder before profiling. Stationing must be the same when profiling more than one surface.

While collecting the profile data to determine the International Roughness Index values, record the following locations in the raw profile data:

1. Begin and end of all bridge approach slabs
2. Begin and end of all bridges
3. Begin and end of all culverts visible on the roadway surface
4. Begin and end of all at-grade intersections

Determine the Mean Roughness Index for 0.1-mile fixed sections using the ProVAL ride quality analysis with a 250 mm filter. Profile the left and right wheel paths of each lane. Calculate the Mean Roughness Index of each lane. A partial section less than 0.1 mile that is the result of an interruption to continuous pavement surface must comply with the Mean Roughness Index specifications for a full section. Adjust the Mean Roughness Index for a partial section to reflect a full section based on the proportion of a section paved.

Determine the areas of localized roughness using a continuous International Roughness Index for each wheel path with a 25-foot interval using a 250 mm filter.

Pavement smoothness must comply with the specifications in section 39-1.01D(9)(c).

39-1.01D(9) Department Acceptance

39-1.01D(9)(a) General

The Department tests treated aggregate for acceptance before lime treatment except for gradation.

The Engineer takes HMA samples for AASHTO T 283 and AASHTO T 324 (Modified) from one of the following:

1. At the plant
2. At the truck
3. Windrow

The Engineer takes HMA samples for all other tests from one of the following:

1. At the plant
2. At the truck
3. Windrow

4. Mat behind the paver

The Engineer's sampling and testing is independent of your QC sampling and testing.

If you request, the Engineer splits samples and provides you with a part.

No single test result may represent more than 750 tons or one day's production, whichever is less, excluding AASHTO T 283 and AASHTO T 324 (Modified).

Except for smoothness, if 2 consecutive Department acceptance test results or any 3 Department acceptance test results for 1 day's production do not comply with the specifications:

1. Stop HMA production
2. Take corrective action
3. Demonstrate compliance with the specifications before resuming production and placement

For Department acceptance tests performed under AASHTO T 27, results are considered 1 Department acceptance test regardless of the number of sieves out of compliance.

The Engineer accepts HMA based on:

1. Authorized JMF
2. Authorized QC plan
3. Asphalt binder compliance
4. Asphalt emulsion compliance
5. Visual inspection
6. Pavement smoothness

39-1.01D(9)(b) In-Place Density

Except for HMA pavement placed using method compaction, the Engineer tests the density core you take from each 250 tons of HMA. The Engineer determines the percent of theoretical maximum density for each density core by determining the density core's density and dividing by the theoretical maximum density.

Density cores must be taken from the final layer, cored to the specified total paved thickness.

If the percent of theoretical maximum density does not comply with the specifications, the Engineer may accept the HMA and take a payment deduction.

For acceptance of a completed tapered notched wedge joint, the Engineer determines density from cores based on:

1. Field compaction by measuring the bulk specific gravity of the cores under AASHTO T 275, Method A
2. Percent compaction as the ratio of the average of the bulk specific gravity of the core for each day's production to the maximum density test value

39-1.01D(9)(c) Pavement Smoothness

For areas that require pavement smoothness determined using an inertial profiler, the pavement surface must:

1. Have no areas of localized roughness with an International Roughness Index greater than 160 in/mi
2. Comply with the Mean Roughness Index requirements shown in the following table for a 0.1 mile section:

HMA[a] Pavement Smoothness Acceptance Criteria

HMA thickness	Mean Roughness Index requirement
> 0.20 foot	60 in/mi or less
≤ 0.20 foot	75 in/mi or less

[a] Except OGFC

The final surface of HMA must comply with the Mean Roughness Index requirements before placing OGFC. Correct pavement to the Mean Roughness Index specifications. Localized roughness greater than 160 in/mi must be corrected regardless of the International Roughness Index values of a 0.1-mile section.

For areas that require pavement smoothness determined using a 12-foot straightedge, the HMA pavement surface must not vary from the lower edge of the straightedge by more than:

1. 0.01 foot when the straightedge is laid parallel with the centerline
2. 0.02 foot when the straightedge is laid perpendicular to the centerline and extends from edge to edge of a traffic lane
3. 0.02 foot when the straightedge is laid within 24 feet of a pavement conform

Pavement smoothness may be accepted based on your testing in the absence of the Department's testing.

39-1.01D(9)(d) Dispute Resolution

You and the Engineer must work together to avoid potential conflicts and to resolve disputes regarding test result discrepancies. Notify the Engineer within 5 business days of receiving a test result if you dispute the test result.

If you or the Engineer dispute each other's test results, submit QC test results and copies of paperwork including worksheets used to determine the disputed test results. An independent third party performs referee testing. Before the third party participates in a dispute resolution, it must be qualified under AASHTO Materials Reference Laboratory program, and the Department's Independent Assurance Program. The independent third party must have no prior direct involvement on this Contract. By mutual agreement, the independent third party is chosen from:

1. Department laboratory in a district or region not in the district or region the project is located
2. Transportation Laboratory
3. Laboratory not currently employed by you or your HMA producer

If split QC or acceptance samples are not available, the independent third party uses any available material representing the disputed HMA for evaluation.

If the independent third party determines the Department's test results are valid, the Engineer deducts the independent third party's testing costs from payments. If the independent third party determines your test results are valid, the Department pays the independent third party's testing costs.

39.A-2 39-1.02 MATERIALS

39-1.02A General

Reserved

39-1.02B Mix Design

39-1.02B(1) General

The HMA mix design must comply with AASHTO R 35 except:

1. Notes 3, 6, and 10 do not apply
2. AASHTO M 323 does not apply on combinations of aggregate gradation and asphalt binder contents to determine the OBC and HMA mixture qualities

The Contractor Hot Mix Asphalt Design Data form must show documentation on aggregate quality.

39-1.02B(2) Hot Mix Asphalt Treatments

If the test results for AASHTO T 283 or AASHTO T 324 (Modified) for untreated plant-produced HMA are less than the minimum requirements for HMA mix design, determine the plasticity index of the aggregate blend under California Test 204.

If the plasticity index is greater than 10, do not use that aggregate blend.

If the plasticity index is from 4 to 10, treat the aggregate with dry lime with marination or lime slurry with marination.

If the plasticity index is less than 4, treat the aggregate with dry lime or lime slurry with marination, or treat the HMA with liquid antistrip.

39-1.02B(3) Warm Mix Asphalt Technology

For HMA with warm mix asphalt additive technology, produce HMA mix samples for your mix design using your methodology for inclusion of warm mix asphalt admixture in laboratory-produced HMA. For warm mix asphalt water injection foam technology, the use of foamed asphalt for mix design is not required.

39-1.02C Asphalt Binder

Asphalt binder must comply with section 92.

For replace asphalt concrete surfacing or hot mix asphalt (leveling) the grade of asphalt binder for the HMA must be PG 64-10 or PG 64-16.

39-1.02D Aggregate

39-1.02D(1) General

Aggregate must be clean and free from deleterious substances.

The aggregate for replace asphalt concrete surfacing and hot mix asphalt (leveling) must comply with the gradation specifications for Type A HMA in section 39-2.02.

39-1.02D(2) Aggregate Gradations

Aggregate gradation must be determined before the addition of asphalt binder and must include supplemental fines. Test for aggregate gradation under AASHTO T 27. Do not wash the coarse aggregate. Use a mechanical sieve shaker. Aggregate shaking time must not exceed 10 minutes for each coarse and fine aggregate portion.

Choose a target value within the target value limits shown in the tables titled "Aggregate Gradations."

Gradations are based on nominal maximum aggregate size.

39-1.02D(3) Aggregate Lime Treatments

39-1.02D(3)(a) General

If aggregate lime treatment is required, virgin aggregate must comply with the aggregate quality specifications.

Lime for treating aggregate must comply with section 24-2.02B.

Water for lime treatment of aggregate with lime slurry must comply with section 24-2.02C.

Notify the Engineer at least 24 hours before the start of aggregate treatment.

Do not treat RAP.

The lime ratio is the pounds of dry lime per 100 lb of dry virgin aggregate expressed as a percentage. Water content of slurry or untreated aggregate must not affect the lime ratio.

Coarse and fine aggregate fractions must have the lime ratio ranges shown in the following table:

Aggregate fractions	Lime ratio percent
Coarse	0.4–1.0
Fine	1.5–2.0
Combined	0.8–1.5

The lime ratio for fine and coarse aggregate must be within ±0.2 percent of the lime ratio in the accepted JMF. The lime ratio must be within ±0.2 percent of the authorized lime ratio when you combine the individual aggregate sizes in the JMF proportions. The lime ratio must be determined before the addition of RAP.

If marination is required, marinate treated aggregate in stockpiles from 24 hours to 60 days before using in HMA. Do not use aggregate marinated longer than 60 days.

Treated aggregate must not have lime balls or clods.

39-1.02D(3)(b) Dry Lime

If marination is required:

1. Treat and marinate coarse and fine aggregates separately
2. Treat the aggregate and stockpile for marination only once
3. Treat the aggregate separate from HMA production

Proportion dry lime by weight with an automatic continuous proportioning system.

If you use a batch-type proportioning system for HMA production, control proportioning in compliance with the specifications for continuous mixing plants. Use a separate dry lime aggregate treatment system for HMA batch mixing including:

1. Pugmill mixer
2. Controller
3. Weigh belt for the lime
4. Weigh belt for the aggregate

If using a continuous mixing plant for HMA production without lime marinated aggregates, use a controller that measures the blended aggregate weight after any additional water is added to the mixture. The controller must determine the quantity of lime added to the aggregate from the aggregate weigh belt input in connection with the manually input total aggregate moisture, the manually input target lime content, and the lime proportioning system output. Use a continuous aggregate weigh belt and pugmill mixer for lime treatment in addition to the weigh belt for the aggregate proportioning to asphalt binder in the HMA plant. If you use a water meter for moisture control for lime treatment, the meter must comply with Department's Material Plant Quality Program manual.

At the time of mixing dry lime with aggregate, the aggregate moisture content must ensure complete lime coating. The aggregate moisture content must not cause aggregate to be lost between the point of weighing the combined aggregate continuous stream and the dryer. Add water to the aggregate for mixing and coating before dry lime addition. Immediately before mixing lime with aggregate, water must not visibly separate from the aggregate.

Mix aggregate, water, and dry lime with a continuous pugmill mixer with twin shafts. Immediately before mixing lime with aggregate, water must not visibly separate from the aggregate. Store dry lime in a uniform and free-flowing condition. Introduce dry lime to the pugmill in a continuous process. The introduction must occur after the aggregate cold feed and before the point of proportioning across a weigh belt and the aggregate dryer. Prevent loss of dry lime.

The pugmill must be equipped with paddles arranged to provide sufficient mixing action and mixture movement. The pugmill must produce a homogeneous mixture of uniformly coated aggregates at mixer discharge.

If the aggregate treatment process is stopped longer than 1 hour, clean the equipment of partially treated aggregate and lime.

Aggregate must be completely treated before introduction into the mixing drum.

39-1.02D(3)(c) Lime Slurry

For lime slurry aggregate treatment, treat aggregate separate from HMA production. Stockpile and marinate the aggregate.

Proportion lime and water with a continuous or batch mixing system.

Add lime to the aggregate as slurry consisting of mixed dry lime and water at a ratio of 1 part lime to from 2 to 3 parts water by weight. The slurry must completely coat the aggregate.

Immediately before mixing lime slurry with the aggregate, water must not visibly separate from the aggregate.

Proportion lime slurry and aggregate by weight in a continuous process.

39-1.02E Liquid Antistrip Treatment

Liquid antistrip must be from 0.25 to 1.0 percent by weight of asphalt binder. Do not use liquid antistrip as a substitute for asphalt binder.

Liquid antistrip total amine value must be 325 minimum when tested under ASTM D2074.

Use only 1 liquid antistrip type or brand at a time. Do not mix liquid antistrip types or brands.

Store and mix liquid antistrip under the manufacturer's instructions.

39-1.02F–39-1.02G Reserved

39-1.02H Hot Mix Asphalt Production

39-1.02H(1) General

Do not start HMA production before verification and authorization of JMF.

HMA plants must be Department-qualified. Before production, the HMA plant must have a current qualification under the Department's Materials Plant Quality Program.

For lime treated aggregate, the HMA plant must be equipped with a bag-house dust system. Material collected in the dust system must be returned to the mix.

Weighing and metering devices used for the production of HMA modified with additives must comply with the requirements of the Department's Material Plant Quality Program. If a loss-in-weight meter is used for dry HMA additive, the meter must have an automatic and integral material delivery control system for the refill cycle.

Calibrate the loss-in-weight meter by:

1. Including at least 1 complete system refill cycle during each calibration test run
2. Operating the device in a normal run mode for 10 minutes immediately before starting the calibration process
3. Isolating the scale system within the loss-in-weight feeder from surrounding vibration
4. Checking the scale system within the loss-in-weight feeder for accuracy before and after the calibration process and daily during mix production
5. Using a 15-minute or 250-pound-minimum test run size for a dry ingredient delivery rate of less than 1 ton per hour.
6. Complying with the limits of Table B, "Conveyor Scale Testing Extremes," in the Department's Material Plant Quality Program

Proportion aggregate by hot or cold-feed control.

Aggregate temperature must not be more than 375 degrees F when mixed with the asphalt binder.

Asphalt binder temperature must be from 275 to 375 degrees F when mixed with aggregate.

Mix HMA ingredients into a homogeneous mixture of coated aggregates.

HMA with or without RAP must not be more than 325 degrees F.

For HMA produced using warm mix asphalt technology, HMA must be at a temperature between 240 and 325 degrees F.

If method compaction is used, HMA must be produced at a temperature between 305 and 325 degrees F.

If you stop production for longer than 30 days, a production start-up evaluation is required.

39-1.02H(2) Liquid Antistrip

If 3 consecutive sets of recorded production data show actual delivered liquid antistrip weight is more than ±1 percent of the authorized mix design liquid antistrip weight, stop production and take corrective action.

If a set of recorded production data shows actual delivered liquid antistrip weight is more than ±2 percent of the authorized mix design liquid antistrip weight, stop production. If the liquid antistrip weight exceeds 1.2 percent of the asphalt binder weight, do not use the HMA represented by that data.

The continuous mixing plant controller proportioning the HMA must produce a production data log. The log consists of a series of data sets captured at 10-minute intervals throughout daily production. The data must be a production activity register and not a summation. The material represented by the data is the quantity produced 5 minutes before and 5 minutes after the capture time. For the duration of the Contract, collected data must be stored by the plant controller or a computer's memory at the plant.

The Engineer orders proportioning activities stopped for any of the following:

1. You do not submit data
2. You submit incomplete, untimely, or incorrectly formatted data
3. You do not take corrective actions
4. You take late or unsuccessful corrective actions
5. You do not stop production when proportioning tolerances are exceeded
6. You use malfunctioning or failed proportioning devices

If you stop production, notify the Engineer of any corrective actions taken before resuming.

39-1.02H(3) Warm Mix Asphalt Technology

Proportion all ingredients by weight. The HMA plant process controller must be the sole source of ingredient proportioning control and be fully interfaced with all scales and meters used in the production process. The addition of the HMA additive must be controlled by the plant process controller.

Liquid ingredient additive, including a normally dry ingredient made liquid, must be proportioned with a mass flow meter at continuous mixing plants. Use a mass flow meter or a container scale to proportion liquid additives at batch mixing plants.

Continuous mixing plants using HMA additives must comply with the following:

1. Dry ingredient additives for continuous production must be proportioned with a conveyor scale or a loss-in-weight meter.
2. HMA plant process controller and ingredient measuring systems must be capable of varying all ingredient feed rates proportionate with the dry aggregate delivery at all production rates and rate changes.
3. Liquid HMA additive must enter the production stream with the binder. Dry HMA additive must enter the production stream at or before the mixing area.
4. If dry HMA additives are used at continuous mixing HMA plants, baghouse dust systems must return all captured material to the mix.
5. HMA additive must be proportioned to within ±0.3 percent of the target additive rate.

Batch mixing plants using HMA additives must comply with the following:

1. Metered HMA additive must be placed in an intermediate holding vessel before being added to the stream of asphalt binder as it enters the pugmill.
2. If a container scale is used, weigh additive before combining with asphalt binder. Keep the container scale separate from other ingredient proportioning. The container scale capacity must be no more than twice the volume of the maximum additive batch size. The container scale's graduations must be smaller than the proportioning tolerance or 0.001 times the container scale capacity.
3. Dry HMA additive proportioning devices must be separate from metering devices for the aggregates and asphalt binder. Proportion dry HMA additive directly into the pugmill or place in an intermediate holding vessel to be added to the pugmill at the appropriate time in the batch cycle. Dry ingredients for batch production must be proportioned with a hopper scale.

4. Zero tolerance for the HMA additive batch scale is ±0.5 percent of the target additive weight. The indicated HMA additive batch scale weight may vary from the preselected weight setting by up to ±1.0 percent of the target additive weight.

39-1.02I Geosynthetic Pavement Interlayer

Geosynthetic pavement interlayer must comply with the specifications for pavement fabric, paving mat, paving grid, paving geocomposite grid, or geocomposite strip membrane as shown.

The asphalt binder for geosynthetic pavement interlayer must be PG 64-10, PG 64-16, or PG 70-10.

39-1.02J Tack Coat

Tack coat must comply with the specifications for asphaltic emulsion or asphalt binder. Choose the type and grade.

39.A-2.a 39-1.02K MISCELLANEOUS AREAS AND DIKES

For miscellaneous areas and dikes:

1. Choose either the 3/8-inch or 1/2-inch aggregate gradation for Type A HMA.
2. Minimum asphalt binder content must be 6.8 percent for 3/8-inch aggregate and 6.0 percent for 1/2-inch aggregate. If you request and the Engineer authorizes, you may reduce the minimum asphalt binder content.
3. Choose asphalt binder Grade PG 64-10, PG 64-16 or PG 70-10.

For HMA used in miscellaneous areas and dikes, sections 39-1.01C, 39-1.01D, 39-1.02B, 39-1.02D(3), and 39-1.02E–J do not apply.

39.A-3 39-1.03 CONSTRUCTION

39-1.03A General

Do not place HMA on wet pavement or frozen surface.

You may deposit HMA in a windrow and load it in the paver if:

1. Paver is equipped with a hopper that automatically feeds the screed
2. Loading equipment can pick up the windrowed material and deposit it in the paver hopper without damaging base material
3. Activities for deposit, pickup, loading, and paving are continuous
4. HMA temperature in the windrow does not fall below 260 degrees F

HMA placed in a windrow on the roadway surface must not extend more than 250 feet in front of the loading equipment or material transfer vehicle.

You may place HMA in 1 or more layers on areas less than 5 feet wide and outside the traveled way, including shoulders. You may use mechanical equipment other than a paver for these areas. The equipment must produce uniform smoothness and texture.

HMA handled, spread, or windrowed must not stain the finished surface of any improvement, including pavement.

Do not use petroleum products such as kerosene or diesel fuel to release HMA from trucks, spreaders, or compactors.

HMA must be free of:

1. Segregation
2. Coarse or fine aggregate pockets
3. Hardened lumps

Where density or data core samples are taken, backfill and compact holes with authorized material.

Complete finish rolling activities before the pavement surface temperature is:

1. Below 150 degrees F for HMA with unmodified binder
2. Below 140 degrees F for HMA with modified binder
3. Below 130 degrees F for HMA with warm mix asphalt technology

39-1.03B Spreading and Compacting Equipment

39-1.03B(1) General

Paving equipment for spreading must be:

1. Self-propelled
2. Mechanical
3. Equipped with a screed or strike-off assembly that can distribute HMA the full width of a traffic lane
4. Equipped with a full-width compacting device
5. Equipped with automatic screed controls and sensing devices that control the thickness, longitudinal grade, and transverse screed slope

Install and maintain grade and slope references.

The screed must be heated and produce a uniform HMA surface texture without tearing, shoving, or gouging.

The paver must not leave marks such as ridges and indentations unless you can eliminate them by rolling.

Rollers must be equipped with a system that prevents HMA from sticking to the wheels. You may use a parting agent that does not damage the HMA or impede the bonding of layers.

In areas inaccessible to spreading and compacting equipment:

1. Spread the HMA by any means to obtain the specified lines, grades, and cross sections
2. Use a pneumatic tamper, plate compactor, or equivalent to achieve thorough compaction

39-1.03B(2) Material Transfer Vehicle

If a material transfer vehicle is specified, the material transfer vehicle must have sufficient capacity to prevent stopping the paver and must be capable of:

1. Either receiving HMA directly from trucks or using a windrow pickup head to load it from a windrow deposited on the roadway surface
2. Remixing the HMA with augers before transferring into the paver's receiving hopper or feed system
3. Transferring HMA directly into the paver's receiving hopper or feed system

39-1.03B(3) Method Compaction Equipment

For method compaction, each paver spreading HMA must be followed by 3 rollers:

1. One vibratory roller specifically designed to compact HMA. The roller must be capable of at least 2,500 vibrations per minute and must be equipped with amplitude and frequency controls. The roller's gross static weight must be at least 7.5 tons.
2. One oscillating type pneumatic-tired roller at least 4 feet wide. Pneumatic tires must be of equal size, diameter, type, and ply. The tires must be inflated to 60 psi minimum and maintained so that the air pressure does not vary more than 5 psi.
3. One steel-tired, 2-axle tandem roller. The roller's gross static weight must be at least 7.5 tons.

Each roller must have a separate operator. Rollers must be self-propelled and reversible.

39-1.03B(4)–39-1.03B(6) Reserved

39-1.03C Surface Preparation

39-1.03C(1) General

Before placing HMA, remove loose paving particles, dirt, and other extraneous material by any means including flushing and sweeping.

39-1.03C(2) Subgrade

Prepare subgrade to receive HMA under the sections for the material involved. Subgrade must be free of loose and extraneous material.

39-1.03C(3) Prime Coat

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

If you request and the request is authorized, you may modify prime coat application rates.

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

39-1.03C(4) Prepaving Inertial Profiler

Section 39-1.03C(4) applies to existing asphalt concrete surfaces receiving an HMA overlay if a bid item for prepaving inertial profiler is shown in the Bid Item List.

Before starting paving activities, perform prepaving inertial profiler measurements. Prepaving inertial profiler includes taking profiles of the existing pavement, analyzing the data with ProVAL to determine existing pavement International Roughness Index, Mean Roughness Index, and areas of localized roughness.

If the Contract includes cold planing, perform prepaving inertial profiler measurements before cold planning.

If the Contract includes replace asphalt concrete surfacing, perform prepaving inertial profiler measurements after replacing the asphalt concrete surfacing.

39-1.03C(5) Prepaving Grinding

Section 39-1.03C(5) applies to all existing asphalt concrete surfaces that will not be cold planned or milled and that will receive an HMA overlay less than or equal to 0.20 foot exclusive of OGFC if a bid item for prepaving grinding day is shown in the Bid Item List.

After performing prepaving inertial profiling, correct areas of localized roughness greater than 180 in/mi.

Prepaving grinding day includes correcting areas of localized roughness, taking profiles of the corrected areas, and submitting profile data as specified in section 39-1.01C(13)(d).

Notify the Engineer of those areas of localized roughness that cannot be corrected by prepaving grinding according to the ProVAL smoothness assurance analysis grinding report. The Engineer responds to your notification within 5 business days.

For those areas of localized roughness that cannot be corrected by grinding, the Engineer may order you to either (1) not correct the areas of localized roughness or (2) correct areas of localized roughness by a different method and take profiles of the corrected areas with an inertial profiler. Corrective work performed by a different method, including taking profiles of the corrected areas and associated traffic control, is change order work.

If ordered not to correct areas of localized roughness, the smoothness specifications do not apply to the final pavement surface placed in those areas.

Correct prepaving areas of localized roughness that you predict will cause the final surface of HMA pavement to be noncompliant with the smoothness specifications. After correcting prepaving areas of localized roughness, take profiles of the corrected area and submit profile data as specified in section 39-1.01C(13)(d).

Dispose of grinding residue.

Pave within 7 days of correcting areas.

The final pavement surface must comply with section 39-1.01D(9)(c).

If the Engineer determines more time is required for prepaving grinding than the Contract allows for and if prepaving grinding is a controlling activity, the Engineer makes a time adjustment.

39-1.03C(6) Tack Coat

Apply tack coat:

1. To existing pavement including planed surfaces
2. Between HMA layers
3. To vertical surfaces of:
   3.1. Curbs
   3.2. Gutters
   3.3. Construction joints

Before placing HMA, apply tack coat in 1 application at the minimum residual rate shown in the following table for the condition of the underlying surface:

Tack Coat Application Rates for HMA

HMA over:	Minimum Residual Rates (gal/sq yd)		
	CSS1/CSS1h, SS1/SS1h and QS1h/CQS1h Asphaltic Emulsion	CRS1/CRS2, RS1/RS2 and QS1/CQS1 Asphaltic Emulsion	Asphalt Binder and PMRS2/PMCRS2 and PMRS2h/PMCRS2h Asphaltic Emulsion
New HMA (between layers)	0.02	0.03	0.02
PCC and existing AC surfacing	0.03	0.04	0.03
Planed pavement	0.05	0.06	0.04

Notify the Engineer if you dilute asphaltic emulsion with water. The weight ratio of added water to asphaltic emulsion must not exceed 1 to 1.

Measure added water either by weight or volume under section 9-1.02 or you may use water meters from water districts, cities, or counties. If you measure water by volume, apply a conversion factor to determine the correct weight.

With each dilution, submit:

1. Weight ratio of water to bituminous material in the original asphaltic emulsion
2. Weight of asphaltic emulsion before diluting
3. Weight of added water
4. Final dilution weight ratio of water to asphaltic emulsion

Apply to vertical surfaces with a residual tack coat rate that will thoroughly coat the vertical face without running off.

If you request and the Engineer authorizes, you may:

1. Change tack coat rates
2. Omit tack coat between layers of new HMA during the same work shift if:
   2.1. No dust, dirt, or extraneous material is present
   2.2. Surface is at least 140 degrees F

Immediately in advance of placing HMA, apply additional tack coat to damaged areas or where loose or extraneous material is removed.

Close areas receiving tack coat to traffic. Do not track tack coat onto pavement surfaces beyond the job site.

Asphalt binder tack coat temperature must be from 285 to 350 degrees F when applied.

39-1.03C(7) Geosynthetic Pavement Interlayer

If specified, place geosynthetic pavement interlayer over a coat of asphalt binder. Place geosynthetic pavement interlayer in compliance with the manufacturer's instructions.

Before placing the geosynthetic pavement interlayer and asphalt binder:

1. Repair cracks 1/4 inch and wider, spalls, and holes in the pavement. Repairing cracks is change order work.
2. Clean the pavement of loose and extraneous material.

Immediately before placing the interlayer, apply 0.25 ± 0.03 gallon of asphalt binder per square yard of interlayer or until the fabric is saturated. Apply asphalt binder the width of the geosynthetic pavement interlayer plus 3 inches on each side. At an interlayer overlap, apply asphalt binder on the lower interlayer the same overlap distance as the upper interlayer.

Align and place the interlayer with no overlapping wrinkles, except a wrinkle that overlaps may remain if it is less than 1/2 inch thick. If the overlapping wrinkle is more than 1/2 inch thick, cut the wrinkle out and overlap the interlayer no more than 2 inches.

The minimum HMA thickness over the interlayer must be 0.12 foot thick including conform tapers. Do not place the interlayer on a wet or frozen surface.

Overlap the interlayer borders between 2 to 4 inches. In the direction of paving, overlap the following roll with the preceding roll at any break.

You may use rolling equipment to correct distortions or wrinkles in the interlayer.

If asphalt binder tracked onto the interlayer or brought to the surface by construction equipment causes interlayer displacement, cover it with a small quantity of HMA.

Before placing HMA on the interlayer, do not expose the interlayer to:

1. Traffic except for crossings under traffic control and only after you place a small HMA quantity
2. Sharp turns from construction equipment
3. Damaging elements

Pave HMA on the interlayer during the same work shift.

39-1.03D Longitudinal Joints

39-1.03D(1) General

Longitudinal joints in the top layer must match lane lines. Alternate the longitudinal joint offsets in the lower layers at least 0.5 foot from each side of the lane line. You may request other longitudinal joint placement patterns.

A vertical longitudinal joint of more than 0.15 foot is not allowed at any time between adjacent lanes open to traffic.

For HMA thickness of 0.15 foot or less, the distance between the ends of the adjacent surfaced lanes at the end of each day's work must not be greater than can be completed in the following day of normal paving.

For HMA thickness greater than 0.15 foot, you must place HMA on adjacent traveled way lanes or shoulder so 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. Place additional HMA along the transverse edge at each lane's end and along the exposed longitudinal edges between adjacent lanes. Hand rake and compact the additional HMA to form temporary conforms. You may place kraft paper or other authorized release agent under the conform tapers to facilitate the taper removal when paving activities resume.

If placing HMA against the edge of existing pavement, sawcut or grind the pavement straight and vertical along the joint and remove extraneous material.

39-1.03D(2) Tapered Notched Wedge

For divided highways with an HMA lift thickness greater than 0.15 foot, you may construct a 1-foot wide tapered notched wedge joint as a longitudinal joint between adjacent lanes open to traffic. A vertical notch of 0.75 inch maximum must be placed at the top and bottom of the tapered wedge.

The tapered notched wedge must retain its shape while exposed to traffic. Pave the adjacent lane within 1 day.

Construct the tapered portion of the tapered notched wedge with an authorized strike-off device. The strike-off device must provide a uniform slope and must not restrict the main screed of the paver.

You may use a device attached to the screed to construct longitudinal joints that will form a tapered notched wedge in a single pass. The tapered notched wedge must be compacted to a minimum of 91 percent compaction.

39-1.03E Edge Treatments

Construct edge treatment on the HMA pavement as shown.

Where a safety edge is required, use the same type of HMA used for the adjacent lane or shoulder.

The edge of roadway where the safety edge treatment is to be placed must have a solid base, free of debris such as loose material, grass, weeds, or mud. Grade areas to receive the safety edge as required.

The safety edge treatment must be placed monolithic with the adjacent lane or shoulder and shaped and compacted with a device attached to the paver.

The device must be capable of shaping and compacting HMA to the required cross section as shown. Compaction must be by constraining the HMA to reduce the cross sectional area by 10 to 15 percent. The device must produce a uniform surface texture without tearing, shoving, or gouging and must not leave marks such as ridges and indentations. The device must be capable of transition to cross roads, driveways, and obstructions.

For safety edge treatment, the angle of the slope must not deviate by more than ±5 degrees from the angle shown. Measure the angle from the plane of the adjacent finished pavement surface.

If paving is done in multiple lifts, the safety edge treatment must be placed with each lift.

Short sections of hand work are allowed to construct transitions for safety edge treatment.

39-1.03F Widening Existing Pavement

If widening existing pavement, construct new pavement structure to match the elevation of the existing pavement's edge before placing HMA over the existing pavement.

39-1.03G Shoulders, Medians, and Other Road Connections

Until the adjoining through lane's top layer has been paved, do not pave the top layer of:

1. Shoulders
2. Tapers
3. Transitions
4. Road connections
5. Driveways
6. Curve widenings
7. Chain control lanes
8. Turnouts
9. Turn pockets

If the number of lanes changes, pave each through lane's top layer before paving a tapering lane's top layer. Simultaneous to paving a through lane's top layer, you may pave an adjoining area's top layer, including shoulders. Do not operate spreading equipment on any area's top layer until completing final compaction.

If shoulders or median borders are shown, pave shoulders and median borders adjacent to the lane before opening a lane to traffic.

If shoulder conform tapers are shown, place conform tapers concurrently with the adjacent lane's paving.

If a driveway or a road connection is shown, place additional HMA along the pavement's edge to conform to road connections and driveways. Hand rake, if necessary, and compact the additional HMA to form a smooth conform taper.

39-1.03H Leveling

Section 39-1.03H applies if a bid item for hot mix asphalt (leveling) is shown on the Bid Item List.

Fill and level irregularities and ruts with HMA before spreading HMA over the base, existing surfaces, or bridge decks. You may use mechanical equipment other than a paver for these areas. The equipment must produce uniform smoothness and texture. HMA used to change an existing surface's cross slope or profile is not paid for as hot mix asphalt (leveling).

39-1.03I Miscellaneous Areas and Dikes

Prepare the area to receive HMA for miscellaneous areas and dikes, including excavation and backfill as needed.

Spread miscellaneous areas in 1 layer and compact to the specified lines and grades.

In median areas adjacent to slotted median drains, each layer of HMA must not exceed 0.20 foot maximum compacted thickness.

The finished surface must be:

1. Textured uniformly
2. Compacted firmly
3. Without depressions, humps, and irregularities

39-1.03J Replace Asphalt Concrete Surfacing

Where replace asphalt concrete surfacing is shown, remove existing asphalt concrete surfacing and replace with HMA. The Engineer determines the exact limits of asphalt concrete surfacing to be replaced.

Replace asphalt concrete in a lane before the lane is specified to be opened to traffic.

Before removing asphalt concrete, outline the replacement area and cut neat lines with a saw or grind to full depth of the existing asphalt concrete. Do not damage asphalt concrete and base remaining in place.

If the base is excavated beyond the specified plane, replace it with HMA. The Department does not pay for this HMA.

Do not use a material transfer vehicle if replace asphalt concrete surfacing is specified.

39-1.03K–39-1.03N Reserved

39-1.03O Compaction

39-1.03O(1) General

Rolling must leave the completed surface compacted and smooth without tearing, cracking, or shoving.

If a vibratory roller is used as a finish roller, turn the vibrator off.

Do not open new HMA pavement to traffic until the surface temperature is below 130 degrees F.

If the surface to be paved is both in sunlight and shade, pavement surface temperatures are taken in the shade.

39-1.03O(2) Method Compaction

Use method compaction for any of the following conditions:

1. HMA pavement thickness shown is less than 0.15 foot
2. Replace asphalt concrete surfacing
3. Leveling courses

4. Areas the Engineer determines conventional compaction and compaction measurement methods are impeded

HMA compaction coverage is the number of passes needed to cover the paving width. A pass is 1 roller's movement parallel to the paving in either direction. Overlapping passes are part of the coverage being made and are not a subsequent coverage. Do not start a coverage until completing the prior coverage.

Method compaction must consist of performing:

1. Breakdown compaction of each layer with 3 coverages using a vibratory roller. The speed of the vibratory roller in miles per hour must not exceed the vibrations per minute divided by 1,000. If the HMA layer thickness is less than 0.08 foot, turn the vibrator off.
2. Intermediate compaction of each layer of HMA with 3 coverages using a pneumatic-tired roller at a speed not to exceed 5 mph.
3. Finish compaction of HMA with 1 coverage using a steel-tired roller.

Start rolling at the lower edge and progress toward the highest part.

The Engineer may order fewer coverages if the layer thickness of HMA is less than 0.15 foot.

39-1.03O(3)–39-1.03O(5) Reserved

39-1.03P Smoothness Corrections

If the final surface of the pavement does not comply with the smoothness specifications, grind the pavement to within specified tolerances, remove and replace it, or place an overlay of HMA. Do not start corrective work until your method is authorized.

Do not use equipment with carbide cutting teeth to grind the pavement unless authorized.

Smoothness correction of the final pavement surface must leave at least 75 percent of the specified HMA thickness. If ordered, core the pavement at the locations determined by the Engineer. Coring, including traffic control, is change order work. Remove and replace deficient pavement areas where the overlay thickness is less than 75 percent of the thickness specified as determined by the Engineer.

Corrected HMA pavement areas must be uniform rectangles with edges:

1. Parallel to the nearest HMA pavement edge or lane line
2. Perpendicular to the pavement centerline

On ground areas not to be overlaid with OGFC, apply fog seal coat under section 37-2.

Where corrections are made within areas requiring testing with inertial profiler, reprofile the entire lane length with the inertial profiler device.

Where corrections are made within areas requiring testing with a 12-foot straightedge, retest the corrected area with the straightedge.

39-1.03Q Data Cores

Section 39-1.03Q applies if a bid item for data core is shown on the Bid Item List.

Take data cores of the completed HMA pavement, underlying base, and subbase material. Notify the Engineer 3 business days before coring.

Protect data cores and surrounding pavement from damage.

Take 4-inch or 6-inch diameter data cores:

1. At the beginning, end, and every 1/2 mile within the paving limits of each route on the project
2. After all paving is complete
3. From the center of the specified lane

On a 2-lane roadway, take data cores from either lane. On a 4-lane roadway, take data cores from each direction in the outermost lane. On a roadway with more than 4 lanes, take data cores from the median lane and the outermost lane in each direction.

Each core must include the stabilized materials encountered. You may choose not to recover unstabilized material but you must identify the material. Unstabilized material includes:

1. Granular material
2. Crumbled or cracked stabilized material
3. Sandy or clayey soil

After data core summary and photograph submittal, dispose of cores.

39.A-4 39-1.04 PAYMENT

Geosynthetic pavement interlayer is measured by the square yard for the actual pavement area covered.

If tack coat, asphalt binder, and asphaltic emulsion are paid as separate bid items, their bid items are measured under section 92 or section 94.

The Department does not adjust the unit price for an increase or decrease in the tack coat quantity.

HMA of the type shown in the Bid Item List is measured based on the combined mixture weight. If recorded batch weights are printed automatically, the bid item for HMA is measured by using the printed batch weights, provided:

1. Total aggregate and supplemental fine aggregate weight per batch is printed. If supplemental fine aggregate is weighed cumulatively with the aggregate, the total aggregate batch weight must include the supplemental fine aggregate weight.
2. Total asphalt binder weight per batch is printed.
3. Each truckload's zero tolerance weight is printed before weighing the first batch and after weighing the last batch.
4. Time, date, mix number, load number and truck identification is correlated with a load slip.
5. Copy of the recorded batch weights is certified by a licensed weigh master and submitted.

Place hot mix asphalt dike of the type shown in the Bid Item List is measured along the completed length. **Payment for the HMA used to construct the dike is included in the payment for place hot mix asphalt dike.**

Place hot mix asphalt (miscellaneous areas) is measured as the in-place compacted area. Payment for the HMA used for miscellaneous areas **is included** in the payment for place hot mix asphalt (miscellaneous areas).

If replace asphalt concrete surfacing is shown, the bid item for replace asphalt concrete is measured based on the specified dimensions and any adjustments ordered.

The Department does not adjust the unit price for an increase or decrease in the prepaving grinding day quantity.

The Department reduces payment for noncompliance of HMA density based on the factors shown in the following table:

Reduced Payment Factors for Percent of Maximum Theoretical Density

HMA percent of maximum theoretical density	Reduced payment factor	HMA percent of maximum theoretical density	Reduced payment factor
91.0	0.0000	97.0	0.0000
90.9	0.0125	97.1	0.0125
90.8	0.0250	97.2	0.0250
90.7	0.0375	97.3	0.0375
90.6	0.0500	97.4	0.0500
90.5	0.0625	97.5	0.0625
90.4	0.0750	97.6	0.0750
90.3	0.0875	97.7	0.0875
90.2	0.1000	97.8	0.1000
90.1	0.1125	97.9	0.1125
90.0	0.1250	98.0	0.1250
89.9	0.1375	98.1	0.1375
89.8	0.1500	98.2	0.1500
89.7	0.1625	98.3	0.1625
89.6	0.1750	98.4	0.1750
89.5	0.1875	98.5	0.1875
89.4	0.2000	98.6	0.2000
89.3	0.2125	98.7	0.2125
89.2	0.2250	98.8	0.2250
89.1	0.2375	98.9	0.2375
89.0	0.2500	99.0	0.2500
< 89.0	Remove and replace	> 99.0	Remove and replace

39.B 39-2 TYPE A HOT MIX ASPHALT

39.B-1 39-2.01 GENERAL

39-2.01A Summary

Section 39-2 includes specifications for producing and placing Type A hot mix asphalt.

You may produce Type A HMA using an authorized warm mix asphalt technology.

39-2.01B Definitions

Reserved

39-2.01C Submittals

39-2.01C(1) General

Reserved

39-2.01C(2) Job Mix Formula

The JMF must be based on an HMA mix design determined as described in the Superpave Mix Design SP-2 Manual by the Asphalt Institute.

39-2.01C(3) Reclaimed Asphalt Pavement

Submit QC test results for RAP gradation with the combined aggregate gradation within 2 business days of taking RAP samples during HMA production.

39-2.01C(4)–39-2.01C(6) Reserved

39-2.01D Quality Control and Assurance

39-2.01D(1) General

Reserved

39-2.01D(2) Quality Control

39-2.01D(2)(a) General

Reserved

39-2.01D(2)(b) Aggregate

Test the quality characteristics of aggregate under the test methods and frequencies shown in the following table:

Aggregate Testing Frequencies

Quality characteristic	Test method	Minimum testing frequency
Gradation[a]	AASHTO T 27	1 per 750 tons and any remaining part
Sand equivalent[b, c]	AASHTO T 176	
Moisture content[d]	AASHTO T 329	
Crushed particles	AASHTO T 335	1 per 10,000 tons or 2 per project whichever is greater
Los Angeles rattler	AASHTO T 96	
Flat and elongated particles	ASTM D4791	
Fine aggregate angularity	AASHTO T 304 Method A	

[a]If RAP is used, test the combined aggregate gradation under California Test 384.
[b]Reported value must be the average of 3 tests from a single sample.
[c]Use of a sand reading indicator is required as shown in AASHTO T 176, Figure 1. Sections 4.7, 4.8, 7.1.2, 8.4.2 and 8.4.3 do not apply.
[d]Test at continuous mixing plants only. If RAP is used, test the RAP moisture content at continuous mixing plant and batch mixing plant.

For lime treated aggregate, test aggregate before treatment and test for gradation and moisture content during HMA production.

39-2.01D(2)(c) Reclaimed Asphalt Pavement

Sample and test processed RAP at a minimum frequency of 1 sample per 1000 tons with a minimum of 6 samples per fractionated stockpile. If the fractionated stockpile has not been augmented, the 3 RAP samples taken and tested for mix design may be part of this minimum sample requirement. If a fractionated RAP stockpile is augmented, sample and test processed RAP quality characteristics at a minimum frequency of 1 sample per 500 tons of augmented RAP.

The combined RAP sample when tested under AASHTO T 164 must be within ±2.0 percent of the average asphalt binder content reported on page 4 of your Contractor Hot Mix Asphalt Design Data form. If new fractionated RAP stockpiles are required, the average binder content of the new fractionated RAP stockpile must be within ±2.0 percent of the average binder reported on page 4 of your Contractor Hot Mix Asphalt Design Data form.

The combined RAP sample when tested under AASHTO T 209 must be within ±0.06 of the average maximum specific gravity reported on page 4 of your Contractor Hot Mix Asphalt Design Data form.

During HMA production, sample RAP twice daily and perform QC testing for:

1. Aggregate gradation at least once a day under California Test 384
2. Moisture content at least twice a day

39-2.01D(2)(d) Hot Mix Asphalt Production

Test the quality characteristics of HMA under the test methods and frequencies shown in the following table:

Hot Mix Asphalt Testing Frequencies

Quality characteristic	Test method	Minimum testing frequency
Asphalt binder content	AASHTO T 308 Method A	1 per 750 tons and any remaining part
HMA moisture content	AASHTO T 329	1 per 2,500 tons but not less than 1 per paving day
Air voids content	AASHTO T 269	1 per 4,000 tons or 2 every 5 paving days, whichever is greater
Voids in mineral aggregate	SP-2 Asphalt Mixture Volumetrics	1 per 10,000 tons or 2 per project whichever is greater
Dust proportion	SP-2 Asphalt Mixture Volumetrics	
Density of core	California Test 375	2 per paving day
Nuclear gauge density	California Test 375	3 per 250 tons or 3 per paving day, whichever is greater
Hamburg wheel track	AASHTO T 324 (Modified)	1 per 10,000 tons or 1 per project, whichever is greater
Moisture susceptibility	AASHTO T 283	

39-2.01D(3)–39-2.01D(4) Reserved

39-2.01D(5) Department Acceptance

The Department accepts Type A HMA based on compliance with:

1. Aggregate quality requirements shown in the following table:

Aggregate Quality

Quality characteristic	Test method	Requirement
Aggregate gradation[a]	AASHTO T 27	JMF ± Tolerance
Percent of crushed particles Coarse aggregate (min, %) One-fractured face Two-fractured faces Fine aggregate (min, %) (Passing No. 4 sieve and retained on No. 8 sieve.) One fractured face	AASHTO T 335	 95 90 70
Los Angeles Rattler (max, %) Loss at 100 Rev. Loss at 500 Rev.	AASHTO T 96	 12 40
Sand equivalent (min.)[b, c]	AASHTO T 176	47
Flat and elongated particles (max, % by weight at 5:1)	ASTM D4791	10
Fine aggregate angularity (min, %)[d]	AASHTO T 304 Method A	45

[a]The Engineer determines combined aggregate gradations containing RAP under California Test 384.
[b]Reported value must be the average of 3 tests from a single sample.
[c]Use of a sand reading indicator is required as shown in AASHTO T 176, Figure 1. Sections 4.7, 4.8, 7.1.2, 8.4.2 and 8.4.3 do not apply.
[d] The Engineer waives this specification if HMA contains 10 percent or less of nonmanufactured sand by weight of total aggregate. Manufactured sand is fine aggregate produced by crushing rock or gravel.

2. If RAP is used, RAP quality requirements shown in the following table:

Reclaimed Asphalt Pavement Quality

Quality characteristic	Test method	Requirement
Binder content (% within the average value reported)	AASHTO T 164	±2.0
Specific gravity (within the average value reported)	AASHTO T 209	±0.06

3. In-place HMA quality requirements shown in the following table:

Type A HMA Acceptance In Place

Quality characteristic	Test method	Requirement
Asphalt binder content (%)	AASHTO T 308 Method A	JMF -0.3, +0.5
HMA moisture content (max, %)	AASHTO T 329	1
Air voids content at N_{design} (%)[a, b]	AASHTO T 269	4 ± 1.5
Voids in mineral aggregate on plant-produced HMA (min, %)[a]	SP-2 Asphalt Mixture Volumetrics[c]	
Gradation:		
No. 4		15.5–18.5
3/8-inch		14.5–17.5
1/2-inch		13.5–16.5
3/4-inch		12.5–15.5
1-inch		
with NMAS[g] = 1-inch		12.5–15.5
with NMAS[g] = 3/4-inch		13.5–16.5
Dust proportion	SP-2 Asphalt Mixture Volumetrics	0.6–1.3
Density of core (% of max theoretical density)[e, f]	California Test 375	91–97
Hamburg wheel track (min number of passes at 0.5-inch rut depth)	AASHTO T 324 (Modified)	
Binder grade:		
PG 58		10,000
PG 64		15,000
PG 70		20,000
PG 76 or higher		25,000
Hamburg wheel track (min number of passes at inflection point)	AASHTO T 324 (Modified)	
Binder grade:		
PG 58		10,000
PG 64		10,000
PG 70		12,500
PG 76 or higher		15,000
Moisture susceptibility (min, psi, dry strength)	AASHTO T 283	100
Moisture susceptibility (min, psi, wet strength)	AASHTO T 283	70

[a]Prepare 3 briquettes. Report the average of 3 tests.
[b]The Engineer determines the bulk specific gravity of each lab-compacted briquette under AASHTO T 275, Method A, and theoretical maximum specific gravity under AASHTO T 209, Method A.
[c]Determine bulk specific gravity under AASHTO T 275, Method A.
[d]The Engineer determines the laboratory-prepared HMA value for mix design verification only.
[e]The Engineer determines percent of theoretical maximum density under California Test 375 except the Engineer uses:

1. AASHTO T 275 to determine in-place density of each density core
2. AASHTO T 209, Method A to determine theoretical maximum density instead of calculating test maximum density

[f]The Engineer determines theoretical maximum density under AASHTO T 209, Method A, at the frequency specified in California Test 375, Part 5. D.
[g]NMAS means nominal maximum aggregate size.

39.B-2 39-2.02 MATERIALS

39-2.02A General

Reserved

39-2.02B Mix Design

The mix design must comply with the requirements shown in the following table:

Type A HMA Mix Design Requirements

Quality characteristic	Test method	Requirement
Air voids content (%)	AASHTO T 269[a]	$N_{initial}$ > 8.0 N_{design} = 4.0 (N_{design} = 5.0 for 1-inch aggregate) N_{max} > 2.0
Gyration compaction (no. of gyrations)	AASHTO T 312	$N_{initial}$ = 8 N_{design} = 85.0 N_{max} = 130
Voids in mineral aggregate (min, %)[b] Gradation: No. 4 3/8-inch 1/2-inch 3/4-inch 1-inch with NMAS[e] = 1-inch with NMAS[e] = 3/4-inch	SP-2 Asphalt Mixture Volumetrics	 16.5–19.5 15.5–18.5 14.5–17.5 13.5–16.5 13.5–16.5 14.5–17.5
Dust proportion	SP-2 Asphalt Mixture Volumetrics	0.6–1.3
Hamburg wheel track (min number of passes at 0.5-inch rut depth) Binder grade: PG 58 PG 64 PG 70 PG 76 or higher	AASHTO T 324 (Modified)[c]	 10,000 15,000 20,000 25,000
Hamburg wheel track (min number of passes at the inflection point) Binder grade: PG 58 PG 64 PG 70 PG 76 or higher	AASHTO T 324 (Modified)[c]	 10,000 10,000 12,500 15,000
Moisture susceptibility, dry strength (min, psi)	AASHTO T 283[c]	100
Moisture susceptibility, wet strength (min, psi)	AASHTO T 283[c, d]	70

[a]Calculate the air voids content of each specimen using AASHTO T 275, Method A, to determine bulk specific gravity. Use AASHTO T 209, Method A, to determine theoretical maximum specific gravity. Use a digital manometer and pycnometer when performing AASHTO T 209.
[b]Measure bulk specific gravity using AASHTO T 275, Method A.
[c]Test plant produced HMA.
[d]Freeze thaw required.
[e]NMAS means nominal maximum aggregate size.

For HMA mixtures using RAP, the maximum binder replacement is 25.0 percent for surface course and 40.0 percent for lower courses.

For HMA with a binder replacement percent less than or equal to 25 percent of your specified OBC, you may request that the performance graded asphalt binder grade with upper and lower temperature classifications be reduced by 6 degrees C from the specified grade.

For HMA with a binder replacement greater than 25 percent of your specified OBC and less than or equal to 40 percent of OBC, you must use a performance graded asphalt binder grade with upper and lower temperature classifications reduced by 6 degrees C from the specified grade.

39-2.02C Asphalt Binder

Reserved

39-2.02D Aggregates

39-2.02D(1) General

Before the addition of asphalt binder and lime treatment, the aggregate must comply with the requirements shown in the following table:

Aggregate Quality

Quality characteristic	Test method	Requirement
Percent of crushed particles Coarse aggregate (min, %) One-fractured face Two-fractured faces Fine aggregate (min, %) (Passing No. 4 sieve and retained on No. 8 sieve.) One fractured face	AASHTO T 335	 95 90 70
Los Angeles Rattler (max, %) Loss at 100 Rev. Loss at 500 Rev.	AASHTO T 96	 12 40
Sand equivalent (min)[a, b]	AASHTO T 176	47
Flat and elongated particles (max, % by weight at 5:1)	ASTM D4791	10
Fine aggregate angularity (min, %)[c]	AASHTO T 304 Method A	45

[a]Reported value must be the average of 3 tests from a single sample.
[b]Use of a Sand Reader Indicator is required as shown in AASHTO T 176, Figure 1. Sections 4.7, 4.8, 7.1.2, 8.4.2 and 8.4.3 do not apply.
[c]The Engineer waives this specification if HMA contains 10 percent or less of nonmanufactured sand by weight of total aggregate, except if your JMF fails verification. Manufactured sand is fine aggregate produced by crushing rock or gravel.

39-2.02D(2) Aggregate Gradations

The aggregate gradations for Type A HMA must comply with the requirements shown in the following table:

Aggregate Gradation Requirements

Type A HMA pavement thickness shown	Gradation
0.10 foot	3/8 inch
Greater than 0.10 to less than 0.20 foot	1/2 inch
0.20 foot to less than 0.25 foot	3/4 inch
0.25 foot or greater	3/4 inch or 1 inch

Aggregate gradation must be within the target value limits for the specified sieve size shown in the following tables:

Aggregate Gradations
(Percentage Passing)

1-inch

Sieve size	Target value limit	Allowable tolerance
1"	100	--
3/4"	88–93	TV ± 5
1/2"	72–85	TV ± 6
3/8"	55–70	TV ± 6
No. 4	35–52	TV ± 7
No. 8	22–40	TV ± 5
No. 30	8–24	TV ± 4
No. 50	5–18	TV ± 4
No. 200	3–7	TV ± 2

3/4-inch

Sieve size	Target value limit	Allowable tolerance
1"	100	--
3/4"	90–98	TV ± 5
1/2"	70–90	TV ± 6
No. 4	42–58	TV ± 5
No. 8	29–43	TV ± 5
No. 30	10–23	TV ± 4
No. 200	2–7	TV ± 2

1/2-inch

Sieve sizes	Target value limit	Allowable tolerance
3/4"	100	--
1/2"	95–98	TV ± 5
3/8"	72–95	TV ± 5
No. 4	52–69	TV ± 5
No. 8	35–55	TV ± 5
No. 30	15–30	TV ± 4
No. 200	2–8	TV ± 2

3/8-inch

Sieve sizes	Target value limits	Allowable tolerance
1/2"	100	--
3/8"	95–98	TV ± 5
No. 4	55–75	TV ± 5
No. 8	30–50	TV ± 5
No. 30	15–35	TV ± 5
No. 200	2–9	TV ± 2

No. 4

Sieve sizes	Target value limits	Allowable tolerance
3/8"	100	--
No. 4	95–98	TV ± 5
No. 8	70–80	TV ± 6
No. 30	34–45	TV ± 5
No. 200	2–12	TV ± 4

39-2.02E Reclaimed Asphalt Pavement

You may substitute RAP for part of the virgin aggregate in a quantity up to a maximum of 25 percent of the aggregate blend.

Provide enough space for meeting all RAP handling requirements at your facility. Provide a clean, graded base, well drained area for stockpiles.

If RAP is from multiple sources, blend the RAP thoroughly and completely before fractionating.

For RAP substitution of 15 percent or less, fractionation is not required.

For RAP substitution greater than 15 percent, fractionate RAP stockpiles into 2 sizes, a coarse fraction RAP retained on 3/8-inch sieve, and a fine fraction RAP passing 3/8-inch sieve.

The RAP fractionation must comply with the requirements shown in the following table:

RAP Stockpile Fractionation Gradation Requirements

Quality characteristic	Test method	Requirement
Coarse (% passing the 1-inch sieve)	California Test 202[a]	100
Fine (% passing the 3/8-inch sieve)	California Test 202[a]	98–100

[a]Maximum mechanical shaking time is 10 minutes

You may use the coarse fractionated stockpile, the fine fractionated stockpile, or a combination of the coarse and fine fractionated stockpiles.

Isolate the processed RAP stockpiles from other materials. Store processed RAP in conical or longitudinal stockpiles. Processed RAP must not be agglomerated or be allowed to congeal in large stockpiles.

39-2.02F Hot Mix Asphalt Production

If RAP is used, the asphalt plant must automatically adjust the virgin asphalt binder to account for RAP percentage and RAP binder.

During production, you may adjust hot or cold-feed proportion controls for virgin aggregate and RAP. RAP must be within ±3 of RAP percentage shown in your Contractor Job Mix Formula Proposal form without exceeding 25 percent.

The aggregate temperature requirements do not apply to RAP.

39.B-3 39-2.03 CONSTRUCTION

Spread Type A HMA at the atmospheric and surface temperatures shown in the following table:

Minimum Atmospheric and Surface Temperatures for Type A HMA

Compacted layer thickness, feet	Atmospheric,°F		Surface,°F	
	Unmodified asphalt binder	Modified asphalt binder	Unmodified asphalt binder	Modified asphalt binder
< 0.15	55	50	60	55
≥ 0.15	45	45	50	50

For method compaction, the maximum compacted layer thickness must be 0.25 foot.

For Type A HMA placed under method compaction, if the asphalt binder is:

1. Unmodified, complete:
   1.1. 1st coverage of breakdown compaction before the surface temperature drops below 250 degrees F
   1.2. Breakdown and intermediate compaction before the surface temperature drops below 190 degrees F

1.3. Finish compaction before the surface temperature drops below 150 degrees F
2. Modified, complete:
   2.1. 1st coverage of breakdown compaction before the surface temperature drops below 240 degrees F
   2.2. Breakdown and intermediate compaction before the surface temperature drops below 180 degrees F
   2.3. Finish compaction before the surface temperature drops below 140 degrees F

If you request and the Engineer authorizes, you may cool Type A HMA with water when rolling activities are complete. Apply water under section 17.

39.B-4 39-2.04 PAYMENT

Not Used

39.C 39-3 RUBBERIZED HOT MIX ASPHALT–GAP GRADED

39.C-1 39-3.01 GENERAL

39.C-1.a 39-3.01A SUMMARY

Section 39-3 includes specifications for producing and placing rubberized hot mix asphalt–gap graded.

You may produce RHMA-G using a warm mix asphalt technology.

39.C-1.b 39-3.01B DEFINITIONS

Reserved

39.C-1.c 39-3.01C SUBMITTALS

39-3.01C(1) General

At least 5 business days before use, submit the permit issued by the local air district for asphalt rubber binder blending equipment. If an air quality permit is not required by the local air district for producing asphalt rubber binder, submit verification from the local air district that an air quality permit is not required.

At least 10 days before RHMA-G production, submit the name of an authorized laboratory to perform QC testing for asphalt rubber binder. The authorized laboratory must comply with the Caltrans Independent Assurance Program.

39-3.01C(2) Job Mix Formula

With your proposed JMF include MSDS for:

1. Base asphalt binder
2. CRM and asphalt modifier
3. Blended asphalt rubber binder components

The JMF must be based on an HMA mix design determined as described in the Superpave Mix Design SP-2 Manual by the Asphalt Institute.

39-3.01C(3) Asphalt Rubber Binder

Submit a proposal for asphalt rubber binder design and profile. In the design, include the asphalt binder, asphalt modifier, and CRM and their proportions.

If you change asphalt rubber binder supplier or any component material used in asphalt rubber binder or its percentage, submit a new JMF.

For the asphalt rubber binder used, submit:

1. Log of production daily.
2. Certificate of compliance with test results for CRM and asphalt modifier with each truckload delivered to the HMA plant. The certificate of compliance for asphalt modifier must represent no more than 5,000 lb.
3. Certified weight slips for the CRM and asphalt modifier furnished.
4. QC test results on viscosity within 2 business days after sampling.

5. QC test results on cone penetration, resilience, and softening point within 3 business days after sampling.

Submit a certificate of compliance for the CRM and asphalt modifier. With the certificate of compliance, submit test results for CRM and asphalt modifier with each truckload delivered to the HMA plant.

39-3.01D Quality Control and Assurance

39-3.01D(1) General

Reserved

39-3.01D(2) Job Mix Formula Verification

If you request, the Engineer verifies RHMA-G quality requirements within 7 days of receiving all verification samples and after the JMF document submittal has been accepted.

39-3.01D(3) Quality Control

39-3.01D(3)(a) General

Reserved

39-3.01D(3)(b) Asphalt Rubber Binder

39-3.01D(3)(b)(i) General

The asphalt rubber binder blending plant must be authorized under the Department's Material Plant Quality Program.

Take asphalt rubber binder samples from the feed line connecting the asphalt rubber binder tank to the HMA plant.

39-3.01D(3)(b)(ii) Asphalt Modifier

Test asphalt modifier under the test methods and frequencies shown in the following table:

Asphalt Modifier for Asphalt Rubber Binder

Quality characteristic	Test method	Frequency
Viscosity	ASTM D445	1 per shipment
Flash point	ASTM D92	
Molecular Analysis		
Asphaltenes	ASTM D2007	1 per shipment
Aromatics	ASTM D2007	

39-3.01D(3)(b)(iii) Crumb Rubber Modifier

Sample and test scrap tire CRM and high natural CRM separately. Test CRM under the test methods and frequencies shown in the following table:

Crumb Rubber Modifier for Asphalt Rubber Binder

Quality characteristic	Test method	Frequency
Scrap tire CRM gradation	California Test 385	1 per 10,000 lb
High natural CRM gradation	California Test 385	1 per 3,400 lb
Wire in CRM	California Test 385	1 per 10,000 lb
Fabric in CRM	California Test 385	
CRM particle length	--	
CRM specific gravity	California Test 208	
Natural rubber content in high natural CRM	ASTM D297	1 per 3,400 lb

Sample and test scrap tire CRM and high natural CRM separately.

39-3.01D(3)(b)(iv) Asphalt Rubber Binder

Test asphalt rubber binder under the test methods and frequencies shown in the following table:

Quality characteristic	Test method	Frequency
Cone penetration	ASTM D217	1 per lot
Resilience	ASTM D5329	
Softening point	ASTM D36	
Viscosity	ASTM D7741	15 minutes before use per lot

Retain the sample from each lot. Test for cone penetration, resilience, and softening point for the first 3 lots and, if all 3 lots pass, the testing frequency may be reduced to once for every 3 lots.

If QC test results indicate that the asphalt rubber binder does not meet the specifications, take corrective action and notify the Engineer.

39-3.01D(3)(c) Aggregate

Test the quality characteristics of aggregate under the test methods and frequencies shown in the following table:

Aggregate Testing Frequencies

Quality characteristic	Test method	Minimum testing frequency
Gradation	AASHTO T 27	1 per 750 tons and any remaining part
Sand equivalent[a, b]	AASHTO T 176	
Moisture content[c]	AASHTO T 329	
Crushed particles	AASHTO T 335	1 per 10,000 tons or 2 per project, whichever is greater
Los Angeles rattler	AASHTO T 96	
Flat and elongated particles	ASTM D4791	
Fine aggregate angularity	AASHTO T 304 Method A	

[a]Reported value must be the average of 3 tests from a single sample.
bUse of a sand reading indicator is required as shown in AASHTO T 176, Figure 1. Sections 4.7, 4.8, 7.1.2, 8.4.2 and 8.4.3 do not apply.
[c]Test at continuous mixing plants only

For lime treated aggregate, test aggregate before treatment and test for gradation and moisture content during RHMA-G production.

39-3.01D(3)(d) Hot Mix Asphalt Production

Test the quality characteristics of RHMA-G under the test methods and frequencies shown in the following table:

RHMA-G Mix Asphalt Testing Frequencies

Quality characteristic	Test method	Minimum testing frequency
Asphalt binder content	AASHTO T 308 Method A	1 per 750 tons and any remaining part
HMA moisture content	AASHTO T 329	1 per 2,500 tons but not less than 1 per paving day
Air voids content	AASHTO T 269	1 per 4,000 tons or 2 every 5 paving days, whichever is greater
Voids in mineral aggregate	SP-2 Asphalt Mixture Volumetrics	1 per 10,000 tons or 2 per project whichever is greater
Dust proportion	SP-2 Asphalt Mixture Volumetrics	
Density of core	California Test 375	2 per paving day
Nuclear gauge density	California Test 375	3 per 250 tons or 3 per paving day, whichever is greater
Hamburg wheel track	AASHTO T 324 (Modified)	1 per 10,000 tons or 1 per project, whichever is greater
Moisture susceptibility	AASHTO T 283	

39-3.01D(4) Reserved

39-3.01D(5) Department Acceptance

39-3.01D(5)(a) General

The Department accepts RHMA-G based on compliance with:

1. Aggregate quality requirements shown in the following table:

Aggregate Quality

Quality characteristic	Test method	Requirement
Aggregate gradation	AASHTO T 27	JMF ± Tolerance
Percent of crushed particles Coarse aggregate (min, %) One-fractured face Two-fractured faces Fine aggregate (min, %) (Passing No. 4 sieve and retained on No. 8 sieve.) One fractured face	AASHTO T 335	 -- 90 70
Los Angeles Rattler (max, %) Loss at 100 Rev. Loss at 500 Rev.	AASHTO T 96	 12 40
Sand equivalent (min)[a, b]	AASHTO T 176	47
Flat and elongated particles (max, % by weight at 5:1)	ASTM D4791	Report only
Fine aggregate angularity (min, %)[c]	AASHTO T 304 Method A	45

[a]Reported value must be the average of 3 tests from a single sample.
[b]Use of a sand reading Indicator is required as shown in AASHTO T 176, Figure 1. Sections 4.7, 4.8, 7.1.2, 8.4.2 and 8.4.3 do not apply.
[c] The Engineer waives this specification if RHMA-G contains 10 percent or less of nonmanufactured sand by weight of total aggregate. Manufactured sand is fine aggregate produced by crushing rock or gravel.

2. In-place RHMA-G quality requirements shown in the following table:

RHMA-G In-Place Acceptance

Quality characteristic	Test method	Requirement
Asphalt binder content (%)	AASHTO T 308 Method A	JMF -0.4, +0.5
HMA moisture content (max, %)	AASHTO T 329	1
Air voids content @ N_{design} (%)[a, b]	AASHTO T 269	4.0 ± 1.5
Voids in mineral aggregate on laboratory-produced HMA[d] (min, %) Gradation: 1/2-inch and 3/4-inch	SP-2 Asphalt Mixture Volumetrics[c]	 18.0–23.0
Voids in mineral aggregate on plant-produced HMA (min, %)[a] Gradation: 1/2-inch and 3/4-inch	SP-2 Asphalt Mixture Volumetrics[c]	 18.0–23.0
Dust proportion[a]	SP-2 Asphalt Mixture Volumetrics	Report only
Density of core (% of max theoretical density)[e, f]	California Test 375	91–97
Hamburg wheel track (min number of passes at 0.5-inch rut depth) Binder grade: PG 58 PG 64 PG 70	AASHTO T 324 (Modified)	 15,000 20,000 25,000
Hamburg wheel track (min number of passes at inflection point) Binder grade: PG 58 PG 64 PG 70	AASHTO T 324 (Modified)	 10,000 12,500 15,000
Moisture susceptibility (min, psi, dry strength)	AASHTO T 283	100
Moisture susceptibility (min, psi, wet strength)	AASHTO T 283	70

[a]Prepare 3 briquettes. Report the average of 3 tests.
[b]The Engineer determines the bulk specific gravity of each lab-compacted briquette under AASHTO T 275, Method A, and theoretical maximum specific gravity under AASHTO T 209, Method A.
[c]Determine bulk specific gravity under AASHTO T 275, Method A.
[d]The Engineer determines the laboratory-prepared RHMA-G value for mix design verification only.
[e]The Engineer determines percent of theoretical maximum density under California Test 375 except the Engineer uses:

1. AASHTO T 275, Method A, to determine in-place density of each density core instead of using the nuclear gauge
2. AASHTO T 209, Method A to determine theoretical maximum density instead of calculating test maximum density.

[f]The Engineer determines theoretical maximum density under AASHTO T 209, Method A, at the frequency specified in California Test 375, Part 5. D.

39-3.01D(5)(b) Asphalt Rubber Binder

39-3.01D(5)(b)(i) General

The Department does not use asphalt rubber binder design profile for production acceptance.

39-3.01D(5)(b)(ii) Asphalt Modifier

The Department accepts asphalt modifier based on compliance with the requirements shown in the following table:

Asphalt Modifier for Asphalt Rubber Binder

Quality characteristic	Test method	Requirement
Viscosity at 100 °C ($m^2/s \times 10^{-6}$)	ASTM D445	X ± 3[a]
Flash point (min, °C)	ASTM D92	207
Molecular Analysis		
Asphaltenes (max, % by mass (max)	ASTM D2007	0.1
Aromatics (min % by mass)	ASTM D2007	55

[a]The symbol "X" is the asphalt modifier viscosity.

39-3.01D(5)(b)(iii) Crumb Rubber Modifier

The Department accepts scrap tire CRM and high natural CRM based on compliance with the requirements shown in the following table:

Crumb Rubber Modifier for Asphalt Rubber Binder

Quality characteristic	Test method	Requirement
Scrap tire CRM gradation (% passing No. 8 sieve)	California Test 385	100
High natural CRM gradation (% passing No. 10 sieve)	California Test 385	100
Wire in CRM (max, %)	California Test 385	0.01
Fabric in CRM (max, %)	California Test 385	0.05
CRM particle length (max, in)	--	3/16
CRM specific gravity	California Test 208	1.1–1.2

Scrap tire CRM and high natural CRM are sampled and tested separately.

39-3.01D(5)(b)(iv) Asphalt Rubber Binder

For Department acceptance testing, take samples in the Engineer's presence of asphalt rubber binder in 6 qt cans with open tops and friction lids. Take samples once per day or every 5 lots, whichever is greater.

The Department accepts asphalt rubber binder based on compliance with the requirements shown in the following table:

Quality characteristic	Test method	Requirement
Cone penetration at 25 °C (0.10 mm)	ASTM D217	25–70
Resilience at 25 °C (min, % rebound)	ASTM D5329	18
Softening point (°C)	ASTM D36	52–74
Viscosity at 190 °C (centipoises)[a]	ASTM D7741	1,500–4,000

[a]Prepare sample for viscosity test under California Test 388.

39-3.01D(5)(c)–39-3.01D(5)(f) Reserved

39.C-2 39-3.02 MATERIALS

39.C-2.a 39-3.02A GENERAL

Reserved

39.C-2.b 39-3.02B MIX DESIGN

For RHMA-G, the mix design must comply with the requirements shown in the following table:

RHMA-G Mix Design Requirements

Quality characteristic	Test method	Requirement
Air voids content (%)	AASHTO T 269[a]	N_{design} = 4.0
Gyration compaction (no. of gyrations	AASHTO T 312	N_{design} = 50–150[b]
Voids in mineral aggregate (min, %)	SP-2 Asphalt Mixture Volumetrics[c]	18.0–23.0
Dust proportion	SP-2 Asphalt Mixture Volumetrics	Report only
Hamburg wheel track (min number of passes at 0.5-inch rut depth) Binder grade: PG 58 PG 64 PG 70	AASHTO T 324 (Modified)[d]	 15,000 20,000 25,000
Hamburg wheel track (min number of passes at the inflection point) Binder grade: PG 58 PG 64 PG 70	AASHTO T 324 (Modified)[d]	 10,000 10,000 12,500
Moisture susceptibility, dry strength (min, psi)	AASHTO T 283[d]	100
Moisture susceptibility, wet strength (min, psi)	AASHTO T 283[d, e]	70

[a]Calculate the air voids content of each specimen using AASHTO T 275, Method A, to determine bulk specific gravity and AASHTO T 209, Method A, to determine theoretical maximum specific gravity. Under AASHTO T 209 use a digital manometer and pycnometer when performing AASHTO T 209.
[b]Superpave gyratory compactor ram pressure may be increased to a maximum of 825kPa, and specimens may be held at a constant height for a maximum of 90 minutes.
[c]Measure bulk specific gravity using AASHTO T 275, Method A.
[d]Test plant produced RHMA.
[e]Freeze thaw required.

Determine the amount of asphalt rubber binder to be mixed with the aggregate for RHMA-G as follows:

1. Base the calculations on the average of 3 briquettes produced at each asphalt rubber binder content.
2. Plot asphalt rubber binder content versus average air voids content for each set of 3 specimens and connect adjacent points with a best-fit curve.
3. Calculate voids in mineral aggregate for each specimen, average each set, and plot the average versus asphalt rubber binder content.
4. Calculate the dust proportion and plot versus asphalt rubber binder content.
5. From the curve plotted, select the theoretical asphalt rubber binder content at 4 percent air voids.
6. At the selected asphalt rubber binder content, calculate dust proportion.
7. Record the asphalt rubber binder content in the Contractor Hot Mix Asphalt Design Data Form as the OBC.

The OBC must not fall below 7.5 percent by total weight of the mix.

Laboratory mixing and compaction must comply with AASHTO R 35, except the mixing temperature of the aggregate must be between 300 and 325 degrees F. The mixing temperature of the asphalt rubber binder must be between 375 and 425 degrees F. The compaction temperature of the combined mixture must be between 290 and 320 degrees F.

39.C-2.c 39-3.02C ASPHALT RUBBER BINDER

39-3.02C(1) General

Asphalt rubber binder must be a combination of:

1. Asphalt binder
2. Asphalt modifier
3. CRM

The grade of asphalt binder for RHMA-G must be 64-10 or PG 64-16.

The combined asphalt binder and asphalt modifier must be 80.0 ± 2.0 percent by weight of the asphalt rubber binder.

39-3.02C(2) Asphalt Modifier

Asphalt modifier must be a resinous, high flash point, and aromatic hydrocarbon, and must comply with the requirements shown in the following table:

Asphalt Modifier for Asphalt Rubber Binder

Quality characteristic	Test method	Requirement
Viscosity at 100 °C ($m^2/s \times 10^{-6}$)	ASTM D445	X ± 3[a]
Flash point (min, °C)	ASTM D92	207
Molecular Analysis		
Asphaltenes (max, % by mass)	ASTM D2007	0.1
Aromatics (min, % by mass)	ASTM D2007	55

[a]The symbol "X" is the proposed asphalt modifier viscosity. "X" must be between 19 and 36. A change in "X" requires a new asphalt rubber binder design.

Asphalt modifier must be from 2.0 to 6.0 percent by weight of the asphalt binder in the asphalt rubber binder.

39-3.02C(3) Crumb Rubber Modifier

CRM must be a ground or granulated combination of scrap tire CRM and high natural CRM. CRM must be 75.0 ± 2.0 percent scrap tire CRM and 25.0 ± 2.0 percent high natural CRM by total weight of CRM. Scrap tire CRM must be from any combination of automobile tires, truck tires, or tire buffings.

The CRM must comply with the requirements shown in the following table:

Crumb Rubber Modifier for Asphalt Rubber Binder

Quality characteristic	Test method	Requirement
Scrap tire CRM gradation (% passing No. 8 sieve)	California Test 385	100
High natural CRM gradation (% passing No. 10 sieve)	California Test 385	100
Wire in CRM (max, %)	California Test 385	0.01
Fabric in CRM (max, %)	California Test 385	0.05
CRM particle length (max, in)[a]	--	3/16
CRM specific gravity	California Test 208	1.1–1.2
Natural rubber content in high natural CRM (%)	ASTM D297	40.0–48.0

[a]Test at mix design and for certificate of compliance.

CRM must be ground or granulated at ambient temperature. If steel and fiber are cryogenically separated, separation must occur before grinding or granulating. Cryogenically produced CRM particles must be ground or granulated and not pass through the grinder or granulator.

CRM must be dry, free-flowing particles that do not stick together. CRM must not cause foaming when combined with the asphalt binder and asphalt modifier. You may add calcium carbonate or talc up to 3 percent by weight of CRM.

39-3.02C(4) Design and Profile

Design the asphalt rubber binder from testing you perform for each quality characteristic and for the reaction temperatures expected during production. The profile must include the same component sources for the asphalt rubber binder used. The 24-hour (1,440-minute) interaction period determines the design profile. At a minimum, mix asphalt rubber binder components, take samples, and perform and record the tests shown in the following table:

Asphalt Rubber Binder Reaction Design Profile

Quality characteristic	Test Method	Minutes of reaction [a]							Limits
		45	60	90	120	240	360	1440	
Cone penetration at 25 °C (0.10 mm)	ASTM D217	X [b]				X		X	25–70
Resilience at 25 °C (min, % rebound)	ASTM D5329	X				X		X	18
Field softening point (°C)	ASTM D36	X				X		X	52–74
Viscosity (centipoises)	ASTM D7741	X	X	X	X	X	X	X	1,500–4,000

[a]Six hours (360 minutes) after CRM addition, reduce the oven temperature to 275 °F for 16 hours. After the 16-hour (960 minutes) cool down after CRM addition, reheat the binder to the reaction temperature expected during production for sampling and testing at 24 hours (1,440 minutes).
[b]"X" denotes required testing

39-3.02C(5) Asphalt Rubber Binder Production

39-3.02C(5)(a) General

Deliver scrap tire CRM and high natural CRM in separate bags.

39-3.02C(5)(b) Mixing

Proportion and mix asphalt binder, asphalt modifier, and CRM simultaneously or premix the asphalt binder and asphalt modifier before adding CRM. If you premix asphalt binder and asphalt modifier, mix them for at least 20 minutes. When you add CRM, the asphalt binder and asphalt modifier must be from 375 to 440 degrees F.

After interacting for at least 45 minutes, the quality characteristics of asphalt rubber binder must comply with the requirements shown in the following table:

Quality characteristic	Test method	Requirement
Cone penetration at 25 °C (0.10 mm)	ASTM D217	25–70
Resilience at 25 °C (min, % rebound)	ASTM D5329	18
Softening point (°C)	ASTM D36	52–74
Viscosity at 190 °C (centipoises)[a]	ASTM D7741	1,500–4,000

[a]Prepare sample for viscosity test under California Test 388.

Do not use asphalt rubber binder during the first 45 minutes of the reaction period. During this period, the asphalt rubber binder mixture must be between 375 degrees F and the lower of 425 or 25 degrees F below the asphalt binder's flash point indicated in the MSDS.

If any asphalt rubber binder is not used within 4 hours after the reaction period, discontinue heating. If the asphalt rubber binder drops below 375 degrees F, reheat before use. If you add more scrap tire CRM to the reheated asphalt rubber binder, the binder must undergo a 45-minute reaction period. The added scrap tire CRM must not exceed 10 percent of the total asphalt rubber binder weight. Reheated and reacted asphalt rubber binder must comply with the viscosity specifications. Do not reheat asphalt rubber binder more than twice.

39.C-2.d 39-3.02D AGGREGATES

39-3.02D(1) General

For RHMA-G, before the addition of asphalt binder and lime treatment, the aggregate must comply with the requirements shown in the following table:

Aggregate Quality

Quality characteristic	Test method	Requirement
Percent of crushed particles Coarse aggregate (min, %) One-fractured face Two-fractured faces Fine aggregate (min, %) (Passing No. 4 sieve and retained on No. 8 sieve.) One fractured face	AASHTO T 335	 -- 90 70
Los Angeles Rattler (max, %) Loss at 100 Rev. Loss at 500 Rev.	AASHTO T 96	 12 40
Sand equivalent (min)[a, b]	AASHTO T 176	47
Flat and elongated particles (max, % by weight at 5:1)	ASTM D4791	Report only
Fine aggregate angularity (min, %)[c]	AASHTO T 304 Method A	45

[a]Reported value must be the average of 3 tests from a single sample.
[b]Use of a sand reading indicator is required as shown in AASHTO T 176, Figure 1. Sections 4.7, 4.8, 7.1.2, 8.4.2 and 8.4.3 do not apply.
[c] The Engineer waives this specification if HMA contains 10 percent or less of nonmanufactured sand by weight of total aggregate, except if your JMF fails verification. Manufactured sand is fine aggregate produced by crushing rock or gravel.

39-3.02D(2) Aggregate Gradations

The aggregate gradations for RHMA-G must comply with the requirements shown in the following table:

Aggregate Gradation Requirements

Type A HMA pavement thickness shown	Gradation
0.10 to less than 0.20 foot	1/2 inch
0.20 foot or greater	3/4 inch

For RHMA-G, the aggregate gradations must be within the target value limits for the specified sieve size shown in the following tables:

Aggregate Gradation
(Percentage Passing)
Rubberized Hot Mix Asphalt - Gap Graded (RHMA-G)

3/4-inch RHMA-G

Sieve Sizes	Target Value Limits	Allowable Tolerance
1"	100	--
3/4"	95–98	TV ± 5
1/2"	83–87	TV ± 6
3/8"	65–70	TV ± 5
No. 4	28–42	TV ± 6
No. 8	14–22	TV ± 5
No. 200	0–6	TV ± 2

1/2-inch RHMA-G

Sieve Sizes	Target Value Limits	Allowable Tolerance
3/4"	100	--
1/2"	90–98	TV ± 6
3/8"	83–87	TV ± 5
No. 4	28–42	TV ± 6
No. 8	14–22	TV ± 5
No. 200	0–6	TV ± 2

39.C-2.e 39-3.02E RUBBERIZED HOT MIX ASPHALT PRODUCTION

Asphalt rubber binder must be from 375 to 425 degrees F when mixed with aggregate.

If the dry and wet moisture susceptibility test result for treated plant-produced RHMA-G is less than the RHMA-G mix design requirement for dry and wet moisture susceptibility strength, the minimum dry and wet strength requirement is waived, but you must use one of the following treatments:

1. Aggregate lime treatment using the slurry method
2. Aggregate lime treatment using the dry lime method
3. Liquid antistrip treatment of HMA

39.C-3 39-3.03 CONSTRUCTION

Use a material transfer vehicle when placing RHMA-G.

Do not use a pneumatic tired roller to compact RHMA-G.

Spread and compact RHMA-G at an atmospheric temperature of at least 55 degrees F and a surface temperature of at least 60 degrees F.

If the atmospheric temperature is below 70 degrees F, cover loads in trucks with tarps. The tarps must completely cover the exposed load until you transfer the mixture to the paver's hopper or to the pavement surface. Tarps are not required if the time from discharge to truck until transfer to the paver's hopper or the pavement surface is less than 30 minutes.

For RHMA-G placed under method compaction:

1. Complete the 1st coverage of breakdown compaction before the surface temperature drops below 285 degrees F.
2. Complete breakdown and intermediate compaction before the surface temperature drops below 250 degrees F. Use a static steel-tired roller instead of the pneumatic-tired roller for intermediate compaction.
3. Complete finish compaction before the surface temperature drops below 200 degrees F.

Spread sand at a rate between 1 and 2 lb/sq yd on new RHMA-G pavement when finish rolling is complete. Sand must be free of clay or organic matter. Sand must comply with section 90-1.02C(3). Keep traffic off the pavement until spreading sand is complete.

39.C-4 39-3.04 PAYMENT

Not Used

39.D 39-4 OPEN GRADED FRICTION COURSES

Not Used

39.E 39-5 BONDED WEARING COURSES

Not Used

39.F 39-6 HOT MIX ASPHALT ON BRIDGE DECKS

Not Used

39.G 39-7 MINOR HOT MIX ASPHALT

39.G-1 39-7.01 GENERAL

39-7.01A Summary

Section 39-7 includes specifications for producing and placing minor hot mix asphalt.

Minor HMA must comply with section 39-2 except as specified in this section 39-7.

39-7.01B Definitions

Reserved

39-7.01C Submittals

The QC plan, test results, and inertial profiler specifications in sections 39-1.01C(3), 39-1.01C(4), 39-1.01C(13)(c)–(d) do not apply.

39-7.01D Quality Control and Assurance

39-7.01D(1) General

For minor HMA, the JMF renewal, inertial profiler certifications and testing, and prepaving meeting specifications in sections 39-1.01D(4), 39-1.01D(6)(c), and 39-1.01D(7) do not apply.

Test pavement smoothness with a 12 foot straightedge.

39-7.01D(2) Quality Control

For minor HMA, section 39-2.01D(2) applies except testing for compliance with the following quality characteristics is not required:

1. Flat and elongated particles
2. Fine aggregate angularity
3. Hamburg wheel track
4. Moisture susceptibility

39-7.01D(3) Department Acceptance

The Department accepts minor HMA under section 39-2.01D(5) except compliance with the following quality characteristics is not required:

1. Flat and elongated particles
2. Fine aggregate angularity
3. Hamburg wheel track

4. Moisture susceptibility

39.G-2 39-7.02 MATERIALS

39-7.02A General

Reserved

39-7.02B Mix Design

The mix design for minor HMA must comply with section 39-2.02B except the Hamburg wheel track and moisture susceptibility requirements do not apply.

39-7.02C Asphalt Binder

The grade of asphalt binder for minor HMA must be PG-64-10 or PG-64-16.

39-7.02D Liquid Antistrip Treatment

Treat minor HMA with liquid antistrip. Liquid antistrip treatment is not required if you submit AASHTO T 283 and AASHTO T 324 (Modified) test results showing compliance with section 39-2.02B. The tests must be dated within 12 months of submittal.

39.G-3 39-7.03 CONSTRUCTION

Not Used

39.G-4 39-7.04 PAYMENT

Not Used

39-8–39-10 RESERVED

END OF SECTION

SECTION 56 SIGNS

Refer to Section 56, “Signs” of the Standard Specifications and the provisions within this section. Provide and install roadside signs as shown.

56.A MATERIALS

56.A-1 SIGN PANEL

Sign panels shall be Type IX (diamond grade cubed) material with 3M #1160 anti- graffiti film or approved equal, and of the standard size signs.

All yellow and orange signs shall be fluorescent in color. All stop signs shall be a minimum of 30 inches.

Panels shall be fastened using galvanized steel rivets.

56.A-2 METAL POSTS

Metal sign posts shall be 2" square galvanized, perforated (telespar) tubular steel, with 12 gauge wall thickness. Post shall include an anchor and a sleeve assembly for a total of 3 pieces. The installation shall include an anchor and sleeve assembly system consisting of two pieces, heavy-duty, tubular, square sleeve with 12 gauge wall thickness. The sleeve must fit tightly over the anchor and post. Anchor segments must be 30” in length +/- 3”. Sleeves must be 18” in length minimum.

Sign posts shall be properly installed in the ground using the manufacture's recommended method and as shown. The depth and length of post and anchor assembly shall be as shown on the plans. The line between the center of the top of a post and the center of a post at the ground line shall be plumb within a tolerance of 0.2 foot in 10 feet. Sign posts shall be secured to anchor assemblies using a minimum of two (2) 3/8" steel drive, rivets. No concrete shall be used in setting anchor sections or sign post.

Any post damaged during installation shall be replaced at the Contractor's expense.

All posts and hardware shall be furnished new.

END OF SECTION

SECTION 64 PLASTIC PIPE

Refer to Section 64, "Plastic Pipe" of the Standard Provisions and provisions in this section.

64.A MATERIAL

Plastic pipe must be Type S Corrugated polyethylene (HDPE) pipe must be with smooth interior wall.

Backfill must be slurry cement and comply with Section 64-1.02B and 19-3.02D.

END OF SECTION

END OF SECTION

SECTION 70 MISCELLANEOUS DRAINAGE FACILITIES

Refer to Section 70 "Miscellaneous Drainage Facilities" of the Standard Specifications.

70.A FLARED END SECTIONS

Refer to Section 70-5.02 "Flared End Sections" of the Standard Specifications and the following provisions.

Replace section 70-5.02A(2) with:

70-5.02A(2) Plastic Flared End Sections

Plastic flared end sections must comply with ASTM D 3350.

Replace "40-1.03N" in item 2.4 of the 1st paragraph of section 70-5.06C with:

40-1.03K

Replace the 2nd, 3rd, and 4th paragraphs of section 70-7.02B with:

Before shipping, the exterior surfaces of the casing must be cleaned, primed, and coated to comply with ANSI/AWWA C213 or ANSI/AWWA C214.

Wrapping tape for repairing damaged coating and wrapping field joints and fittings must be a pressure-sensitive PVC or polyethylene tape with a minimum thickness of 50 mils, 2 inches wide.

70.B GRATED LINE DRAINS

Replace section 70-6 with:

70-6 GRATED LINE DRAINS

70.B-1 GENERAL

Section 70-6 includes specifications for constructing grated line drains.

Submit a certificate of compliance from the manufacturer.

70.B-2 MATERIALS

70.B-2.a GENERAL

Concrete backfill must comply with the specifications for minor concrete.

70.B-2.b LINE DRAIN CHANNEL

Drain channel sections must be manufactured with concrete in compliance with the specifications for minor concrete with no side extensions. The interior surface of the line drain channel must be smooth below the level of the frame, grate, and associated connections.

70.B-2.c LINE DRAIN FRAMES AND GRATES

Frames and grates must be heavy duty rated under General Services Administration CID A-A-60005 *Frames, Covers, Gratings, Steps, Manholes, Sump and Catch Basin*.

Frames and grates must meet the dimensions and properties of the following or approved equal:

Table 7: Grated Line Drain Frame and Grate Manufacturer Information

GRATED LINE DRAIN SIZE	MANUFACTURER/ PRODUCT INFORMATION
15”	Deeter Foundry Catalog No. 3990-EB (17”x24” Heavy Duty, Bolted) w/ Grate Style A
18”	Deeter Foundry Catalog No. 3990-FB (20”x24” Heavy Duty, Bolted) w/ Grate Style A

Attention is directed to Section 6-3.02 “Specific Brand or Trade Name and Substitution” of the Standard Specifications for further information on substitution(s).

The design and performance requirements include the following:

1. Grated line drain frames and grates must be manufactured of ductile iron complying with section 75-1.02. Frames and grates include bolts, nuts, frame anchors, and other connecting hardware. Galvanizing or asphalt paint coating is not required.2. Frames and grates, whether one-piece or separate, must be classified heavy duty traffic rated with a transverse proof-load strength of 25,000 pounds
3. Grates and frames must be one piece anchored into the body of the line drain unless shown as removable. Removable grates must be separate from the frame and must:3.1. Be held in place by locking devices that are tamper resistant
   3.2. Provide a minimum repetitive pullout resistance of 340 lb/ft of length after completion of 1,000 hours of salt spray testing under ASTM B 117
   3.3. Be match marked in pairs before delivery to the work and grates must fit into the frames without rocking
4. If a combination of one piece frame and grate and removable grates are used, the locations of the removable grates are shown
5. Except for grates installed within designated pedestrian paths of travel, grate design must accept inflow of runoff through openings consisting of a minimum of 60 percent of the total top surface area of the grate. Individual openings or slots must have a dimension not greater than 2 inches measured in the direction of the grated line drain flow line.
6. Grates installed within designated pedestrian paths of travel must be certified as conforming to the requirements of the Americans with Disabilities Act.

70.B-3 CONSTRUCTION

Excavation and backfill must comply with section 19-3.

Grated line drains must be installed in trenches excavated to the lines and grades established by the Engineer. Grade and prepare the bottom of the trench to provide a firm and uniform bearing throughout the entire length of the grated line drain.

Installation of grated line drains and joints must comply with the manufacturer's instructions.

Install to the lines and grades with sections closely jointed and secured to ensure that no separation of the line drains occurs during backfilling.

The frame or grate must not extend above the level of the surrounding pavingl.

Connect grated line drains to new or existing drainage facilities as shown.

Backfill with minor concrete or approved backfill material.

Compact and prepare the excavated trench in accordance with 19-3. Place concrete in a trench excavated to the lines and grades established by the Engineer. Grade and prepare the bottom of the trench to provide a firm and uniform bearing throughout the entire line drain length.

Place backfill in the trench as shown. Place against undisturbed material at the sides and bottom of the trench in a manner that prevents (1) floating or shifting of the grated line drain and voids or (2) segregation in the concrete.

Immediately remove foreign material that falls into the trench before or during placement of the concrete.

Where necessary construct and compact earth plugs at the ends of the concrete backfill to contain the concrete within the trench.

Secure frames or line drain wall to the surrounding concrete backfill with steel anchoring rods per manufacturer's recommendations. Alternative securing methods must provide a minimum pullout resistance of 685 lb/ft of length of grated line drain frame.

Concrete backfill must be finished flush with the adjacent surfacing.

The surface of the concrete must be textured with a broom or burlap drag to produce a durable skid-resistant surface.

70.B-4 PAYMENT

Payment for frames and grates is included in the payment for grated line drain.

END OF SECTION

SECTION 72 SLOPE PROTECTION

Refer to Section 72 "Slope Protection" of the Standard Specifications.

72.A ROCK SLOPE PROTECTION

Refer to Section 72-2 "Rock Slope Protection" of the Standard Specifications, and the following provisions.

In conformance with Section 47-2.02A of the Standard Provisions, Rock Slope Protection shall be placed at the pipe outlet(s) as shown. Rock slope protection shall comply with rock class gradation and construction shall comply with Placement Method as shown.

Replace the table in the 3rd paragraph of section 72-2.02A with:

ROCK MATERIAL PROPERTIES

Property	California Test	Value
Apparent specific gravity	206	2.5 minimum
Absorption	206	4.2% maximum
Durability Index	229	52 minimum

Notes:
Durability absorption ratio (DAR) = course durability index/(% absorption + 1)
If the DAR is greater than 10, the absorption may exceed 4.2%
If the DAR is greater than 24, the durability index may be less than 52

END OF SECTION

SECTION 81 MONUMENTS

Refer to Section 81, "Monuments" of the Standard Specifications and the following provisions.

81.A GENERAL

81.A-1 SUMMARY

Section 81 includes specifications for setting monument covers over existing monuments without a monument frame and cover, reconstructing monuments, and reconstructing disturbed monuments. Adjust existing monuments with frame and cover under Section 15.I "Adjust Frames, Covers, Grates and Manholes".

Preserve and protect in place existing survey monuments within the project area by installing monument ring type frame and cover, or reconstruct with a new monument, ring and cover as shown in Table 6. Existing monuments known to exist within the roadway are provided in Table 6 and Corner Records have been filed for these monuments. Corner Records are provided in Appendix B of these Special Provisions. If you find a monument in the work area not in Table 6, stop work and inform the Engineer.

Table 8: Location and Description of Existing Survey Monuments to be preserved.

MONUMENT NUMBER	MONUMENT DESCRIPTION	DEPTH TYPE	PRESERVE/ RECONSTRUCT	LOCATION	
				Project CL Station	Nearest Cross Street
1	Railroad Spike	Surface	Reconstruct	18+49	Glen Circle
2	Railroad Spike	Surface	Reconstruct	19+48	Glen Circle
3	Railroad Spike	Surface	Reconstruct	36+42	Newman Avenue
5	Brass Disc	Surface	Preserve	86+20	Edgewood Lane
6	Brass Disc	Surface	Preserve	99+47	Stearns Road
4*	Disc in monument box- see Adjust Monument Cover;	n/a	n/a	73+02	Sawmill
*Monument shall be adjusted under Section 15.					

If you disturb a monument in the process of adjusting, preserving, or in the course of your work, reset and reconstruct the monument in conformance with 5-1.36 "Property and Facility Preservation" of the Standard Specifications and the following provisions.

Preserve monument applies if shown or identified in Table 6.

Reconstruct monument applies if shown or identified in Table 6.

81.A-2 DEFINITIONS

Preserve Monument- placement of a cast iron or cast steel frame/ring and cover with concrete collar over an existing undisturbed monument.

Reconstruct Monument- placement of a new monument and stamped disc with frame/ring, cover and concrete collar.

Disturbed Monument- An existing land surveying monument which has been moved, altered from its original physical location or otherwise not in sound original (prior to construction) condition.

Surface Monument- A monument that in the existing (pre-project) condition is visible in the pavement or ground. A depth type of "On Surface".

Buried Monument- A monument that in the existing (pre-project) condition that is not visible in the pavement or ground. A depth type of "Buried".

81.A-3 SUBMITTALS

Submit a certificate of compliance for:

1. Survey Marker Disk (if applicable)
2. Picture of the undisturbed monument prior to placement of monument ring and concrete collar (for Preserving Monument)

81.B MATERIALS

81.B-1 PRESERVE MONUMENT

Use an appropriate Monument Ring Frame and Cover to clear the existing monument to the new pavement grade. Monument Ring Frame and Cover must meet the dimensions and properties of the following manufactured item(s) in Table 7, or approved equal:

Table 9: Monument Ring and Cover Manufacturer Information

DEPTH TYPE	MANUFACTURER/ PRODUCT INFORMATION
Buried	Deeter Foundry Catalog No. 1830 (11 ¼"dia Cover x 8" tall ring Heavy Duty) w/ Solid Cover
On Surface	Deeter Foundry Catalog No. 1821 (10 ½ "dia Cover x 6" tall ring Heavy Duty) w/ Solid Cover

Attention is directed to Section 6-3.02 "Specific Brand or Trade Name and Substitution" of the Standard Specifications for further information on substitution(s). Confirm cover thickness is appropriate for application with the HMA thickness prior to construction.

81.B-2 RECONSTRUCT MONUMENT

Materials for resetting monuments must comply with Section 81-1.02 of the Standard Specifications and Type D, Alternative No. 2 (with Buried-Depth Type Ring and Cover) survey monuments, with the following exceptions:

Depth of monument marker to finished grade shall be 3" minimum, 5" maximum. Contractor to confirm clearance between bottom of cover to marker grade is 1" clear.

The second paragraph in Section 81-1.02 "Materials" of the Standard Specifications is amended to read:
The Contractor furnishes survey marker disks.

81.C CONSTRUCTION

81.C-1 PRESERVE MONUMENT

81.C-1.a(i) Surface Monuments

Prepare existing monument by removal of existing pavement around the monument. Remove to a depth and diameter to accommodate Ring and concrete collar. Caution shall be made to not disturb existing monument.

Place monument ring and cover per manufactures' recommendations and as shown.

81.C-1.a(ii) Buried Monuments

Expose the Buried Monument prior to adhering to the provisions in Section 81.C-1.a(i). Expose the Buried Monument by locating with magnetic locator or similar device. Remove pavement surface and carefully excavate to locate the monument. Once monument is exposed, follow the provisions in Section 81.C-1.a(i).

For Buried Monuments where a Corner Record has previously not been recorded. Corner Record Card must be prepared by a licensed Land Surveyor and file with Butte County in compliance with Business and Professions Code 8771.

81.C-2 RECONSTRUCT MONUMENT

Reconstruct Monument in accordance with 81-1.03 of the Standard Specifications.

Survey disks must be stamped verified by a licensed professional land surveyor. File a Corner Record for each monument reset.

81.C-3 CORNER RECORD

Prepare and file a Corner Record in compliance with Business and Professions Code 8771.

81.D PAYMENT

The Department does not pay for reconstruction of disturbed monuments under 5-1.36 "Property and Facility Preservation" of the Standard Specifications.

END OF SECTION

SECTION 82 MARKERS AND DELINEATORS

Refer to Section 82, "Markers and Delineators" of the Standard Specifications.

END OF SECTION

SECTION 83 RAILINGS AND BARRIERS

Refer to Section 83, "Railings and Barriers" of the Standard Specifications and the following amended provisions.

83.A RAILINGS

Replace "guard rail" and "guard railing" at each occurrence in sections 83-1.02A and 83-1.02B with:
guardrail

Replace "metal beam guard railing" at each occurrence in sections 83-1.02 and 83-1.03 with:
midwest guardrail system

Replace "guard rail" and "guard railing" at each occurrence in sections 83-1.02A and 83-1.02B with:
guardrail

Replace the heading of section 83-1.02B with:
Midwest Guardrail System

Add between "splices at" and "posts" in the 5th paragraph of section 83-1.02B:
midspan between

Replace "Metal rail posts, box spacers, and" in item 1 in the list in the 25th paragraph of section 83-1.02B with:
Metal box spacers and

Replace item 4 in the list in the 25th paragraph of section 83-1.02B with:
4. For the connection of guard railing to new bridge railing or barriers, anchor bolt holes must be drilled in the concrete parapet or formed using metal or PVC sleeves.

Delete items 6 and 7 in the list in the 25th paragraph of section 83-1.02B.

Replace "Type WB" at each occurrence in section 83-1.02B(2) with:
Type WB-31

Replace the heading of section 83-1.02B(3) with:
Temporary Midwest Guardrail System

Replace the 2nd sentence of the 9th paragraph of section 83-1.02D(1) with:
Posts and balusters must be normal to the profile grade. Transverse to the profile grade, railings must be plumb within a tolerance not to exceed 0.02 foot in 10 feet.

Replace "80-2.02" in the 2nd paragraph of section 83-1.02E with:
80-3.02B

Replace the 3rd paragraph of section 83-1.02G(2) with:
Stud bolts must comply with the specifications for studs in clause 7 of AWS D1.1.

Replace "horizontal" in the 8th paragraph of section 83-1.02G(2) with:
vertical

Replace "sets" in the 10th paragraph of section 83-1.02G(2) with:
copies

Replace the 1st sentence of the 1st paragraph of section 83-1.03 with:
Except for guardrail within the pay limits of a terminal system, a transition railing (Type WB-31), an end anchor assembly, or a rail tensioning assembly, midwest guardrail system is measured along the face of the rail element from end post to end post of the completed railing.

Add to section 83-2.02D(1):
For a concrete barrier transition:

1. Remove portions of the existing concrete barrier where shown under section 15-3
2. Roughen the contact surface of the existing concrete barrier

3. Drill and bond dowels into the existing concrete barrier under section 51-1

Add to section 83-2.02:

10-19-12

83-2.02H–83-2.02M Reserved

END OF SECTION

SECTION 84 TRAFFIC STRIPES AND PAVEMENT MARKINGS

Refer to Section 84, "Traffic Stripes and Pavement Markings" of the Standard Specifications and the provisions within this section.

84.A GENERAL

Replace section 84-1.01C with:

84.A-1 84-1.01C SUBMITTALS

For glass beads used in drop-on applications and in thermoplastic formulations, submit a certificate of compliance and test results for each lot of beads specifying the EPA test methods used and tracing the lot to the specific test sample. The testing for lead and arsenic content must be performed by an independent testing laboratory.

Submit retroreflectivity readings for traffic stripes and pavement markings at locations with deficient retroreflectivity determined by the Engineer.

84.A-2 84-1.01D QUALITY CONTROL AND ASSURANCE

Test each lot of glass beads for arsenic and lead under EPA Test Method 3052 and 6010B or 6010C.

Applied traffic stripes and pavement markings must be retroreflective. Within 30 days of applying traffic stripes and pavement markings, the retroreflectivity of the stripes and markings must be a minimum of 250 $mcd \cdot m^{-2} \cdot lx^{-1}$ for white and 125 $mcd \cdot m^{-2} \cdot lx^{-1}$ for yellow when measured under ASTM E1710.

The Engineer will perform a nighttime, drive-through, visual inspection of the retroreflectivity of the traffic stripes and pavement markings and notify you of any locations with deficient retroreflectivity. Measure the retroreflectivity of the deficient areas using a retroreflectometer under ASTM E1710 and the sampling protocol specified in ASTM D7585.

84.A-3 MATERIALS

Replace the paragraph in section 84-1.02 with:

Glass beads applied to paint must comply with State Specification 8010-004.

Glass beads applied to molten thermoplastic material must be Type 2 beads complying with AASHTO M 247. The glass beads must have a coating that promotes adhesion of the beads to thermoplastic.

At least 75 percent of the beads by count must be true spheres that are colorless and do not exhibit dark spots, air inclusions, or surface scratches when viewed under 20X magnification.

Each lot of glass beads used in pavement markings must contain less than 200 ppm each of arsenic and lead when tested under EPA Test Method 3052 and 6010B or 6010C.

84.A-4 CONSTRUCTION

Where striping joins existing striping, as shown on the plans, the Contractor shall begin and end the transition from the existing striping pattern into or from the new striping pattern a sufficient distance to ensure continuity of the striping pattern

84.B THERMOPLASTIC TRAFFIC STRIPES AND PAVEMENT MARKINGS

84.B-1 MATERIALS

Thermoplastic material shall be free of lead and chromium, and shall conform to the requirements in State Specification PTH 02ALKYD.

Retroreflectivity of the thermoplastic traffic stripes and pavement markings shall conform to the requirements in ASTM Designation: D 6359 99. White thermoplastic traffic stripes and pavement markings shall have a minimum initial retroreflectivity of 250 mcd m 2 lx 1. Yellow thermoplastic traffic stripes and pavement markings shall have a minimum initial retroreflectivity of 150 mcd m 2 lx 1.Where striping joins existing striping, as shown on the plans, the Contractor shall begin and end the transition from the existing striping pattern into or from the new striping pattern a sufficient distance to ensure continuity of the striping pattern.

Thermoplastic traffic stripes shall be Sprayable Thermoplastic and shall be applied at the minimum thickness and application rate as specified below.

84.B-2 CONSTRUCTION

The minimum application rate is based on a solid stripe of 4 inches in width.

Table 10: Thermoplastic Thickness and Application Rate

MINIMUM STRIPE THICKNESS (INCH)	MINIMUM MARKING THICKNESS (INCH)
0.90	0.120

84.C PAYMENT

Refer to Section 84-2.04, "Payment" of the Standard Specifications.

Replace the 1st paragraph in Section 84-2.04 with:

A double ***extruded*** thermoplastic traffic stripe consisting of two 4-inch wide yellow stripes is measured as two (2) traffic stripes.

A double ***sprayable*** thermoplastic traffic stripe consisting of two 4-inch wide yellow stripes is measured as 1 traffic stripe.

END OF SECTION

SECTION 88 GEOSYNTHETICS

Refer to Section 88, "Geosynthetics" of the Standard Specifications. Geosynthetic paving fabric interlayer shall comply with Section 88-1.02J. Refer to Section 39 of these special provisions for more information.

88.A SILT FENCE FABRIC

Refer to Section 88-1.02E, "Silt Fence Fabric" of the Standard Specifications.

Replace the value for permittivity of woven fabric in the table in the 1st paragraph of section 88-1.02E with:
0.05

Replace the value for apparent size opening of nonwoven fabric in the table in the 1st paragraph of section 88-1.02E with:
0.012

END OF SECTION

SECTION 90 CONCRETE

Refer to Section 90, "Concrete" of the Standard Specifications.

END OF SECTION

SECTION 92 ASPHALTS

Refer to Section 92, "Asphalts" of the Standard Specifications and the following provisions.

Replace the row for dynamic shear for original binder in the table in the 1st paragraph of section 92-1.02B with:

DYNAMIC SHEAR, Test temperature at 10 rad/s, °C min G*/sin(delta), kPa max G*/sin(delta), kPa	T 315	58 1.00 2.00	64 1.00 2.00	64 1.00 2.00	64 1.00 2.00	70 1.00 2.00

Replace 2nd paragraph of section 92-1.02B with:

PG modified asphalt binder must comply with the requirements shown in the following table:

PG MODIFIED ASPHALT BINDER

Property	AASHTO Test Method	Grade		
		PG 58–34 M	PG 64–28 M	PG 76–22 M
Original Binder				
Flash point, min °C	T 48	230	230	230
Solubility, min %	T 44a	97.5	97.5	97.5b
Viscosity at 135 °Cc, max, Pa·s	T 316	3.0	3.0	3.0
Dynamic shear, Test temperature at 10 rad/s, °C min G*/sin(delta), kPa	T 315	58 1.00	64 1.00	76 1.00
RTFO testd, Mass loss, max, %	T 240	1.00	1.00	1.00
RTFO Test Aged Binder				
Dynamic shear, Test temperature at 10 rad/s, °C min G*/sin(delta), kPa	T 315	58 2.20	64 2.20	76 2.20
Dynamic shear, Test temperature at 10 rad/s, °C max (delta), degree	T 315	80e	80e	80e
Elastic recoveryf, Test temperature °C min recovery, %	T 301	25 75	25 75	25 65
PAVg, temperature, °C	R 28	100	100	110
RTFO Test and PAV Aged Binder				
Dynamic shear, Test temperature at 10 rad/s, °C max G*sin(delta), kPa	T 315	16 5000	22 5000	31 5000
Creep stiffness, Test temperature, °C max S-value, MPa min M-value	T 313	-24 300 0.300	-18 300 0.300	-12 300 0.300

aThe Department allows ASTM D 5546 or ASTM D 7753 instead of AASHTO T 44. Particles recovered from ASTM D 5546 or ASTM D 7753 or AASHTO T 44 must be less than 250 µm.
bReport only for spray application.
cThe Engineer waives this specification if the supplier provides written certification the asphalt can be adequately pumped and mixed at temperatures meeting applicable safety standards.
d"RTFO Test" means the asphaltic residue obtained using the Rolling Thin Film Oven Test, AASHTO Test Method T 240 or ASTM D 2872. The residue from mass change determination may be used for other tests.
eTest temperature is the temperature at which G*/sin(delta) is 2.2 kPa. A graph of log G*/sin(delta) plotted against temperature may be used to determine the test temperature when G*/sin(delta) is 2.2 kPa. A graph of (delta) versus temperature may be used to determine delta at the temperature when G*/sin(delta) is 2.2 kPa. The graph must have at least two points that envelope G*/sin(delta) of 2.2 kPa and the test temperature must not be more than 6 degree C apart. The Engineer also accepts direct measurement of (delta) at the temperature when G*/sin(delta) is 2.2 kPa.
fTests without a force ductility clamp may be performed.
g"PAV" means "Pressure Aging Vessel."

Do not modify PG modified asphalt binder using polyphosphoric acid.

Crumb rubber must be from automobile and truck tires and must be free from contaminants including fabric, metal, minerals, and other nonrubber substances.

PG modified asphalt binder modified with crumb rubber must be homogeneous and must not contain visible particles of crumb rubber.

The supplier of PG modified asphalt binder modified with crumb rubber must:

1. Report the amount of crumb rubber by weight of asphalt binder
2. Certify a minimum of 10 percent of crumb rubber by weight of asphalt binder

END OF SECTION

SECTION 93 LIQUID ASPHALTS

Refer to Section 93, “Liquid Asphalts” of the Standard Specifications.

Replace "Celsius" the 1st row in the table in the 8th paragraph of section 93-1.04 with:
Fahrenheit

END OF SECTION

SECTION 94 ASPHALTIC EMULSIONS

Refer to Section 94, “Asphaltic Emulsions” of the Standard Specifications.

Replace the 1st paragraph of section 94-1.04 with:
Asphaltic emulsion is measured by weight under the specifications requiring its use. If water is added to the asphaltic emulsion, the quantity of asphaltic emulsion is determined before the addition of water.

END OF SECTION

END OF SPECIAL PROVISIONS

APPENDIX

TO THE SPECIAL PROVISIONS

The following contents of the Appendix are included as part of the Special Provisions:

APPENDIX #	DESCRIPTION
A	Revised Standard Plan
B	Corner Records for Existing Survey Monuments
C	Federal Minimum Wage Rates (to be inserted at time of agreement execution

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APPENDIX A

M

Maint	MAINTENANCE
Max	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
Med	MEDIAN
MGS	MIDWEST GUARDRAIL SYSTEM
MH	MANHOLE
Min	MINIMUM
Misc	MISCELLANEOUS
Misc I & S	MISCELLANEOUS IRON AND STEEL
Mkr	MARKER
Mod	MODIFIED,
	MODIFY
Mon	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EMBANKMENT
Mt	MOUNTAIN, MOUNT
Mtl	MATERIAL
MVP	MAINTENANCE VEHICLE PULLOUT

N

N	NORTH
NB	NORTHBOUND
No.	NUMBER (MUST HAVE PERIOD)
Nos.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NS	NEAR SIDE
NSP	NEW STANDARD PLAN
NTS	NOT TO SCALE

O

Oblr	OBLITERATE
OC	OVERCROSSING
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OGFC	OPEN GRADED FRICTION COURSE
OH	OVERHEAD
OHWM	ORDINARY HIGH WATER MARK
O-O	OUT TO OUT
Opp	OPPOSITE
OSD	OVERSIDE DRAIN

P

p	PAGE
PAP	PERFORATED ALUMINUM PIPE
PB	PULL BOX
PC	POINT OF CURVATURE,
	PRECAST
PCC	POINT OF COMPOUND CURVE,
	PORTLAND CEMENT CONCRETE
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
PCP	PERFORATED CONCRETE PIPE,
	PRESTRESSED CONCRETE PIPE
PCVC	POINT OF COMPOUND VERTICAL CURVE
PEC	PERMIT TO ENTER AND CONSTRUCT
Ped	PEDESTRIAN
Ped OC	PEDESTRIAN OVERCROSSING
Ped UC	PEDESTRIAN UNDERCROSSING
Perm Mtl	PERMEABLE MATERIAL

P continued

PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
Pkwy	PARKWAY
℄,PL	PLATE
P/L	PROPERTY LINE
PM	POST MILE,
	TIME FROM NOON TO MIDNIGHT
PN	PAVING NOTCH
POC	POINT OF HORIZONTAL CURVE
POT	POINT OF TANGENT
POVC	POINT OF VERTICAL CURVE
PP	PIPE PILE,
	PLASTIC PIPE,
	POWER POLE
PPL	PREFORMED PERMEABLE LINER
PPP	PERFORATED PLASTIC PIPE
PRC	POINT OF REVERSE CURVE
PRF	PAVEMENT REINFORCING FABRIC
PRVC	POINT OF REVERSE VERTICAL CURVE
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES
PS, P/S	PRESTRESSED
PSP	PERFORATED STEEL PIPE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
Pvmt	PAVEMENT

Q

Qty	QUANTITY

R

R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
Rd	ROAD
Reinf	REINFORCED,
	REINFORCEMENT,
	REINFORCING
Rel	RELOCATE
Repl	REPLACEMENT
Ret	RETAINING
Rev	REVISED, REVISION
Rdwy	ROADWAY
RHMA	RUBBERIZED HOT MIX ASPHALT
Riv	RIVER
RM	ROAD-MIXED
RP	RADIUS POINT,
	REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION,
	REVISED STANDARD PLAN
Rt	RIGHT
Rte	ROUTE
RW	REDWOOD,
	RETAINING WALL
R/W	RIGHT OF WAY
Rwy	RAILWAY

S

S	SOUTH,
	SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
Salv	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SAND CUSHION
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
Sec	SECOND,
	SECTION
Sep	SEPARATION
SG	SUBGRADE
Shld	SHOULDER
Sht	SHEET
Sim	SIMILAR
℄	STATION LINE
SM	SELECTED MATERIAL
Spec	SPECIAL,
	SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
SS	SLOPE STAKE
SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
St	STREET
Sta	STATION
STBB	SINGLE THRIE BEAM BARRIER
Std	STANDARD
Str	STRUCTURE
Surf	SURFACING
SW	SIDEWALK,
	SOUND WALL
Swr	SEWER
Sym	SYMMETRICAL
S4S	SURFACE 4 SIDES

T

T	SEMI-TANGENT
Tan	TANGENT
TBB	THRIE BEAM BARRIER
Tbr	TIMBER
TC	TOP OF CURB
TCB	TRAFFIC CONTROL BOX
TCE	TEMPORARY CONSTRUCTION EASEMENT
Tel	TELEPHONE
Temp	TEMPORARY
TG	TOP OF GRADE
Tot	TOTAL
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
Trans	TRANSITION

T continued

TS	TRANSVERSE,
	TRAFFIC SIGNAL,
	TUBULAR STEEL
Typ	TYPICAL

U

UC	UNDERCROSSING
UD	UNDERDRAIN
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS

V

V	VALVE,
	DESIGN SPEED
Var	VARIABLE,
	VARIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
Vert	VERTICAL
Via	VIADUCT
Vol	VOLUME

W

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

X

X Sec	CROSS SECTION
Xing	CROSSING

Y

Yr	YEAR
Yrs	YEARS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

July 19, 2013

PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER — Grace M. Tsuchiya — No. C78814 — Exp. 9-30-14 — CIVIL — STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____

UNIT OF MEASUREMENT SYMBOLS:

Some of the symbols used in the project plan quantity tables and in the Bid Item List are:

TABLE A

SYMBOL USED	DEFINITIONS
ACRE	ACRE
CF	CUBIC FOOT
CY	CUBIC YARD
EA	EACH
GAL	GALLON
LB	POUND
LF	LINEAR FOOT
SQFT	SQUARE FOOT
SQYD	SQUARE YARD
STA	100 FEET
TAB	TABLET
TON	2,000 POUNDS

Some of the symbols used in the plans other than in the project plan quantity tables are:

TABLE B

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft^3, pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
ø	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kip	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

* For use on a sign panel only

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ABBREVIATIONS (SHEET 2 OF 2)

NO SCALE

RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A10B

2010 REVISED STANDARD PLAN RSP A10B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

Roberto L. McLaughlin C40375 3-31-13 CIVIL STATE OF CALIFORNIA

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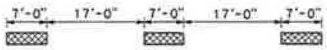
CENTERLINES
(2 LANE HIGHWAYS)

DETAIL 1



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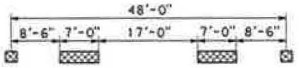
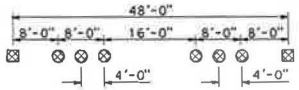


~~DETAIL 3~~ DETAIL 3 DELETED

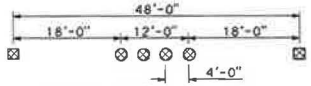
DETAIL 4



DETAIL 5

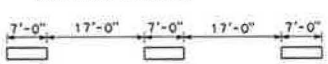
DETAIL 6

DETAIL 7



LANELINES
(MULTILANE HIGHWAYS)

DETAIL 8



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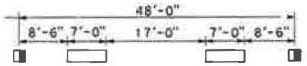
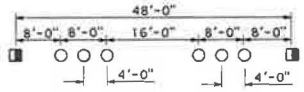
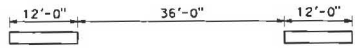


DETAIL 10

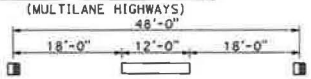


DETAIL 11



LANELINES (Cont)
(MULTILANE HIGHWAYS)

DETAIL 12



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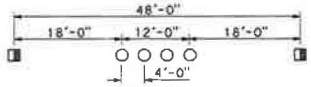
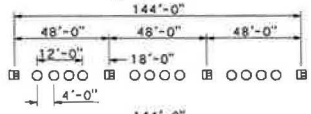
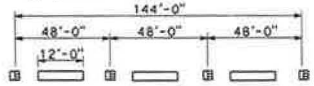


DETAIL 14

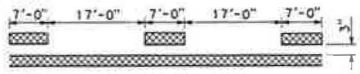


DETAIL 14A

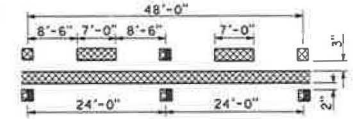


NO PASSING ZONES-ONE DIRECTION

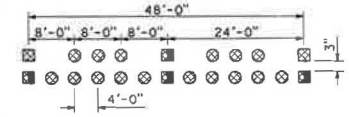
DETAIL 15



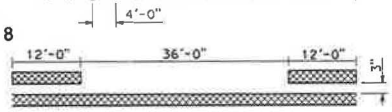
DETAIL 16



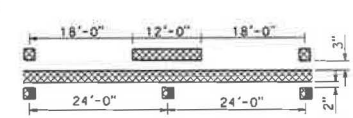
DETAIL 17



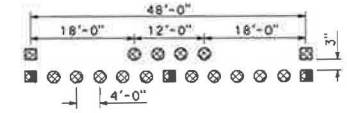
DETAIL 18



DETAIL 19

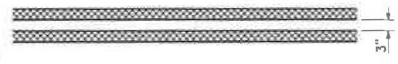


DETAIL 20

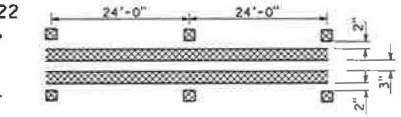


NO PASSING ZONES-TWO DIRECTION

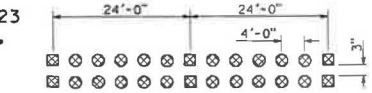
DETAIL 21



DETAIL 22



DETAIL 23



LEGEND

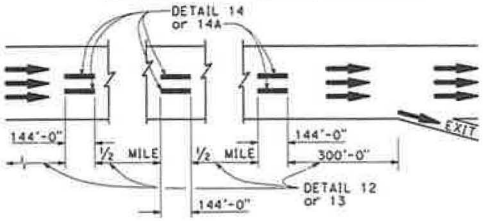
MARKERS

- TYPE A WHITE NON-REFLECTIVE
- TYPE AY YELLOW NON-REFLECTIVE
- TYPE C RED-CLEAR RETROREFLECTIVE
- TYPE D TWO-WAY YELLOW RETROREFLECTIVE
- TYPE G ONE-WAY CLEAR RETROREFLECTIVE
- TYPE H ONE-WAY YELLOW RETROREFLECTIVE

LINES

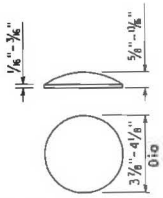
- 4" WHITE
- 4" YELLOW
- DIRECTION OF TRAVEL

TYPICAL LANE LINE DELINEATION IN ADVANCE OF EXIT RAMP

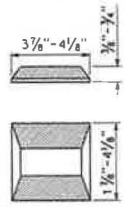


NOTE:
Detail 14 is to be used in combination with Detail 13. Detail 14A is to be used in combination with Detail 12.

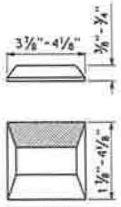
MARKER DETAILS



TYPE A AND TYPE AY



TYPE C AND TYPE D



TYPE G AND TYPE H

RETROREFLECTIVE FACE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

NO SCALE

A20A

2010 STANDARD PLAN A20A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

Robert L. McLoughlin C40375 exp. 3-31-13 CIVIL STATE OF CALIFORNIA

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LEGEND

MARKERS

- TYPE AY YELLOW NON-REFLECTIVE
- TYPE D TWO-WAY YELLOW RETROREFLECTIVE
- TYPE H ONE-WAY YELLOW RETROREFLECTIVE

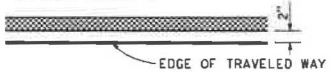
LINES

- 4" WHITE
- 4" YELLOW
- DIRECTION OF TRAVEL

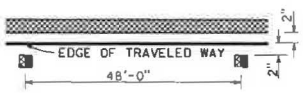
LEFT EDGELINES

(DIVIDED HIGHWAYS)

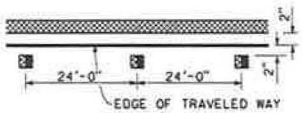
DETAIL 24



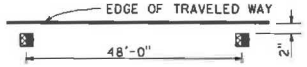
DETAIL 25



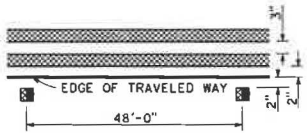
DETAIL 25A



DETAIL 26



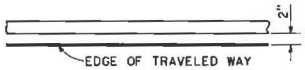
DETAIL 27



RIGHT EDGELINES

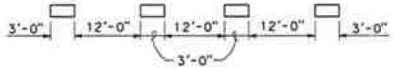
~~DETAIL 27A~~ DETAIL 27A DELETED

DETAIL 27B



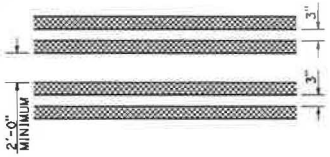
RIGHT EDGELINE EXTENSION THROUGH INTERSECTIONS

DETAIL 27C

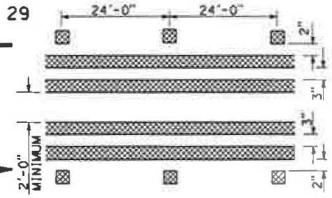


MEDIAN ISLANDS

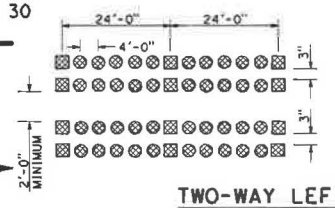
DETAIL 28



DETAIL 29

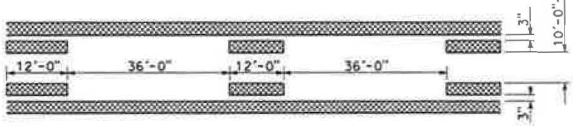


DETAIL 30

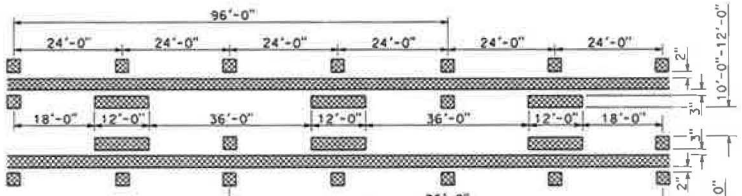


TWO-WAY LEFT TURN LANES

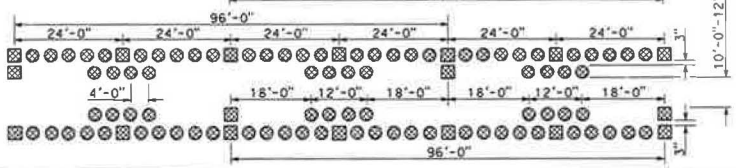
DETAIL 31



DETAIL 32

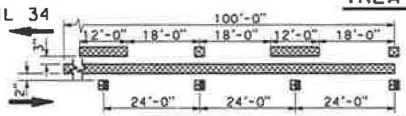


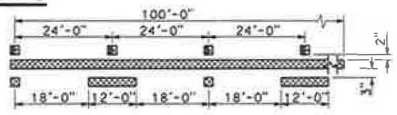
DETAIL 33



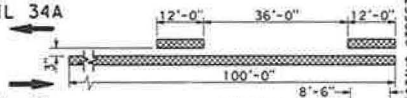
INTERSECTION TREATMENTS

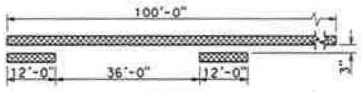
DETAIL 34



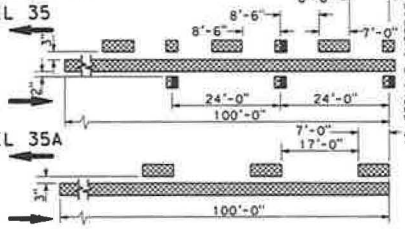


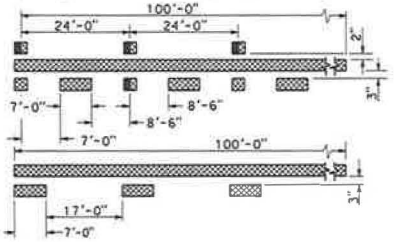
DETAIL 34A





DETAIL 35

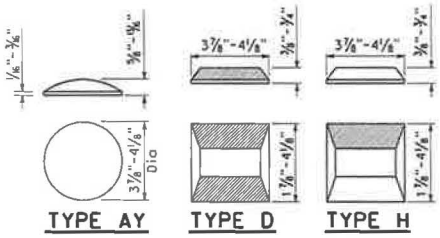




CENTERLINE INTERSECTING STREET

DETAIL 35A

MARKER DETAILS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

NO SCALE

A20B

2010 STANDARD PLAN A20B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

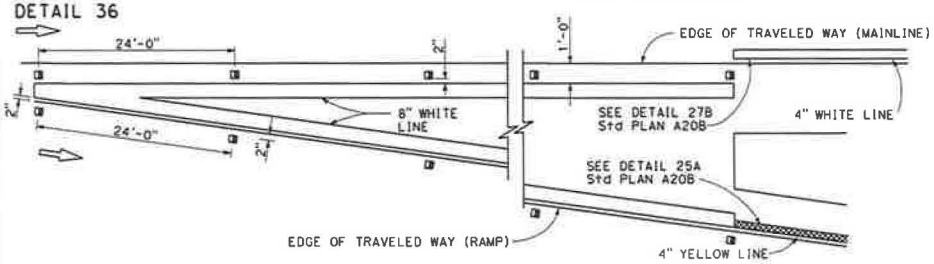
Roberto L. McLoughlin
No. C40315
Exp. 3-31-15
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED _____

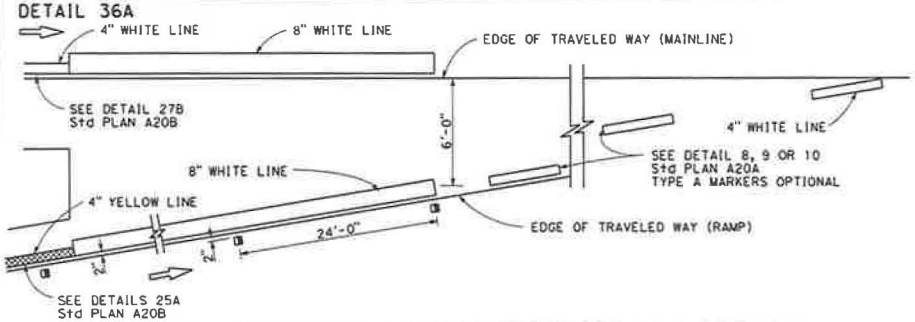
EXIT RAMP NEUTRAL AREA (GORE) TREATMENT

DETAIL 36



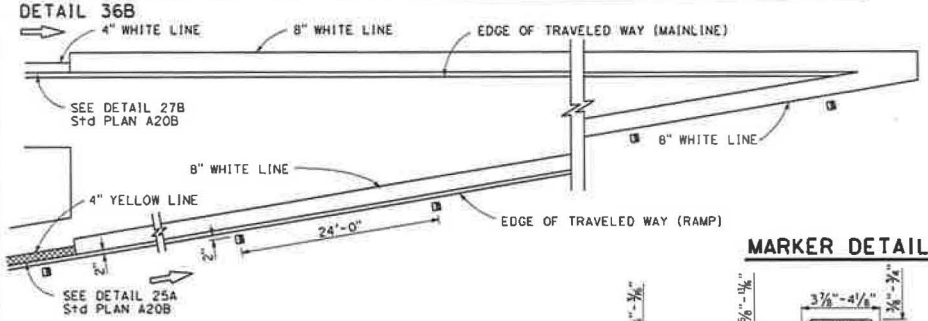
ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT

DETAIL 36A



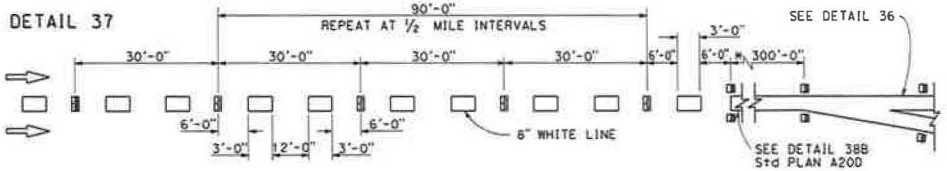
ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT

DETAIL 36B

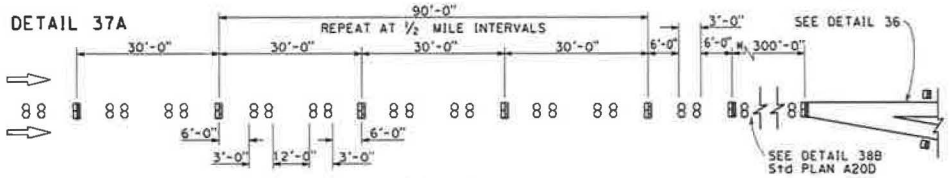


LANE DROP AT EXIT RAMPS

DETAIL 37



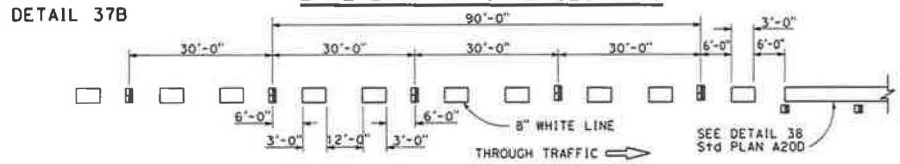
DETAIL 37A



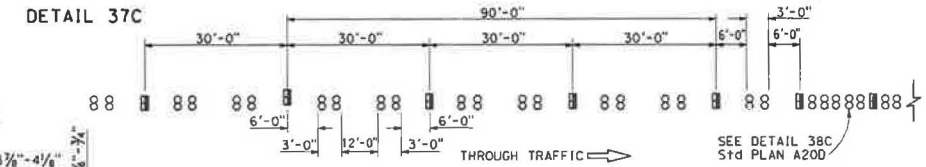
* The solid channelizing line shown may be omitted on short auxiliary lanes where weaving length is critical.

LANE DROP AT INTERSECTIONS

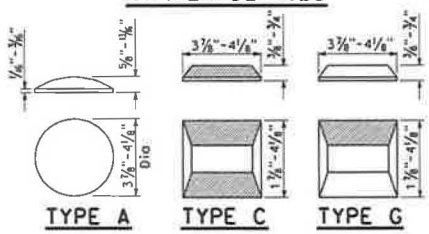
DETAIL 37B



DETAIL 37C



MARKER DETAILS



RETROREFLECTIVE FACE

LEGEND:

MARKERS

- ○ TYPE A WHITE NON-REFLECTIVE
- ▭ TYPE C RED-CLEAR RETROREFLECTIVE
- ◨ TYPE G ONE-WAY CLEAR RETROREFLECTIVE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKERS AND TRAFFIC LINE TYPICAL DETAILS

NO SCALE

RSP A20C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A20C DATED MAY 20, 2011 - PAGE 11 OF THE STANDARD PLANS BOOK DATED 2010.

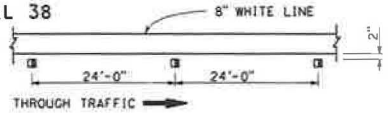
REVISED STANDARD PLAN RSP A20C

2010 REVISED STANDARD PLAN RSP A20C

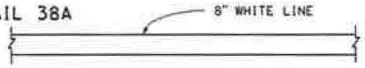
4-29-13

CHANNELIZING LINE

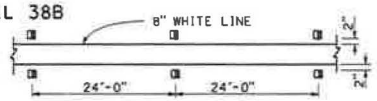
DETAIL 38



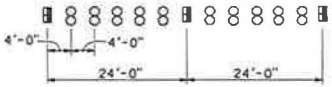
DETAIL 38A



DETAIL 38B

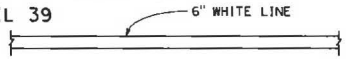


DETAIL 38C



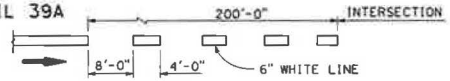
BIKE LANE LINE

DETAIL 39



INTERSECTION LINE
BIKE LANE

DETAIL 39A

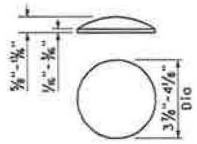


LEGEND

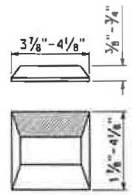
MARKERS

- TYPE A WHITE NON-REFLECTIVE
- TYPE AY YELLOW NON-REFLECTIVE
- TYPE G ONE-WAY CLEAR RETROREFLECTIVE
- 4" YELLOW LINE
- DIRECTION OF TRAVEL

MARKER DETAILS

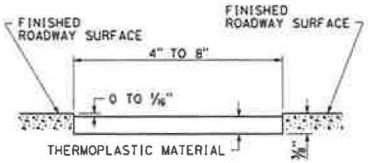


TYPE A AND TYPE AY



TYPE G

RETROREFLECTIVE FACE



DETAIL FOR RECESSED THERMOPLASTIC TRAFFIC STRIPE

See Notes A and B.

RECESSED THERMOPLASTIC NOTES

A. See typical traffic line details for pavement marking patterns.

B. The top of the thermoplastic installed in recessed pavement shall be 0 to 1/16" below the pavement surface.

LANE LINE EXTENSIONS THROUGH INTERSECTIONS

DETAIL 40

DETAIL 40A

CENTER LINE EXTENSIONS THROUGH INTERSECTIONS

DETAIL 41

DETAIL 41A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

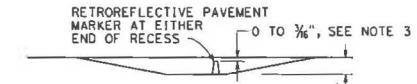
REGISTERED CIVIL ENGINEER

May 20, 2011

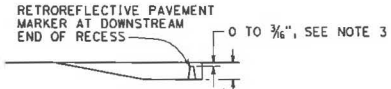
PLANS APPROVAL DATE

Roberta L. McLoughlin No. C40375 Exp. 3-31-13 CIVIL STATE OF CALIFORNIA

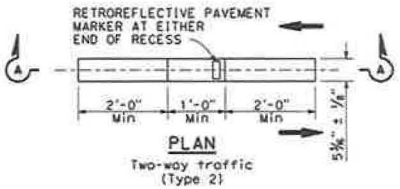
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



SECTION A-A

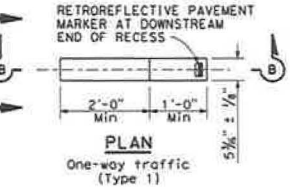


SECTION B-B



PLAN

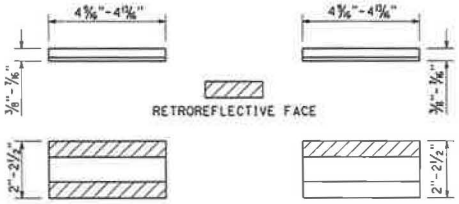
Two-way traffic (Type 2)



PLAN

One-way traffic (Type 1)

RECESS DETAIL FOR RETROREFLECTIVE PAVEMENT MARKER



TYPE C AND TYPE D TYPE G AND TYPE H

See Notes 1 and 2.

RETROREFLECTIVE PAVEMENT MARKER FOR RECESSED INSTALLATION

RECESSED MARKER NOTES:

1. See typical traffic line details for marker patterns to be used with recessed pavement markers. Detail 14A requires a Type 2 recess.
2. The retroreflective pavement markers shown for recessed installations are not to be used for non-recessed installations.
3. The top of pavement markers installed in recesses shall be 0 to 3/16" below the pavement surface.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

NO SCALE

A20D

2010 STANDARD PLAN A20D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

April 20, 2012
PLANS APPROVAL DATE

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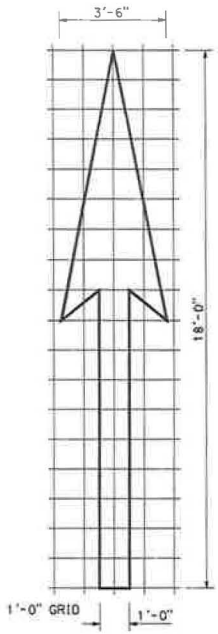
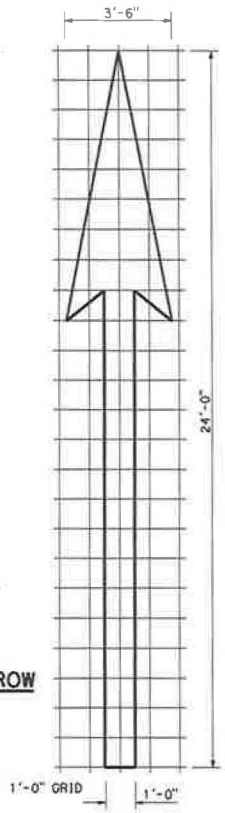
REGISTERED PROFESSIONAL ENGINEER Roberta L. McLoughlin C40375 exp. 3-31-13 CIVIL STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____



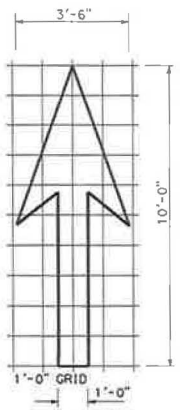
A=25 ft²

TYPE I 18'-0" ARROW



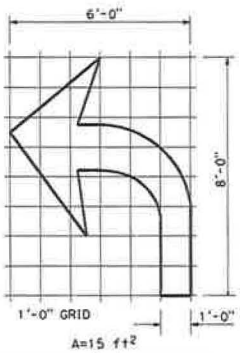
A=31 ft²

TYPE I 24'-0" ARROW



A=14 ft²

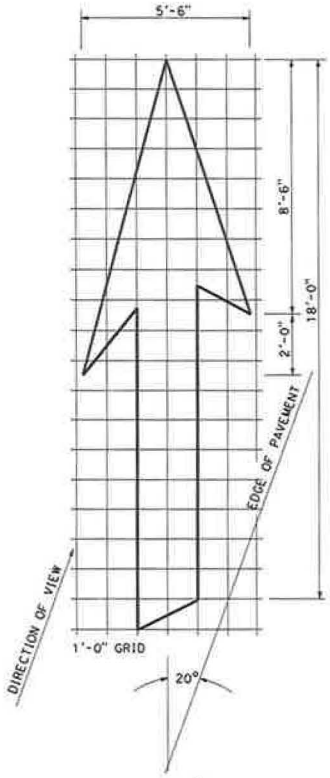
TYPE I 10'-0" ARROW



A=15 ft²

TYPE IV (L) ARROW

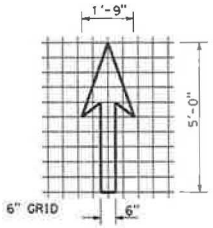
(For Type IV (R) arrow, use mirror image)



A=42 ft²

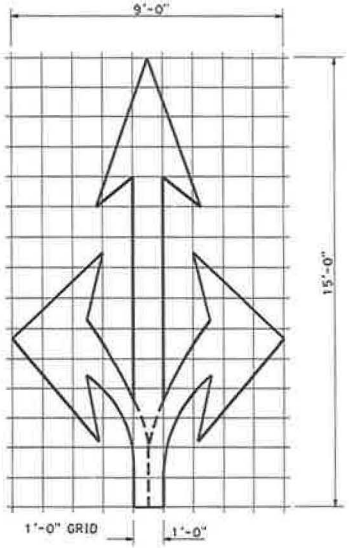
TYPE VI ARROW

Right lane drop arrow
(For left lane, use mirror image)



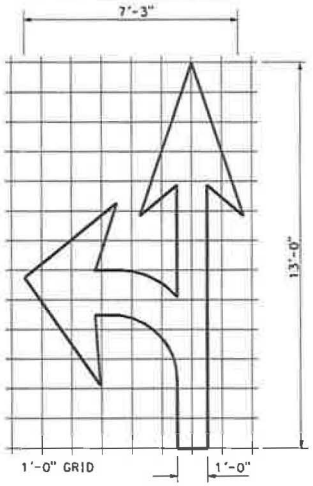
A=3.5 ft²

BIKE LANE ARROW



A=36 ft²

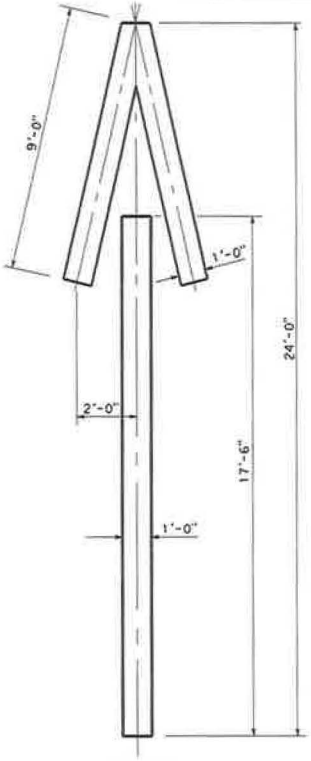
TYPE VIII ARROW



A=27 ft²

TYPE VII (L) ARROW

(For Type VII (R) arrow, use mirror image)



A=33 ft²

TYPE V ARROW

NOTE:
Minor variations in dimensions may be accepted by the Engineer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS ARROWS

NO SCALE

RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A DATED MAY 20, 2011 - PAGE 13 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24A

2010 REVISED STANDARD PLAN RSP A24A

9-14-12

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

Roberto L. McLoughlin C40375 exp. 3-31-13 CIVIL STATE OF CALIFORNIA

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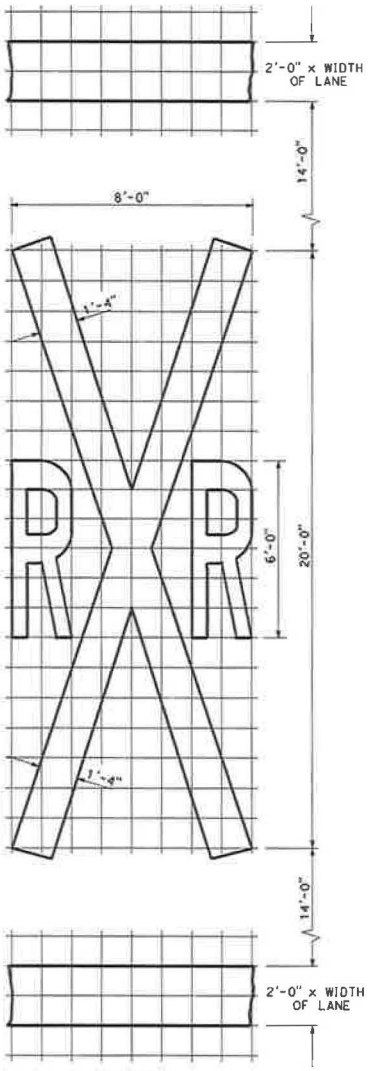
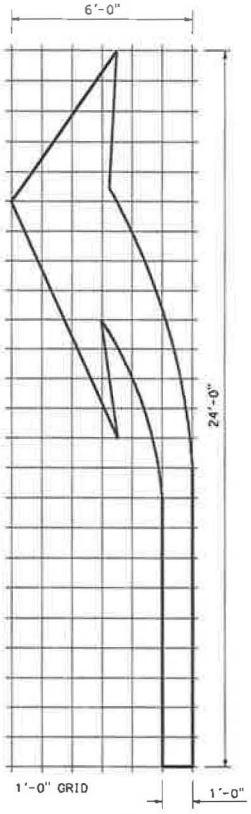


1'-0" GRID
A=70 ft² *

RAILROAD CROSSING SYMBOL

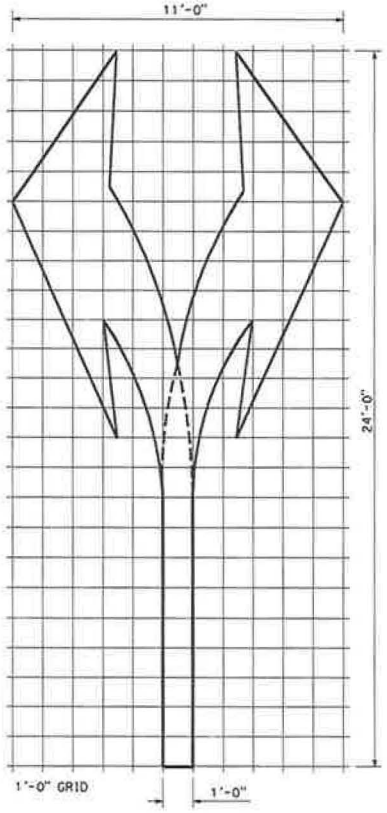
* 70 ft² does not include the 2'-0" x variable width transverse lines.



A=42 ft²

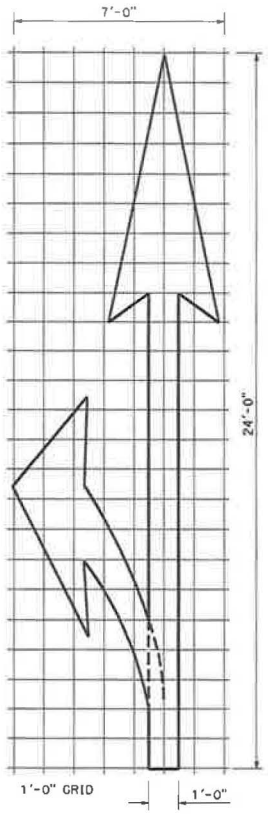
TYPE III (L) ARROW

(For Type III (R) use mirror image)



A=73 ft²

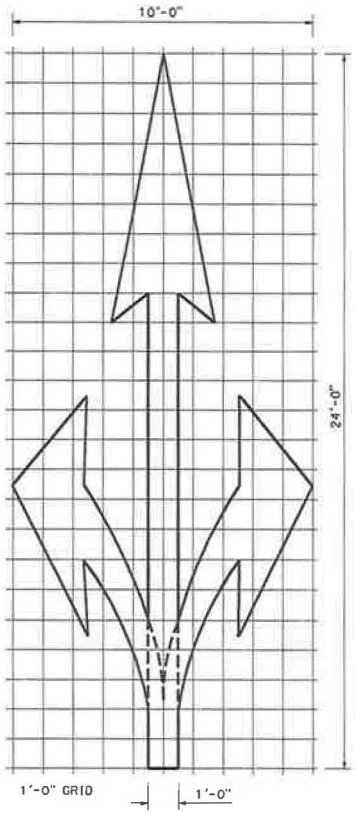
TYPE III (B) ARROW



A=45 ft²

TYPE II (L) ARROW

(For Type II (R) use mirror image)



A=59 ft²

TYPE II (B) ARROW

NOTE:

Minor variations in dimensions may be accepted by the Engineer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS ARROWS AND SYMBOLS

NO SCALE

A24B

2010 STANDARD PLAN A24B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

October 19, 2012
PLANS APPROVAL DATE

Roberta L. McLoughlin
C40375
EXP. 3-31-13
CIVIL
STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

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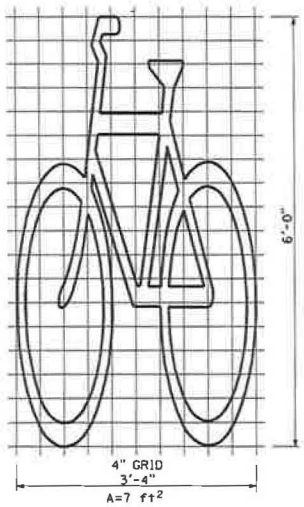
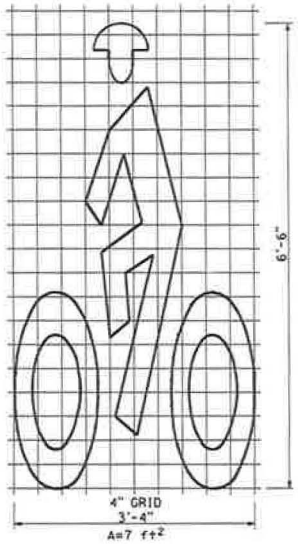
NOTE: TO ACCOMPANY PLANS DATED _____

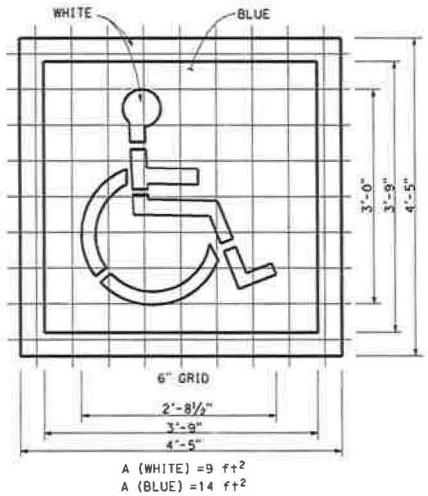
Minor variations in dimensions may be accepted by the Engineer.



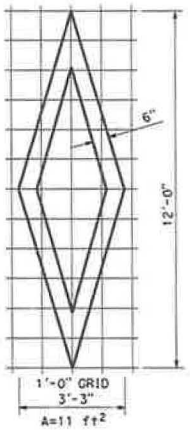
BIKE LANE SYMBOL WITHOUT PERSON



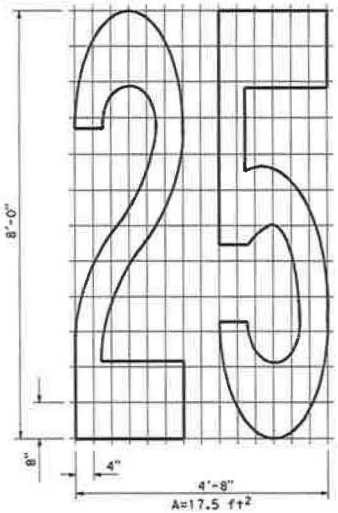
BIKE LANE SYMBOL WITH PERSON

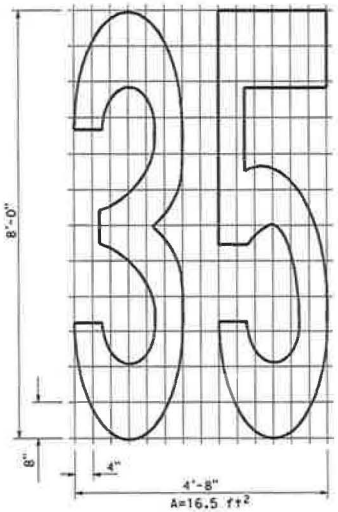


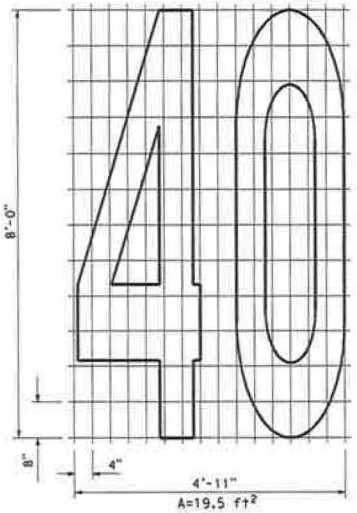
INTERNATIONAL SYMBOL OF ACCESSIBILITY (ISA) MARKING



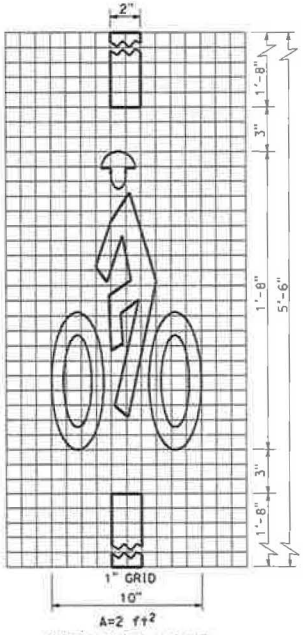
DIAMOND SYMBOL



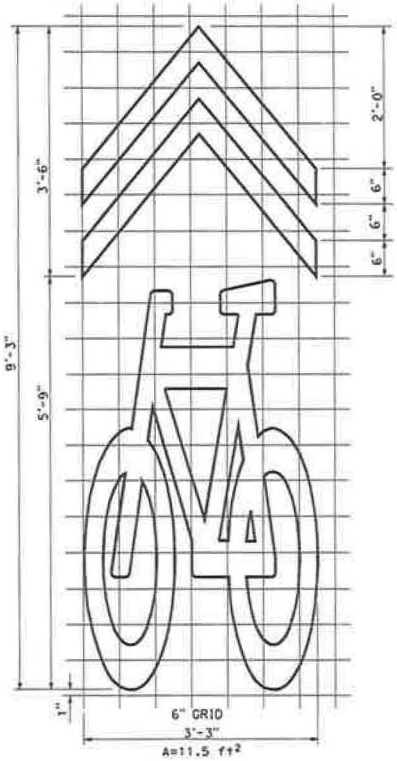




NUMERALS



BICYCLE LOOP DETECTOR SYMBOL



SHARED ROADWAY BICYCLE MARKING

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS SYMBOLS AND NUMERALS

NO SCALE

RSP A24C DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN A24C DATED MAY 20, 2011 - PAGE 15 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24C

2010 REVISED STANDARD PLAN RSP A24C

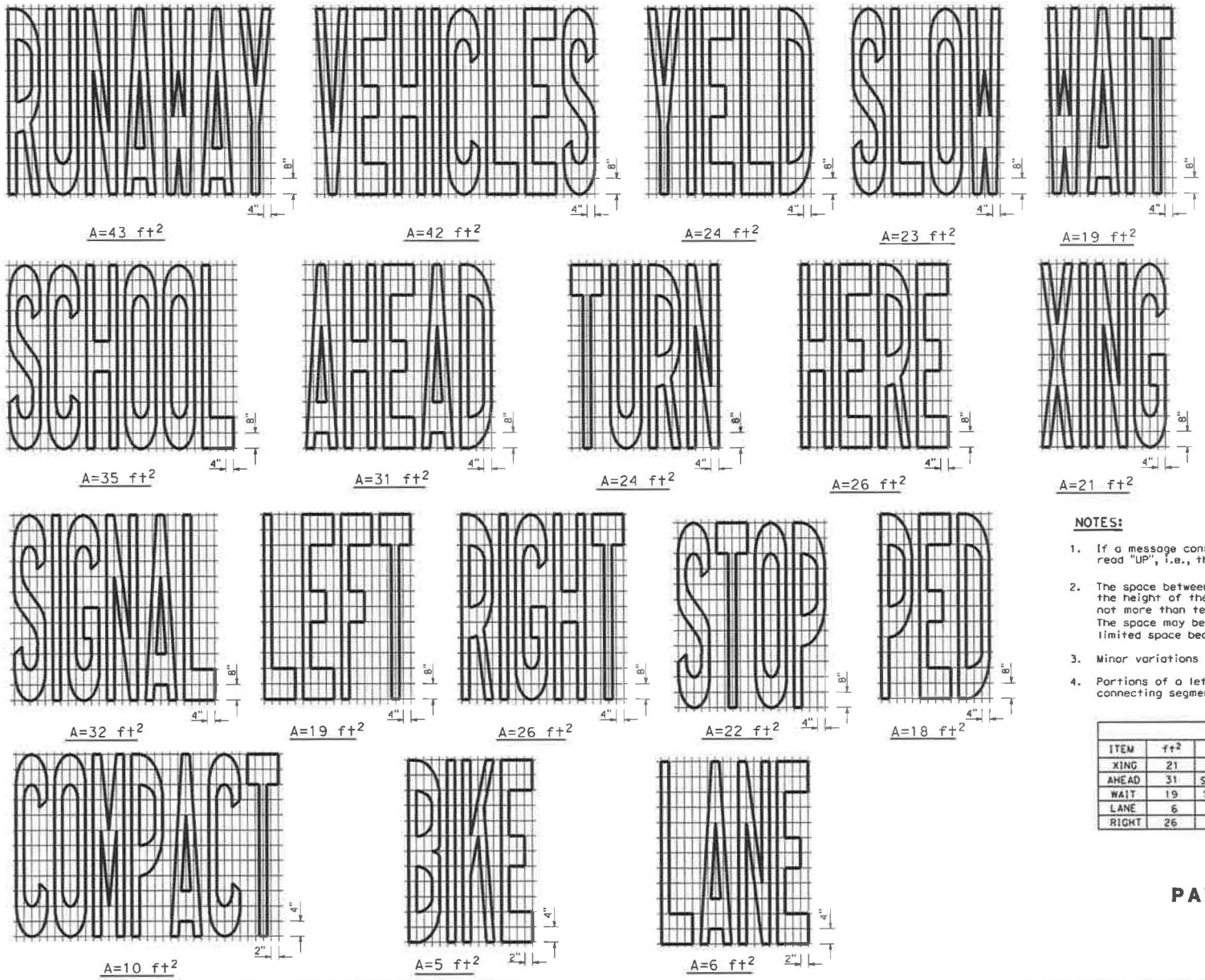
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER Roberto L. McLoughlin C40375 exp. 3-31-13 CIVIL STATE OF CALIFORNIA



NOTES:

1. If a message consists of more than one word, it should read "UP", i.e., the first word should be nearest the driver.
2. The space between words should be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.

WORD MARKINGS							
ITEM	ft²	ITEM	ft²	ITEM	ft²	ITEM	ft²
XING	21	YIELD	24	BIKE	5	PED	18
AHEAD	31	SCHOOL	35	SLOW	23	COMPACT	10
WAIT	19	SIGNAL	32	STOP	22	RUNAWAY	43
LANE	6	TURN	24	LEFT	19	VEHICLES	42
RIGHT	26	HERE	26				

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS WORDS

NO SCALE

A24D

2010 STANDARD PLAN A24D

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

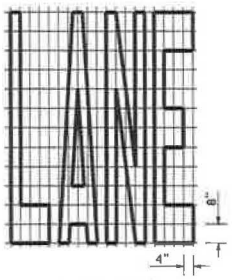
REGISTERED CIVIL ENGINEER

July 20, 2012
PLANS APPROVAL DATE

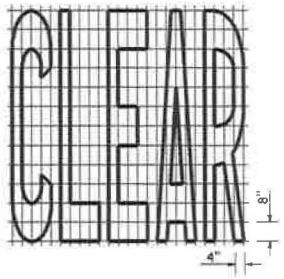
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER Roberto L. McLaughlin C40375 exp. 3-31-13 CIVIL STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____



A=24 ft²



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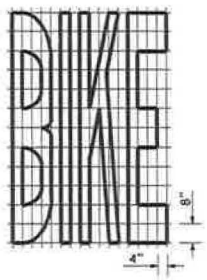

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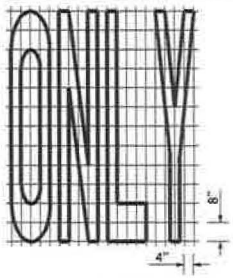

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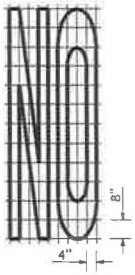
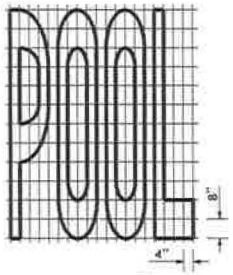
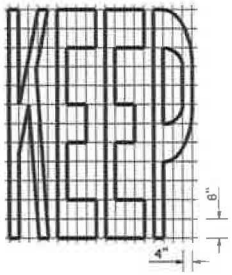


A=14 ft²



A=23 ft²



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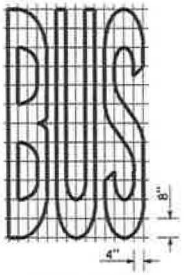
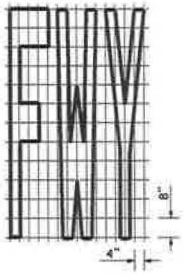
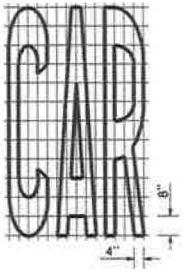


A=20 ft²



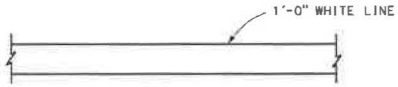
A=16 ft²



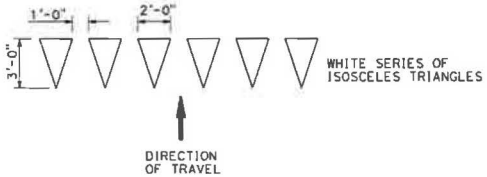
A=17 ft²

WORD MARKINGS			
ITEM	ft²	ITEM	ft²
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16

A=2 ft²
See Notes 6 and 7



LIMIT LINE (STOP LINE)



YIELD LINE

NOTES:

1. If a message consists of more than one word, it should read "UP", i.e., the first word should be nearest the driver.
2. The space between words should be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.
5. The words "NO PARKING" pavement marking is to be used for parking facilities. For typical locations of markings, see Standard Plans A90A and A90B.
6. The words "NO PARKING", shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
WORDS, LIMIT AND YIELD LINES

NO SCALE

RSP A24E DATED JULY 20, 2012 SUPERSEDES STANDARD PLAN A24E
DATED MAY 20, 2011 - PAGE 17 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24E

2010 REVISED STANDARD PLAN RSP A24E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

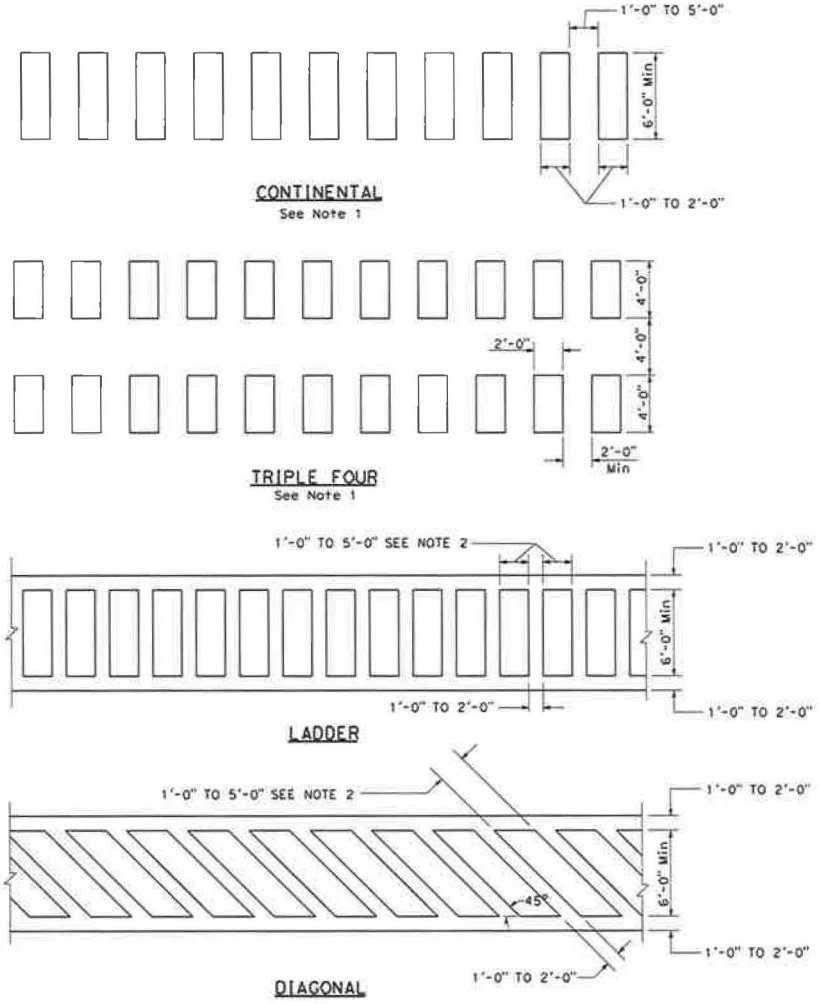
REGISTERED CIVIL ENGINEER

July 20, 2012
PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER Roberta L. McLoughlin C40375 Exp. 3-31-13 CIVIL STATE OF CALIFORNIA

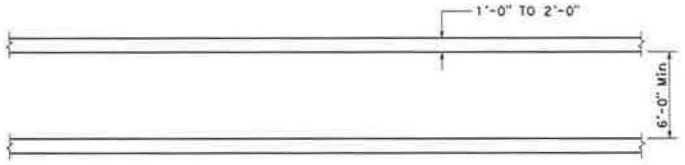
TO ACCOMPANY PLANS DATED _____



HIGHER VISIBILITY CROSSWALKS

NOTES:

1. Spaces between markings should be placed in wheel tracks of each lane.
2. Spacings not to exceed 2.5 times width of longitudinal line.
3. All crosswalk markings must be white except for those near schools must be yellow.



BASIC

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS CROSSWALKS

NO SCALE

RSP A24F DATED JULY 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24F

2010 REVISED STANDARD PLAN RSP A24F

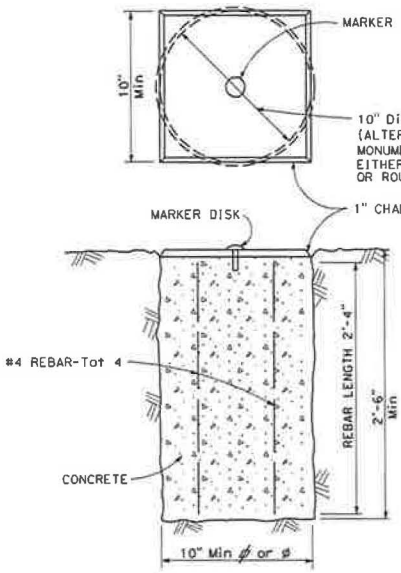
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

PROFESSIONAL LAND SURVEYOR

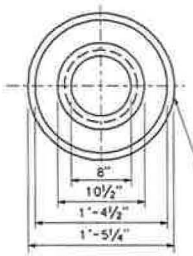
May 20, 2011
PLANS APPROVAL DATE

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

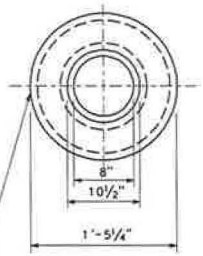
LICENSED LAND SURVEYOR Mark S. Turner No. 6828 Exp. 3-31-12 STATE OF CALIFORNIA



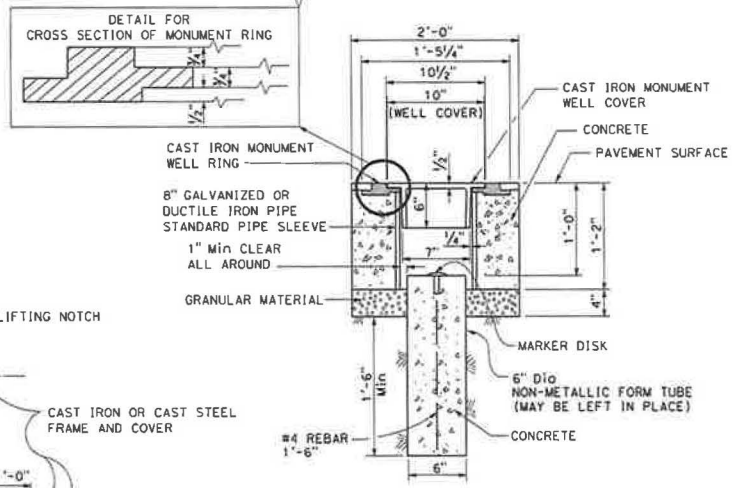
TYPE A



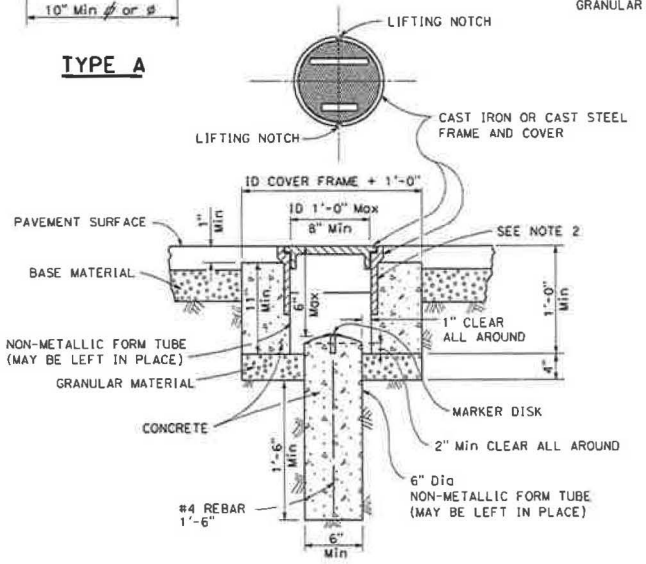
TOP VIEW OF MONUMENT OF WELL RING



BOTTOM VIEW OF MONUMENT OF WELL RING



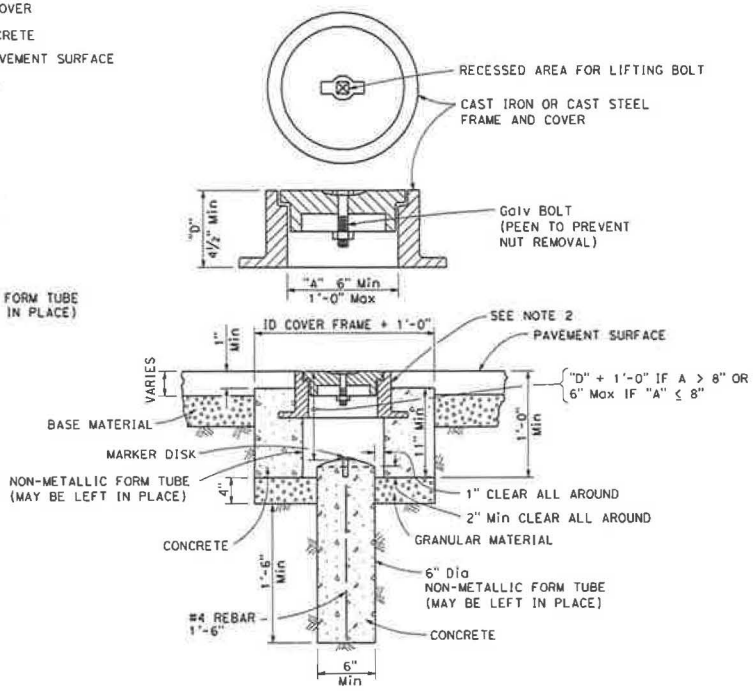
TYPE B



TYPE D
Alternative No. 1

NOTES:

1. The configuration of the cast iron or cast steel frame and cover may vary from that shown.
2. Frame shall be embedded in the concrete a minimum of 3".



TYPE D
Alternative No. 2

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

SURVEY MONUMENTS

NO SCALE

A74

2010 STANDARD PLAN A74

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

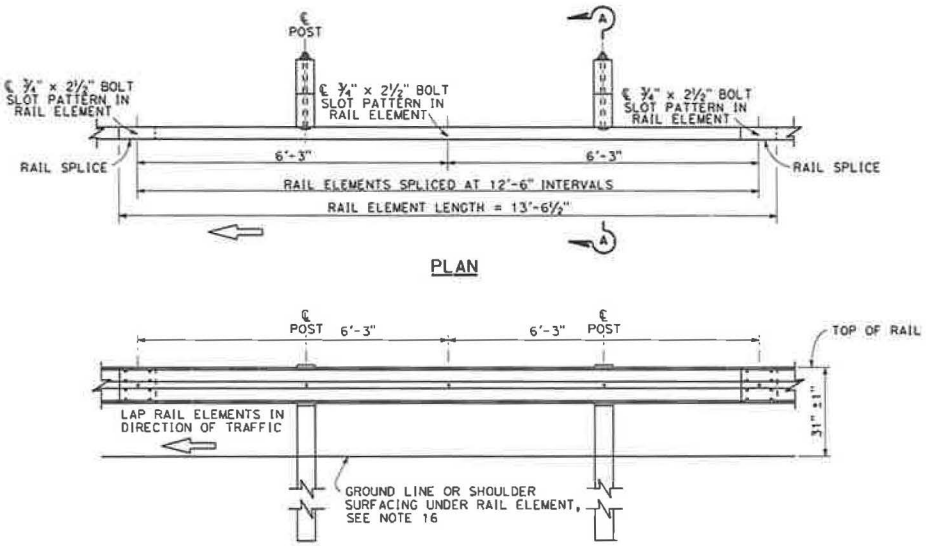
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

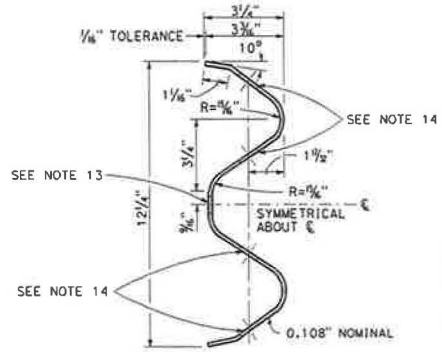
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER Randell D. Hiatt No. C50200 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

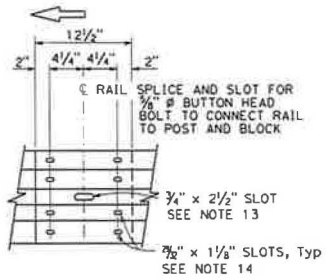
TO ACCOMPANY PLANS DATED _____



MIDWEST GUARDRAIL SYSTEM WITH WOOD POST AND BLOCKS



SECTION THRU RAIL ELEMENT



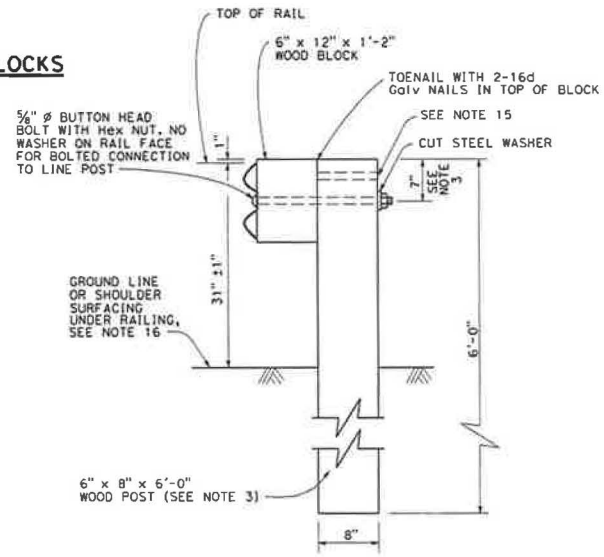
ELEVATION

RAIL ELEMENT SPLICE DETAIL

a) Connect the over lapped end of the rail elements with ⅝" ø x 1 7/8" button head oval shoulder splice bolts inserted into the 29/32" x 1⅛" slots and bolted together with ⅝" ø recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.

b) The ends of the rail elements are to be overlapped in the direction of traffic (see details).

c) Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



SECTION A-A

TYPICAL WOOD LINE POST INSTALLATION

See Note 4

NOTES:

1. For details of steel post installations, see Revised Standard Plan RSP A77L2.
2. For details of standard hardware used to construct MGS, see Revised Standard Plan RSP A77M1.
3. For details of wood posts and wood blocks used to construct MGS, see Revised Standard Plan RSP A77N1.
4. For additional installation details, see Revised Standard Plan RSP A77N3.
5. MGS post spacing to be 6'-3" center to center, except as otherwise noted.
6. For MGS typical layouts, see the A77P, A77Q and A77R Series of Standard Plans.
7. If railing is connected to terminal system end treatment, use 31" height terminal system end treatment.
8. For MGS end anchor details, see Revised Standard Plans RSP A77S1 and RSP A77T2.
9. For details of MGS transition to bridge railing, see Revised Standard Plan RSP A77U4.
10. For additional details of MSG connection to bridge railing, see Revised Standard Plans RSP A77U1, RSP A77U2 and RSP A77V1.
11. For MGS connection details to abutments and walls, see Revised Standard Plan RSP A77U3.
12. For typical MGS delineation and dike positioning details, see Revised Standard Plan RSP A77N4.
13. Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
14. Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
15. Additional hole in uppermost portion of line post is for potential future adjustments of railing height. See Revised Standard Plan RSP A77N1.
16. Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

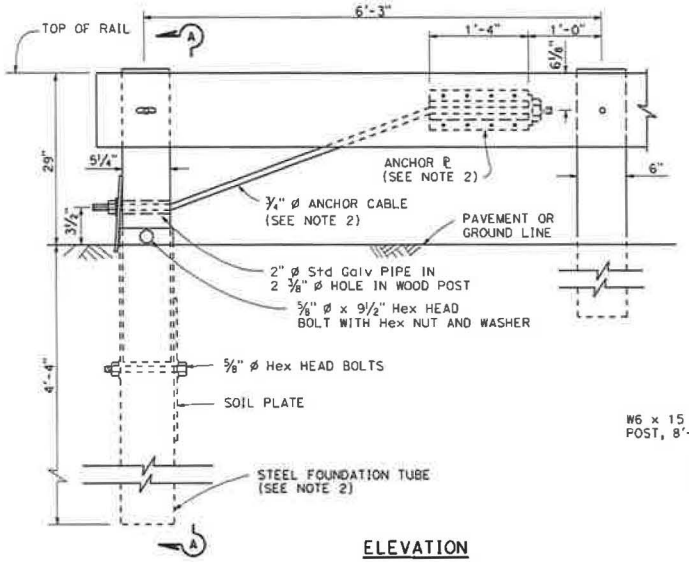
MIDWEST GUARDRAIL SYSTEM STANDARD RAILING SECTION (WOOD POST WITH WOOD BLOCK)

NO SCALE

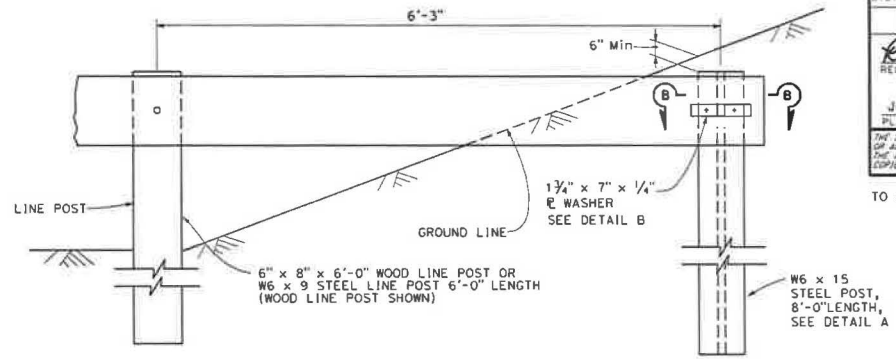
RSP A77L1 DATED JULY 19, 2013 SUPPLEMENTS STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77L1

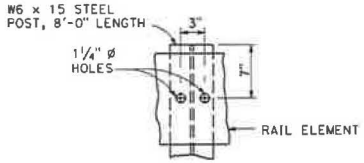
2010 REVISED STANDARD PLAN RSP A77L1



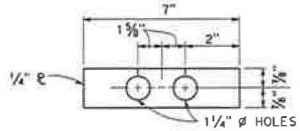
ELEVATION
END ANCHOR
ASSEMBLY (TYPE SFT)



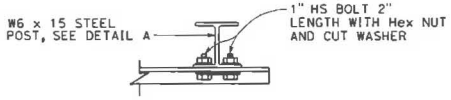
BURIED POST END ANCHOR



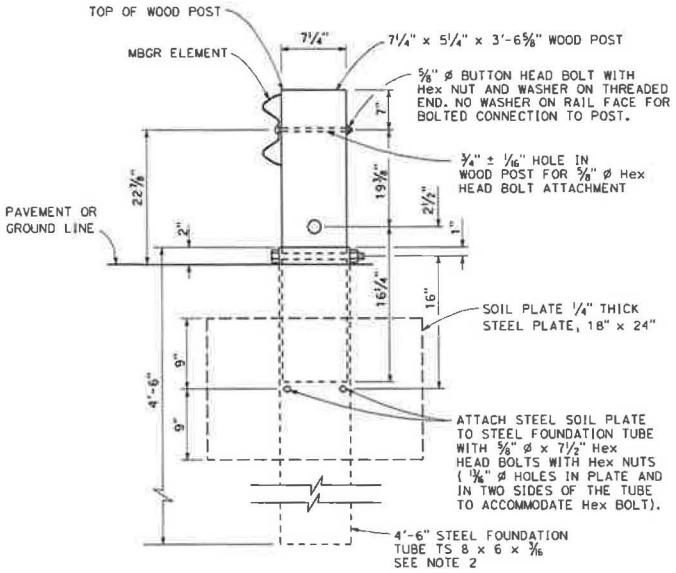
DETAIL A



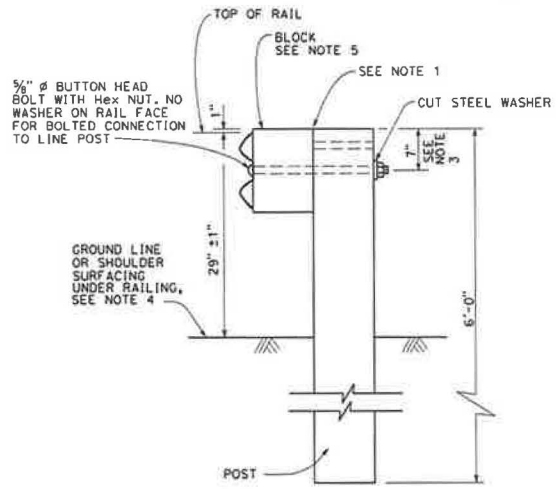
DETAIL B



SECTION B-B



SECTION A-A



TYPICAL LINE
POST INSTALLATION

NOTES:

1. For wood post and wood block, toenail with 2-16d Galv nails in top of block. For steel post and notched wood or plastic block, notched face of block faces steel post.
2. A 6'-0" Length steel foundation tube, TS 8 x 6 x 3/16, without a soil plate, may be furnished and installed in place of the 4'-6" length steel foundation tube and soil plate shown. Minimum embedment of the 6'-0" length tube shall be 5'-9". A 5/8" ø Hex head bolt and nut shall be installed in the hole in the 6'-0" length tube to keep the wood post from dropping into the tube.
3. To connect railing to 27" terminal system end treatment, transition the top of railing height at a ratio of 120:1 to terminal system end treatment height plus one 12'-6" standard railing section at the transitioned height for a horizontal connection to the end treatment.
4. Install posts in soil.
5. See Revised Standard Plans RSP A77N1 and RSP A77N2 for details.
6. Holes excavation in the slope to construct the buried post end anchor shall be backfilled with selected earth, placed in layers approximately 1'-0" thick. Each layer shall be moistened and thoroughly compacted.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
C50200
6-30-15
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING RECONSTRUCT INSTALLATION

NO SCALE

RSP A77L3 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77L3

2010 REVISED STANDARD PLAN RSP A77L3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

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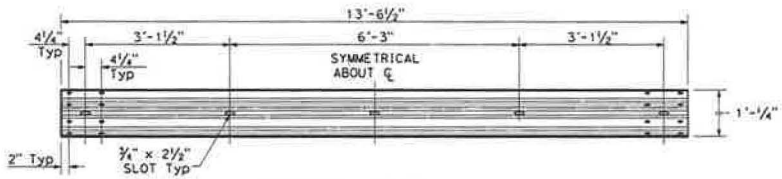
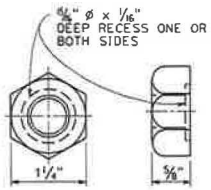
TO ACCOMPANY PLANS DATED _____



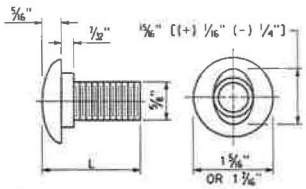
TYPICAL RAIL ELEMENT

NOTE:

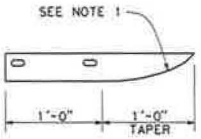
1. Slotted holes for splice bolts to overlap ends of rail element.



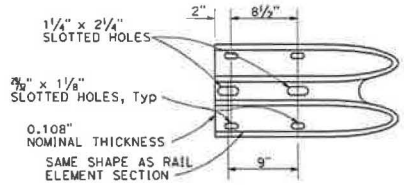
5/8" ø RECESS NUT



5/8" ø BUTTON HEAD BOLT



PLAN



ELEVATION

END CAP (TYPE A)

BUTTON HEAD BOLT

L	THREAD LENGTH
1⅜"	FULL THREAD LENGTH
2"	FULL THREAD LENGTH
10"	4" Min THREAD LENGTH
18"	4" Min THREAD LENGTH
20"	4" Min THREAD LENGTH
22"	4" Min THREAD LENGTH
26"	4" Min THREAD LENGTH
36"	4" Min THREAD LENGTH
** 2¾"	2" Min THREAD LENGTH
** 19"	4" Min THREAD LENGTH

** For nested rail applications.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM STANDARD HARDWARE

NO SCALE

RSP A77M1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77M1

2010 REVISED STANDARD PLAN RSP A77M1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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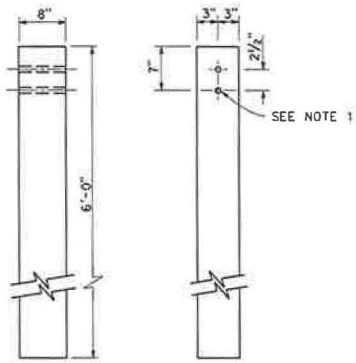
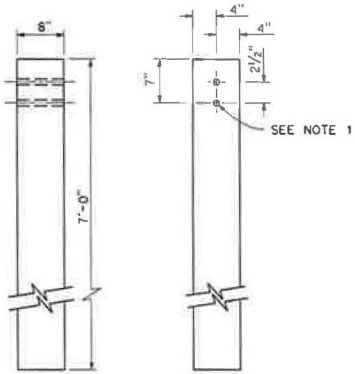
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____



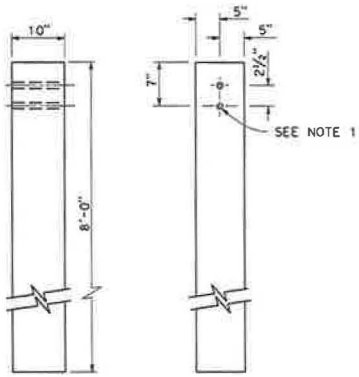
SIDE FRONT

6" x 8" WOOD POST
See Note 3



SIDE FRONT

8" x 8" WOOD POST
See Note 4

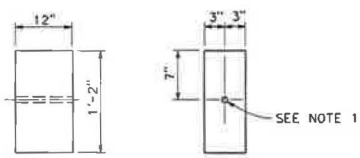


SIDE FRONT

10" x 10" WOOD POST
See Note 5

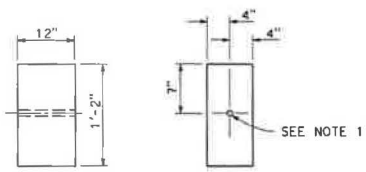
NOTES:

1. All holes in wood posts and blocks shall be ¾" Dia ± 1/16".
2. Dimensions shown for wood post are nominal.
3. This post and block combination used for standard line post sections of MGS.
4. This post and 8" x 12" block combination used for line post sections of MGS on narrow roadways.
5. This post and 8" x 12" block combination is typically used where strengthened line post sections of MGS are warranted to shield fixed objects.
6. See Revised Standard Plan RSP A77L3 for use of 6" x 8" and 8" x 8" wood blocks.



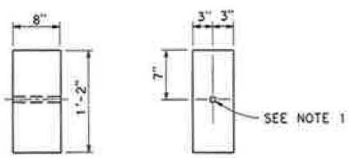
SIDE FRONT

6" x 12" WOOD BLOCK
See Note 3



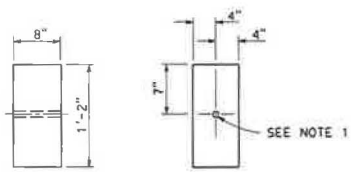
SIDE FRONT

8" x 12" WOOD BLOCK



SIDE FRONT

6" x 8" WOOD BLOCK
Only for use with metal beam guard rail see Note 6



SIDE FRONT

8" x 8" WOOD BLOCK
Only for use with metal beam guard rail see Note 6

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM WOOD POST AND WOOD BLOCK DETAILS

NO SCALE

RSP A77N1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N1

2010 REVISED STANDARD RSP PLAN A77N1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

November 15, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

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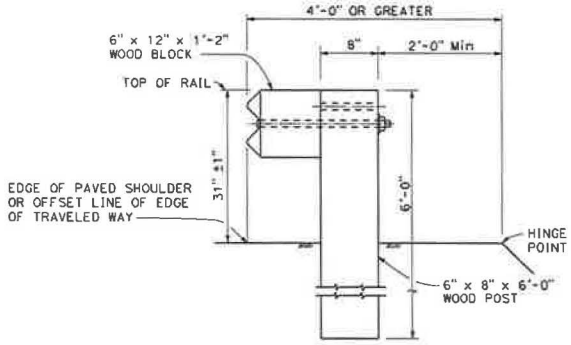
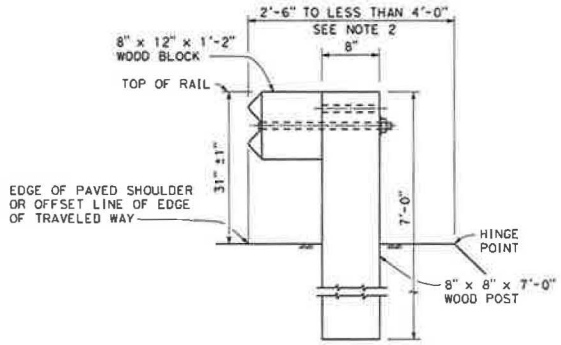
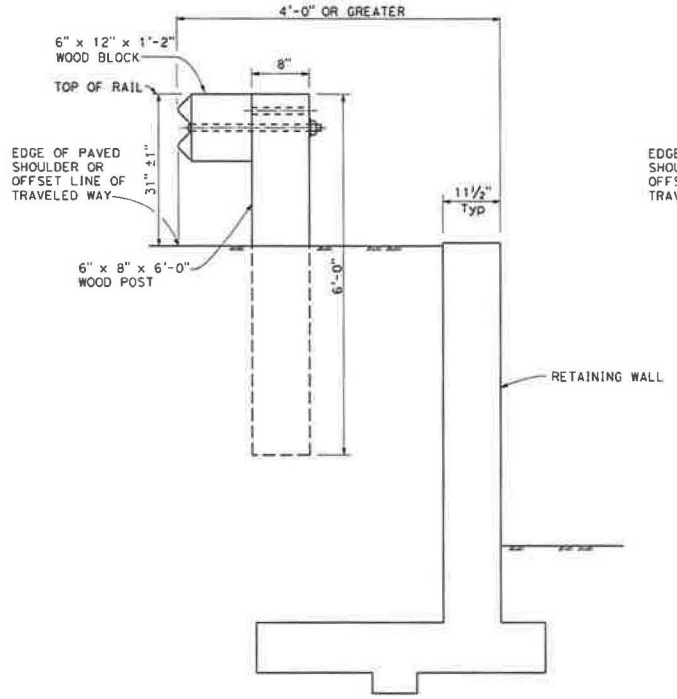


DETAIL A
TYPICAL ROADWAY INSTALLATION
See Note 1

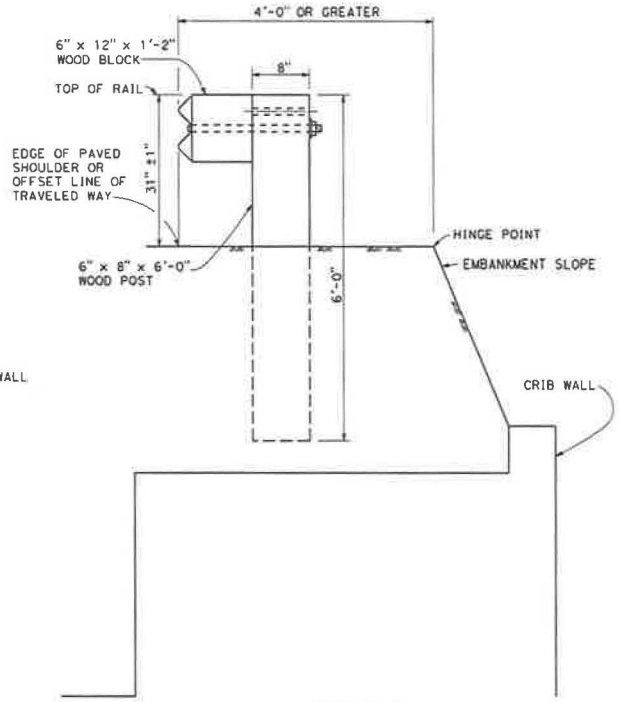


DETAIL B
NARROW ROADWAY INSTALLATION
See Note 1

POST EMBEDMENT



DETAIL C



DETAIL D

INSTALLATION AT EARTH RETAINING WALLS

NOTES:

1. These installation details also applicable to steel line post installations. For Detail A, C, and D, where steel line post installations are constructed, W6 x 8.5 or W6 x 9 steel post, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For Detail B, where steel line post installations are constructed, W6 x 15 steel post, 8'-0" in length, with 8" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For additional installation details, see Revised Standard Plan RSP A77L1 and RSP A77L2.
2. Where the distance between the face of the rail and the hinge point is less than 2'-6", see the Project Plans for special details.
3. For dike positioning with MGS installations, see Revised Standard Plan RSP A77N4.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM TYPICAL LINE POST EMBEDMENT AND HINGE POINT OFFSET DETAILS

NO SCALE

RSP A77N3 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77N3 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N3

2010 REVISED STANDARD PLAN RSP A77N3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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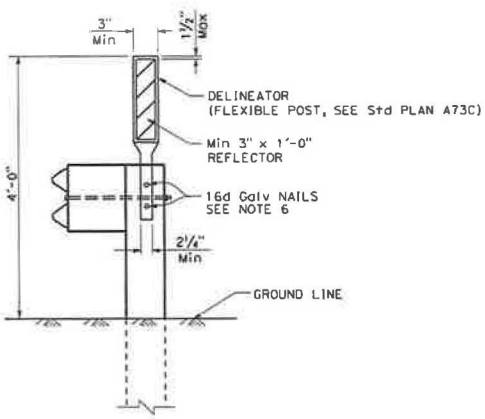
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

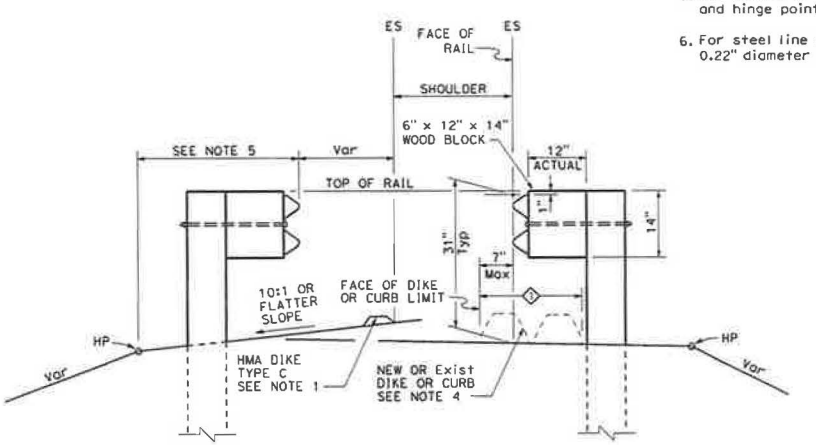
TO ACCOMPANY PLANS DATED _____

NOTES:

1. When necessary to place dike more than 7" in front of face of MGS, only Type C dike may be used. For dike details, see Revised Standard Plan RSP A87B.
2. For standard railing post embedment, see Revised Standard Plan RSP A77N3.
3. MGS delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under MGS, the maximum height of the dike or curb shall be 6". Mountable dike should not be used. For dike and curb details, see Revised Standard Plans RSP A87A and RSP A87B.
5. For details of typical distance between the face of rail and hinge point, see Revised Standard Plan RSP A77N3.
6. For steel line posts, use ¼ - 20 self-tapping screws in 0.22" diameter holes or ¼" bolts in 9/32" diameter holes.



MGS DELINEATION
See Note 3



DIKE POSITIONING
See Note 1

1 PERMISSIBLE DIKE OR CURB PLACEMENT AREA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM TYPICAL RAILING DELINEATION AND DIKE POSITIONING DETAILS

NO SCALE

RSP A77N4 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N4

2010 REVISED STANDARD PLAN RSP A77N4

F-10-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
exp. 6-30-15
CIVIL
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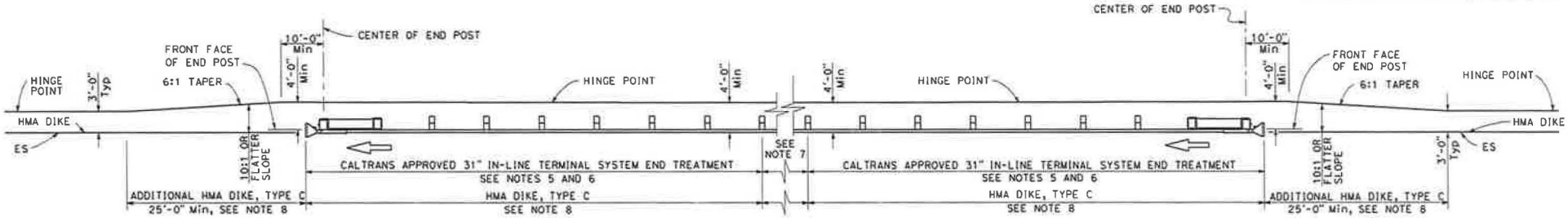
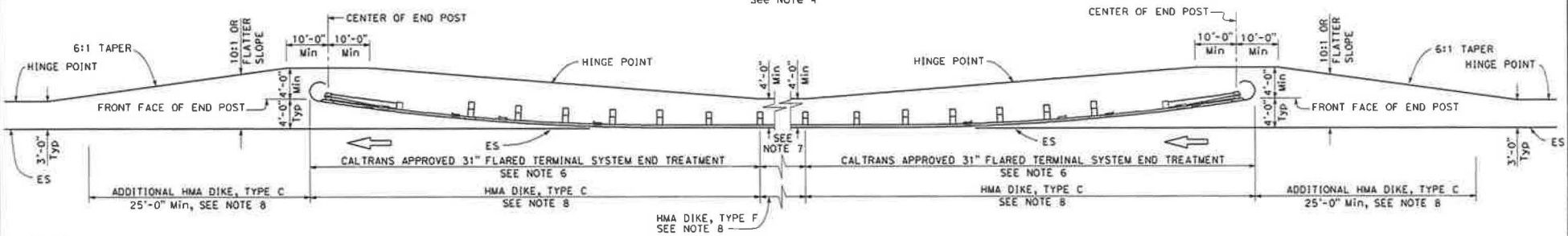


TYPE 11D LAYOUT

(Embankment MGS installation with
31" in-line end treatment at each end of railing)
See Note 4



TYPE 11E LAYOUT

(Embankment MGS installation with
31" flared end treatment at each end of railing)
See Note 4

NOTES:

1. Line post, blocks and hardware to be used are shown on Revised Standard Plans RSP A77L1, RSP A77L2, RSP A77M1, RSP A77N1 and RSP A77N2.
2. MGS post spacing to be 6'-3" center to center, except as otherwise noted.
3. Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 12" x 1'-2" wood blocks, W6 x 8.5 or W6 x 9 steel posts, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 12" x 1'-2" wood blocks where applicable and when specified.
4. Layout Types 11D through 11L, shown on the A77P Series of Standard Plans, are typically used where MGS is recommended to shield embankment slopes and a crashworthy 31" end treatment is required for both directions of traffic.
5. 31" in-line terminal system end treatments are used where site conditions will not accommodate a flared end treatment.
6. The type of 31" terminal system end treatment to be used will be shown on the Project Plans.
7. Dependent on site conditions (embankment height and side slope), construction of additional MGS (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
8. Where placement of dike is required with MGS installations, see Revised Standard Plan RSP A77N4 for dike positioning details.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM TYPICAL LAYOUTS FOR EMBANKMENTS

NO SCALE

RSP A77P2 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77P2

2010 REVISED STANDARD PLAN RSP A77P2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

November 15, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Randell D. Hiatt C50200 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

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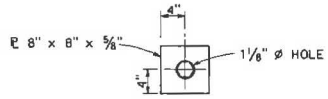
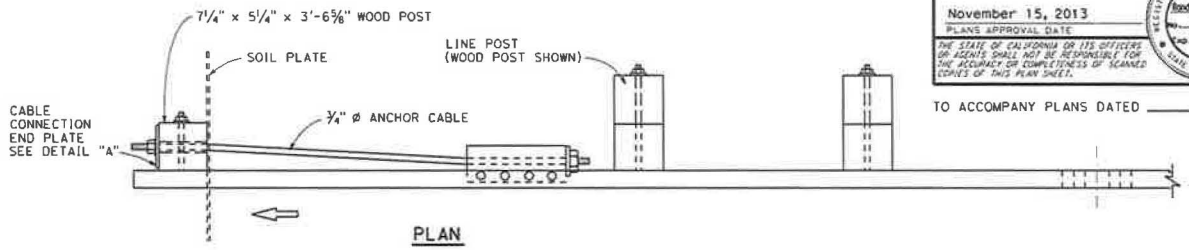
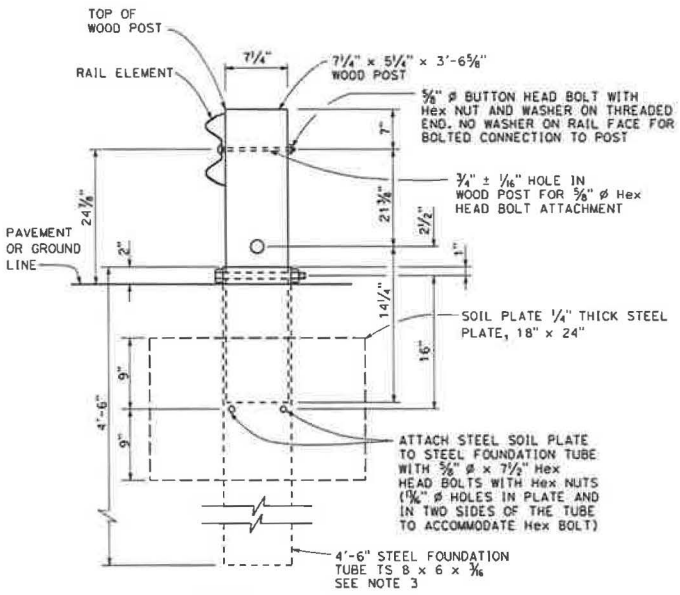


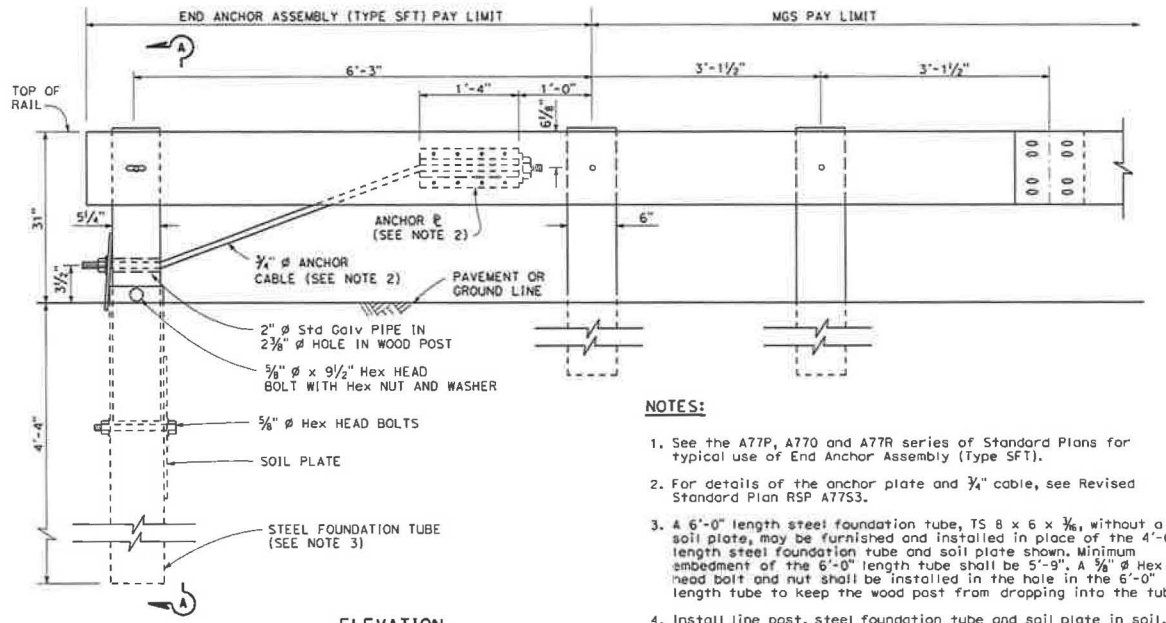
DETAIL "A"
CABLE CONNECTION END PLATE



PLAN



SECTION A-A



ELEVATION

END ANCHOR ASSEMBLY (TYPE SFT)
See Note 1

NOTES:

1. See the A77P, A77O and A77R series of Standard Plans for typical use of End Anchor Assembly (Type SFT).
2. For details of the anchor plate and 3/4" cable, see Revised Standard Plan RSP A77S3.
3. A 6'-0" length steel foundation tube, TS 8 x 6 x 3/16, without a soil plate, may be furnished and installed in place of the 4'-6" length steel foundation tube and soil plate shown. Minimum embedment of the 6'-0" length tube shall be 5'-9". A 5/8" ø Hex head bolt and nut shall be installed in the hole in the 6'-0" length tube to keep the wood post from dropping into the tube.
4. Install line post, steel foundation tube and soil plate in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM END ANCHOR ASSEMBLY (TYPE SFT)

NO SCALE

RSP A77S1 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77S1 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77S1

2010 REVISED STANDARD PLAN RSP A77S1

10-4-13

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

July 19, 2013
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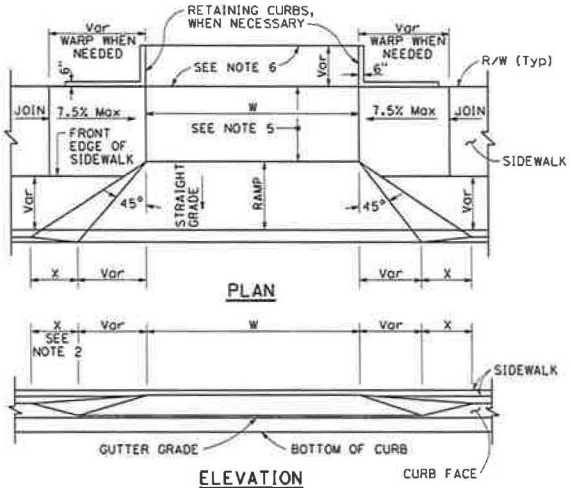
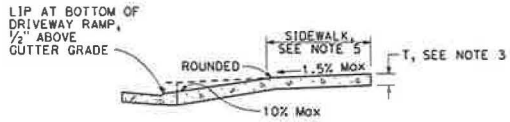
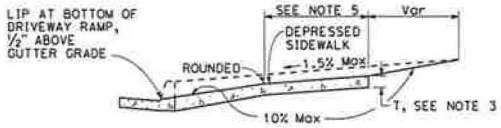




CASE A

Typical driveway, sidewalk not depressed



CASE B

Driveway with depressed sidewalk

SECTIONS

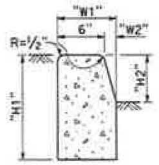
TABLE A

CURB TYPE	DIMENSIONS			
	"H1"	"H2"	"W1"	"W2"
A1-6	1'-2"	6"	7½"	1½"
A1-8	1'-4"	8"	8"	2"
A2-6	1'-0"	6"	2'-7½"	1½"
A2-8	1'-2"	8"	2'-8"	2"
A3-6	6"	5"	7¼"	1¼"
A3-8	8"	7"	7¾"	1¾"
B1-4	1'-0"	4"	7½"	2½"
B1-6	1'-2"	6"	9"	4"
B2-4	10"	4"	2'-7½"	2½"
B2-6	1'-0"	6"	2'-9"	4"
B3-4	4"	3"	7"	2"
B3-6	6"	5"	8½"	3½"
D-4	10"	4"	1'-6"	1'-1"
D-6	1'-0"	6"	2'-2"	1'-9"

CURB QUANTITIES

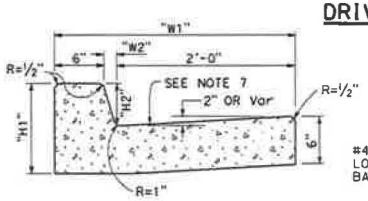
TYPE	CUBIC YARDS PER LINEAR FOOT
A1-6	0.02585
A1-8	0.03084
A2-6	0.05903
A2-8	0.06379
A3-6	0.01036
A3-8	0.01435
B1-4	0.02185
B1-6	0.02930
B2-4	0.05515
B2-6	0.06171
B3-4	0.00641
B3-6	0.01074
B4	0.05709
D-4	0.04083
D-6	0.06804
E	0.06661

DRIVEWAYS



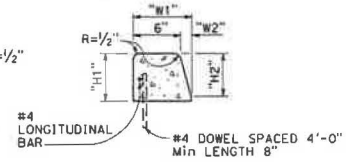
TYPE A1 CURBS

See Table A



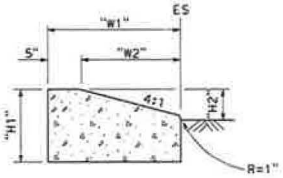
TYPE A2 CURBS

See Table A



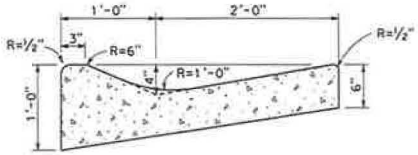
TYPE A3 CURBS

Superimposed on existing pavement
See Table A

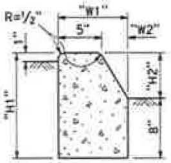


TYPE D CURBS

See Table A

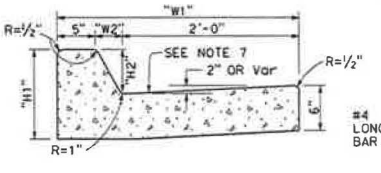


TYPE E CURB



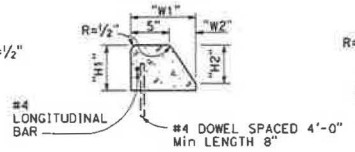
TYPE B1 CURBS

See Table A



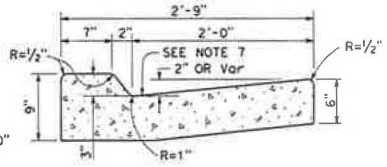
TYPE B2 CURBS

See Table A

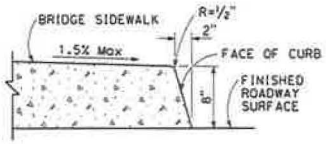


TYPE B3 CURBS

Superimposed on existing pavement
See Table A



TYPE B4 CURBS



TYPE H CURB

On Bridges

CURBS

NOTES:

1. Case A driveway section typically applies.
2. X=3'-0" except for curb heights over 10" where 4:1 slopes shall be used on curb slope.
3. Sidewalk and ramp thickness "T" at driveway shall be 4" for residental and 6" for commercial.
4. Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5'-0" from gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
5. Minimum width of clear passageway for sidewalk shall be 4'-2".
6. Retaining curbs and acquisition of construction easement may be necessary for narrow sidewalks or curb heights in excess of 6".
7. Across the pedestrian route at curb ramp locations, the gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CURBS AND DRIVEWAYS

NO SCALE

RSP A87A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A87A
DATED MAY 20, 2011 - PAGE 119 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A87A

2010 REVISED STANDARD PLAN RSP A87A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Michael Jarzen No. 44788 Exp. 03-31-14 CIVIL STATE OF CALIFORNIA

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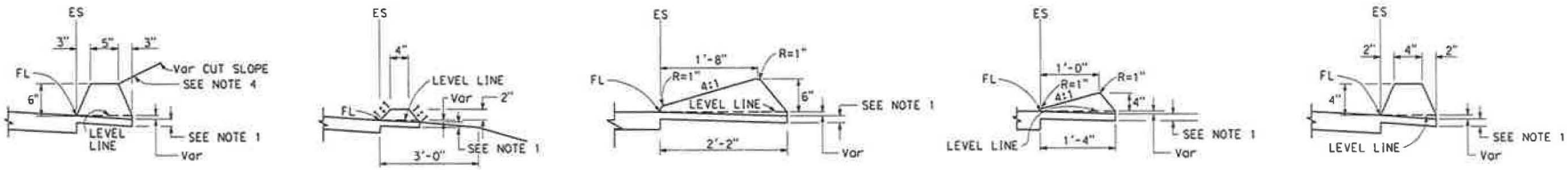
TO ACCOMPANY PLANS DATED _____



TYPE A
See Note 3

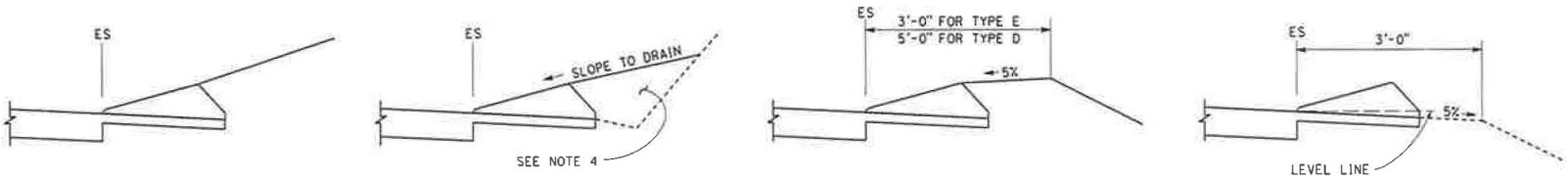
TYPE C

TYPE D

TYPE E

TYPE F
See Note 5

DIKES



CASE C-1
Cut Slope

CASE C-2
Cut Slope

CASE F

CASE R
See Note 2

TYPE D AND E BACKFILL DETAILS

NOTES:

1. For HMA shoulders only, extend top layer of HMA placed on the shoulder under dike with no joint at the ES. For projects with OGFC shoulders, do not extend OGFC under dike. See project plans for modified dike detail.
2. Case R applies to retrofit only projects where restrictive conditions do not provide enough width for Case F backfill.
3. Type A dike only to be used where restrictive slope conditions do not provide enough width to use Type D or Type E dike.
4. Fill and compact with excavated material to top of dike.
5. Use Type F dike, where dike is required with guard railing installations. See Revised Standard Plan RSP A77N4 for dike positioning details.

DIKE QUANTITIES

TYPE	CUBIC YARDS PER LINEAR FOOT
A	0.0135
C	0.0038
D	0.0293
E	0.0130
F	0.0066

Quantities based on 5% cross slope.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

HOT MIX ASPHALT DIKES

NO SCALE

RSP A87B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A87B DATED MAY 20, 2011 - PAGE 120 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A87B

2010 REVISED STANDARD PLAN RSP A87B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

July 19, 2013
PLANS APPROVAL DATE

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

TO ACCOMPANY PLANS DATED _____

A

AB	AGGREGATE BASE
ABS	ACRYLONITRILE-BUTADIENE-STYRENE
AC	ASPHALT CONCRETE
ACC	ARMOR-CLAD CONDUCTORS
Adj	ADJACENT/ADJUSTABLE
AIC	AUXILIARY IRRIGATION CONTROLLER
Alt	ALTERNATIVE
AMEND	AMENDMENT
ARV	AIR RELEASE VALVE
AUTO	AUTOMATIC
AUX	AUXILIARY
AVB	ATMOSPHERIC VACUUM BREAKER

B

B&B	BALLED AND BURLAPPED
B/B	BRASS/BRONZE
B/B/PL	BRASS/BRONZE/PLASTIC
B/PL	BRASS/PLASTIC
BFM	BONDED FIBER MATRIX
Bit Ctd	BITUMINOUS COATED
BP	BOOSTER PUMP
BPA	BACKFLOW PREVENTER ASSEMBLY
BPE	BACKFLOW PREVENTER ENCLOSURE
BV	BALL VALVE

C

C	CONDUIT
CAP	CORRUGATED ALUMINUM PIPE
CARV	COMBINATION AIR RELEASE VALVE
CB	COUPLING BAND
CCA	CAM COUPLER ASSEMBLY
CEC	CONTROLLER ENCLOSURE CABINET
CHDPE	CORRUGATED HIGH DENSITY POLYETHYLENE
CL	CHAIN LINK
CNC	CONTROL AND NEUTRAL CONDUCTORS
Conc	CONCRETE
CP	COPPER PIPE
CS	COMPOST SOCK
CSP	CORRUGATED STEEL PIPE
CST	CENTER STRIP
CV	CHECK VALVE

D

Dia	DIAMETER
DIP	DUCTILE IRON PIPE
DIT	DRIP IRRIGATION TUBING
DG	DECOMPOSED GRANITE
DN	DIAMETER NOMINAL
DVA	DRIP VALVE ASSEMBLY

E

EC	EROSION CONTROL
ECTC	EROSION CONTROL TECHNOLOGY COUNCIL
Elect	ELECTRIC/ELECTRICAL
Elev	ELEVATION
ELL	ELBOW
ENCL	ENCLOSURE
EP	EDGE OF PAVEMENT
ES	EDGE OF SHOULDER
EST	END STRIP
ESTB	ESTABLISHMENT
ETW	EDGE OF TRAVELED WAY

F

F	FULL CIRCLE
F/P	FULL/PART CIRCLE
FCV	FLOW CONTROL VALVE
FERT	FERTILIZER
FG	FINISHED GRADE
FH	FLEXIBLE HOSE
FIPT	FEMALE IRON PIPE THREAD
FIS	FERTILIZER INJECTOR SYSTEM
FL	FLOW LINE
FR	FIBER ROLL
FS	FLOW SENSOR
FSC	FLOW SENSOR CABLE
FV	FLUSH VALVE

G

Galv	GALVANIZED
GARV	GARDEN VALVE
GARVA	GARDEN VALVE ASSEMBLY
GM	GRAVEL MULCH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GSP	GALVANIZED STEEL PIPE
GV	GATE VALVE

H

H	HALF CIRCLE
HDPE	HIGH DENSITY POLYETHYLENE
HP	HORSEPOWER/HINGE POINT
HPL	HIGH PRESSURE LINE
Hwy	HIGHWAY

I

IC	IRRIGATION CONTROLLER
ICC	IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET
ID	INSIDE DIAMETER
IFS	IRRIGATION FILTRATION SYSTEM
IPS	IRON PIPE SIZE
IPT	IRON PIPE THREAD
Irr	IRRIGATION

L

L	LENGTH

M

Max	MAXIMUM
MBGR	METAL BEAM GUARD RAILING
MCV	MANUAL CONTROL VALVE
MIC	MASTER IRRIGATION CONTROLLER
Min	MINIMUM
MIPT	MALE IRON PIPE THREAD
Misc	MISCELLANEOUS
Mtl	MATERIAL
MVP	MAINTENANCE VEHICLE PULLOUT

N

NCN	NO COMMON NAME
NL	NOZZLE LINE
No.	NUMBER
NPT	NATIONAL PIPE THREAD

O

O/C	ON CENTER
OD	OUTSIDE DIAMETER
OL	OVERLAP

P

P	PART CIRCLE
PB	PULL BOX
PCC	PORTLAND CEMENT CONCRETE
PE	POLYETHYLENE
Pkt	PACKET
PL	PLASTIC
PLS	PURE LIVE SEED
PLT	PLANT/PLANTING
PLT ESTB	PLANT ESTABLISHMENT
PM	POST MILE
PR	PRESSURE RATED
PRLV	PRESSURE RELIEF VALVE
PRV	PRESSURE REGULATING VALVE
PVC	POLYVINYL CHLORIDE
Pvmt	PAVEMENT

Q

Q	QUARTER CIRCLE
QCV	QUICK COUPLING VALVE

NOTE:

For additional abbreviations, see Standard Plans A10A and A10B.

R

R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RCV	REMOTE CONTROL VALVE
RCVM	REMOTE CONTROL VALVE (MASTER)
RCVMF	REMOTE CONTROL VALVE (MASTER) W/FLOW SENSOR
RCVP	REMOTE CONTROL VALVE W/PRESSURE REGULATOR
RCW	RECYCLED WATER
RECP	ROLLED EROSION CONTROL PRODUCT
REQ	REQUIRED
RICS	REMOTE IRRIGATION CONTROL SYSTEM
R/W	RIGHT OF WAY

S

S	SLIP
SCH	SCHEDULE
SF	STATE-FURNISHED
Shld	SHOULDER
Sq	SQUARE
SST	SIDE STRIP
Sta	STATION
Std	STANDARD
SW	SIDEWALK/SOUND WALL

T

T	THIRD CIRCLE/THREAD
TLS	TRUCK LOADING STANDPIPE
TQ	THREE QUARTER CIRCLE
TRM	TURF REINFORCEMENT MAT
TT	TWO-THIRDS CIRCLE
TWSA	TREE WELL SPRINKLER ASSEMBLY
Typ	TYPICAL

U

UG	UNDERGROUND

W

W	WIDTH
W/	WITH
WM	WATER METER
WS	WYE STRAINER
WSA	WYE STRAINER ASSEMBLY
WSP	WELDED STEEL PIPE
WWM	WELDED WIRE MESH

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

LANDSCAPE AND EROSION CONTROL ABBREVIATIONS

NO SCALE

RSP H1 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H1
DATED MAY 20, 2011 - PAGE 218 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H1

2010 REVISED STANDARD PLAN RSP H1

EXISTING	NEW	ITEM DESCRIPTION
		WATER METER (WM)
		BACKFLOW PREVENTER ASSEMBLY (BPA)
		BACKFLOW PREVENTER ENCLOSURE (BPE)
		BOOSTER PUMP (BP)
		TRUCK LOADING STANDPIPE (TLS)
	FS	FLOW SENSOR (FS)
		MASTER IRRIGATION CONTROLLER (MIC)
		AUXILIARY IRRIGATION CONTROLLER (AIC)
		IRRIGATION CONTROLLER (IC) IRRIGATION CONTROLLER (IC) (BATTERY) IRRIGATION CONTROLLER (IC) (SOLAR) IRRIGATION CONTROLLER (IC) (TWO WIRE) IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET (ICC)
ACC	ACC	ARMOR-CLAD CONDUCTORS (ACC)
CNC	CNC	CONTROL AND NEUTRAL CONDUCTORS (CNC)
		IRRIGATION CONDUIT
		EXTEND IRRIGATION CONDUIT
dip	DIP	DUCTILE IRON PIPE (SUPPLY LINE) (MAIN) (DIP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (MAIN) (GSP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (LATERAL) (GSP)
		PLASTIC PIPE (SUPPLY LINE) (MAIN)
		PLASTIC PIPE (SUPPLY LINE) (LATERAL)
cp	CP	COPPER PIPE (SUPPLY LINE)
dit	DIT	DRIP IRRIGATION TUBING
		REMOTE CONTROL VALVE (RCV) REMOTE CONTROL VALVE (MASTER) (RCVM) REMOTE CONTROL VALVE (MASTER) W/FLOW METER (RCVMF)
		REMOTE CONTROL VALVE W/PRESSURE REGULATOR (RCVP)
		EXISTING MANUAL CONTROL VALVE (MCV)
		DRIP VALVE ASSEMBLY (DVA)
		WYE STRAINER ASSEMBLY (WSA)

EXISTING	NEW	ITEM DESCRIPTION
		GATE VALVE (GV)
		BALL VALVE (BV)
		QUICK COUPLING VALVE (QCV)
		CAM COUPLER ASSEMBLY (CCA)
		GARDEN VALVE ASSEMBLY (GARVA)
		PRESSURE REGULATING VALVE (PRV)
		PRESSURE RELIEF VALVE (PRLV)
		FLOW CONTROL VALVE (FCV)
		COMBINATION AIR RELEASE VALVE (CARV)
		CHECK VALVE (CV)
		FLUSH VALVE (FV)
		EXISTING NOZZLE LINE W/TURNING UNION
		EXISTING IRRIGATION SYSTEM
		EXISTING IRRIGATION SYSTEM TO BE REMOVED
		CHAIN LINK GATE
		QUICK COUPLING VALVE W/SPRINKLER PROTECTOR
		SPRINKLER W/SPRINKLER PROTECTOR
		CONNECT TO EXISTING SYSTEM
		CAP
		CAP EXISTING
	\\\FR\\\	FIBER ROLL
	\\\CS\\\	COMPOST SOCK

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

LICENSED LANDSCAPE ARCHITECT

November 15, 2013
PLANS APPROVAL DATE

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

LICENSED LANDSCAPE ARCHITECT 2-28-14 11-15-13 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____

2010 REVISED STANDARD PLAN RSP H2

RCV SIZE
IRRIGATION CONTROLLER
CONTROLLER STATION
VALVE IN PARALLEL (IF APPLICABLE)
GPM
QUANTITY OF SPRINKLERS (WHEN SHOWN)

* 2½"-A-2b-40-60

VALVE CODE

* VALVE CODES FOR EXISTING VALVES ARE SHOWN IN A DASHED ENCLOSURE.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

LANDSCAPE AND EROSION CONTROL SYMBOLS

NO SCALE

RSP H2 DATED NOVEMBER 15, 2013 SUPERSEDES RSP H2 DATED JULY 19, 2013 AND STANDARD PLAN H2 DATED MAY 20, 2011 - PAGE 219 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

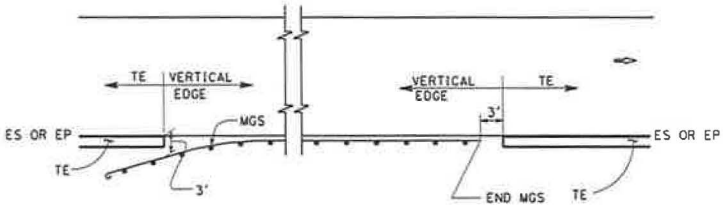
REGISTERED CIVIL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

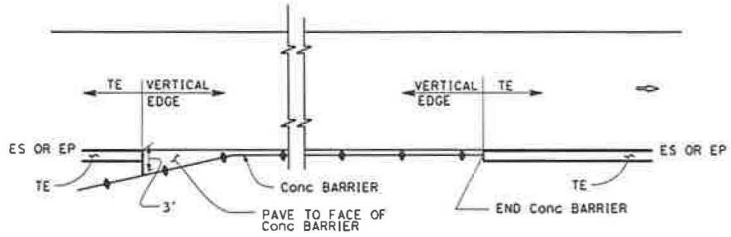
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER Srikanth K. Balasubramanian No. C56426 exp. 6-30-17 CIVIL STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____



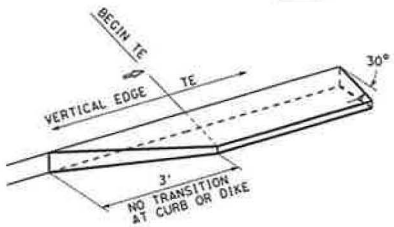
MGS



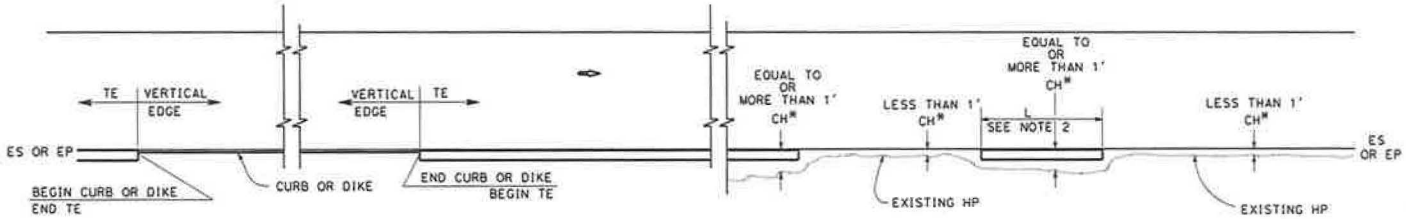
CONCRETE BARRIER

ABBREVIATIONS:

TE TAPERED EDGE



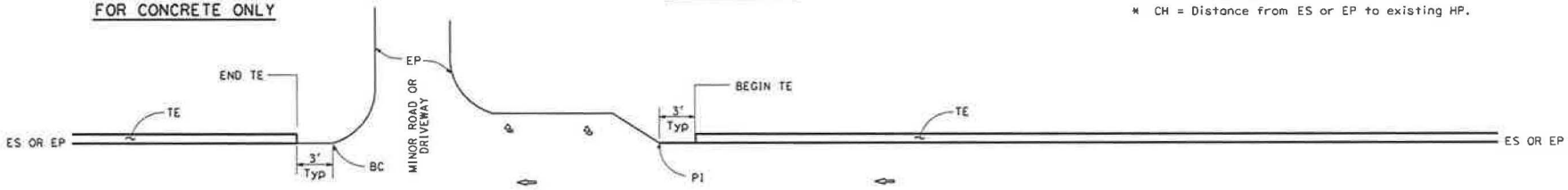
TRANSITION DETAIL FOR CONCRETE ONLY



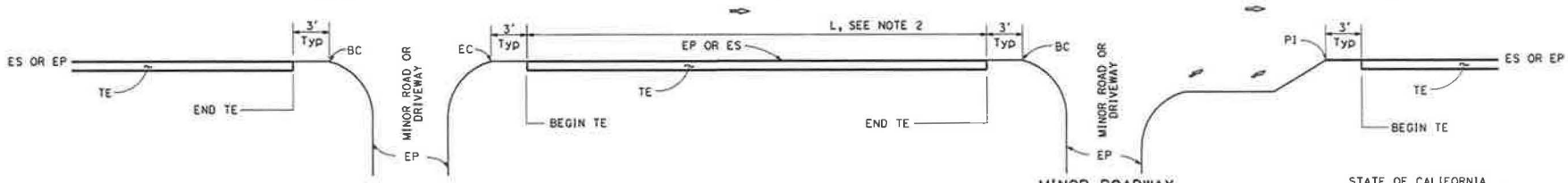
CURB OR DIKE

NARROW SIDE SLOPE

* CH = Distance from ES or EP to existing HP.



STATE ROUTE — STATE ROUTE



INTERTECTION

DRIVEWAY AND INTERSECTION

MINOR ROADWAY OR DRIVEWAY

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT EDGE TREATMENTS

NO SCALE

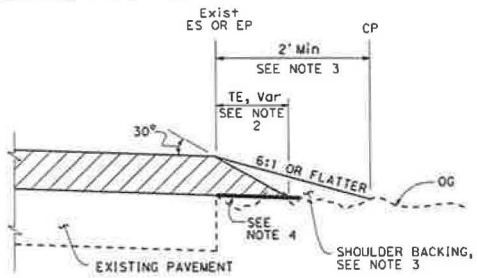
NOTES:

1. For details not shown, see Revised Standard Plans RSP P75 and RSP P76.
2. Tapered edge is optional when L is less than 30'.

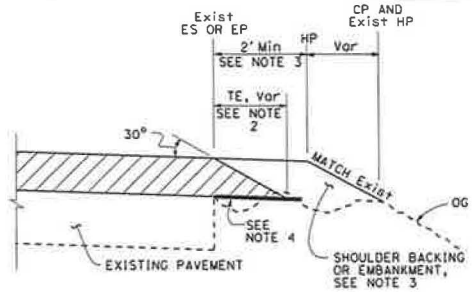
RSP P74 DATED OCTOBER 30, 2015 SUPERSEDES RSP P74 DATED NOVEMBER 15, 2013 AND RSP P74 DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP P74

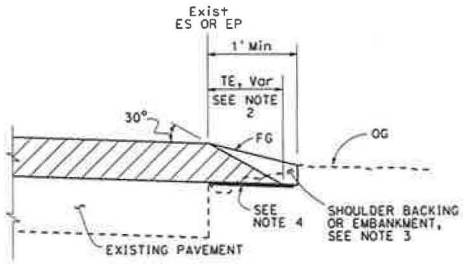
2010 REVISED STANDARD PLAN RSP P74



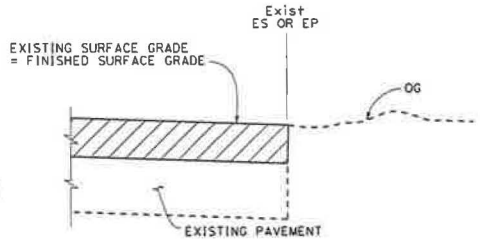
CASE A
Tapered Edge



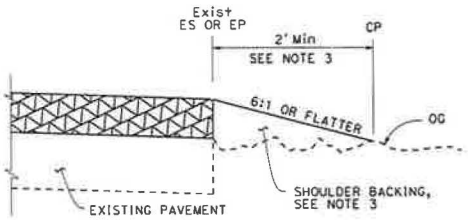
CASE B
Tapered Edge



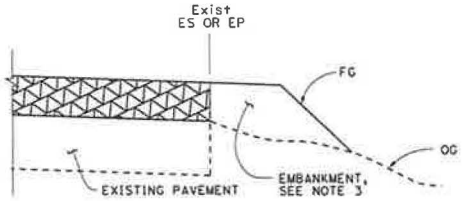
CASE C
Tapered Edge



CASE D
Vertical Edge



CASE E
Vertical Edge



CASE F
Vertical Edge
* See Table A and Revised Std Plan RSP P74

LEGEND:

- HMA OVERLAY
- HMA OR CONCRETE OVERLAY
- CONCRETE OVERLAY

ABBREVIATIONS:

TE TAPERED EDGE
TT TOTAL THICKNESS OF TE

TABLE A
EDGE TREATMENT FOR VARIOUS OVERLAY THICKNESS AND CONDITIONS

	OVERLAY THICKNESS	
FIELD CONDITION	LESS THAN 0.15'	0.15' OR MORE
Exist SLOPE 6:1 OR FLATTER	CASE E	CASE A
Exist SLOPE 3:1 TO 6:1	CASE E	CASE B
Exist SLOPE STEEPER THAN 3:1	CASE F	CASE F
CUT SECTION (REPLACE, COLD PLANE, MILL PAVEMENT)	CASE D	CASE C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
October 30, 2015
PLANS APPROVAL DATE

Srikanth M. Balasubramanian
No. C56426
Exp. 6-30-17
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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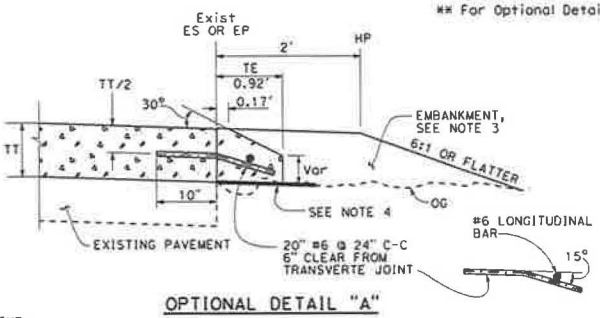
TO ACCOMPANY PLANS DATED _____

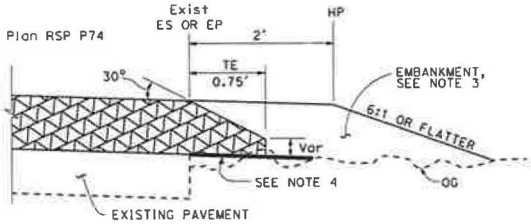
ADDITIONAL HMA OR CONCRETE QUANTITIES FOR TE/SIDE/MILE

TYPICAL CROSS SECTION	TT	TOTAL ADDITIONAL MATERIAL FOR TE/SIDE/MILE		
		HMA (TON)	CONCRETE (CY)*	CONCRETE (CY)**
TT	0.15'	7.7	NA	NA
	0.20'	13.7	NA	NA
	0.30'	30.9	NA	NA
	0.40'	54.9	NA	NA
	0.45'	69.4	NA	NA
TT 0.43'	0.50'	84.2	NA	NA
	0.60'	113.9	NA	NA
	0.70'	143.6	70.9	94.2
	0.80'	173.3	85.6	112.2
	0.90'	203.0	100.3	130.2
	1.00'	232.7	114.9	148.2
	1.10'	262.4	129.6	166.2
	1.20'	292.1	144.3	184.2

* For Detail "A"
** For Optional Detail "A"



OPTIONAL DETAIL "A"
For concrete overlay
See Note 5



DETAIL "A"
For HMA overlay thickness more than 0.43' or concrete overlay

NOTES:

1. For limits of tapered edge and vertical edge treatments, see Revised Standard Plan RSP P74.
2. Details shown for HMA overlay thickness less than 0.43'. See Detail "A" for HMA overlay thickness more than 0.43' or concrete overlay.
3. For locations and limits of shoulder backing or embankment see project plans.
4. Grade existing ground to place tapered edge. 1' minimum width
5. Tapered edge transverse joint must match overlay transverse joint. End of #6 longitudinal bar must be 2" ±1/2" clear from transverse joint.
6. Tapered edge is not needed in the area of MGS, barrier, right turn lane and acceleration lane. See Revised Standard Plan RSP P74.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT EDGE TREATMENTS-OVERLAYS

NO SCALE

RSP P75 DATED OCTOBER 30, 2015 SUPERSEDES RSP P75 DATED NOVEMBER 15, 2013 AND RSP P75 DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP P75

2010 REVISED STANDARD PLAN RSP P75

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Gurinderpal Bhullar C48815 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED _____

TABLE 1

TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING

SPEED (S)	MINIMUM TAPER LENGTH * FOR WIDTH OF OFFSET 12 FEET (W)				MAXIMUM CHANNELIZING DEVICE SPACING		
					X	Y	Z **
	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	TAPER	TANGENT	CONFLICT
mph	ft	ft	ft	ft	ft	ft	ft
20	160	80	40	27	20	40	10
25	250	125	63	42	25	50	12
30	360	180	90	60	30	60	15
35	490	245	123	82	35	70	17
40	640	320	160	107	40	80	20
45	1080	540	270	180	45	90	22
50	1200	600	300	200	50	100	25
55	1320	660	330	220	55	110	27
60	1440	720	360	240	60	120	30
65	1560	780	390	260	65	130	32
70	1680	840	420	280	70	140	35

* - For other offsets, use the following merging taper length formula for L:
For speed of 40 mph or less, $L = WS^2/60$
For speed of 45 mph or more, $L = WS$

Where: L = Taper length in feet
W = Width of offset in feet
S = Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

** - Use for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers (CA).

TABLE 2

LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING

SPEED *	Min D **	DOWNGRADE Min D ***		
		-3%	-6%	-9%
mph	ft	ft	ft	ft
20	115	116	120	126
25	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785
70	730	771	825	891

* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

** - Longitudinal buffer space or flagger station spacing

*** - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

ADVANCE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS *		
	A	B	C
	ft	ft	ft
URBAN - 25 mph OR LESS	100	100	100
URBAN - MORE THAN 25 mph TO 40 mph	250	250	250
URBAN - MORE THAN 40 mph	350	350	350
RURAL	500	500	500
EXPRESSWAY / FREEWAY	1000	1500	2640

* - The distances are approximate, are intended for guidance purposes only, and should be applied with engineering judgment. These distances should be adjusted by the Engineer for field conditions, if necessary, by increasing or decreasing the recommmended distances.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM TABLES FOR LANE AND RAMP CLOSURES

NO SCALE

RSP T9 DATED JULY 19, 2013 SUPERSEDES RSP T9 DATED APRIL 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T9

2010 REVISED STANDARD PLAN RSP T9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Devinder Singh
REGISTERED CIVIL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Devinder Singh C50470 Exp. 6-30-17 CIVIL STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED _____

NOTES:

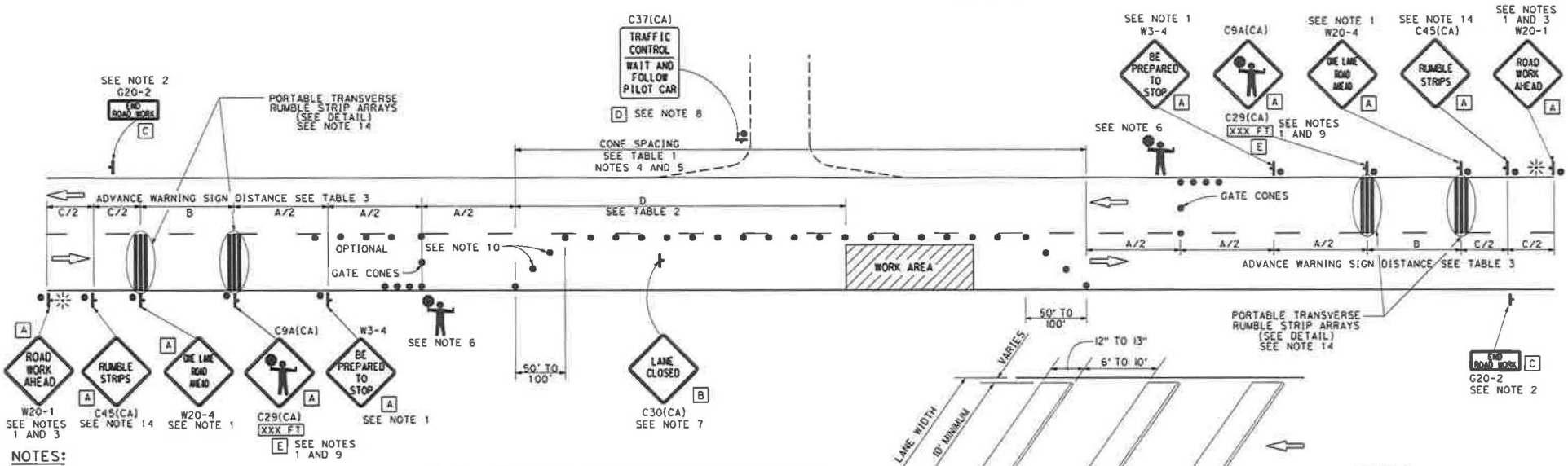
See Revised Standard Plan RSP T9 for tables.

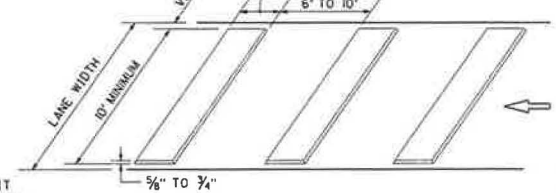
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.

California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL





PORTABLE TRANSVERSE RUMBLE STRIP ARRAY DETAIL

NOTES:

1. Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
2. A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.
3. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a W20-4 sign for the first advance warning sign.
4. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
6. Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging-station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 20' in diameter. Place a minimum of four cones at 50' intervals in advance of flagger station as shown.
7. Place C30(CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
8. When a pilot car is used, place a C37(CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign with black legend on white background at all intersections, driveways and alleys without a flagger within traffic control area. Signs shall be clean and visible at all times. Where traffic can not be effectively self-regulated, at least one flagger shall be used at each intersection within traffic control area.
9. An optional C29(CA) sign may be placed below the C9A(CA) sign.
10. Either traffic cones or barricades shall be placed on the taper. Barricades shall be Type I, II, or III.
11. The color of the portable transverse rumble strips shall be black or orange. Use 2 arrays, each array shall consist of 3 rumble strips.
12. Portable transverse rumble strips shall not be placed on sharp horizontal or vertical curves nor shall they be placed through pedestrian crossings.
13. If the portable transverse rumble strips become out of alignment (skewed) by more than 6 inches, measured from one end to the other, they shall be readjusted to bring the placement back to the original location.
14. Portable transverse rumble strips are not required if any one of the following conditions is satisfied:
    A. Work duration occupies a location for four hours or less
    B. Posted speed limit is below 45 MPH
    C. Work is of emergency nature
    D. Work zone is in snow or icy weather conditions

SIGN PANEL SIZE (Min)

A	48" x 48"
B	30" x 30"
C	36" x 18"
D	36" x 42"
E	20" x 7"

LEGEND

- TRAFFIC CONE
- TEMPORARY TRAFFIC CONTROL SIGN
- PORTABLE FLASHING BEACON
- FLAGGER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS

NO SCALE

RSP T13 DATED OCTOBER 30, 2015 SUPERSEDES
RSP T13 DATED OCTOBER 17, 2014, RSP T13 DATED JULY 18, 2014
AND RSP T13 DATED APRIL 19, 2013 AND STANDARD PLAN T13 DATED
MAY 20, 2011 - PAGE 241 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T13

2010 REVISED STANDARD PLAN RSP T13

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

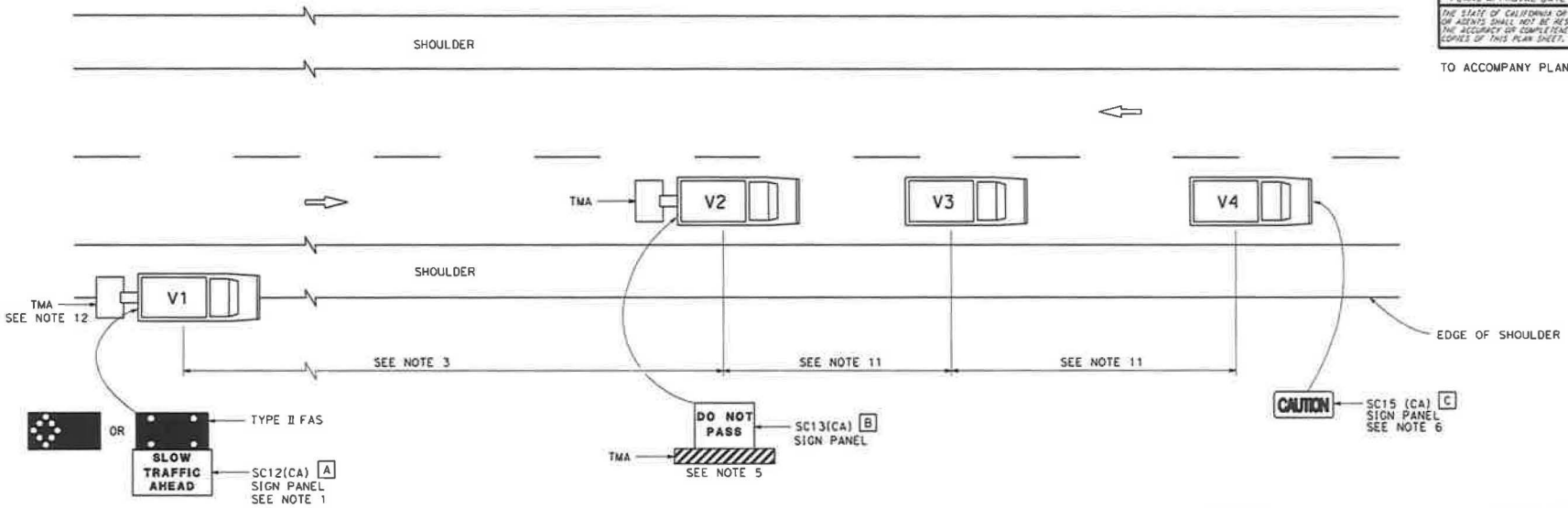
REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

Gurinderpal Bhullar C48815 exp. 9-30-14 CIVIL STATE OF CALIFORNIA REGISTERED PROFESSIONAL ENGINEER

TO ACCOMPANY PLANS DATED _____



LEGEND

V1	SIGN VEHICLE
V2	SHADOW VEHICLE
V3	WORK/APPLICATION VEHICLE
V4	SIGN VEHICLE
TMA	TRUCK-MOUNTED ATTENUATOR
	FLASHING ARROW SIGN (FAS) IN FLASHING CAUTION MODE
	FLASHING ARROW SIGN (FAS) IN ALTERNATING DIAMOND CAUTION

SIGN PANEL SIZE (Min)

A	72" x 42"
B	54" x 42"
C	54" x 24"

NOTES:

1. Either a changeable message sign or a SC12(CA) "SLOW TRAFFIC AHEAD" sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "CAUTION" message first, follow by the "SLOW TRAFFIC AHEAD" message. A Type II flashing arrow sign may be used with the SC12(CA) sign panel.
2. Sign vehicle V1 should be positioned where highly visible when shoulders are not available.
3. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue.
4. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
5. Shadow vehicle shall be equipped with a truck-mounted attenuator. The sign panel shown shall be mounted on the rear of shadow vehicle V2. The message "LANE CLOSED" may be used in place of the "DO NOT PASS" message.
6. The sign panel shown shall be mounted on the front of sign vehicle V4, facing opposing traffic.
7. All vehicles shall be equipped with flashing or rotating amber lights.
8. Sign vehicle V4 will not be required when the work and vehicles V2 and V3 are 2' or more from the centerline of the highway during the work or application operations.
9. All vehicles used for lane closures shall be equipped with two-way radios and the vehicle operators shall maintain communication during the work or application operation.
10. This plan shall not be used where workers would be on foot in the work area. Use a stationary type lane closure (Revised Standard Plan T13) for this condition.
11. Minimize spacing between vehicles V2 and V3 and vehicles V3 and V4 to deter road users from driving in between them.
12. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON TWO LANE HIGHWAYS

NO SCALE

RSP T17 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T17
DATED MAY 20, 2011 - PAGE 245 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T17

2010 REVISED STANDARD PLAN RSP T17

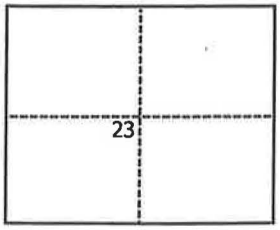
APPENDIX B

CORNER RECORD

Document Number: _____

City of: PARADISE County of: BUTTE, California

Brief Legal Description: A PORTION OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 22 NORTH, RANGE 3 EAST, MOUNT DIABLO MERIDIAN, AS SHOWN ON BOOK 160 OF MAPS, AT PAGE 37, BUTTE COUNTY OFFICIAL RECORDS.



CORNER TYPE

Government Corner ☐ Control ☐

Meander ☐ Property ☑

Rancho ☐ Other ☐

Date of Survey: January 8, 2016

COORDINATES (Optional)

N. _____

E. _____

Zone: _____ NAD27 ☐ NAD83 ☐

NAD83 Epoch: _____

Elevation: _____

Vert. Datum: NVGD29 ☐ NAVD88 ☐

Meas. Units: Metric ☐ Imperial ☐

Corner: Left as Found ☑ Found and Tagged ☐ Established ☐ Reestablished ☐ Rebuilt ☐

Identification and type of corner found: Evidence used to identify or procedure used to establish or reestablish the corner:

USED STANDARD SURVEYING PRACTICES TO LOCATE ROAD CENTERLINE MONUMENT AS SHOWN ON MAP BOOK 160, PAGE 37.

ESTABLISHED FOUR REFERENCE TIES TO SAID MONUMENT THAT IS AT RISK FOR DESTRUCTION BY PROPOSED ROAD IMPROVEMENTS.

A description of the physical condition of the monument as found and as set or reset:

FOUND A RAIL ROAD SPIKE WITH NO MARKINGS AT PAVEMENT SURFACE.

SURVEYOR'S STATEMENT

This Corner Record was prepared by me or under my direction in conformance with the Land Surveyor's Act on: January 25, 2016.

Signed: _____ P.L.S. or R.C.E. Number: PLS 6967

MICHAEL L. MAYS

LICENSED LAND SURVEYOR MICHAEL L. MAYS NO. PLS 6967 STATE OF CALIFORNIA

COUNTY SURVEYOR'S STATEMENT

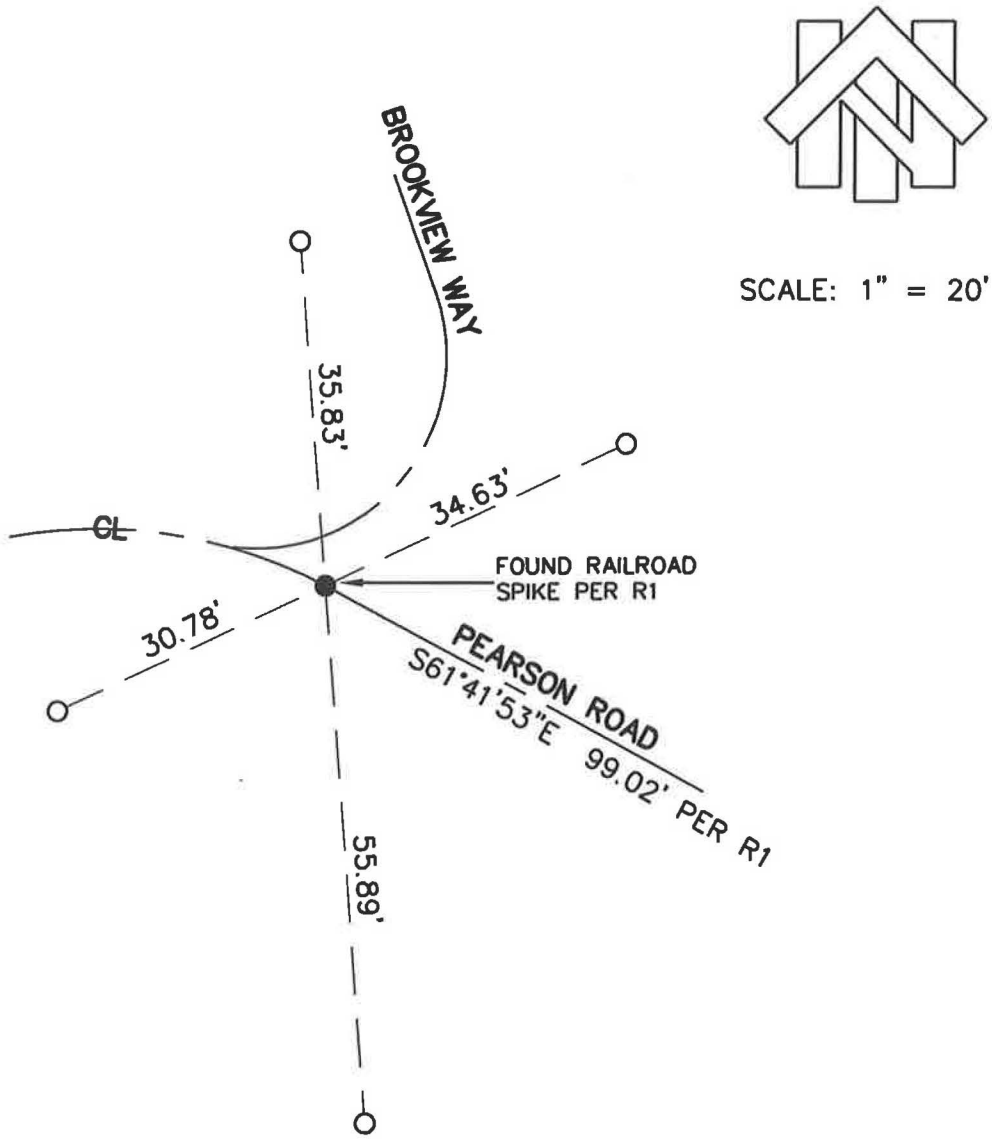
This Corner Record was received on _____

and examined and filed on _____.

Signed: _____ P.L.S. or R.C.E. Number: _____

Title: _____

County Surveyor's Comments:



LEGEND

- ● FOUND MONUMENT AS NOTED PER R1
- O SET 1/2" REBAR AND CAP STAMPED "NORTHSTAR CONTROL" FOR REFERENCE POINT
- R1 RECORD DATA PER BOOK 160 OF MAPS, AT PAGE 37
- CL CENTERLINE

JOB NO. 15-101

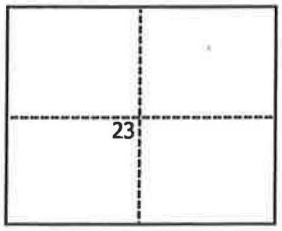
NorthStar
ENGINEERING
111 MISSION RANCH BLVD., STE. 100
CHICO, CALIFORNIA 95926
(530) 893-1600 FAX (530) 893-2113

CORNER RECORD

Document Number: _____

City of: PARADISE County of: BUTTE, California

Brief Legal Description: A PORTION OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 22 NORTH, RANGE 3 EAST, MOUNT DIABLO MERIDIAN, AS SHOWN ON BOOK 160 OF MAPS, AT PAGE 37, BUTTE COUNTY OFFICIAL RECORDS.



CORNER TYPE

Government Corner ☐ Control ☐

Meander ☐ Property ☑

Rancho ☐ Other ☐

Date of Survey: January 8, 2016

COORDINATES (Optional)

N. _____

E. _____

Zone: _____ NAD27 ☐ NAD83 ☐

NAD83 Epoch: _____

Elevation: _____

Vert. Datum: NVGD29 ☐ NAVD88 ☐

Meas. Units: Metric ☐ Imperial ☐

Corner: Left as Found ☑ Found and Tagged ☐ Established ☐ Reestablished ☐ Rebuilt ☐

Identification and type of corner found: Evidence used to identify or procedure used to establish or reestablish the corner:

USED STANDARD SURVEYING PRACTICES TO LOCATE ROAD CENTERLINE MONUMENT AS SHOWN ON MAP BOOK 160, PAGE 37.

ESTABLISHED FOUR REFERENCE TIES TO SAID MONUMENT THAT IS AT RISK FOR DESTRUCTION BY PROPOSED ROAD IMPROVEMENTS.

A description of the physical condition of the monument as found and as set or reset:

FOUND A RAIL ROAD SPIKE WITH NO MARKINGS AT PAVEMENT SURFACE.

SURVEYOR'S STATEMENT

This Corner Record was prepared by me or under my direction in conformance with the Land Surveyor's Act on: January 25, 2016.

Signed: _____ P.L.S. or R.C.E. Number: PLS 6967

MICHAEL L. MAYS

LICENSED LAND SURVEYOR MICHAEL L. MAYS NO. PLS 6967 STATE OF CALIFORNIA

COUNTY SURVEYOR'S STATEMENT

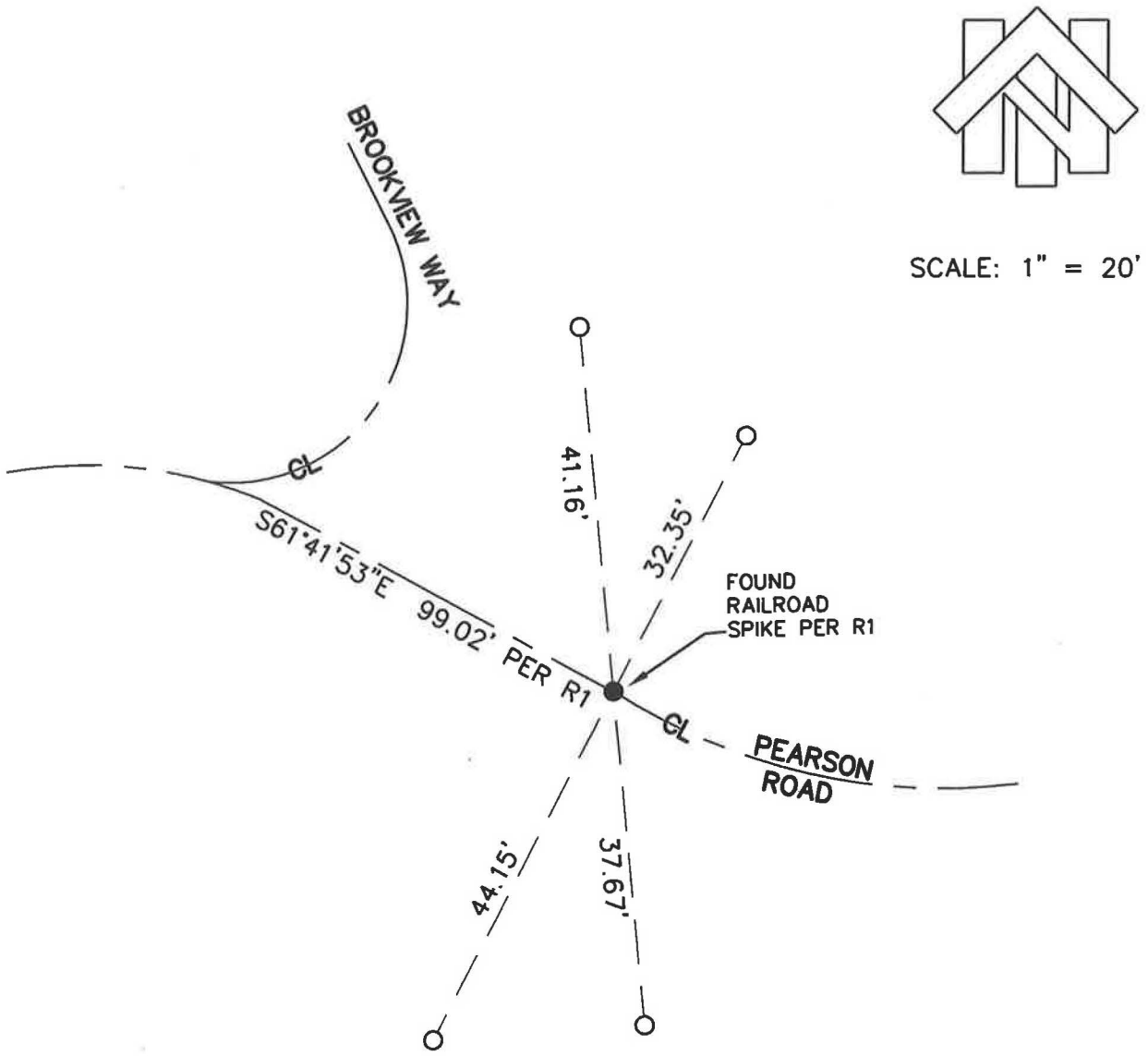
This Corner Record was received on _____

and examined and filed on _____.

Signed: _____ P.L.S. or R.C.E. Number: _____

Title: _____

County Surveyor's Comments:



LEGEND

- ● FOUND MONUMENT AS NOTED PER R1
- ○ SET 1/2" REBAR AND CAP STAMPED "NORTHSTAR CONTROL" FOR REFERENCE POINT
- R1 RECORD DATA PER BOOK 160 OF MAPS, AT PAGE 37
- CL CENTERLINE

JOB NO. 15-101

NorthStar
ENGINEERING
111 MISSION RANCH BLVD., STE. 100
CHICO, CALIFORNIA 95926
(530) 893-1600 FAX (530) 893-2113

CORNER RECORD

Document Number: _____

City of: PARADISE County of: BUTTE, California

Brief Legal Description: A PORTION OF THE NORTHWEST QUARTER SECTION 24, TOWNSHIP 22 NORTH, RANGE 3 EAST, MOUNT DIABLO MERIDIAN, AS SHOWN ON BOOK 45 OF MAPS, AT PAGE 70, BUTTE COUNTY OFFICIAL RECORDS.

CORNER TYPE

Government Corner	☑	Control	☐
Meander	☐	Property	☑
Rancho	☐	Other	☐

Date of Survey: January 8, 2016

COORDINATES (Optional)

N. _____
E. _____
Zone: _____ NAD27 ☐ NAD83 ☐
NAD83 Epoch: _____
Elevation: _____
Vert. Datum: NVGD29 ☐ NAVD88 ☐
Meas. Units: Metric ☐ Imperial ☐

Corner: Left as Found ☑ Found and Tagged ☐ Established ☐ Reestablished ☐ Rebuilt ☐

Identification and type of corner found: Evidence used to identify or procedure used to establish or reestablish the corner:
USED STANDARD SURVEYING PRACTICES TO LOCATE A ROAD CENTERLINE MONUMENT LOCATED AT THE NORTHWEST CORNER OF THE SOUTHWEST ONE-QUARTER OF THE NORTHWEST ONE-QUARTER OF SAID SECTION 24, SHOWN ON MAP BOOK 45 AT PAGE 70.
ESTABLISHED FOUR REFERENCE TIES TO SAID MONUMENT THAT IS AT RISK FOR DESTRUCTION BY PROPOSED ROAD IMPROVEMENTS.

A description of the physical condition of the monument as found and as set or reset:
FOUND A RAILROAD SPIKE WITH NO MARKINGS AT PAVEMENT SURFACE.

SURVEYOR'S STATEMENT

This Corner Record was prepared by me or under my direction in conformance with the Land Surveyor's Act on: January 25, 2016.

Signed: _____ P.L.S. or R.C.E. Number: PLS 6967
MICHAEL L. MAYS

LICENSED LAND SURVEYOR
MICHAEL L. MAYS
NO. PLS 6967
STATE OF CALIFORNIA

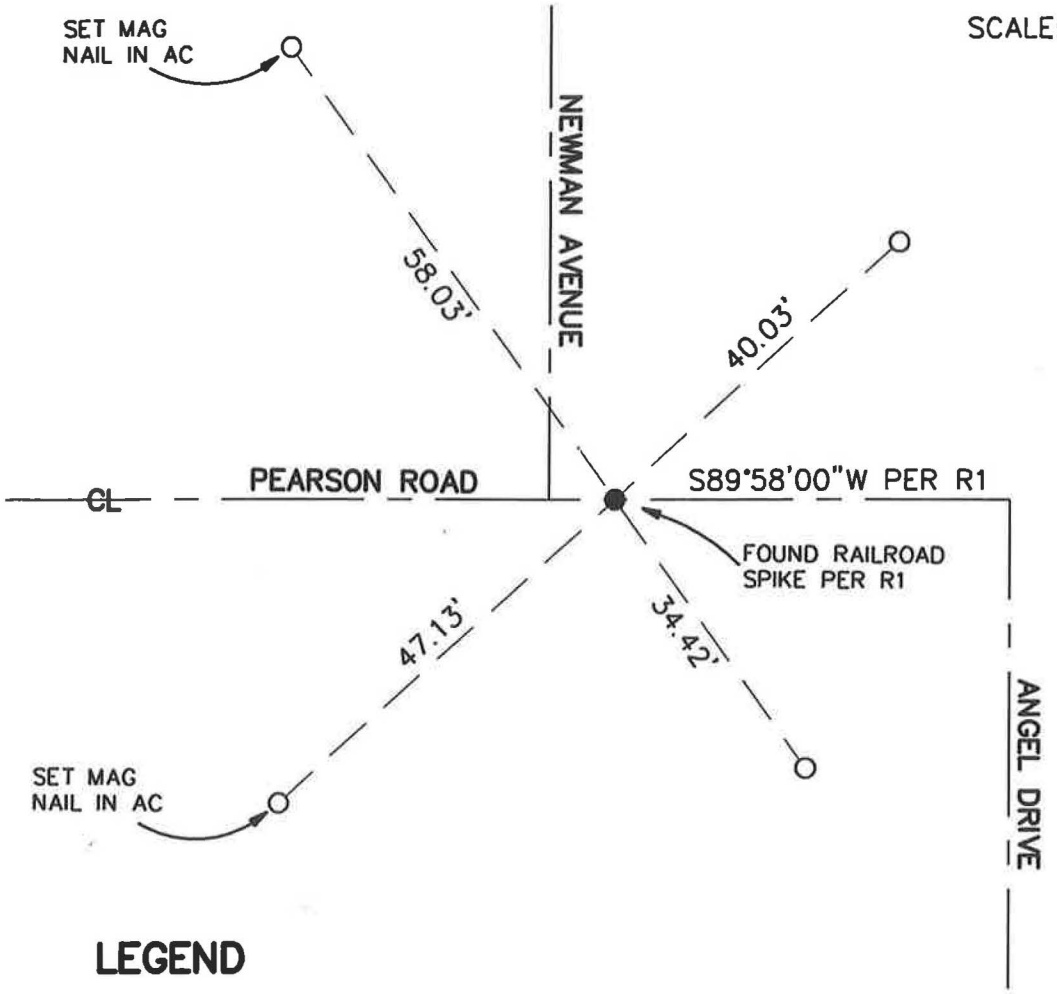
COUNTY SURVEYOR'S STATEMENT

This Corner Record was received on _____
and examined and filed on _____.

Signed: _____ P.L.S. or R.C.E. Number: _____
Title: _____

County Surveyor's Comments:

SCALE: 1" = 20'



LEGEND

- ● FOUND MONUMENT AS NOTED PER R1
- ○ SET 1/2" REBAR AND CAP STAMPED "NORTHSTAR CONTROL" FOR REFERENCE POINT OR AS NOTED
- R1 RECORD DATA PER BOOK 45 OF MAPS, AT PAGE 70
- CL CENTERLINE

JOB NO. 15-101

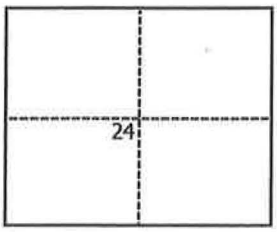
NorthStar
ENGINEERING
111 MISSION RANCH BLVD., STE. 100
CHICO, CALIFORNIA 95926
(530) 893-1600 FAX (530) 893-2113

CORNER RECORD

Document Number: _____

City of: PARADISE County of: BUTTE, California

Brief Legal Description: A PORTION OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 24, TOWNSHIP 22 NORTH, RANGE 3 EAST, MOUNT DIABLO MERIDIAN, AS SHOWN ON BOOK 172 OF MAPS, AT PAGE 75 BUTTE COUNTY OFFICIAL RECORDS.



CORNER TYPE

Government Corner ☑ Control ☐

Meander ☐ Property ☑

Rancho ☐ Other ☐

Date of Survey: January 8, 2016

COORDINATES (Optional)

N. _____

E. _____

Zone: _____ NAD27 ☐ NAD83 ☐

NAD83 Epoch: _____

Elevation: _____

Vert. Datum: NVGD29 ☐ NAVD88 ☐

Meas. Units: Metric ☐ Imperial ☐

Corner: Left as Found ☑ Found and Tagged ☐ Established ☐ Reestablished ☐ Rebuilt ☐

Identification and type of corner found: Evidence used to identify or procedure used to establish or reestablish the corner:

USED STANDARD SURVEYING PRACTICES TO LOCATE MONUMENT ON THE CENTERLINE OF PEARSON ROAD AT IT'S INTERSECTION WITH SAWMILL ROAD SAID MONUMENT ALSO BEING THE CENTER CORNER OF SAID SECTION 24, AS SHOWN ON MAP BOOK 172 AT PAGE 75.

ESTABLISHED FOUR REFERENCE TIES TO SAID MONUMENT THAT IS AT RISK FOR DESTRUCTION BY PROPOSED ROAD IMPROVEMENTS.

A description of the physical condition of the monument as found and as set or reset:

FOUND A 2 3/4" BRASS DISC, STAMPED LS 3634, IN CONCRETE AND IN A MONUMENT WELL.

SURVEYOR'S STATEMENT

This Corner Record was prepared by me or under my direction in conformance with the Land Surveyor's Act on: January 25, 2016.

Signed: _____ P.L.S. or R.C.E. Number: PLS 6967

MICHAEL L. MAYS

LICENSED LAND SURVEYOR MICHAEL L. MAYS NO. PLS 6967 STATE OF CALIFORNIA

COUNTY SURVEYOR'S STATEMENT

This Corner Record was received on _____

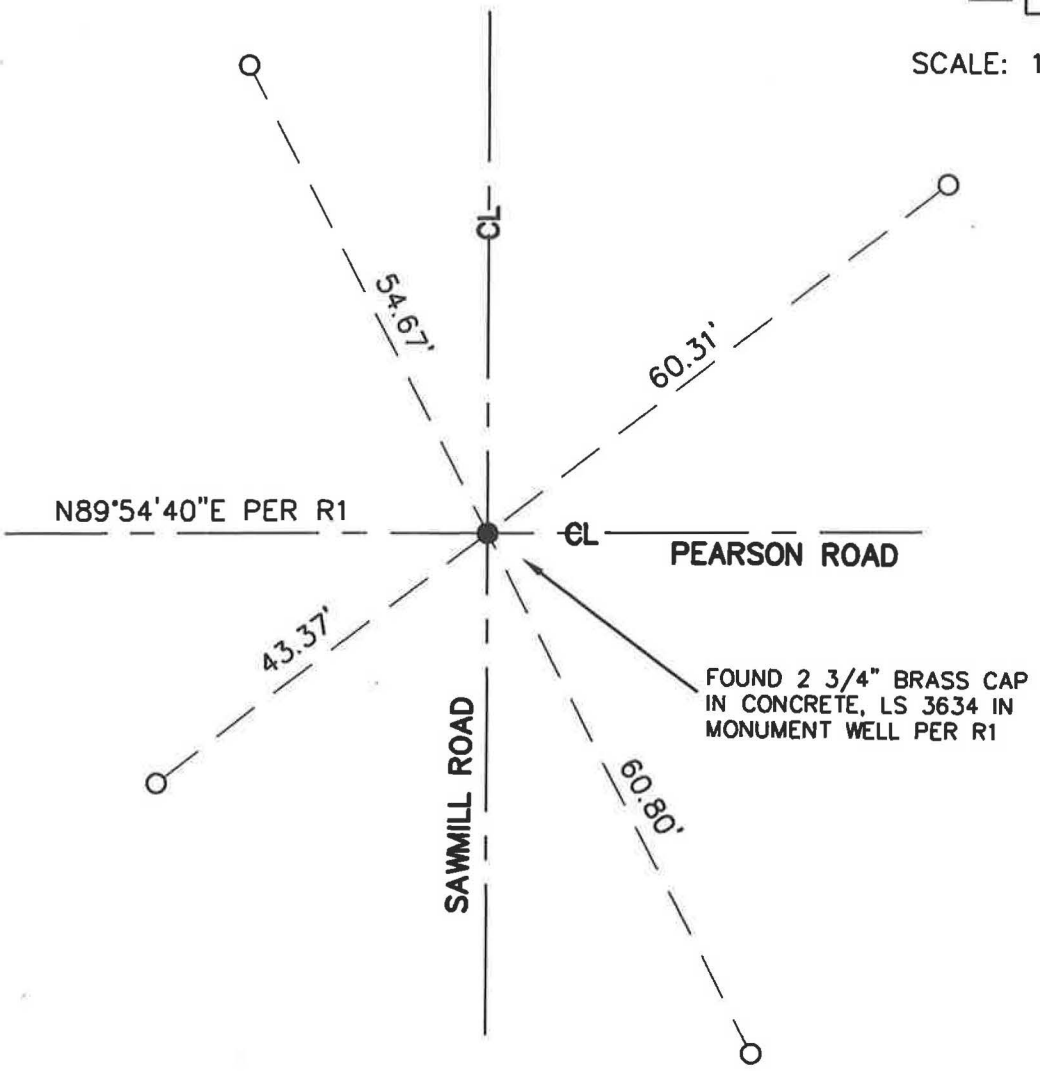
and examined and filed on _____.

Signed: _____ P.L.S. or R.C.E. Number: _____

Title: _____

County Surveyor's Comments:

SCALE: 1" = 20'



LEGEND

- ● FOUND MONUMENT AS NOTED PER R1
- ○ SET 1/2" REBAR AND CAP STAMPED "NORTHSTAR CONTROL" FOR REFERENCE POINT
- R1 RECORD DATA PER BOOK 172 OF MAPS, AT PAGES 74–77
- CL CENTERLINE

JOB NO. 15-101

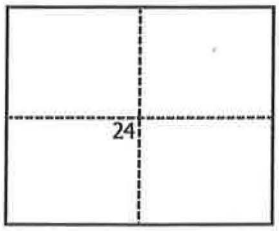
NorthStar
ENGINEERING
111 MISSION RANCH BLVD., STE. 100
CHICO, CALIFORNIA 95926
(530) 893-1600 FAX (530) 893-2113

CORNER RECORD

Document Number: _____

City of: PARADISE County of: BUTTE, California

Brief Legal Description: A PORTION OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 24, TOWNSHIP 22 NORTH, RANGE 3 EAST, MOUNT DIABLO MERIDIAN, AS SHOWN ON BOOK 132 OF MAPS, AT PAGE 51, BUTTE COUNTY OFFICIAL RECORDS.



CORNER TYPE

Government Corner ☑ Control ☐

Meander ☐ Property ☑

Rancho ☐ Other ☐

Date of Survey: January 8, 2016

COORDINATES (Optional)

N. _____

E. _____

Zone: _____ NAD27 ☐ NAD83 ☐

NAD83 Epoch: _____

Elevation: _____

Vert. Datum: NVGD29 ☐ NAVD88 ☐

Meas. Units: Metric ☐ Imperial ☐

Corner: Left as Found ☑ Found and Tagged ☐ Established ☐ Reestablished ☐ Rebuilt ☐

Identification and type of corner found: Evidence used to identify or procedure used to establish or reestablish the corner:

USED STANDARD SURVEYING PRACTICES TO LOCATE A MONUMENT ON THE CENTERLINE OF PEARSON ROAD AT IT'S INTERSECTION WITH EDGEWOOD LANE. SAID MONUMENT BEING A 1/16 CORNER OF SAID SECTION 24 AS SHOWN ON MAP BOOK 132 AT PAGE 51. ESTABLISHED FOUR REFERENCE TIES TO SAID MONUMENT THAT IS AT RISK FOR DESTRUCTION BY PROPOSED ROAD IMPROVEMENTS.

A description of the physical condition of the monument as found and as set or reset:

FOUND A 2 1/2" BRASS DISC WITH PUNCH, STAMPED "BUTTE COUNTY" ... (REST OF MARKINGS ARE ILLEGIBLE). IN ASPHALT PAVING AT ROADWAY SURFACE.

SURVEYOR'S STATEMENT

This Corner Record was prepared by me or under my direction in conformance with the Land Surveyor's Act on: January 25, 2016.

Signed: _____ P.L.S. or R.C.E. Number: PLS 6967

MICHAEL L. MAYS

LICENSED LAND SURVEYOR MICHAEL L. MAYS NO. PLS 6967 STATE OF CALIFORNIA

COUNTY SURVEYOR'S STATEMENT

This Corner Record was received on _____

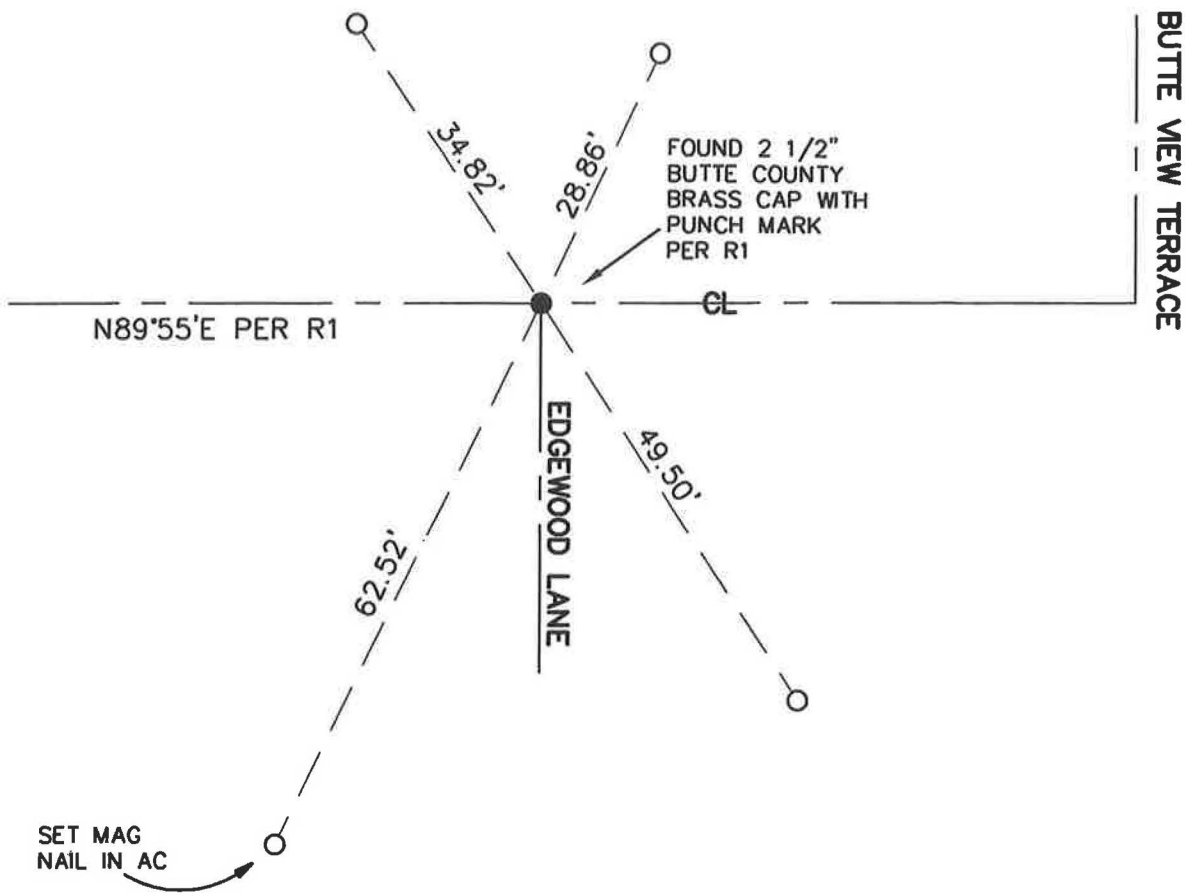
and examined and filed on _____.

Signed: _____ P.L.S. or R.C.E. Number: _____

Title: _____

County Surveyor's Comments:

SCALE: 1" = 20'



LEGEND

- ● FOUND MONUMENT AS NOTED PER R1
- ○ SET 1/2" REBAR AND CAP STAMPED "NORTHSTAR CONTROL" FOR REFERENCE POINT OR AS NOTED
- R1 RECORD DATA PER BOOK 132 OF MAPS, AT PAGE 51
- CL CENTERLINE

JOB NO. 15-101

NorthStar
ENGINEERING
111 MISSION RANCH BLVD., STE. 100
CHICO, CALIFORNIA 95926
(530) 893-1600 FAX (530) 893-2113

CORNER RECORD

Document Number: _____

City of: PARADISE County of: BUTTE, California

Brief Legal Description: A PORTION OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 24, TOWNSHIP 22 NORTH, RANGE 3 EAST, MOUNT DIABLO MERIDIAN, AS SHOWN ON BOOK 132 OF MAPS, AT PAGE 51, BUTTE COUNTY OFFICIAL RECORDS.

CORNER TYPE

Government Corner ☑ Control ☐

Meander ☐ Property ☑

Rancho ☐ Other ☐

Date of Survey: January 8, 2016

COORDINATES (Optional)

N. _____

E. _____

Zone: _____ NAD27 ☐ NAD83 ☐

NAD83 Epoch: _____

Elevation: _____

Vert. Datum: NVGD29 ☐ NAVD88 ☐

Meas. Units: Metric ☐ Imperial ☐

Corner: Left as Found ☑ Found and Tagged ☐ Established ☐ Reestablished ☐ Rebuilt ☐

Identification and type of corner found: Evidence used to identify or procedure used to establish or reestablish the corner:

USED STANDARD SURVEYING PRACTICES TO LOCATE MONUMENT ON THE CENTERLINE OF PEARSON ROAD AT IT'S INTERSECTION WITH HILLTOP DRIVE SAID MONUMENT ALSO BEING THE EAST ONE-QUARTER CORNER OF SAID SECTION 24, AS SHOWN ON MAP BOOK 132 AT PAGE 51. ESTABLISHED FOUR REFERENCE TIES TO SAID MONUMENT THAT IS AT RISK FOR DESTRUCTION BY PROPOSED ROAD IMPROVEMENTS.

A description of the physical condition of the monument as found and as set or reset:

FOUND A 2" BRASS DISC STAMPED "BUTTE COUNTY PUBLIC WORKS DEPT, T22N, 19 1/4 COR, REPLACED 1978", IN ASPHALT PAVING APPROXIMATELY 1/2" BELOW ROAD SURFACE.

SURVEYOR'S STATEMENT

This Corner Record was prepared by me or under my direction in conformance with the Land Surveyor's Act on: January 25, 2016.

Signed: _____ P.L.S. or R.C.E. Number: PLS 6967

MICHAEL L. MAYS

LICENSED LAND SURVEYOR MICHAEL L. MAYS NO. PLS 6967 STATE OF CALIFORNIA

COUNTY SURVEYOR'S STATEMENT

This Corner Record was received on _____

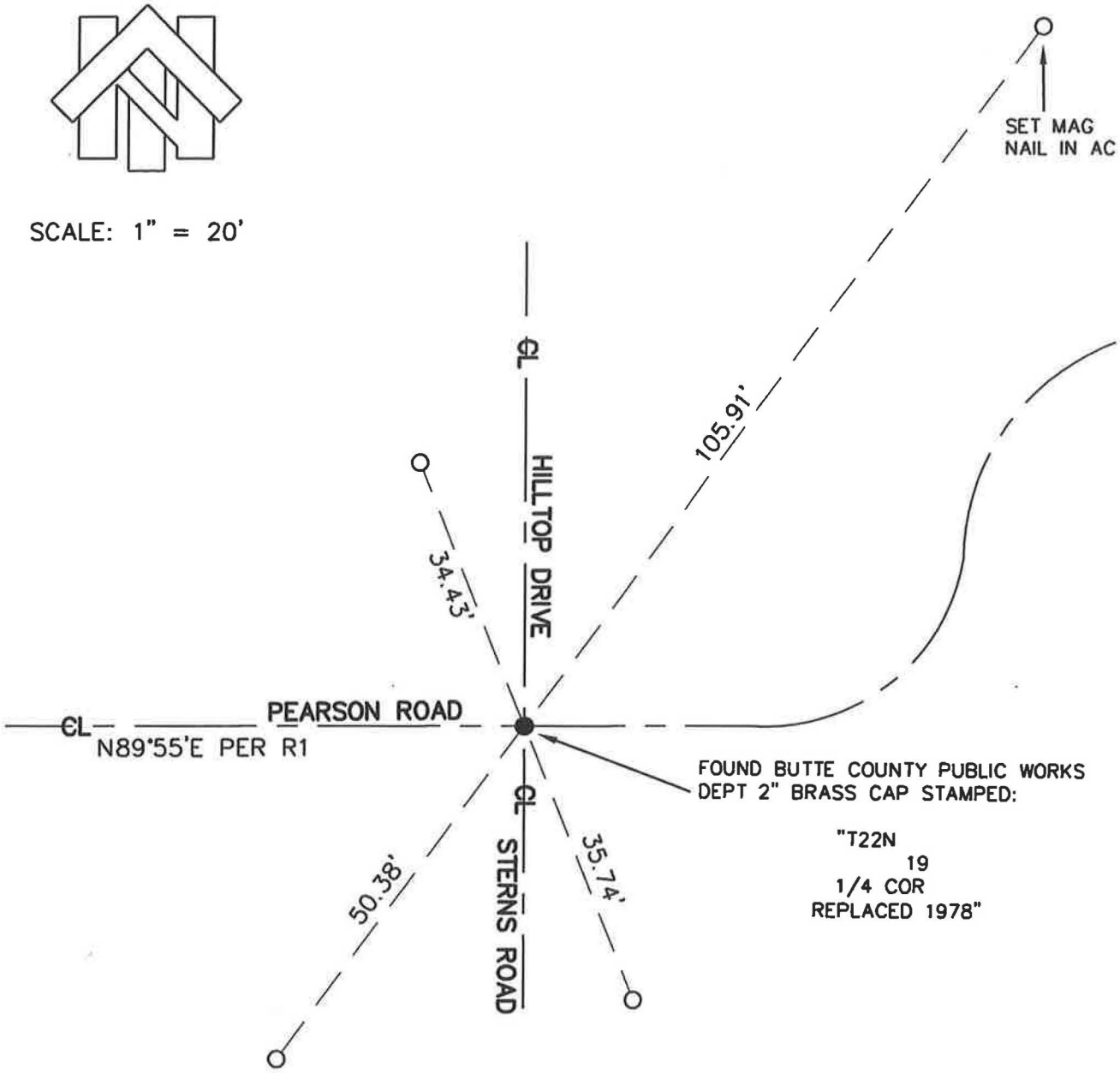
and examined and filed on _____.

Signed: _____ P.L.S. or R.C.E. Number: _____

Title: _____

County Surveyor's Comments:

SCALE: 1" = 20'



LEGEND

- ● FOUND MONUMENT AS NOTED PER R1
- O SET 1/2" REBAR AND CAP STAMPED "NORTHSTAR CONTROL" FOR REFERENCE POINT OR AS NOTED
- R1 RECORD DATA PER BOOK 132 OF MAPS, AT PAGE 51
- CL CENTERLINE

JOB NO. 15-101

NorthStar
ENGINEERING
111 MISSION RANCH BLVD., STE. 100
CHICO, CALIFORNIA 95926
(530) 893-1600 FAX (530) 893-2113

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APPENDIX C

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(Because some colored inks will not reproduce in copy machines, please use **black ink** to complete this Bid.)

(DO NOT DETACH)

BID TO THE TOWN OF PARADISE

DEPARTMENT OF PUBLIC WORKS

TOWN PROJECT #: 14-04.CON

NAME OF BIDDER _____

BUSINESS P.O. BOX _____

CITY, STATE, ZIP _____

BUSINESS STREET ADDRESS _____
(Please include even if P.O. Box used)

CITY, STATE, ZIP _____

TELEPHONE NO: _____ **AREA CODE ( )** _____

FAX NO: _____ **AREA CODE ( )** _____

CONTRACTOR LICENSE NO. _____

****VOID****

The work for which this Bid is submitted is for construction in accordance with the special provisions (including the payment of not less not less than the higher of (1) the State general prevailing wage rates, or (2) the rates specified by the Federal Secretary of Labor), the project plans described below, including any addenda thereto, the contract annexed hereto, and also in accordance with the Standard Specifications dated 2010 and the Standard Plans for Construction dated 2010 of the California Department of Transportation, and the Labor Surcharge And Equipment Rental Rates in effect on the date the work is accomplished.

The special provisions for the work to be done are dated **February 4, 2016** and are entitled:

TOWN OF PARADISE, DEPARTMENT OF PUBLIC WORKS
NOTICE TO BIDDERS, SPECIAL PROVISIONS, BID DOCUMENTS, AND CONTRACT

FOR CONSTRUCTION ON:

MEASURE "C" PEARSON RD IMPROVEMENTS PROJECT

ON PEARSON ROAD, EAST OF CLARK ROAD INTERSECTION TO THE INTERSECTION OF PENTZ ROAD, PARADISE, CALIFORNIA

FED PROJ NO.: HSIP 5425(027)
TOWN PROJECT #: **14-04.CON**

The project plans for the work to be done were approved **February 4, 2016** and are entitled:

TOWN OF PARADISE, DEPARTMENT OF PUBLIC WORKS
CONSTRUCTION PLANS FOR

MEASURE "C" PEARSON RD IMPROVEMENTS PROJECT

FED PROJ NO.: HSIP 5425(027)
TOWN PROJECT #: 14-04.CON

The contract, if awarded, will be awarded to the responsive and responsible bidder who submitted the lowest bid, as determined by the method set forth in Public Contract Code section 20103.8, subdivision (c), which provides that:
The lowest bid shall be the lowest total of the bid prices on the base contract and those additive or deductive items that when taken in order from a specifically identified list of those items in the solicitation, and added to, or subtracted from, the base contract, are less than, or equal to, a funding amount publicly disclosed by the local agency before the first bid is opened.

The award of the contract, if it be awarded, will be to the lowest responsible, responsive bidder based upon the base bid, and any additive bid items chosen by the Town, whose bid complies with all the requirements prescribed.
If, at the time the contract is to be awarded, the total of the lowest acceptable bid exceeds the funds then estimated by the Town as available, the Town may reject all bids or take such other action as best serves the Town's interests. In any case, the Town reserves the right to reject all bids.

Each bid shall be accompanied by a certified or cashier's check or bid bond in the amount of ten percent (10%) of the total BASE BID price, payable to the Town of Paradise.

The bidder shall set forth for each unit basis item of work a unit price and a total for the item, and for each lump sum item a total for the item, all in clearly legible figures in the respective spaces provided for that purpose. In the case of unit basis items, the amount set forth under the "Item Total" column shall be the product of the unit price bid and the estimated quantity for the item.

In case of discrepancy between the unit price and the total set forth for a unit basis item, the unit price shall prevail, except as provided in (a) or (b), as follows:
(a) If the amount set forth as a unit price is unreadable or otherwise unclear, or is omitted, or is the same as the amount as the entry in the item total column, then the amount set forth in the item total column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price;
(b) (Decimal Errors) If the product of the entered unit price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc. from the entered total, the discrepancy will be resolved by using the entered unit price or item total, whichever most closely approximates percentage wise the unit price or item total in the Town of Paradise's Final Estimate of cost.

If both the unit price and the item total are unreadable or otherwise unclear, or are omitted, the bid may be deemed irregular. Likewise if the item total for a lump sum item is unreadable or otherwise unclear, or is omitted, the bid may be deemed irregular unless the project being bid has only a single item and a clear, readable total bid is provided.

Symbols such as commas and dollar signs will be ignored and have no mathematical significance in establishing any unit price or item total or lump sums. Written unit prices, item totals and lump sums will be interpreted according to the number of digits and, if applicable, decimal placement. Cents symbols also have no significance in establishing any unit price or item total since all figures are assumed to be expressed in dollars and/or decimal fractions of a dollar. Bids on lump sum items shall be item totals only; if any unit price for a lump sum item is included in a bid and it differs from the item total, the items total shall prevail.

The foregoing provisions for the resolution of specific irregularities cannot be so comprehensive as to cover every omission, inconsistency, error or other irregularity which may occur in a bid. Any situation not specifically provided for will be determined in the discretion of the Town of Paradise, and that discretion will be exercised in the manner deemed by the Town of Paradise to best protect the public interest in the prompt and economical completion of the work. The decision of the Town of Paradise respecting the amount of a bid, or the existence or treatment of an irregularity in a bid, shall be final.

If this Bid shall be accepted and the undersigned shall fail to enter into the contract and furnish the 2 bonds in the sums required by the section entitled "Contract Bonds", in Section 3 of the Special Provisions, with surety satisfactory to the Town of Paradise, within 10 days, not including Saturdays, Sundays and legal holidays, after the bidder has received notice from the Town of Paradise that the contract has been awarded, the Town of

Paradise may, at its option, determine that the bidder has abandoned the contract, and thereupon this Bid and the acceptance thereof shall be null and void and the forfeiture of the security accompanying this Bid shall operate and the same shall be the property of the Town of Paradise.

The undersigned, as bidder, declares that the only persons or parties interested in this Bid as principals are those named herein; that this Bid is made without collusion with any other person, firm, or corporation; that he has carefully examined the location of the proposed work, the annexed proposed form of contract, and the plans therein referred to; and he proposes, and agrees if this Bid is accepted, that he will contract with the Town of Paradise, in the form of the copy of the contract annexed hereto, to provide all necessary machinery, tools, apparatus and other means of construction, and to do all the work and furnish all the materials specified in the contract, in the manner and time therein prescribed, and according to the requirements of the Engineer as therein set forth, and that he will take in full payment therefor the following prices, to wit:

BID ITEM LIST

ITEM NO.		ITEM DESCRIPTION	UNIT MEAS.	QUANTITY	UNIT PRICE	ITEM TOTAL
1		Mobilization	LS	1.00		
2		Construction Survey	LS	1.00		
3		Traffic Control System	LS	1.00		
4		Prepare and Implement Water Pollution Control Program	LS	1.00		
5		Clearing and Grubbing	LS	1.00		
6		Remove AC Dike	LF	7210.00		
7		Remove Culvert	EA	13.00		
8		Reconstruct Guardrail (Wo Post)	L	250.00		
9		Adjust Water Valve Box To Grade	EA	37.00		
10		Adjust Storm Drain Manhole To Grade	EA	2.00		
11		Adjust Monument Cover	EA	1.00		
12		Reset Mailbox	EA	1.00		
13		Preserve Survey Monument	EA	2.00		
14		Reconstruct Survey Monument	EA	3.00		
15		Cold Plane Asphalt Concrete Pavement	SY	6120.00		
16		Salvage Cold Plane Grindings	LS	1.00		
17		Roadway Excavation	LS	1.00		
18		Aggregate Base (Class II, 3/4")	CY	500.00		
19		Grated Line Drains-15"	LF	60.00		
20		Grated Line Drains-18"	LF	158.00		
21		18" Polyethylene Culvert- Type S	LF	116.00		
22		18" Polyethylene Culvert-FES	EA	8.00		
23		Shoulder Backing	TON	1000.00		

VOID

ITEM NO.		ITEM DESCRIPTION	UNIT MEAS.	QUANTITY	UNIT PRICE	ITEM TOTAL
24		Minor Hot Mix Asphalt-Mainline	TON	540.00		
25		Minor Hot Mix Asphalt-Conform	TON	490.00		
26		RHMA-G (0.15' Thick/ Section A)	TON	2110.00		
27		RHMA-G (0.10' Thick/ Section B)	TON	1600.00		
28		Rock Slope Protection (Method B, No.2)	CY	60.00		
29		Place Asphalt Dike (Type A)	LF	7326.00		
30		Place Asphalt Dike (Type E)	LF	622.00		
31		Roadside Signs	EA	5.00		
32		Delineator (Class 1, Type E)	EA	150.00		
33		Guardrailing Delineator (Class 1, Type E)	EA	7.00		
34		4" Thermoplastic Pavement Stripe	LF	1317.00		
35		6" Thermoplastic Pavement Stripe	LF	20492.00		
36		8" Thermoplastic Pavement Stripe	LF	195.00		
37		Pavement Marker (Retroreflective- Recessed)	EA	943.00		
38		Thermoplastic Pavement Marking	SF	1731.00		
39		Painted Pavement Markings (2-Coat)	SF	76.00		
		BASE BID TOTAL = (BASE BID includes all above Bid Items)				
ALT-1		SAMI-R	SY	44500.00		
		BASE BID PLUS ALT-1 TOTAL =				
ALT-2		Type 3 Microsurfacing	SY	44500.00		
		BASE BID PLUS ALT-2 TOTAL =		**$**		

VOID

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LIST OF SUBCONTRACTORS

The Bidder shall list the name and address of each subcontractor to whom the Bidder proposes to subcontract portions of the work.

SUBCONTRACTOR (Name & Address)	BID ITEM NUMBERS	PERCENT (%) OF BID ITEMS (Describe portion of items subcontracted)	$ VALUE OF WORK

LOCAL AGENCY BIDDER CONSTRUCTION CONTRACT DBE COMMITMENT EXHIBIT 15-G

1. Local Agency: Town of Paradise
2. Contract DBE Goal: **7.0%**
3. Project Description: Measure "C" Pearson Rd Improvements Project
4. Project Location: On Pearson Road, east of Clark Road intersection to the intersection of Pentz Road, Paradise, California

5. Bidder's Name: _____
6. Prime Certified DBE: ☐
7. Bid Amount: _____
8. Total Dollar Amount for **ALL** Subcontractors: _____
9. Total Number of **ALL** Subcontractors: _____

10. Bid Item Number	11. Description of Work, Service, or Materials Supplied	12. DBE Certification Number	13. DBE Contact Information (Must be certified on the date bids are opened)	14. DBE Dollar Amount

Local Agency to Complete this Section

21. Local Agency Contract Number: **14-04.CON**
22. Federal-Aid Project Number: HSIP 5425(027)
23. Bid Opening Date: March 29, 2016
24. Contract Award Date:

Local Agency certifies that all DBE certifications are valid and information on this form is complete and accurate.

25. Local Agency Representative's Signature
26. Date
27. Local Agency Representative's Name
28. Phone
29. Local Agency Representative's Title

15. TOTAL CLAIMED DBE PARTICIPATION

$

%

IMPORTANT: Identify all DBE firms being claimed for credit, regardless of tier. Names of the First Tier DBE Subcontractors and their respective item(s) of work listed above must be consistent, where applicable with the names and items of the work in the "Subcontractor List" submitted with your bid. Written confirmation of each listed DBE is required.

16. Preparer's Signature
17. Date
18. Preparer's Name
19. Phone
20. Preparer's Title

DISTRIBUTION: 1. Original – Local Agency
2. Copy – Caltrans District Local Assistance Engineer (DLAE). Failure to submit to DLAE within 30 days of contract execution may result in de-obligation of federal funds on contract. Include additional copy with award package.

ADA Notice: For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654- 3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

INSTRUCTIONS – CONSTRUCTION CONTRACT DBE COMMITMENT

CONTRACTOR SECTION

1. **Local Agency** - Enter the name of the local or regional agency that is funding the contract.
2. **Contract DBE Goal** - Enter the contract DBE goal percentage as it appears on the project advertisement.
3. **Project Location** - Enter the project location as it appears on the project advertisement.
4. **Project Description** - Enter the project description as it appears on the project advertisement (Bridge Rehab, Seismic Rehab, Overlay, Widening, etc).
5. **Bidder's Name** - Enter the contractor's firm name.
6. **Prime Certified DBE** - Check box if prime contractor is a certified DBE.
7. **Bid Amount** - Enter the total contract bid dollar amount for the prime contractor.
8. **Total Dollar Amount for ALL Subcontractors** – Enter the total dollar amount for all subcontracted contractors. SUM = (DBEs + all Non-DBEs). Do not include the prime contractor information in this count.
9. **Total number of ALL subcontractors** – Enter the total number of all subcontracted contractors. SUM = (DBEs + all Non-DBEs). Do not include the prime contractor information in this count.
10. **Bid Item Number** - Enter bid item number for work, services, or materials supplied to be provided.
11. **Description of Work, Services, or Materials Supplied** - Enter description of work, services, or materials to be provided. Indicate all work to be performed by DBEs including work performed by the prime contractor's own forces, if the prime is a DBE. If 100% of the item is not to be performed or furnished by the DBE, describe the exact portion to be performed or furnished by the DBE. See LAPM Chapter 9 to determine how to count the participation of DBE firms.
12. **DBE Certification Number** - Enter the DBE's Certification Identification Number. All DBEs must be certified on the date bids are opened.
13. **DBE Contact Information** - Enter the name, address, and phone number of all DBE subcontracted contractors. Also, enter the prime contractor's name and phone number, if the prime is a DBE.
14. **DBE Dollar Amount** - Enter the subcontracted dollar amount of the work to be performed or service to be provided. Include the prime contractor if the prime is a DBE. See LAPM Chapter 9 for how to count full/partial participation.
15. **Total Claimed DBE Participation** - $: Enter the total dollar amounts entered in the "DBE Dollar Amount" column.
    %: Enter the total DBE participation claimed ("Total Claimed DBE Participation Dollars" divided by item "Bid Amount"). If the total % claimed is less than item "Contract DBE Goal," an adequately documented Good Faith Effort (GFE) is required (see Exhibit 15-H DBE Information - Good Faith Efforts of the LAPM).
16. **Preparer's Signature** - The person completing the DBE commitment form on behalf of the contractor's firm must sign their name.
17. **Date** - Enter the date the DBE commitment form is signed by the contractor's preparer.
18. **Preparer's Name** - Enter the name of the person preparing and signing the contractor's DBE commitment form.
19. **Phone** - Enter the area code and phone number of the person signing the contractor's DBE commitment form.
20. **Preparer's Title** - Enter the position/title of the person signing the contractor's DBE commitment form.

LOCAL AGENCY SECTION

21. **Local Agency Contract Number** - Enter the Local Agency contract number or identifier.
22. **Federal-Aid Project Number** - Enter the Federal-Aid Project Number.
23. **Bid Opening Date -** Enter the date contract bids were opened.
24. **Contract Award Date** - Enter the date the contract was executed.
25. **Local Agency Representative's Signature** - The person completing this section of the form for the Local Agency must sign their name to certify that the information in this and the Contractor Section of this form is complete and accurate.
26. **Date** - Enter the date the DBE commitment form is signed by the Local Agency Representative.
27. **Local Agency Representative's Name** - Enter the name of the Local Agency Representative certifying the contractor's DBE commitment form.
28. **Phone** - Enter the area code and phone number of the person signing the contractor's DBE commitment form.
29. **Local Agency Representative Title** - Enter the position/title of the Local Agency Representative certifying the contractor's DBE commitment form.

EXHIBIT 15-H DBE INFORMATION- GOOD FAITH EFFORTS

DBE INFORMATION—GOOD FAITH EFFORTS

Federal-aid Project No. HSIP 5425(027) Bid Opening Date: March 29, 2016

MEASURE "C" PEARSON RD IMPROVEMENTS PROJECT

The **Town of Paradise** established an Disadvantaged Business Enterprise (DBE) goal of **7.0%** for this project. The information provided herein shows that a good faith effort was made.

Lowest, second lowest and third lowest bidders shall submit the following information to document adequate good faith efforts. Bidders ***should*** submit the following information even if the "Local Agency Bidder – DBE Commitment" form indicates that the bidder has met the DBE goal. This will protect the bidder's eligibility for award of the contract if the administering agency determines that the bidder failed to meet the goal for various reasons, e.g., a DBE firm was not certified at bid opening, or the bidder made a mathematical error.

Submittal of only the "Local Agency Bidder – DBE Commitment" form may not provide sufficient documentation to demonstrate that adequate good faith efforts were made.

The following items are listed in the Section entitled "Submission of DBE Commitment" of the Special Provisions:

A. The names and dates of each publication in which a request for DBE participation for this project was placed by the bidder (please attach copies of advertisements or proofs of publication):

PUBLICATIONS	DATES OF ADVERTISEMENT

B. The names and dates of written notices sent to certified DBEs soliciting bids for this project and the dates and methods used for following up initial solicitations to determine with certainty whether the DBEs were interested (please attach copies of solicitations, telephone records, fax confirmations, etc.):

NAMES OF DBEs SOLICITED	DATE OF INITIAL SOLICITATION	FOLLOW UP METHODS AND DATES

C. The items of work which the bidder made available to DBE firms, including, where appropriate, any breaking down of the contract work items (including those items normally performed by the bidder

with its own forces) into economically feasible units to facilitate DBE participation. It is the bidder's responsibility to demonstrate that sufficient work to facilitate DBE participation was made available to DBE firms.

ITEMS OF WORK	BIDDER NORMALLY PERFORMS ITEM (Y/N)	BREAKDOWN OF ITEMS	AMOUNT ($)	PERCENTAGE OF CONTRACT

D. The names, addresses and phone numbers of rejected DBE firms, the reasons for the bidder's rejection of the DBEs, the firms selected for that work (please attach copies of quotes from the firms involved), and the price difference for each DBE if the selected firm is not a DBE:

Names, addresses and phone numbers of rejected DBEs and the **reasons for the bidder's rejection** of the DBEs:

_____

_____

_____

_____

_____

Names, addresses and phone numbers of firms selected for the work above:

_____

_____

_____

_____

_____

E. Efforts made to assist interested DBEs in obtaining bonding, lines of credit or insurance, and any technical assistance or information related to the plans, specifications and requirements for the work which was provided to DBEs:

_____

_____

_____

_____

F. Efforts made to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services, excluding supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate:

_____

_____

_____

_____

_____

G. The names of agencies, organizations or groups contacted to provide assistance in contacting, recruiting and using DBE firms (please attach copies of requests to agencies and any responses received, i.e., lists, Internet page download, etc.):

NAME OF AGENCY/ORGANIZATION	METHOD/DATE OF CONTACT	RESULTS

H. Any additional data to support a demonstration of good faith efforts (use additional sheets if necessary):

_____

_____

NOTE: USE ADDITIONAL SHEETS OF PAPER IF NECESSARY.

BIDDER'S LIST OF SUBCONTRACTORS (DBE AND NON-DBE)- PART I

LAPM EXHIBIT 12-G

The bidder shall list **all** subcontractors (both DBE and non-DBE) in accordance with Section 2.J-2.d "DBE / Non-DBE Listing of Subcontractors" of these Special Provisions and per Title 49, Section 26.11 of the Code of Federal Regulations. This listing is required in addition to listing DBE and Non-DBE Subcontractors elsewhere in the Bid. Photocopy and staple this form to the bid for additional firms.

Firm Name/ Address/ City, State, ZIP	Phone/ Fax	Annual Gross Receipts	Description of Portion of Work to be Performed	Local Agency Use Only (Certified DBE?)
Name	*Phone*	☐ < $1 million		☐YES
		☐ < $5 million		☐NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		Age of Firm (Yrs.)
Name	*Phone*	☐ < $1 million		☐YES
		☐ < $5 million		☐NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		Age of Firm (Yrs.)
Name	*Phone*	☐ < $1 million		☐YES
		☐ < $5 million		☐NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		Age of Firm (Yrs.)
Name	*Phone*	☐ < $1 million		☐YES
		☐ < $5 million		☐NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		Age of Firm (Yrs.)

Distribution: 1) Original – Local Agency File

BIDDER'S LIST OF SUBCONTRACTORS (DBE AND NON-DBE)- PART II

LAPM EXHIBIT 12-G

The bidder shall list all subcontractors **who provided a quote or bid** **but were not selected to participate as a subcontractor on this project**. This is required for compliance with Section 2.J-2.d "DBE / Non-DBE Listing of Subcontractors" of these Special Provisions and per Title 49, Section 26.11 of the Code of Federal Regulations. Photocopy and staple this form to the bid for additional firms.

Firm Name/ Address/ City, State, ZIP	Phone/ Fax	Annual Gross Receipts	Description of Portion of Work to be Performed	Local Agency Use Only (Certified DBE?)
Name	*Phone*	☐ < $1 million		☐YES
		☐ < $5 million		☐NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		Age of Firm (Yrs.)
Name	*Phone*	☐ < $1 million		☐YES
		☐ < $5 million		☐NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		Age of Firm (Yrs.)
Name	*Phone*	☐ < $1 million		☐YES
		☐ < $5 million		☐NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		Age of Firm (Yrs.)
Name	*Phone*	☐ < $1 million		☐YES
		☐ < $5 million		☐NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		Age of Firm (Yrs.)

Distribution: 1) Original – Local Agency File 11-2006

EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION

(THE BIDDER'S EXECUTION ON THE SIGNATURE PORTION OF THIS BID SHALL ALSO CONSTITUTE AN ENDORSEMENT AND EXECUTION OF THOSE CERTIFICATIONS WHICH ARE A PART OF THIS BID)

The bidder____, proposed subcontractor_____, hereby certifies that he has _____ , has not _____, participated in a previous contract or subcontract subject to the equal opportunity clauses, as required by Executive Orders 10925, 11114, or 11246, and that, where required, he has filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filling requirements.

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of $10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b) (1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

FEDERAL MINIMUM WAGE RATES

Federal minimum wage rates are not included in these specifications. They may be obtained at the Internet Website http://www.wdol.gov/dba.aspx#0.

A copy is also available at the Offices of Town of Paradise Public Works, 5555 Skyway, Paradise, California 95969

NON-LOBBYING CERTIFICATION FOR FEDERAL-AID CONTRACTS

Refer to Section 7.G-2 “FHWA- Form 1273”, Part XI “Certification Regarding Use of Contract Funds for Lobbying”. Note that the prospective participant certifies to this provision **by signing and submitting this bid or proposal**.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such subrecipients shall certify and disclose accordingly.

"FEDERAL STANDARD FORM LLL" is included herewith in the following 2-sheet insert and shall be completed by the bidder **if applicable**.

DISCLOSURE OF LOBBYING ACTIVITIES

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB
0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:	2. Status of Federal Action:	3. Report Type:
☐ a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	☐ a. bid/offer/application b. initial award c. post-award	☐ a. initial filing b. material change **For Material Change Only:** year _____ quarter _____ date of last report _____

4. Name and Address of Reporting Entity: ☐ **Prime** ☐ **Subawardee** Tier _____, *if known*: **Congressional District**, *if known*:	**5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime:** **Congressional District**, *if known*:
6. Federal Department/Agency:	**7. Federal Program Name/Description:** CFDA Number, *if applicable*: _____
8. Federal Action Number, *if known*:	**9. Award Amount,** *if known*: $
10. a. Name and Address of Lobbying Entity (*if individual, last name, first name, MI*):	**b. Individuals Performing Services** (*including address if different from No. 10a*) (*last name, first name, MI*):

(attach Continuation Sheet(s) SF-LLLA, if necessary)

11. Amount of Payment (*check all that apply*): $ _____ ☐ **actual** ☐ **planned**	**13. Type of Payment** (*check all that apply*): ☐ **a. retainer** ☐ **b. one-time fee** ☐ **c. commission** ☐ **d. contingent fee** ☐ **e. deferred** ☐ **f. other; specify:** _____
12. Form of Payment (*check all that apply*): ☐ **a. cash** ☐ **b. in-kind; specify:** nature _____ value _____	

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment Indicated in Item 11:

(attach Continuation Sheet(s) SF-LLLA, if necessary)

15. Continuation Sheet(s) SF-LLLA attached: ☐ **Yes** ☐ **No**

16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less that $10,000 and not more than $100,000 for each such failure.	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____

Federal Use Only:	Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of covered Federal action or a material change to previous filing pursuant to title 31 U.S.C. section 1352. The filing of a form is required for such payment or agreement to make payment to lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress an officer or employee of Congress or an employee of a Member of Congress in connection with a covered Federal action. Attach a continuation sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence, the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last, previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District if known. Check the appropriate classification of the reporting entity that designates if it is or expects to be a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the first tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in Item 4 checks "Subawardee" then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.

6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organization level below agency name, if known. For example, Department of Transportation, United States Coast Guard.

7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identification in item 1 (e.g., Request for Proposal (RFP) number, Invitation for Bid (IFB) number, grant announcement number, the contract grant. or loan award number, the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitments for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influenced the covered Federal action.

(b) Enter the full names of the individual(s) performing services and include full address if different from 10 (a). Enter Last Name, First Name and Middle Initial (Ml).

11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.

12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.

13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.

14. Provide a specific and detailed description of the services that the lobbyist has performed or will be expected to perform and the date(s) of any services rendered. Include all preparatory and related activity not just time spent in actual contact with Federal officials. Identify the Federal officer(s) or employee(s) contacted or the officer(s) employee(s) or Member(s) of Congress that were contacted.

15. Check whether or not a continuation sheet(s) is attached.

16. The certifying official shall sign and date the form, print his/her name title and telephone number.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.

SF-LLL-Instructions Rev. 06-04-90

PUBLIC CONTRACT CODE

PUBLIC CONTRACT CODE SECTION 10285.1 STATEMENT

In accordance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder has ___ , has not ___been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

Note: The bidder must place a check mark after "has" or "has not" in one of the blank spaces provided. The above Statement is part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Statement. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE

In accordance with Public Contract Code Section 10162, the Bidder shall complete, under penalty of perjury, the following questionnaire:

Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

Yes _____ No _____

If the answer is yes, explain the circumstances in the following space. Provide additional pages as needed.

PUBLIC CONTRACT CODE 10232 STATEMENT

In accordance with Public Contract Code Section 10232, the Contractor, hereby states under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

Note: The above Statement and Questionnaire are part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Statement and Questionnaire.

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

NONCOLLUSION AFFIDAVIT

(TITLE 23 UNITED STATES CODE SECTION 112 AND PUBLIC CONTRACT CODE SECTION 7106)

TO THE TOWN OF PARADISE
DEPARTMENT OF PUBLIC WORKS.

In accordance with Title 23 United States Code Section 112 and Public Contract Code 7106 the bidder declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Note: The above Noncollusion Affidavit is part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Noncollusion Affidavit.

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

DEBARMENT AND SUSPENSION CERTIFICATION

TITLE 49, CODE OF FEDERAL REGULATIONS, PART 29

The Bidder's attention is directed to Section 7.G-2 "FHWA- Form 1273", Part X "Certification Regarding Debarment, Suspension, Ineligibility And Voluntary Exclusion".

If there are any exceptions to this certification, insert the exceptions in the following space.

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Notes: Providing false information may result in criminal prosecution or administrative sanctions.

The above certification is part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Certification.

OPT-OUT FORM

OPT OUT OF PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS

You may opt out of the Payment Adjustments for Price Index Fluctuations portion of the Special Provisions. If you elect to opt out of these provisions, complete this form. *If you do not want to opt-out of these provisions, simply leave this form blank.*

As described in Sections 2 as amended in these Special Provisions and 9-1.07A of the Standard Specifications, I opt out of the Payment Adjustments for Price Index Fluctuations as presented in Section 9-1.07 of the Standard Specifications and amended in Section 0of the project Bid Book for the:

MEASURE "C" PEARSON RD IMPROVEMENTS PROJECT
TOWN OF PARADISE PROJECT # 14-04.CON

Print and sign your Name, fill out the date and firm name below to opt out of payment adjustment for price index fluctuations.

Name- Print	Name- Signature	Date

Firm/ Company Name

BID SIGNATURE PAGE

Accompanying this Bid is_____in amount equal to at least ten percent (10%) of the total of the bid.

(NOTICE: INSERT THE WORDS "CASH($ _____)," "CASHIER'S CHECK","CERTIFIED CHECK", OR "BIDDER'S BOND," AS THE CASE MAY BE.)

The names of all persons interested in the foregoing Bid as principals are as follows:

IMPORTANT NOTICE

If bidder or other interested person is a corporation, state legal name of corporation, also names of the president, secretary, treasurer, and manager thereof; if a co-partnership, state true name of firm, also names of all individual copartners composing firm; if bidder or other interested person is an individual, state first and last names in full.

_____

_____

_____

_____

Licensed in accordance with an act providing for the registration of Contractors,

License No._____ Classification(s)_____

ADDENDA –

This Bid is submitted with respect to the changes to the contract included in addenda number/s

_____

(Fill in addenda numbers if addenda have been received and insert, in this Bid, any Engineer's Estimate sheets that were received as part of the addenda.)

By my signature on this Bid I certify, under penalty of perjury under the laws of the State of California, that the foregoing questionnaire and statements of Public Contract Code Sections 10162, 10232 and 10285.1 are true and correct and that the bidder has complied with the requirements of Section 8103 of the Fair Employment and Housing Commission Regulations (Chapter 5, Title 2 of the California Administrative Code). By my signature on this Bid I further certify, under penalty of perjury under the laws of the State of California and the United States of America, that the Noncollusion Affidavit required by Title 23 United States Code, Section 112 and Public Contract Code Section 7106; and the Title 49 Code of Federal Regulations, Part 29 Debarment and Suspension Certification are true and correct.

Date:

Signature and Title of Bidder

Business Address:

Place of Business:

Place of Residence:

TOWN OF PARADISE
DEPARTMENT OF PUBLIC WORKS

BIDDER'S BOND

We,_____as Principal, and

_____as Surety are bound unto the Town of Paradise, State of California, hereafter called "Town", in the penal sum of ten percent (10%) of the total amount of the bid of the Principal above named, submitted by said Principal to the Town for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, by these presents

THE CONDITION OF THIS OBLIGATION IS SUCH, THAT:

WHEREAS the Principal is submitting a bid to the Town for certain construction specifically described as follows:

TOWN OF PARADISE, DEPARTMENT OF PUBLIC WORKS
NOTICE TO BIDDERS, SPECIAL PROVISIONS, AND CONSTRUCTION PLANS
FOR CONSTRUCTION ON:

MEASURE "C" PEARSON RD IMPROVEMENTS PROJECT

ON PEARSON ROAD, EAST OF CLARK ROAD INTERSECTION TO THE INTERSECTION OF PENTZ ROAD, PARADISE, CALIFORNIA

FED PROJ NO.: HSIP 5425(027)
TOWN PROJECT # **14-04.CON**

for which bids are to be opened at the Town of Paradise Department of Public Works office at 5555 Skyway, Paradise, California 95969, at **11:00**AM , (PST) on **March 29, 2016.**

NOW, THEREFORE, if the aforesaid Principal is awarded the contract and, within the time and manner required under the specifications after the prescribed forms are presented to him for signature, enters into a written contract, in the prescribed form, in accordance with the bid, and files the two bonds with the Town; one to guarantee faithful performance and the other to guarantee payment for labor and materials, as required by law, then this obligation shall be null and void; otherwise, it shall remain in full force.

In the event suit is brought upon this bond by the Town and judgment is recovered, the Surety shall pay all costs incurred by the Town in such suit, including attorney's fee to be fixed by the Court.

Dated: _____ , 20_____

(SEAL)

_____
Bidder

By: _____
Principal

_____
Surety

By: _____
Attorney-in-fact

NOTE: Signatures of those executing for the surety must be properly acknowledged.

CERTIFICATE OF ACKNOWLEDGEMENT

State of California

County of Butte SS

On this _____day of _____ in the year 20_____ before me

_____, personally appeared _____,
Attorney-in-fact

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to this instrument as the attorney-in-fact of , and acknowledged to me that he (she) subscribed the name of the said company thereto as surety, and his (her) own name as attorney-in-fact.

(SEAL) _____

Notary Public

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TOWN OF PARADISE
DEPARTMENT OF PUBLIC WORKS

OWNER-CONTRACTOR AGREEMENT

TOWN PROJECT NO.: 14-04.CON

AGREEMENT #: _____

THIS AGREEMENT, made and concluded, in triplicate, on _____between the Town of Paradise, hereinafter called "Town", and _____, hereinafter called "Contractor".

ARTICLE I.-- The Contractor agrees to complete all the work and furnish all the materials, except such as are mentioned in the specifications to be furnished by the Town, necessary to construct and complete in a good, workmanlike and substantial manner and to the satisfaction of the Town, free of any and all liens and claims of laborers, materialmen, suppliers, and subcontractors, and in conformity with all applicable state, Town, and municipal laws, codes, and regulations, the work described in the Contract Documents. The work shall be completed and the materials furnished in accordance with the Special Provisions and Project Plans described below, including any addenda thereto, and also in accordance with the Standard Specifications for Construction dated May 2010 and the Standard Plans for Construction, dated 2010 of the California Department of Transportation and the Labor Surcharge And Equipment Rental Rates in effect on the date the work is accomplished, which said Special Provisions, Project Plans, Standard Plans, Standard Specifications, and Labor Surcharge And Equipment Rental Rates are hereby specially referred to and by such reference made a part hereof.

The special provisions for the work to be completed by Contractor are dated **February 4, 2016** and are entitled:

TOWN OF PARADISE, DEPARTMENT OF PUBLIC WORKS
NOTICE TO BIDDERS, SPECIAL PROVISIONS, AND BID DOCUMENTS,
FOR CONSTRUCTION ON:

MEASURE "C" PEARSON RD IMPROVEMENTS PROJECT

ON PEARSON ROAD, EAST OF CLARK ROAD INTERSECTION TO THE INTERSECTION OF PENTZ ROAD, PARADISE, CALIFORNIA

FED PROJ NO.: HSIP 5425(027)
TOWN PROJECT #: 14-04.CON

The project plans for the work to be done were approved **February 4, 2016** and are entitled:

TOWN OF PARADISE, DEPARTMENT OF PUBLIC WORKS
CONSTRUCTION PLANS FOR

MEASURE "C" PEARSON RD IMPROVEMENTS PROJECT

FED PROJ NO.: HSIP 5425(027)
TOWN PROJECT #: 14-04.CON

ARTICLE II.-- The Town hereby promises and agrees with the Contractor to employ, and does hereby employ, the Contractor to provide the materials and to complete the work according to the terms and conditions herein contained and referred to, for the prices hereinafter set forth, and hereby agrees to pay the same at the time, in the manner and upon the conditions herein set forth; and the said parties for themselves, their heirs, executors, administrators, successors and assigns, do hereby agree to the full performance of the covenants herein contained.

ARTICLE III.— The higher of the State or the Federal prevailing wage rates as referenced in this set of contract documents are hereby made a part of this contract, and Contractor shall pay and require all subcontractors to pay the higher of the State or Federal prevailing wage rates to the construction workers providing labor for the work. It is further expressly agreed by and between the parties hereto that should there be any conflict between the terms of this instrument and the bid or proposal of said Contractor, then this instrument shall control and nothing herein shall be considered as an acceptance of the said terms of said proposal conflicting herewith.

ARTICLE IV.-- By my signature hereunder, as Contractor, I certify that I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

ARTICLE V. – It is further expressly agreed by and between the parties hereto that if there be any conflict between the terms of this Agreement and the bid of the Contractor, then this agreement shall control and nothing herein shall be considered as an acceptance of the terms of the Bid conflicting herewith.

ARTICLE VI. – The Town of Paradise hereby employs Contractor to provide material and to do the project work according to the terms and conditions herein contained and referred to for the following prices to be paid at the time, in the manner and upon the conditions set forth in this agreement.

ARTICLE VII. – The project work required in the performance of this Agreement is an improvement over which the Town of Paradise shall exercise general supervision.

ARTICLE VIII. – The statement of prevailing wages appearing in the General Prevailing Wage Rates is hereby specifically referred to and by this reference is made a part of this Agreement. It is further expressly agreed, by and between the terms of this Agreement and the bid of the Contractor, that this Agreement shall control and nothing herein shall be considered as an acceptance of the terms of the Bid conflicting with this Agreement.

ARTICLE IX. – Notwithstanding any other provision, all claims by the Contractor for $375,000 or less against the Town shall be subject to the procedures set forth in Public Contract Code sections 20104 to 20104.8; a copy of which is shown below:

20104.

(a) (1) This article applies to all public works claims of three hundred seventy-five thousand dollars ($375,000) or less which arise between a contractor and a local agency.

(2) This article shall not apply to any claims resulting from a contract between a contractor and a public agency when the public agency has elected to resolve any disputes pursuant to Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2.

(b) (1) "Public work" has the same meaning as in Sections 3100 and 3106 of the Civil Code, except that "public work" does not include any work or improvement contracted for by the state or the Regents of the University of California.

(2) "Claim" means a separate demand by the contractor for (A) a time extension, (B) payment of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public work and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (C) an amount the payment of which is disputed by the local agency.

(c) The provisions of this article or a summary thereof shall be set forth in the plans or specifications for any work which may give rise to a claim under this article. (d) This article applies only to contracts entered into on or after January 1, 1991.

20104.2.

For any claim subject to this article, the following requirements apply:

(a) The claim shall be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of final payment. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims.

(b) (1) For claims of less than fifty thousand dollars ($50,000), the local agency shall respond in writing to any written claim within 45 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the local agency may have against the claimant.

(2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.

(3) The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 15 days after receipt of the further documentation or within a period of time no greater than that taken by the claimant in producing the additional information, whichever is greater.

(c) (1) For claims of over fifty thousand dollars ($50,000) and less than or equal to three hundred seventy-five thousand dollars ($375,000), the local agency shall respond in writing to all written claims within 60 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the local agency may have against the claimant.

(2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.

(3) The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 30 days after receipt of the further documentation, or within a period of time no greater than that taken by the claimant in producing the additional information or requested documentation, whichever is greater.

(d) If the claimant disputes the local agency's written response, or the local agency fails to respond within the time prescribed, the claimant may so notify the local agency, in writing, either within 15 days of receipt of the local agency's response or within 15 days of the local agency's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the local agency shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(e) Following the meet and confer conference, if the claim or any portion remains in dispute, the claimant may file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the claimant submits Contractor's or her written claim pursuant to subdivision (a) until the time that claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.

(f) This article does not apply to tort claims and nothing in this article is intended nor shall be construed to change the time periods for filing tort claims or actions specified by Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code.

20104.4.

The following procedures are established for all civil actions filed to resolve claims subject to this article:

(a) Within 60 days, but no earlier than 30 days, following the filing or responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within 15 days by both parties of a disinterested third person as mediator, shall be commenced within 30 days of the submittal, and shall be concluded within 15 days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court or by stipulation of both parties. If the parties fail to select a mediator within the 15-day period, any party may petition the court to appoint the mediator.

(b) (1) If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act (Title 4 (commencing with Section 2016.010) of Part 4of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

(2) Notwithstanding any other provision of law, upon stipulation of the parties, arbitrators appointed for purposes of this article shall be experienced in construction law, and, upon stipulation of the parties, mediators and arbitrators shall be paid necessary and reasonable hourly rates of pay not to exceed their customary rate, and such fees and expenses shall be paid equally by the parties, except in the case of arbitration where the arbitrator, for good cause, determines a different division. In no event shall these fees or expenses be paid by state or county funds.

(3) In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, any party who after receiving an arbitration award requests a trial de novo but does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, pay the attorney's fees of the other party arising out of the trial de novo.

(c) The court may, upon request by any party, order any witnesses to participate in the mediation or arbitration process.

20104.6.

(a) No local agency shall fail to pay money as to any portion of a claim which is undisputed except as otherwise provided in the contract.

(b) In any suit filed under Section 20104.4, the local agency shall pay interest at the legal rate on any arbitration award or judgment. The interest shall begin to accrue on the date the suit is filed in a court of law.

ARTICLE X.—In addition, Contractor agrees to receive and accept the following prices as full compensation for furnishing all materials and for doing all the work contemplated and embraced in this

Agreement; also for all loss or damage, arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its acceptance by the Town, and for all risks of every description connected with the work; also for all expenses incurred by or in consequence of the suspension or discontinuance of work and for well and faithfully completing the work, and the whole thereof, in the manner and according to the plans and specifications, and the requirements of the Engineer under them, to wit:

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BID ITEM LIST

Bid Item List to be inserted
Completed
at Award of Contract

DAVIS-BACON
FEDERAL PREVAILING WAGE RATES

TO BE INSERTED INTO THE CONTACT FOLLOWING
WAGE DECISION DETERMINATION DURING BIDDING

IN WITNESS WHEREOF, the Parties to these presents have hereunto set their hands the year and date first above written

TOWN OF PARADISE

STATE OF CALIFORNIA

(SEAL) _____

Town Manager

Town Council

_____

Date

CONTRACTOR

(SEAL) _____

Signature

_____

Name

_____

Title

_____

Date

Licensed in accordance with and providing for the registration of contractors:

License No.: _____

Federal ID No. _____

DUNS Number (if applicable): _____

Approved as to Form:

_____

Town Counsel

Date

TOWN OF PARADISE, DEPARTMENT OF PUBLIC WORKS

PAYMENT BOND

(PAYMENT BOND TO ACCOMPANY CONTRACT) (SECTION 3247, CIVIL CODE)

BOND NO._____

KNOW ALL MEN BY THESE PRESENTS, THAT:

WHEREAS, The Town of Paradise, has awarded to _____ as Contractor, a contract for the work described as follows:

TOWN OF PARADISE, DEPARTMENT OF PUBLIC WORKS
NOTICE TO BIDDERS, SPECIAL PROVISIONS, AND CONSTRUCTION PLANS
FOR CONSTRUCTION ON:

MEASURE "C" PEARSON RD IMPROVEMENTS PROJECT

ON PEARSON ROAD, EAST OF CLARK ROAD INTERSECTION TO THE INTERSECTION OF PENTZ ROAD, PARADISE, CALIFORNIA

FED PROJ NO.: HSIP 5425(027)
TOWN PROJECT #: **14-04.CON**

AND WHEREAS, said Contractor is required to furnish a bond in connection with said contract in an amount equal to 100% of the bid amount, to secure the payment of claims of laborers, mechanics, material men and other persons as provided by law;
NOW, THEREFORE, we the undersigned Contractor and Surety are held and firmly bound unto the Town of Paradise in the sum of
_____ for which payment well and truly to be made we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH,

That if said Contractor, his or its heirs, executors, administrators, successors or assigns, or its subcontractors shall fail to pay any of the persons named in Civil Code Section 3181, or amounts due under the Unemployment Insurance Code with respect to work or labor performed by such claimant, or any amounts required to be deducted, withheld, and paid over to the Franchise Tax Board for the wages of employees of the Contractor and his subcontractors pursuant to Section 18806 of the Revenue and Taxation Code, with respect to such work and labor, that the surety herein will pay for the same in an amount not exceeding the sum specified in this bond, otherwise the above obligation shall be void. In case suit is brought upon this bond, the surety will pay a reasonable attorney's fee to fixed by the court.
This bond shall inure to the benefit of any of the persons named in Civil Code Section 3181 as to give a right of action to such persons or their assigns in any suit brought upon this bond.

Dated: _____ , 20_____

Correspondence or claims relating to this bond should be sent to the surety at the following address:

_____
Contractor

_____
_____
Surety (SEAL)

_____
_____
_____
By: Attorney-in-Fact

NOTE: Signatures of those executing for the surety must be properly acknowledged.

CERTIFICATE OF ACKNOWLEDGMENT

State of California, City / County of _____ SS

On this _____ day of _____ in the year 20 ___ before me _____,
personally appeared _____, personally known to me (or proved to me
Attorney-in-fact
on the basis of satisfactory evidence) to be the person whose name is subscribed to this instrument as the Attorney-in-fact of _____ and acknowledged to me that he/she subscribed the name of the said company thereto as surety, and his/her own name as Attorney-in-fact.

_____

(SEAL) Notary Public

TOWN OF PARADISE, DEPARTMENT OF PUBLIC WORKS

PERFORMANCE BOND

(PERFORMANCE BOND TO ACCOMPANY CONTRACT)

BOND NO._____

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, The Town of Paradise has awarded _____ as Contractor, a contract for the work described as follows:

TOWN OF PARADISE, DEPARTMENT OF PUBLIC WORKS
NOTICE TO BIDDERS, SPECIAL PROVISIONS, AND CONSTRUCTION PLANS
FOR CONSTRUCTION ON:

MEASURE "C" PEARSON RD IMPROVEMENTS PROJECT

ON PEARSON ROAD, EAST OF CLARK ROAD INTERSECTION TO THE INTERSECTION OF PENTZ ROAD, PARADISE, CALIFORNIA

FED PROJ NO.: HSIP 5425(027)

TOWN PROJECT #: **14-04.CON**

WHEREAS, The Contractor is required to furnish a bond in connection with said contract in an amount equal to 100% of the bid amount, guaranteeing the faithful performance thereof:
NOW, THEREFORE, We the undersigned Contractor and surety are held and firmly bound unto the Town of Paradise in the sum of _____ to be paid to said Town or its certain attorney, its successors and assigns: for which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors or assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH,

That if the above bounded Contractor, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the foregoing contract and any alteration thereof made as therein provided, on his or their part to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning, and shall indemnify and save harmless the Town of Paradise , its officers and agents, as therein stipulated, then this obligation shall become and be null and void; otherwise it shall be and remain in full force and virtue.
IN WITNESS WHEREOF, We have hereunto set our hands and seals on this _____ day of _____, 20___.

Correspondence or claims relating to this bond should be sent to the surety at the following address:

_____
Contractor

_____

_____
Name of Surety (SEAL)

_____

_____

_____
By: Attorney-in-Fact

NOTE: Signatures of those executing for the surety must be properly acknowledged.

CERTIFICATE OF ACKNOWLEDGMENT

State of California, City / County of _____ SS

On this _____ day of _____ in the year 20 ___ before me _____,
A notary public in and for the City / County of _____personally
appeared _____, Known to me to be the person whose
Attorney-in-fact
name is subscribed to this instrument as the Attorney-in-fact of _____
and acknowledged to me that he/she subscribed the name of the said company thereto as surety, and his/her own name as Attorney-in-fact.

_____

(SEAL) Notary Public