

**SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

336A



FROM: TLMA - Transportation Department

SUBMITTAL DATE:
March 29, 2012

SUBJECT: Construction of the Mecca Roundabout Street Improvements at the intersection of 4th Street and Hammond Road, in the unincorporated community of Mecca.

RECOMMENDED MOTION: That the Board of Supervisors:

1. Approve the plans and specifications for the construction of the Mecca Roundabout Street Improvements at the intersection of 4th Street and Hammond Road, in the unincorporated community of Mecca.
2. Authorize the Clerk to advertise for bids and begin advertisement subject to approval of federal funds. Bids anticipated to be received in the office of the Director of Transportation up to the hour of 2:00 pm, Wednesday, May 16, 2012, at which time bids will be opened.

Juan C. Perez
Director of Transportation

JCP:jj:sb:cmw
(Continued On Attached Page)

FINANCIAL DATA	Current F.Y. Total Cost:	\$ 2,002,315	In Current Year Budget:	Yes
	Current F.Y. Net County Cost:	\$ 0	Budget Adjustment:	No
	Annual Net County Cost:	\$ 0	For Fiscal Year:	2011/2012

SOURCE OF FUNDS: Federal Highway (CMAQ) funds (68%), Redevelopment Agency funds (32%)	Positions To Be Deleted Per A-30	<input type="checkbox"/>
	Requires 4/5 Vote	<input type="checkbox"/>

There are no General Funds used in this project.

C.E.O. RECOMMENDATION: APPROVE

BY:
Tina Grande

County Executive Office Signature

FORM APPROVED COUNTY COUNSEL
DATE: 5/28/12
BY: MARSHAL VICTOR

Departmental Concurrence

Dep't Recomm.: Consent Policy
Per Exec. Ofc.: Consent Policy

MINUTES OF THE BOARD OF SUPERVISORS

On motion of Supervisor Stone, seconded by Supervisor Buster and duly carried by unanimous vote, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Buster, Tavaglione, Stone, Benoit and Ashley
Nays: None
Absent: None
Date: April 24, 2012
xc: Transp., COB

Kecia Harper-Ihem
Clerk of the Board
By:
Deputy

Prev. Agn. Ref. 6/28/11, Item 3.64 | **District:** 4/4 | **Agenda Number:**

3.31



The Honorable Board of Supervisors

RE: Construction of the Mecca Roundabout Street Improvements at the intersection of 4th Street and Hammond Road, in the unincorporated community of Mecca.

March 29, 2012

Page 2 of 2

BACKGROUND:

The Transportation Department has substantially completed the construction of Phase 1, 2 and 3 of the Mecca Streets Revitalization Projects, which has brought reconstructed streets with sidewalks and replacement street lighting to the downtown Mecca community. The Union Pacific Railroad, in conjunction with the Transportation Department, has also completed the construction of railroad crossing safety improvements and drainage improvements on 4th Street between Grapefruit Boulevard and Hammond Road.

As a continuation of the street improvements in the downtown Mecca area, the proposed Mecca Roundabout Street Improvement Project will include the reconfiguration of the intersection of 4th Street and Hammond Road from an offset intersection to a roundabout.

In the appropriate setting, using roundabouts instead of traffic signals can increase traffic flow, reduce injury collisions and promote a greener environment with less fuel usage, less vehicle emissions and less noise. Roundabouts are designed to allow for continuously flowing traffic at slower speeds. FHWA studies have shown that the construction of similar roundabouts have increased traffic flow by 30-50% while reducing fatalities by up to 90% and reducing all injury crashes by 76%.

The project will also benefit the community by improving pedestrian access, improving street drainage and eliminating blight. The improvements will include the reconstruction of the existing pavement and the addition of sidewalk, curb, gutter, perimeter walls, landscaping, decorative stamped concrete, decorative decomposed granite and replacement street lighting.

The proposed construction will be funded by a combination of Federal Highway Administration Congestion Mitigation and Air Quality Funds (CMAQ Funds), and Redevelopment Agency (RDA) Funds. RDA funding will be under the terms and established budget of a funding agreement that was approved by the Board on June 28, 2011 (Item #3.64).

There will be no construction cost incurred until FY 2012/13.

The submitted plans and specifications have been approved as to form by County Counsel.

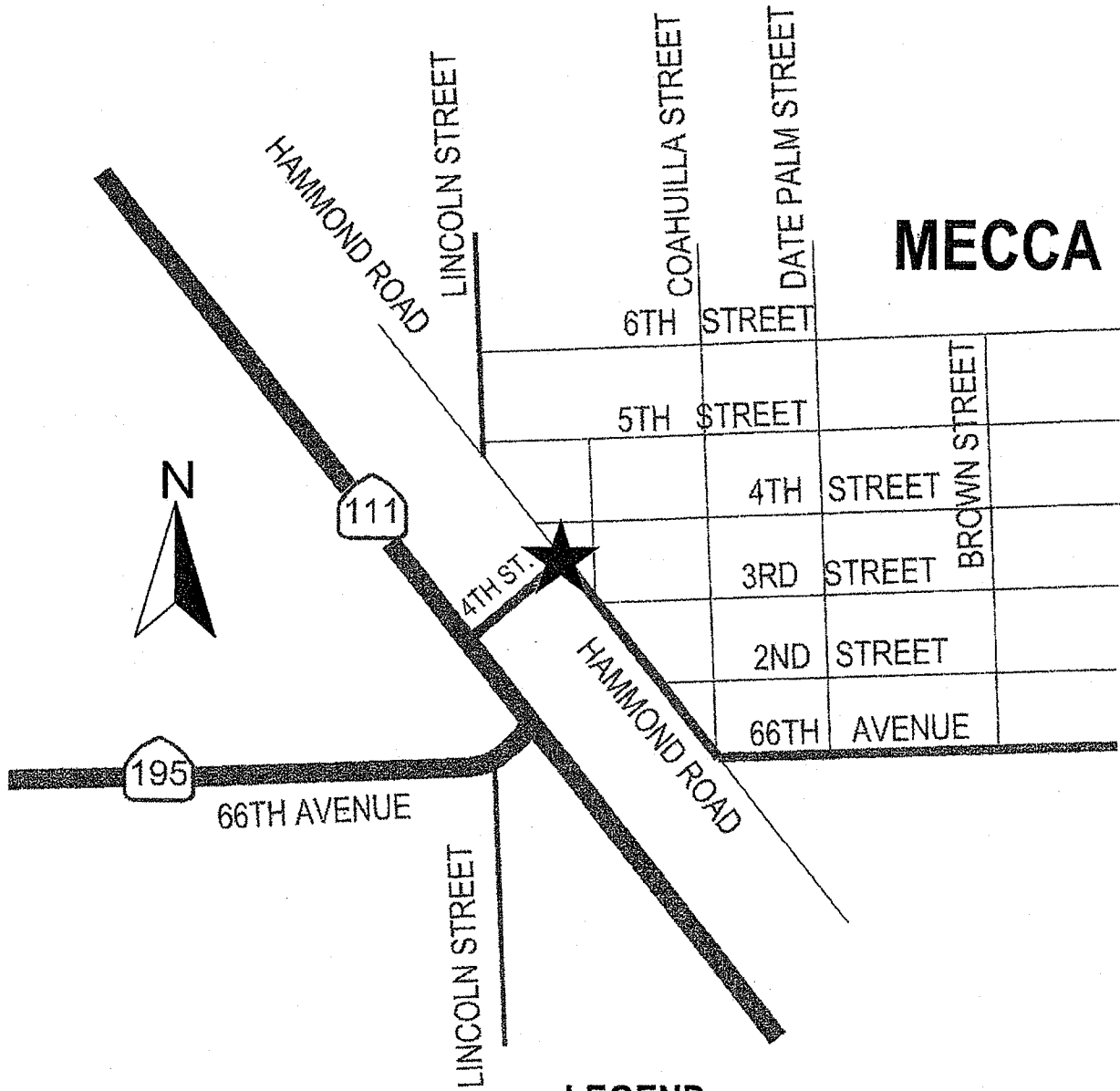
Environmental clearance is complete.

Project No: B9-0997

Federal Aid No. CML-5956(188)



Mecca Roundabout Location Map

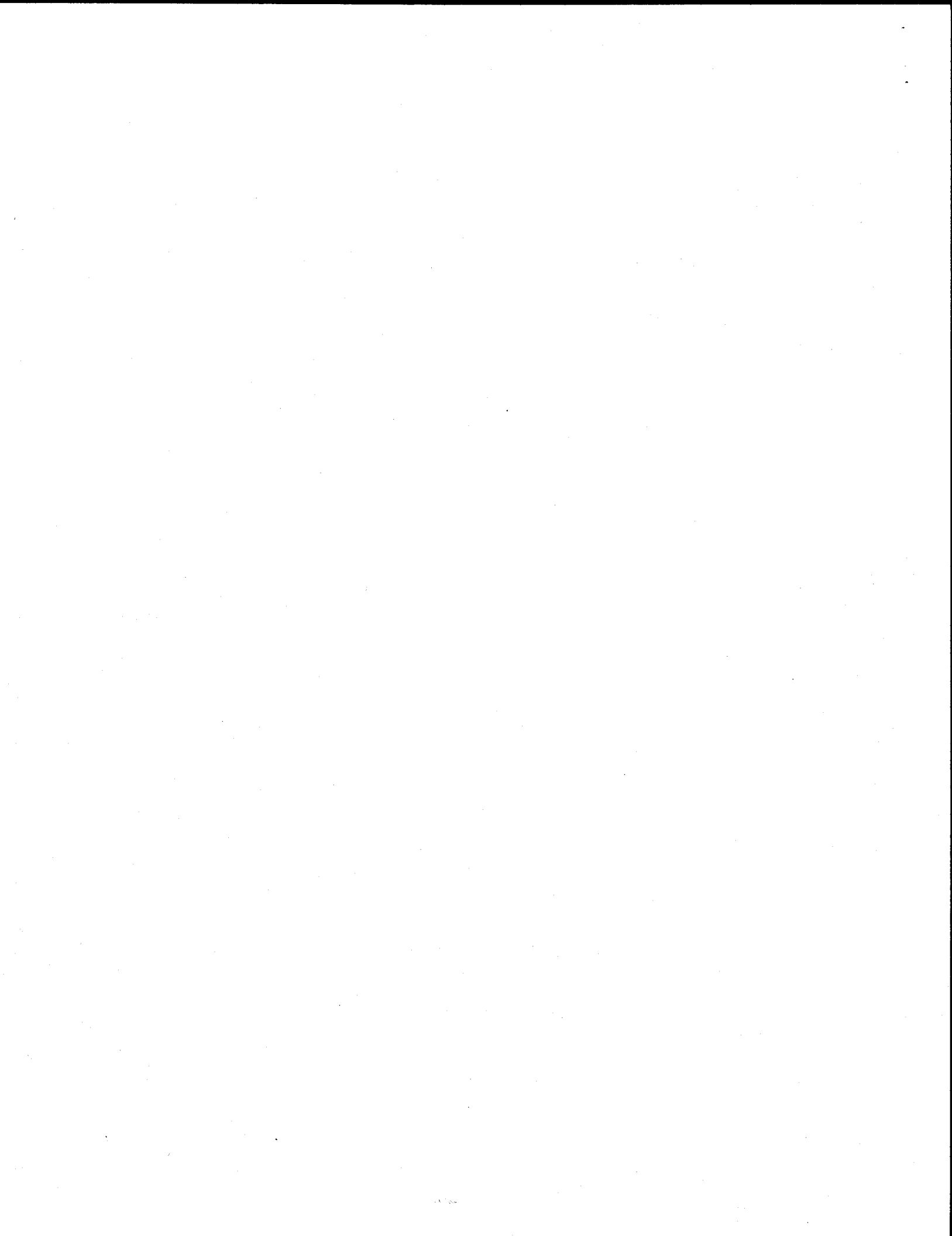


MECCA

LEGEND



Proposed Roundabout Location



MINUTES OF THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA



3.31

The recommendation from Transportation & Land Management Agency/Transportation regarding Approval of the Plans and Specifications for Construction of the Mecca Roundabout Street Improvements at the Intersection of 4th Street and Hammond Road, in the unincorporated community of Mecca, 4th District, is deleted from the agenda for Tuesday, April 17, 2012.

AGENDA NO.
3.31

331 APR 24 2012



MINUTES OF THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA



3.51

On motion of Supervisor Tavaglione, seconded by Supervisor Ashley and duly carried by unanimous vote, IT WAS ORDERED that the recommendation from the Transportation Department regarding Approval of the Plans and Specifications for Construction of the Mecca Roundabout Street Improvements at the Intersection of 4th Street and Hammond Road, in the unincorporated community of Mecca, 4th District is continued to Tuesday, April 17, 2012 at 9:00 a.m.

I hereby certify that the foregoing is a full true, and correct copy of an order made and entered on April 10, 2012 of Supervisors Minutes.

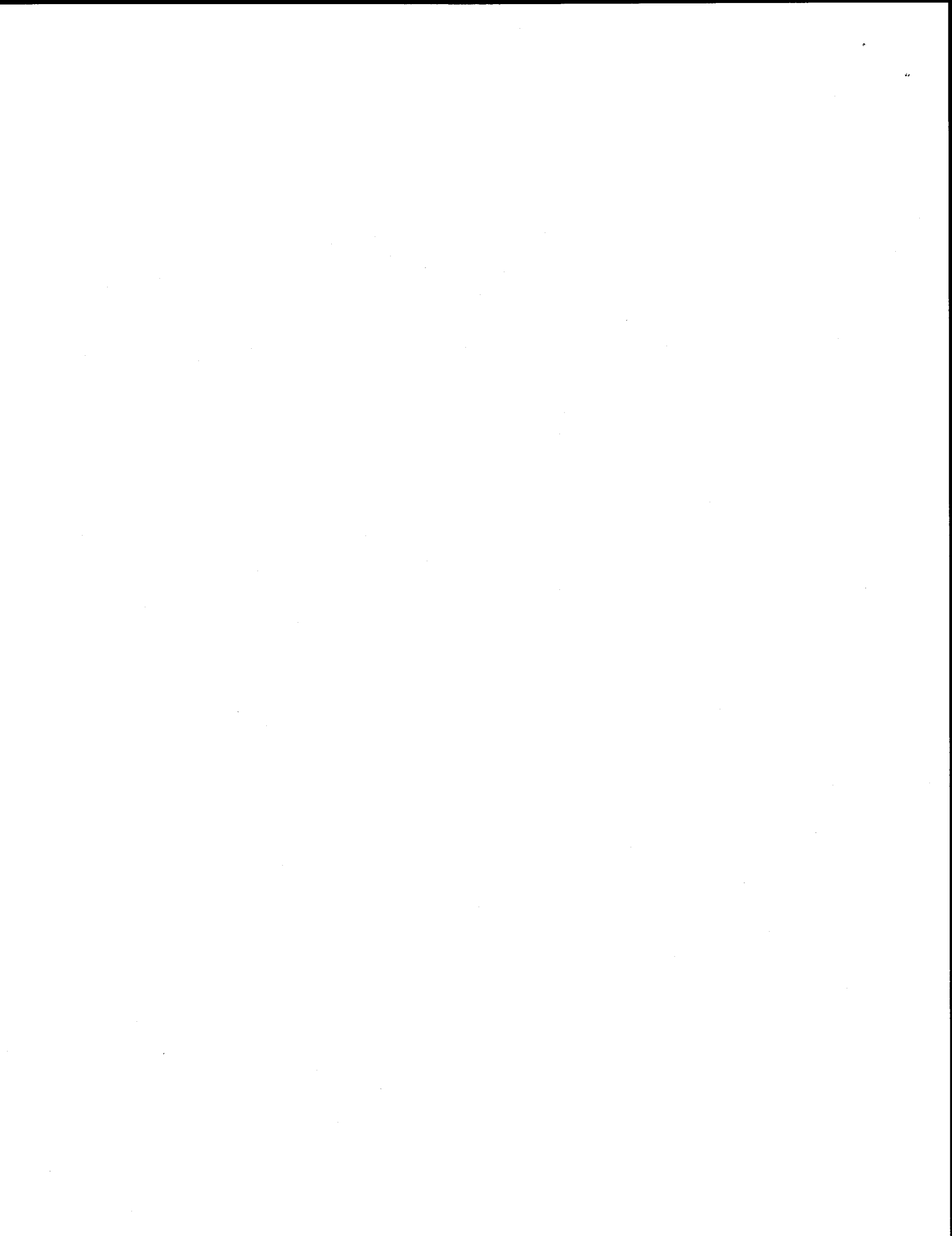
WITNESS my hand and the seal of the Board of Supervisors
Dated: April 10, 2012
Kecia Harper-Ihem, Clerk of the Board of Supervisors, in
and for the County of Riverside, State of California.

(seal)

By: Kecia Harper-Ihem Deputy

AGENDA NO.
3.51

xc: Transp., CQB



Update

Rector, Kimberly

From: Harper-Ihem, Kecia
Sent: Monday, April 09, 2012 3:10 PM
To: Rector, Kimberly
Subject: FW: Item 3.51 Mecca Roundabout on April 10 agenda

From: Perez, Juan [JCPEREZ@rctlma.org]
Sent: Thursday, April 05, 2012 8:43 AM
To: Harper-Ihem, Kecia
Cc: Grande, Tina; Gialdini, Michael; Washington, Sandra; Romo, Patricia
Subject: Item 3.51 Mecca Roundabout on April 10 agenda

Hi Kecia,

Can you please continue this item one week to April 17th. We are expecting final Caltrans approval any day now on the Federal funds to advertise the contract but unfortunately it doesn't look like we'll make it by next Tuesday.

Thanks.

*04.10.2012
3.51*



Harper-Ihem, Kecia

From: Perez, Juan <JCPEREZ@rctlma.org>
Sent: Thursday, April 12, 2012 5:15 PM
To: Harper-Ihem, Kecia
Cc: Grande, Tina; Romo, Patricia; Gialdini, Michael; Washington, Sandra
Subject: Item 3.31, Mecca rounadbout

Importance: High

Hello Kecia,

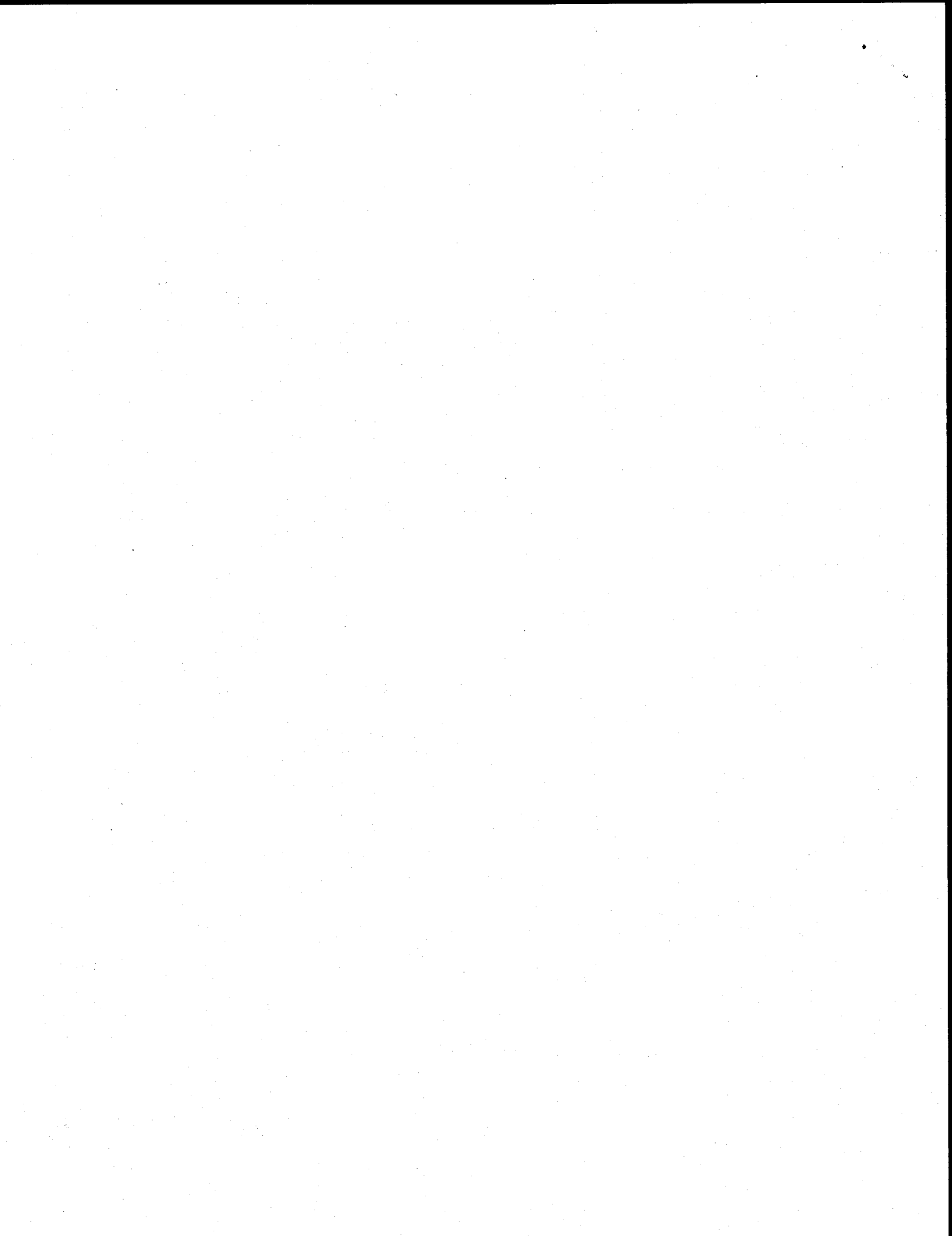
Can you please delete this item. We have been trying to get the final Federal authorization but are not quite yet successful (Mike, Caltrans has approved it a week ago but it's over at FHWA now).

I will add it on as soon as we are ready, hopefully for the following week's agenda.

Thank you as always.

04.17.2012

3.31



**MECCA ROUNDABOUT
STREET IMPROVEMENTS PROJECT
AT 4TH STREET AND HAMMOND ROAD**

**PROJECT NO. B9-0997
FEDERAL AID NO. CML – 5956(188)**

SPECIFICATIONS AND CONTRACT DOCUMENTS

for the construction of

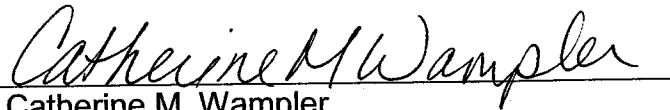
**MECCA ROUNDABOUT
STREET IMPROVEMENT PROJECT
AT 4TH STREET AND HAMMOND ROAD**

COUNTY OF RIVERSIDE

Project No. B9-0997
Federal Aid No. CML-5956(188)

Contract Approvals:


Recommended by:



Catherine M. Wampler,
Senior Civil Engineer

1/3/2012
Date

Approved by:



Khalid Nasim,
Engineering Division Manager

3/1/2012
Date

SPECIFICATIONS AND CONTRACT DOCUMENTS

for the construction of

**MECCA ROUNDABOUT
STREET IMPROVEMENT PROJECT
AT 4TH STREET AND HAMMOND ROAD**

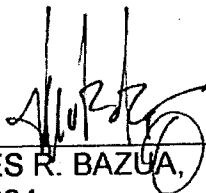
COUNTY OF RIVERSIDE

Project No. B9-0997
Federal Aid No. CML-5956(188)

Engineering Certification:

These specifications, Special Provisions, and estimates have been prepared by or under the direction of the following Registered Civil Engineer:





JAMES R. BAZUA,
C 58394

12/28/11
Date

SPECIFICATIONS AND CONTRACT DOCUMENTS

for the construction of

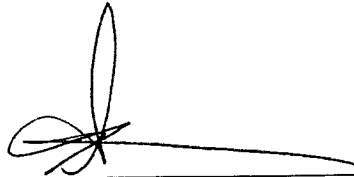
**MECCA ROUNDABOUT
STREET IMPROVEMENT PROJECT
AT 4TH STREET AND HAMMOND ROAD**

COUNTY OF RIVERSIDE

Project No. B9-0997
Federal Aid No. CML-5956(188)

Landscape Architect Certification:

These specifications, Special Provisions, and estimates have been prepared by or under the direction of the following Registered Landscape Architect:



A. STEVENS COOK II
R.L.A. NO. 4053

1-3-12

Date



SPECIFICATIONS AND CONTRACT DOCUMENTS

for

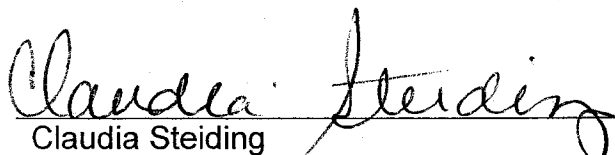
**MECCA ROUNDABOUT
STREET IMPROVEMENT PROJECT
AT 4TH STREET AND HAMMOND ROAD**

COUNTY OF RIVERSIDE


Project No. B9-0997
Federal Aid No. CML-5956(188)

Water Pollution Control:

Reviewed and Recommended by:



Claudia Steiding
Senior Transportation Planner/NPDES
Coordinator



Date

TABLE OF CONTENTS

PAGE

BID PROPOSAL
CONTRACT

B1-B25
C1-C5

NOTICE TO CONTRACTORS

1-2

SECTION

TITLE

1.	SPECIFICATIONS & PLANS	3
1-1.01	General	3
1-1.02	Notice	3
1-1.03	Definitions	4
2.	PROPOSAL REQUIREMENTS & CONDITIONS	4
2-1.01	General	4
2-1.015	Federal Lobbying Restrictions	10
2-1.02	Disadvantaged Business Enterprise	10
2-1.03	Design Engineer may not bid on Construction Contract	14
3.	AWARD, AND EXECUTION OF CONTRACT	14
3-1.01	General	14
3-1.01A	(BLANK)	14
3-1.01B	Insurance - Hold Harmless	14
3-1.01C	Award of Contract	16
3-1.02	Contract Bonds	18
3-1.03	Return of Proposal Guarantees	18
3-1.04	Addenda	18
3-1.05	Bid Bond	19
3-1.06	Alternate Bid Schedules	19
4.	BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES	19
5.	GENERAL	21
5-1.01	Public Safety	21
5-1.02	Extra Work	23
5-1.03	Prevailing Wage	23
5-1.04	Subcontractor and Records	24
5-1.05	DBE Certification Status	25
5-1.06	Performance of Subcontractors	25
5-1.07	Subcontracting	26
5-1.08	Labor Nondiscrimination	27
5-1.09	Arbitration	27
5-1.10	Sound Control Requirements	27

SECTION
PAGE

TITLE

5-1.11	Prompt Progress Payment to Subcontractors	28
5-1.12	Prompt Payment of Withheld Funds to Subcontractors	28
5-1.13	Payments	29
5-1.14	Deposit of Securities	29
5-1.15	Force Account Payment	30
5-1.16	Assignment of Claims	31
5-1.17	Claims Resolution	32
5-1.18	Removal of Asbestos and Hazardous Substances	33
5-1.19	Dust Abatement	33
	Dust Abatement Attachments	DA 1-26
5-2	Federal Prevailing Wage Decision	MW 1-21
6.	FEDERAL REQUIREMENTS FOR FEDERAL AID CONSTRUCTION PROPERTIES	
6-1.01	Federal Requirements for Federal-Aid Construction Projects	(14 Pages)
6.1.02	Final Report-Utilization of Disadvantaged Business Enterprises (DBE), First-Tier Subcontractors	(2 Pages)
6-1.03	Disadvantaged Business Enterprises (DBE) Certification Status Change	(2 Pages)
7.	(BLANK)	
8.	MATERIALS	37
8-1.01	Buy America Requirements	37
8-1.02	Slag Aggregate	38
8-1.03	Year 2000 Compliance	38
8-1.04	Testing	39
8-1.05	Reference Specific Brands or Product	40
9.	Description of Work	41
10.	Special Provisions	41-160

Appendix A (Attachment C for Risk Level 1)
Reference Drawings

SECTION 9 SPECIAL PROVISIONS - GENERAL.....	41
SECTION 9-1 GENERAL.....	41
9-1.01 DESCRIPTION OF WORK:.....	41
9-1.02 STANDARD SPECIFICATIONS:.....	41
9-1.03 REQUIREMENTS FOR BOND - LANDSCAPING:.....	41
9-1.04 PARTIAL PAYMENT:.....	42
9-1.05 ADDITIONAL INSURANCE- HOLD HARMLESS:.....	42
9-1.06 RECORD DRAWINGS:.....	43
9-1.07 SURVEY STAKING:.....	43
9-1.08 IRAN CONTRACTING ACT:.....	44
SECTION 9-2 COOPERATION, UTILITIES AND SCHEDULING.....	45
9-2.01 COOPERATION WITH OTHER CONTRACTORS AND UTILITIES:.....	45
9-2.02 ORDER OF WORK:.....	47
9-2.03 OBSTRUCTIONS:.....	50
SECTION 9-3 ENVIRONMENTAL.....	54
9-3.01 AIR QUALITY – BASIC NESHAP ASBESTOS NOTIFICATION:.....	54
9-3.02 CULTURAL RESOURCES:.....	54
9-3.03 WATER CONSERVATION:.....	55
9-3.04 NON-NATIVE PLANT PRECLUSION:.....	56
9-3.05 BIOLOGICAL MONITORING:.....	57
SECTION 10 SPECIAL PROVISIONS – ITEMS OF WORK.....	58
SECTION 10-1 ROADWAY.....	58
10-1.01 MOBILIZATION:.....	58
10-1.02 DE-MOBILIZATION:.....	58
10-1.03 DUST ABATEMENT:.....	59
10-1.04 DEVELOP WATER SUPPLY:.....	59
10-1.05 WATER POLLUTION CONTROL (WHITewater - RISK LEVEL 1):.....	59
10-1.06 STREET SWEEPING:.....	65
10-1.07 TRAFFIC CONTROL SYSTEM:.....	66
10-1.08 CONSTRUCTION AREA SIGNS:.....	69
10-1.09 TEMPORARY RAILING (TYPE K):.....	70
10-1.10 CLEARING AND GRUBBING:.....	71
10-1.11 CONSTRUCTION PROJECT FUNDING IDENTIFICATION SIGNS:.....	71
10-1.12 ROADWAY EXCAVATION:.....	72
10-1.13 HOT MIX ASPHALT:.....	74
10-1.14 PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS:.....	81
10-1.15 AGGREGATE BASE:.....	86
10-1.16 SUBGRADE ENHANCEMENT TREATMENT:.....	87
10-1.17 SUBGRADE ENHANCEMENT FABRIC (GEOGRID):.....	88
10-1.18 CONCRETE CURB, GUTTER, CONCRETE HEADER (MOW STRIP), DRIVEWAY, SIDEWALK, UNDER SIDEWALK DRAIN AND “U” DRAIN, AND CURB RAMPS:.....	90
10-1.19 ADA DETECTABLE WARNING SURFACES (TRUNCATED DOMES):.....	91

10-1.20	DECORATIVE COLORED CONCRETE - BIKE PATH, BIKE RAMPS AND DRIVEWAY APPROACH:	91
10-1.21	DECORATIVE COLORED STAMPED CONCRETE - MEDIAN ISLANDS:	94
10-1.22	DECORATIVE COLORED STAMPED CONCRETE PAVEMENT FOR TRUCK APRON:	96
10-1.23	METAL BEAM GUARD RAILING:	124
10-1.24	REMOVE TRAFFIC STRIPE AND PAVEMENT MARKINGS:.....	125
10-1.25	THERMOPLASTIC CROSSWALK AND PAVEMENT MARKINGS:.....	125
10-1.26	THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE):	126
10-1.27	PAINT TRAFFIC STRIPE:.....	127
10-1.28	PAVEMENT MARKERS:	128
10-1.29	ROADSIDE SIGNS (INSTALL/RELOCATE):	128
10-1.30	BARRIER POST (BOLLARD):.....	129
10-1.31	CHAIN LINK FENCE (WITH CURB):	130
10-1.32	LIGHTING (ROUNABOUT SAFETY LIGHTING SYSTEM):	130
10-1.33	IMPORTED BORROW (DECORATIVE MOUNDING):.....	133
10-1.34	IMPORTED GRANULAR MATERIAL (DECOMPOSED GRANITE):....	134
10-1.35	IMPORTED ROCKY MATERIAL (BOULDERS):	134
10-1.36	REMOVE/DEMOLISH EXISTING BLOCK WALL:	135
10-1.37	SLUMP BLOCK WALL AND PILASTER:	135
10-1.38	ENTRY MONUMENT WALL STRUCTURE:	136
10-1.39	AGAVE PLANT METAL SCULPTURES:	137
10-1.40	ELECTRIC SERVICE (IRRIGATION):	137
10-1.41	WATER METER AND BACKFLOW PREVENTER:	138
10-1.42	FINISHING ROADWAY:	138
10-1.43	RADAR DRIVER FEEDBACK DISPLAY ASSEMBLIES (2 EACH) AND WIRELESS COMMUNICATION EQUIPMENT	138
10-1.44	ABANDONMENT OF MONITORING WELL AND INSTALLATION OF MONITORING WELL:	143
10-1.45	MISCELLANEOUS DIRECTED WORK:.....	144
SECTION 10-2 LANDSCAPING		145
10-2.01	GENERAL.....	145
10-2.02	IRRIGATION SYSTEM:	146
10-2.03	LANDSCAPING AND PLANTING	177
10-2.04	PLANT ESTABLISHMENT PERIOD	193
10-2.05	LANDSCAPE LIGHTING AND SIGN ILLUMINATION:	205
10-2.06	SUPPLEMENTAL PROJECT SPECIFIC SPECIFICATIONS:	207

APPENDIX A
ATTACHMENT "C" FOR RISK LEVEL 1 REQUIREMENTS

APPENDIX B
REFERENCE DRAWINGS

APPENDIX C
EXHIBIT A – CONSTRUCTION PROJECT FUNDING INFORMATION SIGN
EXHIBIT B – CONSTRUCTION STAGING EXHIBITS
EXHIBIT C – RADAR DRIVER FEEDBACK DISPLAY ASSEMBLIES

BID TO THE COUNTY OF RIVERSIDE

**MECCA ROUNDABOUT
STREET IMPROVEMENTS PROJECT
AT 4TH STREET AND HAMMOND ROAD**

**PROJECT NO. B9-0997
FEDERAL AID NO. CML – 5956(188)**

NAME OF BIDDER: _____

The work for which this bid is submitted is for construction in conformance with the special provisions (including the payment of not less than the State general prevailing wage rates or Federal minimum wage rates), the project plans described below, including any addenda thereto, the contract annexed hereto, and also in conformance with the California Department of Transportation Standard Plans, dated May 2006, the Standard Specifications, dated May 2006, and the Labor Surcharge and Equipment Rental Rates in effect on the date the work is accomplished.

The work to be done is shown upon plans entitled, Mecca Roundabout Street Improvements Project at 4th Street and Hammond Road Project No. B9-0997, Federal Aid No. CML-5956(188).

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.)

TO THE COUNTY OF RIVERSIDE:

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 and in submitting this Bid, the undersigned bidder agrees that if it is determined that he is the successful bidder, he will execute the non-collusion affidavit required by the Federal requirements set forth under Section 6 of these Special Provisions; 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 County of Riverside in the form of the copy of the contract annexed hereto, and will deliver the Faithful Performance Bond, Payment Bond, and Insurance Certificate with endorsements, which comply with the requirements set forth in the contract documents, within 10 working days of the date of the Notice of Acceptance of Bid and Intent to Award as issued by the County of Riverside, and agrees 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 herein prescribed, and according to the requirements of the Engineer as therein set forth, and that he will take in full payment therefore the following item prices, to wit:

**MECCA ROUNDABOUT
STREET IMPROVEMENTS PROJECT
AT 4TH STREET AND HAMMOND ROAD
PROJECT NO. B9-0997
FEDERAL AID NO. CML - 5956(188)**

PROPOSAL

ITEM No.	ITEM CODE	ITEM	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
----------	-----------	------	------	--------------------	-------------------------	--------------------

SCHEDULE "A"

1	999990	MOBILIZATION	LS	1		
2	019901	DE-MOBILIZATION	LS	1	50,000.00	50,000.00
3	066102	DUST ABATEMENT	LS	1		
4	074020	WATER POLLUTION CONTROL	LS	1		
5	120100	TRAFFIC CONTROL SYSTEM	LS	1		
6	160101	CLEARING AND GRUBBING [INCLUDING: REMOVE VEGETATION, DRAIN PIPE, BARRICADE, SIGN, GRADING AND FINE GRADING FOR LANDSCAPING AREAS, INSTALL IRRIGATION SLEEVES]	LS	1		
7	000003	TEMPORARY CONSTRUCTION PROJECT FUNDING IDENTIFICATION SIGN	EA	1		
8	190101(F)	ROADWAY EXCAVATION	CY	5,500		
9	390130	HOT MIX ASPHALT	TON	2,150		
10	260201	CLASS 2 AGGREGATE BASE	CY	4,500		
11	198200	SUBGRADE ENHANCEMENT FABRIC [GEOGRID 1-LAYER]	SQYD	11,500		
12	017304	MINOR CONCRETE (CURB AND GUTTER) (CRS 200)	LF	1,450		
13	017309A	MINOR CONCRETE (TYPE "D" CURB) (MODIFIED CRS 204) [6"CF]	LF	1,900		
14	000003	MINOR CONCRETE (TYPE A3-8 CURB) (CT STD A87A) [8" CF]	LF	230		
15	000003	MINOR CONCRETE (TYPE B3-4 CURB) (CT STD A87A) [4" CF]	LF	270		
16	731501A	MINOR CONCRETE (CURB) [3" CF, MOUNTABLE CURB PER DETAIL]	LF	260		
17	731509	MINOR CONCRETE [CONCRETE MOW STRIP]	LF	500		
18	731521	MINOR CONCRETE (SIDEWALK) [CRS 401] [4" THICK]	SQFT	9,200		
19	731623	MINOR CONCRETE (CURB RAMP) [PER DETAIL]	SQFT	650		
20	510502	MINOR CONCRETE (MINOR STRUCTURE) [UNDER SIDEWALK DRAIN PER CRS 309, AND U-DRAIN PER DETAIL]	LS	1		
21	731516	MINOR CONCRETE (DRIVEWAY) [CRS 207] [8" THICK]	SQFT	90		
22	731516	MINOR CONCRETE (DRIVEWAY) [CRS 207, COLORED CONCRETE] [8" THICK]	SQFT	105		
23	731521A	MINOR CONCRETE [COLORED CONCRETE - BIKE PATH, BIKE RAMP] [4" THICK]	SQFT	1,300		
24	731519	MINOR CONCRETE (STAMPED CONCRETE) [DECORATIVE COLORED - MEDIAN ISLANDS] (4" THICK)]	SQFT	6,400		
25	731519	MINOR CONCRETE (STAMPED CONCRETE) [DECORATIVE COLORED - CONCRETE PAVEMENT - TRUCK APRON, (9" THICK)]	CY	890		
26	832003	METAL BEAM GUARD RAILING (WOOD POSTS) [CALTRANS STD PLAN A77A]	LF	60		
27	150717	REMOVE TRAFFIC STRIPE AND PAVEMENT MARKINGS	SQFT	700		

PROPOSAL

ITEM No.	ITEM CODE	ITEM	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
28	840519	THERMOPLASTIC CROSSWALK AND PAVEMENT MARKINGS	SQFT	4,200		
29	840560	THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)	LF	4,000		
30	840656	PAINT TRAFFIC STRIPE (2 COAT)	LF	780		
31	566011	ROADSIDE SIGN - ONE POST	EA	49		
32	152390A	RELOCATE ROADSIDE SIGN AND REPLACE POST	EA	2		
33	839523	BARRIER POST [BOLLARD]	EA	4		
34	800300	CHAIN LINK FENCE [WITH CURB, PER DETAIL]	LF	50		
35	860401	LIGHTING [ROUNDBOUT SAFETY LIGHTING SYSTEM]	LS	1		
36	198001	IMPORTED BORROW [FILL AND DECORATIVE MOUNDING]	CY	1,275		
37	198005	IMPORTED GRANULAR MATERIAL [DECOMPOSED GRANITE (3" THICK)]	CY	415		
38	198021	IMPORTED ROCKY MATERIAL [BOULDERS (SIZE 1 - 2.5x2x2)]	EA	80		
39	198021	IMPORTED ROCKY MATERIAL [BOULDERS (SIZE 12- 3.5x3x2)]	EA	75		
40	150836A	REMOVE EXISTING BLOCK WALL [INCLUDING INSTALLATION OF TEMPORARY FENCING]	LF	300		
41	518201	MASONRY BLOCK WALL [6' SLUMP BLOCK WALL W/ ROLLED MORTAR CAP]	LF	650		
42	000003	7' PILASTER WITH STONE VENEER AND PRECAST CAP	EA	12		
43	000003	ENTRY MONUMENT WALL STRUCTURE	LS	1		
44	000003	AGAVE PLANT METAL SCULPTURES (24" X 30")(4 EACH)	FA	1	5,000.00	5,000.00
45	860797	ELECTRIC SERVICE (IRRIGATION) [INCLUDING CONDUIT RUNS BETWEEN CONTROLLER, SERVICE POINT, AND PEDESTAL]	EA	1		
46	000003	SOIL PREPARATION (PHASE 1)	LS	1		

SCH. "A" SUBTOTAL: _____ \$ _____

"WORDS"

ITEM 1-46

ITEM No.	ITEM CODE	ITEM	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
SCHEDULE "B"						
47	204022	PLANT (GROUP Z) (PALM TREE) [6 BTH]	EA	24		
48	204022	PLANT (GROUP Z) (PALM TREE) [10 BTH]	EA	3		
49	204002	PLANT (GROUP B) [5 GALLON SHRUB]	EA	200		
50	208000	IRRIGATION SYSTEM [DRIP EMITTER SYSTEM EQUIPMENT, ASSEMBLIES, VALVES, AND PIPING (PHASE 1)]	LS	1		
51	206851A	IRRIGATION CONTROLLER ASSEMBLY (CALSENSE) (INCLUDING ET GAGE, RAIN BUCKET, ANTENNA)	LS	1		
52	860460A	LANDSCAPE LIGHTING AND SIGN ILLUMINATION [INCLUDING ALL CONDUIT, CONTACTS, RELAYS, AND CONDUIT TO SERVICE POINT]	LS	1		
53	204099A	PLANT ESTABLISHMENT PERIOD [12 QUARTERS]	LS	1	60,000.00	60,000.00

SCH. "B" SUBTOTAL: _____ \$ _____

ITEM 47-53

"WORDS"

PROPOSAL

ITEM No.	ITEM CODE	ITEM	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
----------	-----------	------	------	--------------------	-------------------------	--------------------

SCHEDULE "C"

54	000003	RADAR DRIVER FEEDBACK DISPLAY ASSEMBLIES (2 EACH) AND WIRELESS COMMUNICATION EQUIPMENT	LS	1		
55	000003	ABANDONMENT OF MONITORING WELL	EA	1		
56	000003	INSTALLATION OF MONITORING WELL	EA	1		
57	000003	MISCELLANEOUS DIRECTED WORK	FA	1	100,000.00	100,000.00

SCH. "C" SUBTOTAL: _____ \$ _____
 ITEM 54-57 "WORDS"

ITEM No.	ITEM CODE	ITEM	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
----------	-----------	------	------	--------------------	-------------------------	--------------------

ALTERNATE BID SCHEDULE "1"

58	000003	SOIL PREPARATION (PHASE 2)	LS	1		
59	204011	PLANT (GROUP K) [24" BOX]	EA	5		
60	204002	PLANT (GROUP B) [5 GALLON SHRUB]	EA	500		
61	204002	PLANT (GROUP B) [5 GALLON VINE]	EA	33		
62	206555	MODIFY IRRIGATION SYSTEM [REMOVE CAPS AND INSTALL DRIP EMITTERS (PHASE 2)]	LS	1		

ALT. "1" SUBTOTAL: _____ \$ _____
 ITEM 58-62 "WORDS"

PROJECT TOTAL: _____ \$ _____
 ITEM 1-62 "WORDS"

Note 1: The Base Bid includes Schedule A, B and C. These schedules are separated for the County use of allocated funds and for County billing purposes.

Note 2: Alternate Bid Schedule "1" may or may not be selected for award after the review of received bid proposals.

Accompanying this Bid is a certified check, cashier check or bid bond in an amount equal to at least 10 percent of the total bid.

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 co-partners composing firm; if bidder or other interested person is an individual, state first and last names in full.

TRUE NAME OF BIDDER:

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 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 State of California and the United States of America, that the Title 23 United States Code, Section 112 Non-Collusion Affidavit and Title 49 code of Federal Regulations, Part 29 Debarment and Suspension Certification are true and correct.

Date: _____
PRINT NAME AND TITLE

Signature of Bidder

TITLE
If the bidder is a corporation, attach the Corporate Resolution which authorizes the signatory to represent the Corporation)

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 () _____

ELECTRONIC MAIL: _____

CONTRACTOR LICENSE NO. _____

EXPIRATION DATE: _____

LICENSE CLASSIFICATIONS: _____

EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION

The bidder _____, proposed subcontractor _____, hereby certifies that he has _____, has not _____, participated in a previous contract or subcontract subject to the equal opportunity clause, 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 filing requirement.

(Company)

By: _____

(Title)

Date: _____

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.

DECLARATION

The bidder hereby declares under penalty of perjury that the bidder has _____, has not _____ been convicted within the preceding three years by a court of competent jurisdiction of 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.

The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof.

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.

QUESTIONNAIRE

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 circumstances on a separate page.

COMPLIANCE WITH ORDERS OF NATIONAL LABOR RELATIONS BOARD STATEMENT

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.

NON-COLLUSION AFFIDAVIT

In accordance with Public Contract Code Section 7106, the bidder shall execute the Non-Collusion Affidavit that is a part of this Bid, as appropriate for the bidder's business category.

Non-Collusion Declaration

To be executed by bidder and submitted with bid.
(Title 23 United States Code Section 112 and Public Contract Code Section 7106)

The undersigned declares:

I am the _____ (Title) of _____ (Company),
the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder 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. 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.

All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price of any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the applicable laws that the foregoing is true and correct and that this declaration is executed on

_____ (Month) _____ (Day) of _____ (Year),

at _____ (City), _____ (State).

Signature of Declarant: _____

Printed name of Declarant: _____

Name of Bidder (Company): _____

Title or Office: _____

Note: Notarization of signature required.

Check box if attachment is included.

This Page intentionally left Blank

This Page intentionally left Blank

DEBARMENT AND SUSPENSION CERTIFICATION

TITLE 49, CODE OF FEDERAL REGULATIONS, PART 29

The bidder, under penalty of perjury, certifies that, except as noted below, he/she or any person associated therewith in the capacity of owner, partner, director, officer, manager:

is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency;

has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal agency within the past 3 years;

does not have a proposed debarment pending; and

has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

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.

Note: 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.

**NONLOBBYING CERTIFICATION
FOR FEDERAL-AID CONTRACTS**

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

- (1) 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.
- (2) 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 of Lobbying Activities," in conformance with its instructions.

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 Section 1352, Title 31, U.S. Code. 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.

The prospective participant also agrees by submitting his or her bid or bid 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 sub-recipients shall certify and disclose accordingly.

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 (MI).
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.

INSTRUCTIONS - LOCAL AGENCY BIDDER-
UDBE COMMITMENT (CONSTRUCTION CONTRACTS), EXHIBIT 15-G(1)

ALL BIDDERS:

PLEASE NOTE: It is the bidder's responsibility to verify that the UDBE(s) falls into one of the following groups in order to count towards the UDBE contract goal: 1) African Americans; 2) Asian-Pacific Americans; 3) Native Americans; 4) Women. This information may be submitted with your bid proposal. If it is not, and you are the apparent low bidder or the second or third low bidder, it must be submitted and received as specified in the Special Provisions. Failure to submit the required UDBE commitment will be grounds for finding the bid nonresponsive

UDBE is a firm meeting the definition of a DBE as specified in 49 CFR and is one of the following groups:

1. African Americans.
2. Asian-Pacific Americans.
3. Native Americans.
4. Women.

The form requires specific information regarding the construction contract: Agency, Location, Project Description, Federal Aid Project Number (assigned by Caltrans-Local Assistance), Total Contract Amount, Bid Date, Bidder's Name, and Contract Goal.

The form has a column for the Contract Item Number (or Item No's) and Item of Work and Description or Services to be Subcontracted or Materials to be provided by UDBEs. The UDBE should provide a certification number to the Contractor and expiration date. The form has a column for the Names of UDBE Contractors to perform the work (who must be certified on the date bids are opened and include the UDBE address and phone number). Enter the UDBE prime's and subcontractors' certification numbers. Prime Contractors shall indicate all work to be performed by UDBEs including, if the prime is a UDBE, work performed by its own forces.

IMPORTANT: Identify **all** UDBE firms being participating in the project regardless of tier. Names of the First Tier UDBE Subcontractors and their respective item(s) of work listed should be consistent, where applicable, with the names and items of work in the "List of Subcontractors" submitted with your bid. Provide copies of the UDBEs' quotes, and if applicable, a copy of joint venture agreements pursuant to the Subcontractors Listing Law and the Special Provisions.

There is a column for the total UDBE dollar amount. Enter the Total Claimed UDBE Participation dollars and percentage amount of items of work submitted with your bid pursuant to the Special Provisions. (If 100% of item is not to be performed or furnished by the UDBE, describe exact portion of time to be performed or furnished by the UDBE.) See Section "Disadvantaged Business Enterprise (DBE)," of the Special Provisions (construction contracts); to determine how to count the participation of UDBE firms.

Exhibit 15-G (1) must be signed and dated by the person bidding. Also list a phone number in the space provided and print the name of the person to contact.

Local agencies should complete the Contract Award Date and Federal Share fields and verify that all information is complete and accurate before signing and sending a copy of the form to the District Local Assistance Engineer within 15 days of award. Failure to submit a completed and accurate form within the 15-day time period may result in the de-obligation of funds on this project.

District DBE Coordinator should verify that all information is complete and accurate. Once the information has been verified, the District Local Assistance Engineer signs and dates the form.

UDBE INFORMATION—GOOD FAITH EFFORTS, EXHIBIT 15-H

The County of Riverside established an Under-utilized Disadvantaged Business Enterprise (UDBE) goal of 1.2% 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 – UDBE Commitment" form indicates that the bidder has met the UDBE 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 UDBE firm was not certified at bid opening, or the bidder made a mathematical error.

Submittal of only the "Local Agency Bidder – UDBE 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 UDBE Commitment" of the Special Provisions:

- A. The names and dates of each publication in which a request for UDBE 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 UDBEs soliciting bids for this project and the dates and methods used for following up initial solicitations to determine with certainty whether the UDBEs were interested (please attach copies of solicitations, telephone records, fax confirmations, etc.):

Names of UDBEs Solicited	Date of Initial Solicitation	Follow Up Methods and Dates

- C. The items of work which the bidder made available to UDBE 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 UDBE participation. It is the bidder's responsibility to demonstrate that sufficient work to facilitate UDBE participation was made available to UDBE 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 UDBE firms, the reasons for the bidder's rejection of the UDBEs, the firms selected for that work (please attach copies of quotes from the firms involved), and the price difference for each UDBE if the selected firm is not a UDBE:

Names, addresses and phone numbers of rejected UDBEs and the reasons for the bidder's rejection of the UDBEs:

Names, addresses and phone numbers of firms selected for the work above:

E. Efforts made to assist interested UDBEs 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 UDBEs:

F. Efforts made to assist interested UDBEs in obtaining necessary equipment, supplies, materials, or related assistance or services, excluding supplies and equipment the UDBE 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 UDBE 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):

INSTRUCTIONS - LOCAL AGENCY BIDDER- DBE INFORMATION
(CONSTRUCTION CONTRACTS), EXHIBIT 15-G(2)

SUCCESSFUL BIDDER:

The form requires specific information regarding the construction contract: Agency, Location, Project Description, Federal Aid Project Number (assigned by Caltrans-Local Assistance), Total Contract Amount, Bid Date, Bidder's Name, and Contract Goal.

The form has a column for the Contract Item Number (or Item No's) and Item of Work and Description or Services to be Subcontracted or Materials to be provided by DBEs. The DBE should provide a certification number to the Contractor and expiration date. The DBE Contractors should notify the Contractor in writing with the date of the decertification if their status should change during the course of the contract. The form has a column for the Names of DBE certified Contractors to perform the work (must be certified on the date bids are opened and include DBE address and phone number). Enter DBE prime and subcontractors certification number. Prime Contractors shall indicate all work to be performed by DBEs including work performed by its own forces if a DBE.

IMPORTANT: Identify **all** DBE firms participating in the project--including all UDBEs listed on the UDBE Commitment form (Exhibit 15G(1)), regardless of tier. Names of the First Tier DBE Subcontractors and their respective item(s) of work listed should be consistent, where applicable, with the names and items of work in the "List of Subcontractors" submitted with your bid.

There is a column for the total DBE dollar amount. Enter the Total Claimed DBE Participation dollars and percentage amount of items of work submitted with your bid pursuant to the Special Provisions. (If 100% of item is not to be performed or furnished by the DBE, describe exact portion of time to be performed or furnished by the DBE.) See Section "Disadvantaged Business Enterprise (DBE)" of the Special Provisions (construction contracts); to determine how to count the participation of DBE firms.

Exhibit 15-G (2) must be signed and dated by the successful bidder. Also list a phone number in the space provided and print the name of the person to contact.

Local agencies should complete the Contract Award Date, Federal Share, Contract and Project Number fields, and verify that all information is complete and accurate before signing and sending a copy of the form to the District Local Assistance Engineer within 15 days of contract execution. Failure to submit a completed and accurate form within the 15-day time period may result in the de-obligation of funds on this project.

District DBE Coordinator should verify that all information is complete and accurate. Once the information has been verified, the District Local Assistance Engineer signs and dates the form.

**Iran Contracting Act
(Public Contract Code sections 2200-2208)**

Prior to bidding on, submitting a proposal or executing a contract or renewal for a County of Riverside contract for goods or services of \$1,000,000 or more, a Contractor must either:

- a) Certify it is not on the current list of persons engaged in investment activities in Iran created by the California Department of General Services ("DGS") pursuant to Public Contract Code section 2203(b) and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person, for 45 days or more, if that other person will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS; or
- b) Demonstrate it has been exempted from the certification requirement for that solicitation or contract pursuant to Public Contract Code section 2203(c) or (d).

To comply with this requirement, please insert your Contractor or financial institution name and Federal ID Number (if available) and complete one of the options below. Please note: California law establishes penalties for providing false certifications, including civil penalties equal to the greater of \$250,000 or twice the amount of the contract for which the false certification was made; contract termination; and three-year ineligibility to bid on contracts. (Public Contract Code section 2205.)

Option #1 – Certification

I, the official named below, certify I am duly authorized to execute this certification on behalf of the vendor/financial institution identified below, and the vendor/financial institution identified below is **not** on the current list of persons engaged in investment activities in Iran created by DGS and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person/vendor, for 45 days or more, if that other person/vendor will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS.

<i>Contractor Name/Financial Institution (Printed)</i>		<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>		
<i>Printed Name and Title of Person Signing</i>		
<i>Date Executed</i>	<i>Executed in</i>	

Option #2 – Exemption

Pursuant to Public Contract Code sections 2203(c) and (d), a public entity may permit a Contractor/financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to bid on, submit a proposal for, or enters into or renews, a contract for goods and services.

If you have obtained an exemption from the certification requirement under the Iran Contracting Act, please fill out the information below, and attach documentation demonstrating the exemption approval.

<i>Contractor Name/Financial Institution (Printed)</i>		<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>		
<i>Printed Name and Title of Person Signing</i>		
<i>Date Executed</i>	<i>Executed in</i>	

Bid Bond

Recitals:

1. _____ "Contractor", has submitted his/her Contractor's Proposal to County of Riverside, "County", for the construction of public work for **Mecca Roundabout Street Improvements Project at 4th Street and Hammond Road, Project No. B9-0997, Federal Aid No. CML-5956(188)** in accordance with a Notice Inviting Bids from the County.
2. _____ a _____ corporation, hereafter called "Surety", is the surety of this bond.

Agreement:

We, Contractor as Principal and Surety as Surety, jointly and severally agree and state as follows:

1. The amount of the obligation of this bond is 10% of the amount of the Contractor's Proposal, including bid alternates, and inures to the benefit of County.
2. This Bond is exonerated by (1) County rejecting said Proposal or, in the alternate, (2) if said Proposal is accepted, Contractor executes the Agreement and furnishes the Bonds as agreed to in its Proposal, otherwise it remains in full force and effect for the recovery of loss, damage and expense of County resulting from failure of Contractor to act as agreed to in its Proposal. Some types of possible loss, damage and expense are specified in the Contractor's Proposal.
3. Surety, for value received, stipulates and agrees that its obligations hereunder shall in no way be impaired or affected by any extension of time within which County may accept the Proposal and waives notice of any such extension.
4. This Bond is binding on our heirs, executors, administrators, successors and assigns.

Dated: _____

Signatures:

By: _____ By: _____

Title: Attorney in Fact Title: _____
"Surety" "Contractor"

STATE OF _____ } ss. SURETY'S ACKNOWLEDGEMENT
COUNTY OF _____

On _____ before me, _____ personally appeared, _____ known to me, or proved to me on the basis of satisfactory evidence, to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacities, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public

Notary Public (Seal)

Note: This Bond must be executed by both Contractor and Surety with corporate seal affixed. All signatures must be notarized. (Attach acknowledgements).

CONTRACT

COUNTY OF RIVERSIDE

PROJECT NO.

THIS AGREEMENT, made and concluded in duplicate as of the date set forth below, between the County of Riverside, party of the first part, and _____, Contractor, party of the second part.

ARTICLE I: WITNESSETH, that for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the said party of the first part, and under the conditions expressed in the two bonds, bearing even date with these presents, and hereunto annexed, the said party of the second part agrees with the said party of the first part, at his own proper cost and expense, to do all the work and furnish all the materials, except such as are mentioned in the specifications to be furnished by said party of the first part, necessary to construct and complete in a good, workmanlike and substantial manner and to the satisfaction of the County of Riverside, the work described in the Special Provisions and the Project Plans described below, including addenda No. __ issued thereto, and also in conformance with the California Department of Transportation Standard Plans dated May 2006, the Standard Specifications, dated May 2006, 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 work to be done is shown on plans entitled _____, Sheets 1 through _____, Plan number _____, approved _____, on file with the County Surveyor, which said project plans are hereby made a part of this contract.

ARTICLE II: The said party of the first part hereby promises and agrees with the said Contractor to employ, and does hereby employ, the said Contractor to provide the materials and to do the work according to the terms and conditions herein contained and referred to, for the prices hereinafter set forth, and hereby contracts 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 State general prevailing wage rates determined by the Director of Industrial Relations are hereby made a part of this contract. 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 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 Labor Code which require every employer to be insured against liability for workmen'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: And the said 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 County of Riverside, 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:

IN WITNESS WHEREOF the parties hereto have executed this agreement as of the date set forth below.

COUNTY OF RIVERSIDE

CONTRACTOR

BY _____
Chairman, Board of Supervisors

BY _____

Dated _____

TITLE: _____
(If Corporation, Affix Seal)

ATTEST:

ATTEST:

Kecia Harper-Ihem, Clerk of the Board

BY _____
Deputy

TITLE: _____

Licensed in accordance with an act providing for the registration of Contractors,

License No. _____

Federal Employer Identification Number:

"County"
(Seal)

"Corporation"
(Seal)

PERFORMANCE BOND

Recitals:

1. _____ (Contractor) intend to enter into an Agreement with COUNTY OF RIVERSIDE (County) for construction of public work known as _____.
2. _____, a _____ corporation (Surety), is the Surety under this Bond.

Agreement:

We, Contractor, as Principal, and Surety, as Surety, jointly and severally agree, state, and are bound unto County, as obligee, as follows:

1. The amount of the obligation of this Bond is 100% of the estimated contract price for the Project of \$ _____ and inures to the benefit of County.
2. This Bond is exonerated by Contractor doing all things to be kept and performed by it in strict conformance with the Contract Documents for the Project, otherwise it remains in full force and effect for the recovery of loss, damage and expense of County resulting from failure of Contractor to so act. All of said Contract Documents are incorporated herein.
3. This obligation is binding on our successors and assigns.
4. For value received, Surety stipulates and agrees that no change, time extension, prepayment to Contractor, alteration or addition to the terms and requirements of the Contract Documents or the work to be performed thereunder shall affect its obligations hereunder and waives notice as to such matters, except the total contract price cannot be increased by more than 10% without approval of Surety.

THIS BOND is executed as of _____.

By _____

By _____

By _____

Type Name _____

Its Attorney in Fact
"Surety"

Title _____

"Contractor"

(Corporate Seal)

(Corporate Seal)

NOTE: This Bond must be executed by both parties with corporate seal affixed. All signatures must be acknowledged. (Attach acknowledgements).

PAYMENT BOND

(Public Work - Civil Code 3247 et seq.)

The makers of this Bond are _____, as Principal and Original Contractor and _____, a corporation, authorized to issue Surety Bonds in California, as Surety, and this Bond is issued in conjunction with that certain public works contract to be executed between Principal and COUNTY OF RIVERSIDE a public entity, as Owner, for \$ _____, the total amount payable. THE AMOUNT OF THIS BOND IS ONE HUNDRED PERCENT OF SAID SUM. Said contract is for public work generally consisting of _____.

The beneficiaries of this Bond are as is stated in 3248 of the Civil Code and requirements and conditions of this Bond are as is set forth in 3248, 3249, 3250 and 3252 of said code. Without notice, Surety consents to extension of time for performance, change in requirements, amount of compensation, or prepayment under said contract.

DATED: _____

Original Contractor - Principal

Surety

By _____

By _____
Its Attorney In Fact

Title _____
(If corporation, affix seal)

(Corporate Seal)

STATE OF CALIFORNIA }
COUNTY OF _____ } ss. SURETY'S ACKNOWLEDGEMENT

On _____ before me, _____ personally appeared, _____, known to me, or proved to me on the basis of satisfactory evidence, to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacities, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public

Notary Public (Seal)

Note: All signatures must be notarized

COUNTY OF RIVERSIDE
NOTICE TO CONTRACTORS

Sealed proposals will be received at the Riverside County Transportation Department, 14th Street Transportation Annex, 3525 14th Street, Riverside, California 92501, telephone (951) 955-6780 until 2:00 pm on **Wednesday May 2, 2012** at which time they will be publicly opened at said address, for construction in accordance with the specifications therefore, to which special reference is made, as follows:
County of Riverside,

MECCA ROUNDABOUT
STREET IMPROVEMENTS PROJECT
AT 4TH STREET AND HAMMOND ROAD

PROJECT NO. B9-0997
FEDERAL AID NO. CML – 5956(188)

The UDBE Contract goal is 1.2 %.

A pre-bid meeting is scheduled for 2:15 pm on **Wednesday April 18, 2012**, at the County of Riverside Transportation Department, 3525 14th Street, Riverside, California 92501. This meeting is to inform bidders of project requirements and subcontractors of subcontracting and material supply opportunities. Bidder's attendance at this meeting is not mandatory.

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.

Bids are required for the entire work described herein. The Contractor shall possess a current and active State of California **Class "A" Contractor's license** at the time this contract is awarded. The successful bidder shall furnish a payment bond and a performance bond.

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, in writing, prior to bid opening. Any such inquiries or questions, submitted after bid opening, will not be treated as a bid protest. Technical questions should be directed to the office of the County of Riverside Transportation Department, 3525 14th Street, Riverside, CA 92501, telephone (951) 955-6780, electronic mail: jrijimenez@rctlma.org.

Plans and specifications may be obtained for a NONREFUNDABLE FEE OF \$40 PER SET, and are available at 3525 14th Street, Riverside, CA 92501.

Engineering Estimate	\$ 1,800,000 - \$ 2,102,000
Bid Bond	10%
Performance Bond	100%
Payment Bond	100%
Working Days	95

<http://www.rctlma.org/trans/bidadvertisements.html>

The County of Riverside 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.

The County of Riverside, in accordance with Title IV of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Department of Commerce (15 C.F.R., Part 8), issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the grounds of race, color, or national origin.

Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates, in the county, or counties, in which the 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 from the California Department of Industrial Relations' Internet web site at <http://www.dir.ca.gov/DLSR/PWD>. The Federal minimum wage rates for this project as predetermined by the United States Secretary of Labor are set forth in the bid book and in copies of this book that may be examined at the offices described above where project plans, special provisions, and bid forms may be seen. Addenda to modify the Federal minimum wage rates, if necessary, will be issued to holders of bid book. 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 bid book. 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.

April 10, 2012

Date

Kecia Harper-Ihem, Clerk of the Board

By: _____
Deputy

SPECIAL PROVISIONS

SECTION 1

SPECIFICATIONS AND PLANS

1-1.01 GENERAL:

The work embraced herein shall be done in accordance with the Standard Specifications dated May, 2006, and the Standard Plans dated May, 2006, and Amendments to May 2006 Standard Specifications, updated March 11, 2010, of the State of California, Department of Transportation, insofar as the same may apply and in accordance with the following Special Provisions.

In case of conflict between the Standard Specifications and these Special Provisions, the Special Provisions shall take precedence over and be used in lieu of such conflicting portions.

1-1.02 NOTICE:

The "Proposal and Contract" book has been re-titled and is now the "Bid" book. These terms shall be considered as equivalent.

The "Notice to Contractors" has been re-titled and is now the "Notice to Bidders". These terms shall be considered as equivalent.

Bidders are advised that, as required by federal law, the County of Riverside is implementing new Disadvantaged Business Enterprise requirements for Underutilized Disadvantaged Business Enterprises (UDBE). Section 2, "Proposal Requirements and Conditions" under subsection titled "Disadvantaged Business Enterprises (DBE)" and Section 5, "General" under subsection titled "Performance of Subcontractors" of these Special Provisions cover the UDBE requirements.

The County of Riverside is implementing new contract requirements for submittal of Monthly Employment Report forms for those projects funded under the American Recovery and Reinvestment Act. Refer to section titled "Monthly Employment Report (American Recovery and Reinvestment Act)" under Section 5, "General" of these Special Provisions.

Attention is directed to Section 1-1.01, "General" of the Amendments to the Standard Specifications, Dated May 2006, regarding plain language specifications.

1-1.03

DEFINITIONS:

Whenever in the Standard Specifications the following terms are used, they shall be understood to mean and refer to the following:

Department of Transportation/Department- The County of Riverside.

Director of Transportation, State Highway Engineer and Engineer -

The Director of Transportation and includes his representative.

Laboratory -

The established laboratory of the County of Riverside.

State - The County of Riverside.

"State Highway Agency" (SHA), as referred to in FHWA form 1273, shall mean "County of Riverside". Additionally, some functions of the Federal Government, as described in form 1273, have been delegated to the State of California Department of Transportation.

Other terms appearing in the Standard Specifications, and these Special Provisions, shall have the intent and meaning specified in Section 1, "Definition and Terms of the Standard Specifications".

SECTION 2

PROPOSAL REQUIREMENTS AND CONDITIONS

2-1.01

GENERAL:

The bidder's attention is directed to the provisions in Section 2, "Proposal Requirements and Conditions" of the Standard Specifications and these Special Provisions for the requirements and conditions which the bidder must observe in the preparation of the proposal form and the submission of the bid.

The Bidder's Bond form mentioned in the last paragraph in Section 2-1.07, "Proposal Guaranty" of the Standard Specifications and Section 3-1.05, "Bid Bond" of this document will be found following the signature page of the Proposal. In conformance with Public Contract Code Section 7106, a Non-collusion Affidavit is included in the Proposal.

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 Title 49 CFR (Code of Federal Regulations) part 26 in the award and administration of US 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. Each subcontract signed by the bidder must include this assurance.

Failure of the bidder to fulfill the requirements of the Special Provisions for submittals required to be furnished after bid opening 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 contracts.

Proposal and Proposal Forms. The first sentence of the second paragraph in Section 2-1.05, "Proposal Forms" of the Standard Specifications is amended to read:

The proposal form is bound together with the contract.

All proposal forms shall be obtained from the Riverside County Transportation Department, 3525 14th Street, Riverside, California 92501.

Submission of Proposal. A proposal must be submitted in a sealed opaque envelope which clearly identifies the bidder and the project. Bids must be received by the time and at the place set forth in the Notice Inviting Bids and may be withdrawn only as stated in the proposal. Bids shall be completed in ink.

Non-collusion Affidavit. Bidder Affidavit shall be submitted on the appropriate form, which is included in the Contract Documents, and must be completely filled in, dated and signed. Types of business affidavit forms included in the Contract Documents are for: Individual Contractor, Joint Venture or Copartnership Contractor, and for a Corporate Contractor. The bidding Contractor is required to submit the appropriate form with the bid. Signature(s) on the Affidavit shall be notarized.

Contract Documents. The complete Contract Documents are identified in the Agreement. Potential bidders are cautioned that the successful bidder incurs duties and obligations under all of the Contract Documents and that they should not merely examine the Plans and Specifications in making their bid.

License. To be considered for award of the contract, a potential bidder must have the kind of license required under provisions of the California Business and Professions Code for the work covered in this proposal. This includes joint ventures.

Each item of work will be performed by a Contractor which is qualified and properly licensed for that work.

Quantities. The amount of work to be done or materials to be furnished under the Contract as shown in the Contractor's Proposal are but estimates and are not to be taken as an expressed or an implied statement that the actual amount of work or materials will correspond to the estimate.

County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials to be furnished if such action is found to be desirable or expedient.

Contractor is cautioned against the unbalancing of his bid by prorating his overhead only into one or two items when there are a number of items listed in the schedule.

The quantities mentioned in Section 2-1.02, "Approximate Estimate" of the Standard Specifications will be found in the Proposal Form.

Interpretation of Documents. Discrepancies, omissions, ambiguities, requirements likely to cause disputes between trades and similar matter shall be promptly brought to the attention of the County of Riverside in writing. When appropriate, Addenda will be issued by County.

If the Bidder requires clarification or interpretation of the Bidding Documents, the Bidder shall make a written request to the County by a Request for Information (RFI). All requests for information must be submitted, in writing, between the hours of 8:00 AM and 5:00 PM on any day, Monday through Thursday (except holidays), up to, including and no later than the fifth (5th) day prior to Bid Closing Deadline, by hand delivery, mail, fax or electronic mail. The County of Riverside will not respond to Requests for Information submitted after that time, unless the County determines, at its sole discretion, that it is in the best interest of the public and the County to do so. Requests for Information should be addressed to: County of Riverside, Transportation Department, Attn: Joel Jimenez; 3525 14th Street, Riverside, CA 92501, facsimile (951) 955-3164, electronic mail: jjimenez@rctlma.org.

No communication by anyone as to such matters except by an Addendum affects the meaning or requirements of the Contract Documents. Attention is directed to Section 3-1.04 "Addenda".

Inspection of Site. Bidders must examine the site and acquaint themselves with all conditions affecting the work. By making his bid a bidder warrants that he has made such site examination as he deems necessary as to the condition of the site, its accessibility for materials, workmen and utilities and ability to protect existing surface and subsurface improvements. No claim for allowances - time or money - will be allowed as to such matters.

Bids. Bids are required for the entire work, including all alternate bid schedules, if applicable, unless otherwise explicitly allowed in the bid documents. The amount of the bid for comparison purposes will be the total of all items. The total of unit basis items will be determined by extension of the item price bid on the basis of the estimated quantity set forth for the item.

The bidder shall set forth for each item of work in clearly legible figures, an item price and a total for the item in the respective spaces provided for this purpose. In the case of unit basis items, the amount set forth under the "Total" column shall be the extension of the item price bid on the basis of 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 County of Riverside'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 County of Riverside, and that discretion will be exercised in the manner deemed by the County of Riverside to best protect the public interest in the prompt and economical completion of the work. The decision of the County of Riverside respecting the amount of a bid, or the existence or treatment of an irregularity in a bid, including determination of non-responsiveness, shall be final.

No bidder may withdraw his bid for a period of ninety (90) days after the bid opening.

The Board of Supervisors hereby reserves the right to reject any and all proposals, to waive any irregularity, and to award the contract to other than the lowest bidder.

Like Bid Items. The bidder is directed to submit the same bid amount for all contract bid items that are listed with the same item code and item description. Said bid items are referred to herein as "Like Bid Items".

"Like Bid Items" shall be considered a single bid item for purposes of calculating increased and decreased quantities, and as otherwise applicable in Section 4-1.03, "Changes" of the Standard Specifications.

The following are not subject to this bidding requirement:

1. Bid items with the same item code but different item descriptions,
2. Bid items that are measured as "lump sum" or "force account", and
3. Alternate bid schedules.

In the event that a bidder submits different unit bid amounts for "Like Bid Items", as described above, the bid will be corrected by applying the lowest of the unit bid amounts to all the respective "Like Bid Items".

Subletting and Subcontracting. Bidders are required pursuant to the Subletting and Subcontracting Fair Practices Act (commencing with Section 4100 of the Public Contracts Code) to list in their proposal the name and location of place of business of each subcontractor who will perform work or labor or render services in or about the construction of the work or improvement or a subcontractor who specifically fabricates and installs a portion of the work or improvement according to detailed drawings contained in the Plans and Specifications in excess of 1/2 of 1% of this prime Contractor's total bid. Failure to list a subcontractor for a portion of the work means that the prime Contractor will do that portion of the work. It is the County's intent for the Subletting and Subcontracting Fair Practice Act to apply to all phases of the work. The bidder's attention is directed to other provisions of the Act related to the imposition of penalties for failure to observe its

provisions by utilizing unauthorized subcontractors or by making unauthorized substitutions.

In addition to the subcontractors required to be listed in conformance with Section 2-1.054, "Required Listing of Proposed Subcontractors" of the Standard Specifications, each proposal shall have listed therein the portion of work that will be done by each subcontractor listed. A sheet for listing the subcontractors is included in the Proposal.

Bidders are cautioned that this listing requirement is in addition to the requirement to submit a list of all DBE subcontractors after the opening of the proposals.

Each item of work will be performed by a Contractor which is qualified and properly licensed for that work.

Qualifications of Bidders. No award will be made to any bidder who cannot give satisfactory assurance to the Board of Supervisors as to his own ability to carry out the contract, both from his financial standing and by reason of his previous experience as a Contractor on work of the nature contemplated in the contract. The bidder may be required to submit his record of work of similar nature to that proposed under these specifications, and unfamiliarity with the type of work may be sufficient cause for rejection of bid.

Hours of Work. Attention is directed to Section 8-1.06, "Time of Completion" and Section 7-1.01A (1), "Hours of Labor" of the Standard Specifications.

Daily working hours shall be between the hours of 7:00 a.m. and 6:00 p.m., Monday through Friday, except legal holidays, as approved by the Engineer. Exceptions and specific work schedules shall be submitted to the Engineer for consideration.

Prevailing Wages. Attention is directed to the Prevailing Wages requirements of this project, as described elsewhere in these bid documents.

Dust Abatement. Attention is directed to Section 5-1.19, "Dust Abatement" with regard to the dust abatement provisions of the contract.

Submission of Insurance Certificate. Submission of Insurance Certificate. Within 10 working days of the date of the Notice of Acceptance of Proposal and Intent to Award issued by the County of Riverside, the successful Contractor shall submit a certificate of insurance, including required endorsements, which provides evidence that the bidding Contractor has insurance coverage that meets the requirements of Section 3-1.01B of the General Conditions. Failure to have complete insurance coverage in place and to provide all required certificates and endorsements within the specified 10 working days period will be grounds for declaring the bidder to not be in compliance with the bid documents, making a claim against the bid bond, and awarding to the second low bidder, at the sole discretion of the County.

2-1.015

FEDERAL LOBBYING RESTRICTIONS:

Section 1352, Title 31, United States Code prohibits Federal funds from being expended by the recipient or any lower tier sub-recipient of a Federal-aid contract to pay for any person for influencing or attempting to influence a Federal agency or Congress in connection with the awarding of any Federal-aid contract, the making of any Federal grant or loan, or the entering into of any cooperative agreement.

If any funds other than Federal funds have been paid for the same purposes in connection with this Federal-aid contract, the recipient shall submit an executed certification and, if required, submit a completed disclosure form as part of the bid documents.

A certification for Federal-aid contracts regarding payment of funds to lobby Congress or a Federal agency is included in the Bid Book. Standard Form - LLL, "Disclosure of Lobbying Activities" with instructions for completion of the Standard Form is also included in the Bid Book. Signing the Bid Book shall constitute signature of the Certification.

The above referenced certification and disclosure of lobbying activities shall be included in each subcontract and any lower-tier contracts exceeding \$100,000. All disclosure forms, but not certifications, shall be forwarded from tier to tier until received by the Engineer.

The Contractor, subcontractors and any lower-tier contractors shall file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed by the Contractor, subcontractors and any lower-tier Contractors. An event that materially affects the accuracy of the information reported includes:

1. A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or
2. A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or
3. A change in the officer(s), employees(s), or Member(s) contacted to influence or attempt to influence a covered Federal Action.

2-1.02

DISADVANTAGED BUSINESS ENTERPRISE (DBE):

This project is subject to Title 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.

Take necessary and reasonable steps to ensure that DBEs have opportunity to participate in the contract (49 CFR 26).

To ensure there is equal participation of the DBE groups specified in 49 CFR 26.5, the Agency specifies a goal for Underutilized Disadvantaged Business Enterprises (UDBEs). UDBE is a firm that meets the definition of DBE and is a member of one of the following groups:

1. Black Americans.
2. Native Americans.
3. Asian-Pacific Americans.
4. Women.

References to DBEs include UDBEs, but references to UDBEs do not include all DBEs.

Make work available to UDBEs and select work parts consistent with available UDBE subcontractors and suppliers.

Meet the UDBE goal shown in the Notice to Bidders or demonstrate that you made adequate good faith efforts to meet this goal.

It is your responsibility to verify that the UDBE firm is certified as DBE at date of bid opening. For a list of DBEs certified by the California Unified Certification Program, go to: http://www.dot.ca.gov/hq/bep/find_certified.htm

Only UDBE participation will count towards the UDBE goal. DBE participation will count towards the Agency's Annual Anticipated DBE Participation Level and the California statewide goal.

Credit for materials or supplies you purchase from UDBEs counts towards the goal in the following manner:

1. 100 percent counts if the materials or supplies are obtained from a UDBE manufacturer.
2. 60 percent counts if the materials or supplies are obtained from a UDBE regular dealer.
3. Only fees, commissions, and charges for assistance in the procurement and delivery of materials or supplies count if obtained from a UDBE that is neither a manufacturer or regular dealer. 49 CFR 26.55 defines "manufacturer" and "regular dealer."

You receive credit towards the goal if you employ a UDBE trucking company that performs a commercially useful function as defined in 49 CFR 26.55.

UDBE Commitment Submittal:

Submit UDBE information on the "Local Agency Bidder-UDBE Commitment (Construction Contracts)," Exhibit 15-G(1), form included in the Bid book. If the form is not submitted with the bid, remove the form from the Bid book before submitting your bid.

If the UDBE Commitment form is not submitted with the bid, the apparent low bidder, the 2nd low bidder, and the 3rd low bidder must complete and submit the UDBE Commitment form to the Agency. UDBE Commitment form must be received by the Agency no later than 4:00 p.m. on the 4th business day after bid opening.

Other bidders do not need to submit the UDBE Commitment form unless the Agency requests it. If the Agency requests you to submit a UDBE Commitment form, submit the completed form within 4 business days of the request.

Submit written confirmation from each UDBE stating that it is participating in the contract. Include confirmation with the UDBE Commitment form. A copy of a UDBE's quote will serve as written confirmation that the UDBE is participating in the contract.

If you do not submit the UDBE Commitment form within the specified time, the Agency finds your bid nonresponsive.

Good Faith Efforts Submittal:

If you have not met the UDBE goal, complete and submit the "UDBE Information - Good Faith Efforts", Exhibit 15-H, form with the bid showing that you made adequate good faith efforts to meet the goal. Only good faith efforts directed towards obtaining participation by UDBEs will be considered. If good faith efforts documentation is not submitted with the bid, it must be received by the Agency no later than 4:00 p.m. on the 4th business day after bid opening.

If your UDBE Commitment form shows that you have met the UDBE goal or if you are required to submit the UDBE Commitment form, you must also submit good faith efforts documentation within the specified time to protect your eligibility for award of the contract in the event the Agency finds that the UDBE goal has not been met.

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

1. Items of work you have made available to UDBE firms. Identify those items of work you might otherwise perform with its own forces and those items that have been broken down into economically feasible units to facilitate UDBE 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 UDBE firms.
2. Names of certified UDBEs 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 UDBEs 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 UDBEs through all reasonable and available means and provide sufficient time to allow UDBEs to respond.
3. Name of selected firm and its status as a UDBE for each item of work made available. Include name, address, and telephone number of each UDBE that provided a quote and their price quote. If the firm selected for the item is not a UDBE, provide the reasons for the selection.
4. Name and date of each publication in which you requested UDBE 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 UDBE firms. If the agencies were contacted in writing, provide copies of supporting documents.
6. List of efforts made to provide interested UDBEs 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 UDBE 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 UDBEs in obtaining bonding, lines of credit, insurance, necessary equipment, supplies, and materials, excluding supplies and equipment that the UDBE subcontractor purchases or leases from the prime contractor or its affiliate. If such assistance is provided by you, identify the name of the UDBE assisted, nature of the assistance offered, and date. Provide copies of supporting documents, as appropriate.
8. Any additional data to support demonstration of good faith efforts.

2-1.03

DESIGN ENGINEER MAY NOT BID ON CONSTRUCTION CONTRACT:

No engineering or architectural firm which has provided design services for a project shall be eligible to bid on the contract to construct the project. The firms ineligible to bid include the prime Contractor for design, subcontractors of portions of the design and affiliates of either. An affiliate is a firm which is subject to the control of the same persons, through joint ownership or otherwise.

SECTION 3

AWARD, AND EXECUTION OF CONTRACT

3-1.01

GENERAL:

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

3-1.01A

(BLANK)

3-1.01B

INSURANCE - HOLD HARMLESS:

In lieu of the provisions of Section 7-1.12 the following shall apply:

Contractor shall not commence work under this contract until he has obtained the insurance required hereunder and satisfactory proof of said insurance has been submitted to and approved by the County of Riverside.

Contractor shall submit to the County of Riverside a Certificate of Insurance, signed by an authorized representative of the Contractor's insurance provider or agency, which certifies to the County that insurance coverage is provided in accordance with the requirements of this section. The Certificate of Insurance shall include as attachments the required "Waiver of Subrogation" and "Additional Insured" policy endorsements.

I. Workers Compensation Insurance:

Contractor shall procure and maintain during the life of the contract Worker's Compensation Insurance coverage as prescribed by the laws of the State of California. Policy shall include Employer's Liability including Occupational Disease with limits not less than \$1,000,000 per occurrence. Policy shall be endorsed to provide a Borrowed Servant Endorsement, Alternate Employer Endorsement, or Additional Insured Endorsement naming the "County of Riverside, its Directors, Officers, Special Districts, Board of Supervisors, employees, agents and representatives" as Additional Insureds. Policy shall contain a Waiver of Subrogation in favor of the County of Riverside.

Contractor shall further require each of its subcontractors to procure Worker's Compensation Insurance as required by the State while working on the project and the Contractor shall require the subcontractors to endorse the policy to provide a Borrowed Servant Endorsement, Alternate Employer Endorsement, or Additional Insured Endorsement naming the "County of Riverside, its Directors, Officers, Special Districts, Board of Supervisors, employees, agents and representatives" as Additional Insureds. Policy shall contain a Wavier of Subrogation in favor of the County of Riverside.

II. Comprehensive General Liability Insurance:

Contractor shall take out and maintain during the course of the work General Liability Insurance covering bodily injury and property damage insurance and blanket contractual coverage as to the work and obligations covered hereunder. The amount of the insurance shall be in an amount **not less than \$2,000,000**. The policy may be a combined single limit or split limits, but the amount must be no less than \$2,000,000 per occurrence. The insurance carrier must have a current rating of "A" or better by the A.M. Best Company, a financial size of at least "VIII", and be an admitted carrier in the State of California. Any exceptions must be approved in advance by the County of Riverside Risk Management. Said insurance must contain an endorsement the County of Riverside is named as an additional insured as respects the work covered hereunder and **said insurance must not contain, as respects the work covered hereunder, any exclusions as to bodily injury or death or property damage arising out of blasting, explosion, or underground damage to wire, pipes, conduits, mains, sewers, tank tunnels or any similar property - i.e. the so-called "x c u" exclusions.** The insurance certificate evidencing such insurance must **affirmatively state** that the insurance carrier (s) will give Owner 30 days written notice prior to cancellation of the insurance or a reduction in coverage, and that "County of Riverside, its Directors, Officers, Special Districts, Board of Supervisors, employees, agents and representatives" are named as Additional Insureds.

In the alternate to naming County of Riverside as additional insured, Contractor may take out and maintain during the course of the work and until acceptance by County, Owner's Protective Liability Insurance in an amount not less-than \$2,000,000 covering Riverside County.

III. Auto Liability:

If Lessee's vehicles or licensed mobile equipment will be on the premises or used in any manner on behalf of the County, then Lessee shall maintain auto liability insurance for all owned, non-owned or hired automobiles in an amount not less than \$1,000,000 per occurrence combined single limit. Policy shall name the "County of Riverside, its Directors, Officers, Special Districts, Board of Supervisors, employees, agents and representatives" as Additional Insureds.

IV. Hold Harmless:

Contractor shall hold County of Riverside its officers, agent, and employees free and harmless from any liability whatsoever, including wrongful death, based or asserted upon any act or omission of Contractor, its officers, agents, employees or subcontractors relating to or in anywise connected with or arising from the accomplishment of the work, whether or not such acts or omissions were in furtherance of the work required by the Contract Documents and agrees to defend at his expense, including attorney fees, Owner, County of Riverside its officers, agents and employees in any legal action based upon any such alleged acts or omissions.

3-1.01C

AWARD OF CONTRACT:

The award of contract, if it be awarded, will be to the lowest responsible bidder whose proposal complies with all the requirements prescribed.

Bid protests are to be delivered to the following address:

County of Riverside Transportation Department
Attention: Juan C. Perez, Director
4080 Lemon Street, 8th Floor
Riverside, CA 92501

The County reserves the right to reject all bids received. Acceptance by the governing body of the County by resolution or minute order at a meeting regularly called and held of a Contractor's Proposal constitutes an award of the contract and the execution of the Agreement is a written memorial thereof.

The County of Riverside will submit the contract documents to the low responsive and responsible bidder for execution prior to award utilizing the following procedures and requirements:

1. A bidder whose proposal is accepted shall execute the formal construction agreement with the County of Riverside, similar to the form attached hereto as a sample, and shall return said agreement, together with approved performance and payment bonds and with complete evidence of insurance as required elsewhere herein, including executed

additional insured endorsements and waivers of subrogation, within ten (10) working days from the date of the Notice of Acceptance of Proposal and Intent to Award as issued by the Transportation Department. All submittals shall meet the requirements of the bid documents. Corrections, if required, shall be made and the revised documents shall be resubmitted within 2 working days of Contractor's receipt of review comments.

2. The contract bonds and insurance documentation shall be submitted in accordance with the contract requirements prior to submission to the County of Riverside Board of Supervisors for award by the Transportation Department, and prior to the performance of any work under the contract.
3. If a Bidder to whom a Notice of Acceptance of Proposal and Intent to Award has been issued, fails or refuses to sign a construction agreement, or to furnish the bonds or insurance certificates and endorsements as required within the prescribed period of time as described above, the County of Riverside may, at its sole discretion, declare the contractor as non-responsive and the bid guarantee submitted by that contractor shall become the property of the County of Riverside as prescribed in the bid documents and as allowed by law.
4. If it is in the best interest of the County of Riverside, the County reserves the right to award the contract prior to execution by the Contractor. Thereafter, County shall mail or deliver to the lowest responsible bidder the agreement for Contractor's execution and return.

A "Local Agency Bidder-DBE Information (Construction Contracts), Exhibit 15-G(2)" 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(2)" 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 encouraged to provide written confirmation from each DBE that the DBE is participating in the contract. A copy of a DBE's quote will serve 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 encouraged to submit a copy of the joint venture agreement.

The "Local Agency Bidder-DBE Information (Construction Contracts), Exhibit 15-G(2)" form shall be completed and returned to the Agency by the successful bidder with the executed contract and contract bonds.

The Contractor shall commence construction within fifteen (15) days after he has been notified in writing to proceed and shall complete all the work and improvements within the time allotted in contract.

3-1.02 **CONTRACT BONDS:**

Two bonds, a Performance Bond and a Labor and Material Bond, each in the amount of 100 percent of the contract price shall be required.

The bonds must be underwritten by a Surety Company, which is admitted to transact the business of insurance in the State of California, and which carries a rating in the current issue of Best's Insurance Guide of "A" or better with a financial size of at least "VIII". The bond forms included in the project documents shall be used.

3-1.03 **RETURN OF PROPOSAL GUARANTEES:**

Bid bonds will not be returned unless specifically requested by the bidder. Any submitted negotiable securities of unsuccessful bidders will be returned by mail within 30 days of the award of a contract to the successful bidder. Any submitted negotiable security of the successful bidder will be returned by mail within 30 days of receipt by the County of executed contract, performance bond and payment Bond.

3-1.04 **ADDENDA:**

County reserves the right to issue Addenda to the Contract Documents at any time prior to the time set to open bids. Each potential bidder shall leave with the County Transportation Department his name and address for the purpose of receiving Addenda to be mailed or delivered to such names at such addresses. To be considered, a Contractor's Proposal must list and take into account all issued Addenda.

Inquiries or questions based on alleged patent ambiguity of the plans, specifications or estimate must be communicated as a bidder inquiry, in writing, prior to bid opening. Any such inquiries or questions, submitted after bid opening, will not be treated as a bid protest. Technical questions and notifications of suspected discrepancies, omissions and ambiguities should be directed to the

Office of the County of Riverside Transportation Department in accordance with the subsection entitled "Interpretation of Documents" of Section 2-1.01 "General".

3-1.05

BID BOND:

The proposal must be accompanied by a 10% Bid Bond, using the form provided in the Contract Documents, or by a certified or cashier's check payable to the order of County in an amount not less than 10% of the amount bid, inclusive of alternates. All signatures on the bonds shall be notarized. Bonds shall be provided with an executed Power of Attorney issued by the surety.

3-1.06

ALTERNATE BID SCHEDULES:

If the Proposal includes bid items listed under a Base Bid Schedule and one or more Alternate Bid Schedules, the following shall apply: The County may award only the items of work listed on the Base Bid Schedule, or may choose to award some or all of the Alternate Bid Schedules in addition to the Base Bid Schedule. Unless otherwise specified, the basis of the selection of the lowest bid shall be the lowest responsive and responsible bid for the sum of all Bid Schedules.

If the Proposal includes bid items listed under two or more Alternate Bid Schedules with no base bid, the following shall apply:

This project contains Alternate bid schedules that may or may not be mutually exclusive, as described elsewhere in the bid documents. The County may award the items of work listed on one or more of the Alternate Bid Schedules. In the case of mutually exclusive Alternate Bid Schedules, only one of the Alternate Bid Schedules will be selected for award. Unless otherwise specified, the basis of the selection of the lowest bid shall be the lowest responsive and responsible bid for the sum of all Bid Schedules.

The County also reserves the right to reject all bids received.

SECTION 4

BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES

Section 8-1.03 is modified to read as follows:

The Contractor shall begin work within 15 days of the date stated within the written "Notice to Proceed".

The Contractor shall diligently prosecute the work to completion before the expiration of 95 working days from the date stated in the "Notice to Proceed".

Attention is directed to Section 8-1.06, "Time of Completion" and Section 7-1.01A (1), "Hours of Labor" of the Standard Specifications.

Daily working hours shall be between the hours of 7:00 a.m. and 6:00 p.m., Monday through Friday, except legal holidays, as approved by the Engineer. Exceptions and specific work schedules shall be submitted to the Engineer for consideration.

The Contractor shall pay to the County of Riverside the sum of **\$ 5,200.00** per day, for each and every calendar day's delay in finishing the work in excess of the number of working days prescribed above.

The Contractor shall notify the Engineer, in writing, of his intent to begin work at least 72 hours before work is begun. The notice shall be delivered to the Transportation Department's Construction Engineer and shall specify the date the Contractor intends to start. If the project has more than one location of work, a separate notice shall be given for each location.

Should the Contractor begin work in advance of receiving a written "Notice to Proceed", any work performed by him in advance of the date stated in the "Notice to Proceed" shall be considered as having been done by him at his own risk and as a volunteer and subject to the following:

- (1) The Contractor shall, on commencing operations, take all precautions required for public safety and shall observe all the provisions in the Specifications and these Special Provisions.
- (2) All work done according to the contract prior to the issuance of the "Notice to Proceed", will be considered authorized work and will be paid for as provided in the contract.
- (3) The Contractor shall not be entitled to any additional compensation or an extension of time for any delay, hindrance or interference cause by or attributable to commencement of work prior to the issuance of the "Notice to Proceed".

SECTION 5

GENERAL

5-1.01

PUBLIC SAFETY:

The Contractor shall provide for the safety of traffic and the public in conformance with the provisions in Section 7-1.09, "Public Safety" of the Standard Specifications and these Special Provisions.

The Contractor shall install temporary railing (Type K) between a lane open to public traffic and an excavation, obstacle or storage area when the following conditions exist:

- A. Excavations - The near edge of the excavation is 12 feet (3.66 meter) or less from the edge of the lane, except:
 - 1. Excavations covered with sheet steel or concrete covers of adequate thickness to prevent accidental entry by traffic or the public.
 - 2. Excavations less than 1 foot (0.3-m) deep.
 - 3. Trenches less than 1 foot (0.3-m) wide for irrigation pipe or electrical conduit, or excavations less than 0.3-m in diameter.
 - 4. Excavations parallel to the lane for the purpose of pavement widening or reconstruction.
 - 5. Excavations in side slopes, where the slope is steeper than 1:4 (vertical: horizontal).
 - 6. Excavations protected by existing barrier or railing.
- B. Temporarily Unprotected Permanent Obstacles - The work includes the installation of a fixed obstacle together with a protective system, such as a sign structure together with protective railing, and the Contractor elects to install the obstacle prior to installing the protective system; or the Contractor, for the Contractor's convenience and with permission of the Engineer, removes a portion of an existing protective railing at an obstacle and does not replace such railing complete in place during the same day.
- C. Storage Areas - Material or equipment is stored within 12 feet (3.66 meter) of the lane and the storage is not otherwise prohibited by the provisions of the Standard Specifications and these Special Provisions.

The approach end of temporary railing (Type K), installed in conformance with the provisions in this section "Public Safety" and in Section 7-1.09, "Public Safety" of the Standard Specifications, shall be offset a minimum of 15 feet (4.57 meter) from the edge of the traffic lane open to public traffic. The temporary railing shall be installed on a skew toward the edge

of the traffic lane of not more than 1 foot (0.3-m) transversely to 10 feet (3.05 meter) longitudinally with respect to the edge of the traffic lane. If the 15 feet (4.57 meter) minimum offset cannot be achieved, the temporary railing shall be installed on the 10 to 1 skew to obtain the maximum available offset between the approach end of the railing and the edge of the traffic lane, and an array of temporary crash cushion modules shall be installed at the approach end of the temporary railing.

Temporary railing (Type K) shall conform to the provisions in Section 12-3.08, "Temporary Railing (Type K)" of the Standard Specifications. Temporary railing (Type K), conforming to the details shown on 1999 Standard Plan T3, may be used. Temporary railing (Type K) fabricated prior to January 1, 1993, and conforming to 1988 Standard Plan B11-30 may be used, provided the fabrication date is printed on the required Certificate of Compliance.

Temporary crash cushion modules shall conform to the provisions in "Temporary Crash Cushion Module" of these Special Provisions.

Except for installing, maintaining and removing traffic control devices, whenever work is performed or equipment is operated in the following work areas, the Contractor shall close the adjacent traffic lane unless otherwise provided in the Standard Specifications and these Special Provisions:

Approach Speed of Public Traffic (Posted Limit) (Miles Per Hour)	Work Areas
Over 45 Miles Per Hour	Within 6 feet (1.83 meter) of a traffic lane but not on a traffic lane
35 to 45 Miles Per Hour	Within 3 feet (0.91 meter) of a traffic lane but not on a traffic lane

The lane closure provisions of this section shall not apply if the work area is protected by permanent or temporary railing or barrier.

When traffic cones or delineators are used to delineate a temporary edge of a traffic lane, the line of cones or delineators shall be considered to be the edge of the traffic lane, however, the Contractor shall not reduce the width of an existing lane to less than 3 meter without written approval from the Engineer.

When work is not in progress on a trench or other excavation that required closure of an adjacent lane, the traffic cones or portable delineators used for the lane closure shall be placed off of and adjacent to the edge of the traveled way. The spacing of the cones or delineators shall be not more than the spacing used for the lane closure.

Suspended loads or equipment shall not be moved nor positioned over public traffic or pedestrians.

Full compensation for conforming to the provisions in this section "Public Safety," including furnishing and installing temporary railing (Type K) and temporary crash cushion modules, shall be considered as included in the contract prices paid for the various items of work involved and no additional compensation will be allowed therefore.

5-1.02

EXTRA WORK:

Section 4-1.03D, "Extra Work" of the Standard Specifications is amended by adding the following between the second and third paragraphs:

If, in the opinion of the Engineer, such work cannot reasonably be performed concurrently with other items of work, and if a controlling item of work is delayed thereby, an adjustment of contract time will be made.

5-1.03

PREVAILING WAGE:

Attention is directed to Section 7-1.01A(2), "Prevailing Wage" of the Standard Specifications.

Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates, including the per diem wages applicable to the work, and for holiday and overtime work, including employer payments for health and welfare, pension, vacation, and similar purposes, in the county in which the 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 from the California Department of Industrial Relations' Internet web site at <http://www.dir.ca.gov>. These wage rates are not included in the Bid book for the project. Changes, if any, to the general prevailing wage rates will be available at the same location.

The Federal minimum wage rates for this project as predetermined by the United States Secretary of Labor are set forth in the books issued for bidding purposes, referred to as the "Proposal and Contract", and in copies of this book (See Section 5-2) that may be examined at the offices described above where project plans, special provisions, and proposal forms may be seen. Addenda to modify the Federal minimum wage rates, if necessary, will be issued to holders of "Proposal and Contract" books.

Attention is directed to the Federal minimum wage rate requirements in the books referred to herein as "Proposal and Contract". 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.

5-1.04

SUBCONTRACTOR AND RECORDS:

The Contractor shall maintain records showing the name and business address of each first-tier subcontractor. The records shall also show the name and business address of every DBE subcontractor, DBE vendor of materials and DBE trucking company, regardless of tier. The records shall show the date of payment and the total dollar figure paid to all of these firms. DBE prime contractors shall also show the date of work performed by their own forces along with the corresponding dollar value of the work.

Upon completion of the contract, a summary of these records shall be prepared on "Final Report-Utilization of Disadvantaged Business Enterprises (DBE), First Tier Subcontractors" Form CEM-2402 (F) and certified correct by the Contractor or the Contractor's authorized representative, and shall be furnished to the Engineer. The form shall be furnished to the Engineer within 90 days from the date of contract acceptance. \$10,000 will be withheld from payment until a satisfactory form is submitted.

Prior to the fifteenth of each month, the Contractor shall submit documentation to the Engineer showing the amount paid to DBE trucking companies. The Contractor shall also obtain and submit documentation to the Engineer showing the amount paid by DBE trucking companies to all firms, including owner-operators, for the leasing of trucks. If the DBE leases trucks from a non-DBE, the Contractor may count only the fee or commission the DBE receives as a result of the lease arrangement.

The Contractor shall also obtain and submit documentation to the Engineer showing the truck number, owner's name, California Highway Patrol CA number, and if applicable, the DBE certification number of the owner of the truck for all trucks used during that month. This documentation shall be submitted on "Monthly DBE Trucking Verification" Form CEM-2404(F).

5-1.05

DBE CERTIFICATION STATUS:

If a DBE subcontractor is decertified during the life of the project, the decertified subcontractor shall notify the Contractor in writing with the date of decertification.

If a subcontractor becomes a certified DBE during the life of the project, the subcontractor shall notify the Contractor in writing with the date of certification. The Contractor shall furnish the written documentation to the Engineer.

Upon completion of the contract, "Disadvantaged Business Enterprises (DBE) Certification Status Change" Form CEM-2403 (F) indicating the DBE's existing certification status shall be signed and certified correct by the Contractor. The certified form shall be furnished to the Engineer within 90 days from the date of contract acceptance.

5-1.06

PERFORMANCE OF SUBCONTRACTORS:

The subcontractors listed by you in Bid book shall list therein the name and location of each subcontractor to whom the bidder proposes to subcontract portions of the work in an amount in excess of one-half of one percent of the total bid or \$10,000, whichever is greater, in accordance with the Subletting and Subcontracting Fair Practices Act, commencing with Section 4100 of the Public Contract Code. The bidder's attention is invited to other provisions of the Act related to the imposition of penalties for a failure to observe its provisions by using unauthorized subcontractors or by making unauthorized substitutions.

UDBEs must perform work or supply materials as listed in the "Local Agency Bidder - UDBE Commitment" form specified under Section 2, "Bidding" of these Special Provisions. Do not terminate a UDBE listed subcontractor for convenience and perform the work with your own forces or obtain materials from other sources without prior written authorization from the Agency.

The Agency may grant authorization to use other forces or sources of materials for requests that show any of the following justifications as set forth in the Subletting and Subcontracting Fair Practices Act:

1. Listed UDBE fails or refuses to execute a written contract based on plans and specifications for the project.
2. You stipulate a bond is a condition of executing the subcontract and the listed UDBE fails to meet your bond requirements.
3. Work requires a contractor's license and listed UDBE does not have a valid license under Contractors License Law.
4. Listed UDBE fails or refuses to perform the work or furnish the listed materials.
5. Listed UDBE's work is unsatisfactory and not in compliance with the contract.
6. Listed UDBE delays or disrupts the progress of the work.

7. Listed UDBE becomes bankrupt or insolvent.

If a listed UDBE subcontractor is terminated, you must make good faith efforts to find another UDBE subcontractor to substitute for the original UDBE. The substitute UDBE must perform at least the same amount of work as the original UDBE under the contract to the extent needed to meet the UDBE goal.

The substitute UDBE must be certified as a DBE at the time of request for substitution.

The Agency does not pay for work or material unless it is performed or supplied by the listed UDBE, unless the UDBE is terminated in accordance with this section.

5-1.07

SUBCONTRACTING:

Attention is directed to the provisions in Section 8-1.01, "Subcontracting" and Section 2, "Proposal Requirements and Conditions" and Section 3, "Award and Execution of Contract" of the Standard Specifications and these Special Provisions.

Do not use a debarred contractor. Pursuant to the provisions in Section 1777.1 of the Labor Code, the Labor Commissioner publishes and distributes a list of contractors ineligible to perform work as a subcontractor on a public works project. This list of debarred Contractors is available from the Department of Industrial Relations web site at http://www.dir.ca.gov/dir/Labor_law/DLSE/Debar.html.

The Contractor shall perform work equaling at least 50 percent of the value of the original total bid with the Contractor's own employees and equipment, owned or rented, with or without operators. The provisions in the third paragraph of Section 8-1.01, "Subcontracting" of the Standard Specifications, that the Contractor shall perform with the Contractor's own organization contract work amounting to not less than 50 percent of the original contract price, is not changed by the Federal Aid requirement specified under "Required Contract Provisions Federal-Aid Construction Contracts" in Section 6 of these Special Provisions that the Contractor perform not less than 30 percent of the original contract work with the Contractor's own organization.

No subcontract releases the Contractor from the contract or relieves the Contractor of their responsibility for a subcontractor's work.

If the Contractor violates Pub Cont Code § 4100 et seq., the County of Riverside may exercise the remedies provided under Pub Cont Code § 4110. The County of Riverside may refer the violation to the Contractors State License Board as provided under Pub Cont Code § 4111.

Each subcontract must comply with the contract.

Each subcontractor must have an active and valid State Contractor's license with a classification appropriate for the work to be performed (Bus & Prof Code, § 7000 et seq.).

Submit copies of subcontracts upon request by the Engineer.

Before subcontracted work starts, submit a Subcontracting Request form.

Upon request by the Engineer, immediately remove and not again use a subcontractor who fails to prosecute the work satisfactorily.

Each subcontract and any lower tier subcontract that may in turn be made shall include the "Required Contract Provisions Federal-Aid Construction Contracts" in Section 6 of these Special Provisions. Noncompliance shall be corrected. Payment for subcontracted work involved will be withheld from progress payments due, or to become due, until correction is made. Failure to comply may result in termination of the contract.

5-1.08

LABOR NONDISCRIMINATION:

Attention is directed to the following Notice that is required by Chapter 5 of Division 4 of Title 2, California Code of Regulations.

NOTICE OF REQUIREMENT FOR NONDISCRIMINATION PROGRAM
(GOV. CODE, SECTION 12990)

Your attention is called to the "Nondiscrimination Clause", set forth in Section 7-1.01A(4), "Labor Nondiscrimination" of the Standard Specifications, which is applicable to all nonexempt state contracts and subcontracts, and to the "Standard California Nondiscrimination Construction Contract Specifications" set forth therein. The Specifications are applicable to all nonexempt state construction contracts and subcontracts of \$5,000.00 or more.

5-1.09

ARBITRATION:

Section 9-1.10, "Arbitration" of the Standard Specifications is deleted.

5-1.10

SOUND CONTROL REQUIREMENTS:

Sound control shall conform to the provisions in Section 7-1.011, "Sound Control Requirements" of the Standard Specifications and these Special Provisions.

The noise level from the Contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., shall not exceed 86 dba at a distance of 50 feet. This

requirement in no way relieves the Contractor from responsibility for complying with local ordinances regulating noise level.

Said noise level requirement shall apply to all equipment on the job or related to the job, including but not limited to trucks, transit mixers or transient equipment that may or may not be owned by the Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefore.

5-1.11

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. Federal law (49CFR26.29) requires that any delay or postponement of payment over 30 day of receipt of each payment may take place only for good cause and with the agency's prior written approval. 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. This provision applies to both DBE and non-DBE prime Contractors and subcontractors.

5-1.12

PROMPT PAYMENT OF WITHHELD FUNDS TO SUBCONTRACTORS:

No retainage will be withheld by the agency from progress payments due the prime contractor. Retainage by the prime Contractor or subcontractors is prohibited and no retainage will be held by the prime Contractor from progress due subcontractors. 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 California Business and Professions Code. This requirement 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 or deficient subcontract performance, or noncompliance by a subcontractor. This provision applies to both DBE and non-DBE prime contractors and subcontractors. Sections 9-1.06 of the State of California

Department of Transportation Standard Specifications shall be considered as modified accordingly, and Section 9-1.065 shall not apply.

5-1.13

PAYMENTS:

Attention is directed to Section 9-1.06, "Partial Payments", and 9-1.07, "Payment After Acceptance" of the Standard Specifications and these Special Provisions. No partial payment will be for any materials on hand which are furnished but not incorporated in the work.

For the purpose of timely payment, the "receipt of payment request" date, as described in Public Contract Code 20104.50 and as referred to herein, shall be considered to be the fifth working day following the 25th day of each month.

Within 5 working days of the 25th day of each month the County shall:

- A. Calculate and prepare the certificate ("progress pay estimate") stating the value of the work completed for the billing month, for the purpose of determining the proper progress payment amount.
- B. If a progress pay estimate has been prepared by the County but has been contested by the Contractor as of the "receipt of payment request" date, as defined above, the County shall submit to the Contractor a document setting forth in writing a description of the dispute pertaining to the progress billing, and the County's reason for its position. Said document shall be submitted to the Contractor as soon as practicable, but not later than 7 calendar days after the "receipt of payment request" date.

Any progress pay estimate which is undisputed and remains unpaid for thirty (30) calendar days, after the "receipt of payment request date" shall accrue interest to the Contractor equivalent to the legal rate set forth in subdivision (a) of Section 685.010 of the California Code of Civil Procedure. The number of days available to the County to make a payment without incurring interest pursuant to this section shall be reduced by the number of days by which the County exceeds the seven-day submittal requirement set forth in the paragraph above.

Pursuant to Public Contract Code Section 20104.50, subsection (e), the progress payment date is the date that funds are encumbered and the payment warrant is issued.

5-1.14

DEPOSIT OF SECURITIES:

In accordance with Public Contract Code Section 22300 and other applicable law, the Contractor may substitute securities for any monies withheld to ensure performance under the contract.

5-1.15

FORCE ACCOUNT PAYMENT:

The fourth paragraph in Section 9-1.03A, "Work Performed by Contractor" of the Standard Specifications is amended to read:

When extra work to be paid for on a force account basis is performed by a subcontractor, approved in accordance with the provisions in Section 8-1.01, "Subcontracting" an additional markup of 5% will be added to the total cost of said extra work including all markups specified in this Section 9-1.03A. Said additional 5% markup shall reimburse the Contractor for additional administrative costs, and no other additional payment will be made by reason of performance of the extra work by a subcontractor.

The first paragraph in Section 9-1.03A(3), "Equipment Rental" of the Standard Specifications is amended to read:

The Contractor will be paid for the use of equipment at the rental rates listed for such equipment in the Department of Transportation publication entitled Labor Surcharge And Equipment Rental Rates, which is in effect on the date upon which the work is accomplished and which is a part of the contract, regardless of ownership and rental or other agreement, if such may exist, for use of such equipment entered into by the Contractor, except that for those pieces of equipment with a rental rate of \$10.00 per hour or less as listed in the Labor Surcharge And Equipment Rental Rates publication and which are rented from a local equipment agency, other than Contractor owned, the Contractor will be paid at the hourly rate shown on the rental agency invoice or agreement for the time used on force account work as provided in Section 9-1.03A(3a), "Equipment on the Work." If a minimum equipment rental amount is required by the local equipment rental agency, the actual amount charged will be paid to the Contractor.

If it is deemed necessary by the Engineer to use equipment not listed in said publication, a suitable rental rate for such equipment will be established by the Engineer. The Contractor may furnish any cost data which might assist the Engineer in the establishment of such rental rate. If the rental rate established by the Engineer is \$10.00 per hour or less, the provisions above concerning rental of equipment from a local equipment agency shall apply.

The sixth paragraph in said Section 9-1.03A(3) is amended to read:

Individual pieces of equipment or tools not listed in said publication and having a replacement value of \$500 or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefor.

Section 9-1.03A(3), "Equipment Rental" of the Standard Specifications is amended by adding Section 9-1.03A(3d), "Dump Truck Rental" as follows:

9-1.03A(3d) Dump Truck Rental - Dump truck rental shall conform to the provisions of Sections 9-1.03A(3), "Equipment Rental", 9-1.03A(3a), "Equipment on the Work" and 9-1.03A(3b)," Equipment not on the Work" except as follows:

Fully maintained and operated rental dump trucks used in the performance of extra work paid for on a force account basis will be paid for at the same hourly rate paid by the Contractor for use of fully maintained and operated rental dump trucks in performing contract item work.

In the absence of contract item work requiring dump truck rental, the Engineer will establish an hourly rental rate to be paid. The Contractor shall provide the Engineer with complete information on the hourly rental rates available for rental of fully maintained and operated dump trucks.

The provisions in Section 9-1.03A(1), "Labor" shall not apply to operators of rented dump trucks.

The rental rates listed for dump trucks in the Department of Transportation publication entitled Labor Surcharge And Equipment Rental Rates shall not apply.

To the total of the rental costs for fully maintained and operated dump trucks there will be added a markup of 15 %. No other markups will be made by reason of performance of the work by a subcontractor or for labor.

The provisions of Section 9-1.03A(3c), "Owner-Operated Equipment" shall not apply to dump truck rentals.

5-1.16

ASSIGNMENT OF CLAIMS:

In submitting a bid on this public works project, or any subcontractor agreeing to supply goods, services, or materials, and entering a contract pursuant thereto, the Contractor and/or subcontractor do offer and agree to assign to the Owner all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the Contractor, without further acknowledgement by the parties.

CLAIMS RESOLUTION:

In accordance with Public Contract Code Section 20104 - 20104.8 and other applicable law, public works claims of \$375,000 or less which arise between the Contractor and the Owner shall be resolved following the statutory procedure unless the Owner has elected to resolve the dispute pursuant to Public Contract Code SS 10240 et seq.

1. All claims shall be submitted in writing and accompanied by substantiating documentation. Claims must be filed on or before the date of final payment unless other notice requirements are provide in the contract. "Claim" means a separate demand by the claimant for (1) a time extension, (2) payment of money or damages arising from work done by or on behalf of the claimant and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled, or (3) an amount the payment of which is disputed by the Owner.
 - (a) Claims Under or equal to \$50,000. The Owner shall respond in writing to the claim within 45 days of receipt of the claim, or, the Owner may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the Owner may have. If additional information is needed thereafter, it shall be provided upon mutual agreement of the Owner and the claimant. The Owner's written response shall be submitted 15 days after receiving the additional documentation, or within the same period of time taken by the claimant to produce the additional information, whichever is greater.
 - (b) Claims over \$50,000 but less than or equal to \$375,000. The Owner shall respond in writing within 60 days of receipt, or, may request in writing within 30 days of receipt of the claim, any additional documents supporting the claim or relating to defenses or claims the Owner may have against the claimant. If additional information is needed thereafter, it shall be provided pursuant to mutual agreement between the Owner and the claimant. The Owner's response shall be submitted within 30 days after receipt of the further documents, or within the same period of time taken by the claimant to produce the additional information or documents, whichever is greater.
2. If the claimant disputes the Owner's response, or if the Owner fails to respond within the statutory time period, the claimant may so notify the Owner within 15 days of the receipt of the response or the failure to respond, and demand an informal conference to meet and confer for settlement. Upon such demand, the Owner shall schedule a meet and confer conference within 30 days.

3. If following the meet and confer conference, the claim or any portion thereof remains in dispute, the claimant may file a claim pursuant to Government Code SS 900 et seq. and Government Code SS 910 et seq. For purposes of those provisions, the time within which a claim must be filed shall be tolled from the time the claimant submits the written claim until the time the claim is denied, including any time utilized for the meet and confer conference.
5. If a civil action is filed to resolve any claim, the provisions of Public Contract Code SS 20104.4 shall be followed, providing for nonbinding mediation and judicial arbitration.

5-1.18

REMOVAL OF ASBESTOS AND HAZARDOUS SUBSTANCES:

When the presence of asbestos or hazardous substances are not shown on the plans or indicated in the specifications and the Contractor encounters materials which the Contractor reasonably believes to be asbestos or a hazardous substance as defined in Section 25914.1 of the Health and Safety Code, and the asbestos or hazardous substance has not been rendered harmless, the Contractor may continue work in unaffected areas reasonably believed to be safe. The Contractor shall immediately cease work in the affected area and report the condition to the Engineer in writing.

In conformance with Section 25914.1 of the Health and Safety Code, removal of asbestos or hazardous substances including exploratory work to identify and determine the extent of the asbestos or hazardous substance will be performed by separate contract.

If delay of work in the area delays the current controlling operation, the delay will be considered a right of way delay and the Contractor will be compensated for the delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays" of the Standard Specifications.

5-1.19

DUST ABATEMENT:

Dust control shall conform to Section 10, "Dust Control", Section 7-1.01F, "Air Pollution Control", Section 17, "Watering", and Section 18, "Dust Palliative" of the Standard Specifications, Rules no. 401, 402, 403 and 403.1 of the South Coast Air Quality Management District (AQMD), Riverside County Code, Chapter 8.52 "Fugitive Dust Reduction Program For Coachella Valley, all other applicable Federal and State laws, and the requirements set forth herein.

The Contractor is cautioned that failure to control fugitive dust may result in fines being levied by the South Coast Air Quality Management District to both the Contractor and the County of Riverside, as owner. The Contractor shall be fully responsible for payment of all fines pertaining to air pollution control violations,

resulting from Contractor's operations related to the construction contract, which may be levied against both the Contractor and the County of Riverside by the AQMD or other regulatory agencies. The Contractor's attention is directed to Section 7-1.01 "Laws to be Observed" of the Standard Specifications. The cost of all fines levied against the County of Riverside will be deducted from any moneys due or which may become due to the Contractor, unless other payment arrangements are made by the Contractor.

Dust control of all of the Contractor's operations is required 24 hours per day, 7 days a week for the duration of the contract, and until the disturbed soil is permanently stabilized. The Contractor shall take every precaution to prevent emissions of fugitive dust from the project site, from locations of stockpiled materials, from unpaved driving surfaces, from haul vehicles, from inactive construction areas, and from all other operations of the Contractor. The Contractor shall plan for and carry out proper and efficient measures to prevent his operations from producing dust in amounts damaging to property or which constitute a public nuisance, or which cause harm to persons living or working in the vicinity of the work. Of particular concern are emissions of PM10 particles, which are fine particulate matter of 10 microns or less and which are associated with sickness and death from respiratory disease.

The Contractor shall furnish and post dust mitigation signs, which shall be, at a minimum, in accordance with the "AQMD Signage Recommendations", attached hereto. Additional copies are available upon request from the Engineer. The sign shall include the Contractor's phone number which shall be maintained on a 24 hour basis. The sign message, size and design, including any deviations from the signage recommendations, shall be approved by the Engineer prior to fabrication.

The Contractor shall respond to complaints by mobilizing equipment and personnel at the construction site within 2 hours of each complaint to control fugitive dust.

Attention is directed to AQMD Rule 403.1, which applies to all contracts within the Coachella Valley area of Riverside County. That AQMD rule requires the Contractor to take specified dust control actions when prevailing wind speeds exceed 25 miles per hour. Wind forecasts, AQMD Rules and other related information are provided by AQMD at 1-800-CUT-SMOG and at www.aqmd.gov.

Any days on which the Contractor is prevented from working, due to the requirements of AQMD rules, will be considered as non-working days, in accordance with Section 8-1.06 "Time of Completion" of the Standard Specifications.

The Contractor shall utilize the "Best Available Control Measures" of controlling fugitive dust, as prepared by the AQMD. For projects within the Coachella Valley, the "Reasonably Available Control Measures" may be employed, if effective within the context of the AQMD rules. However, if fugitive dust crosses the project boundary, more effective control measures, including the "Best

Available Control Measures" shall be implemented.

A site-specific fugitive dust control plan shall be submitted to the Engineer for review and approval at least 10 days prior to the start of construction. Additionally, for projects outside of the Coachella Valley which meet the criteria for AQMD plan approval, the Contractor shall submit the dust control plan to AQMD for approval. AQMD plan submittal criteria is defined in AQMD Rule 403 as being for projects that will have disturbed surface area in excess of 100 acres, or for projects with a scope of work which requires the movement of more than 10,000 cubic yards of soil on each of any three working days.

A sample plan and other pertinent information are attached, and additional copies are available from the Engineer upon request. The fugitive dust control plan shall include the "Reasonably Available Control Measures" and "Best Available Control Measures" of controlling fugitive dust, as may be appropriate and necessary, including but not limited to watering, application of chemical dust suppressants, wind fencing, covering of haul vehicles, haul vehicle bed-liners, covering or chemically stabilizing stored materials, phased grading, planting of vegetation, the use of a 24 hour environmental observer, and track-out controls at locations where unpaved construction accesses intersect with paved roads. The use of chemical stabilizers, which are approved by all environmental regulatory agencies, and the use of reclaimed water is encouraged. If water is intended as a primary dust control tool, the dust control plan shall provide for at least one 2,000 gallon water truck for every 4 acres of disturbed soil, unless otherwise approved by the Engineer.

If the Construction Engineer determines that the project scope and the forecasted weather conditions are such that the Contractor's work is unlikely to be a source of dust emissions, the Construction Engineer has the authority to waive the requirements for submittal of a dust control plan and for placement of the dust control signs described herein. However, the Contractor's responsibilities for the control of fugitive dust and the other requirements of this section may not be waived.

A completion notice will not be filed, and final payment will not be made to the Contractor until the areas of disturbed soil on the construction site, including roadway shoulders, are suitably stabilized for long term control of fugitive dust.

The successful Contractor shall attend an AQMD PM10 Dust Control Program training session, and furnish evidence of attendance to the Engineer. Attendance at AQMD training seminars can be scheduled through AQMD at 1-866-861-DUST (1-866-861-3878) or by email to dustcontrol@aqmd.gov. Current AQMD certification of previous attendance will be accepted.

At that training session, the successful Contractor will be furnished with the AQMD prepared Rule 403 and Rule 403.1 implementation handbooks, which include the "Best Available Control Measures" and "Reasonably Available Control

Measures”, and other associated information, including a listing of suggested dust control related devices, materials and chemicals.

The signature of the Contractor on the Proposal constitutes acknowledgement by the Contractor of the dust control requirements established by law and described herein, and the enforceability of those requirements.

When the contract includes a bid item for Dust Abatement, full compensation for conformance with these dust abatement requirements, including labor, equipment, materials, developing water supply and incidentals, shall be paid under the Bid Item “Dust Abatement” on a lump sum basis, up to the fixed bid price, for the work performed.

When the contract does not include a bid item for Dust Abatement, full compensation for conformance with these dust abatement requirements, including labor, equipment, materials, developing water supply and incidentals, shall be considered as included in the various items of work, and no additional compensation will be allowed therefore.

Dust Abatement Attachments

1. Signage recommendations (AQMD document, modified)
2. Sample Dust Control Plan (AQMD sample)
3. Dust Control Plan Review Checklists (AQMD document)
4. Reasonably Available Control Measures
(from Rule 403 Implementation Handbook)
5. Best Available Control Measures
(from Rule 403 Implementation Handbook)
6. Best Reasonably Available Control Measures for High Wind Conditions
(from Rule 403 Implementation Handbook)
7. Track Out Control Options
(from Rule 403 Implementation Handbook)

AQMD RECOMMENDATIONS

November, 2001

Plan holder shall post signage at specified locations on the subject property in accordance with the standards specified below. The exception to the standards is that all letters shall be 4 inches high, with the names and telephone numbers of appropriate contacts and services in bold print, as indicated in the standards. These signs shall also include the SCAQMD toll free complaint line 1-800-CUT-SMOG (1-800-288-7664) and the telephone number for the Environmental Observer. These signs shall be posted within 50 feet of the curb on all four (4) corners of the subject property.

For each Dust Control Plan aggregating less than, or equal to, ten (10) acres:

1. The applicant shall install a sign on such property which is visible to the public that meets the following requirements:
 - (a) Such sign shall measure at least four (4) feet wide by four (4) feet high and conform to the specifications in 1 (a) below.

For each Dust Control Plan aggregating over ten (10) acres:

2. The applicant shall install a sign on such property which is visible to the public that meets the following requirements:
 - (a) Such sign shall measure at least eight (8) feet wide by four (4) feet high and conform to the specifications in 1 (b) below.

THE SIGN SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

1. The sign boards shall be constructed with materials capable of withstanding the environment in which they are placed.
 - (a) For 4' x 4' signs, the District recommends the following:
 - I. 3/4" A/C laminated plywood board
 - II. Two 4" x 4" posts
 - III. The posts should be attached to the edges of the plywood board with at least 2 carriage bolts on each post.
 - IV. The front surface of the sign board should be painted in the contrasting color of a white background with black lettering.
 - (b) For 4' x 8' signs, the District recommends the following:
 - I. 1" A/C laminated plywood board
 - II. Two 5" x 6" posts
 - III. The posts should be attached to the 4' edges of the plywood board with at least 2 carriage bolts on each post.
 - IV. The front surface of the sign board should be painted in the contrasting color of a white background with black lettering.

2. The sign board shall be installed and maintained in a condition such that members of the public can easily view, access, and read the sign at all times until the expiration date of the Dust Control plan.

(a) For 4' x 4' signs, the District recommends the following:

- I. The lower edge of the sign board should be mounted at least 2' above the existing ground surface to facilitate ease of viewing.
- II. The posts should be set in a hole at least 3' deep with concrete footings to preclude downing by high winds.
- III. On the construction site, the sign should be positioned such that nothing obstructs the public's view from the primary street access point.
- IV. For construction projects that are developed in phases, the sign should be moved to the area that is under active construction.
- V. In situations where all phases of the construction project are completed on a property prior to expiration of the Dust Control Plan, a written request for cancellation of the Dust Control Plan must be submitted to the Engineer.

(b) For 4' x 8' signs, the District recommends the following:

- I. The lower edge of the sign board should be mounted at least 2' above the existing ground surface to facilitate ease of viewing.
- II. The posts should be set in a hole at least 4' deep with concrete footings to preclude downing by high winds.
- III. On the construction site, the sign should be positioned such that nothing obstructs the public's view from the primary street access point.
- IV. For construction projects that are developed in phases, the sign should be moved to the area that is under active construction.
- V. In situations where all phases of the construction project are completed on a property prior to expiration of the Dust Control Plan, a written request for cancellation of the Dust Control Plan must be submitted to the Engineer.

3. The sign board shall contain the following information:

- (a) Project Name
- (b) Name of Prime Contractor
- (c) Phone Number of Contractor's Employee Responsible for Dust Control Matters
- (d) County designated phone number (to be provided by the Engineer)
- (e) South Coast Air Quality Management District Phone Number

4. The sign board shall be designed to the following alpha and numeric text dimensions (sign boards written in longhand are unacceptable).

(a) For a permittee subject to the 4' x 4' sign requirement, the District provides the following example: (as modified by the County of Riverside for use on County Public Works projects)

1" UPPERCASE Letters →	PROJECT NAME:		← 3 ½ " Title Case Bold Letters
1" UPPERCASE Letters →	CONTRACTOR		← 3 ½ " Title Case Bold Letters
1" Title Case Letters →	Contractor's Dust Control Phone #		← 3" Bold Numbers
1" Title Case Letters →	County of Riverside Phone #		← 3" Bold Numbers
1" Title Case Letters →	Phone Number:	SCAQMD 1-800-CUT-SMOG	← 3 ½ " Bold Numbers

"Title Case" means the first letter of a word is capitalized and subsequent letters are lower case.

(b) For a permittee subject to the 4' x 8' sign requirement, the District provides the following example: (as modified by the County of Riverside)

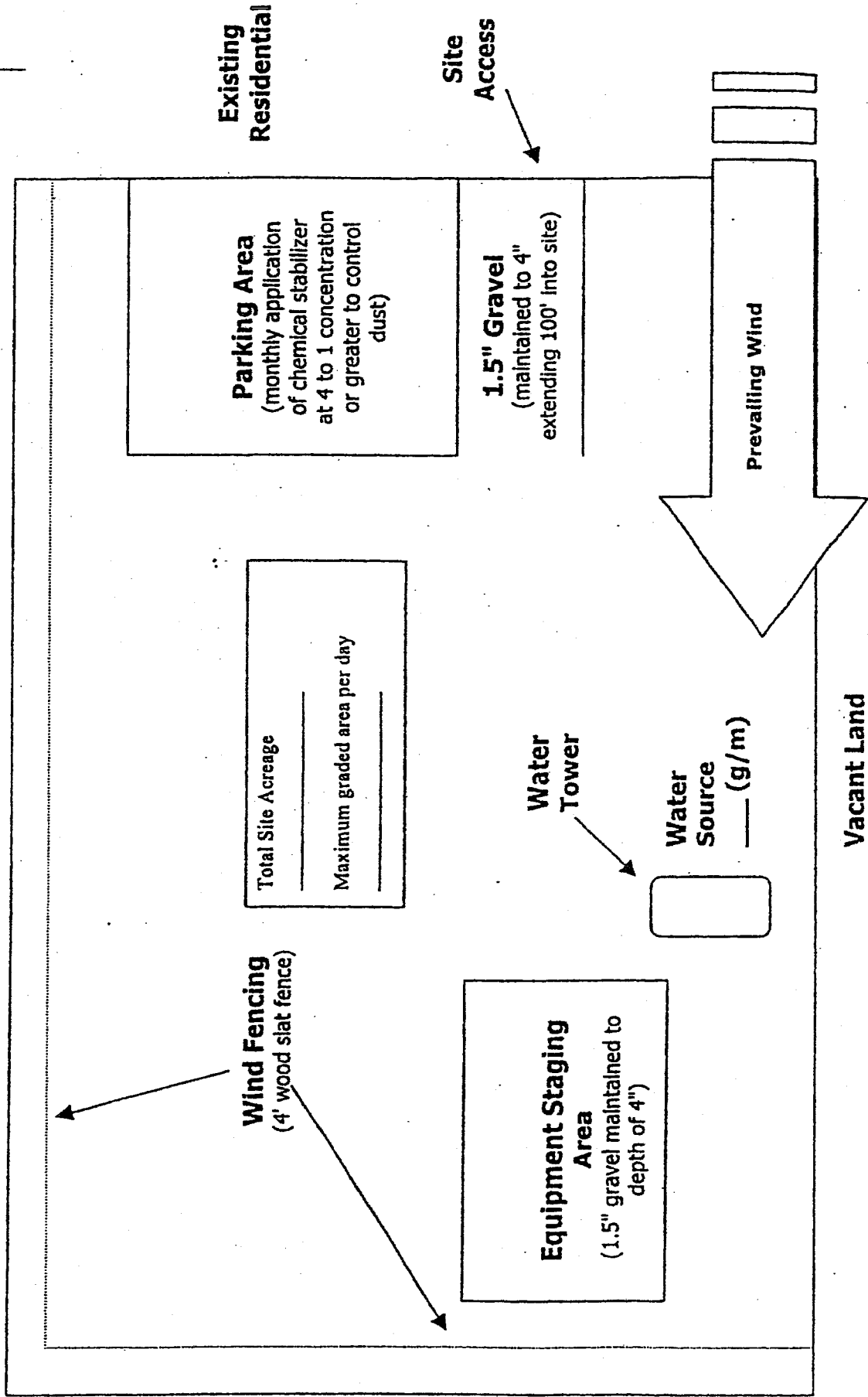
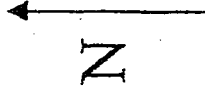
2" UPPERCASE Letters	PROJECT NAME:		4" Title Case Bold Letters
2" UPPERCASE Letters	CONTRACTOR		4" Title Case Bold Letters
2" Title Case Letters	Contractor's Dust Control Phone #		4" Bold Numbers
2" Title Case Letters	County of Riverside Phone #	909-	4" Bold Numbers
2" Title Case Letters	Phone Number:	SCAQMD 1-800-CUT-SMOG	4 1/2" Bold Numbers
2" Title Case Letters	COUNTY OF RIVERSIDE TRANSPORTATION DEPARTMENT		

Section 1

Simplified Sample Site Plan

Existing Residential

Distance and location of nearest:
 Residence _____
 Business _____



Existing Residential

DA5

Remember...
**DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK,
 REGARDLESS OF CONSTRUCTION STATUS**

Plan Review Checklist Clearing/Grubbing/Mass Grading Phase

- If feasible, use grading permit conditions to break the project into phases so that only a portion of the site is disturbed at any given time to ensure control of fugitive dust. This technique is critical for project sites with greater than 100 acres.

- Prior to initiating activity, pre-water site through use of portable irrigation lines. At least 72 hours of pre-watering is recommended for each area prior to initiating earth-movement. Require the Applicant to specify water source and available flow rate (g/m).

- Water applied continuously to all disturbed portions of the site by means of water truck/water pull as necessary to maintain sufficient visible moisture on the soil surface. For reference, one 2,000 gallon water truck can treat approximately 4 acres of active construction per hour. Also, for cut and fill activities, one 10,000 gallon water pull is estimated to be necessary for each 7,000 cubic yards of daily earth-movement. Multiple 4,000-gallon water trucks may be used in place of one 10,000-gallon water pull. Touch and visual contrast are reasonably good indicators of soil moisture. Surface areas that are dry to the touch and appear lighter-colored require the application of additional water to prevent visible or fugitive dust. Require the Applicant to specify the number of watering vehicles available for dust control during mass grading and during off-hours as well as availability of back-up water trucks if the site experiences dust control problems.

- Water towers are necessary for projects with more than 10 acres of active construction. Without a water tower, it can take up to 30 minutes to fill a 2,000 gallon water truck. Also, multiple water towers are necessary for projects that use water pulls as filling one 10,000 gallon water pull can drain a water tower which takes up to 40 minutes to refill.

- Wind fencing is necessary between the site and nearby residences or businesses. Off-site upwind fencing and on-site wind fencing for larger projects can also keep blowsand from being deposited onto the site or traveling through the site.

- A perimeter watering system consisting of portable irrigation equipment may be an effective mitigation system to protect surrounding residences and businesses. The portable watering system may be used in place of or in conjunction with watering trucks. The local jurisdiction may also be provided access to this equipment.

Remember...
DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK,
REGARDLESS OF CONSTRUCTION STATUS

Construction site accesses are to be improved with 1.5" gravel maintained to a depth of 4", at least 20' wide, and extending 100 feet into the site. If the project site is not balanced, a wheel washing system and/or ribbed steel plates should be placed in the roadway before the vehicle enters the graveled area to clean the tires and prevent trackout.

Equipment staging areas are to be treated with 1.5" gravel maintained to a depth of 4".

Employee parking areas are to be covered with 1.5" gravel maintained to a depth of 4" or treated with chemical dust suppressants at a 4 to 1 ratio on at least a monthly basis to prevent fugitive dust.

Chemical dust suppressants are to be mixed at a ratio of 20 to 1 and applied to all disturbed surfaces that are proposed to remain inactive for a period of at least 10 consecutive days. These products are effective in preventing and controlling dust. Recordkeeping is necessary to demonstrate compliance.

All project sites greater than 100 acres shall monitor daily wind speeds and AQMD forecasted wind events (call 1.800.CUT.SMOG, press one for air quality information, and then press five for Coachella Valley wind forecasts). Operators shall maintain these records for review by any local code enforcement officer or AQMD inspector.

An environmental observer whose primary duty is to oversee dust control at the site is to be used for construction projects greater than 100 acres and/or sites with more than 50 acres of active construction. The environmental observer is tasked with monitoring dust abatement measures and authorized to deploy additional water trucks and other dust control actions (i.e., wind fencing, street sweepers, chemical dust suppressants, etc.) as necessary to prevent or control fugitive dust.

Other (specify): _____

Remember...
DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK,
REGARDLESS OF CONSTRUCTION STATUS

Plan Review Checklist Finish Grading Phase

- Water applied continuously to all disturbed portions of the site by means of water truck/water pull as necessary to maintain sufficient visible moisture on the soil surface. For reference, one 2,000 gallon water truck can treat approximately 4 acres of active construction per hour. Also, for cut and fill activities, one 10,000 gallon water pull is estimated to be necessary for each 7,000 cubic yards of daily earth-movement. Multiple 4,000-gallon water trucks may be used in place of a 10,000-gallon water pull. Touch and visual contrast are reasonably good indicators of soil moisture. Surface areas that are dry to the touch and appear lighter-colored require the application of additional water to prevent visible or fugitive dust. Require the Applicant to specify the number of watering vehicles available for dust control during finish grading and during off-hours as well as availability of back-up water trucks if the site experiences dust control problems.

- Water towers are necessary for projects with more than 10 acres of active construction. Without a water tower, it can take up to 30 minutes to fill a 2,000 gallon water truck. Also, multiple water towers are necessary for projects that use water pulls as filling one 10,000 gallon water pull can drain a water tower which takes up to 40 minutes to refill.

- Wind fencing is necessary between the site and nearby residences or businesses to reduce fugitive dust. Off-site upwind fencing and on-site wind fencing for larger projects can also keep blowsand from being deposited onto the site or traveling through a site.

- Chemical dust suppressants are to be applied at a concentration of at least 10 to 1 to finish graded areas once final elevations have been reached. For areas that will remain inactive for longer periods, vegetation can be a cost-effective alternative to chemical stabilization. Wind fencing or other obstructions can keep the stabilized area free from future disturbances.

- Construction site access(es) are to be improved with 1.5" gravel maintained to a depth of at least 4" with a minimum width of at least 20', extending 100 feet into the project site.

- Equipment staging areas are to be treated with 1.5" gravel maintained to a depth of 4".

- Internal roadway networks are to be treated with chemical dust suppressants at a minimum rate of at least 4 to 1 and retreated on a monthly basis once final roadway elevations have been reached.

- Employee parking areas are to be treated with chemical dust suppressants at a mix ratio of at least 4 to 1 and retreated on at least a monthly basis or covered with 1.5" gravel maintained to a depth of 4" to prevent fugitive dust.

- Other (specify): _____

Remember...
DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK,
REGARDLESS OF CONSTRUCTION STATUS

Plan Review Checklist Construction Phase

Water applied continuously to all disturbed portions of the site by means of water truck/water pull is necessary to maintain sufficient visible moisture on the soil surface. For reference, one 2,000 gallon water truck can treat approximately 4 acres of active construction per hour. Touch and visual contrast are reasonably good indicators of soil moisture. Surface areas that are dry to the touch and appear lighter-colored require the application of additional water to prevent visible or fugitive dust. Require the Applicant to specify the number of watering vehicles available for dust control during the construction phase and during off-hours as well as availability of back-up water trucks if the site experiences dust control problems.

Wind fencing is necessary between the site and nearby residences or businesses. Off-site upwind fencing and on-site wind fencing for larger projects can also keep blowsand from being deposited onto the site or traveling through the site. Block walls, if part of the final project, can replace wind fencing during the construction phase.

Chemical dust suppressants are to be applied at a concentration of at least 20 to 1 to finish graded areas once final elevations have been reached. For areas that will remain inactive for longer periods, vegetation can be a cost-effective alternative to chemical stabilization. Wind fencing or other obstructions can keep the stabilized area free from future disturbances.

Construction site accesses are to be improved with 1.5" gravel, maintained to a depth of 4", with a width of at least 20', extending 100' into the project site. Paving internal roadways can substitute for gravel.

Internal roadway networks are to be paved as early as feasible in the construction phase. Street sweeping of internal and/or external access roads will likely be required to control entrained road dust.

Employee parking areas are to be treated with chemical dust suppressants at a mix ratio of no less than 4 to 1 and retreated on a monthly basis, or more frequently if fugitive dust is observed. If internal roadway is complete, employees are to be instructed to park on paved roads.

Other (specify): _____

Remember...
DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK,
REGARDLESS OF CONSTRUCTION STATUS

RULE 403 IMPLEMENTATION HANDBOOK

REASONABLY AVAILABLE CONTROL MEASURES

Paragraph (d)(3) of Rule 403 allows activities outside the South Coast Air Basin (see Figure 2-1) to implement reasonably available control measures in lieu of best available control measures. Additionally, as specified by subparagraph (f)(3)(D) of Rule 403, any person seeking approval of a fugitive dust emissions control plan for projects outside the South Coast Air Basin must demonstrate to the satisfaction of the District that the given activity is employing all reasonably available fugitive dust control measures.

The District has prepared the attached listing of reasonably available fugitive dust control measures for a variety of source categories. This list is based on the U.S. Environmental Protection Agency's reference document entitled, "Control of Open Fugitive Dust Sources," Midwest Research Institute, September 1988.

The District encourages the use of those dust control measures that minimize the use of potable water. When water is needed, reclaimed water should be utilized to the greatest extent feasible.

RULE 403 IMPLEMENTATION HANDBOOK

REASONABLY AVAILABLE CONTROL MEASURES

The left column contains a listing of the sources of fugitive dust which are intended for emission control under District Rule 403 and a listing of control measures and high-wind measures. The right column contains a description of the reasonably available fugitive dust control measures for each of the sources.

Source: (1) Land Clearing/Earth-Moving

CONTROL MEASURES

(A) Watering

DESCRIPTION

- (1) Application of water by means of trucks, hoses and/or sprinklers prior to conducting any land clearing. This will increase the moisture content of the soils; thereby increasing its stability.
- (2) Pre-application of water to depths of proposed cuts.
- (3) Once the land clearing/earth moving activities are complete, a second application of water can generate a thin crust that stabilizes the disturbed surface area provided that it is not disturbed. (Security fencing can be used to prevent unwanted future disturbances of sites where a surface crust has been created).
- (1) Only effective in areas which are not subject to daily disturbances.
- (2) Vendors can supply information on product application and required concentrations to meet the specifications established by the Rule.
- (1) Three- to five-foot barriers with 50% or less porosity located adjacent to roadways or urban areas can be effective in reducing the amount of windblown material leaving a site.
- (2) Would likely be used in conjunction with other measures (e.g., watering, chemical stabilization, etc.) to ensure that visible emissions do not cross a property line.
- (1) Entire surface area of hauled earth should be covered once vehicle is full.
- (1) When feasible, use in bottom-dumping haul vehicles.

(B) Chemical stabilizers

(C) Wind fencing

(D) Cover haul vehicles

(E) Bedliners in haul vehicles

HIGH WIND MEASURE

- (a) Cease all active operations; or
- (b) Apply water within 15 minutes to any soil surface which is being moved or otherwise disturbed.

Source: (2) Unpaved Roads

CONTROL MEASURES

DESCRIPTION

- (F) Paving
 - (1) Requires street sweeping/cleaning if subject to material accumulation.
- (G) Chemical stabilization
 - (1) Vendors can supply information as to application methods and concentrations to meet the specifications established by the Rule
 - (2) Not recommended for high volume or heavy equipment traffic use.
- (H) Watering
 - (1) In sufficient quantities to keep surface moist.
 - (2) Required application frequency will vary according to soil type, weather conditions, and vehicular use.
- (I) Reduce speed limits
 - (1) 15 mile per hour maximum. May need to be used in conjunction with watering or chemical stabilization to prevent visible emissions from crossing the property line.
- (J) Reduce vehicular trips
 - (1) Access restriction or redirecting traffic to reduce vehicle trips by a minimum of 60 percent.
- (K) Gravel
 - (1) Gravel maintained to a depth of four inches can be an effective measure.
 - (2) Should only be used in areas where paving, chemical stabilization or frequent watering is not feasible.

HIGH WIND MEASURE

- (c) Apply a chemical stabilizer (to meet the specifications established by the Rule) prior to wind events; or
- (d) Apply water once each hour; or
- (e) Stop all vehicular traffic.

RULE 403 IMPLEMENTATION HANDBOOK

Source: (3) Storage Piles

CONTROL MEASURES

DESCRIPTION

- | | |
|--|--|
| (L) Wind sheltering | (1) Enclose in silos.
(2) Install three-sided barriers equal to height of material, with no more than 50 percent porosity. |
| (M) Watering | (1) Application methods include: spray bars, hoses and water trucks.
(2) Frequency of application will vary on site-specific conditions. |
| (N) Chemical stabilizers | (1) Best for use on storage piles subject to infrequent disturbances. |
| (O) Altering load-in/load-out procedures | (1) Confine load-in/load-out procedures to leeward (downwind) side of the material.
(2) May need to be used in conjunction with wind sheltering to prevent visible emissions from crossing the property line. |
| (P) Coverings | (1) Tarps, plastic, or other material can be used as a temporary covering.
(2) When used, these should be anchored to prevent wind from removing coverings. |

HIGH WIND MEASURE

- (f) Apply chemical stabilizers (to meet the specifications established by the Rule) prior to wind events; or
- (g) Apply water once per hour; or
- (h) Install temporary covers.

Source: (4) Paved Road Track-Out

CONTROL MEASURES

- (Q) Chemical stabilization
- (R) Sweep/clean roadways
- (S) Cover haul vehicles
- (T) Bedliners in haul vehicles
- (U) Site access improvement

DESCRIPTION

- (1) Most effective when used on areas where active operations have ceased.
- (2) Vendors can supply information on methods for application and required concentrations.
- (1) Either sweeping or water flushing may be used.
- (1) Entire surface area should be covered once vehicle is full.
- (1) When feasible, use in bottom dumping vehicles.
- (1) Pave internal roadway system.
- (2) Most important segment, last 100 yards from the connection with paved public roads

HIGH WIND MEASURE

- (i) Cover all haul vehicles; and
- (j) Clean streets with water flushing, unless prohibited by the Regional Water Quality Control Board.

RULE 403 IMPLEMENTATION HANDBOOK

Source: (S) Disturbed Surface Areas/ Inactive Construction Sites

CONTROL MEASURES

DESCRIPTION

- (Q) Chemical stabilization
 - (1) Most effective when used on areas where active operations have ceased.
 - (2) Vendors can supply information on methods for application and required concentrations.
- (R) Watering
 - (1) Requires frequent applications unless a surface crust can be developed.
- (S) Wind fencing
 - (1) Three- to five-foot barriers with 50% or less porosity adjacent to roadways or urban areas can be effective in reducing the amount of wind blown material leaving a site.
- (T) Vegetation
 - (1) Establish as quickly as possible when active operations have ceased.
 - (2) Use of drought tolerant, native vegetation is encouraged.

HIGH WIND MEASURES

- (k) Apply chemical stabilizers (to meet the specifications established by the Rule); or
- (l) Apply water to all disturbed surface areas 3 times per day.

BEST AVAILABLE CONTROL MEASURES

Rule 403, paragraph (d)(2) requires active operations [defined in Rule 403, paragraph (c)(1)] within the South Coast Air Basin (see Figure 2-1) to implement at least one best available control measure for each fugitive dust source type on site. Additionally, as specified by subparagraph (f)(3)(D) of Rule 403, any person seeking approval of a fugitive dust emissions control plan for projects within the South Coast Air Basin must demonstrate to the satisfaction of the AQMD that the given activity is employing all best available fugitive dust control measures.

The AQMD has prepared the attached listing of best available fugitive dust control measures for a variety of source categories. This list is based on the U.S. Environmental Protection Agency's reference document entitled, "Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures," Office of Air and Radiation, September 1992.

The AQMD encourages the use of those dust control measures that minimize the use of potable water. When water is needed, reclaimed water should be utilized to the greatest extent feasible.

RULE 403 IMPLEMENTATION HANDBOOK

BEST AVAILABLE CONTROL MEASURES

The left column contains a listing of the sources of fugitive dust which are intended for emission control under District Rule 403 and a listing of control measures and high-wind measures. The right column contains a description of the best available fugitive dust control measures for each of the sources.

Source: (1) Land Clearing/Earth-Moving

CONTROL MEASURES

DESCRIPTION

- | | |
|--------------------------------|---|
| (A) Watering (pre-grading) | (1) Application of water by means of trucks, hoses and/or sprinklers prior to conducting any land clearing. This will increase the moisture content of the soils; thereby increasing its stability. |
| (A-1) Watering (post-grading) | (2) Pre-application of water to depths of proposed cuts. |
| (A-2) Pre-grading planning | (1) In active earth-moving areas water should be applied at sufficient frequency and quantity to prevent visible emissions from extending more than 100 feet from the point of origin. |
| (B) Chemical stabilizers | (1) Grade each phase separately, timed to coincide with construction phase; or
(2) Grade entire project, but apply chemical stabilizers or ground cover to graded areas where construction phase begins more than 60 days after grading phase ends. |
| (C) Wind fencing | (1) Only effective in areas which are not subject to daily disturbances.
(2) Vendors can supply information on product application and required concentrations to meet the specifications established by the Rule. |
| (D) Cover haul vehicles | (1) Three- to five-foot barriers with 50% or less porosity located adjacent to roadways or urban areas can be effective in reducing the amount of windblown material leaving a site. Must be implemented in conjunction with either measure (A-1) or (B). |
| (E) Bedliners in haul vehicles | (1) Entire surface area of hauled earth should be covered once vehicle is full.
(1) When feasible, use in bottom-dumping haul vehicles. |

HIGH WIND MEASURE

- (a) Cease all active operations; or
- (b) Apply water within 15 minutes to any soil surface which is being moved or otherwise disturbed.

RULE 403 IMPLEMENTATION HANDBOOK

Source: (2) Unpaved Roads

CONTROL MEASURES

DESCRIPTION

- | | |
|----------------------------|---|
| (F) Paving | (1) Requires street sweeping/cleaning if subject to material accumulation. |
| (G) Chemical stabilization | (1) Vendors can supply information as to application methods and concentrations to meet the specifications established by the Rule
(2) Not recommended for high volume or heavy equipment traffic use. |
| (H) Watering | (1) In sufficient quantities to keep surface moist.
(2) Required application frequency will vary according to soil type, weather conditions, and vehicular use. |
| (I) Reduce speed limits | (1) 15 mile per hour maximum. May need to be used in conjunction with watering or chemical stabilization to prevent visible emissions from crossing the property line. |
| (J) Reduce vehicular trips | (1) Access restriction or redirecting traffic to reduce vehicle trips by a minimum of 60 percent. |
| (K) Gravel | (1) Gravel maintained to a depth of four inches can be an effective measure.
(2) Should only be used in areas where paving, chemical stabilization or frequent watering is not feasible. |

HIGH WIND MEASURE

- (a) Apply a chemical stabilizer (to meet the specifications established by the Rule) prior to wind events; or
(b) Apply water once each hour; or
(c) Stop all vehicular traffic.

RULE 403 IMPLEMENTATION HANDBOOK

Source: (3) Storage Piles

CONTROL MEASURES

DESCRIPTION

- | | |
|--|--|
| (L) Wind sheltering | (1) Enclose in silos.
(2) Install three-sided barriers equal to height of material, with no more than 50 percent porosity. |
| (M) Watering | (1) Application methods include: spray bars, hoses and water trucks.
(2) Frequency of application will vary on site-specific conditions. |
| (N) Chemical stabilizers | (1) Best for use on storage piles subject to infrequent disturbances. |
| (O) Altering load-in/load-out procedures | (1) Confine load-in/load-out procedures to leeward (downwind) side of the material.
Must be used in conjunction with either measure (L), (M), (N), or (P). |
| (P) Coverings | (1) Tarps, plastic, or other material can be used as a temporary covering.
(2) When used, these should be anchored to prevent wind from removing coverings. |

HIGH WIND MEASURE

- (a) Apply chemical stabilizers (to meet the specifications established by the Rule) prior to wind events; or
(b) Apply water once per hour; or
(c) Install temporary covers.

RULE 403 IMPLEMENTATION HANDBOOK

Source: (4) Paved Road Track-Out

CONTROL MEASURES

DESCRIPTION

Compliance with District Rule 403.

Paragraph (d)(5).

RULE 403 IMPLEMENTATION HANDBOOK

Source: (5) Disturbed Surface Areas/ Inactive Construction Sites

CONTROL MEASURES

DESCRIPTION

- (Q) Chemical stabilization
- (1) Most effective when used on areas where active operations have ceased.
- (2) Vendors can supply information on methods for application and required concentrations.
- (R) Watering
- (1) Requires frequent applications unless a surface crust can be developed.
- (S) Wind fencing
- (1) Three- to five-foot barriers with 50% or less porosity adjacent to roadways or urban areas can be effective in reducing the amount of wind blown material leaving a site. Must be used in conjunction with either measure (Q), (R), or (T).
- (T) Vegetation
- (1) Establish as quickly as possible when active operations have ceased.*

HIGH WIND MEASURES

- (a) Apply chemical stabilizers (to meet the specifications established by the Rule); or
- (b) Apply water to all disturbed surface areas 3 times per day.

* Use of drought tolerant, native vegetation is encouraged.

TABLE 1

BEST [REASONABLY]* AVAILABLE CONTROL MEASURES FOR HIGH WIND CONDITIONS

FUGITIVE DUST SOURCE CATEGORY	<u>CONTROL MEASURES</u>
Earth-moving	(1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice [once] per hour during active operation; OR (3C) Stop all vehicular traffic.
Open storage piles	(1D) Apply water twice [once] per hour; OR (2D) Install temporary coverings.
Paved road track-out	(1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 1 may be used.

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 2
DUST CONTROL ACTIONS FOR EXEMPTION FROM PARAGRAPH (d)(4)

<u>FUGITIVE DUST SOURCE CATEGORY</u>	<u>CONTROL ACTIONS</u>
Earth-moving (except construction cutting and filling areas, and mining operations)	<p>(1a) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR</p> <p>(1a-1) For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.</p>
Earth-moving: Construction fill areas:	<p>(1b) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.</p>

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS
Earth-moving: Construction cut areas and mining operations:	(1c) Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b) Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 [70] percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c) Apply chemical stabilizers within five working days of grading completion; OR (2d) Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a) Apply water to at least 80 [70] percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR (3b) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (3c) Establish a vegetative ground cover within 21 [30] days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR (3d) Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 2 (Continued)*

<u>FUGITIVE DUST SOURCE CATEGORY</u>	<u>CONTROL ACTIONS</u>
Unpaved Roads	(4a) Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR (4b) Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR (4c) Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a) Apply chemical stabilizers; OR (5b) Apply water to at least 80 [70] percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR (5c) Install temporary coverings; OR (5d) Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile.
<u>All Categories</u>	(6a) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

TABLE 3
TRACK-OUT CONTROL OPTIONS
PARAGRAPH (d)(5)(B)

CONTROL OPTIONS

(1)	Pave or apply chemical stabilization at sufficient concentration and frequency to maintain a stabilized surface starting from the point of intersection with the public paved surface, and extending for a centerline distance of at least 100 feet and a width of at least 20 feet.
(2)	Pave from the point of intersection with the public paved road surface, and extending for a centerline distance of at least 25 feet and a width of at least 20 feet, and install a track-out control device immediately adjacent to the paved surface such that exiting vehicles do not travel on any unpaved road surface after passing through the track-out control device.
(3)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Section 5-2
Federal Prevailing Wage Decision

General Decision Number: CA120036 03/02/2012 CA36

Superseded General Decision Number: CA20100036

State: California

Construction Types: Building, Heavy (Heavy and Dredging) and Highway

County: Riverside County in California.

BUILDING CONSTRUCTION PROJECTS; DREDGING PROJECTS (does not include hopper dredge work); HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); HIGHWAY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	01/06/2012
1	03/02/2012

ASBE0005-002 06/28/2010		
	Rates	Fringes
Asbestos Workers/Insulator (Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems).....	\$ 32.79	16.31
Fire Stop Technician (Application of Firestopping Materials for wall openings and penetrations in walls, floors, ceilings and curtain walls).....	\$ 24.21	13.76

ASBE0005-004 06/28/2010		
	Rates	Fringes
Asbestos Removal worker/hazardous material handler (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials from mechanical systems, whether they contain asbestos or not)....	\$ 18.70	8.65

BOIL0092-003 05/01/2011		
	Rates	Fringes
BOILERMAKER.....	\$ 41.26	25.27

* BRCA0004-011 05/01/2011		
	Rates	Fringes
BRICKLAYER; MARBLE SETTER.....	\$ 35.66	10.87

*The wage scale for prevailing wage projects performed in

Blythe, China lake, Death Valley, Fort Irwin, Twenty-Nine Palms, Needles and 1-15 corridor (Barstow to the Nevada State Line) will be Three Dollars (\$3.00) above the standard San Bernardino/Riverside County hourly wage rate

BRCA0018-004 06/01/2011

	Rates	Fringes
MARBLE FINISHER.....	\$ 28.02	12.22
TILE FINISHER.....	\$ 27.80	12.54
TILE LAYER.....	\$ 38.61	13.83

BRCA0018-010 09/01/2009

	Rates	Fringes
TERRAZZO FINISHER.....	\$ 26.59	9.62
TERRAZZO WORKER/SETTER.....	\$ 33.63	10.46

CARP0409-001 07/01/2010

	Rates	Fringes
CARPENTER		
(1) Carpenter, Cabinet Installer, Insulation Installer, Hardwood Floor Worker and acoustical installer, and solar panels.	\$ 37.35	11.08
(2) Millwright.....	\$ 37.85	11.08
(3) Piledriver/Derrick Bargeman, Bridge or Dock Carpenter, Heavy Framer, Rock Bargeman or Scowman, Rockslinger, Shingler (Commercial).....	\$ 37.48	10.58
(3) Piledrivermen/Derrick Bargeman, Bridge or Dock Carpenter, Heavy Framer, Rock Bargeman or Scowman, Rockslinger, Shingler (Commercial).....	\$ 37.48	11.08
(4) Pneumatic Nailer, Power Stapler.....	\$ 37.60	11.08
(5) Sawfiler.....	\$ 37.44	11.08
(6) Scaffold Builder.....	\$ 28.55	11.08
(7) Table Power Saw Operator.....	\$ 37.45	11.08

FOOTNOTE: Work of forming in the construction of open cut sewers or storm drains, on operations in which horizontal lagging is used in conjunction with steel H-Beams driven or placed in pre- drilled holes, for that portion of a lagged trench against which concrete is poured, namely, as a substitute for back forms (which work is performed by piledrivers): \$0.13 per hour additional. Certified Welder - \$1.00 per hour premium.

CARP0409-002 07/01/2008

	Rates	Fringes
Diver		
(1) Wet.....	\$ 663.68	9.82
(2) Standby.....	\$ 331.84	9.82
(3) Tender.....	\$ 323.84	9.82
(4) Assistant Tender.....	\$ 299.84	9.82

Amounts in "Rates" column are per day

CARP0409-005 07/01/2010

	Rates	Fringes
Drywall		
DRYWALL INSTALLER/LATHER....\$	37.35	11.08
STOCKER/SCRAPPER.....\$	10.00	6.67

CARP0409-008 08/01/2010

	Rates	Fringes
Modular Furniture Installer.....\$	17.00	7.41

* ELEC0011-002 11/28/2011

COMMUNICATIONS AND SYSTEMS WORK

	Rates	Fringes
Communications System		
Installer.....\$	30.05	11.43
Technician.....\$	29.05	11.40

SCOPE OF WORK:

Installation, testing, service and maintenance of systems utilizing the transmission and/or transference of voice, sound, vision and digital for commercial, educational, security and entertainment purposes for the following: TV monitoring and surveillance, background-foreground music, intercom and telephone interconnect, inventory control systems, microwave transmission, multi-media, multiplex, nurse call systems, radio page, school intercom and sound, burglar alarms, fire alarm (see last paragraph below) and low voltage master clock systems in commercial buildings. Communication Systems that transmit or receive information and/or control systems that are intrinsic to the above listed systems; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding all other data systems or multiple systems which include control function or power supply; excluding installation of raceway systems, conduit systems, line voltage work, and energy management systems. Does not cover work performed at China Lake Naval Ordnance Test Station. Fire alarm work shall be performed at the current inside wireman total cost package.

ELEC0440-001 09/05/2011

	Rates	Fringes
ELECTRICIAN		
INSIDE ELECTRICIAN.....\$	35.70	19.01
INTELLIGENT TRANSPORTATION SYSTEMS		
Electrician.....\$	35.70	17.19
Technician.....\$	26.78	17.19

ZONE PAY: Zone A: Free travel zone for all contractors performing work in Zone A.

Zone B: Any work performed in Zone (B) shall add \$12.00 per hour to the current wage scale. Zone (B) shall be the area from the eastern perimeter of Zone (A) to a line which runs north and south beginning at Little Morongo Canyon (San Bernardino/Riverside County Line), Southeast along the Coachella Tunnels, Colorado River Aqueduct and Mecca Tunnels to Pinkham Wash then South to Box Canyon Road, then southwest along Box Canyon Road to Highway 195 west onto 195 south to Highway 86 to Riverside/Imperial County Line.

ELEC1245-001 06/01/2011

	Rates	Fringes
LINE CONSTRUCTION		
(1) Lineman; Cable splicer..\$	47.87	13.87
(2) Equipment specialist (operates crawler tractors, commercial motor vehicles, backhoes, trenchers, cranes (50 tons and below), overhead & underground distribution line equipment).....\$	38.23	12.80
(3) Groundman.....\$	29.25	12.53
(4) Powderman.....\$	42.75	12.97

HOLIDAYS: New Year's Day, M.L. King Day, Memorial Day,
Independence Day, Labor Day, Veterans Day, Thanksgiving Day
and day after Thanksgiving, Christmas Day

* ELEV0018-001 01/01/2012

	Rates	Fringes
ELEVATOR MECHANIC.....\$	47.73	23.535

FOOTNOTE:

PAID VACATION: Employer contributes 8% of regular hourly
rate as vacation pay credit for employees with more than 5
years of service, and 6% for 6 months to 5 years of service.
PAID HOLIDAYS: New Years Day, Memorial Day, Independence Day,
Labor Day, Veterans Day, Thanksgiving Day, Friday after
Thanksgiving, and Christmas Day.

ENGI0012-003 07/01/2011

	Rates	Fringes
OPERATOR: Power Equipment (All Other Work)		
GROUP 1.....\$	36.13	20.77
GROUP 2.....\$	36.91	20.77
GROUP 3.....\$	37.20	20.77
GROUP 4.....\$	38.69	20.77
GROUP 5.....\$	40.49	20.77
GROUP 6.....\$	38.91	20.77
GROUP 8.....\$	39.02	20.77
GROUP 9.....\$	40.82	20.77
GROUP 10.....\$	39.14	20.77
GROUP 11.....\$	40.94	20.77
GROUP 12.....\$	39.31	20.77
GROUP 13.....\$	39.41	20.77
GROUP 14.....\$	39.44	20.77
GROUP 15.....\$	39.52	20.77
GROUP 16.....\$	39.64	20.77
GROUP 17.....\$	39.81	20.77
GROUP 18.....\$	39.91	20.77
GROUP 19.....\$	40.02	20.77
GROUP 20.....\$	40.14	20.77
GROUP 21.....\$	40.31	20.77
GROUP 22.....\$	40.41	20.77
GROUP 23.....\$	40.52	20.77
GROUP 24.....\$	40.64	20.77
GROUP 25.....\$	40.81	20.77

OPERATOR: Power Equipment
(Cranes, Piledriving &

Hoisting)		
GROUP 1.....	\$ 37.48	20.77
GROUP 2.....	\$ 38.26	20.77
GROUP 3.....	\$ 38.55	20.77
GROUP 4.....	\$ 38.69	20.77
GROUP 5.....	\$ 38.91	20.77
GROUP 6.....	\$ 39.02	20.77
GROUP 7.....	\$ 39.14	20.77
GROUP 8.....	\$ 39.31	20.77
GROUP 9.....	\$ 39.48	20.77
GROUP 10.....	\$ 40.48	20.77
GROUP 11.....	\$ 41.48	20.77
GROUP 12.....	\$ 42.48	20.77
GROUP 13.....	\$ 43.48	20.77

OPERATOR: Power Equipment
(Tunnel Work)

GROUP 1.....	\$ 37.98	20.77
GROUP 2.....	\$ 38.76	20.77
GROUP 3.....	\$ 39.05	20.77
GROUP 4.....	\$ 39.19	20.77
GROUP 5.....	\$ 39.41	20.77
GROUP 6.....	\$ 39.52	20.77
GROUP 7.....	\$ 39.64	20.77

PREMIUM PAY:

\$3.75 per hour shall be paid on all Power Equipment Operator work on the following Military Bases: China Lake Naval Reserve, Vandenberg AFB, Point Arguello, Seely Naval Base, Fort Irwin, Nebo Annex Marine Base, Marine Corp Logistics Base Yermo, Edwards AFB, 29 Palms Marine Base and Camp Pendleton

Workers required to suit up and work in a hazardous material environment: \$2.00 per hour additional. Combination mixer and compressor operator on gunite work shall be classified as a concrete mobile mixer operator.

SEE ZONE DEFINITIONS AFTER CLASSIFICATIONS

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Bargeman; Brakeman; Compressor operator; Ditch Witch, with seat or similar type equipment; Elevator operator-inside; Engineer Oiler; Forklift operator (includes loed, lull or similar types under 5 tons; Generator operator; Generator, pump or compressor plant operator; Pump operator; Signalman; Switchman

GROUP 2: Asphalt-rubber plant operator (nurse tank operator); Concrete mixer operator-skip type; Conveyor operator; Fireman; Forklift operator (includes loed, lull or similar types over 5 tons; Hydrostatic pump operator; oiler crusher (asphalt or concrete plant); Petromat laydown machine; PJU side dum jack; Screening and conveyor machine operator (or similar types); Skiploader (wheel type up to 3/4 yd. without attachment); Tar pot fireman; Temporary heating plant operator; Trenching machine oiler

GROUP 3: Asphalt-rubber blend operator; Bobcat or similar type (Skid steer); Equipment greaser (rack); Ford Ferguson (with dragtype attachments); Helicopter radioman (ground); Stationary pipe wrapping and cleaning machine operator

GROUP 4: Asphalt plant fireman; Backhoe operator (mini-max or similar type); Boring machine operator; Boxman or mixerman (asphalt or concrete); Chip spreading machine operator; Concrete cleaning decontamination machine operator; Concrete Pump Operator (small portable); Drilling machine operator, small auger types (Texoma super economatic or similar types - Hughes 100 or 200 or similar types - drilling depth of 30' maximum); Equipment greaser (grease truck); Guard rail post driver operator; Highline cableway signalman; Horizontal Directional Drilling Machine; Hydra-hammer-aero stomper; Micro Tunneling (above ground tunnel); Power concrete curing machine operator; Power concrete saw operator; Power-driven jumbo form setter operator; Power sweeper operator; Rock Wheel Saw/Trencher; Roller operator (compacting); Screed operator (asphalt or concrete); Trenching machine operator (up to 6 ft.); Vacuum or much truck

GROUP 5: Equipment Greaser (Grease Truck/Multi Shift).

GROUP 6: Articulating material hauler; Asphalt plant engineer; Batch plant operator; Bit sharpener; Concrete joint machine operator (canal and similar type); Concrete planer operator; Dandy digger; Deck engine operator; Derrickman (oilfield type); Drilling machine operator, bucket or auger types (Calweld 100 bucket or similar types - Watson 1000 auger or similar types - Texoma 330, 500 or 600 auger or similar types - drilling depth of 45' maximum); Drilling machine operator; Hydrographic seeder machine operator (straw, pulp or seed), Jackson track maintainer, or similar type; Kalamazoo Switch tamper, or similar type; Machine tool operator; Maginnis internal full slab vibrator, Mechanical berm, curb or gutter (concrete or asphalt); Mechanical finisher operator (concrete, Clary-Johnson-Bidwell or similar); Micro tunnel system (below ground); Pavement breaker operator (truck mounted); Road oil mixing machine operator; Roller operator (asphalt or finish), rubber-tired earth moving equipment (single engine, up to and including 25 yds. struck); Self-propelled tar pipelining machine operator; Skiploader operator (crawler and wheel type, over 3/4 yd. and up to and including 1-1/2 yds.); Slip form pump operator (power driven hydraulic lifting device for concrete forms); Tractor operator-bulldozer, tamper-scraper (single engine, up to 100 h.p. flywheel and similar types, up to and including D-5 and similar types); Tugger hoist operator (1 drum); Ultra high pressure waterjet cutting tool system operator; Vacuum blasting machine operator

GROUP 8: Asphalt or concrete spreading operator (tamping or finishing); Asphalt paving machine operator (Barber Greene or similar type); Asphalt-rubber distribution operator; Backhoe operator (up to and including 3/4 yd.), small ford, Case or similar; Cast-in-place pipe laying machine operator; Combination mixer and compressor operator (gunite work); Compactor operator (self-propelled); Concrete mixer operator (paving); Crushing plant operator; Drill Doctor; Drilling machine operator, Bucket or auger types (Calweld 150 bucket or similar types - Watson 1500, 2000 2500 auger or similar types - Texoma 700, 800 auger or similar types - drilling depth of 60' maximum); Elevating grader operator;

Grade checker; Gradall operator; Grouting machine operator; Heavy-duty repairman; Heavy equipment robotics operator; Kalamazoo balliste regulator or similar type; Kolman belt loader and similar type; Le Tourneau blob compactor or similar type; Loader operator (Athey, Euclid, Sierra and similar types); Mobark Chipper or similar; Ozzie padder or similar types; P.C. slot saw; Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pumpcrete gun operator; Rock Drill or similar types; Rotary drill operator (excluding caisson type); Rubber-tired earth-moving equipment operator (single engine, caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator (multiple engine up to and including 25 yds. struck); Rubber-tired scraper operator (self-loading paddle wheel type-John Deere, 1040 and similar single unit); Self-propelled curb and gutter machine operator; Shuttle buggy; Skiploader operator (crawler and wheel type over 1-1/2 yds. up to and including 6-1/2 yds.); Soil remediation plant operator; Surface heaters and planer operator; Tractor compressor drill combination operator; Tractor operator (any type larger than D-5 - 100 flywheel h.p. and over, or similar-bulldozer, tamper, scraper and push tractor single engine); Tractor operator (boom attachments), Traveling pipe wrapping, cleaning and bending machine operator; Trenching machine operator (over 6 ft. depth capacity, manufacturer's rating); trenching Machine with Road Miner attachment (over 6 ft depth capacity): Ultra high pressure waterjet cutting tool system mechanic; Water pull (compaction) operator

GROUP 9: Heavy Duty Repairman

GROUP 10: Drilling machine operator, Bucket or auger types (Calweld 200 B bucket or similar types-Watson 3000 or 5000 auger or similar types-Texoma 900 auger or similar types-drilling depth of 105' maximum); Dual drum mixer, dynamic compactor LDC350 (or similar types); Monorail locomotive operator (diesel, gas or electric); Motor patrol-blade operator (single engine); Multiple engine tractor operator (Euclid and similar type-except Quad 9 cat.); Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Pneumatic pipe ramming tool and similar types; Prestressed wrapping machine operator; Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Rubber tired earth moving equipment operator (multiple engine, Euclid, caterpillar and similar over 25 yds. and up to 50 yds. struck), Tower crane repairman; Tractor loader operator (crawler and wheel type over 6-1/2 yds.); Woods mixer operator (and similar Pugmill equipment)

GROUP 11: Heavy Duty Repairman - Welder Combination, Welder - Certified.

GROUP 12: Auto grader operator; Automatic slip form operator; Drilling machine operator, bucket or auger types (Calweld, auger 200 CA or similar types - Watson, auger 6000 or similar types - Hughes Super Duty, auger 200 or similar types - drilling depth of 175' maximum); Hoe ram or similar with compressor; Mass excavator operator less tha 750 cu.

yards; Mechanical finishing machine operator; Mobile form traveler operator; Motor patrol operator (multi-engine); Pipe mobile machine operator; Rubber-tired earth-moving equipment operator (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck); Rubber-tired self-loading scraper operator (paddle-wheel-auger type self-loading - two (2) or more units)

GROUP 13: Rubber-tired earth-moving equipment operator operating equipment with push-pull system (single engine, up to and including 25 yds. struck)

GROUP 14: Canal liner operator; Canal trimmer operator; Remote-control earth-moving equipment operator (operating a second piece of equipment: \$1.00 per hour additional); Wheel excavator operator (over 750 cu. yds.)

GROUP 15: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine-up to and including 25 yds. struck)

GROUP 16: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 17: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 50 cu. yds. struck); Tandem tractor operator (operating crawler type tractors in tandem - Quad 9 and similar type)

GROUP 18: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, up to and including 25 yds. struck)

GROUP 19: Rotex concrete belt operator (or similar types); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, up to and including 25 yds. struck)

GROUP 20: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50

yds. struck)

GROUP 21: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

GROUP 22: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, up to and including 25 yds. struck)

GROUP 23: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating with the tandem push-pull system (multiple engine, up to and including 25 yds. struck)

GROUP 24: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 25: Concrete pump operator-truck mounted; Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

CRANES, PILEDRIVING AND HOISTING EQUIPMENT CLASSIFICATIONS

GROUP 1: Engineer oiler; Fork lift operator (includes loed, lull or similar types)

GROUP 2: Truck crane oiler

GROUP 3: A-frame or winch truck operator; Ross carrier operator (jobsite)

GROUP 4: Bridge-type unloader and turntable operator; Helicopter hoist operator

GROUP 5: Hydraulic boom truck; Stinger crane (Austin-Western or similar type); Tugger hoist operator (1 drum)

GROUP 6: Bridge crane operator; Cretor crane operator; Hoist operator (Chicago boom and similar type); Lift mobile operator; Lift slab machine operator (Vagtborg and similar types); Material hoist and/or manlift operator; Polar gantry crane operator; Self Climbing scaffold (or similar type); Shovel, backhoe, dragline, clamshell operator (over 3/4 yd. and up to 5 cu. yds. mrc); Tugger hoist operator

GROUP 7: Pedestal crane operator; Shovel, backhoe, dragline, clamshell operator (over 5 cu. yds. mrc); Tower crane repair; Tugger hoist operator (3 drum)

GROUP 8: Crane operator (up to and including 25 ton capacity); Crawler transporter operator; Derrick barge operator (up to and including 25 ton capacity); Hoist operator, stiff legs, Guy derrick or similar type (up to and including 25 ton capacity); Shovel, backhoe, dragline, clamshell operator (over 7 cu. yds., M.R.C.)

GROUP 9: Crane operator (over 25 tons and up to and including 50 tons mrc); Derrick barge operator (over 25 tons up to and including 50 tons mrc); Highline cableway operator; Hoist operator, stiff legs, Guy derrick or similar type (over 25 tons up to and including 50 tons mrc); K-crane operator; Polar crane operator; Self erecting tower crane operator maximum lifting capacity ten tons

GROUP 10: Crane operator (over 50 tons and up to and including 100 tons mrc); Derrick barge operator (over 50 tons up to and including 100 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 50 tons up to and including 100 tons mrc), Mobile tower crane operator (over 50 tons, up to and including 100 tons M.R.C.); Tower crane operator and tower gantry

GROUP 11: Crane operator (over 100 tons and up to and including 200 tons mrc); Derrick barge operator (over 100 tons up to and including 200 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 100 tons up to and including 200 tons mrc); Mobile tower crane operator (over 100 tons up to and including 200 tons mrc)

GROUP 12: Crane operator (over 200 tons up to and including 300 tons mrc); Derrick barge operator (over 200 tons up to and including 300 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 200 tons, up to and including 300 tons mrc); Mobile tower crane operator (over 200 tons, up to and including 300 tons mrc)

GROUP 13: Crane operator (over 300 tons); Derrick barge operator (over 300 tons); Helicopter pilot; Hoist operator, stiff legs, Guy derrick or similar type (over 300 tons); Mobile tower crane operator (over 300 tons)

TUNNEL CLASSIFICATIONS

GROUP 1: Skiploader (wheel type up to 3/4 yd. without attachment)

GROUP 2: Power-driven jumbo form setter operator

GROUP 3: Dinkey locomotive or motorperson (up to and including 10 tons)

GROUP 4: Bit sharpener; Equipment greaser (grease truck); Slip form pump operator (power-driven hydraulic lifting device for concrete forms); Tugger hoist operator (1 drum); Tunnel locomotive operator (over 10 and up to and including 30 tons)

GROUP 5: Backhoe operator (up to and including 3/4 yd.); Small Ford, Case or similar; Drill doctor; Grouting machine operator; Heading shield operator; Heavy-duty repairperson; Loader operator (Athey, Euclid, Sierra and similar types);

Mucking machine operator (1/4 yd., rubber-tired, rail or track type); Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pneumatic heading shield (tunnel); Pumpcrete gun operator; Tractor compressor drill combination operator; Tugger hoist operator (2 drum); Tunnel locomotive operator (over 30 tons)

GROUP 6: Heavy Duty Repairman

GROUP 7: Tunnel mole boring machine operator

ENGINEERS ZONES

\$1.00 additional per hour for all of IMPERIAL County and the portions of KERN, RIVERSIDE & SAN BERNARDINO Counties as defined below:

That area within the following Boundary: Begin in San Bernardino County, approximately 3 miles NE of the intersection of I-15 and the California State line at that point which is the NW corner of Section 1, T17N, R14E, San Bernardino Meridian. Continue W in a straight line to that point which is the SW corner of the northwest quarter of Section 6, T27S, R42E, Mt. Diablo Meridian. Continue North to the intersection with the Inyo County Boundary at that point which is the NE corner of the western half of the northern quarter of Section 6, T25S, R42E, MDM. Continue W along the Inyo and San Bernardino County boundary until the intersection with Kern County, as that point which is the SE corner of Section 34, T24S, R40E, MDM. Continue W along the Inyo and Kern County boundary until the intersection with Tulare County, at that point which is the SW corner of the SE quarter of Section 32, T24S, R37E, MDM. Continue W along the Kern and Tulare County boundary, until that point which is the NW corner of T25S, R32E, MDM. Continue S following R32E lines to the NW corner of T31S, R32E, MDM. Continue W to the NW corner of T31S, R31E, MDM. Continue S to the SW corner of T32S, R31E, MDM. Continue W to SW corner of SE quarter of Section 34, T32S, R30E, MDM. Continue S to SW corner of T11N, R17W, SBM. Continue E along south boundary of T11N, SBM to SW corner of T11N, R7W, SBM. Continue S to SW corner of T9N, R7W, SBM. Continue E along south boundary of T9N, SBM to SW corner of T9N, R1E, SBM. Continue S along west boundary of R1E, SBM to Riverside County line at the SW corner of T1S, R1E, SBM. Continue E along south boundary of T1S, SBM (Riverside County Line) to SW corner of T1S, R10E, SBM. Continue S along west boundary of R10E, SBM to Imperial County line at the SW corner of T8S, R10E, SBM. Continue W along Imperial and Riverside county line to NW corner of T9S, R9E, SBM. Continue S along the boundary between Imperial and San Diego Counties, along the west edge of R9E, SBM to the south boundary of Imperial County/California state line. Follow the California state line west to Arizona state line, then north to Nevada state line, then continuing NW back to start at the point which is the NW corner of Section 1, T17N, R14E, SBM

\$1.00 additional per hour for portions of SAN LUIS OBISPO, KERN, SANTA BARBARA & VENTURA as defined below:

That area within the following Boundary: Begin approximately 5 miles north of the community of Cholame, on the Monterey County and San Luis Obispo County boundary at the NW corner of T25S,

R16E, Mt. Diablo Meridian. Continue south along the west side of R16E to the SW corner of T30S, R16E, MDM. Continue E to SW corner of T30S, R17E, MDM. Continue S to SW corner of T31S, R17E, MDM. Continue E to SW corner of T31S, R18E, MDM. Continue S along West side of R18E, MDM as it crosses into San Bernardino Meridian numbering area and becomes R30W. Follow the west side of R30W, SBM to the SW corner of T9N, R30W, SBM. Continue E along the south edge of T9N, SBM to the Santa Barbara County and Ventura County boundary at that point which is the SW corner of Section 34. T9N, R24W, SBM, continue S along the Ventura County line to that point which is the SW corner of the SE quarter of Section 32, T7N, R24W, SBM. Continue E along the south edge of T7N, SBM to the SE corner to T7N, R21W, SBM. Continue N along East side of R21W, SBM to Ventura County and Kern County boundary at the NE corner of T8N, R21W. Continue W along the Ventura County and Kern County boundary to the SE corner of T9N, R21W. Continue North along the East edge of R21W, SBM to the NE corner of T12N, R21W, SBM. Continue West along the north edge of T12N, SBM to the SE corner of T32S, R21E, MDM. [T12N SBM is a think strip between T11N SBM and T32S MDM]. Continue North along the East side of R21E, MDM to the Kings County and Kern County border at the NE corner of T25S, R21E, MDM, continue West along the Kings County and Kern County Boundary until the intersection of San Luis Obispo County. Continue west along the Kings County and San Luis Obispo County boundary until the intersection with Monterey County. Continue West along the Monterey County and San Luis Obispo County boundary to the beginning point at the NW corner of T25S, R16E, MDM.

\$2.00 additional per hour for INYO and MONO Counties and the Northern portion of SAN BERNARDINO County as defined below:

That area within the following Boundary: Begin at the intersection of the northern boundary of Mono County and the California state line at the point which is the center of Section 17, T10N, R22E, Mt. Diablo Meridian. Continue S then SE along the entire western boundary of Mono County, until it reaches Inyo County at the point which is the NE corner of the Western half of the NW quarter of Section 2, T8S, R29E, MDM. Continue SSE along the entire western boundary of Inyo County, until the intersection with Kern County at the point which is the SW corner of the SE 1/4 of Section 32, T24S, R37E, MDM. Continue E along the Inyo and Kern County boundary until the intersection with San Bernardino County at that point which is the SE corner of section 34, T24S, R40E, MDM. Continue E along the Inyo and San Bernardino County boundary until the point which is the NE corner of the Western half of the NW quarter of Section 6, T25S, R42E, MDM. Continue S to that point which is the SW corner of the NW quarter of Section 6, T27S, R42E, MDM. Continue E in a straight line to the California and Nevada state border at the point which is the NW corner of Section 1, T17N, R14E, San Bernardino Meridian. Then continue NW along the state line to the starting point, which is the center of Section 18, T10N, R22E, MDM.

REMAINING AREA NOT DEFINED ABOVE RECIEVES BASE RATE

ENGI0012-004 08/01/2009

OPERATOR: Power Equipment
(DREDGING)

Rates

Fringes

(1) Leverman.....	\$ 44.83	17.22
(2) Dredge dozer.....	\$ 40.36	17.22
(3) Deckmate.....	\$ 40.25	17.22
(4) Winch operator (stern winch on dredge).....	\$ 39.70	17.22
(5) Fireman-Oiler, Deckhand, Bargeman, Leveehand.....	\$ 39.16	17.22
(6) Barge Mate.....	\$ 39.77	17.22

* IRON0002-004 07/01/2011

	Rates	Fringes
Ironworkers:		
Fence Erector.....	\$ 26.58	15.76
Ornamental, Reinforcing and Structural.....	\$ 33.00	24.40

PREMIUM PAY:

\$6.00 additional per hour at the following locations:

China Lake Naval Test Station, Chocolate Mountains Naval Reserve-Niland, Edwards AFB, Fort Irwin Military Station, Fort Irwin Training Center-Goldstone, San Clemente Island, San Nicholas Island, Susanville Federal Prison, 29 Palms - Marine Corps, U.S. Marine Base - Barstow, U.S. Naval Air Facility - Sealey, Vandenberg AFB

\$4.00 additional per hour at the following locations:

Army Defense Language Institute - Monterey, Fallon Air Base, Naval Post Graduate School - Monterey, Yermo Marine Corps Logistics Center

\$2.00 additional per hour at the following locations:

Port Hueneme, Port Mugu, U.S. Coast Guard Station - Two Rock

LABO0300-001 07/01/2011

	Rates	Fringes
Brick Tender.....	\$ 27.17	16.71

LABO0300-003 07/01/2011

	Rates	Fringes
LABORER (GUNITE)		
GROUP 1.....	\$ 30.04	14.20
GROUP 2.....	\$ 29.09	14.20
GROUP 3.....	\$ 25.55	14.20
LABORER (TUNNEL)		
GROUP 1.....	\$ 32.20	15.98
GROUP 2.....	\$ 32.52	15.98
GROUP 3.....	\$ 32.98	15.98
GROUP 4.....	\$ 33.67	15.98
LABORER		
GROUP 1.....	\$ 26.33	16.00
GROUP 2.....	\$ 26.88	16.00
GROUP 3.....	\$ 27.43	16.00
GROUP 4.....	\$ 28.98	16.00
GROUP 5.....	\$ 29.33	16.00

FOOTNOTE: GUNITE PREMIUM PAY: Workers working from a

Bosn'n's Chair or suspended from a rope or cable shall receive 40 cents per hour above the foregoing applicable classification rates. Workers doing gunite and/or shotcrete work in a tunnel shall receive 35 cents per hour above the foregoing applicable classification rates, paid on a portal-to-portal basis. Any work performed on, in or above any smoke stack, silo, storage elevator or similar type of structure, when such structure is in excess of 75'-0" above base level and which work must be performed in whole or in part more than 75'-0" above base level, that work performed above the 75'-0" level shall be compensated for at 35 cents per hour above the applicable classification wage rate.

LABORER CLASSIFICATIONS

GROUP 1: Cleaning and handling of panel forms; Concrete screeding for rough strike-off; Concrete, water curing; Demolition laborer, the cleaning of brick if performed by a worker performing any other phase of demolition work, and the cleaning of lumber; Fire watcher, limber, brush loader, piler and debris handler; Flag person; Gas, oil and/or water pipeline laborer; Laborer, asphalt-rubber material loader; Laborer, general or construction; Laborer, general clean-up; Laborer, landscaping; Laborer, jetting; Laborer, temporary water and air lines; Material hose operator (walls, slabs, floors and decks); Plugging, filling of shee bolt holes; Dry packing of concrete; Railroad maintenance, repair track person and road beds; Streetcar and railroad construction track laborers; Rigging and signaling; Scaler; Slip form raiser; Tar and mortar; Tool crib or tool house laborer; Traffic control by any method; Window cleaner; Wire mesh pulling - all concrete pouring operations

GROUP 2: Asphalt shoveler; Cement dumper (on 1 yd. or larger mixer and handling bulk cement); Cesspool digger and installer; Chucktender; Chute handler, pouring concrete, the handling of the chute from readymix trucks, such as walls, slabs, decks, floors, foundation, footings, curbs, gutters and sidewalks; Concrete curer, impervious membrane and form oiler; Cutting torch operator (demolition); Fine grader, highways and street paving, airport, runways and similar type heavy construction; Gas, oil and/or water pipeline wrapper - pot tender and form person; Guinea chaser; Headerboard person - asphalt; Laborer, packing rod steel and pans; Membrane vapor barrier installer; Power broom sweeper (small); Riprap stonepaver, placing stone or wet sacked concrete; Roto scraper and tiller; Sandblaster (pot tender); Septic tank digger and installer(lead); Tank scaler and cleaner; Tree climber, faller, chain saw operator, Pittsburgh chipper and similar type brush shredder; Underground laborer, including caisson bellower

GROUP 3: Buggymobile person; Concrete cutting torch; Concrete pile cutter; Driller, jackhammer, 2-1/2 ft. drill steel or longer; Dri-pak-it machine; Gas, oil and/or water pipeline wrapper, 6-in. pipe and over, by any method, inside and out; High scaler (including drilling of same); Hydro seeder and similar type; Impact wrench multi-plate; Kettle person, pot person and workers applying asphalt, lay-kold, creosote, lime caustic and similar type materials ("applying" means applying, dipping, brushing or handling

of such materials for pipe wrapping and waterproofing); Operator of pneumatic, gas, electric tools, vibrating machine, pavement breaker, air blasting, come-alongs, and similar mechanical tools not separately classified herein; Pipelayer's backup person, coating, grouting, making of joints, sealing, caulking, diapering and including rubber gasket joints, pointing and any and all other services; Rock slinger; Rotary scarifier or multiple head concrete chipping scarifier; Steel headerboard and guideline setter; Tamper, Barko, Wacker and similar type; Trenching machine, hand-propelled

GROUP 4: Asphalt raker, lute person, ironer, asphalt dump person, and asphalt spreader boxes (all types); Concrete core cutter (walls, floors or ceilings), grinder or sander; Concrete saw person, cutting walls or flat work, scoring old or new concrete; Cribber, shorer, lagging, sheeting and trench bracing, hand-guided lagging hammer; Head rock slinger; Laborer, asphalt- rubber distributor boot person; Laser beam in connection with laborers' work; Oversize concrete vibrator operator, 70 lbs. and over; Pipelayer performing all services in the laying and installation of pipe from the point of receiving pipe in the ditch until completion of operation, including any and all forms of tubular material, whether pipe, metallic or non-metallic, conduit and any other stationary type of tubular device used for the conveying of any substance or element, whether water, sewage, solid gas, air, or other product whatsoever and without regard to the nature of material from which the tubular material is fabricated; No-joint pipe and stripping of same; Prefabricated manhole installer; Sandblaster (nozzle person), water blasting, Porta Shot-Blast

GROUP 5: Blaster powder, all work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; Driller: All power drills, excluding jackhammer, whether core, diamond, wagon, track, multiple unit, and any and all other types of mechanical drills without regard to the form of motive power; Toxic waste removal

TUNNEL LABORER CLASSIFICATIONS

GROUP 1: Batch plant laborer; Bull gang mucker, track person; Changehouse person; Concrete crew, including rodder and spreader; Dump person; Dump person (outside); Swamper (brake person and switch person on tunnel work); Tunnel materials handling person

GROUP 2: Chucktender, cabetender; Loading and unloading agitator cars; Nipper; Pot tender, using mastic or other materials (for example, but not by way of limitation, shotcrete, etc.); Vibrator person, jack hammer, pneumatic tools (except driller)

GROUP 3: Blaster, driller, powder person; Chemical grout jet person; Cherry picker person; Grout gun person; Grout mixer person; Grout pump person; Jackleg miner; Jumbo person; Kemper and other pneumatic concrete placer operator; Miner, tunnel (hand or machine); Nozzle person; Operating of troweling and/or grouting machines; Powder person (primer house); Primer person; Sandblaster; Shotcrete person; Steel

form raiser and setter; Timber person, retimber person,
wood or steel; Tunnel Concrete finisher

GROUP 4: Diamond driller; Sandblaster; Shaft and raise work

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Rodmen, Nozzlemen

GROUP 2: Gunmen

GROUP 3: Reboundmen

LABO0300-005 08/05/2009

	Rates	Fringes
LABORER		
PLASTER CLEAN-UP LABORER....	\$ 26.65	15.95
PLASTER TENDER.....	\$ 29.20	15.95

LABO0882-002 01/01/2010

	Rates	Fringes
Asbestos Removal Laborer.....	\$ 26.15	11.65

SCOPE OF WORK: Includes site mobilization, initial site cleanup, site preparation, removal of asbestos-containing material and toxic waste, encapsulation, enclosure and disposal of asbestos- containing materials and toxic waste by hand or with equipment or machinery; scaffolding, fabrication of temporary wooden barriers and assembly of decontamination stations.

LABO1184-001 07/01/2011

	Rates	Fringes
Laborers: (HORIZONTAL DIRECTIONAL DRILLING)		
(1) Drilling Crew Laborer...	\$ 28.01	11.48
(2) Vehicle Operator/Hauler.	\$ 28.18	11.48
(3) Horizontal Directional Drill Operator.....	\$ 30.03	11.48
(4) Electronic Tracking Locator.....	\$ 32.03	11.48
Laborers: (STRIPING/SLURRY SEAL)		
GROUP 1.....	\$ 28.50	14.56
GROUP 2.....	\$ 29.80	14.56
GROUP 3.....	\$ 31.81	14.56
GROUP 4.....	\$ 33.55	14.56

LABORERS - STRIPING CLASSIFICATIONS

GROUP 1: Protective coating, pavement sealing, including repair and filling of cracks by any method on any surface in parking lots, game courts and playgrounds; carstops; operation of all related machinery and equipment; equipment repair technician

GROUP 2: Traffic surface abrasive blaster; pot tender - removal of all traffic lines and markings by any method (sandblasting, waterblasting, grinding, etc.) and preparation of surface for coatings. Traffic control person: controlling and directing traffic through both conventional and moving lane closures; operation of all

related machinery and equipment

GROUP 3: Traffic delineating device applicator: Layout and application of pavement markers, delineating signs, rumble and traffic bars, adhesives, guide markers, other traffic delineating devices including traffic control. This category includes all traffic related surface preparation (sandblasting, waterblasting, grinding) as part of the application process. Traffic protective delineating system installer: removes, relocates, installs, permanently affixed roadside and parking delineation barricades, fencing, cable anchor, guard rail, reference signs, monument markers; operation of all related machinery and equipment; power broom sweeper

GROUP 4: Striper: layout and application of traffic stripes and markings; hot thermo plastic; tape traffic stripes and markings, including traffic control; operation of all related machinery and equipment

PAIN0036-001 07/01/2011

	Rates	Fringes
Painters: (Including Lead Abatement)		
(1) Repaint (excludes San Diego County).....	\$ 26.05	10.35
(2) All Other Work.....	\$ 29.32	10.35

REPAINT of any previously painted structure. Exceptions: work involving the aerospace industry, breweries, commercial recreational facilities, hotels which operate commercial establishments as part of hotel service, and sports facilities.

PAIN0036-008 10/05/2011

	Rates	Fringes
DRYWALL FINISHER/TAPER.....	\$ 33.22	13.81

PAIN0036-015 01/01/2011

	Rates	Fringes
GLAZIER.....	\$ 36.90	21.78

FOOTNOTE: Additional \$1.25 per hour for work in a condor, from the third (3rd) floor and up Additional \$1.25 per hour for work on the outside of the building from a swing stage or any suspended contrivance, from the ground up

PAIN1247-002 01/01/2010

	Rates	Fringes
SOFT FLOOR LAYER.....	\$ 30.85	10.54

PLAS0200-009 08/01/2011

	Rates	Fringes
PLASTERER.....	\$ 35.29	12.05

PLAS0500-002 10/01/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER....	\$ 35.38	14.72

* PLUM0016-001 07/01/2011

	Rates	Fringes
--	-------	---------

PLUMBER/PIPEFITTER

Plumber and Pipefitter All other work except work on new additions and remodeling of bars, restaurant, stores and commercial buildings not to exceed 5,000 sq. ft. of floor space and work on strip malls, light commercial, tenant improvement and remodel work.....	\$ 39.50	19.35
Work ONLY on new additions and remodeling of bars, restaurant, stores and commercial buildings not to exceed 5,000 sq. ft. of floor space.....	\$ 38.30	18.37
Work ONLY on strip malls, light commercial, tenant improvement and remodel work.....	\$ 30.79	16.70

PLUM0345-001 07/01/2011

	Rates	Fringes
PLUMBER		
Landscape/Irrigation Fitter.....	\$ 27.35	16.34
Sewer & Storm Drain Work....	\$ 26.82	18.18

ROOF0036-002 08/01/2011

	Rates	Fringes
ROOFER.....	\$ 34.65	10.71

FOOTNOTE: Pitch premium: Work on which employees are exposed to pitch fumes or required to handle pitch, pitch base or pitch impregnated products, or any material containing coal tar pitch, the entire roofing crew shall receive \$1.75 per hour "pitch premium" pay.

SFCA0669-002 04/01/2011

	Rates	Fringes
SPRINKLER FITTER.....	\$ 33.35	17.75

* SHEE0105-003 01/01/2012

LOS ANGELES (South of a straight line drawn between Gorman and Big Pines) and Catalina Island, INYO, KERN (Northeast part, East of Hwy 395), MONO ORANGE, RIVERSIDE, AND SAN BERNARDINO COUNTIES

	Rates	Fringes
SHEET METAL WORKER		
(1) Commercial - New Construction and Remodel work.....	\$ 36.21	25.20
(2) Industrial work including air pollution control systems, noise abatement, hand rails, guard rails, excluding aritechtural sheet metal work, excluding A-C,		

heating, ventilating
 systems for human comfort...\$ 36.21 25.20

TEAM0011-002 07/01/2008

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 26.44	18.24
GROUP 2.....	\$ 26.59	18.24
GROUP 3.....	\$ 26.72	18.24
GROUP 4.....	\$ 26.91	18.24
GROUP 5.....	\$ 26.94	18.24
GROUP 6.....	\$ 26.97	18.24
GROUP 7.....	\$ 27.22	18.24
GROUP 8.....	\$ 27.47	18.24
GROUP 9.....	\$ 27.67	18.24
GROUP 10.....	\$ 27.97	18.24
GROUP 11.....	\$ 28.47	18.24
GROUP 12.....	\$ 28.90	18.24

WORK ON ALL MILITARY BASES:

PREMIUM PAY: \$3.00 per hour additional.

[29 palms Marine Base, Camp Roberts, China Lake, Edwards AFB,
 El Centro Naval Facility, Fort Irwin, Marine Corps
 Logistics Base at Nebo & Yermo, Mountain Warfare Training
 Center, Bridgeport, Point Arguello, Point Conception,
 Vandenberg AFB]

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Truck driver

GROUP 2: Driver of vehicle or combination of vehicles - 2
 axles; Traffic control pilot car excluding moving heavy
 equipment permit load; Truck mounted broom

GROUP 3: Driver of vehicle or combination of vehicles - 3
 axles; Boot person; Cement mason distribution truck; Fuel
 truck driver; Water truck - 2 axle; Dump truck, less than
 16 yds. water level; Erosion control driver

GROUP 4: Driver of transit mix truck, under 3 yds.; Dumpcrete
 truck, less than 6-1/2 yds. water level

GROUP 5: Water truck, 3 or more axles; Truck greaser and tire
 person (\$0.50 additional for tire person); Pipeline and
 utility working truck driver, including winch truck and
 plastic fusion, limited to pipeline and utility work;
 Slurry truck driver

GROUP 6: Transit mix truck, 3 yds. or more; Dumpcrete truck,
 6-1/2 yds. water level and over; Vehicle or combination of
 vehicles - 4 or more axles; Oil spreader truck; Dump truck,
 16 yds. to 25 yds. water level

GROUP 7: A Frame, Swedish crane or similar; Forklift driver;
 Ross carrier driver

GROUP 8: Dump truck, 25 yds. to 49 yds. water level; Truck
 repair person; Water pull - single engine; Welder

GROUP 9: Truck repair person/welder; Low bed driver, 9 axles
 or over

GROUP 10: Dump truck - 50 yds. or more water level; Water pull - single engine with attachment

GROUP 11: Water pull - twin engine; Water pull - twin engine with attachments; Winch truck driver - \$1.25 additional when operating winch or similar special attachments

GROUP 12: Boom Truck 17K and above

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.
=====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters, PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rate.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

SECTION 6
FEDERAL REQUIREMENTS FOR FEDERAL AID
CONSTRUCTION PROJECTS

SECTION 14. 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 14. 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 1-1.18 of the Standard Specifications.

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. 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.).

Revised 3-95
08-07-95

FR-1

- 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."

Revised 3-95
08-07-95

..... 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]

FR-2

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

(Exclusive of Appalachian Contracts)

	Page
I. General	3
II. Nondiscrimination	3
III. Nonsegregated Facilities	5
IV. Payment of Predetermined Minimum Wage	6
V. Statements and Payrolls	8
VI. Record of Materials, Supplies, and Labor	9
VII. Subletting or Assigning the Contract	9
VIII. Safety: Accident Prevention	10
IX. False Statements Concerning Highway Project	10
X. Implementation of Clean Air Act and Federal Water Pollution Control Act.....	10
XI. Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion	11
XII. Certification Regarding Use of Contract Funds for Lobbying	12

ATTACHMENTS

A. Employment Preference for Appalachian Contracts (included in Appalachian contracts only)

I. GENERAL

1. 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.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

- Section I, paragraph 2;
- Section IV, paragraphs 1, 2, 3, 4, and 7;
- Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 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 DOL, or the contractor's employees or their representatives.

6. **Selection of Labor:** During the performance of this contract, the contractor shall not:

a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

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, and 41 CFR 60) 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 Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American 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 State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his 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, preapprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively

administering and promoting an active contractor program of EEO 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 minority group employees.

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 minority groups 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 minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group 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, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to

refer minority group applicants for employment. Information and procedures with regard to referring minority group 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 ensure 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 his 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 his avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

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. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

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 minority group and women employees 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 his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. 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 best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best 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 SHA 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 minority and women 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 minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) 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 SHA.

8. **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.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 26, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. **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 completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

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

(1) The number 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;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA 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. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers 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 (29 CFR 3)] issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c) the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) 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. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, 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 paragraphs 4 and 5 of this Section IV.

b. 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.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification 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 DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour 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.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional 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. Said 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.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. 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 or subcontractors, as appropriate, shall either pay the benefit

as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a 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.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) 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 DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/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 Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees 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 employee 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 listed in 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 or subcontractor 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-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) 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 journeyman-level 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 for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) 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 DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. 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.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level 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-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor 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. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under an approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. 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.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor 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, as 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 SHA contracting officer 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.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her 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, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall upon its own action or upon written request of any authorized representative of the DOL 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 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent 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. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found 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 and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such 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 the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.

e. 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 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, 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 SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions 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.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

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 State. 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).

a. "Its own organization" shall be construed to include only workers employed and paid directly 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, assignee, or agent of the prime contractor.

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 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 VII 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 SHA 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 SHA 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 SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

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 SHA 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. 333).

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. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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 re-

Form 1273 — Revised 3-95
08-07-95

garding the seriousness of these and similar acts, the following notice 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:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

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

"Whoever being an officer, agent, or employee of the United States, or 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 not more than \$10,000 or imprisoned not more than 5 years or both."

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

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub. L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub. L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized

FR-10

for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

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

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary 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 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 primary 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 department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary 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," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary 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 primary 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 Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

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 may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. 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.

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.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a 3-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;

c. 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 1b of this certification; and

Form 1273 — Revised 3-95
08-07-95

FR-11

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary 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 Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

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," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

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.

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 may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not

required to, check the Nonprocurement List.

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 Covered Transactions**

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 participation in this transaction 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.

**XII. CERTIFICATION REGARDING USE OF
CONTRACT FUNDS FOR LOBBYING**

(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 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 recipients shall certify and disclose accordingly.

FEDERAL-AID FEMALE AND MINORITY GOALS

In accordance with Section II, "Nondiscrimination," of "Required Contract Provisions Federal-aid Construction Contracts" the following are the goals for female utilization:

Goal for Women
(applies nationwide).....(percent) 6.9

The following are goals for minority utilization:

CALIFORNIA ECONOMIC AREA

	Goal (Percent)
174 Redding, CA:	
Non-SMSA Counties	6.8
CA Lassen; CA Modoc;	
CA Plumas; CA Shasta;	
CA Siskiyou; CA Tehama.	
175 Eureka, CA:	
Non-SMSA Counties	6.6
CA Del Norte; CA Humboldt;	
CA Trinity.	
176 San Francisco-Oakland-San Jose, CA:	
SMSA Counties:	
7120 Salinas-Seaside-	
Monterey, CA.....	28.9
CA Monterey.	
7360 San Francisco-Oakland, CA.....	25.6
CA Alameda; CA Contra Costa;	
CA Marin; CA San Francisco;	
CA San Mateo.	
7400 San Jose, CA.....	19.6
CA Santa Clara.	
7485 Santa Cruz, CA.....	14.9
CA Santa Cruz.	
7500 Santa Rosa, CA.....	9.1
CA Sonoma.	
8720 Vallejo-Fairfield- Napa, CA	17.1
CA Napa; CA Solano	
Non-SMSA Counties.....	23.2
CA Lake; CA Mendocino;	
CA San Benito.	

177 Sacramento, CA:

SMSA Counties:	
6920 Sacramento, CA.....	16.1
CA Placer; CA Sacramento;	
CA Yolo.	
Non-SMSA Counties.....	14.3
CA Butte; CA Colusa;	
CA El Dorado; CA Glenn;	
CA Nevada; CA Sierra;	
CA Sutter; CA Yuba.	

178 Stockton-Modesto, CA:

SMSA Counties:	
5170 Modesto, CA	12.3
CA Stanislaus.	
8120 Stockton, CA.....	24.3
CA San Joaquin.	
Non-SMSA Counties.....	19.8
CA Alpine; CA Amador;	
CA Calaveras; CA Mariposa;	
CA Merced; CA Tuolumne.	

179 Fresno-Bakersfield, CA:

SMSA Counties:	
0680 Bakersfield, CA	19.1
CA Kern.	
2840 Fresno, CA	26.1
CA Fresno.	
Non-SMSA Counties.....	23.6
CA Kings; CA Madera;	
CA Tulare.	

180 Los Angeles, CA:

SMSA Counties:	
0360 Anaheim-Santa Ana-Garden	
Grove, CA	11.9
CA Orange.	
4480 Los Angeles-Long	
Beach, CA	28.3
CA Los Angeles.	
6000 Oxnard-Simi Valley-	
Ventura, CA	21.5
CA Ventura.	

Form 1273 — Revised 3-95
08-07-95

FR-13

6780 Riverside-San Bernardino- Ontario, CA	19.0
CA Riverside; CA San Bernardino.	
7480 Santa Barbara-Santa Maria- Lompoc, CA	19.7
CA Santa Barbara.	
Non-SMSA Counties.....	24.6
CA Inyo; CA Mono; CA San Luis Obispo.	
181 San Diego, CA:	
SMSA Counties	
7320 San Diego, CA.....	16.9
CA San Diego.	
Non-SMSA Counties.....	18.2
CA Imperial.	

In addition to the reporting requirements set forth elsewhere in this contract the Contractor and subcontractors holding subcontracts, not including material suppliers, of \$10,000 or more, shall submit for every month of July during which work is performed, employment data as contained under Form FHWA PR-1391 (Appendix C to 23 CFR, Part 230), and in accordance with the instructions included thereon.

Form 1273 — Revised 3-95
08-07-95

Final Report-Utilization of Disadvantaged Business Enterprises (DBE), First-Tier Subcontractors

FINAL REPORT – UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES (DBE), FIRST-TIER SUBCONTRACTORS
CEM 2402(F) (Rev. 02/2008)

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 six 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 decision of which column to be used for entering the DBE dollar value is based on what program(s) status the firm is certified. 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.

Based on this DBE Program status, the following table depicts which column to be used:

DBE Program Status	Column to be used
If program status shows DBE only with no other programs listed	DBE
If program status shows DBE, Black American	BA UDBE
If program status shows DBE, Asian-Pacific Islander	APA UDBE
If program status shows DBE, Native American	NA UDBE
If program status shows DBE, Woman	W UDBE

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.

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.

SECTION 7. (BLANK)

SECTION 8 MATERIALS

SECTION 8-1. MISCELLANEOUS

8-1.01 BUY AMERICA REQUIREMENTS:

Attention is directed to the "Buy America" requirements of the Surface Transportation Assistance Act of 1982 (Section 165) and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) Sections 1041(a) and 1048(a), and the regulations adopted pursuant thereto. In conformance with the law and regulations, all manufacturing processes for steel and iron materials furnished for incorporation into the work on this project shall occur in the United States; with the exception that pig iron and processed, pelletized and reduced iron ore manufactured outside of the United States may be used in the domestic manufacturing process for such steel and iron materials. The application of coatings, such as epoxy coating, galvanizing, painting, and other coating that protects or enhances the value of steel or iron materials shall be considered a manufacturing process subject to the "Buy America" requirements.

A Certificate of Compliance, conforming to the provisions in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications, shall be furnished for steel and iron materials. The certificates, in addition to certifying that the materials comply with the specifications, shall specifically certify that all manufacturing processes for the materials occurred in the United States, except for the above exceptions.

The requirements imposed by the law and regulations do not prevent a minimal use of foreign steel and iron materials if the total combined cost of the materials used does not exceed one-tenth of one percent (0.1 percent) of the total contract cost or \$2,500, whichever is greater. The Contractor shall furnish the Engineer acceptable documentation of the quantity and value of the foreign steel and iron prior to incorporating the materials into the work.

8-1.02 SLAG AGGREGATE:

Steel slag shall not be used on this project. Iron blast furnace slag will be allowed.

8-1.03

YEAR 2000 COMPLIANCE:

This contract is subject to Year 2000 Compliance for automated devices in the State of California.

Year 2000 compliance for automated devices in the State of California is achieved when embedded functions have or create no logical or mathematical inconsistencies when dealing with dates prior to and beyond 1999. The year 2000 is recognized and processed as a leap year. The product shall operate accurately in the manner in which the product was intended for date operation without requiring manual intervention.

The Contractor shall provide the Engineer a Certificate of Compliance from the manufacturer in conformance with the provisions in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications for all automated devices furnished for the project.

8-1.04

TESTING:

Whenever a reference is made in the specifications to any of the California Test numbers specified below the corresponding ASTM Designation or AASHTO Designation test numbers may be used to determine the quality of materials

California Test	ASTM Designation	AASHTO Designation
216	D 1557	T 180
231	D 2922	T 238
203	D 422	T 88
204	D 4318	T 89 (a)
		T 90 (b)
504	C 231	T 152
518	C 138	T 121
521	C 39	T 22
523	C 293 (c)	T 177 (c)
	C 78 (d)	T 97 (d)
533	C 360	--
211	C 131 (e)	T 96 (f)
	C 535 (g)	--

Notes:

- (a) Determining the Liquid Limit of Soils.
- (b) Determining the Plastic Limit and Plasticity Index of Soils.
- (c) Flex Strength of Concrete
(Using Simple Beam with Center Point Loading).
- (d) Flexural Strength of Concrete
(Using the Simple Beam with Third Point Loading).
- (e) Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact on the Los Angeles Machine.
- (f) Resistance to Degradation of Small- Size Coarse Aggregate by Use of the Los Angeles Machine.
- (g) Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.

8-1.05 REFERENCE SPECIFIC BRANDS OR PRODUCTS:

Although the Special Provisions and construction plans reference specific brands or products, the intent of these references is as a guideline only, and products from alternate manufacturers will be accepted, provided that the product and its performance are a close approximation of the specified product. The Contractor shall submit information and specifications of the proposed alternate product to the Engineer for evaluation and approval prior to placing an order with the vendor.



SECTION 9 SPECIAL PROVISIONS - GENERAL

SECTION 9-1 GENERAL

9-1.01 DESCRIPTION OF WORK:

This project consists of constructing a roundabout at the intersection of Hammond Road and 4th Street in the Mecca area of Riverside County. In general, the work consists of constructing asphalt concrete pavement, constructing concrete curb, gutter, sidewalk driveway approaches, median curbs, curb ramps and decorative colored and stamped concrete, grading for associated roadway improvements, installing/relocating roadside signs, placing thermoplastic crosswalk stripes, pavement markings and pavement markers, striping, landscaping, landscape lighting, street lighting, block walls, entry monuments and other work as may be required.

9-1.02 STANDARD SPECIFICATIONS:

This project shall conform to the requirements of the May 2006 edition of the Standard Specifications and Standard Plans as issued by the State of California Department of Transportation, hereinafter referred to as the "Standard Specifications."

Requirements on the construction plans for Portland Cement Concrete (PCC) are modified to the PCC Class designations, as described in Section 90-1.01 of the Standard Specifications, as follows:

- Class "A" shall mean Class "2"
- Class "B" shall mean Class "3"
- Class "C" shall mean Class "4"
- Class "D" shall mean Class "1"

9-1.03 REQUIREMENTS FOR BOND - LANDSCAPING:

In addition to the terms set forth in Section 3-1.02 "Contract Bonds" of these contract documents requiring a Performance Bond and a Payment Bond, a separate Maintenance/Warranty Bond for landscape improvements and plant establishment shall be required.

The Performance Bond and Payment Bond amounts shall each be in the amount of 100 percent of the total contract price as described in Section 3-1.02 of these contract documents and shall not be reduced by the amount of the Maintenance/Warranty Bond for landscape improvements and plant establishment.

The Maintenance/Warranty Bond for landscape improvements and plant establishment shall be issued in the amount of 100 percent of the amount listed in Base Bid Schedule "B" and shall meet the requirements set forth in Section 3-1.02 of these contract documents.

The County will release the Performance Bond and Payment Bond upon: 1) Contractor's 100 percent completion of construction of all improvements for this project; 2) County's final acceptance of all improvements for this project except those improvements listed in Base Bid Schedule B; 3) County's issuance of a Partial Notice of Completion; and 4) Contractor providing the County with a Maintenance/Warranty Bond for landscape improvements and plant establishment.

The County will release the Maintenance/Warranty Bond for landscape improvements and plant establishment upon: 1) Contractor's completion of the 3-year plant establishment period; 2) County's final acceptance of the improvements as described in Base Bid Schedule "B"; and 3) County's issuance of a Final Notice of Completion.

9-1.04 PARTIAL PAYMENT:

For the purpose of making partial payments pursuant to Section 9-1.06, "Partial Payments" of the Standard Specifications, the amount set forth for the contract item of work hereinafter listed shall be deemed to be maximum total value of said contract item of work which will be recognized for progress payment purposes:

Clearing and Grubbing -	\$ 60,000.00
Mobilization -	\$ 45,000.00
Dust Abatement -	\$ 15,000.00

After acceptance of the contract pursuant to Section 7-1.17, "Acceptance of Contract" of the Standard Specifications, the amount, if any, payable for a contract item of work in excess of the maximum value for progress payment purposes herein above listed for said item, will be included for payment in the first estimate made after acceptance of the contract.

9-1.05 ADDITIONAL INSURANCE- HOLD HARMLESS:

In addition to the requirements of Section 3-1.01B, "Insurance – Hold Harmless" of the contract documents, the Contractor's Certificate of Insurance and endorsements for the project shall name the following listed entities as additional insured under the Contractor's general liability, excess liability, and auto liability insurance policies, and each listed entity shall be named on the Waiver of Subrogation for the Contractor's Workers Compensation policy.

1. "Redevelopment Agency for the County of Riverside, its officers, directors, agents and employees".

2. "Coachella Valley Water District, its officers, directors, agents and employees".
3. "Imperial Irrigation District, its officers, directors, agents and employees".

Each of the above listed entities shall also be held harmless, in accordance with the requirements of subsection IV, "Hold Harmless" of Section 3-1.01B, "Insurance – Hold Harmless" of these contract documents.

Payment:

Full compensation for compliance with the requirements of this section shall be considered as included in the various items of work, and no additional compensation will be allowed therefor.

9-1.06

RECORD DRAWINGS:

The Contractor shall keep one clean set of bond originals to note any changes which take place during construction. These changes to the original plans and/or specifications shall be noted at the appropriate locations with the appropriate changes indicated in red pencil or ink. The Contractor shall note in large letters "RECORD DRAWINGS" on the Title Sheet of the plans. The job will not be finalized by the Engineer until these record drawings have been completed to the satisfaction of the Engineer. The changes shall be noted on the plans as the changes occur. The record drawings shall be submitted to the Engineer, and become the property of the County at conclusion of the project.

Payment:

Full compensation for maintaining and compiling the record drawings shall be considered to be included in other items of work and no additional compensation will be allowed therefor.

9-1.07

SURVEY STAKING:

County surveyors will establish external primary survey control marks and/or monuments to be used throughout the construction period. These control marks will be used by the County Surveyor to set construction stakes. The control marks will also be used to make verification surveys at various stages of work.

The County places stakes and marks per the County's Survey Manual.

Contractor must submit request for County furnished stakes:

1. Once staking area is ready for stakes
2. Request for construction stakes must be in writing.

The County will provide Contractor with a survey request form. A minimum notice of 2 working days is required from the Contractor prior to County Surveyor beginning the work requested.

Contractor must preserve stakes and marks placed by the County. Survey costs are incurred by the County; however, if the stakes or marks are destroyed, the County replaces them at the County's earliest convenience and deducts the replacement expenses.

9-1.08

IRAN CONTRACTING ACT:

The Department of General Services has published a list of companies who are prohibited from contracting with public entities in California as required by Public Contract Code section § 2200-2208.

The Iran Contracting Act Certification/Exemption form is included in this contract document and must be completely filled in, dated, signed and submitted with Proposal bid documents. The bidding Contractor is required to submit the appropriate form with the bid.

SECTION 9-2 COOPERATION, UTILITIES AND SCHEDULING

9-2.01

COOPERATION WITH OTHER CONTRACTORS AND UTILITIES:

Attention is directed to Section 7-1.14, "Cooperation" of the Standard Specifications, and these Special Provisions.

In addition to the Contractor's construction activities to construct the roundabout street improvements at 4th Street and Hammond Road, the Contractor is hereby advised that other contractors may be constructing several other projects in the downtown Mecca area. These other projects include, but are not limited to: 1) a new fire station between 66th Avenue and 2nd Street east of Date Palm Street; 2) the full reconstruction of all streets in downtown Mecca including:

- 4th Street from Hammond Road to Coahuilla Street
- Lincoln Street from 5th Street to 7th Street
- Coahuilla Street from 5th Street to 65th Avenue
- Date Palm Street from 5th Street to 65th Avenue
- Brown Street from 5th Street to 6th Street
- Dale Kiler Road from 5th Street to 7th Street
- Home Avenue from 2nd Street to 5th Street
- Frank Valdovino Road from south of 3rd Street to 5th Street
- 3rd Street from Home Avenue to Frank Valdovino Road
- 4th Street from Dale Kiler Road to Frank Valdovino Road
- 5th Street from Dale Kiler Rod to Frank Valdovino Road
- 6th Street from Lincoln Street to Dale Kiler Road
- 7th Street from Lincoln Street to Dale Kiler Road

The Contractor is directed to coordinate and cooperate with other contractors doing work in the area.

Existing street lights within the project area are anticipated to be relocated to temporary locations by the Imperial Irrigation District (IID) prior to construction of conflicting proposed improvements. The temporary street light relocation plan will be provided to the successful bidder upon receipt. The temporary street lights will remain in place under the Contractor installs and IID energizes the new street system.

The Contractor is hereby advised to cooperate with utility companies (Coachella Valley Water District (CVWD), Imperial Irrigation District (IID), Southern California Gas Company, Verizon Communications, USA Cable and/or others) for adjustment of water valves, manholes and other facility to grade and for any work being performed by the utility companies' own forces. Should construction be under way by other forces or by other contractors within or adjacent to those limits, the Contractor shall cooperate with all other contractors or other forces to the end that any delay or hindrance to work will be avoided. The right is reserved to perform other or additional work at or the near site (including material sources) at any time, by the use of other forces. Attention is directed

to any utility windows that have been designated for work during construction, including, but not limited to Imperial Irrigation District (IID) street light pole temporary relocations and installations, Southern California Gas Company gas regulator station relocation, and Verizon pole relocations and cabinet installation.

CVWD will not lower their surface facilities within the paved areas for the Contractor. The Contractor is responsible to lower CVWD surface utilities, under the inspection of CVWD, prior to paving. The Contractor is responsible to fully protect all utility facilities during the course of construction, in accordance with the Contract Documents, the Standard Specifications, and as directed by the Engineer. Attention is directed to the Section 9-2.03 "Obstructions" of these Special Provisions.

Relocation of Conflicting Utilities by Owners

The Contractor's attention is directed to Section 8-1.10 "Utility and Non-Highway Facilities" of the Standard Specifications.

Working days allowed shall be in accordance with the executed agreement. Part of the working days allowed include 25 working days for access to a portion of the construction site by the affected utility companies to perform utility relocation work. No on-site work by the Contractor will be allowed in the utility relocation areas unless specifically agreed to by both the utility company and the Engineer. This requirement does not preclude work being performed by the Contractor in areas not being utilized by the utility owner. The utility company days are anticipated to not be sequential, and will be assigned by the Engineer in coordination with the scheduling needs of the affected utility companies.

The utility relocation work that is anticipated to be performed during the course of construction is generally described as follows:

Southern California Gas Company
Relocation of natural gas regulator station and gas lines

Verizon Communications
Relocation of DLC cabinets, equipment and pole(s)

Coachella Valley Water District (CVWD)
Adjustment to grade of water valves and final adjustment to grade of sewer manhole covers; installation of new air release assemblies and fire hydrants.

Imperial Irrigation District (IID)
Temporary relocation of street light poles, IID work associated with new street light installations and landscaping electrical service

If necessary, removal and disposal of abandoned utility conduits, conductors and other facilities shall be considered as incidental excavation, and shall be included in the contract unit price for Roadway Excavation.

The Contractor shall provide traffic control as required to support the above described work.

It is anticipated that some or all of the utility relocation work to be performed by Coachella Valley Water District, Imperial Irrigation District, Southern California Gas Company, Verizon Communications and USA Cable will be completed prior to the start of construction. However, the Contractor shall cooperate with any utility forces that have a need to perform work within the project limits.

Payment:

Full compensation for the provisions of this Special Provision shall be considered as included in the various items of work, and no additional compensation will be allowed therefore.

9-2.02

ORDER OF WORK:

Landscaping Water and Electrical Connections:

The Contractor shall install all necessary sleeves for landscape irrigation prior to any road work/paving and prior to making connections to the designated water and electrical service points as shown on the Construction Drawings and/or as directed by the Engineer. No cuts in the final asphalt concrete pavement or final PCC improvements will be allowed for the installation of sleeves.

The water and electrical connections shall be operational prior to any planting. The Contractor is required to coordinate with Coachella Valley Water District and Imperial Irrigation District to ensure these connections are made and operational prior to any planting. The Contractor shall coordinate any work involved with these utilities (and their outside contractors if necessary) to allow the service points for each to be installed. See Section 9-2.01 entitled "Cooperation With Other Contractors and Utilities" of these Special Provisions for more information.

Traffic Control/Staging:

General: Emergency vehicles must be allowed access through the project construction area at all times without delays. The Riverside County Fire Department operates a fire station located at 91100 4th Street in Mecca, CA. This station serves many emergency calls across the region, including the area west of Hammond Road. The Contractor shall notify the Fire Department staff for the Fire Department's review of all significant construction schedule events (especially lane/roadway closures) and traffic control plans for adequate fire truck access during an emergency. An access lane for emergency vehicle access must be maintained at a minimum width of 12 feet at all times.

Large wheelbase trucks shall be restricted from driving through the project area when truck tracking will extend beyond the construction area traveled way. The recommended

detour routes directing trucks to alternate routes at the 62nd Avenue railroad crossing and at the Grant Street/Colfax Street (Thobe Street) railroad crossing, as shown in the attached Exhibits B-5 and B-6, shall remain in place until such time that the constraints have been removed.

Temporary concrete barriers separating the construction area and active travel lanes shall be maintained in place at all times, unless otherwise approved by the Engineer. See Section 10-1.09 "Temporary railing (Type K)" of these Special Provisions. Crash array cushions and portable delineators shall be utilized where necessary. Travel lanes shall be 12 feet wide minimum unless otherwise approved by the Engineer.

Bus Transit: The Contractor is hereby notified that SunLine Transit Agency operates a dual direction bus line through Mecca known as Line 91. The route travels between the communities of Thermal, Mecca and Oasis. The route through Mecca travels through 4th Street between Hammond Road and Grapefruit Boulevard. Contractor shall notify SunLine Transit Agency, 32-505 Harry Oliver Trail, Thousand Palms, CA 92276, (760) 343-3456, attention Anita Petke, two weeks prior to any activities that would impact bus services.

The Contractor shall coordinate with other transit services service providers in the area, including school buses.

Suggested Construction Staging: The construction of this project shall occur in multiple stages. The Contractor is hereby directed to the attached Exhibits B-1 through B-8 that supplement the following-described suggested construction staging and traffic control. The following is a suggestion only and the Contractor must submit traffic control and staging plans for County approval. Contractor is directed to the section entitled "Traffic Control System" for specific County requirements.

The maximum number of days for each road closures and/or lane closure is specified below. If the Contractor suggests a different construction staging method on the traffic control and staging plans, and if such method is approved by the County, the same maximum number of days for each road closures and/or lane closure as specified below shall apply.

Stage 1: The construction area is located along the east side of Hammond Road and consists mostly of the off-pavement areas as well as some existing pavement on Hammond Road. A minimum of 24 feet wide section of Hammond Road should remain open to public travel in both directions at all times during this stage. The construction area should allow for the construction of nearly all curbs, gutters, roadway pavement, sidewalks, landscaping, street lighting, and other utilities within the area. This includes the construction of the central island, central island entry monument structure and central island landscaping. The attached Exhibit B-1 illustrates the approximate limits of Stage 1. Normal traffic operations at the intersection of Hammond Road and 4th Street will be maintained since lane closures are not required.

Stage 2: The construction area is located along the west side of Hammond Road between 4th Street and 5th Street. The attached Exhibit B-2 illustrates the approximate limits of Stage 2. The construction during this stage will require the temporarily closure of the northern approach of Hammond Road and traffic movements to/from this approach will be prohibited. Detour signs shall be placed directing vehicles to the expected detour route via 5th Street to Coahuilla Street to 2nd Street, or as directed by the Engineer. The attached Exhibit B-7 illustrates the detour route recommended for this stage. An increase in traffic demands along the route is expected and the Contractor shall station flaggers at key intersections along the detour route during peak traffic periods if deemed necessary by the Engineer.

Construction in this area includes curbs, gutters, roadway pavement, sidewalks, landscaping and street lighting. This portion of Hammond Road shall be closed to public travel no longer than 15 working days.

Stage 3: The construction area is located on the northerly half of 4th Street from the railroad crossing to Hammond Road. The attached Exhibit B-3 illustrates the approximate limits of Stage 3. The entire section of 4th Street from Grapefruit Boulevard to Hammond Road will be closed during construction hours and all turning movements from Hammond Road will be prohibited. Detours directing vehicles to the northerly detour route via 62nd Avenue and the southerly detour route via Grant Street/Colfax Street (Thobe Street) crossings shall be in place, as shown in the attached Exhibits B-5 and B-6. 4th Street may be reopened during non-construction hours to eastbound traffic only at the discretion of the Engineer.

Construction in this area includes curbs, gutters, roadway pavement, sidewalks, and grading. This portion of 4th Street shall be closed to public travel for no longer than 5 working days.

Stage 4: The construction area is located on the southerly half of 4th Street from the railroad crossing to Hammond Road and the westerly portion of the southern leg of Hammond Road. The attached Exhibit B-4 illustrates the approximate limits of Stage 4. The southerly half of 4th Street from Grapefruit Boulevard to Hammond Road will be closed during construction hours and eastbound 4th Street traffic will be prohibited during this stage. Advanced signage and community announcements must be in place directing vehicles to the northerly detour route via 62nd Avenue and the southerly detour route via Grant Street/Colfax Street (Thobe Street) crossings, as shown in the attached Exhibits B-5 and B-6. Traffic control shall consist of normal roundabout operations without eastbound traffic on 4th Street and southbound through traffic on Hammond Road. Southbound through traffic on Hammond Road shall be directed to the detour via 5th Street to Coahuilla Street to 2nd Street, or as directed by the Engineer. The attached Exhibit B-8 illustrates the detour route recommended for this stage.

Construction in this area includes curbs, gutters, roadway pavement, sidewalks, grading, drainage improvements, landscaping and street lighting. This portion of 4th Street and Hammond Road is to be closed to public travel for no longer than 15 working days. All major construction shall be completed at the end of this stage.

Payment:

Full compensation for complying with requirements of this section shall be considered as included in the contract price paid for the items involved, and no additional compensation will be allowed therefor.

9-2.03

OBSTRUCTIONS:

Attention is directed to Sections 8-1.10, "Utility and Non-Highway Facilities", and 15, "Existing Highway Facilities" of the Standard Specifications and these Special Provisions.

Existing utility and privately owned facilities shall be protected in accordance with Section 7-1.11, "Preservation of Property" of the Standard Specifications and these Special Provisions. The Contractor is also responsible to protect those facilities that are to be relocated by others prior to or during construction, and shall protect those facilities in both their existing and their ultimate locations. The Contractor shall cooperate with owners and their contractors of utility and privately owned facilities, for the relocation of said facilities, in accordance with Section 7-1.14, "Cooperation" of the Standard Specifications.

All water valves and covers, gas valves and covers, sewer manholes, survey monuments, survey markers and any other utility appurtenances shall be protected in place.

The Contractor's attention is directed to the existence of certain underground facilities that may require special precautions be taken by the Contractor to protect the health, safety and welfare of workmen and the public. Facilities requiring special precautions include, but are not limited to: conductors of petroleum products, oxygen, chlorine, and toxic or flammable gases; natural gas in pipe lines greater than 6 inches in diameter or pipe lines operating at pressures greater than 60 psi (gage); underground electric supply system conductors or cables either directly buried or in duct or conduit which do not have concentric neutral conductors or other effectively grounded metal shields or sheaths; and underground electrical conductors with potential to ground of more than 300 volts. The Contractor shall notify the Engineer at least twenty-four hours prior to performing any work in the vicinity of such facilities.

Attention is directed to the requirements of Government Code Sections 4216-4216.9 pertaining to existing utility facilities.

The Contractor shall assume that every house, building and lot within the project limits has utility service pipes and conductors (laterals), and that utility main and trunk facilities exist within the project limits. The Contractor shall determine if it is warranted to determine the exact location of these utility service laterals and existing main lines, unless directed by the Engineer to pot-hole at specific locations, or as otherwise required herein. The Contractor will not be directly reimbursed for determining the exact location

of the utility main lines or services laterals but shall include any compensation for this work in the contract price paid for the various items of work. Any damage to existing main lines or service laterals for which pot-holing was not performed shall be considered damage due to not using reasonable care and the damage shall be repaired at the Contractor's expense.

The Contractor shall conduct his operations with the assumption that underground utility facilities exist within the project limits. The Contractor shall exercise caution and best construction practices for safety and for protection of underground facilities. The approximate locations of underground utility facilities, as shown on the plans, are based on information provided by the respective owners, listed below. The Contractor shall also utilize the markings of the regional notification center (Underground Service Alert), and above-ground utility appurtenances to determine the existence and approximate location of underground utilities.

The Contractor is hereby notified that due to the extra excavation required to stabilize the wet subgrade conditions, existing underground utilities may be near or within the excavation grading plane. Contractor is responsible to protect utilities in place.

The Contractor is hereby notified that existing asbestos cement pipe may be near or within the excavation grading plane. Contractor is responsible to protect utilities in place.

No excavation shall be made within 4 feet of any underground utilities, as shown on the plans and/or marked by Underground Service Alert, unless and until such utilities have been positively located as to horizontal and vertical position. This requirement applies to all underground electric, natural gas, toxic or flammable gas, chlorine, oxygen or petroleum facilities.

Forty-eight hours prior to beginning construction, the Contractor shall notify the following agencies:

Underground Service Alert	800-227-2600 or 811
Southern California Gas Company	909-335-7716
Verizon Communication	760-327-8648
Coachella Valley Water District	760-398-2651
Imperial Irrigation District	760-398-5820
Cable USA	760-767-5607

Payment:

Full compensation for all costs, including labor, equipment, materials and incidentals, required to comply with the requirements of this section above, including protection of all utilities, utility appurtenances, survey monuments and survey markers, shall be considered as included in the various items of work, and no additional compensation will be allowed therefor.

Adjustments to Grade for Obstructions

The Contractor shall adjust to finish grade any valve covers encountered within the project limits, as required, for those utility valves that are provided with slip cans and are adjustable without the replacement of parts or the removal of concrete collars. In cases where the owning utility company (such as Coachella Valley Water District) insists upon upgrades in the standards, or when additional parts or the removal of concrete collars are required for the adjustment, said adjustment will be the responsibility of the owning utility company.

Communication and coordination with the owning utility company shall be the responsibility of the Contractor.

For public safety, traffic shall not be allowed on temporary or permanent pavement until all manholes are either adjusted to grade or otherwise protected, as approved by the Engineer. The Contractor shall adjust to grade manholes and valves when and as necessary for the protection of the traveling public during construction, and shall coordinate all work on said facilities with the owning utility companies. This requirement is intended for traffic that is to be allowed on temporary surfaces during the course of construction. Final adjustment to grade will be the responsibility of the owning utility company, except as provided herein.

Said work shall be performed in accordance with Section 15-2.05A, "Frames, Covers, Grates, and Manholes" of the Standard Specifications. Full compensation for adjustment of valve covers shall be considered as included in the contract price paid for asphalt concrete, or applicable items of work in the event that there is no asphalt concrete bid item, and no additional compensation will be allowed therefor.

All existing utility facilities shall be protected from damage by the Contractor's operations.

Unless otherwise provided herein, the owning utility companies will not be obligated to lower their surface utilities (manholes and valve covers) for Contractor's grading, grinding and/or paving operations. The Contractor shall lower surface facilities, including manholes and valve covers, to facilitate construction, and the following shall apply:

1. Contractor shall coordinate all work with the utility owner.
2. Contractor shall be responsible for all costs and shall be responsible for any damage caused to the owner's facilities. If the Contractor observes any pre-existing damage to the utility facilities, the Contractor shall notify the Engineer and the utility owner of that damage prior to performing additional work on the facility.
3. Contractor shall, after removing grade rings and covers, arrange for pickup by, or delivery to, the owner's yard. Any and all concrete collars removed by the

Contractor shall become the property of the Contractor, and shall be disposed of as specified elsewhere in these special provisions.

4. The Contractor is advised that he is responsible for ensuring that construction materials do not enter the utility owner's facilities. The Contractor shall install traffic bearing steel plates for this purpose, and provide all coordination and transportation necessary. It is recommended that the Contractor request the utility owner to provide such steel plates. If the Contractor provides steel plates, it shall be the Contractor's responsibility to coordinate with the utility owner for the return of the steel plates to the Contractor after final adjustment to grade. If the Contractor utilizes utility owner's steel plates, and if the Contract items of work include adjustment to final grade, the Contractor shall return the steel plates to the Utility owner's yard, or as otherwise arranged with the Utility owner.
5. Prior to paving or covering the plated utility facility, the Contractor shall tie-out the facility utilizing a method acceptable to the utility owner and provide notes and data of all covered facilities to both the utility owner and the Engineer.
6. The Contractor shall notify the utility owner, upon completion of the Contractor's work, when the utility owner may move in to make the final adjustments to grade.
7. The requirements for lowering of surface facilities shall not apply to vaults. The Contractor shall notify the utility owner of the need to make adjustments to such major facilities.
8. The Contractor is reminded that the utility facilities are owned by public and private utility companies that operate their facilities within public rights of way. The utility owner's preferences with regards to the handling of its facilities shall be complied with to the greatest extent feasible.

Payment:

Full compensation for initial lowering of surface utilities facilities shall be considered as included in the contract price paid for asphalt concrete, or applicable items of work in the event that there is no asphalt concrete bid item, and no additional compensation will be allowed therefor.

SECTION 9-3 ENVIRONMENTAL

9-3.01

AIR QUALITY – BASIC NESHAP ASBESTOS NOTIFICATION:

In addition to the requirements of Section 5-1.18, "Removal of Asbestos and Hazardous Substances" of these contract documents and Section 7-1.01F of the Standard Specifications, the Contractor shall notify the air pollution control district or air quality management district identified below as required by the National Emission Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR Part 61, Subpart M, and California Health and Safety Code section 39658(b)(1). A copy of the notification form and attachments shall be provided to the Engineer prior to submittal. Notification shall take place a minimum of 10 working days prior to starting demolition or renovation activities as defined in the NESHAP regulations.

The Contractor shall also notify the South Coast Air Quality Management District, (21865 E. Copley Drive, Diamond Bar, California 91765-4182, E-Mail: bwallerstein@aqmd.gov, Phone: (909) 396-2000) other local permit agencies and utility companies prior to starting any demolition activities.

Payment:

Full compensation for complying with requirements of this section shall be considered as included in the contract price paid for the items involved, and no additional compensation will be allowed therefor.

9-3.02

CULTURAL RESOURCES:

Contractor shall protect all known and identified historic or prehistoric sites, buildings, objects, and properties related to American history, architecture, archaeology, and culture against destruction, obliteration, removal, or damage during Contractor's operations. Measures needed to protect such areas shall be approved by the Engineer prior to implementation. Contractor shall immediately notify the Engineer if disturbance occurs to any known site and shall immediately halt operations in the vicinity of the site until the Engineer authorizes Contractor to proceed.

If human remains are found at the project site during excavation of the project, work shall be suspended in the immediate area of the find and the Engineer will notify the Riverside County Coroner's Office. Standard guidelines set by California law for the treatment of human remains shall be followed (Public Resources Code § 5097.98 et seq., Health and Safety Code § 7050.5, and others).

Payment:

In the event that any damage occurs to any cultural resource, the Contractor shall bear the full cost of resource damage evaluation and restoration, and such payment shall not relieve Contractor from civil or criminal remedies otherwise provided by law.

Full compensation for compliance with this section shall be considered as included in the various items of work, and no additional compensation will be allowed therefor.

9-3.03**WATER CONSERVATION:**

Attention is directed to the various sections of the Standard Specifications and these Special Provisions which require the use of water for the construction of this project. Attention is directed to Section 7, "Legal Relations and Responsibility" of the Standard Specifications with regards to the Contractor's responsibilities for public convenience, public safety, preservation of property, indemnification, and insurance.

Nothing in this section "Water Conservation" shall relieve the Contractor from furnishing an adequate supply of water required for the proper construction of this project in conformance with the provisions in the Standard Specifications or these Special Provisions or relieve the Contractor from the legal responsibilities defined in Section 7 of the Standard Specifications.

The Contractor shall, whenever possible and not in conflict with the above requirements, minimize the use of water during construction of the project. Watering equipment shall be kept in good working order; water leaks shall be repaired promptly; and washing of equipment, except when necessary for safety or for the protection of equipment, shall be discouraged.

Concrete slope protection, minor structures, and miscellaneous concrete construction shall not be cured by using water. The water cure for bridge decks shall be accomplished with the use of a moisture retaining medium in conformance with the provisions in Section 90-7.01A, "Water Method" of the Standard Specifications.

When ordered by the Engineer, a dust palliative conforming to the provisions in Section 18, "Dust Palliative" of the Standard Specifications shall be used to control dust on this project. Dust palliative ordered by the Engineer will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications.

Attention is directed to Section 17-1.025, "Chemical Additives" of the Standard Specifications. When ordered by the Engineer, a chemical additive shall be added to water used for compaction. The additive shall be approved by the Engineer and shall be used in conformance with instructions issued by the Engineer. Chemical additive ordered by the Engineer will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications.

NON-NATIVE PLANT PRECLUSION:

Non-native Plant Preclusion shall consist of protecting construction sites and adjacent natural habitats against contamination from non-native seeds and plants. The Contractor shall guard against the contamination of construction site soil from the unplanned importation of non-native seeds and plant material.

Attention is directed to "Construction Site Management" of these Special Provisions regarding vehicle and equipment cleaning.

Attention is directed to "Control of Materials" in the standard specifications regarding the source of supply, inspection of materials, certificates of compliance, and local materials.

The Contractor shall clean all equipment and vehicles with water to remove dirt, seeds, vegetative material, or other debris that could contain or hold seeds of noxious weeds before or upon arriving to, and leaving the project site.

The Contractor shall notify the Engineer a minimum of 14 days prior to obtaining material from a commercial or state-furnished borrow site. The Engineer will inspect the site or stockpile for the presence of noxious weeds or invasive plants.

As directed by the Engineer, the Contractor shall chemically or mechanically treat the borrow material to kill existing non-native weeds and invasive plants.

As directed by the Engineer, the Contractor shall remove 6 inches of the surface material at the borrow site prior to transporting borrow site soil to the project. As directed by the Engineer, material removed from the surface of the borrow site will be disposed of in accordance with Section 7-1.13 of the Standard Specifications.

The treatment, removal, and disposal of rejected borrow site material will be paid for as extra work in accordance with Section 4-1.03D of the Standard Specifications.

Soil from the borrow site shall not be transported to the project until approved in writing by the Engineer.

Killing and Disposal of Non-Native Weeds from the Project Site

As directed by the Engineer, the Contractor shall kill and dispose of non-native weeds from the project site. Weeds shall be disposed of in accordance with Section 7-1.13 "Disposal of Material Outside the Highway Right of Way" of the Standard Specifications.

The killing and disposal of non-native weeds from the project site will be paid for as extra work in accordance with Section 4-1.03D of the Standard Specifications.

Payment:

Full compensation, except as otherwise provided in these Special Provisions, for conforming to the requirements of this section shall be considered included in the various items of work and no additional compensation will be allowed therefor.

9-3.05

BIOLOGICAL MONITORING:

The County will have available a qualified biologist as specified in these Special Provisions for a pre-construction survey of the project site, on site monitoring, if required, and all Endangered species handling that may be required. "Biologist" or "Monitor" referenced in these specifications refers to the biologist provided by the County. The Contractor shall request this service from the Engineer at least 10 days prior to the initial performance of work activities.

SECTION 10 SPECIAL PROVISIONS – ITEMS OF WORK

SECTION 10-1 ROADWAY

10-1.01 MOBILIZATION:

Mobilization shall conform to the provisions in Section 11, "Mobilization" of the Standard Specifications.

Payment:

Full compensation, except as otherwise provided herein, for conforming to the requirements of this article shall be paid for on a lump sum basis and no additional compensation will be allowed therefor.

10-1.02 DE-MOBILIZATION:

De-mobilization shall consist of the completion of all final construction and administrative work required to secure the project for termination and acceptance by the Engineer, including, but not limited to the following:

1. Satisfactory completion of Finishing Roadway in accordance with Section 22, "Finishing Roadway" of the Standard Specifications;
2. Removal of all temporary facilities, temporary utilities, plant, equipment, surplus material, construction debris and similar from project limits and adjacent property, as required and as directed by the Engineer;
3. Restoration of all temporary roads and haul routes and construction storage and office areas, etc. to original or better condition;
4. Completion of record of drawings (as-builts), to the satisfaction of the Engineer;
5. Submission of final Disadvantaged Business Enterprise report to the Engineer;
6. Submission of final certified payroll documents to the Engineer;
7. Submission of property owner releases, as required by the Engineer (if any);
8. Completion of the requirements of permits issued by other agencies;
9. Satisfactory completion of all other contractually and legally required construction and administrative items of work.

De-Mobilization shall include the satisfactory completion of all items of work, but shall not be construed as being a separate payment for work that is paid under separate contract items. The contract item for De-Mobilization is intended for proper close-out activities.

Payment:

De-Mobilization will be made on a lump sum basis in the amount of the fixed bid price after satisfactory completion of the above listed items. Payment for De-Mobilization will be included in the final pay estimate and payment. No partial payments will be made for De-Mobilization.

10-1.03**DUST ABATEMENT:**

Dust control shall conform to the provisions of Section 5-1.19 "Dust Abatement" of these contract documents.

Payment:

Full compensation, except as otherwise provided herein, for conforming to the requirements of this article shall be paid for on a lump sum basis for Dust Abatement and no additional compensation will be allowed therefor.

10-1.04**DEVELOP WATER SUPPLY:**

Develop water supply shall conform to the provisions of Section 17 of the Standard Specifications and these Special Provisions.

Payment:

Full compensation for developing water supply and furnishing watering equipment shall be considered as included in the lump sum price paid for Dust Abatement and no additional compensation will be allowed therefor.

Attention is directed to the requirements of Section 10, "Dust Abatement" of the Standard Specifications. Water in amounts specified by the Engineer will be used for dust control, and the cost thereof will be included in the lump sum price paid for Dust Abatement.

10-1.05**WATER POLLUTION CONTROL (WHITEWATER - RISK LEVEL 1):**

Throughout the term of this contract, the total land disturbance area of the project site is more than 1 acre. County will submit a Notice of Intent (NOI) to the California Regional Water Quality Board – Colorado River Basin Region for compliance with the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (hereafter referred to as the Construction General Permit), which is available at:

(http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml).

The Area-Wide Municipal Stormwater Permit NPDES No. CAS617002, hereafter referred to in this section as the "Municipal Permit", issued by the California Regional Water Quality Control Board (CRWQCB) – Colorado River Basin Region. This permit regulates both stormwater and non-stormwater discharges associated with Contractor's construction activities. A copy of the Permit may be obtained at the office of the County of Riverside Transportation Department, 14th Street Transportation Annex, 3525 14th Street, Riverside, California. (951) 955-6780, or may be obtained on the internet at: <http://www.swrcb.ca.gov/rwqcb7>

The Contractor shall comply with the requirements of Construction General Permit, the Municipal Permit, and the De Minimus Permit.

Contractor's Stormwater Pollution Prevention Plan and Construction Site Monitoring Program (SWPPP/CSMP) shall be prepared by a Qualified SWPPP Developer in accordance with Section 2, "Preparing a Stormwater Pollution Prevention Plan (SWPPP)", of the *Caltrans Stormwater Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual (June 2011)*, which is available as a free download from:

<http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>

This project is a Risk Level 1 project under the Construction General Permit. Therefore, Contractor's SWPPP/CSMP shall also conform to Attachment C, Risk Level 1 Requirements of the Construction General Permit.

<http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>

WATER POLLUTION CONTROL MEASURES:

- A. Work having the potential to cause water pollution shall not commence until the Contractor's SWPPP/CSMP has been reviewed and approved by the Engineer. **The Engineer's review and approval of the Contractor's SWPPP/CSMP shall not waive any contractual requirements and shall not relieve the Contractor from achieving and maintaining compliance with all federal, state, and local laws, ordinances, statues, rules, and regulations.** A copy of Contractor's SWPPP/CSMP shall be maintained onsite. When the SWPPP/MP or access to the construction site is requested by a representative of a federal, state, or local regulatory agency, Contractor shall make the SWPPP/CSMP available and Contractor shall immediately contact the Engineer. Requests from the public for the Contractor's SWPPP/CSMP shall be directed to the Engineer.
- B. Contractor's SWPPP/CSMP shall describe the Contractor's plan for managing runoff during each construction phase. Contractor's SWPPP/CSMP shall describe the Best Management Practices (BMPs) that will be implemented to control erosion, sediment, tracking, construction materials, construction wastes, and non-stormwater flows. BMP details shall be based upon California Stormwater Quality Association's 2009 California Stormwater Quality BMP Handbook Portal or the Caltrans Construction Site BMP Manual (<http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>). Contractor's SWPPP/CSMP shall describe installation, operation, inspection, maintenance, and monitoring activities that will be implemented for compliance with the Construction General Permit and all applicable federal, state, and local laws, ordinances, statutes, rules, and regulations related to the protection of water quality.
- C. Preparer of Contractor's SWPPP/CSMP shall have one of the following certifications:
1. A California registered professional civil engineer;
 2. A California registered professional geologist or engineering geologist;

3. A California registered landscape architect;
4. A professional hydrologist registered through the American Institute of Hydrology;
5. A Certified Professional in Erosion and Sediment Control™ (CPESC®) registered through EnviroCert International, Inc.; or
6. A Certified Professional in Storm Water Quality™ (CPSWQ®) registered through EnviroCert International, Inc.

In addition, the SWPPP/CSMP preparer shall hold a valid Qualified SWPPP Developer (QSD) certificate issued by the California Stormwater Quality Association (CASQA).

D. Contractor shall designate a Water Pollution Control Manager that shall have one of the certifications in the immediately preceding subsection D or one of the following certifications:

1. A certified erosion, sediment and storm water inspector registered through EnviroCert International, Inc.; or
2. A certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control, Inc.

In addition, the Water Pollution Control Manager shall hold a valid Qualified SWPPP Practitioner (QSP) certificate issued by the California Stormwater Quality Association (CASQA).

E. Contractor's Water Pollution Control Manager shall:

1. Be responsible for all water pollution control work.
 2. Be the Engineer's primary contact for all water pollution control work.
 3. Have the authority to mobilize resources (crews, supplies, equipment, etc.) to make immediate repairs of water pollution control measures or to supplement water pollution control measures to maintain compliance with all federal, state, and local laws, ordinances, and regulations related to the protection of water quality, including the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities.
- F. Water Pollution Control Training: Contractor shall provide water pollution control training to Contractor's employees and subcontractors prior to their performing work on the work site. The water pollution control training shall be appropriate to the employee or subcontractor function and area of responsibility and shall address (as applicable):

1. Erosion Control (water and wind)
2. Sediment Control
3. Tracking Control
4. Materials & Waste Management
5. Non-Stormwater Discharge Management
6. Run-on and Run-off Control

G. Monitoring and Reporting: Observations and inspections conducted by the Contractor's Water Pollution Control Manager shall be documented on the Construction Site Inspection Checklist included in Contractor's SWPPP/CSMP. A copy of each completed

Inspection Checklist included in Contractor's SWPPP/CSMP. A copy of each completed Construction Site Inspection Checklist shall be submitted to the Engineer within 24 hours of conducting the inspection.

General Requirements:

In the event the County incurs any Administrative Civil Liability (fine) imposed by the CRWQCB – Colorado River Basin Region, as a result of Contractor's failure to fully implement the provisions of "Stormwater and Non-Stormwater Pollution Control", the Engineer, may, in the exercise of his sole judgment and discretion, withhold from payments otherwise due Contractor a sufficient amount to cover the Administrative Civil Liability including County staff time, legal counsel, consultant support costs and all other associated cost.

The Contractor shall be responsible for all costs and for any liability imposed by law as a result of the Contractor's failure to comply with the requirements set forth in "Water Pollution Control", including but not limited to, compliance with the applicable provisions of the Caltrans Handbooks, Construction General Permit, Federal, State, and local regulations. For the purpose of this paragraph, costs and liabilities include, but not limited to, fines, penalties, damages, and costs associated with defending against enforcement actions whether taken against the County or the Contractor, including those levied under the Federal Clean Water Act and the State Porter-Cologne Water Quality Act.

Within fifteen (15) working days after the award of the contract, the Contractor shall submit two (2) copies of the SWPPP/CSMP to the Engineer for review and approval. The Contractor shall allow ten (10) working days for the Engineer to review the SWPPP/CSMP. If revisions are required as determined by the Engineer, the Contractor shall revise and resubmit the SWPPP/CSMP within three (3) working days of receipt of the Engineer's comments and shall allow ten (10) working days for the Engineer to review the revisions. The Contractor shall submit four (4) copies of the approved SWPPP/CSMP to the Engineer prior to notice to proceed. The Contractor must have an approved SWPPP/CSMP and a Waste Discharge Identification Number (WDID) prior to the notice to proceed. In no case will the conditional approval extend beyond twenty-one (21) calendar days and in no case may work commence without the WDID issued by the State Water Resources Control Board. The WDID number will be provided by the County. The Engineer may suspend construction operations until the Contractor submits a revised SWPPP/CSMP that is reviewed and approved by the Engineer.

The SWPPP shall contain all required and applicable certifications and evidence of training for the Water Pollution Control Manager, SWPPP Developer, and all other employees working on the project receiving formal training or certification.

Unless otherwise directed by the Engineer or specified in these Special Provisions, the Contractor's responsibility for SWPPP/CSMP implementation shall continue throughout any temporary suspension of work ordered in accordance with Section 8-1.05, "Temporary Suspension of the Work", of the Standard Specifications.

The Engineer may withhold progress payments or order the suspension of construction operations without an extension of the contract time, if the Contractor fails to comply with the requirements of "Water Pollution Control" as determined by the Engineer.

All BMP repairs shall be implemented by the Contractor within 72 hrs. All BMP repairs shall also be implemented by the Contractor prior to a qualifying storm event, as defined in the Construction General Permit.

The Contractor shall be responsible for all the "Risk Level 1 Monitoring and Reporting Requirements" described in the General Construction Permit, which includes (but not limited to):

- a. Risk Level 1 - Visual Monitoring (Inspection) Requirements for Qualifying Rain Events
- b. Risk Level 1 – Monitoring Methods
- c. Risk Level 1 – Non-Storm Water Discharge Monitoring Requirements
- d. Risk Level 1 – Non-Visible Pollutant Monitoring Requirements
- e. Risk Level 1 – Records

The Contractor shall be responsible for all of the inspection required by the General Construction Permit (weekly, pre and post storm, quarterly non-stormwater, etc). At the direction, the Contractor shall be responsible for providing any information for annual reporting purposes in electronic format, including inspection reports, photos, NOI, sampling and analysis reports, etc.

The Contractor shall be responsible for obtaining coverage under latest adopted version of the De Minimus Permit and provide notification prior to a regulated discharge. Compliance with the De Minimus Permit is required by the Municipal Permit. This permit regulates non-stormwater discharges to surface waters of various types of wastes that pose an insignificant threat to water quality and includes monitoring and reporting requirements. At least 45 days before the start of a new (De Minimus Permit) discharge, the contractor shall submit an application and obtain the authorization letter from the (the Regional Board's) Executive Officer to discharge wastewater to surface waters. The types of wastewater discharges regulated under this Permit include the following discharges:

- a. Construction dewatering wastes;
- b. Wastes associated with well installation, development, test pumping and purging;
- c. Aquifer testing wastes;
- d. Dewatering wastes from subterranean seepage, except for discharges from utility vaults;
- e. Discharges resulting from hydrostatic testing of vessels, pipelines, tanks, etc.;
- f. Discharges resulting from the maintenance of potable water supply pipelines, tanks, reservoirs, etc.;
- g. Discharges resulting from the disinfection of potable water supply pipelines, tanks, reservoirs, etc.;
- h. Discharges from potable water supply systems resulting from initial system startup,

- routine startup, sampling of influent flow, system failures, pressure releases, etc.;
- i. Discharges from fire hydrant testing or flushing;
 - j. Air conditioning condensate;
 - k. Swimming pool discharge;
 - l. Discharges resulting from diverted stream flows;
 - m. Decanted filter backwash wastewater and/or sludge dewatering filtrate water from water treatment facilities; and
 - n. Other similar types of wastes as determined by the Regional Water Board Executive Officer, which pose a de minimus threat to water quality yet must be regulated under waste discharge requirements.

At the direction of the Engineer the Contractor shall conduct monitoring, sampling and analysis, and report preparation for conformance with Construction Permit, Municipal Permit, and De Minimus Permit. The Contractor will not be compensated for sampling and analysis work due to the Contractor's failure to properly implement, inspect, maintain, and repair BMPs in conformance with the approved SWPPP/CSMP and any amendments thereto, or for failing to store construction materials or wastes in watertight conditions.

Each proposal shall have listed therein the name and address of a local certified laboratory within 50 miles of the project site to whom the bidder proposes to subcontract all laboratory sampling and analysis, monitoring and report preparation necessary to comply with the Construction General Permit, De Minimus and the Municipal Permit, in accordance with the Subletting and Subcontracting Fair Practices Act, commencing with Section 4100 of the Public Contract Code. The bidder's attention is invited to other provisions of the Act related to the imposition of penalties for a failure to observe its provisions by using unauthorized subcontractors or by making unauthorized substitutions. The certified laboratory shall have experience with monitoring, sampling and analysis, and report preparation for the Construction General Permit and/or the De Minimus Permit and shall be certified by the State. A list of certified laboratories by the State can be found at:

<http://www.cdph.ca.gov/certlic/labs/Documents/ELAPLablist.xls>

Payment:

Payment for Water Pollution Control shall be on a lump sum basis and shall include full compensation for the work performed, including obtaining Permit coverage, developing, preparing, revising, obtaining approval of, and amending the SWPPP/CSMP, implementing, installing, constructing, operating, maintaining, and removing and disposing of temporary BMPs, performing the observations, inspections, sampling, analysis, reporting, and street sweeping, and as specified in the Caltrans Handbooks, Construction General Permit, De Minimus Permit, Municipal Permit and these Special Provisions, and as directed by the Engineer.

STREET SWEEPING:

The following special provision regarding "Street Sweeping" is being added to the contract document.

GENERAL

Summary

This work includes street sweeping.

The SWPPP/MP shall describe and include the use of street sweeping as a Water Pollution Control practice for sediment control and tracking control. Street sweeping shall also conform to all applicable AQMD requirements.

Submittals

At least 5 working days before starting clearing and grubbing, earthwork, or other activities with the potential for tracking sediment or debris, submit:

- A. The number of street sweepers that will be used as described in the SWPPP/MP.
- B. Type of sweeper technology (or technologies).

Quality Control and Assurance

Retain the following records related to street sweeping and submit weekly to the Engineer:

- A. Tracking Inspection Log
- B. Sweeping times and locations.
- C. Quantity of sweeping waste disposal.

CONSTRUCTION

Street Sweepers

Sweepers must use one of these technologies:

- A. Mechanical sweeper followed by a vacuum-assisted sweeper.
- B. Vacuum-assisted dry (waterless) sweeper.
- C. Regenerative-air sweeper.

Operation

Street sweeping shall be conducted at:

- A. Paved roads at job site entrance and exit locations.
- B. Paved areas within the job site that flow to storm drains or water bodies.

Street sweeping shall be conducted, and sweeper(s) shall be available to operate at all times, for the following:

- A. During clearing and grubbing activities.
- B. During earthwork activities.
- C. During trenching activities.
- D. During roadway structural section activities.
- E. When vehicles are entering and leaving the job site.
- F. After soil disturbing activities.
- G. After observing offsite tracking of material.

Contractor's Water Pollution Control Manager shall inspect adjacent paved areas at job site entrances and exits and paved roadways within the job site on a minimum daily basis, and more frequently when activities that require street sweeping are being performed. Contractor's Water Pollution Control Manager shall maintain a "Tracking Inspection Log." Street sweeping shall be conducted:

- A. Within 1 hour, if sediment or debris is observed on paved areas or paved roadways.

At least one sweeper, in good working order, must be on the job site at all times when sweeping work may be required.

Perform street sweeping to minimize dust. If dust generation is excessive or sediment pickup is ineffective, water may be used but shall be contained, collected (e.g. vacuum), and properly disposed.

Material collected during street sweeping must be removed and disposed of under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way" of the Standard Specifications.

Payment:

Full compensation to conform with the requirements of this section shall be considered as included the contract lump sum price paid for "Water Pollution Control" including furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in street sweeping, including disposal of collected material, as shown on the plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer. Therefore, no additional compensation will be allowed for street sweeping.

10-1.07

TRAFFIC CONTROL SYSTEM:

Contractor shall prepare detailed construction staging and traffic control plans for review and approval by the Riverside County Transportation Department.

Proposed plans shall be submitted by the Contractor to the Engineer for review and approval by the County at least two weeks prior to the start of construction. The construction staging and traffic control plans shall be prepared, signed and stamped by a Civil Engineer or Traffic Engineer who is registered as such in the State of California, unless otherwise specifically allowed by the Engineer. The Contractor shall revise and implement the plans as directed by the Engineer. Construction shall not begin until the Engineer provides Contractor with County approval of the plans.

Construction staging and traffic control plans shall be in accordance with the appropriate standards and specifications for construction staging, detour roads, traffic control, including the State of California Highway Design Manual, the 2006 California Manual of Uniform Traffic Control Devices (MUTCD), the May 2006 Standard Plans and Standard Specifications, and the Work Area Traffic Control Handbook (WATCH), as published by Building News, Inc. Any requests for deviation from the established design standards or specifications are to be submitted to the Engineer for review and approval prior to submission of the required plans.

With regard to the preparation and implementation of the plans, attention is especially directed to Sections 7-1.06, 7-1.08, 7-1.09, 7-1.11, 7-1.12 and Section 12 of the Standard Specifications. Section 12-2.02 of the Standard Specifications is deleted.

Maintaining traffic shall conform to the provisions in 7-1.02 "Load Limitations", 7-1.06 "Safety and Health Provisions", 7-1.08 "Public Convenience", 7-1.09 "Public Safety", and 12-3.04 "Portable Delineators" of the Standard Specifications, the 2006 California Manual of Uniform Traffic Control Devices (MUTCD), the Section of these contract documents entitled "Insurance - Hold Harmless", and these Special Provisions.

All existing traffic control signs and street name signs shall be maintained in visible locations as directed by the Engineer.

No detours will be provided, unless specifically allowed herein. The Contractor will be required to conduct his operations in such a manner that traffic will be permitted to pass through the work area with as little delay as possible.

All warning lights, signs, flares, barricades and other facilities for the sole convenience and direction of public traffic shall be furnished and maintained by the Contractor. All traffic control devices shall conform to and be placed in accordance with the 2006 California Manual of Uniform Traffic Control Devices (MUTCD), the corresponding California Supplement, and subsequent modifications as adopted by the State of California Department of Transportation.

All construction signs shall be either covered or removed when not required by the nature of the work or if no present hazard to the motorist exists.

The Contractor shall notify the appropriate regional notification center for operators of subsurface installations at least 2 working days, but not more than 14 calendar days, prior

to commencing excavation for construction area sign posts. The regional notification centers include, but not limited to, the following:

Notification Center	Telephone Number
Underground Service Alert-Southern California (USA)	1-800-422-4133 1-800-227-2600 or 811

Excavations required to install construction area signs shall be performed by hand methods without the use of power equipment, except that power equipment may be used if it is determined there are no utility facilities in the area of the proposed post holes.

No payment for extra work will be allowed for work performed as specified in Section 12-2.02 (Flagging Costs) of the Standard Specifications. Flagging costs will be borne entirely by the Contractor.

Dust control shall conform to the provision of Section 10 of the Standard Specifications except that no extra work will be allowed when the Engineer orders the application of water for the purpose of controlling dust caused by public traffic as provided for in the last paragraph of Section 10 of the Standard Specifications.

The Contractor shall be responsible to distribute an information letter pertaining to the planned work to all affected residences and businesses, at least one week prior to commencing work adjacent to those residences and businesses. It shall be the responsibility of the Contractor to design the information letter, obtain design approval from the Engineer, print sufficient copies, and distribute the letter. The Riverside County Transportation Department logo shall be included on the letter. A computer file of the logo may be obtained from the Engineer in .WPG, .DXF, .DGN or .DWG format. The letter shall be similar to the sample provided by the Engineer, and shall include a project description, the scope of work, the anticipated construction schedule, and other information as appropriate.

The Contractor shall post temporary no parking signs on affected streets 24 hours prior to work on those streets. The temporary no parking signs shall state the anticipated dates and hours of work on those streets.

Payment:

Full compensation, except as otherwise provided herein, for conforming to the requirements of this article, including furnishing, installing and maintaining all traffic control devices shown on the construction staging and traffic control plans, including construction area signs, channelizers, portable changeable message signs, temporary pavement markers, temporary traffic stripes, shall be considered as included in the contract lump sum price paid for Traffic Control System, and no additional compensation will be allowed therefor.

CONSTRUCTION AREA SIGNS:

Construction area signs for temporary traffic control shall be furnished, installed, maintained, and removed when no longer required in conformance with the provisions in Section 12, "Construction Area Traffic Control Devices" of the Standard Specifications and these Special Provisions.

Attention is directed to "Furnish Sign" of these Special Provisions.

Attention is directed to the provisions in "Prequalified and Tested Signing and Delineation Materials" of these Special Provisions. Type II retroreflective sheeting shall not be used on construction area sign panels. Type III, IV, VII, VIII, or IX retroreflective sheeting shall be used for stationary mounted construction area sign panels.

Attention is directed to "Construction Project Information Signs" of these Special Provisions regarding the number and type of construction project information signs to be furnished, erected, maintained, and removed and disposed of.

Unless otherwise shown on the plans or specified in these Special Provisions, the color of construction area warning and guide signs shall have black legend and border on orange background, except W10-1 or W47(CA) (Highway-Rail Grade Crossing Advance Warning) sign shall have black legend and border on yellow background.

Orange background on construction area signs shall be fluorescent orange.

Repair to construction area sign panels will not be allowed, except when approved by the Engineer. At nighttime under vehicular headlight illumination, sign panels that exhibit irregular luminance, shadowing or dark blotches shall be immediately replaced at the Contractor's expense.

The Contractor shall notify the appropriate regional notification center for operators of subsurface installations at least 2 business days, but not more than 14 days, prior to commencing excavation for construction area sign posts. The regional notification centers include, but are not limited to, the following:

Notification Center	Telephone Number
Underground Service Alert	811

Excavations required to install construction area signs shall be performed by hand methods without the use of power equipment, except that power equipment may be used if it is determined there are no utility facilities in the area of the proposed post holes. The post hole diameter, if backfilled with Portland Cement Concrete, shall be at least 4-inches greater than the longer dimension of the post cross-section.

Construction area signs placed within 15 feet from the edge of the travel way shall be mounted on stationary mounted sign supports as specified in "Construction Area Traffic Control Devices" of these Special Provisions.

The Contractor shall maintain accurate information on construction area signs. Signs that are no longer required shall be immediately covered or removed. Signs that convey inaccurate information shall be immediately replaced or the information shall be corrected. Covers shall be replaced when they no longer cover the signs properly. The Contractor shall immediately restore to the original position and location any sign that is displaced or overturned, from any cause, during the progress of work.

Payment:

Full compensation, except as otherwise provided herein, for conforming to the requirements of this article shall be considered as included in the lump sum price paid for "Traffic Control System" and no additional compensation will be allowed therefor.

10-1.09

TEMPORARY RAILING (TYPE K):

Temporary Railing (Type K) separating the construction area from the active travel lanes shall be maintained in place at all times, unless otherwise approved by the Engineer, and shall conform to the provisions in Section 12, "Construction Area Traffic Control Devices" of the Standard Specifications and these Special Provisions.

Temporary railing (Type K) shall be secured in place before starting work for which the temporary railing is required. Temporary railing that is in place for more than 5 calendar days shall be pinned in place with four dowels per railing section. Dowels shall be 1-inch in nominal diameter with a length of 2-feet and shall conform to ASTM Designation A 36/A 36M. Dowels shall be installed so as not to extend above the surface of the railing. Holes left in pavement surface upon removal of temporary railing shall be filled as directed by the Engineer.

Reflectors on temporary railing (Type K) shall conform to the provisions in "Prequalified and Tested Signing and Delineation Materials" of these Special Provisions.

Temporary railing (Type K) placed in conformance with the provisions in "Public Safety" of these Special Provisions will be neither measured nor paid for.

Payment:

Full compensation for conforming to the requirements of this article for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved shall be considered included in the bid item "Traffic Control System" and no additional compensation shall be allowed therefor.

10-1.10

CLEARING AND GRUBBING:

Clearing and grubbing (including but not limited to removal/disposal of existing vegetation, drain pipe, barricade and sign; removal/disposal of unsuitable or excess soil in landscape areas; grading and fine grading for landscape areas; and installation of irrigation sleeves) shall conform to the provisions in Section 16 of the Standard Specifications and to these Special Provisions.

Attention is directed to the Federal Migratory Bird Treaty Act (15 USC 703-711) 50 CFR Part 21 and 50 CFR Part 10, and the California Department of Fish and Game Code Sections 3503, 3513 and 3800, that protect migratory birds, their occupied nests, and their eggs from disturbance or destruction.

Ground disturbance, tree, shrub and/or vegetation removal that occurs between March 1st and September 15th will not commence until a preconstruction survey for nesting birds has verified that no active nests have been located or the Engineer has approved the beginning of work. If an active nest is located, construction within 500 feet of the nest must be avoided until the nest has been vacated and the young are independent of their parents.

The Contractor shall use exclusion techniques directed by the Engineer to prevent migratory birds from nesting in trees within the project limits.

If evidence of bird nesting is discovered, the Contractor shall not disturb the nesting birds or nests until the birds have naturally left the nests. If evidence of migratory bird nesting is discovered after beginning work, the Contractor shall immediately stop work within 500 feet of the nests and notify the Engineer. Work shall not resume until the Engineer provides a written notification that work may begin at or adjacent areas of the discovered bird nest locations.

Attention is directed to Section 8-1.05, "Temporary Suspension of Work" of the Standard Specifications.

Payment:

Full compensation, except as otherwise provided herein, for conforming to the requirements of this section shall be paid for on a lump sum basis and no additional compensation will be allowed therefor.

10-1.11

CONSTRUCTION PROJECT FUNDING IDENTIFICATION SIGNS:

Before any major physical construction work readily visible to roadway users is started on this contract, the Contractor shall furnish and install one (1) Construction Project Funding Identification Sign (4' X 8'). The sign shall be installed at a location to be determined by the Engineer, within or near the project limits, in accordance with the relevant requirements of Section 56-2 of the Standard Specifications and the appropriate

details of Standard Plans RS1 through RS4 for two post installation of signs, and as directed by the Engineer.

A reference exhibit displaying the text and colors of the sign is attached to these Special Provisions as Exhibit A. The Contractor shall submit a copy of the final sign design (in the form of an editable picture file in .eps format – Encapsulated PostScript file) for approval by the Engineer prior to fabrication.

The sign shall be maintained and kept clean and in good repair by the Contractor through the duration of the construction project. Signs damaged, stolen, or knocked out shall be re-installed or replaced at the request of the Engineer by the Contractor at no additional cost to the County.

At the completion of the project, the signs will become property of the County. When directed by the Engineer, the Contractor shall remove all hardware from the signs. Posts and hardware shall become the property of the Contractor. The Contractor shall deliver and off-load the signs to the address listed below or as directed by the Engineer:

Traffic Signal Shop
Riverside County Transportation Department
McKenzie Highway Operations Center
2950 Washington Street
Riverside, California 92504
Telephone (951) 955-6894

Payment:

The contract unit bid price paid per each for Construction Project Funding Identification Sign shall include full compensation for furnishing, transporting, installing/erecting, maintaining, removal, delivery to County shop, and for doing all work involved to completion including furnishing posts, and excavation and backfill as directed by the Engineer and no additional compensation will allowed therefor.

10-1.12

ROADWAY EXCAVATION:

Roadway excavation shall conform to the provisions of Section 19 of the Standard Specifications, and these Special Provisions.

At road connections and at limits of asphalt paving, existing pavement shall be header cut as shown on the plans or as directed by the Engineer. Full compensation for furnishing all labor, tools and doing all the work necessary, including grinding and sawcutting, shall be considered as included in the contract prices paid per ton for the various asphalt concrete items and no additional compensation will be allowed therefor.

Existing pavement including any base material shall be cut back to neat lines and removed as shown on the plans or as directed by the Engineer. Excess material will

become the property of the Contractor and will be disposed of as provided in Section 7-1.13 of the Standard Specifications.

Disposal of Excess Excavation or Materials:

Excess earth excavation, pavement grindings and other excess materials resulting from construction operations shall be disposed of by the Contractor outside of the highway right of way, as provided in Section 7-1.13 of the Standard Specifications.

The second paragraph of Section 7-1.13 of the Standard Specifications is modified to read as follows:

When any material is to be disposed of outside the highway right of way, and the County of Riverside has not made arrangements for the disposal of such material, the Contractor shall first obtain written authorization from the property owner on whose property the disposal is to be made and he shall file with the Engineer said authorization or a certified copy thereof together with a written release from the property owner absolving the County of Riverside from any and all responsibility in connection with the disposal of material on said property. If the disposal of materials is to be made at an established disposal facility that is available for public use, the Contractor shall retain all authorizations and receipts from said disposal facility and shall provide copies to the Engineer upon request.

Relative Compaction:

Whenever relative compaction is specified to be determined by Test Method No. Calif. 216, the in-place density may be determined by Test Method No. Calif. 231. The in-place density required by Test Method No. Calif. 312 may be determined by Test Method No. 231. The wet weight or dry weight basis and English Units of Measurement may be used at the option of the County's Materials Engineer.

Payment:

The unit bid price paid per cubic yard for Roadway Excavation shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved including compaction and the removal of asphalt concrete berm as directed by the Engineer and no additional compensation will be allowed therefor. No adjustment in the bid price per cubic yard for overages or underages from the stated quantity will be allowed. Sections 4-1.03B(1) and 4-1.03B(2) of the Standard Specifications do not apply for increases and decreases of pay quantity of more than 25% from the stated quantity.

HOT MIX ASPHALT:

The asphalt concrete shall be Type "A" and shall conform to the requirements of Section 39 of the Standard Specifications and the following:

Aggregate grading shall be three-quarter inch (3/4") maximum, medium for base course and three-quarter inch (3/4") maximum, medium for the final course. One-half inch (1/2") maximum, medium for the final course shall be used if shown on the plans or as directed by the Engineer.

The asphalt lift thickness table, as shown in Section 39-6.01, "General Requirements" of the Standard Specifications, is revised as follows:

Total Thickness Shown on Plans	Minimum No. of Layers	Top Layer Thickness (foot)		Next Lower Layer Thickness (foot)		All Other Lower Layer Thickness (foot)	
		Min.	Max.	Min.	Max.	Min.	Max.
0.24-foot or less ^a	1	-	-	-	-	-	-
0.25-foot	2 ^b	2	0.13	0.12	0.13	-	-
0.26 - 0.46 foot	2	0.12	0.21	0.14	0.25	-	-
0.47-foot or more	3 or more	0.15	0.21	0.15	0.25	0.17	0.25

Footnotes to asphalt thickness table are revised as follows:

- a. No Change.
- b. One layer of 0.25 foot thick may be placed as approved by the Engineer. When the Traffic Index specified is 5.5 or below, two layers shall be placed.

Asphalts:

Asphalt shall conform to the provisions in this Section, "Asphalts". Section 92, "Asphalts" of the Standard Specifications shall not apply.

Asphalt shall consist of refined petroleum or a mixture of refined liquid asphalt and refined solid asphalt, prepared from crude petroleum. Asphalt shall be:

1. Free from residues caused by the artificial distillation of coal, coal tar, or paraffin;
2. Free from water;
3. Homogeneous.

General:

The Contractor shall furnish asphalt in conformance with the State of California Department of Transportation's Certification Program for Suppliers of Asphalt". The Department maintains the program requirements, procedures, and a list of approved suppliers at <http://www.dot.ca.gov/hq/esc/Translab/fpmcoc.htm>.

The Contractor shall ensure the safe transportation, storage, use, and disposal of asphalt. The Contractor shall prevent the formation of carbonized particles caused by overheating asphalt during manufacturing or construction.

Grade:

Performance graded (PG) asphalt binder shall conform to the following:

Property	AASHTO Test Method	Specification Grade		
		PG 64-10	PG 64-16	PG 70-10
Original Binder				
Flash Point, Minimum °C	T48	230	230	230
Solubility, Minimum % ^b	T44	99	99	99
Viscosity at 135 °C, Maximum, Pa's	T316	3.0	3.0	3.0
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T315	64 1.00	64 1.00	70 1.00
RTFO Test ^e , Mass Loss, Maximum, %	T240	1.00	1.00	1.00
RTFO Test Aged Binder				
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T315	64 2.20	64 2.20	70 2.20
Ductility at 25 °C Minimum, cm	T51	75	75	7 5
PAV ^f Aging, Temperature, °C	R28	100	100	110
RTFO Test and PAV Aged Binder				
Dynamic Shear, Test Temp. at 10 rad/s, °C Maximum G*/sin(delta), kPa	T315	31 ^d 5000	28 ^d 5000	34 ^d 5000
Creep Stiffness, Test Temperature, °C Maximum S-value, Mpa Minimum M-value	T313	0 300 0.300	-6 300 0.300	0 300 0.30 0

Notes:

- a. Not used.
- b. The Engineer will waive this specification if the supplier is a Quality Supplier as defined by County's "Certification Program for Suppliers of Asphalt".
- c. The Engineer will waive this specification if the supplier certifies the asphalt binder can be adequately pumped and mixed at temperatures meeting applicable safety standards.
- d. Test the sample at 3 °C higher if it fails at the specified test temperature. G*/sin(delta) shall remain 5000 kPa maximum.
- e. "RTFO Test" means the asphaltic residue obtained using the Rolling Thin Film Oven Test, AASHTO Test Method T240 or ASTM Designation: D2827.
- f. "PAV" means Pressurized Aging Vessel.

Performance graded polymer modified asphalt binder (PG Polymer Modified) is:

Performance Graded Polymer Modified Asphalt Binder ^a

Property	AASHTO Test Method	Specification Grade		
		PG 58-34 PM	PG 64-28 PM	PG 76-22 PM
Original Binder				
Flash Point, Minimum °C	T 48	230	230	230
Solubility, Minimum % ^b	T 44 ^c	98.5	98.5	98.5
Viscosity at 135°C, ^d Maximum, Pa·s	T 316	3.0	3.0	3.0
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T 315	58 1.00	64 1.00	76 1.00
RTFO Test , Mass Loss, Maximum, %	T 240	1.00	1.00	1.00
RTFO Test Aged Binder				
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T 315	58 2.20	64 2.20	76 2.20
Dynamic Shear, Test Temp. at 10 rad/s, °C Maximum (delta), %	T 315	Note e 80	Note e 80	Note e 80
Elastic Recovery ^f , Test Temp., °C Minimum recovery, %	T 301	25 75	25 75	25 65
PAV ^g Aging, Temperature, °C	R 28	100	100	110
RTFO Test and PAV Aged Binder				
Dynamic Shear, Test Temp. at 10 rad/s, °C Maximum G*sin(delta), kPa	T 315	16 5000	22 5000	31 5000
Creep Stiffness, Test Temperature, °C Maximum S-value, MPa Minimum M-value	T 313	-24 300 0.300	-18 300 0.300	-12 300 0.300

Notes:

- a. Do not modify PG Polymer Modifier using acid modification.
- b. The Engineer waives this specification if the supplier is a Quality Supplier as defined by the County's "Certification Program for Suppliers of Asphalt".
- c. The County allows ASTM D5546 instead of AASHTO T44.
- d. The Engineer waives this specification if the supplier certifies the asphalt binder can be adequately pumped and mixed at temperatures meeting applicable safety standards.
- e. Test 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 Engineer also accepts direct measurement of (delta) at the temperature when G*/sin(delta) is 2.2 kPa.
- f. Test without a force ductility clamp may be performed.
- g. "PAV" means Pressurized Aging Vessel.

Sampling:

The Contractor shall provide a sampling device in the asphalt feed line connecting the plant storage tanks to the asphalt weighing system or spray bar. The sampling device shall be accessible between 24 and 30 inches above the platform. The Contractor shall provide a receptacle for flushing the sampling device.

The sampling device shall include a valve:

1. With a diameter between 1/2 and 3/4 inches;
2. Manufactured in a manner that a one-quart sample may be taken slowly at any time during plant operations;
3. Maintained in good condition.

The Contractor shall replace failed valves.

In the presence of the Engineer, the Contractor shall take 2 one-quart samples per operating day. The Contractor shall provide round friction top containers with one-quart capacity for storing samples.

Applying Asphalt:

Unless otherwise specified, the Contractor shall heat and apply asphalt in conformance with the provisions in Section 93, "Liquid Asphalts" of the Standard Specifications.

Section 39-2.01, "Asphalts" is replaced in its entirety with the following:

Asphalt binder to be mixed with aggregate shall conform to the provisions in "Asphalts" of these Special Provisions.

The grade of asphalt binder shall be 70-10 (Desert).

Liquid asphalt for prime coat shall conform to the provisions in Section 93, "Liquid Asphalts" of the Standard Specifications and shall be Grade 70-10 unless otherwise designated by the contract item or otherwise specified in the Special Provisions.

Asphaltic emulsion for paint binder (tack coat) shall conform to the provisions in Section 94, "Asphaltic Emulsion" of the Standard Specifications for the rapid-setting or slow-setting type and grade approved by the Engineer.

Section 39-3.01B of the Standard Specifications shall be amended to include:

Aggregate of the 3/4 inch or 1/2 inch maximum size and aggregate for asphalt concrete base shall be separated into 3 or more sizes and each size shall be stored in separate bins. If 3 sizes are used, one bin shall contain that portion of the material which will pass the

maximum size specified and be retained on a 3/8 inch sieve; one bin shall contain that portion of the material which will pass a 3/8 inch sieve and be retained on a No. 8 sieve; and one bin shall contain that portion of the material which will pass a No. 8 sieve.

Aggregate of 3/8 inch maximum size shall be separated into 2 sizes and each size shall be stored in separate bins. One bin shall contain that portion of the material which will pass the maximum size specified and be retained on a No. 8 sieve and one bin shall contain that portion of the material which will pass a No. 8 sieve.

The bin containing the fine material shall not contain more than 15 percent of material retained on the No. 8 sieve. The material in any of the other bins shall not contain more than 15 percent of material passing a No. 8 sieve. Failure to comply with this requirement shall be corrected immediately, and the material in the bins not meeting these requirements shall be re-screened or wasted.

All asphalt concrete for this project shall be supplied from one source unless approved by the Engineer. Said source shall be listed on the Contractor's Source of Materials List as required in Section 6 of the Standard Specifications.

Asphaltic emulsion shall be furnished and applied as provided in Section 39-4.02 of the Standard Specifications.

Asphalt concrete driveway approaches shall be reconstructed to match existing as directed by the Engineer.

Unless otherwise specified on the plans, asphalt concrete placed on driveways shall be two and a half inches (2 1/2") in thickness and will be paid for at the same unit price as for material placed on the roadbed.

In addition to the provisions in Section 39-5.01, "Spreading Equipment" of the Standard Specifications, asphalt paving equipment shall be equipped with automatic screed controls and a sensing device or devices.

When placing asphalt concrete to the lines and grades established by the Engineer, the automatic controls shall control the longitudinal grade and transverse slope of the screed. Grade and slope references shall be furnished, installed, and maintained by the Contractor. Should the Contractor elect to use a ski device, the minimum length of the ski device shall be 30 feet. The ski device shall be a rigid one piece unit and the entire length shall be utilized in activating the sensor.

When placing the initial mat of asphalt concrete on existing pavement, the end of the screed nearest the centerline shall be controlled by a sensor activated by a ski device not less than 30 feet. The end of the screed farthest from centerline shall be controlled by an automatic transverse slope device set to reproduce the cross slope designated by the Engineer, by a sensor activated by a similar ski device or as directed by the Engineer.

When paving contiguously with previously placed mats, the end of the screed adjacent to the previously placed mat shall be controlled by a sensor that responds to the grade of the previously placed mat and will reproduce the grade in the new mat within a 0.12 inch tolerance. The end of the screed farthest from the previously placed mat shall be controlled in the same way it was controlled when placing the initial mat.

Should the methods and equipment furnished by the Contractor fail to produce a layer of asphalt concrete conforming to the provisions, including straightedge tolerance, of Section 39-6.03, "Compacting" of the Standard Specifications or elsewhere in these Special Provisions, the paving operations shall be discontinued and the Contractor shall modify the equipment or methods, or furnish substitute equipment.

Should the automatic screed controls fail to operate properly during a day's work, the Contractor may manually control the spreading equipment for the remainder of that day. However, the equipment shall be corrected or replaced with alternative automatically controlled equipment conforming to the provisions in this section before starting another day's work.

General Criteria For Profiling:

In addition to the straightedge provisions in Section 39-6.03, "Compacting" of the Standard Specifications, asphalt concrete pavement shall conform to the surface tolerances specified herein.

The uppermost layer of asphalt concrete surfacing shall be profiled in the presence of the Engineer using a California Profilograph or equivalent in conformance with California Test 526 and as specified in these Special Provisions.

The California Profilograph or equivalent will not be required for the following areas of the pavement surface but shall conform to the straightedge requirements in Section 39-6.03, "Compacting" of the Standard Specifications:

1. Pavement with a total thickness less than 0.24 foot;
2. Pavement on horizontal curves with a centerline curve radius of less than 1,000 feet and the pavement within the superelevation transition on those curves;
3. Pavement placed in a single lift when required by the Special Provisions;
4. Pavement with extensive grade or cross slope correction which does not receive advance leveling operations in conformance with the provisions in Section 39-6.02, "Spreading" of the Standard Specifications;
5. Pavement for ramps and connectors with steep grades and high rates of superelevation, as determined by the Engineer;
6. Shoulders and miscellaneous areas.

The Contractor shall conform to California Test 526, except a zero (null) blanking band shall be used for determining the Profile Index. Prior to beginning profiles, the profilograph shall be calibrated in the presence of the Engineer. Two profiles shall be obtained within each traffic lane, 3 feet from and parallel with the edges of the lane.

Pavements profiled shall conform to the following Profile Index requirements:

1. Pavement on tangent alignment and pavement on horizontal curves having a centerline curve radius of 2,000 feet or more shall have a Profile Index of 0.16 foot or less for each 330 feet section profiled;
2. Pavement on horizontal curves having a centerline curve radius of 1,000 feet or more but less than 2,000 feet, including the pavement within the superelevation transition of these curves, shall have a Profile Index of 0.32 foot or less for each 330 feet section profile;
3. Pavement within any 330 feet section, containing high point areas with deviations in excess of 0.025 foot in a length of 25 feet or less, when tested in conformance with the requirements in California Test 526, shall be corrected by the Contractor regardless of the Profile Index.

The Contractor shall complete initial runs of the profilograph prior to opening the pavement to public traffic. If initial profiles cannot be made prior to opening the pavement to public traffic, the initial runs of the profilograph shall be made the next day that traffic control is permitted for the area to be profiled.

Areas of the top surface of the uppermost layer of asphalt concrete pavement that do not meet the specified surface tolerances shall be brought within tolerance by abrasive grinding.

Abrasive grinding shall be performed to reduce individual deviations in excess of 0.025 foot, and to reduce the Profile Index of the pavement to be within the specified tolerance. Areas which have been subjected to abrasive grinding shall receive a seal coat. Deviations in excess of 0.025 foot which cannot be brought into specified tolerance by abrasive grinding shall be corrected by either (1) removal and replacement or (2) placing an overlay of asphalt concrete. The corrective method for each area shall be selected by the Contractor and shall be approved by the Engineer prior to beginning the corrective work. Replacement or overlay pavement not meeting the specified tolerances shall be corrected by the methods specified above. Corrective work shall be at the Contractor's expense. The Contractor shall run profilograms on the areas that have received abrasive grinding or corrective work until the final profilograms indicate the Profile Index of the area is within the specified tolerance.

When abrasive grinding is used to bring the top surface of the uppermost layer of asphalt concrete surfacing within the specified surface tolerances, additional abrasive grinding shall be performed as necessary to extend the area ground in each lateral direction so that

the lateral limits of grinding are at a constant offset from, and parallel with, the nearest lane line or pavement edge, and in each longitudinal direction so that the grinding begins and ends at lines normal to the pavement centerline, within a ground area. Ground areas shall be neat rectangular areas of uniform surface appearance.

The original of the final profilograms that indicate the pavement surface is within the Profile Index specified shall become the property of the County and shall be delivered to the Engineer prior to acceptance of the contract.

Payment:

Asphalt Concrete for road pavement and driveway tie-ins will be paid for at a unit price per ton as a combined item, including mineral aggregate and asphalt binder in place on the roadbed.

Full compensation for furnishing and applying asphaltic emulsion (paint binder/tack coat) shall be considered as included in the contract price paid for Asphalt Concrete.

The contract bid price paid per ton for Hot mix Asphalt shall include full compensation for furnishing all labor, tools, materials, equipment, and incidentals, and for doing all the work involved including the furnishing and applying asphaltic emulsion (paint binder), matching existing pavement with 2-foot wide grinding/overlay and no additional compensation will be allowed therefor.

10-1.14

PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS:

GENERAL

Summary

This section applies to asphalt contained in materials for pavement structural sections and surface treatments such as hot mix asphalt (HMA), tack coat, asphaltic emulsions, bituminous seals, asphalt binders, and modified asphalt binders placed in the work. This section does not apply if you opted out of payment adjustment for price index fluctuations at the time of bid.

The Engineer adjusts payment if the California Statewide Crude Oil Price Index for the month the material is placed is more than 5 percent higher or lower than the price index at the time of bid.

The California Statewide Crude Oil Price Index is determined each month on or about the 1st business day of the month by the County using the average of the posted prices in effect for the previous month as posted by Chevron, ExxonMobil, and ConocoPhillips for the Buena Vista, Huntington Beach, and Midway Sunset fields.

If a company discontinues posting its prices for a field, the County determines the index from the remaining posted prices. The County may include additional fields to determine the index.

For the California Statewide Crude Oil Price Index, go to:
<http://www.dot.ca.gov/hq/construc/crudeoilindex/>

If the adjustment is a decrease in payment, the County deducts the amount from the monthly progress payment.

The County includes payment adjustments for price index fluctuations when making adjustments under Section 4-1.03B, "Increased or Decreased Quantities" of the Standard Specifications.

If the Contractor does not complete the work within the contract time, payment adjustments during the overrun period are determined using the California Statewide Crude Oil Price Index in effect for the month in which the overrun period began.

If the price index at the time of placement increases:

- A. 50 percent or more over the price index at bid opening, notify the Engineer.
- B. 100 percent or more over the price index at bid opening, do not furnish material containing asphalt until the Engineer authorizes you to proceed with that work. The County may decrease Bid item quantities, eliminate Bid items, or terminate the contract.

Submittals

Before placing material containing asphalt, submit the current sales and use tax rate in effect in the tax jurisdiction where the material is to be placed.

Submit certified weight slips for HMA, tack coat, asphaltic emulsions, and modified asphalt binders, including those materials not paid for by weight, as specified in Section 9-1.01, "Measurement of Quantities" of the Standard Specifications. For slurry seals, submit certified weight slips separately for the asphaltic emulsion.

ASPHALT QUANTITIES

Hot Mix Asphalt

The Engineer calculates the quantity of asphalt in HMA using the following formula:

$$Q_h = HMATT \times [X_a / (100 + X_a)]$$

Where:

- Qh = quantity in tons of asphalt used in HMA
- HMATT = HMA total tons placed
- Xa = theoretical asphalt content from job mix formula expressed as percentage of the weight of dry aggregate

Rubberized Hot Mix Asphalt

The Engineer calculates the quantity of asphalt in rubberized HMA (RHMA) using the following formula:

$$Q_{rh} = RHMATT \times 0.80 \times [X_{arb} / (100 + X_{arb})]$$

where:

- Qrh = quantity in tons of asphalt in asphalt rubber binder used in RHMA
- RHMATT = RHMA total tons placed
- Xarb = theoretical asphalt rubber binder content from the job mix formula expressed as percentage of the weight of dry aggregate

Modified Asphalt Binder in Hot Mix Asphalt

The Engineer calculates the quantity of asphalt in modified asphalt binder using the following formula:

$$Q_{mh} = MHMATT \times [(100 - X_{am}) / 100] \times [X_{mab} / (100 + X_{mab})]$$

where:

- Qmh = quantity in tons of asphalt in modified asphalt binder used in HMA
- MHMATT = modified asphalt binder HMA total tons placed
- Xam = specified percentage of asphalt modifier
- Xmab = theoretical modified asphalt binder content from the job mix formula expressed as percentage of the weight of dry aggregate

Hot Mix Asphalt Containing Reclaimed Asphalt Pavement (RAP)

The Engineer calculates the quantity of asphalt in HMA containing RAP using the following formulas:

$$Q_{rap} = HMATT \times [X_{ma} / (100 + X_{ma})]$$

where:

$$X_{ma} = X_{ta} - [(100 - X_{new}) \times (X_{ra} / 100)]$$

and

- Q_{rap} = quantity in tons of asphalt used in HMA containing RAP
- $HMATT$ = HMA total tons placed
- X_{ma} = asphalt content of HMA adjusted to account for the asphalt content in RAP expressed as percentage of the weight of dry aggregate
- X_{ta} = total asphalt content of HMA expressed as percentage of the weight of dry aggregate
- X_{new} = theoretical percentage of new aggregate in the HMA containing RAP determined from RAP percentage in the job mix formula
- X_{ra} = asphalt content of RAP expressed as percentage

Tack Coat

The Engineer calculates the quantity of asphalt in tack coat (Q_{tc}) as either:

- A. Asphalt binder using the asphalt binder total tons placed as tack coat.
- B. Asphaltic emulsion by applying the formula in "Asphaltic Emulsion" to the asphaltic emulsion total tons placed as tack coat.

Asphaltic Emulsion

The Engineer calculates the quantity of asphalt in asphaltic emulsions, including fog seals and tack coat, using the following formula:

$$Q_e = AETT \times X_e$$

where:

- Q_e = quantity in tons of asphalt used in asphaltic emulsions
- $AETT$ = undiluted asphaltic emulsions total tons placed
- X_e = minimum percent residue specified in Section 94, "Asphaltic Emulsions," of the Standard Specifications based on the type of emulsion used

The Contractor may, as an option, determine " X_e " by submitting actual daily test results for asphalt residue for the asphaltic emulsion used. If the Contractor chooses this option, the Contractor must:

- A. Take 1 sample every 200 tons but not less than 1 sample per day in the presence of the Engineer from the delivery truck, at midload from a sampling tap or thief, and in the following order:
 1. Draw and discard the 1st gallon.
 2. Take two separate 1/2-gallon samples.
- B. Submit 1st sample at the time of sampling.
- C. Provide 2nd sample within 3 business days of sampling to an independent testing laboratory that participates in the AASHTO Proficiency Sample Program.

- D. Submit test results from independent testing laboratory within 10 business days of sample date.

Slurry Seal

The Engineer calculates the quantity of asphalt in slurry seals (Q_{ss}) by applying the formula in "Asphaltic Emulsion" to the actual quantity of asphaltic emulsion used in producing the slurry seal mix.

Modified Asphalt Binder

The Engineer calculates the quantity of asphalt in modified asphalt binder using the following formula:

$$Q_{mab} = MABTT \times [(100 - X_{am}) / 100]$$

where:

Q_{mab} = quantity in tons of asphalt used in modified asphalt binder

MABTT = modified asphalt binder total tons placed

X_{am} = specified percentage of asphalt modifier

Other Materials

For other materials containing asphalt not covered above, the Engineer determines the quantity of asphalt (Q_o).

PAYMENT ADJUSTMENTS

The Engineer includes payment adjustments for price index fluctuations in progress pay estimates. If material containing asphalt is placed within 2 months during 1 estimate period, the Engineer calculates 2 separate adjustments. Each adjustment is calculated using the price index for the month in which the quantity of material containing asphalt subject to adjustment is placed in the work. The sum of the 2 adjustments is used for increasing or decreasing payment in the progress pay estimate.

The Engineer calculates each payment adjustment as follows:

$$PA = Q_t \times A$$

where:

PA = Payment adjustment in dollars for asphalt contained in materials placed in the work for a given month.

Q_t = Sum of all quantities of asphalt-contained materials in pavement structural sections and pavement surface treatments placed ($Q_h + Q_{rh} + Q_{mh} + Q_{rap} + Q_{tc} + Q_e + Q_{ss} + Q_{mab} + Q_o$).

A = Adjustment in dollars per ton of asphalt used to produce materials placed in the work rounded to the nearest \$0.01.

For US Customary projects, use:

$A = [(I_u / I_b) - 1.05] \times I_b \times [1 + (T / 100)]$ for an increase in the crude oil price index exceeding 5 percent

$A = [(I_u / I_b) - 0.95] \times I_b \times [1 + (T / 100)]$ for a decrease in the crude oil price index exceeding 5 percent

T = Sales and use tax rate, expressed as a percent, currently in effect in the tax jurisdiction where the material is placed. If the tax rate information is not submitted timely, the statewide sales and use tax rate is used in the payment adjustment calculations until the tax rate information is submitted.

10-1.15 AGGREGATE BASE:

Aggregate base shall comply with Section 26, "Aggregate Bases" of the Standard Specifications and these Special Provisions.

Aggregate base shall be Class 2.

Do not store reclaimed asphalt concrete or aggregate base with reclaimed asphalt concrete within 100-feet measured horizontally of any culvert, watercourse, or bridge.

Payment:

The contract unit bid price paid per cubic yard for Class 2 Aggregate Base shall include full compensation for furnishing all labor, tools, materials, equipment, and incidentals, and for doing all the work involved and complete in place and no additional compensation will be allowed therefor.

This item of work includes the placement of aggregate base as required under all AC pavement and PCC concrete (including colored) constructed improvements as shown on the construction drawings.

SUBGRADE ENHANCEMENT TREATMENT:

The Contractor is hereby notified that shallow groundwater and/or yielding of the upper soils will be encountered within the project site area.

In addressing groundwater issues, including yielding or pumping of the upper soils during construction, methods of subgrade stabilization treatment and/or mitigation measures will include the following:

- a. Overexcavate the soil an additional 12 inches below the finished subgrade or as directed by the Engineer.
- b. Place the first layer of geogrid directly on the soft and yielding soil.
- c. Spread aggregate base materials in layers using a track-type dozer up to the original finished subgrade. The number of layers or lifts will depend on the operating weight of the dozer as specified herein.
- d. Place the second layer of geogrid prior to the required aggregate base and asphalt concrete layers.

Installation of the geogrid shall be in accordance with the manufacturer's recommendation except overlaps (longitudinal and transverse) shall be 36 inches. The geogrid shall be placed directly on the soft soil and on the first layer of aggregate base surface.

Contractor shall utilize small to medium track-type dozer for excavation to minimize subgrade/groundwater disturbance. Spreading of the first and second layer of aggregate base shall also be performed with the same type of equipment. The depth and lift thickness of the layers shall be based on the equipment operating weight. Small equipment shall place the material at a minimum of 3 lifts or at the direction of the Engineer. The final lift of the first layer may require some compactive effort (static rolling) for the geogrid to be installed flat and level.

The second layer of aggregate base will require the same spreading equipment. The material will be compacted at 95% density. All compactive effort will be at static rolling (no vibration).

The asphalt layer shall be placed in lift specified in the special provisions. However, the initial breakdown shall require static rolling. Compaction in vibratory mode shall be at the direction of the Engineer.

The Contractor is encouraged to perform review of the site to evaluate conditions and the type of equipment to be used.

Protection of Existing Utilities:

Due to the extra excavation required to stabilize wet subgrade conditions, existing underground utilities may be near or within the excavation grading plane. Contractor is responsible to protect utilities in place.

Payment:

Full compensation for conforming to the requirements of this section for Subgrade Enhancement Treatment and for the protection of existing utilities shall be considered as included in the contract bid price for Roadway Excavation and Class 2 Aggregate Base and no additional compensation will be allowed therefor.

10-1.17

SUBGRADE ENHANCEMENT FABRIC (GEOGRID):

This work includes constructing a mechanically stabilized layer (MSL) with geogrid placed between the subgrade and pavement structure.

MSL geogrid must be Tensar TX7 or equal, and shall have the minimum characteristics shown in the table below:

Properties	Longitudinal	Diagonal	Transverse	General
Rib Pitch, in	1.60	1.60	-	
Mid-rib depth, in	-	0.08	0.06	
Mid-rib width, in	-	0.04	0.06	
Rib Shape				Rectangular
Aperture Shape				Triangular

If proposing an alternative MSL equal to Tensar TX7, the Contractor shall submit the following at least 30 days before use:

1. An MSL design sealed and signed by an Engineer registered in California.
2. Performance testing results documenting calibration and validation in compliance with the following:
 - a. Accelerated pavement testing (APT) conducted in the United States and in compliance with NCHRP Report 512 and Synthesis 325. Performance of pavement sections must be evaluated with standard highway moving wheel loads. Geogrid reinforced sections must be compared to a control section. Testing must be performed on paved structure. Test results of the geogrid section must demonstrate a minimum of 70,000 equivalent single axle loads

at less than 1/2 inch rut depth. The rutting performance of the sections must be assessed by trenching. The APT must be continued beyond the rutting failure criterion.

- b. In-ground performance testing conducted in California and in compliance with AASHTO R50. A minimum of 3 performance tests must be completed on subgrade conditions representative of this project. Reinforced sections must be compared to a control section for each subgrade condition. The testing and evaluation of the geogrid performance shall be conducted by an independent firm and all results of tests and reports shall be signed by an Engineer registered in California.

No proposed equal geogrid shall be accepted based on material index properties, in-air index testing of geogrid properties, or explanations of performance based on material index properties.

The listed product is intended as a guideline, and products from alternate manufacturers will be accepted provided that the product and its performance are a close approximation of the specified product. The Contractor shall submit the proposed alternate product to the Engineer for evaluation and approval prior to placing an order with the vendor.

The geogrid shall be installed in accordance with this specification and installation guidelines and recommendations by the manufacturer. Additionally, the Contractor shall not:

1. Stockpile material on MSL geogrid
2. Place more MSL geogrid than can be covered in 48 hours

The geogrid may be temporarily secured in place with ties, staples, pins, or backfill or as directed by the Engineer.

When underlying subgrade is firm and stable with minimum rutting, rubber-tired equipment may pass over the MSL geogrid at speeds less than 5 mph. Do not use sudden braking or sharp turning movements.

Damaged or defective geogrid shall be replaced by the Contractor at no additional cost to the County. Replacement of damaged area shall consist of replacing the affected area adding 3 feet of geogrid beyond the limits of the affected area.

Payment:

The contract bid price paid per square yard for geogrid shall include full compensation for furnishing all labor, tools, material, equipment, and incidentals, and for doing all the work involved and complete in place for each layer of geogrid in the area of the asphalt concrete roadway and concrete truck apron construction and no additional compensation will be allowed therefor. No adjustment in the bid price for overages or underages from the stated quantity for each will be allowed. Sections 4-1.03B(1) and 4-1.03B(2) of the

Standard Specifications do not apply for increases and decreases of pay quantity of more than 25% from the stated quantity.

10-1.18

CONCRETE CURB, GUTTER, CONCRETE HEADER (MOW STRIP), DRIVEWAY, SIDEWALK, UNDER SIDEWALK DRAIN AND "U" DRAIN, AND CURB RAMPS:

Concrete curb, gutter, concrete header (mow strip), driveway, sidewalk, under sidewalk drain, "U" drain and curb ramps shall be constructed in accordance with the County Road Improvement Standards And Specifications, or as directed by the Engineer and in conformance with Section 51, 73 and 90 of Standard Specifications.

The Contractor is hereby notified that the existing soils have a high sulfate/chloride solution content. In order to decrease the probability of these solutions penetrating the concrete, the concrete mix shall be Class 1 with Type V Portland cement with a maximum W/C ratio of 0.4. Additionally, an impermeable membrane (6-mil visqueen) and 12 inches of Class 2 Aggregate Base shall be placed under all concrete improvements.

Preparation of subgrade for the concrete structures shall be done in conformance with the requirements of Section 73-1.02 of the Standard Specifications.

The placement of 12" aggregate base material with an impermeable membrane (6-mil visqueen) is required under all concrete in accordance with County Road Improvement Standards, Specifications, and per these Special Provisions. The payment for aggregate base is covered under Section 10-1.15 "Aggregate Base" of these Special Provisions.

Excess material resulting from the excavation of the subgrade shall be disposed of as elsewhere provided in these Special Specifications. Full compensation for the removal of existing concrete structures shall be included in the contract bid prices for such items.

The Contractor is responsible for meeting all requirements of the Americans with Disability Act (ADA).

Construction of curb, gutter, sidewalk, header, driveways, under-sidewalk drain and U drain and curb ramps shall include, but not be limited to, the following:

- 1) Establishing grades, and assuring that all grades are met;
- 2) Performing all grading and compaction in accordance with County Standard 403 and/or details on the construction plans;
- 3) Construction of new sidewalk, curb ramps and driveways;
- 4) All scoring/grooving and required saw cutting;
- 5) Repair of existing asphalt and PCC surfacing;
- 6) Installing 1/2" wide expansion joints;
- 7) All landscaping, and related work, to return the area adjacent to the curb ramp to its original condition and to conform the area to the new improvements;

At a minimum, the area from the BCR to ECR shall meet all required Americans with Disabilities Act (ADA) standards. Therefore, to conform to existing conditions and/or to achieve the required four-foot level area (maximum of 2.0% crossfall) at the top portion of the curb ramp, it may be necessary to extend the work beyond the BCR/ECR in certain instances.

The area behind and along the sidewalk shall be filled and compacted with native or select material and graded to match and provide a smooth transition from the back of sidewalk, to the satisfaction of the Engineer.

Payment:

The contract unit bid prices will be paid per linear foot for Curb And Gutter, Curb only and Concrete Header (mow strip); square foot for Sidewalk, Driveway and Curb Ramps; and lump sum for Under Sidewalk Drain And U-Drain; and shall include full compensation for furnishing all labor, equipment, materials and tools, and incidentals, and for doing all the work involved in the construction and complete in place including the furnishing and placing of expansion joints within the right of way (and as directed by the Engineer on private property) and no additional compensation will be allowed therefor.

10-1.19

ADA DETECTABLE WARNING SURFACES (TRUNCATED DOMES):

Detectable warning surfaces consisting of truncated dome panels shall be yellow in color and shall meet all requirements of ADA, the Standard Specifications and these Special Provisions.

Payment:

Full compensation for furnishing all labor, tools, material, equipment, and incidentals, and for doing all the work involved and complete in place for ADA Detectable Warning Surfaces and for conforming to the requirements of this section shall be considered as included in the contract bid price for Curb Ramps and Sidewalk and no additional compensation will be allowed therefor.

10-1.20

DECORATIVE COLORED CONCRETE - BIKE PATH, BIKE RAMPS AND DRIVEWAY APPROACH:

Decorative colored concrete shall be constructed as shown on the construction plans and in accordance with Sections 51, 73 and 90 of the Standard Specifications, the recommendations of the tool and admixture manufacturers, and as directed by the Engineer. Preparation of subgrade for the decorative colored concrete shall be performed in conformance with the requirements of Section 73-1.02 of the Standard Specifications.

The Contractor is hereby notified that the existing soils have a high sulfate/chloride solution content. The concrete mix shall be Class 1 with Type V Portland cement with a maximum W/C ratio of 0.4. The following shall apply for each application:

The concrete for Bike Paths and Bike Ramps shall be 4 inches thick. The concrete for Driveway Approach shall be 8" inches thick.

The placement of 12" aggregate base material with an impermeable membrane (6-mil visqueen) is required under and around all concrete in accordance with County Road Improvement Standards, Specifications, and per these Special Provisions. The payment for aggregate base is covered under Section 10-1.15 "Aggregate Base" of these Special Provisions.

Colored concrete shall be produced by the integral color method as follows:

- a. Color conditioning admixture shall be added to the concrete in accordance with approved manufacturer's printed instructions. No calcium chloride shall be added to the concrete. Other non-chloride admixtures may be added subject to the approval of the Engineer. No fly ash admixture shall be added.
- b. Pure mineral pigments shall be added to the concrete in accordance with approved manufacturer's printed instructions. Other admixtures specified or approved by the Engineer shall be added to the concrete in accordance with Section 90-4, "Admixtures" of the Standard Specifications except that no calcium chloride, or other admixture containing ions, and no fly ash shall be used.

Color:

Integral color of the bike paths, bike ramps and colored driveway approach shall be "5059 Sorrento Red" by L.M. Schofield Co., or close approximation as approved by the Engineer. The listed product is intended as a guideline, and products from alternate manufacturers will be accepted provided that the product and color are close approximations as determined by the Engineer.

The Contractor shall provide the Engineer with Certificates of Compliance for all materials used in the coloring, curing and sealing of decorative colored concrete paving installation, including: Product Name, Supplier, Product Type, and Date of Delivery.

All concrete shall slope to drain. Depressions in the slab surface that hold water will not be accepted.

Expansion joints, joints fillers and joint sealants shall conform to Section 51-1.12 of the Standard Specifications. Joint filler shall be ½ inch wide, premolded, polyethylene expansion foam with a perforated removable top. Remove top of perforated foam filled expansion joint and apply uniform bead of sealant into the joint assuring complete wetting of the bonding surfaces. Thoroughly clean all joint surfaces and apply masking

tape to all surfaces adjacent to joints to protect them from primer and sealant residue. Prime all expansion joints carefully. Do not apply primer to any adjacent surfaces.

The decorative colored concrete shall be protected against rapid drying and damage by rain. Keep moist for at least 7 days after placing and protect by wet burlap, canvas covering or liquid-curing compound. If weather is hot or surface has dried out, spray surface with fine mist of water, starting no later than 2 hours after final troweling. Wetting is considered emergency work and shall be performed on weekends and holidays if necessary.

A clear concrete sealer shall be applied between 14 days and 28 days after concrete placement, per manufacturer's written instructions and specifications. The sealed surface shall be finished using a fine brush, which removes residual dust from the surface.

No cutting removal or patching of work will be permitted to correct damaged or defective work; defective sections shall be removed and replaced. Repair of damaged facilities shall be performed by the Contractor within a reasonable amount of time. No extensions of time will be allowed for correcting defective work.

Payment for the construction of decorative colored concrete shall include, but not be limited to, the following, which shall be considered as included in the unit price for Minor Concrete (Decorative Colored Concrete):

1. Establishing grades, and assuring that all grades are met;
2. Performing all grading and compaction;
3. All scoring/grooving, required saw cutting;
4. Installing 1/2" wide expansion joints;
5. Construction of concrete improvements, including furnishing and incorporating color admixtures, furnishing and applying color hardeners, and other work as required herein.

The area behind and along the sidewalk shall be filled and compacted with native or select material and graded to match and provide a smooth transition from the back of sidewalk, to the satisfaction of the Engineer.

Payment:

The contract bid price paid per square foot for Decorative Colored Concrete for Bike Path, Bike Ramps and Driveway Approach shall include full compensation for furnishing all labor, tools, material, equipment, and incidentals, and for doing all the work involved and complete in place and no additional compensation will be allowed therefor.

DECORATIVE COLORED STAMPED CONCRETE – MEDIAN ISLANDS:

Decorative colored stamped concrete shall be constructed as shown on the construction plans and in accordance with Sections 51, 73 and 90 of the Standard Specifications, the recommendations of the tool and admixture manufacturers, and as directed by the Engineer. Preparation of subgrade for the decorative colored stamped concrete shall be performed in conformance with the requirements of Section 73-1.02 of the Standard Specifications.

The Contractor is hereby notified that the existing soils have a high sulfate/chloride solution content. The concrete mix shall be Class 1 with Type V Portland cement with a maximum W/C ratio of 0.4.

Concrete shall be 4 inches thick. The placement of 12" aggregate base material with an impermeable membrane (6-mil visqueen) is required under all concrete in accordance with County Road Improvement Standards, Specifications, and per these Special Provisions. The payment for aggregate base is covered under Section 10-1.15 "Aggregate Base" of these Special Provisions.

The maximum size aggregate in the top 2 inches shall be 3/8 inch. Stamped concrete shall be imprinted with special tools while in the plastic stage to provide the pattern specific herein.

Colored concrete shall be produced by the integral color method as follows:

- a. Color conditioning admixture shall be added to the concrete in accordance with approved manufacturer's printed instructions. No calcium chloride shall be added to the concrete. Other non-chloride admixtures may be added subject to the approval of the Engineer. No fly ash admixture shall be added.
- b. Pure mineral pigments shall be added to the concrete in accordance with approved manufacturer's printed instructions. Other admixtures specified or approved by the Engineer shall be added to the concrete in accordance with Section 90-4, "Admixtures" of the Standard Specifications except that no calcium chloride, or other admixture containing ions, and no fly ash shall be used.

Pattern and Finish:

The color and pattern of decorative colored stamped concrete shall be as shown below.

Color:

Integral color shall be "5059 Sorrento Red" by L.M. Schofield Co., or close approximation as approved by the Engineer. The listed product is intended as a guideline, and products from alternate manufacturers will be accepted provided

that the product and color are close approximations as determined by the Engineer.

Pattern:

The stamped concrete pattern shall be Lithotex Pavecrafters "300 Cobblestone – Random Interlocking", or close approximation as approved by the Engineer. The listed product is intended as a guideline, and products from alternate manufacturers will be accepted provided that the product provides a pattern of the size and texture that is a close approximation to the guideline product.

The pattern shall be implanted, indented, imprinted or stamped into the surface by means of forms, molds, or other approved devices. The impressions shall be approximately 3/8 inch in width, and shall be ungrouted unless otherwise specified.

The Contractor shall install at least one test panel, in an area not to be incorporated into the work, for the specified color and pattern. The sample shall be a minimum of 20 square feet, which shall be subject to inspection and approval by the Engineer. If ordered by the Engineer, additional test panels shall be constructed and finished until a satisfactory representation is obtained. The approved test panel shall then be the standard of comparison for enhanced concrete paving. The Contractor shall dispose of the test panel when work is completed, unless otherwise directed by the Engineer.

The Contractor shall provide the Engineer with Certificates of Compliance for all materials used in the imprinting, texturing, coloring, curing, and sealing of decorative colored stamped concrete paving installation, including: Product Name, Supplier, Product Type, and Date of Delivery.

All concrete shall slope to drain. Depressions in the slab surface that hold water will not be accepted.

Expansion joints, joints fillers and joint sealants shall conform to Section 51-1.12 of the Standard Specifications. Joint filler shall be 1/2 inch wide, premolded, polyethylene expansion foam with a perforated removable top. Remove top of perforated foam filled expansion joint and apply uniform bead of sealant into the joint assuring complete wetting of the bonding surfaces. Thoroughly clean all joint surfaces and apply masking tape to all surfaces adjacent to joints to protect them from primer and sealant residue. Prime all expansion joints carefully. Do not apply primer to any adjacent surfaces.

The decorative colored stamped concrete shall be protected against rapid drying and damage by rain. Keep moist for at least 7 days after placing and protect by wet burlap, canvas covering or liquid-curing compound. If weather is hot or surface has dried out, spray surface with fine mist of water, starting no later than 2 hours after final troweling. Wetting is considered emergency work and shall be performed on weekends and holidays if necessary.

A clear concrete sealer shall be applied between 14 days and 28 days after concrete placement, per manufacturer's written instructions and specifications. The sealed surface shall be finished using a fine brush, which removes residual dust from the surface.

No cutting removal or patching of work will be permitted to correct damaged or defective work; defective sections shall be removed and replaced. Repair of damaged facilities shall be performed by the Contractor within a reasonable amount of time. No extensions of time will be allowed for correcting defective work.

All decorative colored stamped concrete construction shall be performed by qualified personnel. The Contractor shall provide written evidence demonstrating to the satisfaction of the Engineer that the installer has successfully performed concrete placement and finishing work similar to that specified herein. Such evidence shall include past project documentation and references.

Payment for the construction of decorative colored stamped concrete shall include, but not be limited to, the following, which shall be considered as included in the unit price for Minor Concrete (Stamped Concrete):

1. Establishing grades, and assuring that all grades are met;
2. Performing all grading and compaction;
3. All scoring/grooving, required saw cutting, and specified decorative pattern stamping;
4. Installing ½" wide expansion joints;
5. Construction of stamped concrete improvement, including furnishing and incorporating color admixtures, furnishing and applying color hardeners, furnishing and applying stamp devices and other work as required herein.

Payment:

The contract bid price paid per square foot for Minor Concrete (Decorative Stamped Colored Concrete - Median Island) shall include full compensation for furnishing all labor, tools, material, equipment, and incidentals, and for doing all the work involved and complete in place and no additional compensation will be allowed therefor.

10-1.22

DECORATIVE COLORED STAMPED CONCRETE PAVEMENT FOR TRUCK APRON:

Decorative Stamped Colored Concrete Pavement for Truck Apron shall consist of constructing decorative colored stamped concrete pavement as shown on the plans and in conformance with Section 40, "Portland Cement Concrete Pavement," and Section 90, "Portland Cement Concrete" of the Standard Specifications and these Special Provisions.

Definitions

The following definition shall apply to this section:

OPENING AGE – The age at which the concrete will achieve the specified strength for opening to public or Contractor traffic.

Just-In-Time Training

Just-In-Time Training (JITT) shall be mandatory, and consist of a formal joint training class on decorative colored concrete. Construction operations for decorative colored concrete shall not begin until the Contractor's and the Engineer's personnel have completed the mandatory JITT.

The JITT session will be conducted for not less than 4 hours on decorative colored concrete. The training class shall be conducted at the project field location convenient for both the Contractor's and the Engineer's project staffs. Scheduling and completion of the JITT session shall be completed at least 5 business days prior to the start of construction of decorative colored concrete. The class shall be held during normal working hours.

The JITT instructor shall be experienced in the construction methods, materials, and test methods associated with decorative concrete including colored and stamped concrete. The instructor shall not be an employee of the Contractor or a member of the Engineer's field staff. A copy of the syllabus, handouts, and presentation material shall be submitted to the Engineer at least 7 days before the day of the training. Selection of the course instructor, the course content and training site shall be as mutually agreed to by the Contractor and the Engineer. The instructor shall issue a certificate of completion to the participants upon the completion of the class. The certificate shall include the course title, date and location of the class, the name of the participant, instructor's name, location and phone number.

The Contractor's or Engineer's personnel involved with decorative colored concrete operations will not be required to attend JITT if they have completed similar training within the previous 12 months of the date of the JITT for this project. The Contractor shall provide a certificate of class completion as described above for each staff member to be excluded from the JITT session. The final determination for exclusion of any staff member's participation will be as determined by the Engineer. All attendees of the JITT shall complete, and submit to the Engineer, an evaluation of the training. The course evaluation form will be provided by the Engineer.

It is expressly understood that Just-In-Time Training shall not relieve the Contractor of any responsibility under the contract for the successful completion of the work in conformity with the requirements of the plans and specifications.

Trial Slab

Prior to construction of decorative stamped colored concrete pavement, the Contractor shall construct one or more trial slabs under conditions similar to those that will exist during concrete pavement placement, for each mix design, to show that personnel, equipment, and mixing, placing, texturing/imprinting, curing, and sawing techniques will

produce a concrete pavement conforming to these Special Provisions in the anticipated time period under similar atmospheric and temperature conditions as pavement construction and to establish the correlation described below. During production and placement, the Contractor shall conform to the requirements of these Special Provisions and to the procedure outlined in the Quality Control Plan (QCP) herein to ensure that mixing, transporting, placing, finishing, curing and sawing techniques and that personnel and equipment to be used will produce decorative colored concrete pavement conforming to these Special Provisions.

A trial slab shall be constructed using the approved mix design, admixtures and conditions for batching. During construction of trial slab, the Contractor shall demonstrate placement at the minimum and maximum times allowed from batching to placement. Decorative stamped colored concrete pavement within the roadway shall not proceed until a trial slab meeting the requirements of these Special Provisions has been constructed.

The minimum trial slab dimensions shall be 10' x 20' and shall be 9 inches thick where planned decorative colored concrete pavement nominal thickness is less than 9 inches. Where there are planned decorative colored concrete pavement with greater and less than 10 inches thickness then two trial slabs shall be required one at 9 inches thick and one at 10 inches thick. Trial slabs shall be placed near the project site at a location mutually acceptable to the Engineer and the Contractor except slabs shall not be placed on the roadway or within the project limits.

During trial slab construction, the Contractor shall sample and split the aggregate for gradings, cleanness value, and sand equivalent testing with the Engineer, at the Contractor's cost. Both sets of test results of these samples shall conform to the provisions in Section 90-2.02, "Aggregates" of the Standard Specifications. If test results do not conform to the requirements, the trial slab will be rejected.

During trial slab construction and within 20 minutes of decorative colored concrete delivery, beams shall be fabricated in conformance with the requirements in California Test 524. Beams shall be used to determine 14-, 21-, and 28-day modulus of rupture values. Beams fabricated for opening age testing shall be cured so that the monitored temperature in the beams and the trial slab are within 5° F at all times. Internal temperatures of the trial slab and opening age beams shall be monitored and recorded at minimum time intervals of 5 minutes by installing thermocouples and or thermistors connected to strip-chart recorders or digital data loggers. Temperature recording devices shall be accurate to within $\pm 2^\circ$ F. Internal temperature readings shall be measured at one inch from the top and one inch from the bottom, no closer than 3 inches from any edge of the concrete elements, until the early age testing is completed. Beams fabricated for testing shall be cured in conformance with the requirements in California Test 524. Testing shall be performed by the Contractor and witnessed by the Engineer. At the Engineer's request, the Contractor shall produce samples for the Engineer to test. Strength results from beams shall be the basis for determining whether decorative concrete pavement operations may proceed. Trial slabs 9 inches thick shall have an opening age modulus of rupture of not less than 400 pounds per square inch at age 14 days and a

28-day modulus of rupture of not less than 600 pounds per square inch. Beams failing opening age or 14-day modulus of rupture requirements shall be cause for the rejection of the trial slab.

When proposed by the Contractor, in writing, and approved by the Engineer, ASTM Designation: C 805 or C 900 shall be used to estimate the modulus of rupture of the pavement at early ages. The selected test method shall be used to determine modulus of rupture until 7 days after the Contractor notifies the Engineer of withdrawal of the proposal or 7 days after the Engineer notifies the Contractor of withdrawal of approval, in writing. During trial slab curing, correlation testing shall be performed to determine the relation between the modulus of rupture and ASTM Designation: C 805 or C 900 performed on the trial slab. The correlation shall be established by testing at 4 or more time intervals. At a minimum, tests shall be performed one hour before and one hour after the opening age and two others within 15 minutes of the opening age. Modulus of rupture estimates shall be calculated with either a linear, exponential or logarithmic, least squares best-fit equation, whichever provides the best correlation coefficient.

The Contractor shall state in detail the intended location and time; procedure for production, placement and finishing of decorative colored concrete pavement; sampling, sample imprinting, curing and sample transportation; testing and reporting of test results for the trial slab in the QCP.

Materials resulting from construction of trial slabs and test specimens shall become the property of the Contractor and shall be removed and disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way" of the Standard Specifications.

Decorative Stamped Colored Concrete Pavement

Decorative Stamped Colored Concrete Pavement shall be a concrete made with hydraulic cement that develops opening age and 28-day specified modulus of rupture strengths.

Requirements of Sections 40-1.05, "Proportioning" and 90-1.01, "Description" of the Standard Specifications shall not apply.

Primary aggregate gradings shall conform to the gradation requirements of Section 90-3, "Aggregate Gradings" of the Standard Specifications. Combined aggregate grading used in decorative colored concrete shall be one-inch maximum grading. When combined in the proportions determined by the Contractor, the percent passing the 3/8-inch sieve and retained on the No. 8 sieve shall not be less than 16 percent of the total aggregate.

The cementitious material content shall not be less than 675 pounds per cubic yard and fly ash will be allowed.

Cement for decorative colored concrete shall be hydraulic cement as defined in ASTM Designation: C 219.

The Contractor shall submit uniformity reports for cement used in decorative colored concrete to the Transportation Materials Laboratory. Uniformity reports shall conform to the requirements in ASTM Designation: C 917, except that testing age and water content may be modified to suit the particular material.

When preparing concrete mixes that will contain integral coloring agent admixtures, the type of water-reducing and accelerating admixtures to be added shall be as recommended by the color agent manufacturer.

Color:

Integral color shall be "5059 Sorrento Red" by L.M. Schofield Co.," or close approximation as approved by the Engineer. The listed product is intended as a guideline, and products from alternate manufacturers will be accepted provided that the product and color are close approximations as determined by the Engineer.

Pattern:

The decorative concrete pattern shall be "Lithotex Pavecrafters "300 Cobblestone – Random Interlocking"", or close approximation as approved by the Engineer. The listed product is intended as a guideline, and products from alternate manufacturers will be accepted provided that the product provides a pattern of the size and texture that is a close approximation to the guideline product.

The pattern shall be implanted, indented, imprinted or stamped into the surface by means of forms, molds, or other approved devices. The impressions shall be approximately 3/8 inch in width, and shall be ungrouted unless otherwise specified.

At least 10 days prior to use in the trial slab, the Contractor shall submit a mix design for decorative concrete that shall include the following:

1. Opening age.
2. Aggregate gradings.
3. Mix proportions of hydraulic cement and aggregate.
4. Types and amounts of chemical admixtures including coloring agent.
5. Maximum time allowed between batching decorative colored concrete and placing roadway pavement.
6. Range of ambient temperatures over which the mix design is effective (18° F maximum range).
7. Final set time of the concrete.
8. Any special instructions or conditions, including but not limited to, water temperature requirements when appropriate.

The Contractor shall submit more than one mix design to plan for ambient temperature variations anticipated during placement of the roadway pavement. Each mix shall be designed for a maximum ambient temperature range of 18° F. The Contractor shall develop and furnish modulus of rupture development data for each proposed mix design.

Modulus of rupture development data for up to 21 days shall be provided to the Engineer prior to beginning paving operations. Modulus of rupture development data may be developed from laboratory prepared samples. The testing ages for modulus of rupture development data shall include opening age, 14 days, 21 days and 28 days. The Contractor shall also provide the Engineer with Certificates of Compliance for all materials used in the imprinting, texturing, coloring, curing, and sealing of decorative colored concrete including: Product Name, Supplier, and Product Type.

Decorative colored concrete pavement shall develop a minimum modulus of rupture of as specified in "Pay Factor Adjustment for Low Modulus of Rupture" of these Special Provisions before opening to public or Contractor traffic. In addition, decorative colored concrete pavement shall develop a minimum modulus of rupture of 600 pounds per square inch in 28 days after placement. Decorative colored concrete pavement that attains a modulus of rupture of less than specified may be accepted in conformance with "Pay Factor Adjustment for Low Modulus of Rupture" specified herein. Modulus of rupture shall be determined by averaging results from 3 beam specimens tested in conformance with the requirements in California Test 524. Beam specimens may be fabricated using an internal vibrator in conformance with the requirements in ASTM Designation: C 31. No single test shall represent more than the production of that day or 100 cubic yards, whichever is less.

Modulus of rupture at early age may be estimated using the correlation established during trial slab placement. When modulus of rupture at early age is determined using beam specimens, beam specimens shall be cured under atmospheric conditions and at a temperature within 5° F of the pavement. Modulus of rupture at other ages will be determined using beams cured and tested in conformance with California Test 524. The Engineer will perform the testing to determine modulus of rupture values of the decorative colored concrete pavement. The modulus of rupture, as determined above, will be the basis for accepting or rejecting the decorative colored concrete pavement for modulus of rupture requirements.

Pay Factor Adjustment for Low Modulus of Rupture

Payment for Decorative Stamped Colored Concrete Pavement will be adjusted for low modulus of rupture tests as follows:

1. Decorative Stamped Colored Concrete Pavement with modulus of rupture of 400 pounds per square inch or greater before the lane is opened to the traffic and 28-day modulus of rupture of 600 pounds per square inch or greater will be paid for at the contract price per cubic yard for decorative Colored Concrete Pavement.
2. Decorative Stamped Colored Concrete Pavement with a 28-day modulus of rupture of less than 500 pounds per square inch will not be paid for, and shall be removed and replaced, at the Contractor's expense with Decorative Colored Concrete Pavement conforming to the requirements of these Special Provisions.

3. Decorative Stamped Colored Concrete Pavement with modulus of rupture of 300 pounds per square inch or greater before the lane is opened to traffic and a 28-day modulus of rupture of equal to or greater than 500 pounds per square inch will be paid for at a percentage of the contract price per cubic yard for Decorative Colored Concrete Pavement in conformance with the percentages in the pay table below.
4. Decorative Stamped Colored Concrete Pavement with modulus of rupture of less than 300 pounds per square inch when the lane is opened to traffic will be rejected and shall be removed and replaced at the Contractor's expense with Decorative Colored Concrete Pavement conforming to the requirements of these Special Provisions.

Percentage Pay Table

Modulus of Rupture (psi) at opening to traffic	28-Day Modulus of Rupture (psi)		
	Greater than or equal to 600	Less than 600 and greater than or equal to 550	Less than 550 and greater than or equal to 500
Greater than or equal to 400	100%	95%	90%
Less than 400 and greater than or equal to 350	95%	95%	90%
Less than 350 and greater than or equal to 300	80%*	80%*	80%*

Any replacement panels that develop one or more transverse cracks within 21 days after placement shall be removed and replaced at the Contractor's expense with Decorative Colored Concrete Pavement conforming to the requirements of these Special Provisions. A transverse crack is defined as a crack running from one longitudinal edge of the panel to the other.

The Contractor shall pay to the County adjustments in payment for low modulus of rupture tests in conformance with the requirements specified in the tables in this section. The County will deduct the amount of the adjustments from moneys due or that may become due, the Contractor under the contract.

Proportioning

Weighing, measuring and metering devices used for proportioning materials shall conform to the provisions in Section 9-1.01, "Measurement of Quantities" of the Standard Specifications and these Special Provisions.

Over and under dials, and other indicators for weighing and measuring systems used in proportioning materials shall be grouped so that the smallest increment for each indicator can be accurately read from the point at which the proportioning operation is controlled for ingredients batched at a central batch plant. In addition, indicators for weighing and measuring cement batched from a remote weighing system shall also be placed so that each indicator can be accurately read from the point at which the proportioning operation is controlled.

Aggregates shall be handled and stored in conformance with the provisions in Section 90-5.01, "Storage of Aggregates" of the Standard Specifications. Liquid admixtures shall be proportioned in conformance with the provisions in Section 90-4.10, "Proportioning and Dispensing Liquid Admixtures" of the Standard Specifications.

Weighing equipment shall be insulated against vibration or movement of other operating equipment. When the plant is in operation, the weight of each draft of material shall not vary from the designated weight by more than the tolerances specified herein. Each scale graduation shall be 0.001 of the usable scale capacity.

Aggregate shall be weighed cumulatively and equipment for the weighing of aggregate shall have a zero tolerance of ± 0.5 percent of the designated total batch weight of the aggregate. Equipment for the separate weighing of the cement shall have a zero tolerance of ± 0.5 percent of its designated individual batch draft. Equipment for measuring water shall have a zero tolerance of ± 0.5 percent of its designated weight or volume.

The weight indicated for any individual batch of material shall not vary from the preselected scale setting by more than the following:

Material	Tolerance
Aggregate	± 1.0 percent of designated batch weight
Cement	± 0.5 percent of designated batch weight
Water	± 1.5 percent of designated batch weight or volume

Proportioning shall consist of dividing the aggregates into the specified sizes, each stored in a separate bin, and combining them with cement and water as provided in these Special Provisions. Dry ingredients shall be proportioned by weight. Liquid ingredients shall be proportioned by weight or volume.

At the time of batching, aggregates shall have been dried or drained sufficiently to result in stable moisture content, so that no visible separation of water from aggregate will take place during the proportioning process. In no event shall the free moisture content of the fine aggregate at the time of batching exceed 8 percent of its saturated, surface-dry weight.

If separate supplies of aggregate material of the same size group with different moisture content or specific gravity or surface characteristics affecting workability are available at the proportioning plant, withdrawals shall be made from one supply exclusively and the materials therein completely exhausted before starting upon another supply.

Cement shall be kept separate from the aggregates until released for discharge into the mixer. Cement shall be free of lumps and clods when discharged into the mixer. Fabric containers used for transportation or proportioning of cement shall be clean and free of residue before reuse.

Weigh systems for proportioning aggregate and cement shall be individual and distinct from all other weigh systems. Each weigh system shall be equipped with a hopper, a lever system, and an indicator to constitute an individual and distinct material-weighing device.

For batches with a volume of one cubic yard or more, proportioning equipment shall conform to one of the following methods:

1. All ingredients shall be batched at a central batch plant and charged into a mixer truck for transportation to the pour site. Ingredient proportioning shall meet the requirements of Section 90-5, "Proportioning" of the Standard Specifications.
2. All ingredients except the cement shall be batched at a central batch plant and charged into a mixer truck for transportation to a remote located silo and weigh system for the proportioning of the cement. The remote system shall proportion cement for charging the mixer truck.
3. All ingredients except the cement shall be batched at a central batch plant and charged into a mixer truck for transportation to a remote location where pre-weighed, containerized cement shall be added to the mixer truck. The cement pre-weighing operation shall utilize a platform scale. The platform scale shall have a maximum capacity of 2.75 tons with a maximum graduation size of one pound. Cement shall be pre-weighed into a fabric container. The minimum amount of cement to be proportioned into any single container shall be one half of the total amount required for the load of Decorative Colored Concrete being produced.
4. Cement, water, and aggregate shall be proportioned volumetrically in conformance with these Special Provisions.

In order to check the accuracy of batch weights, the gross weight and tare weight of truck mixers shall be determined when ordered by the Engineer. The equipment shall be weighed on scales designated by the Engineer.

The Contractor shall install and maintain in operating condition an electrically actuated moisture meter. The meter shall indicate, on a readily visible scale, changes in the moisture content of the fine aggregate as it is batched. The meter shall have a sensitivity of 0.5 percent by weight of the fine aggregate.

No additional mixing water shall be incorporated into the concrete during hauling or after arrival at the delivery point, unless authorized by the Engineer. If the Engineer authorizes additional water to be incorporated into the concrete, the drum shall be revolved not less than 30 revolutions at mixing speed after the water is added and before discharge is commenced. Water added to the truck mixer at the job site shall be measured through a meter that conforms to the provisions in Section 9-1.01, "Measurement of Quantities" of the Standard Specifications.

Aggregate discharged from several bins shall be controlled by gates or by mechanical conveyors. The means of discharge from the bins and from the weigh hopper shall be interlocked so that no more than one bin can discharge at a time, and so that the weigh hopper cannot be discharged until the required quantity from each of the bins has been deposited in the weigh hopper.

Weighmaster Certificates

Weighmaster certificates for Decorative Stamped Colored Concrete Pavement, regardless of the proportioning method used, shall include all information necessary to trace the manufacturer, and manufacturer's lot number for the cement being used. When proportioned into fabric containers the weighmaster certificates for the cement shall contain date of proportioning, location of proportioning and actual net draft weight of the cement. When proportioned at the pour site from a storage silo the weighmaster certificates shall contain date of proportioning, location of proportioning and the net draft weight of the cement used in the load.

Volumetric Proportioning

When Decorative Stamped Colored Concrete Pavement is proportioned by volume, the method shall conform to requirements specified herein.

Aggregates shall be handled and stored in conformance with the provisions in Section 90-5.01, "Storage of Aggregates" of the Standard Specifications. Liquid admixtures shall be proportioned in conformance with the provisions in Section 90-4.10, "Proportioning and Dispensing Liquid Admixtures" of the Standard Specifications.

Batch-mixer trucks shall be equipped to proportion cement, water, aggregate and additives by volume. Aggregate feeders shall be connected directly to the drive on the cement vane feeder. The cement feed rate shall be tied directly to the feed rate for the aggregate and other ingredients. Any change in the ratio of cement to aggregate shall be accomplished by changing the gate opening for the aggregate feed. The drive shaft of the aggregate feeder shall be equipped with a revolution counter reading to the nearest full or partial revolution of the aggregate delivery belt.

Aggregate shall be proportioned using a belt feeder operated with an adjustable cutoff gate delineated to the nearest quarter increment. Height of the gate opening shall be readily determinable. Cement shall be proportioned by a method that conforms to the accuracy requirements of these special provisions. Water shall be proportioned by a meter conforming to the provisions in Section 9-1.01, "Measurement and Payment" of the Standard Specifications and these Special Provisions.

Delivery rate of aggregate and cement per revolution of the aggregate feeder shall be calibrated at appropriate gate settings for each batch-mixer truck used on the project and for each aggregate source. Batch-mixer trucks shall be calibrated at 3 different aggregate gate settings that are commensurate with production needs. Two or more calibration runs shall be required at each of the different aggregate gate openings. The actual weight of

material delivered for aggregate proportioning device calibrations shall be determined by a platform scale as specified in these Special Provisions.

Aggregate belt feeder shall deliver aggregate to the mixer with volumetric consistency so that deviation for any individual aggregate delivery rate check-run shall not exceed 1.0 percent of the mathematical average of all runs for the same gate opening and aggregate type. Each test run shall be at least 1,000 pounds. Fine aggregate used for calibration shall not be reused for device calibration.

At the time of batching, aggregates shall be dried or drained sufficiently to result in stable moisture content, so that no visible separation of water from aggregate takes place during the proportioning process. In no event shall the free moisture content of the fine aggregate at the time of batching exceed 8 percent of its saturated, surface-dry weight.

If separate supplies of aggregate material of the same size group with different moisture content or specific gravity or surface characteristics affecting workability are available at the proportioning plant, withdrawals shall be made from one supply exclusively and the materials therein completely exhausted before starting another supply.

Rotating and reciprocating equipment on batch-mixer trucks shall be covered with metal guards.

The cement proportioning system shall deliver cement to the mixer with a volumetric consistency so that the deviation for any individual delivery rate check-run shall not exceed 1.0 percent of the mathematical average of 3 runs of at least 1,000 pounds each. Cement used for calibration shall not be reused for device calibration.

Water meter accuracy shall be such that, when operating between 50 percent and 100 percent of production capacity, the difference between the indicated weight of water delivered and the actual weight delivered shall not exceed 1.5 percent of the actual weight for each of two individual runs of 300 gallons. The water meter shall be calibrated in conformance with the requirements of California Test 109 and shall be equipped with a resettable totalizer and display the operating rate.

Calibration tests for aggregate, cement and water proportioning devices shall be conducted with a platform scale located at the calibration site. Weighing of test run calibration material shall be performed on a platform scale having a maximum capacity not exceeding 2.75 tons with maximum graduations of one pound. The platform scale shall be error tested within 8 hours of calibration of batch-mixer truck proportioning devices. Error testing shall be performed with test weights conforming to California Test 109 and shall produce a witness scale that is within 2 graduations of the test weight load. The scale shall be available for use at the production site throughout the production period. Equipment needed for the calibration of proportioning systems shall remain available at the production site throughout the production period. A Certificate of Compliance in conformance with the provisions in Section 6-1.07, "Certificates of Compliance" shall be furnished with each delivery of aggregate, cement, and admixtures used for calibration tests and shall be submitted to the Engineer with certified copies of

the weight of each delivery. The Certificate of Compliance shall state that the source of materials used for the calibration tests is from the same source as to be used for the planned work. The Certificate of Compliance shall state that the material supplied conforms to the Standard Specifications and these Special Provisions and shall be signed by an authorized representative who shall have the authority to represent and act for the Contractor.

The batch-mixer truck shall be equipped so that an accuracy check can be made prior to the first operation for the project and at any other time as directed by the Engineer. Further calibration of proportioning devices shall be required every 30 days after production begins or when the source or type of any ingredient is changed. A spot calibration shall consist of calibration of the cement proportioning system only. A two run spot re-calibration of the cement proportioning system shall be performed each time 55 tons of cement has passed through the batch-mixer truck. Should the spot re-calibration of the cement proportioning system fall outside the limitations specified herein, a full calibration of the cement proportioning system shall be completed before the resumption of production.

Liquid admixtures shall be proportioned by a meter.

Cement storage shall be located immediately before the cement feeder and shall be equipped with a device that will automatically shut down the power to the cement feeder and aggregate belt feeder when the cement storage level is lowered to a point where less than 20 percent of the total volume is left in storage.

The Contractor shall furnish aggregate moisture determinations, made in conformance with the requirements of California Test 223, at least every 2 hours during proportioning and mixing operations. Moisture determinations shall be recorded and presented to the Engineer at the end of the production shift.

Each aggregate bin shall be equipped with a device that will automatically shut down the power to the cement feeder and the aggregate belt feeder when the aggregate discharge rate is less than 95 percent of the scheduled discharge rate of any bin.

Indicators specified herein shall be in working order prior to commencing proportioning and mixing operations and shall be visible when standing near the batch-mixer truck.

Identifying numbers of batch-mixer trucks shall be at least 3 inches in height, and be located on the front and rear of the vehicles.

Volumetric proportioned Decorative Stamped Colored Concrete Pavement shall be mixed in a mechanically operated mixer of adequate size and power for the type of Decorative Stamped Colored Concrete Pavement to be placed. Mixers may be of the auger type and shall be operated uniformly at the mixing speed recommended by the manufacturer. Mixers that have an accumulation of hard concrete or mortar shall be removed from service until cleaned. Other types of mixers may be used provided mixing quality will meet the requirements of these Special Provisions.

Charge or rate of feed to the mixer shall not exceed that which will permit complete mixing of the materials. Dead areas in the mixer, where material does not move or is not sufficiently agitated, shall be corrected by a reduction in the volume of material or by other adjustments. The mixer shall be designed to provide sufficient mixing action and movement to produce properly mixed Decorative Stamped Colored Concrete Pavement. Mixing shall continue until a homogeneous mixture is produced at discharge from the mixer. There shall be no lumps or evidence of non-dispersed cement at discharge from the mixer. No water shall be added to the Decorative Stamped Colored Concrete Pavement after discharge from the mixer.

Equipment having components made of aluminum or magnesium alloys, which may have contact with plastic concrete during mixing or transporting of Decorative Stamped Colored Concrete Pavement, shall not be used.

Uniformity of concrete mixtures will be determined by differences in penetration measurement made in conformance with the requirements in California Test 533. Difference in penetration, determined by comparing penetration tests on 2 samples of mixed concrete from the same batch or truck mixer load, shall not exceed 5/8 inch. The Contractor shall furnish samples of freshly mixed concrete and provide facilities for obtaining the samples. Sampling facilities shall be safe, accessible, and clean and produce a sample which is representative of production. Sample devices and sampling methods shall also conform to the requirements of California Test 125.

Ice shall not be used to cool Decorative Stamped Colored Concrete Pavement directly. When ice is used to cool water used in the mix, all of the ice shall be melted before entering the mixer.

Cement shall be proportioned and charged into the mixer by means that will result in no losses of cement due to wind, or due to accumulation on equipment, or other conditions which will vary the required quantity of cement.

Each mixer shall have a metal plate or plates, prominently attached, on which the following information is provided:

1. Uses for which the equipment is designed.
2. Manufacturer's guaranteed capacity of the mixer in terms of the volume of mixed concrete.
3. Speed of rotation of the mixer.

Consistency and workability of mixed concrete when discharged at the delivery point shall be suitable for placement and consolidation.

Information generated by volumetric devices will not be used for payment calculations.

The device that controls the proportioning of cement, aggregate and water shall produce a log of production data. The log of production data shall consist of a series of snapshots

captured at 15-minute intervals throughout the period of daily production. Each snapshot of production data shall be a register of production activity at that time and not a summation of the data over the preceding 15 minutes. The amount of material represented by each snapshot shall be the amount produced in the period of time from 7.5 minutes before to 7.5 minutes after the capture time. The daily log shall be submitted to the Engineer, in electronic or printed media, at the end of each production shift or as requested by the Engineer, and shall include the following:

1. Weight of cement per revolution count.
2. Weight of each aggregate size per revolution count.
3. Gate openings for each aggregate size being used.
4. Weight of water added to the concrete per revolution count.
5. Moisture content of each aggregate size being used.
6. Individual volume of all other admixtures per revolution count.
7. Time of day.
8. Day of week.
9. Production start and stop times.
10. Batch-mixer truck identification.
11. Name of supplier.
12. Specific type, size, or designation of concrete being produced.
13. Source of the individual aggregate sizes being used.
14. Source, brand and type of cement being used.
15. Source, brand and type of individual admixtures being used.
16. Name and signature of operator.

Required report items may be input by hand into a pre-printed form or captured and printed by the proportioning device. Electronic media containing recorded production data shall be presented in a tab delimited format on a CD-ROM or a USB flash drive. Each snapshot of the continuous production shall be followed by a line-feed carriage-return with allowances for sufficient fields to satisfy the amount of data required by these specifications. The reported data shall be in the above order and shall include data titles at least once per report.

Spreading, Compacting and Shaping

Metal or wood side forms may be used. Wood side forms shall not be less than 1-1/2 inches thick. Side forms shall be of sufficient rigidity, both in the form and in the connection with adjoining forms, that movement will not occur under the force from subgrading and paving equipment or from the pressure of concrete.

Side forms shall remain in place until the pavement edge no longer requires the protection of forms. Side forms shall be thoroughly cleaned and oiled prior to each use.

Consolidation of Decorative Stamped Colored Concrete Pavement shall be by means of high-frequency internal vibrators after the Decorative Stamped Colored Concrete Pavement is deposited on the subgrade. Vibrating shall be done in a manner to assure uniform consolidation adjacent to forms and across the full paving width. Decorative

Stamped Colored Concrete Pavement shall be placed as nearly as possible in its final position and use of vibrators for extensive shifting of the weight of Decorative Stamped Colored Concrete Pavement will not be permitted.

Decorative Stamped Colored Concrete Pavement shall be spread and shaped by suitable powered finishing machines and supplemented by hand finishing as necessary. Methods of spreading, shaping and consolidating that result in segregation, voids or rock pockets shall be discontinued. The Contractor shall use methods that will produce dense homogeneous pavement conforming to the required cross section.

After the Decorative Stamped Colored Concrete Pavement has been mixed and placed, no additional water shall be added to the surface to facilitate finishing. Surface finishing additives, when used, shall be as recommended by the manufacturer of the cement and shall be approved by the Engineer prior to use.

Joints

Contractor shall prepare and submit a "Joint Layout" plan depicting the proposed transverse joint locations for Engineer's review and approval. The proposed joints shall be placed from center curb to edge of concrete pavement at a minimum of 6 feet and maximum 10 feet measured at inner circle and as shown on the plans. The transverse joints shall be placed at equal spacing radially with 1-foot plus or minus tolerance. Contractor shall allow Engineer at least 7 working days to review the Joint Layout plan and to provide comments or approve plans.

A transverse contact (construction) joint shall be constructed, including dowel bars, at the end of each day's work or where concrete placement is interrupted for more than 30 minutes, to coincide with the next transverse weakened plane joint location. If sufficient concrete has not been mixed to form a slab to match the next transverse weakened plane joint, when an interruption occurs, the excess concrete shall be removed and disposed of back to the last preceding joint. The cost of removing and disposing of excess concrete shall be at the Contractor's expense. Excess material shall become the property of the Contractor and shall be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way" of the Standard Specifications. A metal or wooden bulkhead (header) shall be used to form the joint. The bulkhead shall be designed to accommodate the installation of dowel bars.

Transverse weakened plane joints shall be constructed by the sawing method as described in Section 40-1.8B(1) of the Standard Specifications. Sawing of weakened plane joints shall be completed within 2 hours of completion of final surface or when cutting action will not tear, ravel, abrade, or otherwise damage surface and before developing random cracks. Strictly follow manufacturer's instructions for saw-cutting joints when working with integral color concrete to prevent discoloration or unwanted staining effects. Joints that develop random cracking shall be removed to the nearest controlled joint and replaced with colored concrete pavement containing dowel bars in conformance with these Special Provisions and as shown on the plans. The removal and replacement work shall be at the Contractor's expense.

Sawed grooves shall be cut to a maximum of 0.12-inch in width and the minimum depth of cut shall be calculated utilizing the formula in Section 40-1.08B(1), "Sawing Method" of the Standard Specifications.

Isolation joints, when required by the Engineer, shall conform to this provision for materials and installation as specified herein. Final alignment of perpendicular transverse weakened plane joints in pavement shall not be made to match the spacing or skew of the weakened plane joints in the existing parallel concrete pavement. Tie bars shall not be placed across longitudinal isolation joints. The edge of the existing pavement shall be saw cut a width 1/8 inch and to the full depth of the existing concrete pavement to produce a flat vertical face. Prior to placing concrete, joint filler material shall be placed as shown on the joint layout plans. The joint filler shall be secured to the face of the existing pavement joint face by a method that will hold the joint filler in place and prevent the new concrete from adhering to the existing concrete, during placement of concrete.

Sealant for longitudinal isolation joints shall be silicone and placed in conformance with the requirements for liquid joint sealant installation as specified herein, except references to backer rods shall not apply.

Dowel Bar and Placement

Epoxy (Drill and Bond)

Epoxy for bonding dowel bars to Portland cement concrete or Decorative Stamped Colored Concrete Pavement shall be a two-component, epoxy-resin, conforming to the requirements of ASTM Designation: C 881, Type V, Grade 3 (Non-Sagging), Class A, B or C. The class used shall be dependent on the internal temperature of the hardened concrete at the time the epoxy is to be applied. Class A shall be used when the internal temperature is below 40°F, but not lower than recommended by the manufacturer. Class B shall be used when the internal temperature is from 40°F to 60°F. Class C shall be used when the internal temperature is above 60°F, but not higher than recommended by the manufacturer. A Certificate of Compliance in conformance with the provisions in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications shall be furnished with the epoxy. A copy of the manufacturer's recommended installation procedure shall be provided to the Engineer at least 7 days prior to the start of work. Epoxy shall be applied in conformance with the manufacturer's recommendations.

Dowel Bars

Dowel bars shall be plain round smooth, epoxy-coated steel conforming to the requirements in ASTM Designation: A 615/A 615M, Grade 40 or 60, the details shown on the plans and the provisions in Section 52-1.02B, "Epoxy-coated Reinforcement" of the Standard Specifications, except that the two samples required in ASTM Designation: D 3963/D 3963M shall be 18 inches long. Epoxy coating of dowel bars shall conform to

the provisions in ASTM Designation: A 884/A 884M, Class A, Type 1 or Type 2, except that the bend test shall not apply.

Dowel bars shall be free from burrs or other deformations detrimental to free movement of the bars in the concrete.

Bond Breaker

Dowel bars shall be lubricated with a bond breaker over the entire bar. A bond breaker application of petroleum paraffin based lubricant or white-pigmented curing compound shall be used to coat the dowel bars completely prior to placement. Oil and asphalt based bond breakers shall not be used. Paraffin based lubricant shall be Dayton Superior DSC BB-Coat or Valvoline Tectyl 506 or an approved equal. Paraffin based lubricant shall be factory applied. White pigmented curing compound shall conform to the requirements of ASTM Designation: C 309, Type 2, Class A, and shall contain 22 percent minimum nonvolatile vehicles consisting of at least 50 percent paraffin wax. Curing compound shall be applied in 2 separate applications, the last application not more than 8 hours prior to placement of the dowel bars. Each application of curing compound shall be applied at the approximate rate of one gallon per 15 square yards.

Dowel Bar Baskets

Dowel bar baskets shall be manufactured with a minimum welded wire gage number of MW 65. Baskets shall be either U-frame or A-frame shape. J-frame shapes shall not be used. Baskets shall be fabricated in conformance with the requirements in ASTM Designation: A 82. Welding of baskets shall conform to the requirements in AASHTO Designation: M 254. A broken weld will be a cause for rejection of the basket. Baskets shall be Class A, Type 1 or Type 2 epoxy-coated in conformance with the requirements in ASTM Designation: A 884/A 884M. Fabrication and job-site handling shall conform to the requirements in ASTM Designation: D 3963 and the provisions in Section 52-1.02B, "Epoxy-coated Reinforcement" of the Standard Specifications, except that sampling of epoxy-coated wire reinforcement will not be required. A Certificate of Compliance conforming to the provisions in Section 6-1.07, "Certificates of Compliance" shall be furnished for each shipment of epoxy-coated wire reinforcement certifying that the coated bars conform to the requirements in ASTM Designation: A 884/A 884M and the provisions in Section 52-1.02B, "Epoxy-coated Bar Reinforcement" of the Standard Specifications. The Certificate of Compliance shall include the certifications specified in ASTM Designation: A 884/A 884M and a statement that the coating material has been pre-qualified by acceptance testing performed by the Valley Forge Laboratories, Inc., Devon, Pennsylvania.

Dowel Placement

Dowel bars shall be centered on the joint within a tolerance of ± 2 inches in the longitudinal direction directly over the contact joint or sawcut for the transverse weakened plane joints, as shown on the plans. Prior to placement of dowel bars, the Contractor shall submit to the Engineer a written procedure to identify the transverse

weakened plane joint locations relative to the middle of the dowel bars and the procedure for consolidating concrete around the dowel bars.

Dowel bars shall be placed at transverse weakened plane joints within shoulder areas except at drainage inlets.

Dowel bars shall be placed as shown on the plans by using dowel bar baskets.

When dowel bar baskets are used, they shall be anchored to the base to hold the dowel bars at the specified depth and alignment during concrete placement without displacement. A minimum of 8 alternating, equally spaced, concrete fasteners with clips shall be used to anchor each 12-foot dowel bar basket (4 per lower runner wire). At least 10 concrete fasteners shall be used for basket sections greater than 12 feet and less than or equal to 16 feet. Temporary spacer wires connecting dowel bar baskets shall be cut or removed after the dowel bar baskets are anchored into position prior to concrete placement. Paving shall be suspended when dowel bar baskets are not in place at least 200 feet in advance of the concrete placement operation. The Engineer may waive this requirement upon written request by the Contractor, in areas, where access is restricted, or other construction limitations are encountered. The Contractor shall demonstrate to the Engineer's satisfaction that dowel bar baskets are adequately anchored and not shift during concrete placement. The Contractor shall provide longer concrete nails than the minimum lengths for the varying bases beneath the Portland cement concrete when anchored dowel bar baskets demonstrate movement.

Full compensation for providing longer concrete nails shall be considered as included in the contract unit price paid per cubic yard for Decorative Stamped Concrete Pavement for Truck Apron and no additional compensation will be allowed therefor.

Dowel bar placement at transverse and longitudinal weakened plane joints	
Horizontal offset	±1 inch
Longitudinal translation	±2 inches
Horizontal skew	3/8 inch
Vertical skew	3/8 inch
Vertical depth	($d/3 + 1/2$ inch) from pavement surface to top of dowel bar or 5/8 inch below planned placement

Note: d = pavement thickness in inches

Joint Sealant Material

Silicone Joint Sealant

Low modulus silicone joint sealant shall be furnished in a one-part silicone formulation. Acid cure sealant shall not be used. The compound shall be compatible with the surface to which it is applied and shall conform to the following requirements:

Property	Test Method	Requirement
Tensile stress, 150% elongation, 7-day cure at 77° F ^{±2°} F and 45% to 55% R.H. ^e	ASTM D 412 (Die C)	45 psi max.
Flow at 77° F ^{±2°} F	ASTM C 639 ^a	Shall not flow from channel
Extrusion Rate at 77° F ^{±2°} F	ASTM C 603 ^b	3 to 9 ounces/minute
Specific Gravity	ASTM D 792 Method A	1.01 to 1.51
Durometer Hardness, at 0° F, Shore A, cured 7 days at 77° F ^{±2°} F	ASTM C 661	10 to 25
Ozone and Ultraviolet Resistance, after 5,000 hours	ASTM C 793	No chalking, cracking or bond loss
Tack free at 77° F ^{±2°} F and 45% to 55% R.H. ^e	ASTM C 679	Less than 75 minutes
Elongation, 7 day cure at 77° F ^{±2°} F and 45% to 55% R.H. ^e	ASTM D 412 (Die C)	500 percent min.
Set to Touch, at 77° F ^{±2°} F and 45% to 55% R.H. ^e	ASTM D 1640	Less than 75 minutes
Shelf Life, from date of shipment	—	6 months min.
Bond, to concrete mortar-concrete briquettes, air cured 7 days at 77° F ^{±2°} F	AASHTO T 132 ^c	50 psi min.
Movement Capability and Adhesion, 100% extension at 0° F after, air cured 7 days at 77° F ^{±2°} F, and followed by 7 days in water at 77° F ^{±2°} F	ASTM C 719 ^d	No adhesive or cohesive failure after 5 cycles

Notes:

ASTM Designation: C 639 Modified (15 percent slope channel A).

ASTM Designation: C 603, through 1/8 inch opening at 50 psi.

Mold briquettes in conformance with AASHTO Designation: T 132, sawed in half and bonded with a 1/16 inch maximum thickness of sealant and tested in conformance with AASHTO Designation: T 132. Briquettes shall be dried to constant mass at 212 ±10° F.

Movement Capability and Adhesion: Prepare 12" x 1" x 3" concrete blocks in conformance with ASTM Designation: C 719. A sawed face shall be used for bond surface. Seal 2 inches of block leaving 1/2 inch on each end of specimen unsealed. The depth of sealant shall be 3/8 inch and the width 1/2 inch. R.H. equals relative humidity.

The silicone joint sealant shall be formulated to cure rapidly enough to prevent flow after application on grades of up to 15 percent.

A Certificate of Compliance for the silicone sealant shall be furnished to the Engineer in conformance with the provisions in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications. The Certificate shall also be accompanied with a certified test report of the results of the required tests performed on the sealant material within the previous 12 months prior to proposed use. The Certificate and accompanying test report shall be provided for each lot of silicone joint sealant prior to use on the project.

Preformed Compression Joint Sealant

Preformed compression seals shall conform to the requirements of ASTM Designation: D 2628. Preformed compression seals shall have 5 or 6 cells. Preformed compression seals for Types A2 and B joints shall have 4 or more cells. Lubricant adhesive used with preformed compression seals shall conform to the requirements of ASTM Designation: D 2835. Compression seals and lubricant adhesive shall be installed in conformance with the manufacturer's recommendations and these Special Provisions. The manufacturer's recommendations shall be submitted to the Engineer at the pre-paving conference.

Each lot of compression seal and lubricant adhesive shall be accompanied by a Certificate of Compliance in conformance with the provisions in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications, and shall be accompanied with storage instructions and precautionary instructions for use. The Certificate shall also be accompanied with a certified test report of the results of the required tests performed on the preformed compression joint sealant material within the previous 12 months prior to proposed use. The Certificate and accompanying test report shall be provided for each lot of joint seal prior to use on the project. The Contractor shall submit the manufacturer's data sheet with installation instructions and recommended type of preformed compression seal for the joint size and depth as shown on the plans. The manufacturer's selected compression seal shall show evidence that the seal is being compressed at level between 40 percent and 50 percent for the joint width and depth shown on the plans.

Foam Backer Rods

Foam backer rods shall be Type 1, conforming to the requirements of ASTM Designation: D 5249. Foam backer rods shall have a diameter prior to placement at least 25 percent greater than the width of the sawcut and shall be expanded, crosslinked, closed-cell polyethylene foam that is compatible with the joint sealant so that no bond or adverse reaction occurs between the rod and sealant. Hot applied sealant that will melt the foam backer rod shall not be used. The Contractor shall submit a manufacturer's data sheet verifying that the foam backer rod is compatible with the sealant to be used.

Joint Filler Material

Joint filler material shall be preformed expansion joint filler for concrete (bituminous type), conforming to the requirements of ASTM Designation: D 994.

Joint filler material shall be Type 1 preformed expansion joint filler for concrete conforming to the requirements of ASTM Designation: D 1752.

A Certificate of Compliance for the joint filler material shall be furnished to the Engineer in conformance with the provisions in Section 6-1.07, "Certificates of Compliance" of the Standard Specifications. The certificate shall be accompanied with a certified test report of the results of the required tests performed on the joint filler material within the previous 12 months prior to proposed use. The certificate and accompanying test report shall be provided for each lot of joint filler material prior to use on the project.

Hydraulic Cement Grout (Non-Shrink)

Hydraulic cement grout (non-shrink) shall conform to the requirements in ASTM Designation: C 1107. At the Contractor's option, clean, uniformly rounded aggregate filler may be used to extend the grout. The extension of grout shall not exceed 60 percent of the weight of the grout or the maximum amount of grout extension recommended by the manufacturer, whichever is less. The moisture content of the aggregate filler shall not exceed 0.5-percent. Grading of the aggregate filler shall conform to the following:

Sieve Size	Percentage Passing
1/2 inch	100
3/8 inch	85 - 100
No. 4	10 - 30
No. 8	0 - 10
No. 16	0 - 5

Joint Sealant Installation

Liquid Joint Sealant

The joint sealant detail for transverse joints, as shown on the plans, shall apply only to weakened plane joints. Weakened plane joints shall be constructed by the sawing method. Should grinding or grooving be required over or adjacent to joints after sealant has been placed, the joint materials shall be removed and disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way" of the Standard Specifications, and replaced at the Contractor's expense. Immediately after sawing, a water wash using less than 100 pounds per square inch of pressure shall be used to remove the slurry from the sawing operation.

Transverse weakened plane joints shall be Type A1 or B as shown on the plans.

After the concrete pavement placement and not more than 4 hours before placing backer rods and joint sealant materials, the joint walls shall be cleaned by the dry sand blast method and other means as necessary to remove from the joint objectionable material such as soil, asphalt, curing compound, paint and rust. Sand blasting shall be performed

in at least 2 passes, one for each side of the joint, with the nozzle held at an angle to the joint within one inch to 2 inches of the pavement. After cleaning the joint, traces of sand, dust and loose material shall be removed from and near the joint for a distance along the pavement surfaces of at least 2 inches on each side of the joint by the use of a vacuum device. Surface moisture or dampness shall be removed at the joints by means of compressed air or moderate hot compressed air or other means approved by the Engineer. Drying procedures that leave a residue or film on the joint wall shall not be used. Sandblasting equipment shall have a maximum nozzle diameter size of $1/4$ inch \pm $1/32$ inch and a minimum pressure of 90 pounds per square inch.

Backer rods shall be installed when the temperature of the Portland cement concrete pavement is above the dew point of the air and when the air temperature is 40°F or above. Backer rod shall be installed when the joints to be sealed have been properly patched, cleaned and dried, as determined by the Engineer. Methods of placing backer rod that leave a residue or film on joint walls shall not be used.

Immediately after placement of the backer rod, joint sealant shall be placed in the clean, dry, prepared joints as shown on the plans. The joint sealant shall be applied using a mechanical device with a nozzle shaped to fit inside the joint to introduce the sealant from inside the joint. Adequate pressure shall be applied to the sealant to ensure that the sealant material is extruded evenly and that full continuous contact is made with the joint walls. After application of the sealant, the surface of the sealant shall be recessed as shown on the plans.

Failure of the joint material in either adhesion or cohesion will be cause for rejection of the joint. The finished surface of joint sealant shall conform to the dimensions and allowable tolerances shown on the plans. Rejected joint materials or joint material whose finished surface does not conform to the dimensions shown on the plans, as determined by the Engineer, shall be repaired or replaced, at the Contractor's expense, with joint material that conforms to the requirements.

After each joint is sealed, surplus joint sealer on the pavement surface shall be removed. Traffic shall not be permitted over the sealed joints until the sealant is tack free and set sufficiently to prevent embedment of roadway debris into the sealant.

Preformed Compression Joint Seal

The compression seal alternative joint detail for transverse joints, as shown on the plans, shall apply only to weakened plane joints. Weakened plane joints shall be constructed by the sawing method. Should grinding or grooving be required over or adjacent to any joint after the compression seal has been placed, the joint materials shall be removed and disposed of, and replaced at the Contractor's expense. Compression seals shall be recessed below the final finished surface as shown on the plans.

Transverse weakened plane joints shall be Type A1 or B as shown on the plans.

Seven days after the concrete pavement placement and not more than 4 hours before placing preformed compression joint seals, the joint walls shall be cleaned by the dry sand blast method and other means as necessary to remove from the joint objectionable material such as soil, asphalt, curing compound, paint and rust. After cleaning the joint, traces of sand, dust and loose material shall be removed from and near the joint for a distance along the pavement surfaces of at least 2 inches on each side of the joint by the use of a vacuum device. Surface moisture or dampness shall be removed at the joints by means of compressed air or moderate hot compressed air or other means approved by the Engineer. Drying procedures that leave a residue or film on the joint wall shall not be used. Sandblasting equipment shall have a maximum nozzle diameter size of 1/4 inch \pm 1/32 inch and a minimum pressure of 90 pounds per square inch.

Longitudinal seals shall be installed before installing transverse seals. Longitudinal seals shall be continuous except at intersections with transverse seals. Transverse seals shall be installed in one continuous piece throughout each transverse joint. After the longitudinal seal is completed and the transverse seal is ready to be installed, a single cut with a sharp instrument or saw shall be made across the longitudinal seal at the middle of the intersection with the transverse seal. After the initial cut of the longitudinal seal, if the longitudinal joint material does not relax enough to allow proper installation of the transverse seal, the longitudinal joint material shall be trimmed precisely to accommodate the transverse seal and form a tight seal between the 2 joints.

An installation machine specifically designed for the installation of preformed compression joint seals shall be used to install the seal at the specified depth without cutting, nicking, or twisting the seal. The installation machine shall install the seal with no more than 4 percent stretch in the installed seal. Hand installation methods of installing seals will not be permitted.

The percentage of stretch shall be determined by laying a length of the preformed compression joint seal material cut to the exact length of the pavement joint to be sealed. The length shall then be measured. The cut length of preformed compression joint seal material shall then be installed in the joint. Excess amount of seal material remaining at the end of the joint shall be measured as the amount of stretch. The measured amount of stretch shall be divided by the original measured length to determine the percentage of stretch.

The completed seal shall not be twisted or have deformities that prevent the seal from making complete continuous contact with the joint walls. Seals installed that are twisted or deformed, or do not make continuous contact with joint walls or with greater than 4 percent stretch of the joint material will be rejected and removed.

Final Surface

The final textured surface of the Decorative Stamped Colored Concrete Pavement shall be of the pattern specified herein. The pattern shall be implanted, indented, imprinted or stamped into the surface by means of forms, molds, or other approved devices.

Protection and Curing

The decorative colored concrete shall be cured as described in Section 90-7, Curing Concrete, and protected with the provisions of Section 90-8.03, Protecting Concrete Pavement, and these Special Provisions. Protection and curing of the decorative colored concrete pavement shall be in accordance with the manufacturer's specific instructions to prevent mottling, discoloration, unwanted staining effects of the concrete surface.

Concrete Sealer

A clear concrete sealer shall be applied after concrete placement in accordance with the manufacturer's written instructions and specifications. The sealed surface shall be finished using a fine brush that removes residual dust from the surface and shall be protected throughout the course of construction.

Quality Control Program

General

The Contractor shall establish, provide and maintain a quality control program that will provide assurance to the Engineer that all materials and completed construction conform to the contract requirements specified herein.

At least 20 days prior to the placement of the trial slab the Contractor shall submit to the Engineer for approval a written Quality Control Plan (QCP) that shall be used to ensure the quality of the product and the work. At the request of the Engineer or Contractor, the Contractor and Quality Control Managers (QCMs) shall meet with the Engineer to discuss the QCP. The Engineer will have 15 days to approve the QCP. Should the Engineer fail to complete the review of the QCP within the time allowance and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in reviewing the QCP, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays" of the Standard Specifications.

If in the judgment of the Engineer, the Contractor has not implemented or is not complying with the approved QCP, production and placement shall be suspended. Production and placement shall not resume until approved by the Engineer.

Quality Control Plan

The Contractor shall provide a QCP that describes the procedures that the Contractor will use to control the production process, to determine when changes to the production process are needed, and to propose procedures for implementing changes for replacement pavement operations. The QCP shall also include an outline for the placement and testing of the trial slab.

Placement shall not begin until the QCP has been approved by the Engineer. Approval of the QCP will be based on the inclusion of all required information. Approval of the QCP does not imply any warranty by the Engineer that adherence to the QCP will result in replacement pavement that complies with these specifications. It shall remain the responsibility of the Contractor to demonstrate this compliance.

The QCP shall include the names and qualifications of the lead QCM and the assistant QCM. The lead QCM shall be responsible for the administration of the QCP. The lead QCM shall have current American Concrete Institute (ACI) certification as "Concrete Field Testing Technician-Grade I" and "Concrete Laboratory Testing Technician-Grade II". The assistant QCM shall have current ACI certification as "Concrete Field Testing Technician-Grade I" and either "Concrete Laboratory Testing Technician-Grade I" or "Concrete Laboratory Testing Technician-Grade II". All sampling, inspection and test reports shall be reviewed and signed by the QCM responsible for the production period involved prior to submittal to the Engineer. At least one QCM shall be present for each stage of mix design, trial slab construction, during production and construction of replacement pavement and for all meetings between the Contractor and Engineer relating to production, placement or testing of replacement pavement. The QCMs shall not be members of production or paving crews, inspectors or testers on the project during production or placement of replacement pavement. QCMs shall have no duties other than those referenced in these Special Provisions during the production and placement of replacement pavement.

All decorative stamped colored concrete construction shall be performed by qualified personnel. The Contractor shall provide written evidence demonstrating to the satisfaction of the Engineer that the installer has successfully performed concrete placement and finishing work similar to that specified herein. Such evidence shall include past project documentation and references and shall be included in the QCP.

The QCP shall include an outline of the production, transportation and placement of the colored concrete pavement. The QCP shall include a contingency plan for correcting situations if there is a problem in production, transportation or placement. The Contractor shall have equipment and personnel present to meet the requirements of the contingency plan. The QCP shall contain provisions for determining when placement of the decorative colored concrete pavement will be suspended and temporary roadway will be substituted.

The QCP shall include the names of quality control personnel to be used and an outline of sampling, testing to be performed during and after construction of replacement pavement. At the time of submission of the QCP, quality control samplers and testers must be Caltrans qualified by the Department through the Independent Assurance Program (IAP) for the sampling and testing for which they will be responsible.

Before production and placement begins, the Contractor, QCMs and Engineer shall have a meeting with all production, transportation, placement, inspection, sampling and testing personnel to familiarize them with the requirements of the project. Items to be discussed include the production, transportation and placement processes for decorative colored concrete pavement; contingency plan; and sampling and testing. The Contractor shall

provide the facility for this meeting. The meeting date and location will be approved by the Engineer. Attendance at this meeting is mandatory for key personnel including the project manager, QCMs, production plant manager, plant inspector, all concrete delivery truck drivers, paving superintendent, paving foreman, paving machine operator, and all inspectors, samplers and testers. All meeting attendees shall sign in at the meeting. Production and placement operations shall not begin unless the above key personnel have attended the mandatory meeting.

Quality Control Inspection, Sampling and Testing

The Contractor shall perform quality control inspection, sampling and testing to ensure that replacement pavement production and placement conform to the provisions specified herein.

The Contractor shall be responsible for the Quality Control Program as described in these Special Provisions and the costs associated with the Quality Control Program.

The Contractor shall provide the required sampling, testing and inspection during all phases of concrete pavement production and placement. The Contractor shall provide a minimum of two business days notice to the Engineer, so the Engineer can witness all sampling and testing. The Engineer shall be given unrestricted access to the Contractor's quality control inspectors, samplers, testers and laboratories. During the production and placement period, the Contractor shall provide results of all testing to the Engineer within 15 minutes of completion of testing. The Contractor shall record all inspection, sampling and testing on forms approved by the Engineer. The Contractor shall provide written results of all inspection and testing to the Engineer within 48 hours of completion of each shift of paving and within 24 hours for all strength tests.

The Contractor shall provide a testing laboratory with adequate equipment and personnel for the performance of the quality control tests. This laboratory shall be located at a location approved by the Engineer and so that prompt testing requirements will be achieved. All sampling and testing equipment shall be maintained in proper working condition. Sampling shall be performed in conformance with the requirements of California Test 125. The QCP shall include a list of the equipment to be used including date of last calibration, the names and certifications of sampling and testing personnel, and the location of the laboratory and testing equipment during and after paving operations.

Testing laboratories, testing equipment, and sampling and testing personnel shall conform to the requirements of the Department's IAP.

Process Control and Quality Control Testing

The Contractor shall provide continuous process control and quality control sampling and testing throughout production and placement of Decorative Stamped Colored Concrete Pavement.

During production of decorative colored concrete, the Contractor shall sample and test aggregates at least once per placement shift. Aggregates shall be tested for conformance with gradations, cleanness value and sand equivalent requirements.

During placement of Decorative Stamped Colored Concrete Pavement, the Contractor shall fabricate specimens and test for modulus of rupture within the first 30 cubic yards, within the final truckload and at least twice during a production shift.

During placement of Decorative Stamped Colored Concrete Pavement, the Contractor shall sample and test for yield, penetration, air content and unit weight at least twice per placement shift.

At the Engineer's request, the Contractor shall provide split samples and fabricate beams for the Engineer to test. The cost of sampling, fabricating and transporting extra samples will be paid for as extra work in conformance with the provisions in Section 4-1.03D, "Extra Work" of the Standard Specifications. When, in the opinion of the Engineer, decorative colored concrete fails to conform to the mix design requirements or the requirements of these Special Provisions, the Contractor shall provide samples and testing at the direction of the Engineer. If the material fails to meet requirements of these Special Provisions, cost of sampling and testing shall be at the Contractor's expense. If the material meets the requirements of these Special Provisions, the cost of sampling and testing will be paid for as extra work in conformance with the provisions in Section 4-1.03D, "Extra Work" of the Standard Specifications.

Beams used for determining opening age modulus of rupture shall be cured under the same conditions as the pavement until one hour prior to testing. Beams fabricated for testing shall be cured in conformance with California Test 524. Modulus of rupture test results will be used for accepting or rejecting the Decorative Stamped Colored Concrete Pavement and pay factor adjustment for low modulus of rupture.

Materials resulting from the construction of the trial slab, test specimens, temporary roadway structural section, and all rejected replacement pavement shall become the property of the Contractor and shall be removed and disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way" of the Standard Specifications.

Payment:

Payment for Decorative Stamped Colored Concrete Pavement for Truck Apron will be subject to the pay factor values listed in "Pay Factor Adjustment for Low Modulus of Rupture" of these Special Provisions.

Costs for providing JITT shall be considered as included in the contract prices paid for the item involving decorative colored concrete and no additional compensation will be made therefor. Costs for providing JITT shall include training materials, class site, and the JITT instructor including the JITT instructor's travel, lodging, meals and presentation

materials. All costs incurred by the Contractor or Engineer for attending JITT shall be borne by the party incurring the costs.

The provisions in Section 40-1.135, "Pavement Thickness" of the Standard Specifications shall not apply.

Full compensation for constructing trial slabs, furnishing and placing bond breaker, and quality control program, shall be considered as included in the contract price paid per cubic yard for Decorative Stamped Colored Concrete Pavement for Truck Apron, and no additional compensation will be allowed therefor.

If calibration of volumetric batch-trucks is performed more than 100 miles from the project limits, additional inspection expenses will be sustained by the County. Whereas it is and will be impracticable and extremely difficult to ascertain and determine the actual increase in these expenses, it is agreed that payment to the Contractor for Decorative Stamped Colored Concrete Pavement for Truck Apron will be reduced \$1,000.

Sealing transverse weakened plane joints, and longitudinal isolation joints (when required) in Portland cement concrete pavement shall be considered as included in the contract price paid per cubic yard for Decorative Stamped Colored Concrete Pavement for Truck Apron and no additional compensation will be allowed therefor. When a test strip conforms to the specifications for concrete pavement and remains a part of the project paving surface.

Full compensation for seal pavement joint shall be considered as included in the contract price paid per cubic yard for Decorative Stamped Colored Concrete Pavement for Truck Apron and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in sealing pavement joints complete in place, including sawing, cleaning and preparing the joints in the concrete pavement, furnishing and installing backer rod, repairing and patching spalled or raveled sawed joints, and replacing or repairing rejected joints, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

Full compensation for seal longitudinal isolation joint shall be considered as included in the contract price paid per cubic yard for Decorative Stamped Colored Concrete Pavement for Truck Apron and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in sealing longitudinal isolation joints complete in place, including sawing, cleaning and preparing the joints in the concrete pavement, furnishing and installing joint filler material, repairing and patching spalled or raveled sawed joints, and replacing or repairing rejected joints, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

Concrete pavement will be measured by the cubic yard in conformance with the provisions in Section 40-1.13, "Measurement" of the Standard Specifications. No deduction will be made for the volume of epoxy-coated dowel bars, and dowel bar

baskets with fasteners, in the concrete pavement. When a test strip conforms to the specifications for concrete pavement and remains a part of the project paving surface, the concrete will be measured and paid for as concrete pavement.

The contract price paid per cubic yard for Decorative Stamped Colored Concrete Pavement for Truck Apron shall include full compensation for furnishing all labor, materials (including cementitious material in the amount determined by the Contractor), tools, equipment, and incidentals, and for doing all the work involved in constructing the Portland cement concrete pavement complete in place, including color integration and decorative (stamped) surface, furnishing and placing epoxy-coated dowel bars, and dowel bar baskets with fasteners, submittal to the Engineer all test data for determination of mix proportions of concrete for concrete pavement and for providing the facility, Contractor personnel and all the work involved for constructing and repairing all joints; for grooving and grinding required for final finishing; and for removing, and replacing pavement for deficient thickness, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

Full compensation for coring test strips for evaluation by the Engineer and for backfilling core holes with hydraulic cement grout when the test strip remains in place as part of the concrete pavement; and for constructing, coring and removing and disposing of test strips that are rejected shall be considered as included in the contract price paid per cubic yard for Decorative Stamped Colored Concrete Pavement for Truck Apron and no additional compensation will be allowed therefor.

Full compensation for furnishing and placing paint binder (tack coat) for transition end panel shall be considered as included in the contract price paid per cubic yard for Decorative Stamped Colored Concrete Pavement for Truck Apron and no additional compensation will be allowed therefor.

10-1.23

METAL BEAM GUARD RAILING:

Metal beam guard railing shall be constructed in conformance with the provisions in Section 83-1, "Railings," of the Standard Specifications and these Special Provisions. Attention is directed to "Order of Work" of these special provisions.

Line posts shall be wood, steel, or plastic. Blocks shall be wood or plastic.

Metal beam guard railing elements and required backup plates, terminal sections, end caps, and return caps shall conform to the requirements of Type 2 W-Beam as shown in AASHTO Designation: M 180.

Payment:

The contract unit price paid per linear foot for metal beam guard shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and installing metal beam guard railing,

complete in place, including excavation, backfill and disposal of surplus material, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1.24

REMOVE TRAFFIC STRIPE AND PAVEMENT MARKINGS:

Where blast cleaning/grinding is used for the removal of painted/thermoplastic traffic stripes and pavement markings or for removal of objectionable material, and such removal operation is being performed within 10 feet of a lane occupied by public traffic, the residue including dust shall be removed immediately after contact between the sand and the surface being treated. Such removal shall be by wet abrasive blasting hydro-blasting or vacuum blasting, and shall comply with AQMD regulations.

Blast to cleaning/grinding for removal of traffic stripe shall be feathered out to irregular and varying widths.

Pavement marking shall be removed by blast cleaning/grinding a rectangular area, rather than just lettering or markings, so the old message cannot be identified.

After removal of traffic stripes and pavement markings, a fog seal coat shall be applied in conformance with the provisions in Section 37, "Bituminous Seals," of the Standard Specifications and the following:

If removal of existing striping is performed more than 24 hours prior to final striping, the Contractor shall place reflective temporary striping tape throughout the limits of sandblasting, to provide channelization of traffic, for all lanes of travel.

Temporary striping tape shall be removed subsequent to final striping.

Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provide in Section 7-1.09, "Public Safety," of the Standard Specifications.

Payment:

The price paid per square foot for Remove Traffic Stripe and Pavement Markings shall include full compensation for furnishing all labor, tools, materials, and equipment and no additional compensation will be allowed therefor.

10-1.25

THERMOPLASTIC CROSSWALK AND PAVEMENT MARKINGS:

Thermoplastic pavement markings shall be applied in conformance with the provisions in Section 84, "Traffic Stripes and Pavement Markings" of the Standard Specifications and these Special Provisions.

Thermoplastic material shall be free of lead and chromium, and shall conform to the requirements in State Specification PTH-02ALKYD.

Retroreflectivity of the thermoplastic pavement markings shall conform to the requirements in ASTM Designation: D 6359-99. White thermoplastic pavement markings shall have a minimum initial retroreflectivity of $250 \text{ mcd}\cdot\text{m}^{-2}\cdot\text{lx}^{-1}$. Yellow thermoplastic pavement markings shall have a minimum initial retroreflectivity of $150 \text{ mcd}\cdot\text{m}^{-2}\cdot\text{lx}^{-1}$.

Thermoplastic pavement markings shall be free of runs, bubbles, craters, drag marks, stretch marks, and debris.

Payment:

Full compensation, except as otherwise provided herein, for conforming to this article shall be paid per square foot for Thermoplastic Pavement Marking and shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved and no additional compensation will be allowed therefor.

10-1.26

THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE):

Sprayable thermoplastic traffic stripes (traffic lines) shall be applied in conformance with the provisions in Section 84, "Traffic Stripes and Pavement Markings" of the Standard Specifications and these Special Provisions.

Sprayable thermoplastic material shall be free of lead and chromium, and shall conform to the requirements in State Specification No. PTH-02SPRAY.

Retroreflectivity of the sprayable traffic stripes shall conform to the requirements in ASTM Designation: D 6359-99. White sprayable thermoplastic traffic stripes shall have a minimum initial retroreflectivity of $250 \text{ mcd}\cdot\text{m}^{-2}\cdot\text{lx}^{-1}$. Yellow sprayable thermoplastic traffic stripes shall have a minimum initial retroreflectivity of $150 \text{ mcd}\cdot\text{m}^{-2}\cdot\text{lx}^{-1}$.

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.

Sprayable thermoplastic material shall be applied to the pavement at a minimum thickness of 0.04-inches and a minimum rate of 0.13-lb/ft. The minimum application rate is based on a solid stripe of 4-inches in width.

Sprayable thermoplastic material shall be applied to the pavement at a temperature between 177°C and 205°C , unless a different temperature is recommended by the manufacturer.

Sprayable thermoplastic traffic stripes shall be free of runs, bubbles, craters, drag marks, stretch marks, and debris.

Sprayable thermoplastic traffic stripes will be measured by the linear foot along the line of the traffic stripes, without deductions for gaps in broken traffic stripes. A double traffic stripe, consisting of two 4-inch wide yellow stripes, will be measured as one traffic stripe.

Payment:

The contract price paid per linear foot for Thermoplastic Traffic Stripe (Sprayable) shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in applying sprayable thermoplastic traffic stripes (regardless of the number, widths, and patterns of individual stripes involved in each traffic stripe) including establishing alignment for stripes, and layout work, complete in place, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

10-1.27

PAINT TRAFFIC STRIPE:

Painting traffic stripe shall conform to the provisions in Sections 84-1, "General" and 84-3, "Painted Traffic Stripes and Pavement Markings" of the Standard Specifications and these Special Provisions.

Traffic striping shall be applied in two coats with airless equipment and shall be performed with a roadliner truck mounted striping machine. Where the configuration or location of a traffic stripe is such that the use of a roadliner truck mounted striping machine is unsuitable, traffic striping and glass spheres may be applied by other methods and equipment approved by the Engineer.

Newly painted traffic striping shall be protected from damage by public traffic or other causes until the paint is thoroughly dry. Any newly painted traffic striping which are damaged as a result of the construction, including wheel markings by public traffic and the construction equipment, shall be repainted by the Contractor and any associated removals shall be performed as called for in these Special Provisions.

Payment:

The contract price paid per linear foot for Paint Traffic Stripe (2 Coats) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in painting traffic stripe (regardless of the number, widths, and types of individual stripes involved in each traffic stripe) including any necessary cat tracks, dribble lines any layout work, complete in place as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

10-1.28**PAVEMENT MARKERS:**

Pavement markers shall conform to the provisions in Section 85, "Pavement Markers" of the Standard Specifications and these Special Provisions.

Pavement markers shall be placed to the line established by the Engineer. All additional work necessary to establish satisfactory lines for markers shall be performed by the Contractor.

Pavement markers (blue reflective) shall be installed where required in the roadway for all existing fire hydrants per CVWD Standards and per County Standards and Specifications as directed by the Engineer.

Markers and adhesive removal shall be performed by a method approved by the Engineer. Any pavement scarring resulting from the markers removal shall be repaired to the satisfaction of the Engineer.

Payment:

Payment for furnishing and placing will be at the unit price bid per each and shall include full compensation for furnishing all labor, materials, tools, equipment and no additional compensation will be allowed therefor.

Full compensation for furnishing all labor, tools, material, equipment, and incidentals, and for doing all the work involved and complete in place for Pavement Markers and for conforming to the requirements of this section shall be considered as included in the contract bid price for Thermoplastic Traffic Stripe (Sprayable) and no additional compensation will be allowed therefor.

10-1.29**ROADSIDE SIGNS (INSTALL/RELOCATE):**

Roadside signs (install/relocate) shall conform to the provisions in Section 56-2, "Roadside Signs" of the Standard Specifications, and in accordance with Standard Plans RS2 and as directed by the Engineer.

Roadside signs shall be installed at the locations shown on the construction plans or where directed by the Engineer.

Roadside signs furnished by the Contractor shall be of the standard size specified in the State of California Department of Transportation Sign Specification Sheets, unless otherwise indicated on the construction plans.

Sheeting shall be guaranteed against defects for a period of ten years from the date of fabrication.

The base metal shall be new aluminum, 0.08 gauge, of alloys 6061-T6 or 5052-H38 conforming to the requirements of ASTM Designation: B209.

Any reflective sheeting supplied as a part of this contract, whether as a legend or background, shall be FHWA FP-85 Type IIA or AASHTO M268 Type III.

Reflective sheeting shall be applied to the sign by a method approved by the manufacturer of the sheeting and shall produce a durable bond equal to or greater than the strength of the reflective sheeting. No air pockets or bubbles shall exist between the sheeting and aluminum backing.

The reflective material and screening inks or overlay film shall be graffiti proof. The graffiti proofing method shall be supplied by and/or approved by the sheeting manufacturer. Neither the color nor the reflective intensity of the finished sign shall be significantly diminished by the use of graffiti remover when used in a manner approved by the Transportation Department in conjunction with the sheeting manufacturer. Any signs graffitied by over the counter spray paint or marking pens, which fail to be restored, shall be replaced by the sign sheeting manufacturer.

All letters and numerals shall be in accordance with the "Standard Alphabet of Highway Signs" as used by the State of California, Department of Transportation.

All signs shall be installed using hex head bolts, washers, nuts and jam nuts in accordance with Standard Plans RS2 or as directed by the Engineer.

Payment:

The contract unit prices paid per each for Roadside Signs (Install/Relocate) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work including all necessary concrete, excavation and backfill as specified in the Standard Specification and these Special Provisions or as directed by the Engineer and no additional compensation will be allowed therefor.

10-1.30

BARRIER POST (BOLLARD):

Barrier Post (Bollard) shall be constructed as shown on the construction drawings and in accordance with Sections 51 and 90 of the Standard Specifications, and/or as directed by the Engineer. Preparation of subgrade for the barrier post (bollard) shall be performed in conformance with the requirements in the construction drawings and per the Standard Specifications.

The placement of 12" aggregate base material with an impermeable membrane (6-mil visqueen) is required under and around all concrete in accordance with County Road Improvement Standards, Specifications, and per these Special Provisions. The payment for aggregate base is covered under Section 10-1.15 "Aggregate Base" of these Special Provisions.

Payment:

The contract bid price paid per each for Barrier Post (Bollard) shall include full compensation for furnishing all labor, tools, material, equipment, and incidentals, and for doing all the work involved and complete in place and no additional compensation will be allowed therefor.

10-1.31 CHAIN LINK FENCE (WITH CURB):

Chain Link Fence to use as pedestrian barricade shall conform to the provisions in Section 83, "Railings and Barriers" of the Standard Specifications and per the details on the construction plans and includes the construction of a 6" high PCC concrete curb adjacent to the back of sidewalk.

Payment:

The contract unit price paid per linear foot for chain link fence (with curb) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work including concrete curb construction as required (per the construction plans) and all necessary footings, sleeve posts, excavation, and backfill as specified in the Standard Specifications, Construction Plans, and these Special Provisions and no additional compensation will be allowed therefor.

10-1.32 LIGHTING (ROUNABOUT SAFETY LIGHTING SYSTEM):

The street lighting system shall be constructed in accordance with the current edition of the National Electric Code, the standards and specifications of the Imperial Irrigation District, the electrical plans as prepared by the Imperial Irrigation District, which are included in the plan set issued to plan holders, and as directed by the Engineer.

The standards and specifications of the Imperial Irrigation District, entitled "Developer Energy Planning Guide" and "Electrical Service and Metering Equipment Guide" will be posted on the County of Riverside Transportation Department's public works bidding website (http://www.tlma.co.riverside.ca.us/trans/con_bid_advertisements.html) during the bid period. These documents, and additional information are also available at the Imperial Irrigation District's website, <http://iid.com/Energy/NewConstruction>. The Contractor shall provide necessary coordination with the Imperial Irrigation District for all work associated with the street lighting system.

The Contractor shall furnish and install all conduits, conductors, trenching, trench backfill, street lighting foundations, transformer foundations, conduit and pull ropes between transformer pads and power poles, including sweeps and 10 feet of riser conduit, street light standards and luminaires, and shall perform all other work and furnish all other materials required for the installation of the street lighting system, complete and in-

place, except for the specific tasks that will be performed by the Imperial Irrigation District, as listed below.

The placement of 12" aggregate base material with an impermeable membrane (6-mil visqueen) is required under and around all concrete in accordance with County Road Improvement Standards, Specifications, and per these Special Provisions. The payment for aggregate base is covered under Section 10-1.15 "Aggregate Base" of these Special Provisions.

The Imperial Irrigation District, as owner of the electrical system, will furnish and install transformers, furnish and connect conductors between transformers and primary electric conductors, install risers (above 10 foot level) on power poles, and will make final connections of street lighting conductors to transformers. Imperial Irrigation District will remove existing street lights after installation and energization of the new street lighting system.

The scope of work includes the installation of high pressure sodium street lights, poles, including but not limited to foundations, conduits, risers, pull ropes, trenching, and all other work required, as specified herein and as shown on the lighting plans. All work shall be performed in coordination with the Imperial Irrigation District.

All existing wood street lighting poles will be removed by the Imperial Irrigation District in coordination with the Contractor's work. All existing steel street lighting poles will be removed by the Contractor. Existing street lights shall not be removed or de-energized until the new street lighting system is energized and operational. The Contractor shall be fully responsible for all coordination with the Imperial Irrigation District for the installation of the new street lighting system.

Street light poles (standards) and mast arms shall substantially conform to County of Riverside standard number 1000 or 1001, as applicable. Poles and mast-arms shall be galvanized steel. Contractor shall submit manufacturer's specifications to the Engineer for approval prior to placing equipment order. Approval by the Imperial Irrigation District shall be required with respect to poles, mast-arms and luminaire mounting height. The requirements of Standards 1000 and 1001 with respect to high sulfate content of abutting soil are applicable with respect to PCC foundations, transformer pads and other cast in place PCC improvements associated with the street lighting system, and in accordance with Section 16.04 of County of Riverside Ordinance no. 461, Cement Type V shall be utilized with a minimum of 715 Lbs/CY cement content, and a minimum of 12 inches of Class 2 Aggregate Base constructed between the PCC and native soil. Additionally, 6 mil plastic sheeting shall be installed between PCC and Class 2 Aggregate base.

Contractor is required to maintain functional existing lighting system for the duration of the project as specified in Section 7-1.08 Public Convenience and Section 7-1.09 Public Safety of the Standard Specifications. Any temporary relocation of existing street lighting, poles, conduits, and wiring shall be performed as required to facilitate the

construction per plan and/or as directed by the Engineer. No additional compensation will be allowed for temporary improvement.

Conductors (wiring) shall be copper, THW or IID approved alternate conductor, and in accordance with 86-2.08 "Conductors" of the Standard Specifications. The Contractor shall submit a sample of the wiring and the conductor specifications to the IID inspector for approval prior to installation.

With respect to connections to all service points and transformers, the Contractor shall furnish and install conduits, pull ropes and conductors as follows and as otherwise provided herein:

1. Between transformer and service pole, Contractor shall install conduit, riser and pull rope. IID will install conductors.
2. Contractor shall install conductors to pad-mounted transformers from the street lighting side of the system. However, IID shall make all connections to the transformers.

The Contractor shall install two 10-foot long, 5/8" diameter, copper grounding rods and hardware in pull boxes for a fully functional system. Said ground rods shall be installed in pull boxes adjacent to each street light pole, which is the first street light in each circuit, and closest to each transformer. Green copper ground conductors, no. 6 or as otherwise shown on the approved lighting plan, shall be installed throughout the street light system, except between the transformer and the first street light pole in each circuit. Each street light shall be grounded by connecting to the system ground. Primary conductors shall consist of one solid color no. 6 conductor and one white or grey no. 6 conductor. All work shall meet the National Electric Code as specified in the Special Provisions. Payment for this item of work shall be considered as included in scope of work, and shall be included in the lump sum contract price paid for Lighting and no further compensation will be allowed therefor.

All existing steel street lighting poles will be removed by the Contractor and delivered to the County of Riverside yard located at 2950 Washington Street Riverside, CA 92504, or as otherwise directed by the Engineer. All conflicting power poles with street lighting will be relocated temporarily by IID, but will not be removed until energization of the new street lighting system.

Payment:

Full compensation for the installation of the street lighting system shall be considered as included in the lump sum price paid for "Lighting (Roundabout Safety Lighting System)" per plan, addenda (if any), and Imperial Irrigation District general requirements, including all labor, equipment, personnel and incidentals, and including all necessary coordination with the Imperial Irrigation District.

IMPORTED BORROW (DECORATIVE MOUNDING):

Class "A" Topsoil/Imported Borrow is intended for the proposed landscaped areas and shall conform to the provisions of Section 19-7.02 of the Standard Specifications and shall be from a source outside the limits of the project selected by the Contractor and in compliance with the requirements specified herein. The Engineer may make such inspections and perform such tests as deemed necessary to determine that the material meets the requirement.

At least 15 days before scheduled use, the proposed source of topsoil must be submitted to the Engineer for approval. The Contractor shall submit a written request for approval which shall be accompanied by a written report of a test agency registered by the State for agricultural soil evaluation which states that the proposed source complies with these specifications. Class "A" topsoil shall have the same relative composition and structure, a friable sandy loam character, and be free from roots, clods and stones larger than 1/2" in greatest dimension, pockets of coarse sand, noxious weeds, sticks, brush, and other litter. It shall not be infested with nematodes or other undesirable insects and plant disease organisms.

Class "A" Topsoil shall meet the following additional requirements:

1. **Gradation Limits.** Sand, 70 to 80 percent; clay 20 percent maximum; and silt, 30 percent maximum. The sand, clay and silt gradation limits shall be as defined in ASTM D422.
2. **Permeability Rate.** Not less than 1/2" per hour nor more than 2" per hour when tested in accordance with ASTM D2434, California Test 220, or other approved methods.
3. **Agricultural Suitability.** The topsoil shall sustain the growth of the plants specified.

Relative Compaction:

Whenever relative compaction is specified to be determined by Test Method No. Calif. 216, the in-place density may be determined by Test Method No. Calif. 231. The in-place density required by Test Method No. Calif. 312 may be determined by Test Method No. 231. The wet weight or dry weight basis and English Units of Measurement may be used at the option of the County's Materials Engineer.

Payment:

The payment for Imported Borrow shall include doing all work necessary for the placement of the import material in the landscape planter areas, including the preparatory excavation of unsuitable material (including existing pavement, aggregate base, subgrade, sidewalk, curb and gutter or AC dike), the transportation of the import material to/from

the project site, and the placement and compaction of the import material to the lines and grades as shown on the contract plans and as directed by the Engineer

The contract unit bid price paid per cubic yard for Imported Borrow shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved and no additional compensation will be allowed therefor.

10-1.34

IMPORTED GRANULAR MATERIAL (DECOMPOSED GRANITE):

Imported Granular Material (Decomposed Granite) shall be either "Desert Gold" or "California Gold" or approved equal with 3/8" max. granite gravel minus 11% fines. Contractor shall wet and compact to a depth of 3" and apply stabilizer only in the areas intended for vehicular access (not in planter areas). Contractor shall install decomposed granite to a depth of 3" in all planter areas designated on the plans and/or directed by the Engineer. The decomposed granite in the planter areas is intended as a mulch and shall not be compacted. Contractor shall submit sample to the Engineer for approval prior to delivery.

Payment:

The payment for Imported Granular Material (Decomposed Granite) shall include doing all work necessary for the placement of the granular material in the landscape planter areas, including the preparatory excavation of unsuitable material (including existing pavement, aggregate base, subgrade, sidewalk, curb and gutter or AC dike), the transportation of the import material to/from the project site, and the placement of the material to the lines, grades and depths as shown on the contract plans and as directed by the Engineer

The contract unit bid prices paid per cubic yard for Imported Granular Material (Decomposed Granite), shall include full compensation for furnishing all labor, equipment, materials, tools and incidentals, and for doing all work involved in the construction and complete in place where specified on the plans including transporting to/from project site and compaction (85-90%) and no additional compensation will be allowed therefor.

10-1.35

IMPORTED ROCKY MATERIAL (BOULDERS):

Imported Rocky Material (Boulders) shall be either "Cresta" or "La Cresta" or as approved by the Engineer. Boulder sizes (LxWxH) shall be: (1) 2.5'x2'x2' and/or (2) 3.5'x3'x2' and/or as directed by the Engineer. Contractor shall submit sample or photographs to the Engineer for approval prior to delivery.

Payment:

The contract unit bid prices paid per each for Imported Rocky Material (Boulders), shall include full compensation for furnishing all labor, equipment, materials, tools and incidentals, and for doing all work involved complete in place where specified on the plans and as directed by the Engineer and no additional compensation will be allowed therefor.

10-1.36

REMOVE/DEMOLISH EXISTING BLOCK WALL:

Existing block wall shall be removed/demolished as shown on the plan and as directed by the Engineer.

Adequate clearance for mobilizing equipment needed to remove/demolish existing block wall and haul away to dispose of material in result of demolishing work will be provided. Contractor shall protect in place all other private fencing/block walls as shown on the plan and as directed by the Engineer. All work shall be completed in a neat and professional manner.

Contractor shall furnish and install temporary chain link fencing (6' minimum height or as directed by the Engineer) in order to secure owners' private properties. Contractor shall install fencing as per the applicable Specifications and/or as directed by the Engineer to include but not limited to all requirements for footings, tie-ins to existing walls/fencing, vehicle and pedestrian gates that may be required, etc. Contractor shall maintain the fencing in a professional manner providing a safe and secure environment for the property owner as directed by the Engineer. Any replacement fencing (due to damage imposed by the Contractor or other) or removals (complete removal or partial removals) will become the property of the Contractor as directed by the Engineer and no additional compensation will be allowed.

Payment:

Full compensation for removing/demolishing existing block wall including removal of footing, backfilling and disposal of material, shall be paid for on a linear foot basis for Remove/Demolish Existing Block Wall and no additional compensation will be allowed.

Full compensation for furnishing, installation, maintenance, and removal of temporary chain link fencing shall be considered included in the bid price paid for Remove/Demolish Existing Block Wall and no additional compensation will be allowed.

10-1.37

SLUMP BLOCK WALL AND PILASTER:

Slump block wall and pilaster shall be constructed as shown on the construction plans or as directed by the Engineer and shall conform to the applicable portions of Sections 51, 52, and 90 of the Standard Specifications and these Special Provisions.

The color of the slump block shall be "Tan." A sample of the block color shall be provided to the Engineer for approval prior to the ordering of material.

The placement of 12" aggregate base material with an impermeable membrane (6-mil visqueen) is required under and around all concrete in accordance with County Road Improvement Standards, Specifications, and per these Special Provisions. The payment for aggregate base is covered under Section 10-1.15 "Aggregate Base" of these Special Provisions.

Excess material resulting from the excavation of the subgrade shall be disposed of in the method as elsewhere provided in these Special Specifications and will be considered as part of the contract price for Slump Block Wall And Pilaster.

The Contractor shall provide permanent tie-ins to existing walls/fencing using materials that match the existing walls/fences, such that there are no gaps between the existing walls/fences and the Slump Block Wall And Pilasters.

Payment:

The contract unit bid price paid per linear foot for Slump Block Wall and paid per each for Pilaster shall include full compensation for furnishing all labor, equipment, materials and tools, and incidentals, and for doing all work involved in the complete structure, including structure excavation and backfill, furnishing and placing reinforcement, furnishing and placement of mortar cap and precast cap, furnishing and placement of stone veneer, and permanent tie-ins to existing walls/fences, as directed by the Engineer and no additional compensation will be allowed therefor.

10-1.38

ENTRY MONUMENT WALL STRUCTURE:

Entry Monument Wall Structure shall be constructed as shown on the construction plans or as directed by the Engineer and shall conform to the applicable portions of Sections 51, 52, and 90 of the Standard Specifications and these Special Provisions.

See Section 10-1.34 "Slump Block Wall and Pilaster" of these Special Provisions for the color of the slump block.

The placement of 12" aggregate base material with an impermeable membrane (6-mil visqueen) is required under and around all concrete in accordance with County Road Improvement Standards, Specifications, and per these Special Provisions. The payment for aggregate base is covered under Section 10-1.15 "Aggregate Base" of these Special Provisions.

Excess material resulting from the excavation of the subgrade shall be disposed of in the method as elsewhere provided in these Special Specifications and will be considered as part of the contract price for Slump Block Wall And Pilaster.

Payment:

The contract unit bid price paid per lump sum for Entry Monument Wall Structure shall include full compensation for furnishing all labor, equipment, materials and tools, and incidentals, and for doing all work involved in the complete structure, including structure excavation and backfill, furnishing and placing reinforcement, furnishing and placement of mortar caps, furnishing and placement of stone veneer, as directed by the Engineer and no additional compensation will be allowed therefor.

10-1.39

AGAVE PLANT METAL SCULPTURES:

Agave Plant Metal Sculptures (4 each) shall be installed on the monument wall pilasters as shown on the plans. The Contractor shall obtain design approval from the County for the design of the sculptures prior to the Contractor ordering the sculptures.

Installation shall include securely anchoring the sculptures to the pilasters to prevent theft. The method of anchoring shall be approved by the Engineer. The Contractor shall be responsible for the replacement of any sculptures damaged or stolen prior to the final acceptance of the Project by the County

Sculptures damaged during delivery, installation or post-installation shall be replaced by the Contractor and no additional compensation will be allowed therefore.

Payment:

Full compensation for Agave Plant Metal Sculptures shall be made on a force account basis, in accordance with Section 9-1.03 of the Standard Specifications. The total accumulated costs for the order, delivery, and installation of the Agave Plant Metal Sculptures shall not exceed the amount specified in the contract bid item, unless otherwise increased by change order.

10-1.40

ELECTRIC SERVICE (IRRIGATION):

Electric Service (irrigation pedestal) shall be installed as shown on the construction drawings and in accordance with the Standard Specifications, Imperial Irrigation District (IID) Standards and Specifications, Riverside County Standards, and/or as directed by the Engineer. Service type, size, material, etc. shall be determined and approved by IID. No additional compensation will be allowed for size or material changes.

Payment:

The contract bid price paid per each for Electric Service (Irrigation) shall include full compensation for furnishing all labor, tools, material, equipment, and incidentals, and for doing all the work involved and complete in place including conduit runs between

controller, pedestal, and service point as determined by field conditions and IID and no additional compensation will be allowed therefor.

10-1.41

WATER METER AND BACKFLOW PREVENTER:

Water Meter shall be installed by Coachella Valley Water District (CVWD) as shown on the construction drawings and in accordance with the Standard Specifications, CVWD Standards and Specifications, Riverside County Standards, and/or as directed by the Engineer and/or CVWD field/permit engineer/representative. Water Meter type, size, material, etc. shall be determined and approved by CVWD. No additional compensation will be allowed for size or material changes.

The Contractor shall provide all field preparation required as determined by CVWD prior to meter and backflow preventer installation, from backflow preventer, to meter, to water main as determined by field conditions and CVWD.

Payment:

Full compensation, except as otherwise provided herein, for conforming to the requirements of this article shall be considered as included in the contract bid prices paid for the various items of work, and no additional compensation will be allowed therefor.

10-1.42

FINISHING ROADWAY:

Finishing Roadway shall conform to Section 22 of the Standard Specifications.

Payment:

Full compensation, except as otherwise provided herein, for conforming to the requirements of this article shall be considered as included in the contract bid prices paid for the various items of work, and no additional compensation will be allowed therefor.

10-1.43

RADAR DRIVER FEEDBACK DISPLAY ASSEMBLIES (2 EACH) AND WIRELESS COMMUNICATION EQUIPMENT

Radar Driver Feedback Display Assemblies (2 Each) And Wireless Communication Equipment shall conform to the provisions in Section 86, "Signals and Lighting" of the Standard Specifications and these Special Provisions.

The Contractor shall have a technician from the manufacturer or their representative who is qualified to work on the Radar Driver Feedback Display Assemblies And Wireless Communication Equipment to field test the intended operation in accordance with a County-provided programming sheet, and to be present when the equipment is turned on.

General:

The Contractor shall furnish and install two (2) solar powered Radar Driver Feedback Display units as shown on the plans. Each Radar Driver Feedback Display unit shall be a dynamic full-matrix numeric and alphanumeric variable message sign that gives motorists passing through a speed zone the real time feedback of their vehicle's speed as to the zone's speed limit, displays pre-programmed messages and/or graphics.

The Radar Driver Feedback Display unit shall come with vehicle speed measuring capabilities via radar detector module mounted within the sign enclosure, programming and data analyzing software features, wireless IP modem, radio transmitter/receiver and antenna.

The Radar Driver Feedback Display unit shall be capable of fully autonomous operation 24 hours per day, 365 days per year utilizing the solar power assembly only.

Materials:

The Radar Driver Feedback Display unit shall be VCalm@ITS or approved equal and shall consist of:

(A) Solar Power Assembly that includes

- (1) A 85 Watt, 12 VDC Solar Panel
- (2) Two (2) Valve-Regulated, Absorbed Glass Mat Technology 12 VDC and 79 Ah batteries;
- (3) A solar industry standard Charging Control System with temperature compensating charging voltage;
- (4) A solar power cabinet:
 - a) Cabinet size shall be 16"(h) x 37"(w) x 8.25"(d);
 - b) Cabinet shell shall be powder coat painted gloss white;
 - c) Cabinet and assembly hardware shall be vandal and tamper resistant;
 - d) Cabinet shall house the batteries, solar controller and lightning protection device. The lightning protection device shall be Emerson, PowerSure FAS-120AC surge suppressor or approved equal.

(B) Radar Driver Feedback Display that includes

(1) Sign Housing

- a) Housing size shall be 26"(h) x 48"(w) x 5"(d);
- b) Sign enclosure shall be made of 0.09" continuous formed aluminum. Entire surface of enclosure shall be powder painted gloss black;
- c) Housing shall be weather proof to NEMA 3R specifications or better;
- d) Housing shall be provided with tamper proof fasteners;
- e) Housing shall be of non-sealed, ventilated type to prevent accumulation of moisture;

- f) Display window shall be a minimum of 45" x 29" and made of 3/8" shatter resistant polycarbonate;

(2) Sign Display

- a) Full-matrix display shall consist of two rows of four square LED panels. Each display panel shall be 10.25" x 10.25" and mounted flush with adjacent panels to provide evenly gapped LEDs across all display panels for graphical display.
- b) Each display panel (of which there are 8 total) shall consist of 768 surface mounted LEDs which are individually aimed to provide even light distribution within the viewing area.
- c) Display shall be capable of displaying at least:
- 4 rows of 13 characters 4" tall
 - 3 rows of 10 characters 5" tall
 - 3 rows of 8 characters 6 1/2" tall
 - 2 rows of 7 characters 8" tall
 - 2 rows of 6 characters 10" tall
 - 1 row of 5 characters 12" tall
 - 1 row of 4 characters 16" tall
- d) Display shall have the capability of displaying vehicle speed.
- e) Light intensity of display shall be programmable to different times of day to provide optimum view ability under all ambient light conditions.
- f) The display shall be designed to avoid distracting the attention of motorists away from the road, by prevention of viewing from acute angles outside the motorist's normal forward field of view. Viewable area shall enclose an area up to a maximum included angle of 30 degrees from the roadside.
- g) The display shall be capable of multi-mode operation;
- h) The display pixels shall have a design life of 10 years.
- i) The pixels shall have a Mean Time Before Failure (MTBF) of 100,000 hours.

(3) Controller Functions

- a) On board real time clock with built in daylight savings. This setting can be programmed via RS-232 hardwire, Ethernet, USB, SD card, and wireless modem.
- b) Clock shall have a battery backup with a three-year shelf-life capacity.
- c) Controller shall allow radar to operate independently from the display so that the sign can collect data while the display is blank or "off".
- d) Controller shall have up to 256 programmable behaviors each with a combination of up to 256 different messages to be displayed according to any combination of up to 256 programmable conditions including multiple contact closures, vehicle speed, date, day and time. (see Auxiliary Device Control).
- e) Traffic Data Collection

- Sign shall collect the first, fastest, slowest, and last speed for each vehicle detected in the radar zone each with its own timestamp (day, month, year, hours, minutes, seconds) to allow software to calculate acceleration, deceleration, no change in speed and other behavioral analysis for every vehicle detected in the radar zone.
 - Shall have ability to enable/disable data collection
 - Data shall be stored to a removable SD card for easy data retrieval
 - On-board data compression shall allow storage of more than 20 years of raw traffic data per gigabyte.
 - Sign shall be SD and SDHC compatible.
- f) Auxiliary Device Control
- Sign shall have at least six (8) simultaneous auxiliary contacts available to trigger or be triggered by the sign.
 - Trigger-able devices include but are not limited to: strobes, flashers, flashing beacons, lighted crosswalks, traffic cameras, etc. Each of these devices can be triggered according to parameters set for one of up to 256 programmable behaviors.
 - Available triggering devices include but are not limited to: pedestrian push buttons, temperature sensors, wireless devices, etc. Each device can trigger 1 of 4 user-definable messages.
- g) Message control
- All 2048 LED clusters can be programmed individually to form up to 256 custom messages to be triggered by a variety of speed thresholds and auxiliary devices. (see sign programming software for details on changing these messages)
 - Sign shall have the ability to display custom messages instantly with an internet connection.
- h) The sign shall be able to function as a Conditional or Variable Speed Limit (VSL) sign with user-selectable speed limits.
- i) Dimming can be set by time-of-day with up to 6 different settings per day.
- j) Controller shall maintain an accessible log of low voltage warnings, power failures, and contact closure changes.
- k) Sign shall perform LED self-diagnostics by detecting and reporting LED pixel failures.

(4) Wireless Data Service

The Contractor shall furnish and install a wireless, GPS-enabled modem within each Radar Driver Feedback Display and provide 60 months of wireless data service for each modem. The cost for this services and modems shall be included in the **Lump Sum** price paid for the Radar Driver Feedback Displays.

(5) Wireless Transmitting Equipment

The Contractor shall furnish and install wireless transmitting equipment within the existing traffic signal controller cabinet located at Grapefruit Boulevard and 4th Street and at each Radar Driver Feedback Display unit with the following equipment as required for the intended operation.

- Phoenix contact radio, RAD-ISM-900-SET or approved equal
- IDEC relay, RH2B-U (AC110 – 120V) or approved equal
- IDEC relay base, SH2B-05 or approved equal

(6) Sign programming software

- a) Shall be compatible with Windows 98, 2000, NT, XP, Mobile6.1, Linux, Android, Mac OSX, and OSX-mobile.
- b) Through wireless data service
 1. Sign software shall be updated automatically and require no installation;
 2.
 - Data shall be downloaded automatically from sign on a regular basis;
 - Modifications to sign programming shall be sent automatically to the sign;
 - Unlimited traffic alerts can be set up for notification of excessive speeding sent automatically from sign.
- c) Manufacturer shall provide a database to store all raw data retrieved from the sign so that multiple data files can be merged to a single database where all duplicate speed data is automatically deleted and data retrieval can be selected by date range
- d) Raw data can be downloaded by a user-definable date range to an excel spreadsheet.
- e) Software shall calculate the following
 - Peak/low histogram charts separated by speed limit so that signs in areas where speed limits change during the day can have accurate data
 - Peak/low 85th percentile by time-of-day chart that shows percentiles by time-of-day at a user-definable interval
 - Incremental analysis where percentage of vehicles slowed is calculated for each user-definable speed increment exceeding the speed limit to assist in proving the sign's effectiveness.
- f) Software shall have video and written tutorial instruction built-in to assist in a quick and easy guided learning process
- g) Programming software shall include a simulator that will show the user exactly what the sign will do with the program before deployment to eliminate programming errors.
- h) Sign messages shall have the ability to be free-drawn or letters can be dragged and dropped into place.

(C) Foundations

Foundations shall conform to the provisions in Section 51, "Concrete Structures", and Section 86-2.03, "Foundations", of the Standard Specifications and these Special Provisions.

Portland cement concrete shall conform to Section 90-10, "Minor Concrete", of the Standard Specifications and shall be Class 3 except pole foundations shall be Class 2.

The Contractor shall install 2' diameter x 4' deep foundation for the 14' height Type 1-A pole.

All foundation concrete shall be vibrated to eliminate air pockets.

(D) Standards, Steel Pedestals and Posts

Standards, steel pedestals, and posts shall conform to the provisions in Section 86-2.04, "Standards, Steel Pedestals and Posts", of the Standard Specifications and these Special Provisions.

The Contractor shall furnish and install 14' height Type 1-A pole and anchor bolts for each Radar Driver Feedback Display unit.

Warranty:

The solar powered Radar Driver Feedback Display unit shall have two (2) years of manufacturer warranty. During the warranty period, technical support shall be available from the supplier via telephone within 24 hours of the time a call is made by a user, and this support shall be available from factory-certified personnel or factory-certified installers.

The contractor shall furnish the Engineer with the manufacturer's standard written warranty pertaining to defects in materials and workmanship for all equipment furnished by the Contractor.

The Contractor shall furnish two sets of user, operation, and maintenance manuals, written in English, on all equipments and components furnished for the signal and lighting systems.

Payment:

Full compensation for furnishing and installing Radar Driver Feedback Display Assemblies (2 Each) And Wireless Communication Equipment, including all labor, materials, tools, equipment, documents, programming, testing, incidents, wireless data service, and all the work specified herein, elsewhere in these Special Provisions and on the plans, shall be paid for on a lump sum basis, and no additional compensation shall be allowed therefor.

10-1.44

ABANDONMENT OF MONITORING WELL AND INSTALLATION OF MONITORING WELL:

The existing groundwater monitoring well shall be abandoned and a new monitoring well shall be installed in accordance with the County of Riverside Ordinance 682.4 "Construction, Reconstruction, Abandonment, and Destruction of Wells" and all applicable County, State, and Federal Water Quality and Environmental Health

requirements in the location shown on the construction plans, and as directed by the Engineer and/or County Environmental Health Inspector.

Payment:

The contract bid price paid per lump sum for Abandon Monitoring Well and for Install Monitoring Well shall include full compensation for furnishing all labor, tools, material, equipment, and incidentals, and for doing all work involved including obtaining all required permits at the County, State, and/or Federal level; providing all documentation, including but not limited to, studies, reports, work plans, etc. in regards to obtaining said permits; and paying all required fees in accordance with the permits/approvals for full/complete abandonment of the well as directed by the Engineer and/or County Environmental Health Inspector and no additional compensation will be allowed therefor.

10-1.45

MISCELLANEOUS DIRECTED WORK:

Miscellaneous Directed Work shall consist of necessary work that is not included in other contact bid items, as determined by the Engineer. Miscellaneous Directed Work shall be performed as directed by the Engineer and in accordance with the applicable standards and specifications.

Payment:

Full compensation for implementing "Miscellaneous Directed Work" shall be made on a force account basis, in accordance with Section 9-1.03 of the Standard Specifications. The total accumulated costs for the Miscellaneous Directed Work shall not exceed the amount specified in the contract bid item, unless otherwise increased by change order.

SECTION 10-2 LANDSCAPING

10-2.01

GENERAL

The work performed in connection with highway planting and irrigation systems shall conform to the provisions in Section 20, "Erosion Control and Highway Planting" of the Standard Specifications and these Special Provisions.

The Contractor shall notify the Engineer not less than 72 hours prior to requiring initial access to the existing irrigation controllers. When the Engineer determines that access to the controllers is required at other times, arrangements will be made to provide this access.

When fluctuations of water pressure and water supply are encountered during normal working hours, plants shall be watered at other times, as often, and in sufficient amounts as conditions may require to keep the soil and plant roots moist during the life of the contract.

Full compensation for watering plants outside normal working hours shall be considered as included in the contract lump sum prices paid for Highway Irrigation work and no additional compensation will be allowed therefor.

Progress Inspections

Progress Inspections will be performed by the Engineer for completed highway planting and irrigation system work at designated stages during the life of the contract.

Progress inspections will not relieve the Contractor of responsibility for installation in conformance with the special provisions, plans, and Standard Specifications. Work within an area shall not progress beyond each stage until the inspection has been completed, corrective work has been performed, complies with Section 10-2.01 of these Special Provisions, and the work is approved, unless otherwise permitted by the Engineer.

The requirements for progress inspections will not preclude additional inspections of work by the Engineer at other times during the life of the contract.

The Contractor shall notify the Engineer, in writing, at least 4 working days prior to completion of the work for each stage of an area and shall allow a minimum of 3 working days of the inspection.

Progress inspections will be performed at the following stages of work:

- A. During pressure testing of the pipelines on the supply side of control valves.
- B. During testing of low voltage conductors.

- C. Before planting begins and after completion of the work specified for planting in Section 20-4.03, "Preparing Planting Areas" of the Standard Specifications.
- D. Before plant establishment work begins and after completion of the work specified for planting in Section 20-4.05, "Planting" of the Standard Specifications.

10-2.02 IRRIGATION SYSTEM:

PART 1 - GENERAL

1.01 SUMMARY

- A. This section covers the furnishings of all materials and performing all operations to provide a complete operable landscape irrigation system as shown on the drawings including the following:
 - 1. Trenching, stockpiling excavated materials and refilling trenches.
 - 2. Irrigation system components including but not limited to: piping, backflow prevention devices and enclosures, valves, fittings, rotors, spray heads, central control system controllers, wiring and final adjustments as determined by the County Representative to insure efficient and uniform distribution.
 - 3. Pipe connections to irrigation backflow prevention devices.
 - 4. Testing and inspection of irrigation system.
 - 5. Clean-up and maintenance.
- B. The conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.02 GENERAL REQUIREMENTS

- A. Code Requirements shall be those of State and Municipal Codes and Regulations locally governing this work, providing that any requirements of the Drawings and Specifications, not conflicting therewith but exceeding the Code Requirements shall govern, unless written permission to the contrary is granted by the County Representative.
- B. Conform to the requirements of the reference information listed below except where more stringent requirements are shown or specified in the most current set of construction documents:

1. American Society for Testing Material (ASTM), for test methods specifically referenced in this section.
 2. Underwriter's Laboratories (UL), for UL wires and cables.
- C. Work involving substantial plumbing for installation of brass piping, backflow prevention devices and other related work shall be executed by a licensed and bonded plumbing contractor. Any necessary permits shall be obtained prior to beginning work.
- D. Specified depths of pressure supply lines, laterals and pitch of pipes as stated in this section are minimums. Settlement of trenches lower than grades specified on the final grading plans is cause for removal of finish grade treatment, refilling trenches, recompacting and repairing of finish grade treatment.
- E. Follow current printed manufacturer's specifications and drawings for items or information not specified or graphically indicated in the most current set of construction drawings.
- F. Scaled dimensions are approximate and at times it is not possible to indicate offsets, fittings and other related equipment graphically on the construction drawings. Contractor shall be responsible for minor changes caused by actual site conditions. Before proceeding with any work, the Contractor shall carefully check and verify all dimensions of related architectural elements, utilities and landscaping and furnish and install required fittings.
- G. Do not install the irrigation system as shown on the construction drawings when it is obvious that actual field conditions such as physical obstructions, grading discrepancies and field dimensions vary from those recorded on the construction drawings. Immediately bring any such discrepancies to the attention of the County Representative prior to proceeding with work. If immediate notification is not given and such discrepancies exist, the Contractor shall assume full responsibility for necessary revisions, as determined by the County Representative.
- H. All central control system telephone communication and/or radio communication shall be tested and certified in writing by the appropriate manufacturer's representative.

1.03 EXISTING FIELD CONDITIONS

- A. Preserve and protect all existing trees, plants, monuments, structures, hardscape and architectural elements from damage due to work in this section. In the event that damage does occur to inanimate object and structures, the Contractor will repair or replace such damage to the satisfaction of the County Representative. Damage or injury to living plant material will be replaced by the Contractor at the Contractor's expense.

- B. Trenching or other work required in this section under the limb spread of existing trees shall be done by hand or by other methods so as to prevent damage or harm to limbs, branches and roots.
- C. Trenching in areas where root diameter exceeds 2 inches shall be done by hand. Exposed roots of this size shall be heavily wrapped with moistened burlap to avoid scarring or excessive drying. Where a trenching machine is operated in proximity to roots that are less than 2 inches, the wall of the trench shall be hand trimmed , making clean cuts through roots.
- D. Trenches adjacent to or under existing trees shall be closed within 24 hours, and when this is not possible, the side of trench closest to the tree or trees affected shall be covered with moistened burlap.
- E. Protect, maintain and coordinate work with other contracts, specifications, trades, and utilities. Extreme care shall be exercised in excavating and working in the area due to existing utilities. Contractor shall be responsible for damages caused by their operations. In the event that damage does occur, the costs of such repairs shall be paid by the Contractor and/or as directed by the Engineer.
- F. Use caution where trenches and piping cross existing roadways, sidewalks, hardscape, paths or curbs. In the event that damage does occur, the Contractor will repair such damage at the Contractor's expense.

1.04 REQUIRED DOCUMENTS

A. Submittals

- 1. Submit (6) six sets of all irrigation equipment to be used, manufacturer's brochures, service manuals, guarantees, and operating instructions for approval to the County Representative prior to beginning work. Submittals should be in a bound form complete with table of contents. The Contractor shall not proceed with work in the field until this submittal is approved in its entirety by the County Representative.

B. Service Manuals

- 1. The Contractor shall furnish (4) four service manuals to the County prior to scheduling a walk through for substantial completion. Manuals shall be submitted in a bound form complete with a table of contents, and workmanship form on company letterhead copy of Contractor's warranty, copy of the letter of certification for the central control system on the central control system manufacturer's letterhead and shall contain complete enlarged drawings of all equipment installed showing component warranties and catalog numbers together with the manufacturer's name and address. Manuals shall include operation

instructions. Manuals shall be subject to approval by the County Representative.

C. Record Drawings/As-builts

1. Prior to beginning work in the field the Contractor shall secure a complete set of irrigation plans at the original scale complete with details and specifications. The Contractor shall be responsible for making a set of blue-line prints for every week on the project. At the end of each working day, the Contractor shall record all work accomplished for that day on the set of blue-line prints in red ink. These record drawings shall be brought up to date at the end of each work week by a qualified draftsman. The drawings should indicate the following:
 - a. Any zoning changes.
 - b. Dimension from two permanent points of reference (building corners, fixed hardscape corners, road intersections, and permanent existing utilities) the location of the following items:
 1. Water meters.
 2. Pump stations.
 3. Connection to existing water lines.
 4. Routing of pressure supply lines at every 100' along routing.
 5. Backflow Prevention Devices.
 6. Flow Sensors.
 7. Master Valves.
 8. Isolation Ball Valves.
 9. Quick Coupling Valves.
 10. Air Release Valves.
 11. Electric Control Valves
 12. Drip Valve Assemblies.
 13. Flush Valve Assemblies.
 14. Swing Check Valves.
 15. Central Control System Controllers.
 16. Grounding rods.
 17. Control wire routing (if routed separately from pressure supply line).
 18. Control wire splices that are outside of the controller.
 19. Weather Station Equipment.
 20. Communication Equipment for Central Control System.
 21. Other equipment as directed by the County Representative.
2. Prior to scheduling a walk through for substantial completion, provide a record set of field as-built drawings as described above to the County Representative for review. After review, the County Representative will

return the as-built set to the field foreman requesting further information or will notify the foreman that the record set of field as-builts drawings are complete. After approval from the County Representative, a walk through for substantial completion may be scheduled.

3. Prior to scheduling the final walk through, the final set of irrigation as-built drawings shall be professionally drafted in AutoCAD by the Contractor.
4. The County Representative and the Contractor shall verify the final as-builts at the time of the final walk through and once successful the Contractor shall deliver the final set of as-built drawings to the County Representative prior to initiating the maintenance period for the Contractor.

D. Controller Charts

1. Prior to scheduling a walk through for substantial completion, provide a record set of field controller charts which have color coded each station within each controller to the County Representative for review. After review, the County Representative will return the controller charts to the field foreman requesting further information or will notify the Contractor that the record set of controller charts are complete. After approval from the County Representative, a walk through for substantial completion may be scheduled.
2. Prior to scheduling a final walk through, one set of controller charts shall be professionally drafted in AutoCAD by the Contractor for each controller unit installed on the project. The controller drawings shall be an actual AutoCAD reduction of the area covered by that controller unit and shall be at the maximum allowable scale that will fit inside the controller door without folding the drawing.
3. The County Representative and the Contractor shall verify each controller chart at the time of the final walk through and once successful the Contractor shall deliver the final set of controller charts to the County Representative prior to initiating the maintenance period for the Contractor. The controller chart sent to the County Representative shall be hermetically sealed between two (2) pieces of minimum 20 mils thick plastic.
4. The Contractor shall then deliver one controller chart to the Contractor who will permanently fix the controller chart to the inside of the applicable controller.

PART 2 - PRODUCTS

2.01 PIPING

A. General Piping:

1. Pipe sizes shown are nominal inside diameter unless otherwise noted.
2. Pipe shall be identified with the following indelible markings:
 - a. Manufacturer's name.
 - b. Nominal pipe size.
 - c. Schedule or class.
 - d. Pressure rating.
 - e. NSF (National Sanitation Foundation) seal of approval.
 - f. Date of extrusion.

B. Solvent Weld Pressure Supply Line:

1. Solvent Weld Pressure Supply Line: (downstream of Backflow prevention device) PVC CL315BE (1" - 3")
 - a. Manufactured from virgin polyvinyl chloride (PVC) compound in accordance with ASTM D2241 and ASTM D1784; cell classification 12454-B.
 - b. Type 1, Grade 1.
2. Fittings: Standard weight, Schedule 40, injection molded PVC, complying with ASTM D1784 and D2466, cell classification 12454-B.
 - a. Threads- Injection molded type (where required)
 - b. Tees and Ells- side gated
3. Threaded Nipples: ASTM D2464, Schedule 80 with molded threads.
4. Joint Cement and Primer: Type as recommended by manufacturer of pipe and fittings.

C. Gasket-End Pressure Supply Line:

1. Gasket-End Pressure Supply Line: (downstream of Backflow prevention device) PVC Class 200 (4" and larger).
 - a. Manufactured from virgin polyvinyl chloride (PVC) compound in accordance with ASTM D2241 and ASTM D1784; cell classification 12454-B,
 - b. Type 1, Grade 1.

2. Fittings: Cast Iron or Epoxy coated steel; complying with ASTM D1784 and D2466, cell classification 12454-B.
3. Gaskets: Factory installed in pipe and fittings, having a metal or plastic support within the gasket or a plastic retainer ring for gasket.
4. Lubricant: As recommended by manufacturer of pipe fittings.

D. Non-Pressure Lines Below Grade:

1. Non-Pressure Lines: (downstream of electric remote control valve) PVC SCH 40.
2. Fittings: Standard weight, Schedule 40, injection molded PVC, complying with ASTM D1784 and D2466, cell classification 12454-B.
 - a. Threads- Injection molded type (where required)
 - b. Tees and Ells- side gated
 - c. Threaded Nipples: ASTM D2464, Schedule 80 with molded threads.
3. Joint Cement and Primer: Type as recommended by manufacturer of pipe and fittings.

E. Non-Pressure Lines Above Grade:

1. Non-Pressure Lines: (downstream of electric remote control valve) Ultraviolet Resistant PVC SCH 40, conforming to ASTM D1785-83.
2. Fittings: Standard weight, Schedule 40, injection molded PVC, complying with ASTM D1784 and D2466, cell classification 12454-B.
 - a. Threads- Injection molded type (where required)
 - b. Tees and Ells- side gated
 - c. Threaded Nipples: ASTM D2464, Schedule 80 with molded threads.
3. Joint Cement and Primer: Type as recommended by manufacturer of pipe and fittings.
4. On-Grade Pipe Stabilizer Bars: 5/16" hot rolled "J" Hook with protective vinyl tubing, welded to #4 rebar stake.

F. Sleeving and Conduit:

1. All PVC sleeving for pressure supply line and non- pressure supply line shall be twice the nominal size of the pipe within and used for sleeves below grade as indicated in the following sleeve and conduit schedule:
2. Sleeving and Conduit Material Under Hardscape:
 - a. PVC SCH 40 for 1"-2 1/2" pressure supply line.
 - b. PVC SCH40 for 3" and larger pressure supply line.
 - c. PVC SCH 40 for non- pressure lines.
 - d. (1) one 3/4" PVC SCH. 40 conduit for up to 5 wires.
 - e. (1) one 1" PVC SCH. 40 conduit for up to 8 wires.
 - f. (1) one 1 1/4" PVC SCH. 40 conduit for up to 15 wires.
 - g. (1) one 1 1/2" PVC SCH. 40 conduit for up to 20 wires
 - h. (1) one 2" PVC SCH 40 conduit for up to 30 wires.
 - i. (1) one 2 1/2" PVC SCH 40 conduit for up to 35 wires.
 - j. (1) one 3/4" PVC SCH 40 wire conduit for flow sensing cable.
 - k. (1) one 3/4" PVC SCH 40 wire conduit for master valve wire.
3. Flow sensing cable and master valve wires shall be installed each in their own conduit separate and apart from all other wires.
4. Sleeving and Conduit Material Over Concrete V-Ditches:
 - a. Galvanized SCH. 40 for 1"-2 1/2" pressure supply line.
 - b. Galvanized SCH.40 for 3" and larger pressure supply line.
 - c. Galvanized SCH. 40 for non- pressure lines.
 - d. (1) one 3/4" Galvanized SCH. 40 conduit for up to 5 wires.
 - e. (1) one 1" Galvanized SCH. 40 conduit for up to 8 wires.
 - f. (1) one 1 1/4" Galvanized SCH. 40 conduit for up to 15 wires.
 - g. (1) one 1 1/2" Galvanized SCH. 40 conduit for up to 20 wires
 - h. (1) one 2" Galvanized SCH. 40 conduit for up to 30 wires.
 - i. (1) one 2 1/2" Galvanized SCH. 40 conduit for up to 35 wires.
 - j. (1) one 3/4" Galvanized SCH. 40 wire conduit for flow sensing cable.
 - k. (1) one 3/4" Galvanized SCH. 40 wire conduit for master valve wire.
5. On-Grade Pipe Stabilizer Bars: 5/16" hot rolled "J" Hook with protective vinyl tubing, welded to #4 rebar stake.

G. Brass Pipe and Fittings:

1. Pressure Supply line (from point of connection through Backflow Prevention Device) Brass pipe shall be regular weight, 85% red brass, ANSI Schedule 40 screwed pipe.
2. Fittings: Medium brass, screwed at 125 pound class.

2.02 BACKFLOW PREVENTION DEVICE 2" AND SMALLER

- A. Backflow Prevention Device: Reduced pressure principal Backflow assembly shall consist of an approved brass or bronze body, brass check valves, hydraulically actuated relief valve, inlet and discharge shutoffs and field test cocks, as specified on drawings.
- B. Backflow prevention units shall be approved by the Foundation for Cross-Connection Control and Hydraulic Research.
- C. Backflow device enclosure shall be constructed of stainless steel tube and wire construction and have a smooth surface to protect against handling industry. Enclosure shall have a full release locking mechanism and provide easy access for service and repairs.

2.03 BOOSTER PUMP

- A. Booster pump shall be single stage end suction close coupled centrifugal, cast iron bronze fitted construction, equipped with mechanical shaft seal, back pullout design. Impeller shall be keyed and locked to the shaft with a hex head impeller nut and washer. Pump shaft shall be high strength S.A.E. 1045 carbon steel protected in the stuffing box area by a replaceable bronze shaft sleeve. Pump shall be directly coupled to a C-face electric motor.
- B. Electric motor shall be of the squirrel cage induction type suitable for full voltage starting. Motor shall be ODP to aid in cooling. Electric motor shall be rated for continuous service. The motor shall have horsepower ratings such that the motor will carry the maximum possible load to be developed under the designed pumping conditions and not overload the motor beyond the nameplate rating of the motor. Motor shall have a 1.15 service factor. The motor shall conform to the latest NEMA Standards for motor design and construction.
- C. Pump Control Panel shall have a NEMA 4X plain front non-metallic enclosure with padlock latches. This includes power and control re-settable thermal circuit breakers, heavy duty magnetic starter with adjustable overload protection, Hand-Off-Auto switch to select mode of operation, and heavy duty numbered terminal strips for power and control wiring lead terminations.
- D. Metal oxide varistor protected pump start relay(s) incorporated in panel to start pump with signal from each irrigation controller.
- E. All system piping shall be type "L" copper. All fittings shall be copper or brass, with unions or flanges to allow for system disassembly or major component removal. System shall incorporate an integral full pipe size bypass line with isolation valve to allow for pump removal and repair without disrupting water supply to system.

- F. Isolation valves shall be all brass quarter turn ball valves with hard chrome ball on lines 2" and less. Isolation valves shall be lug style butterfly valves with Buna-N elastomeric seats, ductile iron nickel coated disc, and stainless steel stem with handle and 10 position galvanized memory plate on lines 2½" and greater.
- G. Gauges shall be 2½" diameter face, glycerin filled with stainless casing and brass internals.
- H. Flow activated paddle style magnetically coupled flow switch, sensitive to flows as low as 1 fps, mounted on piping and interconnected to time delay relay to shut down pump on no-flow conditions, time delay relay adjustable from 0 to 5 minutes.
- I. Pump system shall be mounted on a structural aluminum skid with mounting flanges on front and back to allow for mounting of skid to concrete pad. Skid equipped with pipe support on suction and discharge piping. All nuts and bolts and washers to be heavy zinc coated steel on skid and piping. Skid shall include mounting hardware for integral aluminum enclosure.
- J. The system enclosure shall be vandal and weather resistant, marine grade aluminum alloy 5052-H32 construction with rectangular punch-outs for viewing and heat dissipation. The enclosure shall be low profile hinged top design with padlock provision. The cover shall be secured to the concrete pad with stainless steel hardware.
- K. Pump Assembly shall include the following option(s):
(ATT) Where specified by the System Design Parameters, Sound Attenuation foam shall be installed on interior of enclosure with baffles on venting to reduce sound emanating from the booster system.
(VFD) Where specified by the System Design Parameters, a Variable Frequency Drive system to convert incoming 1 phase power to 3 phase power for the motor. VFD system to receive feedback signal from system mounted stainless steel pressure transducer, and in conjunction with internal software driven PID control loop maintain customer adjustable constant system discharge pressure by varying the speed of the pump in response to varying system load.
(FSW) Where specified by the System Design Parameters, Flow activated non-adjustable pivoting vane style magnetically coupled Flow Switch, with 300 series stainless vane, brass body and weatherproof enclosure. Flow switch sensitive to flows as low as 1 fps, with electrical contact ratings of 5 Amps at 125/250 VAC, pressure rated to 250 PSI, mounted on piping and interconnected to time delay relay to shut down pump on no-flow conditions, time delay relay adjustable from 0 to 5 minutes. (Option: Flow switch to provide on-off control of pumping unit)
- L. The services of a factory representative or trained service professional shall be made available on the job site to check installation and perform the startup and instruct the operating personnel. A startup report containing voltage and amperage

readings, suction and discharge pressure readings, estimated flow conditions, and general operating characteristics shall be submitted to the Owner.

- M. Four sets of operating and maintenance manuals shall be provided to the owner after startup and shall include parts manuals for major components, performance curve for pump, general sequence of operation, and electrical schematic for control panel.

2.04 BASKET STRAINER

- A. Basket strainer shall be manufactured with a steel powder coat or stainless steel body with an 80-mesh filtration element and stainless steel basket.
- B. Specify basket strainer at P.O.C. directly downstream of the backflow device. Install per filter detail.

2.05 WYE STRAINER

- A. Wye strainer shall be bronze construction with a stainless steel screen element. Wye strainer shall have a standard filtration size of 80 mesh.

2.06 PRESSURE REGULATING VALVE

- A. Pressure reducing valves shall be bronze and stainless steel construction and be adjusted from 25 P.S.I. to 125 P.S.I.

2.07 MASTER VALVES

- A. The master valve shall be normally closed, pressure reducing, surge protecting, supplying constant downstream pressure when opened. Operating voltage of 16-40 VAC. Regulating and surge anticipation control pilot frange from 5 125 psi with accuracy within ± 1.5 percent of setting. Capable of operating within a range of .01 to 400 GPM. Copper encased solenoids that area corrosion resistant and provide heat dissipation for prolonged coil life, cast iron, epoxy coated body and bronze trim fully guided, 600 psi rated diaphragm assembly, with manual on-off capability.

2.08 FLOW SENSORS

- A. The flow meter shall use two #14 AWG; one red, and one black in 1" PVC conduit to connect to the irrigation controller. The maximum wire run between flow meter and controller shall be 2000 ft. The flow meter shall send low voltage digital pulses back to the controller and therefore all electrical connections must be waterproof and shall resist any moisture entry.
- B. It is intended that all wire runs between the controller and flow meter shall be direct pulls and shall have no splices. If wire splices are unavoidable, they shall be

installed in a valve box with water proof connectors and properly labeled valve boxes.

- C. Each flow meter shall have the following characteristics:
 1. Housing to be a Sch 80 polyvinyl chloride tee or bronze tee
 2. Have a pulsing output that operates at 9V DC and a pulse rate that is proportionate to the GPM
 3. Fully compatible with the internal interface at each field controller
 4. Powered by the controller
 5. Replaceable metering insert shall feature a six-bladed design with a proprietary, non-magnetic sensing mechanism
 6. Supplied by the same manufacturer as the irrigation controller.
- D. Irrigation zones must be sized so that the specified flow meter is capable of reading the minimum and maximum gallons per minute for all proposed zones.
- E. Install downstream of master valve.

2.09 ISOLATION VALVES

- A. Isolation all PVC Valves: Industrial grade sealed unit socket weld schedule 80 PVC ball valve (Use for mainline pipe 1-1/2" and smaller) as manufactured by Spears model 2122 or approved equal.
- B. Isolation Gate Valve: Bronze, screw-in-bonnet, non-rising stem, cross handle, solid wedge, threaded valve (Use on mainline pipe 2" and 2-1/2 " in size) as manufactured by Nibco model T-113-K, or approved equal.
- C. Isolation Gate Valve: Iron bolted bonnet with 2" square operating nut, non-rising stem, resilient wedge type, soft seat, flanged end epoxy coated, bronze trimmed iron body. (Use on pipe 3" and greater) as manufactured by Nibco model F-619-RW flanged, or approved equal.

2.10 QUICK COUPLING VALVES

- A. Quick coupler valves shall have a body constructed of red brass with a wall thickness guaranteed to withstand normal working pressure of 150 P.S.I. without leakage with female threads (penning at base). Quick coupler valve shall have a hinge cover constructed of red brass with leather like vinyl cover bonded to it on such a manner that it becomes permanent type of cover. Quick couplers used with potable water shall have vinyl covers yellow in color. Quick coupler valves used for reclaimed water shall have vinyl covers purple in color with the appropriate reclaimed water warnings in English and Spanish as well as the international "Do Not Drink" symbol.

- B. All quick coupler valves must have a Schedule 80 ball valve to isolate mainline from quick coupler valve. Mainline shall be the size of quick coupler valve from mainline tee to quick coupler.

2.11 ELECTRIC CONTROL VALVES

- A. Electric Remote Control Valves: Electric control valves with pressure regulating feature two way solenoid, pilot operated made of synthetics, non-corrosive material; diaphragm activated and slow closing. Include freely pivoted seat seal, retained (mounted) without attachment to diaphragm.

- B. Isolation Ball Valve at Manifold and/or Electric Control Valve:

- 1. Ball Valve: PVC threaded true union ball valve, with heavy bodied PVC construction, buttress threaded double union nuts, safe-t-block seal carrier, PTFE ball seat, high impact polypropylene handlesafe-t-shear stem, full schedule 80 bore, 235PSI rating, NSF listed.

2.12 DRIP VALVE ASSEMBLIES:

- A. Electric Remote Control Valves: Electric control valves with pressure regulating feature two way solenoid, pilot operated made of synthetics, non-corrosive material; diaphragm activated and slow closing. Include freely pivoted seat seal, retained (mounted) without attachment to diaphragm.

- B. Wye Strainer: 150 mesh screen for point to point drip and subsurface

- C. Isolation Ball Valve: Ball Socket Ball Valve with thermoplastic molded one piece construction and Teflon seat with EDPM cushions.

2.13 HARD PIPED POINT TO POINT DRIP IRRIGATION:

- A. Riser Assembly For Hard Piped Point to Point Drip Irrigation:

- 1. 12" Long, ½" IPS flexible PVC tubing with factory attached ½" schedule 40 PVC MIPT adapters on both ends.

- B. Emitters For Hard Piped Point to Point Drip Irrigation:

- 1. Pressure compensating single outlet emitter with ½" FIPT base and 20 mesh screen. ½ GPH, 1 GPH or 2GPH. Mulch Camo Brown in color.

2.14 MULTI OUTLET POINT TO POINT DRIP IRRIGATION:

- A. Drip Tubing For Point to Point Drip Irrigation with Multi-Port Adapter:

1. DuraPolyHose 1/4", manufactured of flexible vinyl chloride conforming to ASTM D2855M, D380 and D1599.

B. 6 Outlet Manifold for Point to Point Drip Irrigation

1. Emission Device with 1/2" FPT inlet thread for 1/2" MIPT threaded riser, providing a manifold with six free-flowing 1/4" barb outlets. Each barb outlet shall be sealed with a durable, removable, plastic cap that can be removed for additional emission devices.

C. Emitters For Point to Point Drip Irrigation with Multi-Port Adapter:

1. 1/4" barbed pressure compensating emitter with a high quality diaphragm for improved pressure compensation and uniformity over a wide range of pressure. Emitter shall have a take-apart feature for inspection and cleaning as well as an outlet baffle to deter entry of insects.

Emitters shall be installed according to the following schedule:

1 Gallon Shrub – (2) .5 GPH Emitters

5 Gallon Shrub – (2) .5 GPH Emitters

15 Gallon Shrub/Tree – (3) 1 GPH Emitters

24" Box Tree – (4) 1 GPH Emitters

36" Box Tree – (6) 1 GPH Emitters

48" Box Tree – (8) 1 GPH Emitters

D. Tubing Stakes For Point to Point Drip Irrigation with Multi-Port Adapter:

1. 6" galvanized, 9 gauge, PVC coated tubing stake.

2.15 FLUSH VALVE ASSEMBLIES:

A. Schedule 80 Ball Valve, threaded schedule 80 nipples and fittings with polyethylene tubing for flush hose.

2.16 VALVE BOXES:

A. Jumbo rectangular valve boxes shall be 14-7/8 inch wide by 21-3/8 inch long and 12 inch high. Rectangular valve boxes shall be 11-3/4 inch wide by 17 inch long and 12 inch high. Round valve boxes shall be 10-inch diameter and 10 1/2 inch high. All valve boxes shall be constructed of rigid polyolefin.

B. Valve boxes shall have locking covers secure with a 3/8-inch stainless steel bolt and washer.

C. Jumbo rectangular valve boxes shall be used for master control valves.

- D. Rectangle valve boxes shall be used for control valves, pressure regulators, flow sensors, wye strainers, filtration devices, ball valves and pull boxes.
- E. Round valve boxes shall be used for gate valves quick coupler valves, flush valve assemblies and spare wires.
- F. All valve boxes to be green in color unless otherwise specified for use of reclaimed water.
- G. Heat brand all box lids with the appropriate two-inch high identification letters and/or numbers.
- H. All valve boxes shall receive landscape fabric. Landscape fabric shall be constructed of 5.0 oz. weight proven polypropylene weed barrier with burst strength of 225 P.S.I. and capable of 12 gallons per minute of water flow and puncture strength of 60 lbs. Dewitt Pro, Mirify or approved equal.
- I. All valve boxes shall receive 2 cubic feet of 3/4-inch gravel.
- J. Valve Tag: Manufactured from UV stabilized plastic with 180lbs pull out resistance and hot stamped for maximum visibility. Top hole shall be designed to pass a 16 gauge or smaller solenoid pigtail or attach with a nylon tie.

2.17 IRRIGATION HEADS (GENERAL):

- A. All irrigation heads shall be the size, type, and provide the same rate of precipitation with the same radius of spray, pressure and discharge in G.P.M. as listed on drawings
- B. All spray head sprinklers shall have stainless steel screw adjustment for radius of spray.
- C. All irrigation heads shall have a factory installed check valve or have an aftermarket check valve installed.
- D. All other requirements for non-pressure lateral line pipe to be as specified in fitting specification section.
- E. In no case shall the irrigation head spacing exceed the maximum manufacturer's recommendation.
- F. Irrigation heads along walks, curbs, paving, etc. shall be positioned 1 inch above finish grade. Irrigation in turf areas shall be positioned 2 inches above finish grade.
- G. All sprinkler heads shall be set perpendicular to finish grades.

- H. All sprinklers in turf areas shall have a minimum pop-up height of six (6) inches.
- I. All sprinklers in planter/slope areas shall have a minimum pop-up height of twelve (12) inches.

2.18 BUBBLERS:

- A. Bubblers shall be constructed of heavy duty plastic and be pressure compensation full circle. The bubbler shall have a 20 mesh screen to protect it from clogging.
- B. Bubblers shall be from .25 - 1.0 GPM and operate between 20-90 PSI.

2.19 CENTRAL CONTROL SYSTEM CONTROLLER AND COMMUNICATION HUB MANUFACTURED BY CALSENSE

All controllers/hubs shall be the most current Calsense version and model and shall have the following specifications and capabilities:

- A. Shall be capable of fully automatic, semi-automatic, and manual operation using a keypad that is an integrated part of the controller. Each controller shall be capable of storing irrigation schedules, monitor and manage flow all without the Central Computer (i.e. if the Central Computer is turned off, removed, or if communication from/to the Central Computer fails, the field controllers will continue to perform weather and flow management functions).
- B. Backlit display shall have a minimum of sixteen (16) lines by forty (40) characters so that scrolling through menus is minimized. The display shall allow the user to easily move from screen to screen through an intuitive, self-prompting display so that it is easier for the user to program, read and understand the controller. The controller shall display an area description for each station including the station's location, the type of plant material irrigated and type of irrigation equipment used.
- C. The controller shall have the built-in capacity for sensing flow via a flow meter input and utilizing a master valve without the addition of sensor boards, decoders, or other pieces of equipment.
- D. There shall be a minimum of seven (7) regular irrigation programs with individual station cycle and soak watering, plus two additional syringe/propagation programs each with minimum of six (6) start times, adjustable station run times and with automatic programming capability up to a specific date. When the date is reached the controller shall automatically cease irrigating the manual program.
- E. The controller shall have a water budget feature that provides monthly water volume allotments proportionate to historical evapo-transpiration (ET) which is interactive with all programs, and able to alert the user (via on screen alarms) when the controllers' water usage is more than the user set water budget.

- F. A full year master schedule to allow twelve (12) month programming shall be a standard feature of the controller.
- G. Programming shall be based on a seven (7), fourteen (14), twenty-one (21) or twenty-eight (28) day scheduling and shall be able to irrigate in minutes and as a % of ETo.
- H. The controller shall be able to receive real-time weather data directly from an ET gage and tipping rain bucket, and as a stand-alone controller automatically use the data to calculate appropriate run times for each station without use of a central control system.
- I. The controller shall be able to irrigate with the use of soil moisture sensing whereas the soil moisture sensor overrides programmed irrigation minutes, or minutes calculated when using real-time weather data. The soil moisture sensor used with the irrigation control system shall be by the same manufacturer.
- J. The controller shall have flow management capability as a standard feature whereas the controller shall learn each station's expected GPM flow rate automatically at night over several irrigations, and use the mainline GPM capacity programmed, to operate up to four (4) valves at the same time plus the master valve to shorten the water window.
- K. Alerts shall be able to be processed and responded to at both the field controller location and at the Central Computer location.
- L. When an alert, such as High Flow is indicated on the controller, the station with the High Flow shall still attempt to come on each watering cycle and then shut off, rather than having the alert keep the station off until someone clears the alert from the central computer or at the field controller.
- M. The controller shall have built-in amperage meter to accurately measure and diagnose valve solenoid electrical problems such as "no current", "station short", "under current", "over current", etc.
- N. The controller shall have an irrigation test program or "walk-thru" program that has a delay time to allow a user to walk to a certain area before valves come on. The controller shall then manually water a sequence of predetermined stations for set program times. The programmable delay time shall be an integral part of the irrigation test program. The controller shall be capable of operating a test program without affecting the controller's normal program station times or without terminating a regular watering schedule.
- O. The system shall be capable of allowing the user to make changes to the irrigation program via either at the Central Computer or at the field controller without requiring the user to go back to the Central Computer to accept the change.

- P. The controller shall allow for operator-set water window, which prevents irrigation from continuing beyond a set end time. Remaining run-times shall be carried in a hold-over table and shall be applied at the next scheduled irrigation with the system prioritizing which valve to operate based on accumulated ET and the hold-over time.
- Q. The system shall provide a multi-level access control up to four (4) levels for controlling who programs what at each controller. The controller shall have the ability to track and report on when an access code or "individual" user logged into the controller, what keys were pushed while there, and when an access code logged out of the controller. These shall be date and time stamped.
- R. The controller shall be able to display for the user a detailed water usage report categorizing for each month the usage during scheduled irrigation, test and manual key operation, and for non-controller usage such as bleeding valves on manually, using quick couplers or hose bibs.
- S. Optional Radio Remote receiver board, (model-RRe) shall be built-in the controller and a hand-held radio remote transmitter (model RRe-TRAN) will be supplied so that the end user can trouble shoot valves remotely without having to go the controller itself. The hand-held transmitter shall display operational information such as valve on, gallon per minute flow rate and electrical draw in amps.
- T. The field controller(s) shall be capable of utilizing a single mode or a combination of communication modes such as hardwire cable, standard telephone, Ethernet, WiFi, point-to-point spread spectrum radio, local radio in the 450-470 MHz range, fiber optic modems, or GPRS wireless modem application as communication links to the central computer. The field controllers shall be capable of directly receiving, storing, and operating commands downloaded from the central computer.
- U. The controller shall operate on a minimum of 120 volts A.C. power input and shall be capable of operating up to four 5.5 VAC 24 volt A.C. remote control valves at once. The controller shall have a reset circuit breaker to protect the controller from overloading.

Install one extra 1-1/2" inch conduit to controller for future use.

2.20 CENTRAL CONTROL SYSTEM CONTROLLER ENCLOSURE
MANUFACTURED BY CALSENSE

- A. The enclosure shall be of a vandal and weather resistant nature manufactured entirely of 304-grade stainless steel, and the top shall be 12 gauge and the body 14 gauge. The main housing shall be louvered upper and lower body to allow for cross flow ventilation. A stainless steel backboard shall be provided for the

purpose of mounting electronic and various other types of equipment. The stainless steel backboard shall be mounted on four stainless steel bolts that will allow for easy removal of the backboard.

- B. The 38-inch height with flip top shall provide easy access for programming from a standing position under normal installations.
- C. The pre-assembled vandal resistant enclosure by Calsense shall come complete with lightning and surge protection and all terminals shall be factory labeled. The pre-assembled enclosure shall come provided with an On/Off switch to isolate the controller along with a GFI receptacle. An optional radio antenna shall be pre-mounted and connected on SSE-R enclosure. The enclosure shall include 2-7/8", 1-1/2" thick, 6-pin cylinder, die-cast steel padlock with unique shackles design.
- D. Factory pre-assembled enclosure with controller shall carry a full UL listing.
- E. The enclosure and Controller installed equipment within shall carry a five (5) year warranty.

2.21 ET GAGE FOR CENTRAL CONTROL SYSTEM MANUFACTURED BY CALSENSE

- A. The Central Control system shall include a remote connected ET gage where shown on the plans and specifications. The ET measuring device shall be powered by the selected field controller. ET is measured directly in 0.01" increments and pulses from the gage shall be sent directly to the field controller. The daily, on-site ET data shall be stored in a 28-day table in the controller.
- B. Cable shall be installed in conduit and shall be run from the location of the ET gage back to the controller. Maximum length of cable shall be 1,000 feet. Wire runs shall be direct pulls without underground splices.
- C. The top surface of the gage shall be 3'4" above grade. The location shall be representative of the area to be irrigated, free of any obstructions to sunlight and wind. The location of the gage shall be located in an area where water from sprinkler heads does not hit the top surface of the gage. Calsense shall be called at 800-572-8608 for assistance in correct placement of the ET Gage.
- D. A vandal-resistant stainless-steel enclosure shall be used to protect the ET gage. The ET gage shall be mounted on a poured concrete base 18"x18"x 6" with the enclosure metal base and stake embedded into the slab. The horizontal plate shall be one inch (1") below the poured concrete, and the finish grade shall be two inches (2") below top of the concrete base.

1.22 RAIN BUCKET AND WIND SENSOR FOR CENTRAL CONTROL SYSTEM MANUFACTURED BY CALSENSE

- A. The Central Control system shall include a remote connected Tipping Rain Bucket where shown on the plans and specifications. The rain-measuring device shall be wired using the 60' of 2-conductor cable supplied with the Tipping Rain Bucket to the selected field controller. The cable should be installed in conduit and the connections are to be made at a terminal strip inside the enclosure. Maximum length of cable run shall be 200 feet.
- B. The Rain Bucket shall accurately measure rainfall in 0.01" increments by means of a tipping and emptying device mounted below the center of the collection dish.
- C. The controller shall provide the following programming parameters for rain:
 - Stop Irrigation after x.xx inches *
 - Maximum Rain in One Hour is x.xx inches *
 - Maximum Rain in 24 Hours is x.xx inches *
 - Let Rain only build up to x.xx inches *

* Note: x.xx inches is to be set by the operator.

2.23 ELECTRIC CONTROL VALVE WIRE

- A. Low Voltage:
 - 1. AWG UF UL approved No. 14 direct burial copper wire for all control wires and No. 14 direct burial copper wire for all common wires.
 - 2. Wire Colors:
 - a. Control Wires- As specified on drawings
 - b. Common Wires- As specified on drawings.
 - c. Master Valve Wires- Blue.
 - d. Spare Wires- Green (labeled at termination)
 - 3. Wire Splice Connectors: 3M DBY Direct Bury Splice Kits.
- B. High Voltage:
 - 1. Type required by local codes and ordinances, of proper size to accommodate needs of equipment serviced.

2.24 SAND BEDDING

- A. Sand bedding shall be construction grade.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Examine field conditions prior to beginning work described in this section. Grading operations shall be completed and approved prior to beginning work.
- B. Verify all sleeve locations below future hardscape and/or across concrete v-ditches prior to beginning work in this section. Flag all existing sleeves and conduits installed by other trades. Report any conflicts and discrepancies to the architect immediately.
- C. Irrigation system shall be constructed to the sizes and grades at the locations shown on the drawings. Mark with powdered lime or marking paint routing of pressure supply line and stake the location of each sprayhead, rotor, electric control valve and other related equipment for the first three zones. Architect shall review staking and direct any necessary changes with the Contractor prior to proceeding to other zones. This review does not in any way alleviate the Contractor from the responsibilities associated with proper uniformity and distribution of head placement after staking.
- D. Install sleeves, to accommodate pipes and wires, under paving, hardscape areas, sidewalks, and paths prior to asphalt and concrete operations. Compact backfill around sleeves to 95% Modified Proctor Density within 2% of optimum moisture content in accordance with ASTM D1557.

3.02 EXCAVATION AND BACKFILLING OF TRENCHES

- A. Trench excavation shall as much as possible follow the layout shown on the drawings. Trenches shall be straight in alignment and support pipe continuously on bottom of trench. Remove rocks and debris greater than 1" in diameter. Over excavate as required for bedding material.
- B. Depth of Trench (in landscape areas):
 - Pressure Supply Line (3" and smaller): 18" from top of pipe to finish grade.
 - Non-Pressure Line (12" pop-up Rotors): 18" from top of pipe to finish grade.
 - Non-Pressure Line (6" and smaller pop-up Rotors): 12" from top of pipe to finish grade.
 - Non-Pressure Line (12" pop-up Spray Heads): 18" from top of pipe to finish grade.
 - Non-Pressure Line (6" and smaller pop-up Spray Heads): 12" from top of pipe to finish grade
 - Control Wiring: directly at side and bottom of pressure supply line.
 - Pressure Supply line Locator Tape: 6" above top of pipe.
- C. Depth of Trench (under asphalt paving or concrete):

Pressure Supply Line (3" and smaller): 24" from top of pipe to aggregate base.
Non-Pressure Line: 24" from top of pipe to aggregate base.
Control Wiring: directly at side and bottom of pressure supply line.
Pressure Supply line Locator Tape: 6" above top of pipe.

1. Piping located under asphalt paving or concrete shall be installed with the appropriate sized sleeve and backfilled with sand bedding (6" below pipe and 6" above pipe).
2. Compact backfill material in 6" lifts at 90% maximum density determined in accordance with ASTM D1557 using manual or mechanical tamping device.
3. Set in place, cap, and pressure test piping in the presence of the County or County's representative prior to backfilling.

D. Width of Trench:

Pipe Greater than 3": 14" minimum.
Pipe Less than 3": 7" minimum.

E. Width between Trenches:

Irrigation Trench to Irrigation Trench: 6" minimum.
Irrigation Trench and other Trade Trenches: 12" minimum.

F. Boring: Boring will only be permitted where pipe must pass under an obstruction that cannot be avoided or removed. Backfill shall match surrounding soil density and grain. Boring under existing paving, sidewalks, or hardscape may be permitted at Contractor's own risk. Contractor is responsible for any repairs or damage to such items at their own expense.

G. Backfilling: Backfilling of trenches may not be done until all required testing for the irrigation system has been completed.

1. Material: Excavated material is generally considered to be adequate for backfilling operations. Before beginning the backfilling operation, insure that backfill material is free from debris and rocks greater than 1" in diameter, and is not mixed with topsoil. These materials after separated from backfill, shall be legally disposed of at Contractor's expense.
2. Bedding: Bed pressure supply line with construction grade sand 6" above and 6" below pipe as shown on details. Remaining backfill may be as described above.

3. Bed all electrical control wire trenched separate from pressure supply line, with construction grade sand 6" above and 6" below wires.
4. When backfilling, slightly mound filled trenches for settlement after backfilling is compacted. Compact backfill to a 90% maximum density in accordance with ASTM D1557 with a mechanical tamper. Do not leave trenches open for a period greater than 48 hours. Open trenches shall be protected in accordance with current OSHA regulations.
5. Smooth trenches to finish grade prior to requesting a walk through for substantial completion with the architect.

3.03 POINT OF CONNECTION(S)

- A. Point of connection shall be approximately as shown on drawings. Connect new underground piping and valves and provide all flanges, adapters, or other necessary fittings.

3.04 INSTALLATION OF SOLVENT WELD POLYVINYL CHLORIDE PIPE (PVC)

- A. Polyvinyl chloride pipe shall be cut with an approved PVC pipe cutter designed only for that purpose.
- B. All plastic-to-plastic solvent weld joints shall use only the solvent recommended by the pipe manufacturer. Do not install solvent weld pipe when temperature is below 40° F.
- C. Pipe ends and fittings shall be wiped with MEK, or approved equal, before welding solvent is applied. Welded joints shall be given a minimum of 15 minutes to set before moving or handling.
- D. Pipe shall be snaked from side-to-side on trench bottom to allow for expansion and contractions.
- E. All changes of direction over 15 degrees shall be made with appropriate fittings.
- F. When pipe laying is not in progress at the end of each working day, close pipe ends with tight plug or cap.
- G. Install pressure supply line locating tape along the entire length of pressure supply line.
- H. Coordinate pressure supply line with sand bedding operations.
- I. No water shall be permitted in the pipe until inspections have been completed and a period of at least 24 hours has elapsed for solvent weld setting and curing.

- J. Center load pipe with small amount of backfill to prevent arching and slipping under pressure. Leave joints exposed for inspection during testing.

3.05 INSTALLATION OF BRASS PIPE:

- A. Brass piping shall be cut by a power hacksaw, a circular cutting machine using an abrasive wheel, or by means of a hand hacksaw. All pipe shall be reamed and rough edges or burrs removed so that a smooth and unobstructed flow is obtained.
- B. Eccentric reducing fittings shall be used where any change in pipe size occurs. Bushings shall not be used unless specifically authorized by the architect.
- C. Joint compound shall be carefully and smoothly placed on the male thread only. All screwed joints must be tightened with tongs or wrenches. Caulking of any kind will not be permitted.
- D. All exposed piping under structural slabs shall be stenciled with "Irrigation Main" or "Irrigation Lateral" as required, at ten foot (10') intervals in black lettering, 3/4" minimum high.

3.06 BACKFLOW PREVENTION DEVICE

- A. Install Backflow prevention device, enclosure and associated equipment at the location as specified on drawings.
- B. Coordinate installation with local governing codes and ordinances.

3.07 FLOW SENSORS

- A. Install flow sensors as specified on drawings and per manufacturer's specifications.
- B. Install flow sensing cable in a separate conduit and connect to terminal strip at controller.

3.08 MASTER VALVES

- A. Install master valves as specified on drawings and per manufacturer's specifications.
- B. Install master valve wire in a separate conduit and connect to terminal strip at controller.

3.09 ISOLATION BALL VALVES

- A. Install isolation ball valves in separate valve boxes as specified on the drawings.

3.10 QUICK COUPLING VALVES

- A. Install quick coupling valves in separate valve box as specified on the detail drawings.
- B. Angled nipple relative to pressure supply line shall be no greater than 45° and no less than 10°.

3.11 AIR RELIEF VALVES

- A. Install air release valves in separate valve boxes as specified on the drawings.

3.12 ELECTRIC CONTROL VALVES

- A. Install each electric control valve in a separate valve box so that cross handle is 3" min. below valve box cover as specified on the detail drawings.
- B. Group electric control valves together as specified on the drawings allowing a maximum of 12 " between each valve box. Install valve boxes in the same direction and parallel with one another and perpendicular to paving, hardscape, sidewalks and paths.
- C. Install electric control valves on slopes within two feet from toe of slope. Use same trench as toe of slope non-pressure lateral line for pressure supply line and wire routing see Section 3.02 B and C above for pipe and wire depths.

3.13 VALVE BOXES

- A. Install valve boxes with each type of irrigation equipment so that top of valve box is above finish grade as specified on the detail drawings. Valve box extensions are not acceptable.
- B. Place gravel sump below and around each valve box prior to installing valve box as specified on the drawings. Place remaining portion of gravel inside valve box allowing full access in and around all fittings. Valve box shall be fully supported by gravel sump. No brick or wood supports are allowed.
- C. Brand valve box lid of associated equipment as follows:

Electric control valve box lid with "Controller Letter and Station Number".

Quick coupling valve box lid with the letters "QC".

Isolation ball valve box lid with the letters "BV".

Air relief valve box lid with the letters "AR".

Spare Wire box lids with the letters "SW"

Wire Splice box lid with the letters "WS".

Letter and number size of brand shall be no less than 1" and no greater than 1 1/2" in height and shall be 1/8" maximum in depth. Provide sample branding to the County or County's representative prior to commencement of work.

- D. Walk through for substantial completion will not be allowed until all branding is complete.

3.14 AUTOMATIC CONTROLLER UNIT

- A. Verify electrical power at location of automatic controller unit prior to installation of automatic controller unit. Notify architect immediately if power source is not available.
- B. Hardwire controller to the on/off switch and existing power source. Controller shall not be plugged into socket provided for other equipment.
- C. Install automatic controller unit where shown on drawings per manufacturer's specifications. Controller shall be tested with complete electrical connections. The Contractor shall be responsible for temporary power to the Controller for operation and testing purposes.
- D. Connect electric control valve wiring to controller unit in the same numerical sequence as indicated on the drawings and label within 1" of the terminal strip. Label all spare wires as "spare".
- E. Connect flow sensing and master valve wiring to controller unit and label within 1" of the terminal strip.
- F. Install a separate ground rod and wire for each controller unit as specified on the drawings and per manufacturer's specifications.
- G. Above ground conduit shall be rigid galvanized pipe with the appropriate fittings. Below ground conduit shall be PVC SCH 40 pipe with appropriate fittings.
- H. Label each automatic controller unit with the letter or number designated on the drawings. Letter or number shall be located in a visible location on the inside panel cover with 3" high vinyl letters.
- I. Each automatic controller unit shall be completely operable prior to scheduling a walk through for substantial completion.

3.15 ELECTRICAL WIRE

- A. Low Voltage Wiring:

1. Bury control wiring in same trench as pressure supply line as specified.
2. Bundle all 24 volt wires at 20' intervals with electrical tape.
3. Provide expansion loops at every pressure supply line angle fitting and at 250' length intervals along routing. Form expansion loop by wrapping wire a minimum of 10 times around a 3/4" pipe and withdrawing pipe as specified on the drawings.
4. Limit splicing of electrical wiring. Provide each splice made at intervals or in electric control valve and drip valve assembly valve boxes with 3M DBY Direct Bury Splice Kits.
5. Wire splices occurring at intervals outside electric control valve boxes shall be installed in a separate valve box.
6. Provide (1) one electrical control wire for every electric control valve. Piggy backing like zones on the same electrical control wire is not allowed.
7. Install (2) two spare #14-1 electrical control wires from the automatic controller unit pedestal to the last electric control valve on each leg of pressure supply line. Locate the spare wires in their own valve box as specified on the drawings. In addition to these spare wires, check the drawings for any additional wires that may be required and locate them in the same valve box as the spare wires.

B. High Voltage Wiring:

1. Install 120 volt power from power source to automatic controller unit following local governing codes and ordinances.

3.16 QUALITY CONTROL

- A. Preconstruction Meeting: The Contractor is responsible for contacting the architect prior to beginning construction and/or ordering materials to establish a meeting to review and discuss project objectives, concerns and to review the construction documents to insure a complete understanding of required installation procedures.
- B. General Observation: The architect will visit the construction site at interim times during the construction process to access construction progress regarding installation of irrigation equipment to be in compliance with the drawings, details, specifications and site conditions. The architect will prepare a site report after each visit noting progress of installation, verbal communication with the Contractor and identifying any field adjustments necessary which require modifications to the designed irrigation system. A copy of this site report will be

delivered to both the County and the Contractor. The Contractor is responsible to immediately address each item on the site report before proceeding with further construction.

- C. Pressure Testing the Pressure Supply Line: After backfilling, flushing, and prior to the installation of each electric control valve, isolation ball valve and quick coupling valve the irrigation system shall be pressure tested.
1. Pressure testing shall be performed in the presence of the architect and County or County's representative utilizing the following procedure:
 - a. Pressurize the irrigation system to 40 psi greater than the designated static pressure or 150 psi whichever is greater for a period of no less than 2 hours. The pressure gauge used for the pressure test shall not exceed readings greater than 300psi. Pressure pump and other equipment necessary for the test shall be furnished by the Contractor.
 - b. Test is acceptable if no leakage occurs within the system for the duration of the testing period.
 - c. If leaks occur, repair said leaks and begin pressure test again. Repeat this operation until no leaks occur in the irrigation system.
 - d. Before requesting a walk through for substantial completion, the entire irrigation system shall remain under pressure for a period of no less than 48 hours.
 2. The Contractor is responsible for notifying the architect one day in advance of the pressure test.
- D. Flushing: Center load all piping prior to flushing. After all new irrigation piping and risers are in place and connected and all necessary diversion work has been completed and prior to the installation of sprinkler heads, rotors and quick coupling valves, thoroughly flush piping system under full head of pressure. After the furthest riser from the point of connection begins to flush, continue flushing for a duration of five minutes. After the system is thoroughly flushed, cap all risers.
- E. Walk Through For Substantial Completion:
1. Before requesting a walk through for substantial completion the following requirements must be entirely satisfied:
 - a. The entire irrigation system is completely installed, flushed and satisfactorily pressure tested. If the Contractor failed to notify the architect for the pressure test and flushing procedures stated above than the Contractor assumes full responsibility for any design modifications directed by the architect during the walk through for substantial completion regarding pressure and flushing issues.

- b. All valve boxes have been branded.
 - c. All automatic controllers are fully operable and communication has been certified in writing and checked at central control system by the central control system manufacturer on their letter head.
 - d. Record as-built drawings have been submitted to the architect for review as to completeness.
 - e. (4) Four Services manuals have been delivered to the County or County's representative.
2. Once the above requirements have been met a walk through for substantial completion may be requested. The following procedures will be used during the walk through:
- a. Contractor must have (2) two personnel available with radio communication for the entire length of the walk through.
 - b. All valve box lids shall be removed from valve boxes and placed face up adjacent to the valve box prior to beginning the walk through.
 - c. The walk through will be divided into (2) two sections and proceed as follows:
 - 1. Visual Walk Through: This will consist of walking through the entire irrigation system and examining all components of the system without turning on zones. A punch list will be established of deficiencies in the construction and workmanship of the irrigation system as compared to the construction drawings, details, and specifications.
 - 2. Operational Walk Through: This will consist of walking through the entire irrigation system observing each zone in a fully operable condition. Valves must be activated from the automatic controller unit (Manual bleeding of individual electric control valves will not be acceptable). A punch list will be established of deficiencies in the operation of each zone in the irrigation system evaluating but not limited to head spacing, row spacing, nozzle sizing, correct radius of throw, correct stationing, as compared to the construction drawings, details, and specifications.
3. Once the Walk Through for Substantial Completion has been completed the County representative will provide a copy of all punch list items to the Contractor. It is the Contractor's responsibility to repair, replace, and adjust all items on the punch prior to requesting a final walk through.

F. Final Walk Through:

1. Before commencement of a final walk through is requested, the following requirements must be entirely satisfied:
 - a. Each item on the walk through for substantial completion has been thoroughly addressed and resolved by the Contractor.
 - b. All final record as-built drawings and controller charts have been produced by the architect for review by the architect and Contractor at the final walk through.
2. Once the above requirements have been met a final walk through may be requested. The following procedures will be used:
 - a. Contractor must have (2) two personnel available with radio communication for the entire length of the walk through.
 - b. Only those valve box lids shall be removed from valve boxes as indicated on the walk through for substantial completion punch list. The valve box lids shall be placed faced up adjacent to the valve box prior to beginning the final walk through.
 - c. The final walk through will be divided into (2) two sections and proceed as follows:
 1. Visual Walk Through: This will consist of walking through the punch list items created at the time of the walk through for substantial completion, examining all components of the system without turning on zones. Any remaining deficiencies in the construction and workmanship of the irrigation system as compared to the punch list generated at the time of the walk through for substantial completion, construction drawings, details and specifications will be noted.
 2. Operational Walk Through: This will consist of walking through the punch list items created at the time of the walk through for substantial completion and observing each zone in a fully operable condition. Valves must be activated from the automatic controller unit (Manual bleeding of individual electric control valves will not be acceptable). Any remaining deficiencies in the operation of each zone in the irrigation system including but not limited to head spacing, row spacing, nozzle sizing, correct radius of throw, correct stationing as compared to the punch list generated at the time of the walk through for substantial completion construction drawings, details, and specifications.
3. Once the Final Walk Through is completed and all items created on the final punch list have been addressed the plant establishment period may begin. Any additional walk-throughs required due to Contractors' inability

to address all issues on the punch lists described above will be provided at the Contractor's expense.

3.17 PLANT ESTABLISHMENT PERIOD

- A. The Plant Establishment Period shall be for three (3) years after notification from County representative of a successful final walk through and will begin once all items on the final walk through punch list have been satisfactorily addressed by a written statement indicating such from the County representative.
 - 1. The Contractor is responsible for obtaining and following any maintenance manuals created specifically for the project from the County at the beginning of the plant establishment period.
 - 2. Once the Contractor has fulfilled all plant establishment agreement obligations the period will end. See Section 10-2.04, "Plant Establishment Period" of these Special Provisions, for maintenance responsibilities.

PART 4 – MEASUREMENT AND PAYMENT

4.01 SITE IRRIGATION SYSTEM (DRIP EMITTER SYSTEM) EQUIPMENT, ASSEMBLIES, VALVES, AND PIPING

- A. Full compensation for furnishing all labor, materials, tools, equipment, incidentals, accessories and for doing all the work involved in accordance with the contract documents shall be included in the unit price bid, **per Lump Sum**, for the Bid Item "SITE IRRIGATION SYSTEM (DRIP EMITTER SYSTEM) EQUIPMENT, ASSEMBLIES, VALVES, AND PIPING" and no additional compensation will be allowed therefor.

4.02 IRRIGATION CONTROLLER ASSEMBLY (CALSENSE)

- A. Full compensation for furnishing all labor, materials, tools, equipment, incidentals, accessories and for doing all the work involved in accordance with the contract documents shall be included in the unit price bid, **per Each**, for the Bid Item "IRRIGATION CONTROLLER ASSEMBLY (CALSENSE)" and no additional compensation will be allowed therefor.

PART 1 - GENERAL

1.01 SUMMARY:

- A. The work includes all services, labor, materials, transportation and equipment necessary to perform the work indicated on the Drawings and as specified. The conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.02 RELATED REQUIREMENTS (of these Special Provisions):

- A. Section 10-2.02 Irrigation System
- B. Section 10-2.04 Plant Establishment Period
- C. Section 10-2.06 Supplemental Project Specifications

1.03 SUBMITTALS:

- A. Submit certificates of compliance and invoices for soil amendments, fertilizers, and plant materials, with quantities of each.
- B. Tree Samples: Deliver to the site, a minimum of one sample of each tree variety and size indicated, 15 gallons in size and larger, a minimum of 15 days before planting operations. At the Contractor's option and expense, he may retain the services of the Landscape Architect to review trees 15 gallon and larger tagged at the nursery or at its place of growth, or as otherwise indicated.
- C. Shrub and Tree Samples: Submit 3 samples of each variety and size of plant materials at the site a minimum of 15 days before planting operations. Accepted samples shall remain on the site and shall be maintained as standards of comparison for plant materials to be furnished. Samples may be incorporated into the work.
- D. A sample of the soil amendments and proposed mulch material(s), including manufacturer or supplier certificate or invoice, shall be delivered to the Landscape Architect within thirty-five (35) days after recording of the Contract.

1.04 GUARANTEES AND REPLACEMENTS:

- A. Shrubs, vines and groundcovers shall be guaranteed to remain healthy and vigorously growing for a period of ninety (90) days from date of final acceptance of Maintenance Period of project.
- B. Trees shall be guaranteed to live in a healthy condition for a period of one (1) year from date of final acceptance of Maintenance Period of project.

- C. Plants found to be dead or not in a vigorous condition within the Maintenance and Guarantee Periods shall be replaced within fourteen (14) days at Contractor's expense.
- D. Plants used for replacement shall be the same kind and size as specified in the plant list. They shall be furnished, planted and fertilized as originally specified. The expense of all repair work on existing improvements damaged during replacement shall be borne by the Contractor.

1.05 QUALITY ASSURANCE:

- A. Reviews herein specified shall be made by the Landscape Architect or Landscape Inspector. The Contractor shall request review in writing a minimum of 48 hours in advance, for the following parts of work:
 - 1. Pre-job meeting to introduce Landscape Architect, Landscape Inspector, Contractor, job project manager and job superintendent and to discuss the particular requirements of the job.
 - 2. Incorporation of soil conditioning and fertilizing into the soil. Observation shall begin prior to amendments being rototilled into the soil. Amendment materials shall be distributed in piles around the site in quantities corresponding to the soils analysis recommendations "per 1,000 sq. ft.". Invoices showing materials and quantities purchased shall be available for review.
 - 3. Upon completion of grading prior to planting. Review of plant materials is to coincide with this review.
 - 4. When trees, shrubs and vines are spotted in place for planting, but before planting holes are excavated.
 - 5. Upon completion of finish grades and planting. Application of pre-emergent herbicide is to coincide with this review.
 - 6. When planting, and all other indicated and specified work, except the Maintenance Period, has been completed. Acceptance, in writing, shall establish beginning of the Maintenance Period.
 - 7. Final review at the completion of the Maintenance Period. Contingent on acceptance, this review shall establish the beginning date for the Guarantee Period.

1.06 MAINTENANCE:

- A. The Contractor shall continuously maintain all involved areas during the progress of the work and during the maintenance period until the final acceptance of the work.
- B. The Maintenance Period begins on the first day after written acceptance of planting operations is received from the County Representative, and shall continue thereafter for no less than 3 years (see Section 10-2.04, "Plant Establishment Period" of these Special Provisions).
- C. The contract completion date of the contract maintenance period will be extended, when in the opinion of the Landscape Architect, improper maintenance or possible poor or unhealthy condition of planted material or poorly established non-covering turf areas are evident at the termination of the scheduled maintenance period. The Contractor shall be responsible for additional maintenance of the work until work is completed and acceptable.
- D. See Section 10-2.04, "Plant Establishment Period" of these Special Provisions, for specific maintenance requirements.

1.07 GENERAL REQUIREMENTS:

- A. The term "Planting Area" shall mean all areas to be planted with trees, shrubs, groundcovers, sod and seed.
- B. Actual planting shall be performed during those periods when weather and soil conditions are suitable in accordance with locally accepted horticultural practice.
- C. All rock and other growth or debris accumulated during the duration of the project shall be removed from the site.
- D. Prior to excavation for planting or placing of plant materials, locate all underground improvements, utility lines, etc. and take proper precautions to avoid damage. In the event of a conflict between such lines and plant locations, notify Landscape Architect and receive direction prior to proceeding. The Contractor assumes responsibility for making repairs for damages resulting from work as herein specified.
- E. Grading and soil preparation work shall be performed only during the period when beneficial and optimum results may be obtained. If the moisture content of the soil should reach such a level that working it would destroy soil structure, spreading and grading operations shall be suspended until the moisture content is increased or reduced to acceptable levels and the desired results are likely to be obtained.

- F. Scaled dimensions are approximate. Before proceeding with work, carefully check and verify dimensions and immediately inform the Landscape Architect of discrepancies between the drawings and specifications and actual conditions.
- G. Quantities for plant materials are shown for convenience only, and not guaranteed. Check and verify count and supply sufficient number to fulfill intent of drawings.
- H. Adequately stake, barricade, and protect irrigation equipment, manholes, utility lines, and other existing property during all phases of the soil amending and grading operations.
- I. Rejection and Substitution: Plants not conforming to the requirements herein specified shall be considered defective, and such plants, whether in place or not, shall be marked as rejected and be immediately removed from the site of the work and replaced with acceptable plant materials. The plant materials shall meet all applicable inspections required by law. Plants shall be of the species, variety, size, age, flower color and condition as specified herein and/or as indicated on the drawings. Under no condition will there be any substitution of plant species, variety, or reduced sizes for those listed on the accompanying drawings, except with the expressed written consent of the Landscape Architect.
- J. All utilities (water and electricity) used during the installation and maintenance of the landscaping and irrigation systems for this project shall be paid for by the County.

1.08 FINAL SOIL AMENDMENT QUANTITIES:

- A. Upon completion of all backfill and/or rough grading of planted areas, a minimum of six (6) representative samples of existing soil found in the planting areas shall be taken by the Contractor and at his/her expense sent to an independent soil testing laboratory for an agricultural suitability analysis and recommendations for quantity and application rate of amendments and include any corrective measures required to adjust pH or salt to acceptable levels. These recommendations shall then be compared with those listed in Paragraphs 2.02 and 3.01 and the contract modified accordingly.

1.09 SOIL PREPARATION CONFORMANCE

- A. Amendment materials shall be distributed in piles around the site in quantities corresponding to the soils analysis "per 1,000 sq. ft." recommendations. Invoices showing materials and quantities purchased shall be available for review. The Landscape Architect will compare the distribution piles and total quantities of each material furnished against the soils analysis recommendations. If the minimum rates of application have not been met, the Landscape Architect will require the distribution of additional quantities of these materials to fulfill the minimum application requirements specified. After approval by the Landscape

Architect of the distribution and quantities of soil amendments, the Contractor will then commence with soil conditioning operations per Section 10-2.03 paragraph 3.01 of these Special Provisions.

1.10 PLANT MATERIAL QUANTITY CONFORMANCE

- A. After installation of plant materials, and coinciding with the pre-maintenance observation, the Landscape Architect, with the heretofore specified signed copies of the required certificates, trip slips and invoices for the plant materials and related items, will inventory such material, comparing the total area and/or the amounts specified. If the minimum amounts have not been furnished, the Landscape Architect may require the installation of additional materials to fulfill the minimum requirements specified or require that the Contractor provide credit(s) to the County.

PART 2 - PRODUCTS

2.01 SOIL AMENDMENT AND FERTILIZER:

- A. Provide singly or in combination as required to meet specified requirements for topsoil. Soil conditioners shall be nontoxic to plants.
1. Composted Derivatives: Ground bark, nitrolized sawdust, humus, or other wood green waste material free of stones, sticks, and soil stabilized with nitrogen and having the following properties:
 2. Particle Size: Minimum percent by weight passing:

a.	No. 4 mesh screen	95
b.	No. 8 mesh screen	80
 3. Nitrogen Content: Minimum percent based on dry weight:

a.	Fir Sawdust	0.7
b.	Fir or Pine Bark	1.0
- B. Gypsum shall be a commercially processed and packaged gypsum (CaSo, 2H 0) with minimum 80% grade containing 14% minimum combined sulfur.
- C. Iron Sulphate: Ferric or ferrous sulphate in pelleted or granular form containing not less than 18 percent metallic iron. Material shall conform to the Agricultural Code of the State of California.
- D. Pre-plant fertilizer for incorporation with rototilling or plant pit backfill mix shall be of a uniform 'beaded' homogeneous granular composition suitable for application with approved equipment and shall contain the following minimum available percentages by weight of plant food:

Nitrogen	5% minimum
Phosphoric acid	3% minimum
Potash	1% minimum
Iron	1%
Manganese	.05%
Zinc	.05%
Humic Acids (derived from compost)	15%
Soil Penetrant (alkyl naphthalene sodium sulfonate)	15%

- E. Post-planting Fertilizer for Maintenance Period Fertilization: Organic base, long lasting, nonburning, controlled slow release, free flowing, uniform in composition, suitable for application with approved equipment, and shall contain the following minimum available percentages of weight of plant food:

Nitrogen	12% minimum
Phosphoric acid	8% minimum
Potash	8% minimum
Sulphur	7%
Iron	2%
Manganese	.05%
Zinc	.05%
Humic Acids (derived from compost)	5%

WARNING: Some fertilizers contain chelated iron which has caused staining of concrete surfaces in other projects. Contractor shall be responsible for removing all iron stains from concrete by sandblasting, or as directed by architect, at no additional cost to the County.

- F. Planting Tablets: Tightly compressed chip type commercial grade planting tablets of varying weighted sizes with the following available percentages by weight of plant food:

Nitrogen	20% minimum
Phosphoric acid	10% minimum
Potash	5% minimum

- G. Post-planting Fertilizer for Palms: Organic base, long lasting, nonburning, controlled slow release, free flowing, uniform in composition, suitable for application with approved equipment, and shall contain the following minimum available percentages of weight of plant food :

Nitrogen	3% minimum
Phosphoric acid	1% minimum
Potash	3% minimum

A micro-nutrient foliar spray for palm fronds is recommended to avoid micro-nutrient deficiencies.

2.02 PLANTING BACKFILL:

- A. Planting backfill soil for all shrubs shall be from native site only.

Soil to be used as planting medium for the project shall be fertile, well-drained, of uniform quality, free of stones over 1 inch diameter, sticks, oils, chemicals, plaster, concrete and other deleterious materials. On-site soil may be stockpiled for re-use provided it meets all requirements.

- B. Planting Backfill for Date Palms:

Pure, washed plaster sand only. Do not incorporate fertilizer into backfill mix. Apply post-planting fertilizer only.

2.03 PLANT MATERIALS:

- A. Nomenclature: The scientific and common names of plants herein specified conform to the approved names given in "Sunset Western Garden Book ", published by Lane Publishing Company, Menlo Park, California, latest edition. See list of plant material on drawings.
- B. Quality and size of all plants shall be No. 1, of Pinto Tag stock. They shall be vigorous, of normal growth, free from disease, insects, insect eggs, and/or exceed the measurements specified or the American standards for nursery stock. Pinto Tags shall be submitted to the landscape architect.
- C. Container stock (1 gal., 5 gal., and 15 gal.) shall have grown in containers for at least six months, but not over two years. No container plants that have cracked or broken balls of earth, when taken from the container, shall be planted, except upon special approval. No trees with damaged roots or broken balls shall be planted and no shrubs, vines or groundcovers shall be planted that are "pot-bound" or that have damaged roots.
- D. Pruning shall not be done, prior to delivery, except by written approval.
- E. Observation of Plant Materials, required by County authorities, shall be a responsibility of the Contractor, and where necessary, the Contractor shall have secured permits or certificates prior to delivery of plants to site.
- F. Plants shall be subject to observation and approval or rejection, at the project site at any time before or during progress of work, for size, variety, condition, latent defects and injuries. Rejected plants shall be removed from the project site immediately.

- G. Substitutions will not be permitted except that if proof is submitted that any plant specified is not obtainable, a proposal will be considered for use of the nearest equivalent size, variety and cost.
- H. Quantities shall be furnished as needed to complete work as shown on drawings.
- I. The landscape architect reserves the right to observe root condition of any species, particularly those grown from seed, and if found defective, to reject the plants represented by the defective sample.
- J. Identify plant species or varieties correctly on legible, weather-proof labels attached securely at the job site. There shall be a minimum of one labeled plant for each 5 plants in a lot.
- K. Groundcover plants shall be healthy vigorous rooted cuttings grown in flats until transplanting.

2.04 HERBICIDE:

- A. Weed Contact Spray, post emergent, systemic product with no soil residual activity formulated as a water soluble liquid containing 50% glyphosate and 14.5% surfactant with surflan additive.

2.05 RODENT REPELLENT:

- A. Rodent Repellent: Repellent X or approved equal.

2.06 STAKING MATERIALS FOR TREES:

- A. Double Staking (Triple Staking for High Wind Areas) for Trees from up to 36" Box Size:
 - 1. Stakes shall be of lodgepole pine. These shall be straight shafts, shaved and cut clean and bare of branches and stubs, of uniform thickness with a minimum diameter of 2 inches (3 inches in high wind exposure areas), free of loose knots, splits or bends. Stakes shall be no less than eight (8) feet in length.
- B. Tree Tie Materials shall be one of the following:
 - 1. Hose wires used for stabilizing trees with stakes, shall be 12 gauge galvanized wire with ultra-violet resistant precut hoses to 10 1/2" and wire precut to 27" or 36" the length necessary per details.
 - 2. Twist Braces shall be used in areas with high wind exposure, utilizing twist brace stability bars with the following criteria:

4 1/2" loop diameter by 24" length for 24" box trees
4 1/2" loop diameter by 36" length for 36" box trees

2.07 GUYING MATERIALS FOR TREES 48" BOX SIZE AND GREATER:

- A. Guy wires shall be of pliable, zinc-coated steel of No. 12 gauge.
- B. Anchors (deadman) for holding guy wires shall be of 4 inch by 4 inch (4" x 4") solid lumber, 1'-6" in length, or "duckbill" style anchor materials as shown on the details on the drawings.
- C. Hose for covering wire shall be of 2-ply reinforced rubber, used or new, garden hose type of at least 1/2 inch in diameter.
- D. Warning indicators, to be attached to guys, shall be of 1/2" PVC pipe and four feet long.
- E. Tree ties shall be as stated above in Section 10-2.03 paragraph 2.06B of these Special Provisions.

2.08 TRIM GUARDS FOR TREES:

- A. Trim Guards shall be made from quality polyethylene with ultra violet inhibitors and ratcheting latching device.

2.09 ROOT BARRIERS FOR TREES:

- A. #UB-24-2 root barriers as manufactured by Deep Root Corp. or approved equal.

PART 3 - EXECUTION

3.01 LEACHING, SOIL CONDITIONING, ROTOTILLING AND FERTILIZING:

- A. Deep Water Leaching:
 - 1. After complete installation and testing of the irrigation system, all areas shall be deep water leached and compacted and settled by continuous application of irrigation water until the soil has received a minimum of 12" of water.
 - 2. After leaching operation, soil samples shall be taken by Contractor per landscape architect's direction and given to the County's soil laboratory for testing. Soil test shall meet the following requirements:

ECe	- Maximum 3.0
pH	- Maximum 7.50
	- Minimum 6.00

3. Deep water leaching shall be done prior to the application of the commercial fertilizer.
4. Care shall be taken that the rate of application of water does not cause erosion or sloughing of soils. Do not undertake leaching operations in expansive soils.
5. All depressions, voids, erosion scars and settled trenches generated by the deep watering shall be filled with conditioned topsoil and brought to finish grade prior to digging planting pits.

- B. After leaching operations and after the areas have been graded, follow the Soil Preparation Conformance procedures per Section 10-2.03 paragraph 1.09 of these Special Provisions. After approval by the Landscape Architect of the requirements in Section 10-2.03 paragraph 1.09 of these Special Provisions, the soil conditioning and amendment materials shall be evenly spread over all planting areas and shall be thoroughly scarified to an average depth of six (6) inches by rototilling a minimum of two (2) alternating passes:

The following materials and quantities are to be used as a basis for bidding, and may be modified based on soil analysis results.

Soil conditioner:	4 cu. yd. per 1,000 sq. ft.
Soil sulphur:	20 lbs/per 1,000 sq. ft.
Iron sulphate:	20 lbs/per 1,000 sq. ft.
Gypsum:	100 lbs/per 1,000 sq. ft.
Pre-plant fertilizer:	20 lbs/per 1,000 sq. ft.

1. Fertilizer shall be incorporated into the top six (6) inches of finish grade. Fertilizer shall be applied after leaching operation.
2. The thoroughness and completeness of the rototilling and incorporation of the soil conditioners/amendments shall be accepted by the landscape architect in writing, prior to digging planting pits. For slopes 2:1 and steeper, or as per the drawings, omit soil conditioner application and rototilling.

3.02 FINISH GRADING:

- A. Finish grades shall be as indicated on landscape and civil drawings. Contractor shall notify landscape architect for a decision should any discrepancies exist between the drawings and site conditions.

- B. Finish grades shall be measured as the final water compacted and settled surface grades and shall be within +/- 0.1 feet of the spot elevations and grade lines indicated. Grades adjacent to hardscape shall be within +/- 0.01 feet of the grades indicated on the drawings.
- C. Molding and rounding of the grades shall be provided at all changes in slope.
- D. All undulations and irregularities in the planting surfaces resulting from tillage, rototilling and all other operations shall be leveled and floated out before planting operations are initiated.
- E. Take every precaution to protect and avoid damage to erosion control materials, sprinkler heads, irrigation lines, and other underground utilities during grading and conditioning operations.

F. Final finish grades shall insure positive drainage of the site with all surface drainage away from buildings, walls, and toward roadways, drains and catch basins.

- G. Final grades shall be accepted by the landscape architect/County's representative in writing on company letterhead prior to digging planting pits and/or before planting operations will be allowed to begin.
- H. Planting surfaces shall be graded with no less than 2 percent surface slope for positive drainage.

3.03 PLANTING:

- A. The layout of locations for plants and outlines of groundcover beds to be planted shall be accepted by the landscape architect in writing prior to digging plant pits for planting. All such locations shall be checked by the Contractor for possible interference with existing underground piping prior to excavation of holes. If underground construction or utility lines are encountered in the excavation of planting areas, other locations for the planting may be selected by the landscape architect at no additional cost to the County. Damage to existing utilities shall be the responsibility of the Contractor.
- B. Planting Trees, Shrubs and Vines:
 - 1. All excavated holes shall have vertical sides with roughened surfaces and shall be of the minimum sizes indicated on drawings. Holes shall be, in all cases, large enough to permit handling and planting without injury or breakage of root balls or roots.
 - 2. Excavation shall include the stripping and stacking of all acceptable soil encountered within the areas to be excavated for plant pits and planting

beds. Protect all areas that are to be trucked over and upon which soil is to be temporarily stacked pending its re-use for the filling of holes, pits and beds.

3. Excess soil, generated from the planting holes shall be spread evenly on the site within the tolerances indicated in Section 10-2.03 paragraph 3.02 of these Special Provisions, or as directed by the landscape architect.
4. The plants shall be planted at approved locations with the heretofore specified plant pit fertilizer and soil planting backfill. Place plant pit fertilizer after two thirds of backfill material is installed at the rates specified by the manufacturer and soils report.
5. The plants shall be placed in the planting pits, which have been hand-tamped, and water settled to the rootball base levels prior to the placement of the plants. After setting the plants, the remaining backfill material shall be carefully tamped and settled around each rootball to fill all voids.
6. Each tree and shrub shall be placed in the center of the hole and shall be set plumb and held rigidly in position until the planting backfill has been tamped around each rootball.
7. All plants shall be set at such a level that after settling they bear the same relationship to the surrounding finish grade as they bore to the soil line grade in the container, unless otherwise noted.
8. No plant will be accepted if the rootball is broken or cracked, either before, during, or after the process of installation.
9. Plants shall be thoroughly watered into the full depth of each planting hole immediately after planting.
10. Install shrubs and vines as shown on the drawings.
11. For 1 gallon trees, utilize pre-installed nursery stakes if stakes are in good condition as described above. Broken, cracked and/or unsecured nursery stakes will not be allowed. If new stakes are required, install stakes with materials as specified as shown on the drawings.
12. For trees up to 36" Box size, install tree stakes with materials specified and as shown on the drawings. The stakes shall be driven in plumb and secure. Special care shall be taken that the driving in of the stake does not damage the tree roots or rootball. Tree ties shall be fastened to each stake by tacking the wire tie to the stake. Protective hoses shall be in contact with all tree trunk or branch areas per the details on the drawings.

13. For trees 48" Box size and greater guy all trees with the materials specified and as shown on the drawings.
14. The staking and guying shall be accomplished in such a manner as to insure the proper and healthy growth and the safety of the plants, property, and the public.
15. The Contractor shall be responsible for all surface and subsurface drainage required which may affect his guarantee of the trees, shrubs, and vines.
16. Pruning after planting shall be required on all trees, shrubs, and vines when necessary to provide the specified or approved standard shapes, form, and/or sizes characteristic to each plant. Pruning may include thinning, and/or cutting and shall be under the direction of the landscape architect or certified arborist.
17. Install tree guards on all trees within turf areas.

C. Planting Groundcovers:

1. Groundcovers shall be planted in the areas indicated on the drawings. The groundcover plants shall be rooted cuttings grown in flats and shall remain in those flats until transplanting.
2. All groundcover plants shall be planted with soil around roots in staggered row, evenly spaced at the intervals called out on the drawings.
3. The groundcover plants shall be planted sufficiently deep to cover all roots.
4. The groundcover planting area shall be hand smoothed after planting to provide an even, smooth final finish grade.

3.04 HERBICIDE APPLICATION:

- A. Herbicide or pesticide applications shall be performed only by personnel licensed for such work by the State of California.

3.05 RODENT REPELLENT:

- A. Once plants have been planted and watered in, apply rodent repellent for plants indicated on plant legends on the drawings around the entire perimeter of the planting area at application rates and with methods as specified by the manufacturer.

3.06 MULCHING:

- A. Landscape areas other than those hydroseeded or planted with turf shall be covered with the specified mulching material to the minimum depth indicated on the drawings.

3.07 CLEAN-UP:

- A. As the project progresses on a daily basis, the Contractor shall maintain all areas in a neat manner and remove unsightly debris as necessary, remove all debris and containers used in accomplishing work and sweep and clean all sidewalks, asphalt, and concrete areas adjacent to plantings.

3.08 SITE OBSERVATION & WALK-THROUGHS FOR SUBSTANTIAL COMPLETION:

- A. General Observation: The County representative will visit the construction site at interim times during the construction process to assess construction progress regarding installation of landscape material to be in compliance with the drawings, details, specifications and site conditions. The County representative will prepare a site report after each visit noting progress of installation, verbal communication with the Contractor and identifying any field adjustments necessary that require modifications to the designed landscape. A copy of this site report will be delivered to the Contractor. The Contractor is responsible to immediately address each item on the site report before proceeding with further construction.
- B. Walk Through For Substantial Completion (Punch List #1):
 - 1. Before requesting a walk through for substantial completion the following requirements must be entirely satisfied:
 - a. The entire planting area is completely installed, and when letters of acceptance as described above have been obtained from the County's representative. If the Contractor failed to notify the County representative for any of the above items as listed above then the Contractor assumes full responsibility for any design modifications directed by the County representative during the walk through for substantial completion any of these issues at no additional cost to the County.
 - b. All invoices, pinto tags and receipts have been delivered to the County's representative.
 - 2. Once the above requirements have been met a walk through for substantial completion may be requested. The following procedures will be used during the walk through:

- a. Contractor must have (2) two personnel available with radio communication for the entire length of the walk through.
 - b. A visual walk through of the entire site will take place consisting of an examination of planting areas as compared to the drawings, and installation procedures as shown on the details and specifications. A punch list will be established of deficiencies in the construction and workmanship of the landscaped area as compared to the construction drawings, details, and specifications.
3. Once the Walk Through for Substantial Completion has been completed the County representative will provide a copy of all punch list items to the Contractor. It is the Contractor's responsibility to repair, replace, and adjust all items on the punch prior to requesting a final walk through.

C. Final Walk Through:

1. Before commencement of a final walk through is requested, each item on the walk through for substantial completion (punch list #1) must be thoroughly satisfied, addressed, and resolved by the Contractor.
2. Once the above requirement has been met a final walk through may be requested. The following procedures will be used:
 - a. Contractor must have (2) two personnel available with radio communication for the entire length of the walk through.
 - b. Unless new issues arise between walk-throughs, only those items as indicated on the walk through for substantial completion punch list will be addressed. This visual walk through will consist of walking through the punch list items created at the time of the walk through for substantial completion, and examining outstanding items. Any remaining deficiencies in the construction and workmanship of the landscape as compared to the punch list generated at the time of the walk through for substantial completion, construction drawings, details and specifications will be noted.
3. Once the Final Walk Through is completed and all items created on the final punch list have been addressed, the Plant Establishment Period may begin. Any additional walk-throughs required due to Contractors' inability to address all issues on the punch lists described above will be provided at the Contractor's expense.

3.09 PLANT ESTABLISHMENT PERIOD:

- A. The Plant Establishment Period shall be for three (3) years after notification from the County representative of a successful final walk through and will begin once all items on the final walk through punch list have been satisfactorily addressed by a written statement indicating such from the County representative.
1. The Contractor is responsible for obtaining and following any maintenance manuals created specifically for the project from the County at the beginning of the plant establishment period.
 2. Once the Contractor has fulfilled all plant establishment agreement obligations the period will end see Section 10-2.04, "Plant Establishment Period" of these Special Provisions, for maintenance responsibilities.

PART 4 – MEASUREMENT AND PAYMENT

4.01 LANDSCAPING EARTHWORK, SOILS AND VEGETATION

- A. Full compensation for furnishing all labor, materials, tools, equipment, incidentals and for doing all the work involved in accordance with the contract documents shall be on a lump sum basis, for the following Bid Items and no additional compensation will be allowed therefore:
- SOIL PREPARATION [PLANT PIT AMEDING ONLY]
- B. Full compensation for furnishing all labor, materials, tools, equipment, incidentals and for doing all the work involved in accordance with the contract documents shall be included in the unit price bid, **per Each**, for the following Bid Items and no additional compensation will be allowed therefore:
- PLANT (GROUP B) (5 GALLON) [SHRUBS]
 - PLANT (GROUP B) (5 GALLON) [VINES]
 - PLANT (GROUP Z) (PALM TREE) (6 BTH)
 - PLANT (GROUP Z) (PALM TREE) (10 BTH)

10-2.04 PLANT ESTABLISHMENT PERIOD

PART 1 - GENERAL

1.01 SUMMARY

- A. The work includes all services, labor, materials, transportation and equipment necessary to perform the work indicated on the Drawings and as specified. The conditions of the Contract and County apply to this section as fully as if repeated herein.

1.02 RELATED REQUIREMENTS

- A. Irrigation System.
- B. Landscaping.

1.03 DEFINITIONS

- A. Pesticide: Includes any of the following:
 - 1. Fumigant.
 - 2. Herbicide.
 - 3. Insecticide.
 - 4. Fungicide.
 - 5. Rodent repellents.
- B. Planting Bed: An area comprised of trees, shrubs, flowers, and ground cover, excluding grass.

1.04 DELIVERY, STORAGE AND HANDLING OF MATERIALS FOR PERMENANTLY IRRIGATED AND TEMPORARILY IRRIGATED SLOPES AND FLAT AREAS

- A. Fertilizer, Gypsum, and Iron Sulphate: Deliver to the site in original containers bearing manufacturer's chemical analysis, name, trade name, or trademark, and indication of conformance to state and federal laws. Instead of containers, fertilizer, and gypsum may be furnished in bulk with a certificate indicating the above information.
- B. Pesticides: Deliver to the site in original containers with legible label indicating Environmental Protection Agency (EPA) registration number and manufacturer's registered uses.

1.05 STORAGE FOR PERMANENTLY IRRIGATED AND TEMPORARILY IRRIGATED SLOPES AND FLAT AREAS

- A. Fertilizer, Gypsum, Iron Sulphate, and Mulch: Store in dry locations away from contaminants.
 - B. Pesticides: Do not store with other maintenance material. Store herbicides "downwind" relative to the airflow from other pesticides.
- 1.06 HANDLING FOR PERMANENTLY IRRIGATED AND TEMPORARILY IRRIGATED SLOPES and FLAT AREAS
- A. Do not drop or dump materials from vehicles.

PART 2 – PRODUCTS

- 2.01 PH ADJUSTERS:
- A. See Specification Section: Landscaping and Planting
- 2.02 SOIL CONDITIONERS:
- A. See Specification Section: Landscaping.
- 2.03 PLANTING BACKFILL:
- A. See Specification Section: Landscaping.
- 2.04 FERTILIZERS:
- A. See Specification Section: Landscaping.
- 2.05 WATER:
- A. See Specification Section: Landscaping.
- 2.06 PESTICIDES:
- A. See Specification Section: Landscaping.

PART 3 – EXECUTION

- 3.01 MAINTENANCE REQUIREMENTS DURING THE THREE (3) YEAR PLANT ESTABLISHMENT PERIOD
- A. Shrubs and Vines:
 - 1. The Contractor is responsible for the restoration and maintenance of all vegetation included in these specifications for the duration of the

maintenance period. During the first two weeks of the maintenance period, the Contractor shall conduct a survey of all areas and identify by quantity, species, and location, all dead, dying, and diseased vegetation. The Contractor shall be responsible for restoring dying and diseased vegetation to a healthy state in accordance with accepted Horticultural Practice and Treatment. The County's Representative will be the final authority in determining which vegetation is considered dead or irreparably damaged. Restoration and replacement of vegetation is considered routine maintenance and shall be accomplished as often as necessary during the maintenance period. Vegetation replacement shall be accomplished within 5 days after the Contractor discovers or has been notified of the situation. Diseased or dead vegetation shall be removed and replaced with healthy plants of the same species. All replacement plants must be approved by the County's Representative before planting.

2. Planting beds shall be cultivated, pruned, trimmed, weeded, irrigated, fertilized, mulched, and otherwise maintained in a manner that presents a professionally landscaped appearance at all times. Plant beds shall be kept weed, gopher, squirrel, rabbit and pest free. Ground cover shall not be allowed to grow into flowers, shrubs or trees. Planting beds shall be maintained in a manner that provides balance between the various types of vegetation, and prevents dominance of any one species. The Contractor shall provide and maintain a minimum of three-inch layer of mulch in all planting beds with a slope gradient of 3:1 or less. The Contractor shall provide for the special needs of various species. Diseased or dead vegetation shall be removed and replaced with healthy plants of the same species.
3. The Contractor shall not use steel bow type rakes or equipment of similar design to clean plant beds. Lightweight fan rakes or vacuum equipment may be used. The Contractor shall maintain the soil level in the plant beds, and ensure all surface root systems and irrigation piping are covered as required. The Contractor shall be responsible for damage caused by Contractor operations at no additional cost to the County.
4. Shrubs and vines shall be trimmed pruned, irrigated, fertilized to present a healthy and manicured appearance. Shrubs and vines will not be allowed to encroach into grass areas. A definite break shall be maintained between grass and shrub areas. In such areas the Contractor shall maintain a healthy and well-balanced landscape.
5. All shrubs, vines, and other cultivated plants shall be trimmed and pruned according to their natural growth characteristics for proper health and attractive appearance. All clippings shall be removed and disposed of by the end of each day. Pruning shall be accomplished as necessary in accordance with conditions (a) through (d) specified below. Shrubs and

vines shall be trimmed to shape for aesthetic appearance and health at the frequency specified in this section.

- a. Remove growth in front of windows, over entrance ways or walks, and any growth which will obstruct vision at street intersections. Shrubs around perimeter of buildings shall be trimmed to maintain natural growth characteristics.
 - b. Remove dead, damaged or diseased branches or limbs and crossing, rubbing and interfering branches.
 - c. Evenly form and balance the shrub to natural growth characteristics. Hedges are to be trimmed to maintain their natural growth characteristics and not allowed to obstruct pedestrian walkways. Shrubs shall be allowed to completely fill planter beds. Shrubs, hedges and vines shall not be trimmed into round, square and or geometric shapes. Side growth shall be allowed to grow unless growth is in front of windows, over entrance ways, streets, driveways, parking area or walks, and/or any growth which will obstruct vision at street intersections.
 - d. Remove growth against or over structures and into any type of electrical or telephone lines (leave growth on block walls).
6. Shrubs shall be pruned to evenly form and balance plant to natural growth characteristics. Shoots, suckers, and branches of shrubs not conforming to desired shape and size shall be removed. Retain typical growth habit of individual plants with as much height and spread as is practical. Shrubs shall be allowed to completely fill planter beds.
 7. Any depression or mound around the base of shrubs intended to retain water in place for proper irrigation shall be maintained in good condition to permit the most efficient application of water and reduce waste.
 8. Do not fertilize native plant material as shown on the planting legend during the maintenance period.

B. Trees

1. Tree maintenance and care is considered routine on-going maintenance and shall be accomplished as specified or as often as necessary during the maintenance period. Tree maintenance and care includes, staking trees, adjustment of ties and supports, removal of stakes, watering, fertilization, pest control, pruning, turf clearance, mulch clearance, removal of broken limbs and branches, tree removal/replacement, and fall cleanup.

2. The Contractor shall maintain and/or replace tree staking and guying as necessary as specified in Section 10-2.02 "Landscaping and Planting" of these Special Provisions for the duration of the maintenance period. Stakes, ties and supports shall be inspected and adjusted monthly to prevent girdling and rubbing, and to promote natural development of trees. Stakes, ties, and supports shall be removed when the tree becomes capable of supporting itself.
3. Trees shall be pruned according to their natural growth characteristics to evenly form and balance the tree and to promote proper health and growth in accordance with accepted standards and horticultural practices of the National Arboriculture Society, of the Western Chapter. All tree maintenance must be performed in compliance with ANSI Z133.1 Safety Standards. Tree pruning shall include all areas of the project, which are permanently and/or temporarily irrigated for the duration of the maintenance period. All sucker growth shall be removed from and around the trees. All trees are to be inspected monthly to identify pruning needs. Pruning or trimming shall be accomplished at any time during the maintenance period as required in accordance with conditions (a) through (h) below:
 - a. Remove dead, damaged or diseased wood, or structurally weak limbs that may cause a safety hazard. Remove interfering branches, crossing and rubbing branches.
 - b. Remove branches which endanger roofs, eaves, and windows or hang within eight feet of sidewalks, parking lot driveways, and which obstruct traffic signs or streetlights. This includes removal of dead or broken branches on the ground or still hanging in the tree.
 - c. Provide clearance for buses, moving vans and similar vehicles along streets.
 - d. Eliminate and prevent growth into electrical or telephone transmission lines. Anticipate the effects of wind on branches, which might fall on transmission lines. Shape the entire tree rather than notch the top.
 - e. Prevent growth of trees in front of windows, over entranceways and walkways and which will obstruct vision at street intersections.
 - f. Remove partially attached broken limbs and branches from trees regardless of diameter or length. Provide stakes or braces as required for future protection.
 - g. "Skirting-Up" and "pollarding" a tree is prohibited.

h. Topping of trees is prohibited.

C. Weeds, Rodent and Pest Control:

1. Weed and pest control shall be performed to prevent encroachment of undesirable vegetation and noxious weeds, and infestation of pest (rodent, insect and fungus) into established landscapes, including lawns and around trees, shrubs, flower beds, etc. Noxious weeds in landscaped and natural growth areas, plant beds and landscaped areas shall not be allowed to establish themselves and be maintained weed free. Additionally, weed control is to be performed to eliminate grass and weeds in cracks and joints on all paved and concreted areas. Weed control is to be performed to prevent the encroachment of vegetation into perimeter fences and fire breaks. Rodent control shall be performed as required to maintain healthy vigorous plant growth. Live or dead rodents shall be removed within 24 hours from the project property and properly disposed of. Trees, shrubs, turf and vegetation shall be protected from all varieties of insect and rodent damage. Pesticides may be used to control pests. Pesticides and herbicides shall be used in a manner, which will not affect landscape plants health.
2. All pesticides, including herbicides, insecticides, fungicides, etc., shall be applied only by persons holding a valid state license for each category of pest control work involved. Any required state, county, or local permits for possession, procurement, or use of any pesticide shall be obtained and complied with at no additional expense to the County.
3. All pesticides shall be procured, transported, stored, handled, and applied in strict accordance with the manufacturer's label, which shall be registered with the Environmental Protection Agency and the State of California. The Contractor shall comply with the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act, 40 CFR 170-171, CCR Title 3, and CCR Title 8. All pesticide containers shall be managed in accordance with the requirements of CCR Title 3, Section 6684 and disposed of in accordance with CCR Title 22. Each pesticide formulation shall be registered for use under the particular environmental conditions under which it was applied. The Contractor shall exercise extreme care to prevent any damage or illegal contamination by pesticides to vegetation, water, fish, animals, and humans. The Contractor shall be held responsible and liable for all damage, contamination, and effects resulting from Contractor's pesticide use.
4. Pesticide spraying shall be performed only on still days and will be stopped when unfavorable weather or other conditions exist which would unduly increase the hazard to personnel or desirable vegetation by drift, runoff, or leaching through the soil. Any project property or desirable

vegetation damaged by the Contractor due to pesticide applications shall be repaired or replaced at no additional cost to the County.

5. Pesticide rinse water or excess pesticides from Contractor operations shall be collected by the Contractor in an appropriate receptacle and disposed of at an approved disposal site; or shall be applied to a similar target area to which the original application was made and in the same manner of application if allowed by the EPA registered label.
6. Job site pesticide applications shall be made by personnel capable of identifying the pest species to be controlled, knowledgeable of control techniques, and able to apply pesticide active ingredients at prescribed dosages and rates of application, as required by the label to achieve the required control under job site conditions, without danger to people, pets or other non-target animals, plants, or property.
7. The Contractor shall be responsible for having a spill kit on service vehicles and for reporting and cleaning pesticide spills as required by state laws and regulations. The Contractor shall submit a written report of spills on or in project property, within 8 hours of incident to the County on company letterhead.

D. Irrigation and Irrigation System Maintenance:

1. The Contractor shall plan and adjust irrigation schedules for automatic, hand or portable irrigation systems based on minimal water requirements with the following considerations:
 - a. The precipitation rates of irrigation components.
 - b. Soil water infiltration rate and holding capacity.
 - c. Exposure.
 - d. Plant material.
 - e. Site climate conditions.
 - f. ET (Evapotranspiration) rate.
 - g. Slope.

It shall be the Contractor's responsibility to adjust controllers and/or hand/portable irrigation application to compensate for weekly environmental changes for the duration of the maintenance period. The Contractor shall perform irrigation in a manner that promotes the health, growth, color and appearance of cultivated vegetation while preventing over watering, water run-off, erosion and ponding.

2. Irrigation includes watering of shrubs, vines, trees and plants for both permanently irrigated slopes and flat areas. Care shall be exercised by regulating the time and equipment to prevent wasting of water. Sprinkler heads shall be adjusted to prevent water spray on buildings, sidewalks,

walls, monuments and adjacent hardscape. It shall be the Contractor's responsibility to apply enough water to assure and maintain the health and vigor of all shrubs, trees, and planted areas. Irrigation controllers shall be programmed for no irrigation during periods of rain that exceed twelve hours of rainfall in one day or during rain storms of one day or more. Once rain has subsided controllers shall be reprogrammed for irrigation operations. Controllers shall also be checked and reset if necessary after power outages.

3. The Contractor shall provide all equipment necessary to perform all irrigation operations. For temporarily irrigated slopes, flat areas and trees within future private lots that require manual irrigation, the Contractor shall provide hoses and irrigation equipment to adequately irrigate this plant material for the duration of the maintenance period. In the event that an area has no water supply due to a system failure, the Contractor shall provide a supply by either hose or truck. All valves and valve box covers shall be kept closed at all times except when in actual use.
4. Irrigation equipment shall be kept clear of any obstructions including plant material. Dirt or other debris surrounding sprinkler heads, which prevents proper operation, shall be removed. The Contractor shall be held responsible for any damage to project property caused by careless handling of irrigation equipment including slope failure at no additional cost to the County.
5. The Contractor is responsible for the maintenance and repair of all components of the irrigation system for the duration of the maintenance period. This includes irrigation equipment items as shown on the original irrigation drawings. Maintenance and repairs of irrigation equipment during the maintenance period shall be done at no additional cost to the County. Maintenance shall include but not be limited to the following:
 - a. Repair or replace broken, missing, or inoperative pop-up spray heads and pop-up rotors.
 - b. Repair or replace defective sprinkler head risers, rotors on risers, fittings, swing arms and breaks in piping. Adjust and align risers. Repairs shall include all fittings as specified in the original irrigation drawings.
 - c. Clean and adjust pop-up sprayheads, pop-up rotors, sprinkler head risers and rotors on risers and their gears and/or mechanisms, check and adjust for proper coverage.
 - d. Remove dirt and debris from around pop-up spray heads and pop-up rotors.

- e. Repair or replace defective or malfunctioning control valves (Electric and/or Manual) flow sensors and master valves. Clean and service valves. The Contractor shall replace any damaged or missing valve boxes or valve lids. Valve box lids shall be kept in place at all times. Barricades shall be placed over any valve boxes with missing lids until replaced. Valve boxes shall be kept level with existing grade as shown on the drawings.
- f. Maintain, service, repair or replace central controller systems as specified by the product manufacturer.
- g. System repairs and replacement shall be accomplished with new parts and equipment that are identical to existing.
- h. The Contractor is responsible for required irrigation by any means during the periods of system breakdown.

E. Fertilizer Application During the Plant Establishment Period:

- 1. Apply fertilizer in a manner that promotes health, growth, color and appearance of cultivated vegetation at applications rates described in Section 10-2 "Landscaping and Planting" of these Special Provisions for the duration of the maintenance period.

F. Fallen Vegetation and Debris Removal:

- 1. The Contractor shall police the entire project area including all paved areas, planters, lawn areas, sidewalks (including common area sidewalks) and trash enclosures and collect fallen leaves, branches and limbs regardless of length or diameter, dead vegetation, paper, trash, cigarette butts, garbage, rocks, and any and all other debris to prevent unsightly and inordinate accumulations during normal maintenance working hours. Sidewalks shall be swept or washed as necessary to keep free of trash and graffiti. Collected items shall be promptly removed and taken to a legal disposal site.

G. Removal of Dead Animals:

- 1. Removal and legal disposal of animal carcasses are considered a normal maintenance task for the duration of the maintenance period. Dead carcasses shall be legally removed immediately when discovered by the Contractor.

H. Erosion Control:

- 1. The Contractor is responsible for daily visual inspection of slopes and immediately reporting areas experiencing erosion to the County's

Representative on the same day noticed. If the Contractor fails to notify the County's Representative of areas experiencing erosion on the same day noticed, then the Contractor assumes full responsibility for any erosion control measures and/or repairs as directed by the County's Representative at no additional cost to the County.

2. Upon notification and agreement of the applicable erosion control measure by the County Representative and the Contractor, the Contractor is responsible for immediately repairing and correcting any progressive rilling that may occur.
3. Erosion control measures may include but not be limited to:
 - a. Filling.
 - b. Raking.
 - c. Redirecting runoff.
 - d. Properly programming irrigation operations.
 - e. Replanting.
 - f. Providing additional erosion control materials such as:
 1. Jut matting.
 2. Filter fabric.
 3. Hay bales.
 4. Hay rolls.
 5. Silt fencing.
 6. Sand bags.
 7. And/or other erosion control items as required to maintain healthy plant material and stable slopes.
4. Additional erosion control measures required due to irrigation operations programmed by the Contractor that did not take into account cycle and soak functions of the controller will be installed and/or repaired as directed by the County's Representative at no additional cost to the County.

I. Frequency of Maintenance Operations:

TASK:	FREQUENCY:
Shrub/Vine Restoration and Replacement	Weekly
Weeding	Daily
Pruning	Weekly
Tree Replacement	As Required
Tree Staking	As Required
Pesticide Applications	As Required
Debris Removal & Disposal	Twice Weekly
Irrigation System Maintenance	Weekly
Fertilizer Application	As Required

Fallen Vegetation and Debris Removal	Twice Weekly
Removal of Dead Animals	Twice Weekly
Re-Mulching (Maintained at 3 Inches)	Weekly
Erosion Control	Daily

- J. At the end of each quarter (every 3 months) of the three year plant establishment period and at the end of the three year plant establishment period (final), the Contractor shall request a post-maintenance walk through with the County Representative. Prior to requesting this walk through the following requirements must be entirely satisfied:
1. Any outstanding maintenance items that were previously directed to be completed by the restoration specialist and/or County Representative.
- K. Quarterly Preliminary Post Maintenance Walk Through: Once the above requirements have been met a quarterly preliminary post maintenance walk-through may be scheduled. At the quarterly preliminary post maintenance walk through, the following procedures will be used:
1. Contractor must have (2) two personnel available with radio communication for the entire length of the walk through.
 2. A visual walk through of the entire landscape area will take place consisting of an examination of planting areas and noting any remaining maintenance items to be completed.
 3. Once the quarterly preliminary post maintenance walk through has been completed, the County Representative shall prepare a quarterly punch list of outstanding items to be completed and will provide a copy of this list to the County and Contractor for review and use. It is the Contractor's responsibility to repair, replace, and adjust all items on the quarterly punch list prior to requesting a quarterly final post maintenance walk through.
- L. Quarterly Final Post Maintenance Walk Through: Before commencement of a quarterly final post maintenance walk through, each item on the quarterly preliminary maintenance walk through punch list must be thoroughly satisfied, addressed, and resolved by the Contractor. Once the above requirement has been met a quarterly final post maintenance walk through may be requested. At the quarterly final maintenance walk through, the following procedures will be used:
1. Contractor must have (2) two personnel available with radio communication for the entire length of the walk through.
 2. Only those items as indicated on the quarterly preliminary maintenance walk through punch list will be addressed. This visual walk through will consist of walking through the punch list items created at the time of the quarterly preliminary maintenance walk through, and examining

outstanding items. Any remaining deficiencies in the maintenance of the wetlands mitigation will be noted.

3. Once the quarterly final post maintenance walk through is completed and any outstanding items created on the quarterly final punch list have been addressed and deemed completed by the County representative, the Contractor may request the quarterly payment in writing for the work completed in the previous 3 months for which the maintenance occurred. Payment will be made based upon the Contractor's performance and adherence to these special provisions and as determined by the County's representative (minus any retention). Any additional walk-throughs required due to Contractors' inability to address all issues on the quarterly punch lists described above will be provided at the Contractor's expense and no additional compensation will be allowed.

M. Final Post Maintenance Walk Through at the end of the three (3) year plant establishment period. At the end of the three (3) year plant establishment period the Contractor can request a preliminary final post maintenance walk through. Prior to requesting this walk through the following requirements must be entirely satisfied:

1. Any outstanding maintenance items from quarterly maintenance walk-throughs that were previously directed to be completed by the restoration specialist and/or County Representative.

At the preliminary final post maintenance walk through, the following procedures will be used:

1. Contractor must have (2) two personnel available with radio communication for the entire length of the walk through.
2. A visual walk through of the entire landscape area will take place consisting of an examination of planting areas and noting any remaining maintenance items to be completed.
3. Once the preliminary final post maintenance walk through has been completed, the County Representative shall prepare a final punch list of outstanding items to be completed and will provide a copy of this list to the County and Contractor for review and use. It is the Contractor's responsibility to repair, replace, and adjust all items on the final punch list prior to requesting a final post maintenance walk through.

N. Before commencement of a final post maintenance walk through, each item on the final preliminary post maintenance walk through punch list must be thoroughly satisfied, addressed, and resolved by the Contractor. Once the above requirement has been met a final post maintenance walk through may be

requested. At the final post maintenance walk through, the following procedures will be used.

1. Contractor must have (2) two personnel available with radio communication for the entire length of the walk through.
2. Only those items as indicated on the preliminary final post maintenance walk through punch list will be addressed. This visual walk through will consist of walking through the punch list items created at the time of the preliminary post maintenance walk through, and examining outstanding items. Any remaining deficiencies in the maintenance of the wetlands mitigation will be noted.
3. Once the final post maintenance walk through is completed and any outstanding items created on the final punch list have been addressed the maintenance period may end. The County Representative will formerly relieve the Contractor of any further maintenance in writing. The Contractor may request the final payment in writing for the work completed in the previous 3 months for which the maintenance occurred. Payment will be made based upon the Contractor's performance and adherence to these special provisions and as determined by the County's representative (minus any retention). Any additional walk-throughs required due to Contractors' inability to address all issues on the punch lists described above will be provided at the Contractor's expense.

PART 4 – MEASUREMENT AND PAYMENT

4.01 PLANT ESTABLISHMENT PERIOD

- A. Full compensation for furnishing all labor, materials, tools, equipment, incidentals and for doing all the work involved in accordance with the contract documents shall be on a quarterly basis, for the PLANT ESTABLISHMENT PERIOD Bid Item and no additional compensation will be allowed therefore. Payments will be made to the Contractor on a quarterly basis (12 payments) at the discretion of the County representative and these special provisions.

10-2.05 LANDSCAPE LIGHTING AND SIGN ILLUMINATION:

PART 1 – PRODUCTS AND EXECUTION

1.01 LTV710 SERIES BRONZE HOUSING ACCENT BRONZE LIGHTVAULT

Lens Ring: One-piece cast bronze, natural finish. (Optional standard stainless steel lens ring is also available.) Eight captive M" blackened stainless steel hex-socket cap screws.

Lens: Clear tempered borosilicate glass, M" thick, flush with lens ring, slightly crowned.

Lens Gasket: One-piece molded silicone, U-channel wraps completely around lens flange.

Bronze Housing: Two-piece cast bronze, F" min. wall thickness upper and lower housing continuously soldered together. No top lip to trap dirt and moisture. Separate splice and ballast compartments, individual cast aluminum internal covers with one-piece molded silicone gaskets. Two L" NPT in bottom of 33 cu in. splice area. Modular reverse draft housing design (top smaller than largest bottom diameter).

Optical System: SP and NF - Spot or narrow flood spun aluminum reflectors, specular Alzak®, black Duranodic® arc tube glare shield on SP only. (G12 base socket option available.) PR - for PAR38 reflector lamps. All sockets 4KV medium base. All optical systems yoke mounted, 360° rotation, ±25° vertical adjustment, locking screws, black hi-temp finish gimbal ring. PL - GX24q-4 universal socket is provided for fluorescent.

Electrical Module: High power factor ballast, -20°F starting, factory mounted and prewired to gasketed compartment cover, LTV710 only.

Wiring: Anti-siphon barriers on all wiring to and from ballast compartment. All components wire linked for ground, quick-disconnect for removal of optical system.

Drive-over Durability: When installed in concrete, fixture will withstand drive-over by vehicles weighing up to 5,500 lb.

Installation: Installation (including wiring requirements) shall be per Kim Lighting Document ltv710.pdf, revised 12/1/10.

1.02 SIGN / WALL LIGHTER 4300 SERIES / 120 VOLT EXTRUDED ALUMINUM, T-5 / T-8 FLUORESCENT

Housing: One-piece extruded aluminum with die-cast aluminum ends.

Swivels: Two, die-cast aluminum, with locking teeth and K" solid brass NPT mount. Swivel locked by J-20 stainless set screw. Clear anodized prior to powder coating for added corrosion resistance.

Reflector: Specular Alzak®.

Lens: Clear flat acrylic, fully gasketed, retained by a concealed extruded aluminum rail with recessed captive allen-head fasteners.

Socket: Medium bipin mounted on reflector. Wiring: Factory prewired with No. 18AWM rated 105°C, leads extended from swivel base.

Ballast: Electronic ballast 0°F starting. Variable voltage 120 through 277.

Finish: Super TGIC thermoset polyester powder coat paint, 2.5 mil nominal thickness, applied over a titanated zirconium conversion coating; 2500 hour salt spray test endurance rating. Standard colors are Black (BL), Dark Bronze (DB), and Verde Green (GR).

Certification: UL Listed to U.S. and Canadian safety standards for wet locations.

Installation: Installation (including wiring requirements) shall be per Kim Lighting Document 4300.pdf, revised 2/1/09.

PART 2 – MEASUREMENT AND PAYMENT

2.01 LANDSCAPE LIGHTING AND SIGN ILLUMINATION

- A. Full compensation for furnishing all labor, materials, tools, equipments, incidentals and for doing all the work involved including all conduit, contacts, relays, and conduit to service point, in accordance with the contract documents shall be on a lump sum basis, for the LANDSCAPE LIGHTING AND SIGN ILLUMINATION Bid Item and no additional compensation will be allowed therefor.

10-2.06 SUPPLEMENTAL PROJECT SPECIFIC SPECIFICATIONS:

PART 1 - GENERAL

1.01 SUMMARY:

- A. These project specific specifications are to be used only as a supplement to the Riverside County Ordinances. It shall be used for the Lighting, Walls, Monumentation, Phased Construction and any other elements not covered in the specifications noted in Section 10-2.06 paragraph 1.02 below.

1.02 RELATED REQUIREMENTS:

- A. County of Riverside Comprehensive Landscape Guidelines – Standard Specifications Section 328300 Landscaping
- B. County of Riverside Comprehensive Landscape Guidelines – Standard Specifications Section 328400 Irrigation System
- C. County of Riverside Comprehensive Landscape Guidelines – Standard Specifications Section 320533 Landscape Maintenance
- D. The Standard Plans for Public Works Construction 2009 edition.

1.03 SUBMITTALS:

- A. The Contractor shall submit samples of construction materials and finishes for the walls, monuments and boulders and lighting equipment within 30 days of award of contract.

1.04 GUARANTEES AND REPLACEMENTS:

- A. All lighting elements shall be guaranteed by the Contractor to be operational as deemed by the County, for a period of one year beyond the Plant Establishment Period for damage resulting from neglect or vandalism.

1.05 QUALITY ASSURANCE:

- A. Reviews herein specified shall be made by the Landscape Architect or Landscape Inspector. The Contractor shall request review in writing a minimum of 48 hours in advance, for the following parts of work:
 - 1. Pre-job meeting to introduce Landscape Architect, Landscape Inspector, Contractor, job project manager and job superintendent and to discuss the particular requirements of the job.
 - 2. Any meetings requested by the County, or agency as necessary for permitting or otherwise construction related.
 - 3. Any meetings as specified in the Standard Plans for Public Works Construction 2009 edition.

1.06 MAINTENANCE:

- A. Maintenance shall conform to the special provision entitled "Plant Establishment Period".

PART 2 - PHASED PROJECT

2.01 PHASED PLANTING:

- A. The planting of this project is divided into two phases. See the planting plan and planting legend for the trees and shrubs to be planted during the two separate phases.
- B. The complete specifications shall apply to both phases of the planting.

2.02 PHASED IRRIGATION:

- A. The irrigation system servicing phase two shall be completely installed and verified complete concurrently with phase one.
- B. The only modification to be done with regards to the irrigation system servicing the phase two planting shall be as follows:
 - 1. In lieu of the specified emitter nozzles, grey, sch. 80 PVC caps will be installed.
 - 2. Prior to the installation of the phase two planting, the caps shall be replaced with the emitters specified in the irrigation legend and the irrigation system servicing them shall be deemed complete and operable.

PART 3 - ADDITIONAL IRRIGATION NOTES

- 3.01 Location of irrigation lines and symbols on Irrigation Plans are diagrammatic. All irrigation shall be placed in planting area except when crossing pavement.
- 3.02 Prior to backfilling, the party responsible for irrigation installation shall conduct a preliminary field inspection of the irrigation system.
- 3.03 After project installation, an audit shall be conducted by a certified irrigation auditor and findings stated in a report.
- 3.04 CalSense certification required prior to start of 90-day plant establishment period.
- 3.05 Prior to start of maintenance period, the irrigation controller shall be programmed to run off real time ET.

PART 4 - PUBLIC CONTRACT CODE COMPLIANCE

- 4.01 All references to trade or brand names are intended as reference to the type and quality of the equipment to be installed. The Contractor may submit proposed substitutions, for evaluation by the Engineer, products that are equivalent or superior to the products specified. The Engineer shall make the determination if the proposed substitution is, or is not, equal or superior to the specified product, and the decisions of the Engineer shall be considered final.

APPENDIX A

Attachment "C" for Risk Level 1 Requirements

Of Water Pollution Control

ATTACHMENT C RISK LEVEL 1 REQUIREMENTS

A. Effluent Standards

[These requirements are the same as those in the General Permit order.]

1. Narrative – Risk Level 1 dischargers shall comply with the narrative effluent standards listed below:
 - a. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.
 - b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.
2. Numeric – Risk Level 1 dischargers are not subject to a numeric effluent standard.

B. Good Site Management "Housekeeping"

1. Risk Level 1 dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, Risk Level 1 dischargers shall implement the following good housekeeping measures:
 - a. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).
 - b. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

- c. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).
 - d. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).
 - e. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.
2. Risk Level 1 dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:
- a. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.
 - b. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.
 - c. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.
 - d. Cover waste disposal containers at the end of every business day and during a rain event.
 - e. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.
 - f. Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.
 - g. Implement procedures that effectively address hazardous and non-hazardous spills.
 - h. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that:
 - i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and

- ii. Appropriate spill response personnel are assigned and trained.
 - i. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.
3. Risk Level 1 dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:
 - a. Prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.
 - b. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.
 - c. Clean leaks immediately and disposing of leaked materials properly.
4. Risk Level 1 dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:
 - a. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.
 - b. Contain fertilizers and other landscape materials when they are not actively being used.
 - c. Discontinue the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.
 - d. Apply erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.
 - e. Stack erodible landscape material on pallets and covering or storing such materials when not being used or applied.
5. Risk Level 1 dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify

all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, Risk Level 1 dischargers shall do the following:

- a. Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.
 - b. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.
 - c. Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.
 - d. Ensure retention of sampling, visual observation, and inspection records.
 - e. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.
6. Risk Level 1 dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.

C. Non-Storm Water Management

1. Risk Level 1 dischargers shall implement measures to control all non-storm water discharges during construction.
2. Risk Level 1 dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.
3. Risk Level 1 dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

D. Erosion Control

1. Risk Level 1 dischargers shall implement effective wind erosion control.
2. Risk Level 1 dischargers shall provide effective soil cover for inactive¹ areas and all finished slopes, open space, utility backfill, and completed lots.
3. Risk Level 1 dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

E. Sediment Controls

1. Risk Level 1 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.
2. On sites where sediment basins are to be used, Risk Level 1 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.

F. Run-on and Runoff Controls

Risk Level 1 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

G. Inspection, Maintenance and Repair

1. Risk Level 1 dischargers shall ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all of these activities to an employee trained to do the task(s) appropriately, but shall ensure adequate deployment.
2. Risk Level 1 dischargers shall perform weekly inspections and observations, and at least once each 24-hour period during extended

¹ Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.

storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

3. Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 1 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.
4. For each inspection required, Risk Level 1 dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format.
5. Risk Level 1 dischargers shall ensure that checklists shall remain onsite with the SWPPP and at a minimum, shall include:
 - a. Inspection date and date the inspection report was written.
 - b. Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.
 - c. Site information, including stage of construction, activities completed, and approximate area of the site exposed.
 - d. A description of any BMPs evaluated and any deficiencies noted.
 - e. If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.
 - f. Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.
 - g. Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.
 - h. Photographs taken during the inspection, if any.
 - i. Inspector's name, title, and signature.

H. Rain Event Action Plan

Not required for Risk Level 1 dischargers.

I. Risk Level 1 Monitoring and Reporting Requirements

Table 1- Summary of Monitoring Requirements

Risk Level	Visual Inspection				Sample Collection		
	Quarterly non-Storm Water Discharge	Pre-storm Event		Daily Storm Bmp	Post Storm	Storm Water Discharge	Receiving Water
		Baseline	REAP				
1	X	X		X	X		

1. Construction Site Monitoring Program Requirements

- a. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the Storm Water Pollution Prevention Plan (SWPPP), included as an appendix or separate SWPPP chapter.
- b. Existing dischargers registered under the State Water Board Order No. 99-08-DWQ shall make and implement necessary revisions to their Monitoring Programs to reflect the changes in this General Permit in a timely manner, but no later than July 1, 2010. Existing dischargers shall continue to implement their existing Monitoring Programs in compliance with State Water Board Order No. 99-08-DWQ until the necessary revisions are completed according to the schedule above.
- c. When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger shall comply with these requirements as of the date the ownership change occurs.

2. Objectives

The CSMP shall be developed and implemented to address the following objectives:

- a. To demonstrate that the site is in compliance with the Discharge Prohibitions;

- b. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives;
 - c. To determine whether immediate corrective actions, additional Best Management Practice (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges; and
 - d. To determine whether BMPs included in the SWPPP are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.
- 3. Risk Level 1 - Visual Monitoring (Inspection) Requirements for Qualifying Rain Events**
- a. Risk Level 1 dischargers shall visually observe (inspect) storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.
 - b. Risk Level 1 dischargers shall visually observe (inspect) the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.
 - c. Risk Level 1 dischargers shall conduct visual observations (inspections) during business hours only.
 - d. Risk Level 1 dischargers shall record the time, date and rain gauge reading of all qualifying rain events.
 - e. Within 2 business days (48 hours) prior to each qualifying rain event, Risk Level 1 dischargers shall visually observe (inspect):
 - i. All storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.
 - ii. All BMPs to identify whether they have been properly implemented in accordance with the SWPPP. If needed, the discharger shall implement appropriate corrective actions.

- iii. Any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.
- f. For the visual observations (inspections) described in e.i and e.iii above, Risk Level 1 dischargers shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.
- g. Within two business days (48 hours) after each qualifying rain event, Risk Level 1 dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.
- h. Risk Level 1 dischargers shall maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

4. Risk Level 1 – Visual Observation Exemptions

- a. Risk Level 1 dischargers shall be prepared to conduct visual observation (inspections) until the minimum requirements of Section 1.3 above are completed. Risk Level 1 dischargers are not required to conduct visual observation (inspections) under the following conditions:
 - i. During dangerous weather conditions such as flooding and electrical storms.
 - ii. Outside of scheduled site business hours.
- b. If no required visual observations (inspections) are collected due to these exceptions, Risk Level 1 dischargers shall include an explanation in their SWPPP and in the Annual Report documenting why the visual observations (inspections) were not conducted.

5. Risk Level 1 – Monitoring Methods

Risk Level 1 dischargers shall include a description of the visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures in the CSMP.

6. Risk Level 1 – Non-Storm Water Discharge Monitoring Requirements

a. Visual Monitoring Requirements:

- i. Risk Level 1 dischargers shall visually observe (inspect) each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.
- ii. Risk Level 1 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).
- iii. Risk Level 1 dischargers shall ensure that visual observations (inspections) document the presence or evidence of any non-storm water discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source. Risk Level 1 dischargers shall maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges.

7. Risk Level 1 – Non-Visible Pollutant Monitoring Requirements

- a. Risk Level 1 dischargers shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.
- b. Risk Level 1 dischargers shall ensure that water samples are large enough to characterize the site conditions.
- c. Risk Level 1 dischargers shall collect samples at all discharge locations that can be safely accessed.
- d. Risk Level 1 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.
- e. Risk Level 1 dischargers shall analyze samples for all non-visible pollutant parameters (if applicable) - parameters indicating the

presence of pollutants identified in the pollutant source assessment required (Risk Level 1 dischargers shall modify their CSMPs to address these additional parameters in accordance with any updated SWPPP pollutant source assessment).

- f. Risk Level 1 dischargers shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.
- g. Risk Level 1 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis.²
- h. Risk Level 1 dischargers shall keep all field /or analytical data in the SWPPP document.

8. Risk Level 1 – Particle Size Analysis for Project Risk Justification

Risk Level 1 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

9. Risk Level 1 – Records

Risk Level 1 dischargers shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Risk Level 1 dischargers shall retain all records on-site while construction is ongoing. These records include:

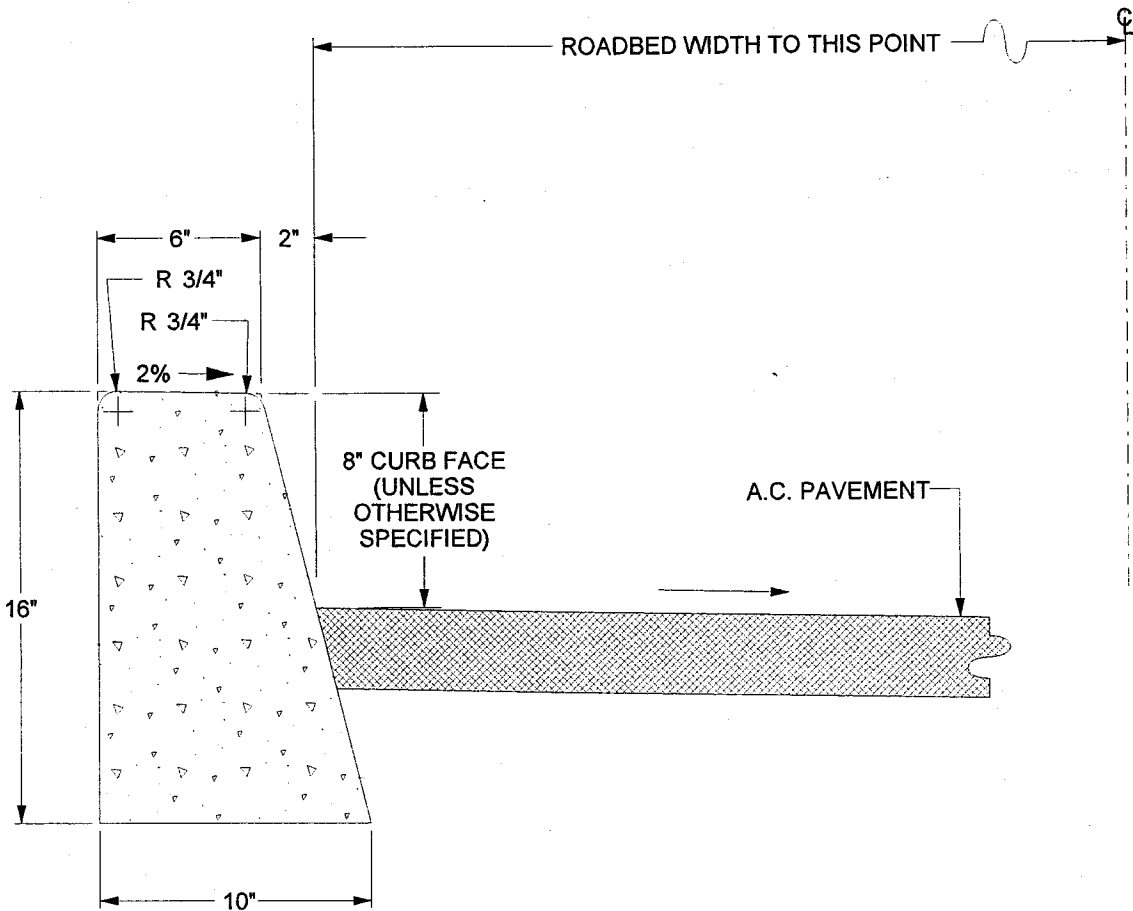
- a. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation.
- b. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements.
- c. The date and approximate time of analyses.
- d. The individual(s) who performed the analyses.

² For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

- e. A summary of all analytical results from the last three years, the method detection limits and reporting units, and the analytical techniques or methods used.
- f. Rain gauge readings from site inspections.
- g. Quality assurance/quality control records and results.
- h. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Sections I.3 and I.6 above).
- i. Visual observation and sample collection exception records (see Section I.4 above).
- j. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

Appendix B

Reference Drawings



CLASS "B" CONCRETE

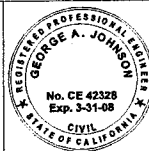
0.888 CU FT. / L.F.

1 CU. YD. = 30.41 L.F.

APPROVED BY:

George A. Johnson
 DIRECTOR OF TRANSPORTATION
 GEORGE A. JOHNSON, RCE 42328

DATE: 05/01/07

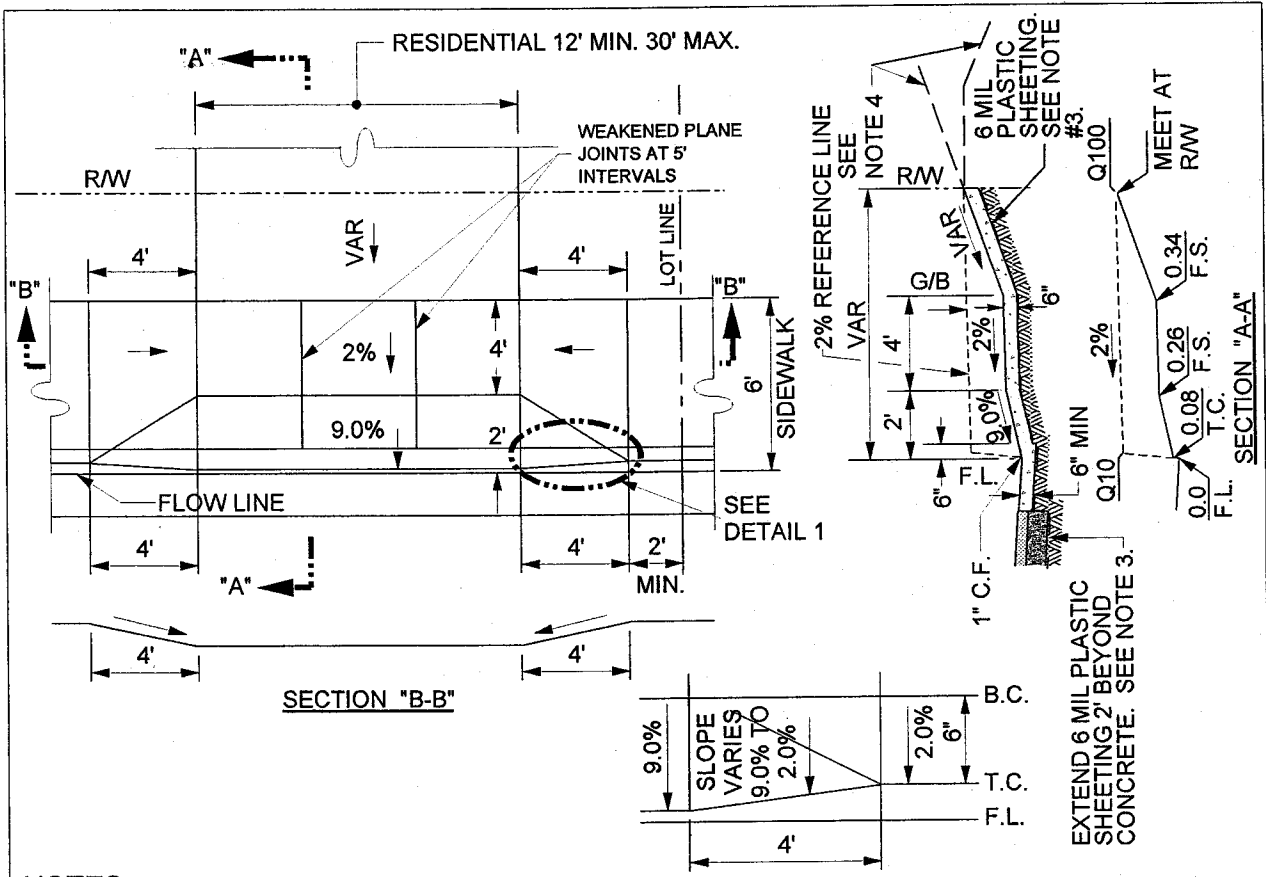


COUNTY OF RIVERSIDE

TYPE "D" CURB

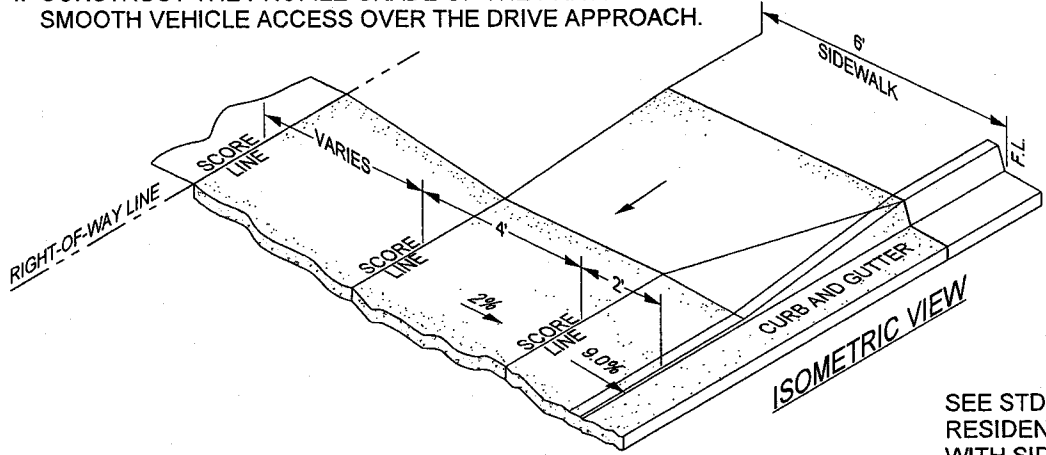
STANDARD NO. 204

REVISIONS	REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-71, 2-90	1				4			
11-04	2				5			
	3				6			



NOTES:

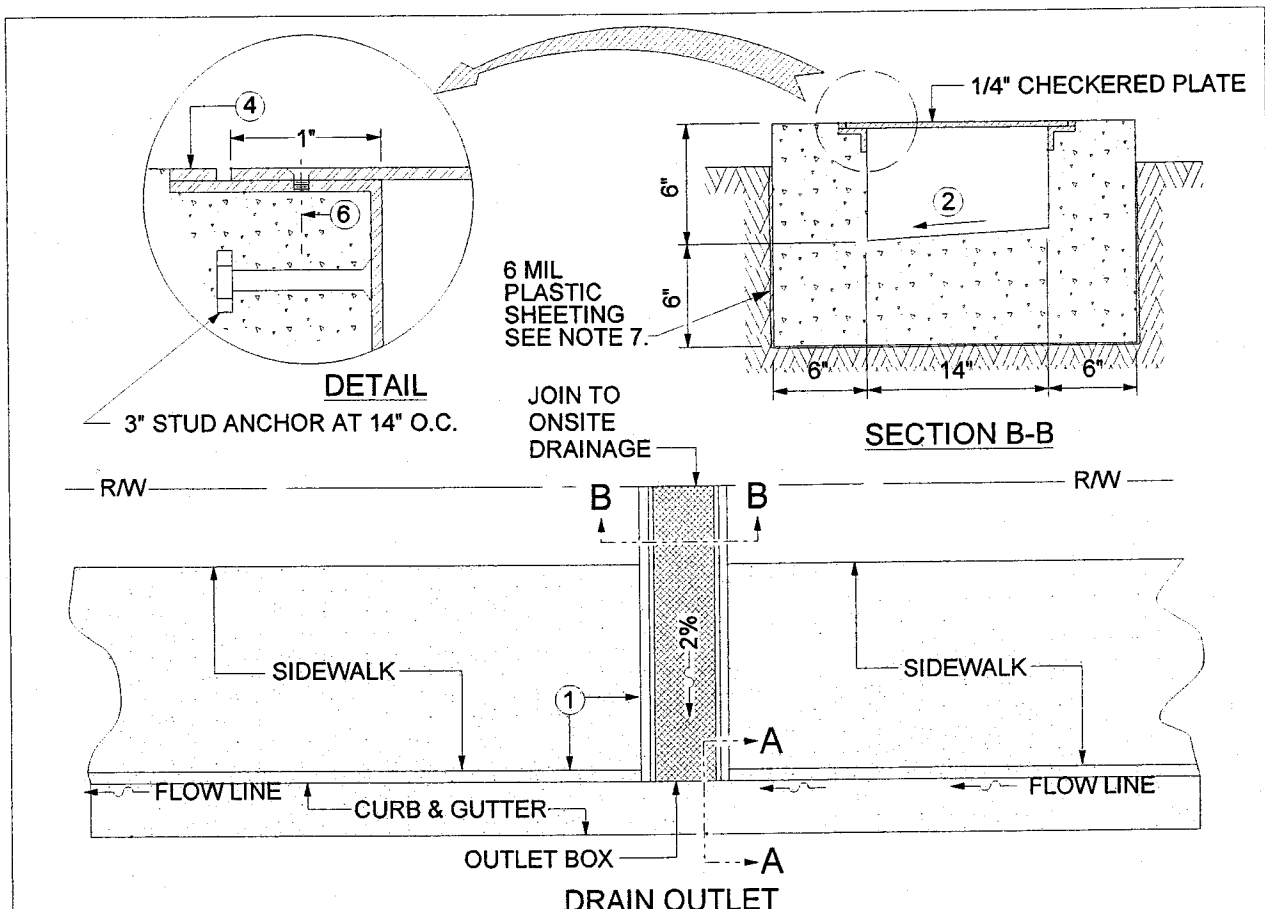
1. ALL CONSTRUCTION SHALL BE CLASS "3" CONCRETE.
2. 20' OF FULL-HEIGHT CURB REQUIRED BETWEEN DRIVEWAYS WITHIN ANY ONE PROPERTY FRONTAGE.
3. USE 6 MIL PLASTIC SHEETING WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS (SECTION 16.04).
4. CONSTRUCT THE PROFILE GRADE OF THE PRIVATE ON-SITE DRIVEWAY SO THAT IT PROVIDES SMOOTH VEHICLE ACCESS OVER THE DRIVE APPROACH.



NOT TO SCALE

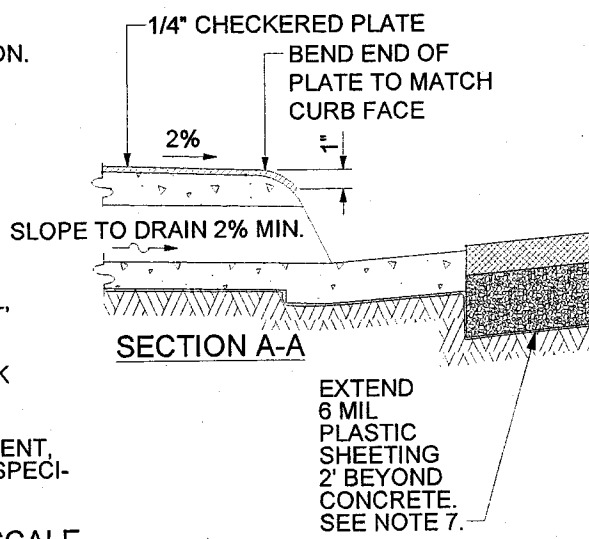
SEE STD NO. 213 FOR RESIDENTIAL DRIVEWAY WITH SIDEWALK AT RW

APPROVED BY: DIRECTOR OF TRANSPORTATION GEORGE A. JOHNSON, RCE 42328				DATE: 11/15/04								COUNTY OF RIVERSIDE																																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">REVISIONS</th> <th style="width: 10%;">REV.</th> <th style="width: 10%;">BY:</th> <th style="width: 10%;">APR'D</th> <th style="width: 10%;">DATE</th> <th style="width: 10%;">REV.</th> <th style="width: 10%;">BY:</th> <th style="width: 10%;">APR'D</th> <th style="width: 10%;">DATE</th> </tr> </thead> <tbody> <tr> <td>8-71, 8-77</td> <td>11-04</td> <td>1</td> <td></td> <td></td> <td>4</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5-80, 2-82</td> <td></td> <td>2</td> <td></td> <td></td> <td>5</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2-90, 12-97</td> <td></td> <td>3</td> <td></td> <td></td> <td>6</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>								REVISIONS	REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE	8-71, 8-77	11-04	1			4				5-80, 2-82		2			5				2-90, 12-97		3			6				RESIDENTIAL DRIVEWAY WITH SIDEWALK AT CURB			
REVISIONS	REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE																																							
8-71, 8-77	11-04	1			4																																										
5-80, 2-82		2			5																																										
2-90, 12-97		3			6																																										
								STANDARD NO. 207																																							



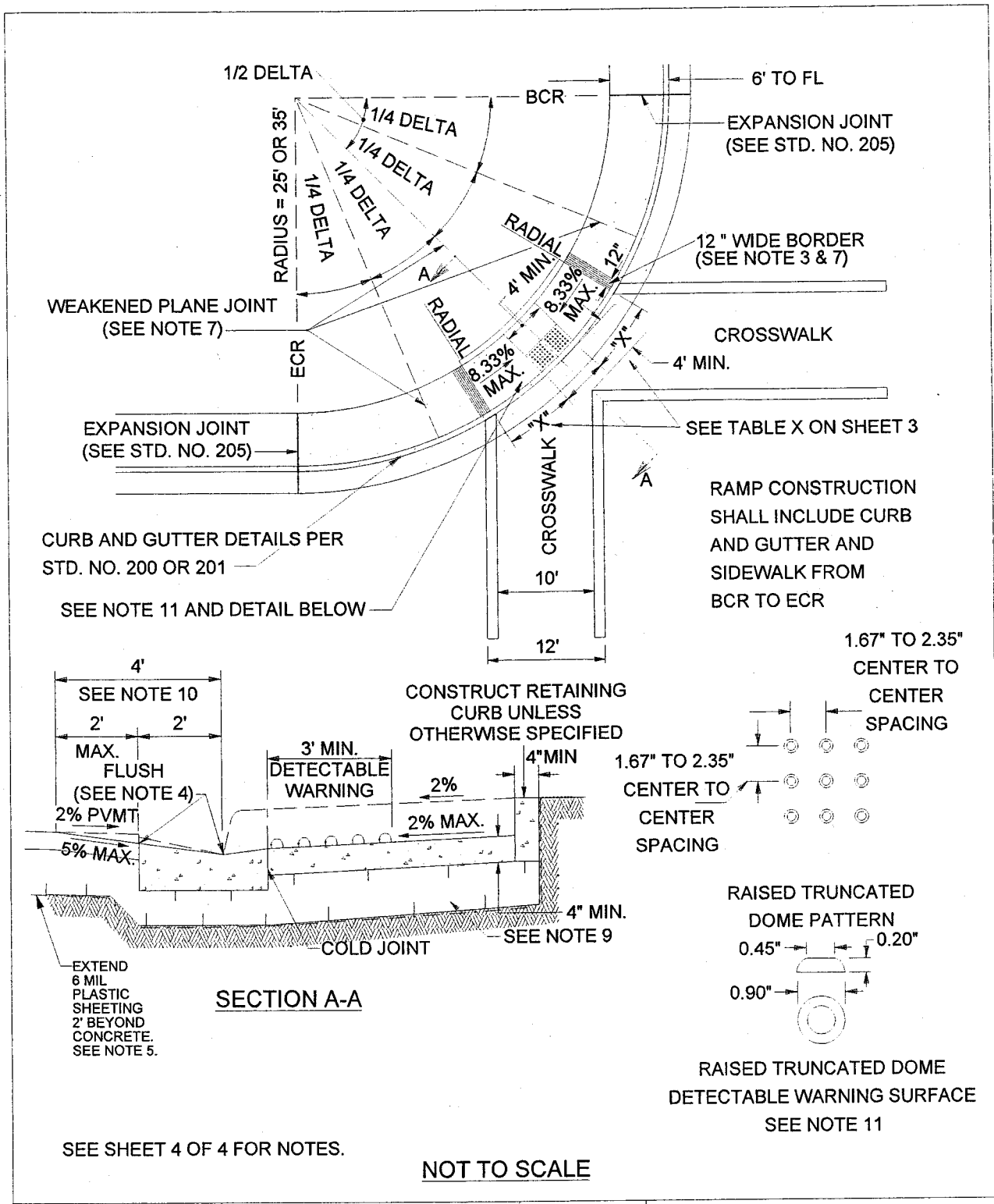
NOTE

- ① UNDER SIDEWALK DRAIN TO BE CONSTRUCTED AT 90°. VARIATIONS FROM 90° REQUIRE THE APPROVAL OF THE DIRECTOR OF TRANSPORTATION.
- ② SLOPE TO DRAIN TO ONE SIDE.
- ③ ALL EXPOSED METAL PARTS TO BE GALVANIZED AFTER FABRICATION.
- ④ 1 1/2" X 1 1/2" X 1/4" "L" FRAME WITH 3/8" X 1/4" STEEL STRIP WELDED TO FRAME.
- ⑤ CHECKERED PLATE SHALL BE GALVANIZED STEEL, MAXIMUM WIDTH 36".
- ⑥ FASTEN WITH 1/4" COARSE-THREAD COUNTERSINK METAL SCREWS AT 12" O.C..
- ⑦ WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS (SECTION 16.04).



NOT TO SCALE

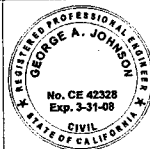
APPROVED BY: DIRECTOR OF TRANSPORTATION GEORGE A. JOHNSON, RCE 42328				DATE: 05/01/07		COUNTY OF RIVERSIDE UNDER SIDEWALK DRAIN CAST IN PLACE STANDARD NO. 309			
REVISIONS	REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE	
11-04	1				4				
	2				5				
	3				6				



APPROVED BY:

George A. Johnson
 DIRECTOR OF TRANSPORTATION
 GEORGE A. JOHNSON, RCE 42328

DATE: 11/15/04



COUNTY OF RIVERSIDE

**CURB RAMP
 CASE B**

REVISIONS	REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-77, 5-80	11-04	1			4			
10-81, 6-82		2			5			
9-88, 2-90		3			6			

STANDARD NO. 403 (2 OF 4)

12-97

NOT TO SCALE

SEE SHEET 4 OF 4 FOR NOTES.

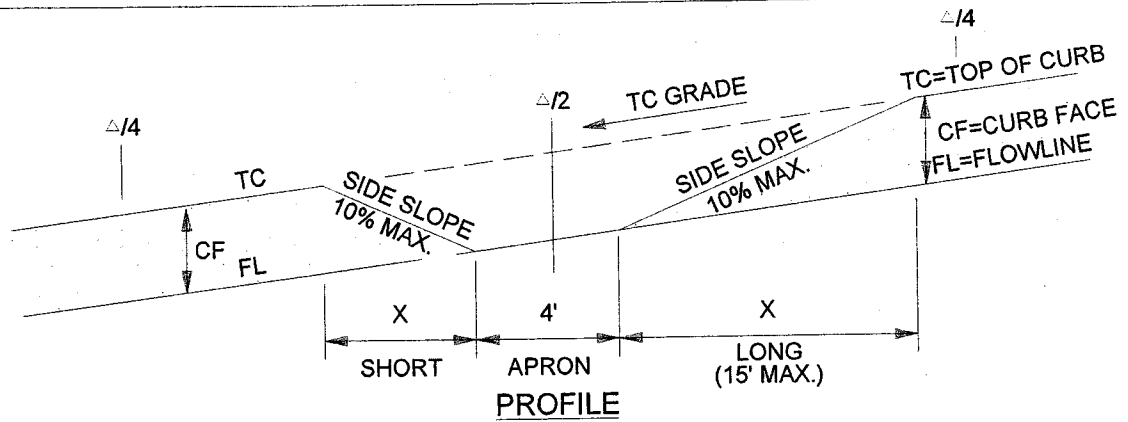


TABLE X

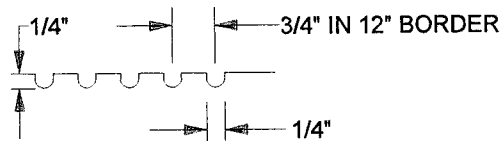
CF (IN)	RADIUS (FT)	SIDE SLOPE	X	TC GRADE (ALONG CURB RETURN)					
				1%	2%	3%	4%	5%	6%
6"	35'	10%	X _S	4.6	4.2	3.9	3.6	3.4	3.2
			X _L	5.6	6.3	7.2	8.4	10.0	12.5
8"	35'	10%	X _S	6.1	5.6	5.2	4.8	4.5	4.2
			X _L	7.5	8.4	9.6	11.2	13.4	15.0

TO CALCULATE "X" DIMENSION:

SHORT SIDE (DOWN SLOPE): $X_S (FT) = \frac{\text{CURB FACE (FT)}}{\text{SIDE SLOPE} + \text{TC GRADE}}$

LONG SIDE (UP SLOPE): $X_L (FT) = \frac{\text{CURB FACE (FT)}}{\text{SIDE SLOPE} - \text{TC GRADE}}$

ENGINEER TO SHOW X_S AND X_L ON IMPROVEMENT PLANS



GROOVING DETAIL

APPROVED BY:								COUNTY OF RIVERSIDE					
								DATE: 05/05/04				<p style="text-align: center;">CURB RAMP</p>	
DIRECTOR OF TRANSPORTATION GEORGE A. JOHNSON, RCE 42328								STANDARD NO. 403 (3 OF 4)					
REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE				
8-77, 5-80	11-04	1				4							
10-81, 6-82		2				5							
9-88, 2-90		3				6							

CONSTRUCTION NOTES:

1. IF DISTANCE FROM CURB TO BACK OF SIDEWALK IS TOO SHORT TO ACCOMODATE RAMP AND 4' LANDING, THEN USE THE CASE "B" RAMP.
2. IF SIDEWALK IS LESS THAN 6' WIDE, THE FULL WIDTH OF THE SIDEWALK SHALL BE DEPRESSED AS SHOWN IN CASE B. MINIMUM SIDEWALK WIDTH IS 4' FROM BACK OF CURB.
3. THE RAMP SHALL HAVE A 12" WIDE BORDER WITH GROOVES 1/4" WIDE AND 1/4" DEEP APPROXIMATELY 3/4" ON CENTER. SEE GROOVING DETAIL.
4. TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
5. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS (SECTION 16.04).
6. RAMP SIDE SLOPE VARIES UNIFORMLY FROM A MAXIMUM OF UP TO 10% AT CURB TO CONFORM WITH LONGITUDINAL SIDEWALK SLOPE ADJACENT TO TOP OF THE RAMP (EXCEPT IN CASE B).
7. CONSTRUCT WEAKENED PLANE JOINTS AT 1/4 DELTAS WHEN RADIUS EQUALS 35' AND AT INSIDE EDGE OF GROOVED BORDER WHEN RADIUS EQUALS 25'.
8. IF EXPANSIVE SOIL IS ENCOUNTERED, THEN RAMP SHALL BE CONSTRUCTED OVER CLASS 2 AGGREGATE MATERIAL.
9. CONCRETE SHALL BE CLASS B.
10. MAXIMUM SLOPES OF ADJOINING GUTTERS: THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP AND CONTINUOUS PASSAGE TO THE CURB RAMP SHALL NOT EXCEED 5% WITHIN 4' OF THE BOTTOM OF THE CURB RAMP.
11. DETECTABLE WARNING SURFACES ARE REQUIRED ON ALL CURB RAMPS THAT ENTER INTO A VEHICULAR TRAVEL WAY.

APPROVED BY:

George A. Johnson

DATE: 11/15/04

DIRECTOR OF TRANSPORTATION
GEORGE A. JOHNSON, RCE 42328



COUNTY OF RIVERSIDE

**CURB RAMP
CONSTRUCTION NOTES**

REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-77, 5-80	11-04	1				4			
10-81, 6-82		2				5			
9-88, 2-90		3				6			

STANDARD NO. 403 (4 OF 4)

12-97

APPENDIX C

CONSTRUCTION PROJECT FUNDING INFORMATION SIGN

**Federal Highway Funds
County Redevelopment Funds
AT WORK**

Mecca Roundabout Project



Project Information
Call (951) 955-6885

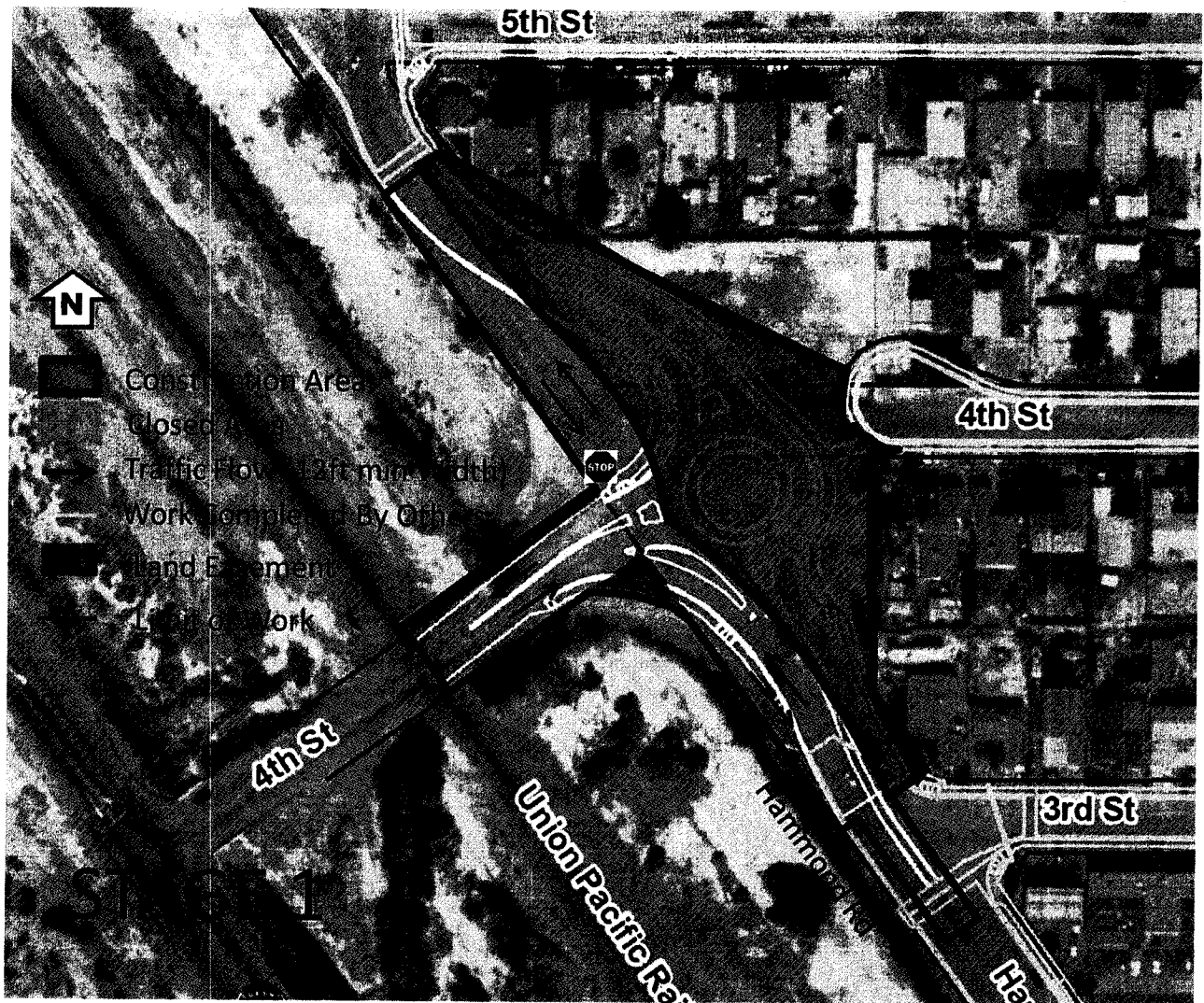


Riverside County Transportation Department

Riverside County Economic Development Agency

MECCA ROUNDABOUT CONSTRUCTION STAGING EXHIBIT

Stage 1: East Side



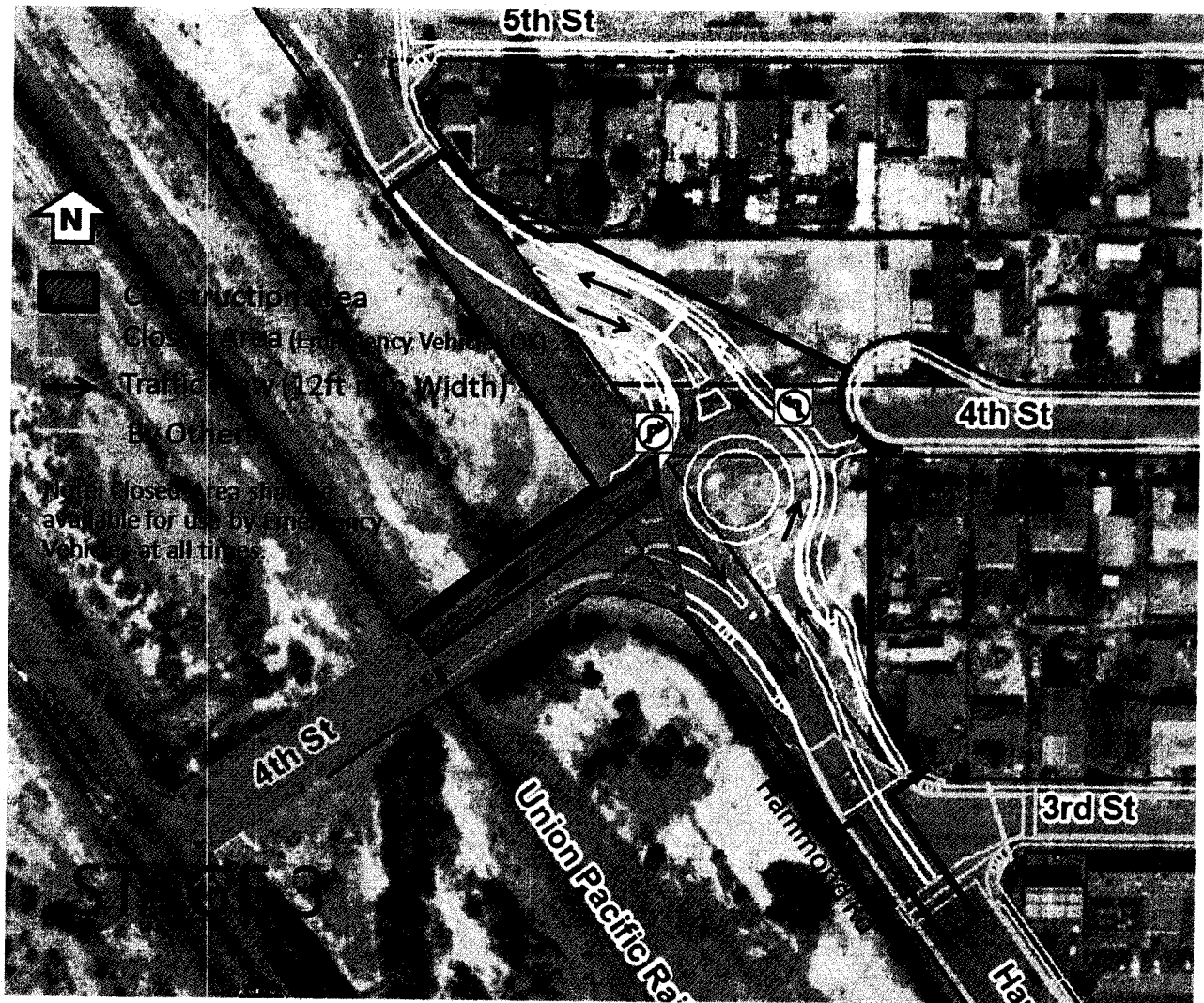
**MECCA ROUNDABOUT
CONSTRUCTION STAGING EXHIBIT**

Stage 2: Hammond Road (north end)



**MECCA ROUNDABOUT
CONSTRUCTION STAGING EXHIBIT**

Stage 3: 4th Street Closure Part 1



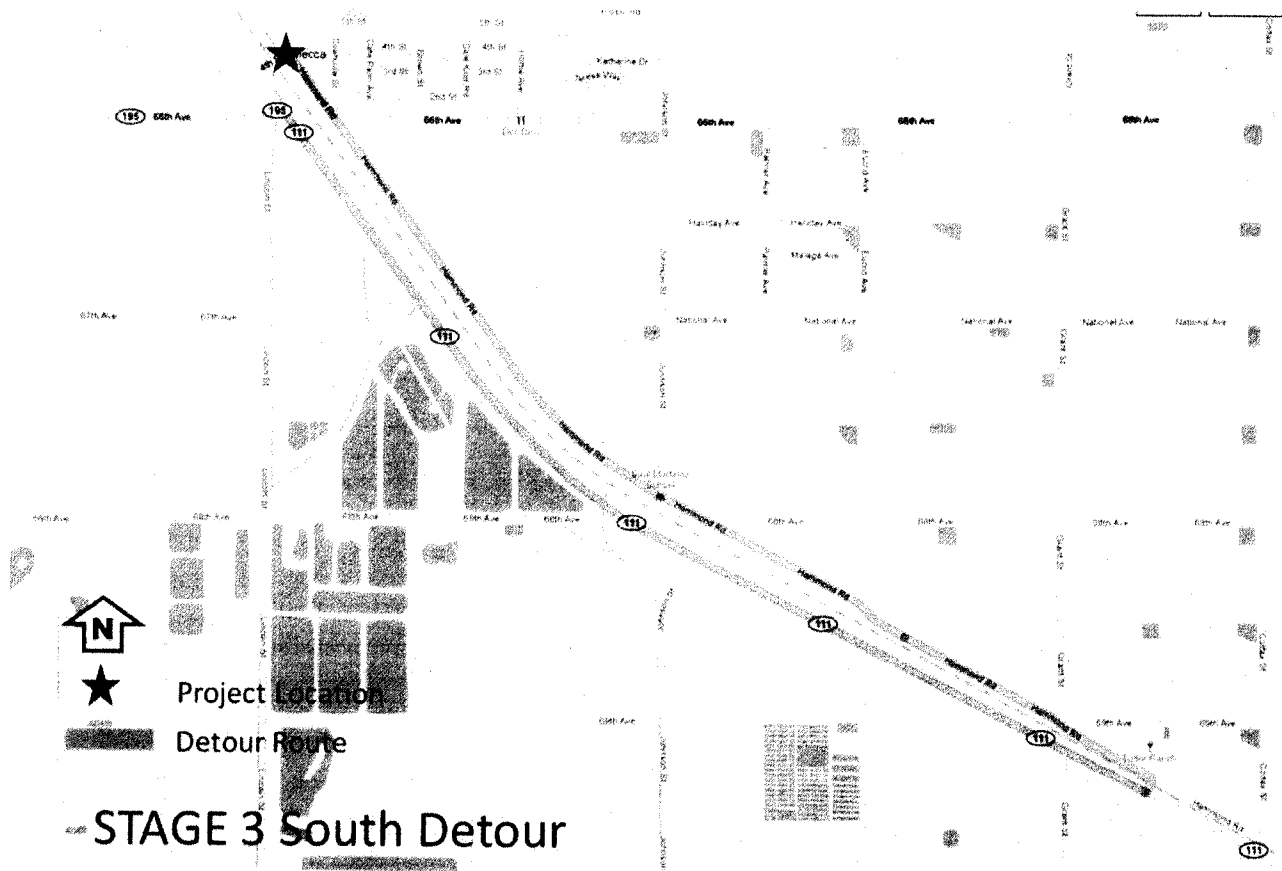
**MECCA ROUNDABOUT
CONSTRUCTION STAGING EXHIBIT**

**Stage 4: 4th Street Half Closure Part 2
and Hammond Road (south end)**



MECCA ROUNDABOUT CONSTRUCTION STAGING EXHIBIT

DETOUR Stage 3: North Detour Route



**MECCA ROUNDABOUT
CONSTRUCTION STAGING EXHIBIT**

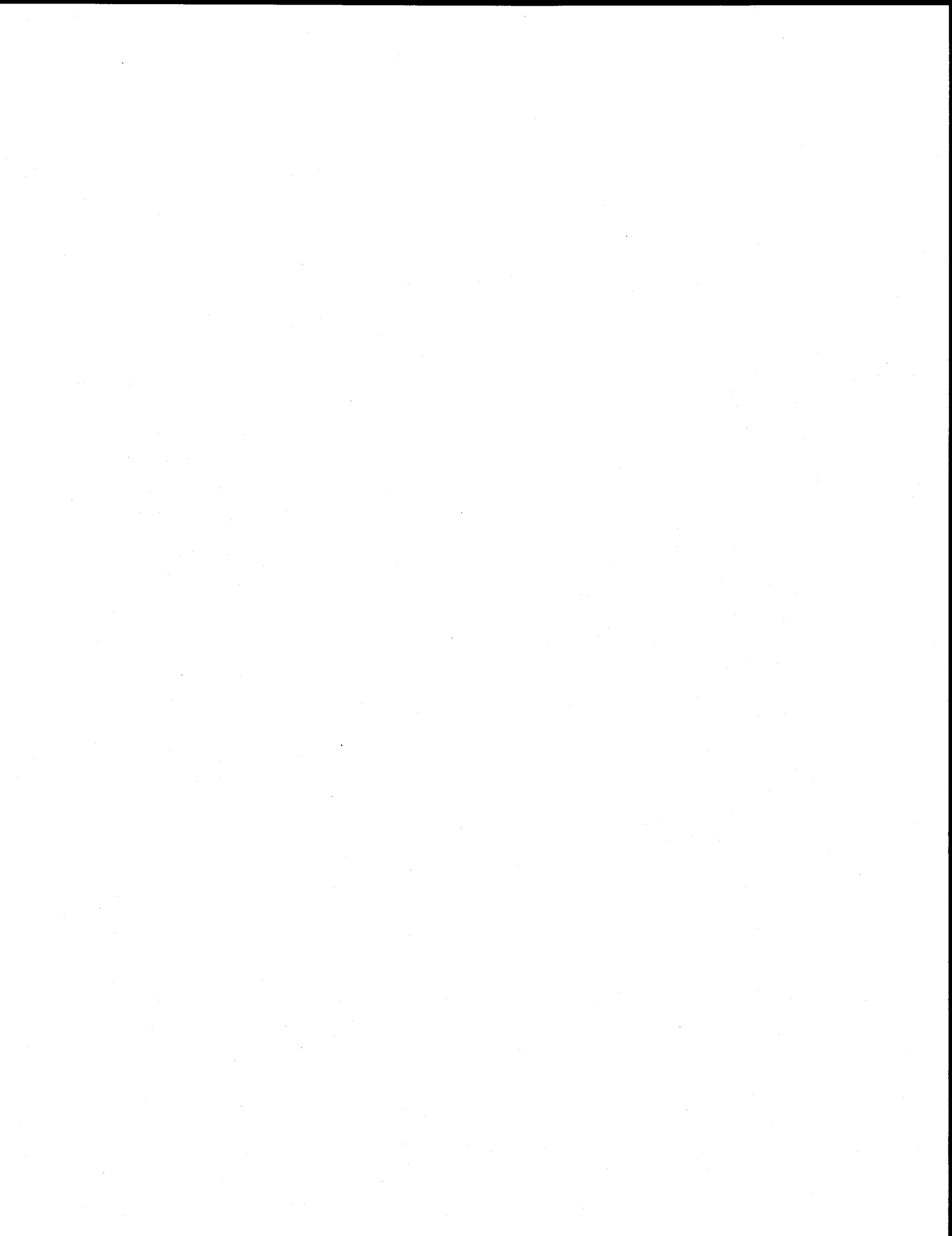
DETOUR Stage 2: Hammond Road (north end) Detour



**MECCA ROUNDABOUT
CONSTRUCTION STAGING EXHIBIT**

DETOUR Stage 4: Hammond Road (south end)









OFFICE OF
CLERK OF THE BOARD OF SUPERVISORS
1st FLOOR, COUNTY ADMINISTRATIVE CENTER
P.O. BOX 1147, 4080 LEMON STREET
RIVERSIDE, CA 92502-1147
PHONE: (951) 955-1060
FAX: (951) 955-1071

KECIA HARPER-IHEM
Clerk of the Board of Supervisors

KIMBERLY A. RECTOR
Assistant Clerk of the Board

April 25, 2012

THE PRESS ENTERPRISE
ATTN: LEGALS
PO BOX 792
RIVERSIDE, CA 92501

FAX (951) 368-9018
E-MAIL: legals@pe.com

RE: NOTICE INVITING BIDS: MECCA ROUNDABOUT B9-0997

To Whom It May Concern:

Attached is a copy for publication in your newspaper for **TEN (10) TIMES:**

Friday	- April 27, 2012	Wednesday	- May 2, 2012
Saturday	- April 28, 2012	Thursday	- May 3, 2012
Sunday	- April 29, 2012	Friday	- May 4, 2012
Monday	- April 30, 2012	Saturday	- May 5, 2012
Tuesday	- May 1, 2012	Sunday	- May 6, 2012

We require your affidavit of publication immediately upon completion of the last publication.

Your invoice must be submitted to this office in duplicate, WITH TWO CLIPPINGS OF THE PUBLICATION.

NOTE: PLEASE COMPOSE THIS PUBLICATION INTO A SINGLE COLUMN FORMAT.

Thank you in advance for your assistance and expertise.

Sincerely,

Mcgil

Cecilia Gil, Board Assistant to
KECIA HARPER-IHEM, CLERK OF THE BOARD



Gil, Cecilia

From: mtinajero@pe.com on behalf of Master, PEC Legals <legalsmaster@pe.com>
Sent: Wednesday, April 25, 2012 9:29 AM
To: Gil, Cecilia
Subject: Re: [Legals] FOR PUBLICATION: MECCA ROUNDABOUT B9-0997

Received for publication from April 27 to May 6

On Wed, Apr 25, 2012 at 8:57 AM, Gil, Cecilia <CCGIL@rcbos.org> wrote:

Good Morning! Attached is a Notice Inviting Bids, for publication from April 27 to May 6, 2012. Please confirm. Thank you!

Cecilia Gil

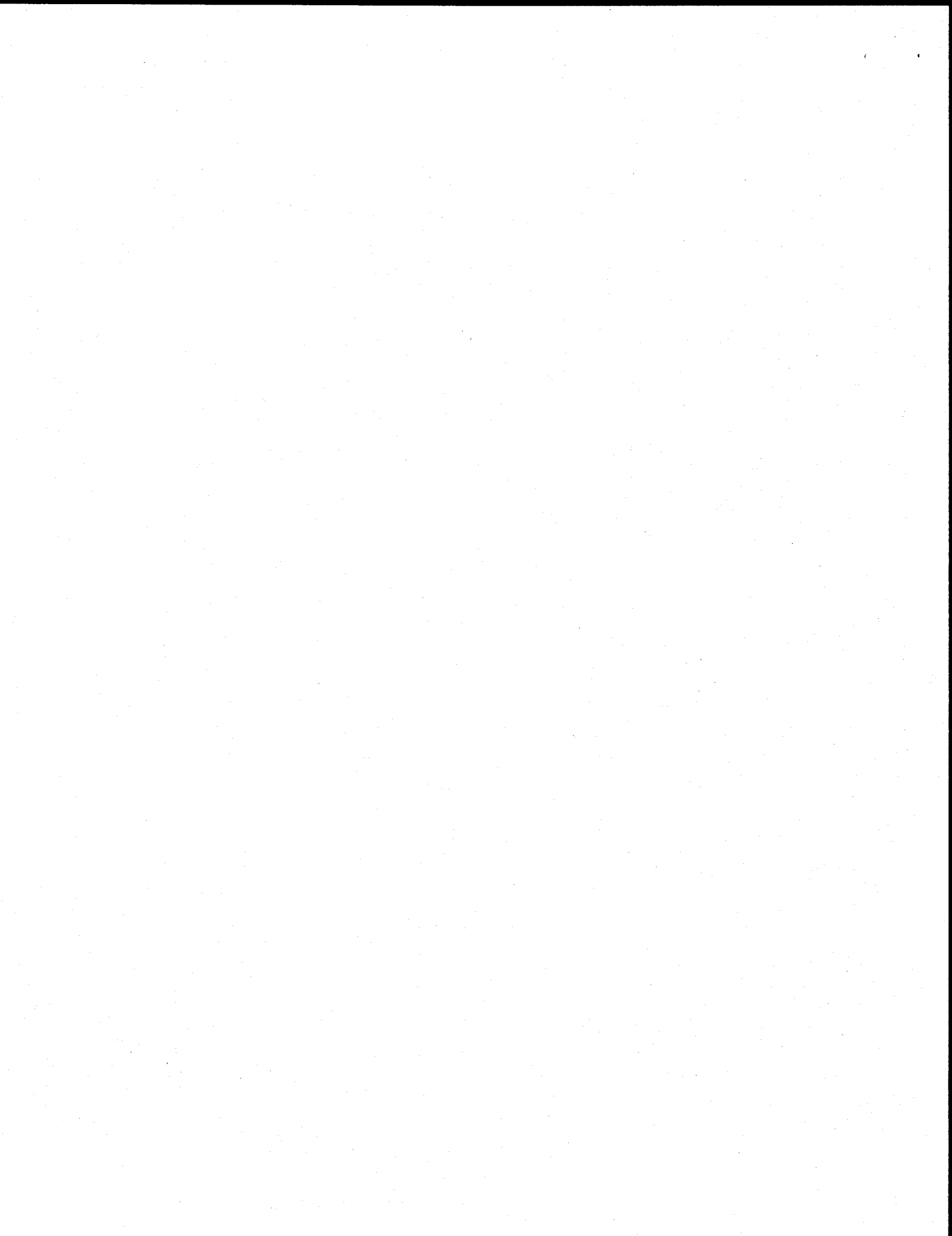
Board Assistant to the
Clerk of the Board of Supervisors
[951-955-8464](tel:951-955-8464)

THE COUNTY ADMINISTRATIVE CENTER IS CLOSED EVERY FRIDAY UNTIL FURTHER NOTICE.

PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING.

--

Thank You!
The Press-Enterprise - Legal Advertising Department
1-800-880-0345 (p) 951-368-9018 (f) e-mail: legals@pe.com





OFFICE OF
CLERK OF THE BOARD OF SUPERVISORS
1st FLOOR, COUNTY ADMINISTRATIVE CENTER
P.O. BOX 1147, 4080 LEMON STREET
RIVERSIDE, CA 92502-1147
PHONE: (951) 955-1060
FAX: (951) 955-1071

KECIA HARPER-IHEM
Clerk of the Board of Supervisors

KIMBERLY A. RECTOR
Assistant Clerk of the Board

April 25, 2012

THE DESERT SUN
ATTN: LEGALS
PO BOX 2734
PALM SPRINGS, CA 92263

FAX (760) 778-4731
E-MAIL: legals@thedesertsun.com

RE: NOTICE INVITING BIDS: MECCA ROUNDABOUT B9-0997

To Whom It May Concern:

Attached is a copy for publication in your newspaper for **FIVE (5) TIMES:**

Friday	- April 27, 2012
Saturday	- April 28, 2012
Sunday	- April 29, 2012
Wednesday	- May 2, 2012
Thursday	- May 3, 2012

We require your affidavit of publication immediately upon completion of the last publication.

Your invoice must be submitted to this office in duplicate, WITH TWO CLIPPINGS OF THE PUBLICATION.

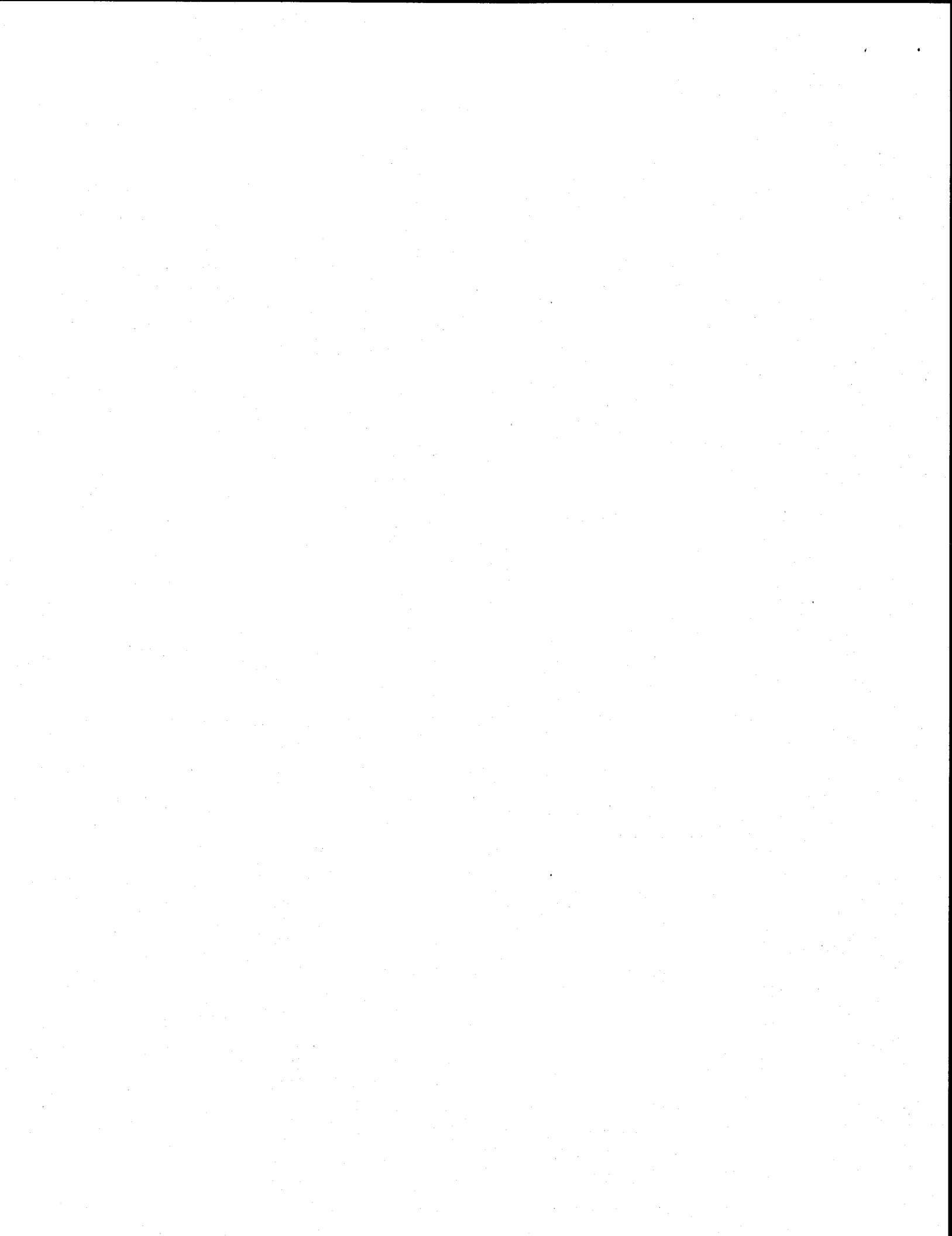
NOTE: PLEASE COMPOSE THIS PUBLICATION INTO A SINGLE COLUMN FORMAT.

Thank you in advance for your assistance and expertise.

Sincerely,

Mcgil

Cecilia Gil, Board Assistant to
KECIA HARPER-IHEM, CLERK OF THE BOARD



Gil, Cecilia

From: Moeller, Charlene <CMOELLER@palmspri.gannett.com>
Sent: Wednesday, April 25, 2012 9:13 AM
To: Gil, Cecilia
Subject: RE: FOR PUBLICATION: Mecca Roundabout B9-0997

Ad received and will publish on date(s) requested.

Charlene Moeller | Media Sales Legal Notice Coordinator

The Desert Sun Media Group
750 N. Gene Autry Trail, Palm Springs, CA 92262
t 760.778.4578 | f 760.778.4731
legals@thedesertsun.com / dpwlegals@thedesertsun.com

The Coachella Valley's #1 Source in News & Advertising!
www.mydesert.com | twitter @MyDesert | facebook MyDesert.com

This email and any files transmitted with it are confidential and intended for the individual to whom they are addressed. If you have received this email in error, please notify the sender and delete the message from your system

From: Gil, Cecilia [<mailto:CCGIL@rcbos.org>]
Sent: Wednesday, April 25, 2012 9:01 AM
To: tds-legals
Subject: FOR PUBLICATION: Mecca Roundabout B9-0997

Good morning! Attached is a Notice Inviting Bids, for publication on April 27 to 29, and May 2 to 3, 2012. Please confirm. THANK YOU!

Cecilia Gil

Board Assistant to the
Clerk of the Board of Supervisors
951-955-8464

**THE COUNTY ADMINISTRATIVE CENTER IS CLOSED EVERY FRIDAY UNTIL FURTHER NOTICE.
PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING.**



**COUNTY OF RIVERSIDE
NOTICE TO CONTRACTORS**

Sealed proposals will be received at the Riverside County Transportation Department, 14th Street Transportation Annex, 3525 14th Street, Riverside, California 92501, telephone (951) 955-6780 until 2:00 pm on **Wednesday May 16, 2012** at which time they will be publicly opened at said address, for construction in accordance with the specifications therefore, to which special reference is made, as follows:

County of Riverside,

**MECCA ROUNDABOUT
STREET IMPROVEMENTS PROJECT
AT 4TH STREET AND HAMMOND ROAD**

**PROJECT NO. B9-0997
FEDERAL AID NO. CML – 5956(188)**

The UDBE Contract goal is 1.6 %.

A pre-bid meeting is scheduled for 2:15 pm on **Wednesday May 2, 2012**, at the County of Riverside Transportation Department, 3525 14th Street, Riverside, California 92501. This meeting is to inform bidders of project requirements and subcontractors of subcontracting and material supply opportunities. Bidder's attendance at this meeting is not mandatory.

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.

Bids are required for the entire work described herein. The Contractor shall possess a current and active State of California **Class "A" Contractor's license** at the time this contract is awarded. The successful bidder shall furnish a payment bond and a performance bond.

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, in writing, prior to bid opening. Any such inquiries or questions, submitted after bid opening, will not be treated as a bid protest. Technical questions should be directed to the office of the County of Riverside Transportation Department, 3525 14th Street, Riverside, CA 92501, telephone (951) 955-6780, electronic mail: irjimenez@rctlma.org.

Plans and specifications may be obtained for a NONREFUNDABLE FEE OF \$40 PER SET, and are available at 3525 14th Street, Riverside, CA 92501.

Engineering Estimate	\$ 1,800,000 - \$ 2,102,000
Bid Bond	10%
Performance Bond	100%
Payment Bond	100%
Working Days	95

<http://www.rctlma.org/trans/bidadvertisements.html>

Dated: April 25, 2012

Kecia Harper-Ihem, Clerk of the Board
By: Cecilia Gil, Board Assistant

