

**PROPOSAL, SPECIFICATIONS, BOND
AND AFFIDAVIT
FOR THE CONSTRUCTION OF**

**CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND
PACIFIC COAST HIGHWAY TO SOUTH CITY LIMIT)**

B2016-28

Federal Project No. STPL-5249 (030)



**Craig Bilezerian
City Engineer**

June 2016

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SECTION A

NOTICE INVITING BIDS

CITY OF TORRANCE, CALIFORNIA

NOTICE INVITING BIDS

Notice is hereby given that sealed bids for performing the following described work will be received at the Office of the City Clerk of the City of Torrance, California, **until 3:00 p.m. on Wednesday, July 20, 2016**, after which time they will be publicly opened and read at 3:15 p.m. in the Council Chambers of said City:

**CONSTRUCTION OF
CRENSHAW BOULEVARD REHABILITATION, I -120 (SEPULVEDA BOULEVARD TO
SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTH CITY LIMIT)
B2016-28
Federal Project No. STPL-5249 (030)**

Plans and Specifications are available on the City's website at
<http://www.torranceca.gov/25852.htm>

Those who only view and/or print the Plans and Specifications from the City's website will not automatically be added to the City's Plan Holder list for this project.

The official Bidder's Submittal packet must be obtained from the Office of the City Clerk, City Hall, 3031 Torrance Boulevard, Torrance, California. Contact the City Clerk's office at (310) 781-7530 or CityClerk@TorranceCA.gov for more information. There is no cost if the Bidder's Submittal is obtained at City Hall. A payment of \$5 is required if requested by mail. The amount includes tax and is not refundable. A prospective bidder must provide to the City Clerk the firm's name, address, telephone and fax numbers, a contact person and a valid email address. This will ensure that your firm is listed as a "Plan Holder" and that you will be informed of any and all information issued subsequent to obtaining the official form of Proposal. Addenda will be issued only by email and only to those that provide the required information to the City Clerk. Receipt of any Addendum must be acknowledged by a bidder in its submitted form of Proposal. **If a bidder submits its Bidder's Submittal on forms other than the official Bidder's Submittal forms, the City may declare the bid as non-responsive.**

Full-size 24" x 36" Plans and a bound Specifications booklet may also be obtained at the same Office of the City Clerk, upon payment of \$70 if obtained at City Hall, or payment of \$100 if requested by mail. Both amounts include tax. Neither amount is refundable. The \$70 or \$100 purchase includes a copy of the official Bidder's Submittal packet. If requesting any item(s) by mail, please send check to the following:

**CITY OF TORRANCE
OFFICE OF THE CITY CLERK
3031 TORRANCE BLVD
TORRANCE, CA 90503
ATTN: B2016-28**

The Engineer's estimate of the contract total is between \$3,600,000 and \$3,800,000. All work shall be completed within 120 working days from the date of the Notice to Proceed (NTP).

Per Division 2, Chapter 2 of the Torrance Municipal Code, the Torrance City Council may reject any and all bids, waive any informality or irregularity in such bids, and determine the lowest responsible bidder. No facsimile bids shall be accepted by the City.

This project has a DBE Contract goal of 3% percent. Refer to Section B Instructions to Bidders, subsection D4 "Disadvantaged Business Enterprises (DBE)".

The City of Torrance hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, underutilized disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation.

Substitution of securities for withheld funds is permitted per Section 22300 of the Public Contract Code.

The City has determined that a Class **A** Contractor's license is necessary to bid this project, but reserves the right to accept another Class at the sole discretion of either the Public Works Director or Engineer.

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.

Pursuant to Section 1770, et. seq., of the California Labor Code, the successful bidder shall pay not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations. These wage rates are available from the California Department of Industrial Relations' Internet website at <http://www.dir.ca.gov/DLSR/PWD>

Pursuant to Section 1725.5 of the California Labor Code, no contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations at the time the contract is awarded. Contractors and subcontractors may find additional information for registering at the Department of Industrial Relations website at <http://www.dir.ca.gov/Public-Works/PublicWorks.html>

Pursuant to Labor Code section 1771.1, no contractor or subcontractor may be listed on a bid proposal for a public works project submitted on or after March 1, 2015 unless registered with the Department of Industrial Relations. Furthermore, all bidders and contractors are hereby notified that no contractor or subcontractor may be awarded, on or after April 1, 2015, a contract for public work on a public works project unless registered with the Department of Industrial Relations.

Pursuant to Labor Code section 1771.4, all bidders are hereby notified that this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Also refer to Special Provisions Section 7-2.6 of this document (SB854).

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 Section G of this 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.

By order of the City Council of the City of Torrance, California.

For further information, please contact Stephanie Comon, Associate Civil Engineer in the Public Works Department at (310) 618-3079 or via the main office at (310) 781-6900.

SECTION B

INSTRUCTIONS TO BIDDERS

CITY OF TORRANCE, CALIFORNIA

INSTRUCTIONS TO BIDDERS

A. QUALIFICATIONS OF BIDDERS

1. Competency of Bidders

The Bidder shall be thoroughly competent and capable of satisfactorily performing the Work covered by the Bid. As specified in the Bid Documents, the Bidder shall furnish statements of previous experience on similar work. When requested, the Bidder shall also furnish the plan of procedure proposed; the organization, machinery, plant and other equipment available for the Work; evidence of its financial condition and resources; and any other such documentation as may be required by the City to determine if the Bidder is responsible.

2. Contractor's License

At the time of submitting the Bid, the Bidder shall be licensed as a contractor in accordance with the provisions of Chapter 9, Division 3, of the California Business and Professions Code. The required prime contractor license class for the Work is shown in the project Notice Inviting Bids. However, the City reserves the right to award the Contract to a contractor with another class if the City determines that the license is proper for the work.

3. Contractor Registration Requirements

SB 854 amended the Labor Code to require all contractors bidding on public work to register with the Department of Industrial Relations (DIR) and to pay an annual fee. The registration requires contractors to provide the State with evidence of the contractors' compliance with a number of statutory requirements. The registration requirement took effect on July 1, 2014.

4. Bidder's Submittal and Contract Award Prohibited

Under California Labor Code section 1771.1, as amended by SB 854, unless registered with the DIR, a contractor may not bid, nor be listed as a subcontractor, for any bid proposal submitted for public work on or after March 1, 2015. Similarly, a public entity cannot award a public work contract to a non-registered contractor, effective April 1, 2015. Also refer to Section 7-2.6 of the Special Provisions.

B. BIDDER RESPONSIBILITY

A responsible Bidder is a Bidder who has demonstrated the attribute of trustworthiness, as well as ability, fitness, capacity and experience to satisfactorily perform the work.

Bidders are notified that, in accordance with Division 2, Chapter 2 of the Torrance Municipal Code, the City Council may determine whether the Bidder is responsible based on a review of the Bidder's performance on other contracts.

If, based on the provision and criteria in Division 2, Chapter 2 of the Torrance Municipal Code, the Public Works Director proposes not to recommend the award of contract to the apparent low bidder, the Director shall notify the Bidder in writing of its intention to

recommend to the City Council that the Council award the contract to the 2nd lowest responsible bidder. If the Bidder presents evidence in rebuttal to the recommendation, the Director shall evaluate the merits of such evidence, and based on that evaluation, make a recommendation to the City Council.

C. **ADDENDA TO THE CONTRACT DOCUMENTS**

The City may issue Addenda to the Contract Documents during the period of advertising for any reason. Addenda will be issued only by email and to those considered "Plan Holders". Refer to the Notice Inviting Bid for instructions on becoming a "Plan Holder". The Bidder shall acknowledge the receipt of the Addenda in their Bid. Failure of the Bidder to do so may result in the rejection of the Bid as non-responsive.

D. **PREPARATION OF THE BID**

1. Examination of Site, Plans and Specifications

Prior to submitting a Bid, the Bidder shall examine the Plans and the Work site, carefully read the Specifications, and satisfy itself that it has the abilities and resources to complete the Work. The Bidder agrees that if it is awarded the Contract, no claim will be made against the City based on ignorance or misunderstanding of the provisions of the Contract Documents, the nature and amount of the work, and the physical and climatic conditions of the work site.

2. Estimated Quantities

The quantities shown in the Bid are approximate only. The Contractor will be paid for the actual quantities of work based on field measurements as provided for in these Specifications. The City reserves the right to increase or decrease the amount of any item or portion of work to be performed or materials furnished, or to delete any item, in accordance with the Specifications.

3. Bid Instructions and Submissions

The Bid shall be submitted on the Bidder's Submittal forms provided by the City Clerk. All Bid Documents listed below must be completed, executed and submitted with the Bid by the Bidder.

Required Bidder's Submittal Documents:

- 1) Bidder's Submittal
- 2) Addenda Acknowledgment Of Addenda Received
- 3) Contractor's Affidavit
- 4) List of Subcontractors
- 5) References (2 pages)
- 6) Violations of Federal or State Law
- 7) Bid Bond (10%)
- 8) Notice to Bidders - Federal Requirements for Federal-Aid Projects
- 9) Equal Employment Opportunity Certification
- 10) Noncollusion Affidavit
- 11) Debarment and Suspension Certification
- 12) Non-lobbying Certification for Federal-Aid Contracts
- 13) Disclosure of Lobbying Activities

All prices submitted will be considered as including any and all sales or use taxes. For any individual bid item, in the case of a discrepancy between its unit price and total bid, the unit price shall always prevail.

4. Disadvantaged Business Enterprise (DBE) Requirements

This project has a DBE goal of 3%.

This project is subject to Title 49 CFR 26.13(b). A bidder is referred to the requirements listed in Section C "Performance of DBE" on page C-32 of these Specifications.

E. BID BOND

The Bid must be accompanied by either cash, a certified or cashier's check or a surety bond (bid bond) payable to the City of Torrance. Bids must be submitted on the proposal forms furnished by the City Clerk. The Bid Guaranty shall be in an amount equivalent to at least 10% of the Total Contract Bid Price.

F. NONRESPONSIVE BIDS AND BID REJECTION

1. A Bid in which any one (1) of the required Bidder's submittal documents are not completed, executed and submitted may be considered non-responsive and be rejected.
2. A Bid in which the Contract Unit Prices are unbalanced, which is incomplete or which shows alteration of form or irregularities of any kind, or which contains any additions or conditional or alternate Bids that are not called for, may be considered non-responsive and be rejected.

G. AWARD OF CONTRACT

In accordance with Division 2, Chapter 2 of the Torrance Municipal Code, the City Council reserves the right to reject any and all bids received, to take all bids under advisement for a period not-to-exceed sixty (60) days after date of opening thereof, to waive any informality or irregularity in the Bid, and to be the sole judge of the merits of material included in the respective bids received.

No less than 2 weeks prior to the anticipated City Council meeting awarding a contract as a result of the Notice Inviting Bids, the City will notify all of the vendors that submitted a bid of the intention to award.

City of Torrance Bid/RFP Protest Procedures: The City of Torrance Bid/RFP Protest Procedures may be found on the City of Torrance website:
http://www.torranceca.gov/PDF/Bid_RFP_Protest_Procedures.pdf

H. EXECUTION OF CONTRACT

After the Contract is awarded, the awardee shall execute the following eight (8) documents:

- 1) Performance Bond (100% of Bid)
- 2) Labor and Material Bond (100% of Bid)
- 3) Contract (Public Works Agreement)
- 4) Verification of Insurance Coverage (Certificates and Endorsements)
- 5) Construction or Service Contract Endorsement
- 6) Workers' Compensation Insurance Certificate
- 7) Construction Permit Application Form
- 8) Business License Application Form

I. APPRENTICESHIP EMPLOYMENT STANDARDS

The Contractor is directed to the provisions in Sections 1776, 1777.5 and 1777.6 of the California Labor Code concerning the employment of apprentices by the contractor or any subcontractor under them.

J. PERMITS, LICENSES AND PUBLIC WORKS AGREEMENT

The Contractor shall procure and execute all permits, licenses, pay all charges and fees, and give all notices necessary and incidental to the completion of the Work. The Contractor shall execute a Public Works Agreement. No fee is charged for a Construction-Excavation Permit issued by the City of Torrance for a public works project. The Contractor shall obtain a City of Torrance Business License.

The Contractor shall be required to obtain a rider to the City of Torrance's encroachment permit from the State.

K. INSURANCE

The Contractor shall maintain Automobile Liability, General Liability and Workers' Compensation Insurance as specified in the Public Works Agreement included in the Project Specifications.

L. PRE-BID INQUIRIES

A Bidder with a Pre-Bid Inquiry must submit their question(s) in writing to the Torrance Public Works Department. Any and all questions must be emailed to Stephanie Comon, Associate Civil Engineer at scomon@torranceca.gov. Please list "**Crenshaw Boulevard Rehabilitation, I-120 RFI**" in the subject line of the email.

All questions must be received no later than 1:00 p.m. on the Wednesday one week prior to the date for opening the bids. Questions received after this date may not be considered. For questions of a general nature, a bidder may call Stephanie Comon directly at (310) 618-3079.

SECTION C
BID DOCUMENTS

BIDDER'S SUBMITTAL

Company: _____ Total Bid: _____

**PROPOSAL, SPECIFICATIONS, BOND AND AFFIDAVIT FOR THE CONSTRUCTION OF
CRENSHAW BOULEVARD REHABILITATION, I-120 (SEPULVEDA BOULEVARD TO
SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTH CITY LIMIT)
B2016-28
Federal Project No. STPL-5249 (030)**

Honorable Mayor and Members
of the Torrance City Council
Torrance, California

Members of the Council:

In accordance with the Notice Inviting Bids pertaining to the receiving of sealed proposals by the City Clerk of the City of Torrance for the above titled improvement, the undersigned hereby proposes to furnish all Work to be performed in accordance with the Plans, Specifications, Standard Drawings, and the Contract Documents, for the unit price or lump sum set forth in the following schedule.

BID SCHEDULE

Item #	Est. Qty	Unit	Bid Item Description	Spec. Section	Unit Price	Total Bid
1	1	LS	MOBILIZATION (5% MAX. OF TOTAL BID PRICE)	9-3.4	\$	\$
2	1	LS	CONSTRUCTION SURVEYING	2-9.2	\$	\$
3	80	EA	SURVEY MONUMENTS	2-9.1	\$	\$
4	1	LS	TRAFFIC CONTROL	7-10.2.3 7-10.6	\$	\$
5	2	EA	PROJECT CONSTRUCTION SIGNS	7-15	\$	\$
6	1	LS	NPDES COMPLIANCE	7-8.6.1 7-8.6.2	\$	\$
7	1	LS	STORM WATER POLLUTION PREVENTION PLAN	7-8.6.3	\$	\$
STREET IMPROVEMENTS						
8	1,200	LF	REMOVE PCC CURB & GUTTER (HEIGHT AND WIDTH VARIES)	300-1	\$	\$
9	8,900	SF	REMOVE PCC CROSS GUTTER	300-1	\$	\$
10	1,000	SF	REMOVE PCC DRIVEWAY	300-1	\$	\$
11	18,400	SF	REMOVE PCC SIDEWALK	300-1	\$	\$

Item #	Est. Qty	Unit	Bid Item Description	Spec. Section	Unit Price	Total Bid
12	61	EA	REMOVE TREE	300-1	\$	\$
13	1,200	LF	CONSTRUCT PCC CURB & GUTTER (TYPE A2-8) OVER 8" CMB PER SPPWC STD PLAN 120-2 AND CITY OF TORRANCE STD PLAN T115, INCLUDING RESTORATION OF 1-FOOT WIDE SLOT PATCH. MATCH EXISTING CURB HEIGHT AND GUTTER WIDTH	303-5.1	\$	\$
14	724	LF	CONSTRUCT AND JOIN PCC WITH DOWEL BAR PER SPPWC STD PLAN 134-2	303-5.1	\$	\$
15	8,900	SF	CONSTRUCT 8" THICK PCC CROSS GUTTER OVER 8" CMB PER SPPWD STD PLAN 122-2 AND CITY OF TORRANCE STD PLAN T108, INCLUDING RESTORATION OF 1-FOOT WIDE SLOT PATCH	303-5.1	\$	\$
16	1,000	SF	CONSTRUCT 6" THICK PCC DRIVEWAY ON 8" CMB PER CITY OF TORRANCE STD PLAN T108	303-5.1	\$	\$
17	1,070	CY	SAWCUT AND REMOVE EXISTING PAVEMENT SECTION AND UNCLASSIFIED MATERIALS PER PLAN	300-2.2.1	\$	\$
18	700	TN	CONSTRUCT 5" BASE COURSE (B-PG-64-10) IN TWO LIFTS (LOWER LIFT - 3")	302-5	\$	\$
19	480	CY	CONSTRUCT 9" LAYER OF CRUSHED MISCELLANEOUS BASE (CMB)	301-2.4	\$	\$
20A	45,000	SF	COLD MILL EXISTING ASPHALT CONCRETE PAVEMENT, VARIABLE DEPTH, SOUTH OF PACIFIC COAST HIGHWAY	302-1.1	\$	\$
20B	96,000	SF	COLD MILL EXISTING ASPHALT CONCRETE PAVEMENT, VARIABLE DEPTH, BETWEEN SEPULVEDA BLVD AND SKYPARK DR	302-1.1	\$	\$
21A	183,000	SF	COLD MILL EXISTING ASPHALT CONCRETE PAVEMENT, 2" DEPTH, SOUTH OF PACIFIC COAST HIGHWAY	3.02-1.1	\$	\$
21B	397,000	SF	COLD MILL EXISTING ASPHALT CONCRETE PAVEMENT, 2" DEPTH, BETWEEN SEPULVEDA BLVD AND SKYPARK DR	3.02-1.1	\$	\$
22A	6,000	TN	CONSTRUCT AC SURFACE COURSE (C2-PG-64-10) [2 LIFTS: 1.5" EACH LIFT] SOUTH OF PACIFIC COAST HIGHWAY	302-5	\$	\$
22B	9,000	TN	CONSTRUCT AC SURFACE COURSE (C2-PG-64-10) [2 LIFTS: 1.5" EACH LIFT] BETWEEN SEPULVEDA BLVD AND SKYPARK DR	302-5	\$	\$
23	53	EA	ADJUST MANHOLE TO GRADE (IN STREET)	302-5.8	\$	\$
24	36	EA	ADJUST PULL BOX TO GRADE	302-5.8	\$	\$
25	70	EA	ADJUST VALVE TO GRADE	302-5.8	\$	\$
26	65	EA	REMOVE EXISTING CURB ACCESS RAMP	303-5	\$	\$

Item #	Est. Qty	Unit	Bid Item Description	Spec. Section	Unit Price	Total Bid
27	16	EA	INSTALL TRAFFIC LOOP DETECTORS	86-8.02	\$	\$
27	19,000	SF	CONSTRUCT 3.5" THICK PCC SIDEWALK OVER 4" CMB PER SPPWC STD PLAN 112-2 AND 113-2	303-5	\$	\$
28	65	EA	CONSTRUCT NEW CORNER 3.5" THICK CURB ACCESS RAMP (TYPE PER PLAN) PER SPPWC 111-4 WITH 36"X48" DETECTABLE WARNING SURFACE PANEL, ON 4" CMB INCLUDING RESTORATION OF 1-FOOT WIDE SLOT PATCH. CURB RAMP IS NOT MONOLITHIC WITH CURB OR CURB AND GUTTER	301-2.1	\$	\$
29	4	EA	RELOCATE BUS STOP BENCHES AND TRASH RECEPTACLES	308-9.1	\$	\$
TRAFFIC SIGNAL UPGRADES						
ROLLING HILLS ROAD						
30	1	LS	FURNISH AND INSTALL NEW VIDEO DETECTION SYSTEM, COMPLETE IN PLACE, INCLUDING ALL WIRING AND DISCONNECT OF EXISTING PRIMARY DETECTORS LOOPS AT ROLLING HILLS ROAD INTERSECTION	86-5.01B	\$	\$
31	8	EAX	REMOVE EXISTING PEDESTRIAN INDICATION. FURNISH AND INSTALL NEW COUNTDOWN PEDESTRIAN INDICATION AT ROLLING HILLS ROAD INTERSECTION	86-4.01	\$	\$
32	4	EA	REMOVE EXISTING INTERNALLY ILLUMINATED SIGN. FURNISH AND INSTALL NEW INTERNALLY ILLUMINATED STREET NAME SIGN ON EXISTING TRAFFIC SIGNAL MAST ARMS AT ROLLING HILLS ROAD INTERSECTION	86-6.06	\$	\$
33	4	EA	REMOVE EXISTING SAFETY LUMINAIRE. FURNISH AND INSTALL NEW SAFETY LUMINAIRE WITH LED LIGHTS AT ROLLING HILLS ROAD INTERSECTION	86-6.01	\$	\$
34	1	EA	FURNISH AND INSTALL NEW POST FOR PEDESTRIAN PUSH BUTTON	86-4	\$	\$
CREST ROAD						
35	1	LS	FURNISH AND INSTALL NEW VIDEO DETECTION SYSTEM, COMPLETE IN PLACE, INCLUDING ALL WIRING AND DISCONNECT OF EXISTING PRIMARY DETECTORS LOOPS AT ROLLING HILLS ROAD INTERSECTION	86-5.01B	\$	\$
36	4	EA	REMOVE EXISTING PEDESTRIAN INDICATION. FURNISH AND INSTALL NEW COUNTDOWN PEDESTRIAN INDICATION AT ROLLING HILLS ROAD INTERSECTION	86-4.01	\$	\$
37	2	EA	REMOVE EXISTING SAFETY LUMINAIRE. FURNISH AND INSTALL NEW SAFETY	86-6.01	\$	\$

Item #	Est. Qty	Unit	Bid Item Description	Spec. Section	Unit Price	Total Bid
			LUMINAIRE WITH LED LIGHTS AT ROLLING HILLS ROAD INTERSECTION			
SKYPARK DRIVE / AMSLER STREET						
38	1	LS	FURNISH AND INSTALL NEW VIDEO DETECTION SYSTEM, COMPLETE IN PLACE, INCLUDING ALL WIRING AND DISCONNECT OF EXISTING PRIMARY DETECTORS LOOPS AT ROLLING HILLS ROAD INTERSECTION	86-5.01B	\$	\$
39	6	EA	REMOVE EXISTING PEDESTRIAN INDICATION. FURNISH AND INSTALL NEW COUNTDOWN PEDESTRIAN INDICATION AT ROLLING HILLS ROAD INTERSECTION	86-4.01	\$	\$
40	2	EA	REMOVE EXISTING INTERNALLY ILLUMINATED SIGN. FURNISH AND INSTALL NEW INTERNALLY ILLUMINATED STREET NAME SIGN ON EXISTING TRAFFIC SIGNAL MAST ARMS AT ROLLING HILLS ROAD INTERSECTION	86-6.06	\$	\$
41	4	EA	REMOVE EXISTING SAFETY LUMINAIRE. FURNISH AND INSTALL NEW SAFETY LUMINAIRE WITH LED LIGHTS AT ROLLING HILLS ROAD INTERSECTION	86-6.01	\$	\$
LANDSCAPE AND IRRIGATION UPGRADES						
42	1	LS	REGRADE AND RESTORE LANDSCAPED AREA TO MATCH EXISTING	308-2	\$	\$
43	12,400	SF	REMOVE AND DISPOSE OF EXISTING CONCRETE AND ASPHALT PAVING IN MEDIAN ISLANDS	300-1	\$	\$
44	1	LS	REMOVE AND DISPOSE OF MISCELLANEOUS EXISTING SHRUBS AND IRRIGATION EQUIPMENT	300-1	\$	\$
45	51	CY	IMPORT AND PLACE 3" DEEP LAYER OF TOPSOIL IN LANDSCAPE AREAS TO REPLACE CONCRETE AND ASPHALT REMOVED	308-2	\$	\$
46	16,120	SF	REGRADE MEDIANS FOLLOWING REMOVALS TO PREVENT DRAINAGE INTO THE STREET	308-2	\$	\$
47	8,870	SF	CONSTRUCT NEW BUFF INTEGRAL COLORED AND SCORED CONCRETE PAVING	303-5.10	\$	\$
48	1,660	SF	FURNISH AND PLACE PRECAST CONCRETE PAVERS INCLUDING SAND BASE	303-5.10	\$	\$
49	300	SF	CONSTRUCT 3.5" THICK PCC SAFETY RIBBON/CURB RETURN/STRIP OVER 4" CMB	303-5.10	\$	\$
50	3	EA	FURNISH AND INSTALL POINT OF CONNECTION IRRIGATION EQUIPMENT - NEW REDUCED PRESSURE TYPE BACKFLOW PREVENTER IN CAGE, MANUAL	308-5	\$	\$

Item #	Est. Qty	Unit	Bid Item Description	Spec. Section	Unit Price	Total Bid
			SHUTOFF VALVE, NEW "SMART" CONTROLLER			
51	95	LF	FURNISH AND INSTALL 4" PVC SCH. 80 IRRIGATION SLEEVE UNDER STREET TO CONNECT MEDIANS	212-2.1	\$	\$
52	5,470	SF	FURNISH AND INSTALL NEW SPRAY-TYPE IRRIGATION SYSTEM IN ALL LANDSCAPE AREAS (INCLUDES MAINLINE, ISOLATION VALVES, REMOVE CONTROL VALVES, QUICK COUPLERS, LATERAL LINE PIPE, SPRINKLER HEADS)	308-5	\$	\$
53	2,530	LF	FURNISH AND INSTALL PVC MOISTURE BARRIER SURROUNDING LANDSCAPED AREAS	300-12	\$	\$
54	5,470	SF	IMPORT SOIL, SOIL AMENDMENT, AND FINISH GRADING	308-2	\$	\$
55	21	EA	FURNISH AND PLANT NEW 24" BOX TREES	308-4	\$	\$
56	570	EA	FURNISH AND PLANT NEW 1 GALLON SHRUBS	308-4	\$	\$
57	5	EA	PRUNE EXISTING TREES IN MEDIAN	308-9	\$	\$
58	5,470	SF	FURNISH AND PLACE 3" THICK LAYER OF BARK MULCH THROUGHOUT LANDSCAPED AREAS	212-1.2.5	\$	\$
59	1	LS	60 DAY CONTRACTOR MAINTENANCE PERIOD	308-6	\$	\$
60	3	EA	ADJUST MANHOLE TO GRADE (IN MEDIAN)	302-5.8	\$	\$
61	7	EA	ADJUST FIRE HYDRANT TO GRADE	302-5.8	\$	\$
62	7	EA	ADJUST VALVE TO GRADE	302-5.8	\$	\$
63	6	EA	ADJUST METER TO GRADE	302-5.8	\$	\$
SIGNING AND STRIPING						
64	1	LS	INSTALL THERMOPLASTIC STRIPING, PAVEMENT MARKERS, AND LEGENDS	85-1	\$	\$
65	10	EA	REMOVE EXISTING SIGN. FURNISH AND INSTALL NEW REGULATORY, WARNING, ADVISORY AND/ OR GUIDE SIGN ON EXISTING POST, TRAFFIC SIGNAL POLE OR MAST ARM. SIGN SHALL BE 3M DIAMOND GRADE CUBED WITH 1160 PROTECTIVE ANTI-GRAFFITI OVERLAY FILM AND MATCHED COMPONENTS SYSTEM WARRANTY (12 YEARS) ON .080 ALUMINUM.	317-1	\$	\$
CONTRACT ADMINISTRATION						

Item #	Est. Qty	Unit	Bid Item Description	Spec. Section	Unit Price	Total Bid
66	1	LS	CONSTRUCTION SCHEDULE	6-1.5	\$	\$
67	1	LS	PORTABLE CHANGEABLE MESSAGE SIGNS	7-15	\$	\$
68	1	ALW	CALTRANS PERMIT AND FEES REIMBURSEMENT		\$ 10,000	\$ 10,000

TOTAL BID PRICE \$ _____
(Figures)*

TOTAL BID PRICE: _____
(Words)*

*BID MAY BE REJECTED IF TOTAL IS NOT SHOWN IN FIGURES AND WORDS.

B2016-28, FEDERAL PROJECT NO. STPL-5249 (030)

**BIDDER'S SUBMITTAL (Continued) B2016-28
FEDERAL PROJECT NO. STPL-5249 (030)**

The undersigned furthermore agrees to enter into and execute a contract, with necessary bonds, at the unit prices set forth herein and in case of default in executing such contract, with necessary bonds, the check or bond accompanying this bid and the money payable thereon shall be forfeited thereby to and remain the property of the City of Torrance.

The above unit prices include all work appurtenant to the various items as outlined in the Specifications and all work or expense required for the satisfactory completion of said items. In case of discrepancies between unit prices and totals, the unit prices shall govern.

The undersigned declares that it has carefully examined the Plans, Specifications, and Contract Documents, and has investigated the site of the work and is familiar with the conditions thereon.

Contractor: _____

Date: _____ By: _____

Contractor's State License No. _____ Class _____

Address: _____

Phone: _____

Fax: _____

**ACKNOWLEDGMENT OF ADDENDA RECEIVED – B2016-28
FEDERAL PROJECT NO. STPL-5249 (030)**

The Bidder shall acknowledge the receipt of addenda by placing an "X" by each addendum received.

Addendum No. 1 _____

Addendum No. 2 _____

Addendum No. 3 _____

Addendum No. 4 _____

Addendum No. 5 _____

Addendum No. 6 _____

Addendum No. 7 _____

Addendum No. 8 _____

If an addendum or addenda have been issued by the City and not noted above as being received by the Bidder, the Bid Proposal may be rejected.

Bidder's Signature

Date

CONTRACTOR'S AFFIDAVIT (CONTINUED)

B2016-28

7. That the Contractor did not, directly or indirectly, submit the Contractor's bid price or any breakdown thereof, or the contents thereof, or divulge information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, or to any individual or group of Individuals, except to the City of Torrance, or to any person or persons who have a partnership or other financial interest with said Contractor in its business.

Dated this _____ day of _____, 20__.

Subscribed and Sworn to
before me this _____ day
of _____, 20__.

(Contractor)

(Title)

Notary Public in and for said
County and State.
(Seal)

LIST OF SUBCONTRACTORS
B2016-28, FEDERAL PROJECT NO. STPL-5249 (030)

The Bidder is required to fill in the following blanks in accordance with the provisions of the California Public Contract Code Sections 4100-4114, CHAPTER 4. SUBLETTING AND SUBCONTRACTING. 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, including but not limited to escrowed bid documents, where applicable, may subject the bidder to a determination of the bidder's responsibility in the event it is the apparent low bidder on a future public works contracts.

Name Under Which Subcontractor is Licensed: _____

Subcontractor's Address: _____

Specific Description of Sub-Contract: _____

License Number: _____ CA License Classification/Type: _____

Name Under Which Subcontractor is Licensed: _____

Subcontractor's Address: _____

Specific Description of Sub-Contract: _____

License Number: _____ CA License Classification/Type: _____

Name Under Which Subcontractor is Licensed: _____

Subcontractor's Address: _____

Specific Description of Sub-Contract: _____

License Number: _____ CA License Classification/Type: _____

Subcontractors listed must be properly licensed under the laws of the State of California for the type of work which they are to perform. Do not list alternate subcontractors for the same work.

The Bidding Contractor must include each subcontractor's contract license number (AB 44). An inadvertent error in listing the subcontractor's license number shall not be grounds for filing a bid protest, or grounds for considering the bid nonresponsive, if the corrected contractor's license number is submitted to the public entity by the prime contractor within 24 hours after the bid opening – provided that the corrected license number corresponds to the submitted name and location of the subcontractor.

REFERENCES (Page 1 of 2)
B2016-28
FEDERAL PROJECT NO. STPL-5249 (030)

List work similar in magnitude and degree of difficulty completed by the Contractor within the past three (3) years.

1. Name (Firm/Agency): _____
Address: _____
Contact Person: _____ Telephone No.: _____
Title of Project: _____
Project Location: _____
Date of Completion: _____ Contract Amount: \$ _____

2. Name (Firm/Agency): _____
Address: _____
Contact Person: _____ Telephone No.: _____
Title of Project: _____
Project Location: _____
Date of Completion: _____ Contract Amount: \$ _____

3. Name (Firm/Agency): _____
Address: _____
Contact Person: _____ Telephone No.: _____
Title of Project: _____
Project Location: _____
Date of Completion: _____ Contract Amount: \$ _____

4. Name (Firm/Agency): _____
Address: _____
Contact Person: _____ Telephone No.: _____
Title of Project: _____
Project Location: _____
Date of Completion: _____ Contract Amount: \$ _____

REFERENCES (PAGE 2 OF 2)
B2016-28
FEDERAL PROJECT NO. STPL-5249 (030)

If Contractor has not performed work for the City of Torrance within the last five (5) years, list all work done within said five years (attach additional sheets if necessary). Note if work was done as subcontractor [include only subcontract amount]:

Work Description & Contract Amount	Agency	Date Completed

Contractor's License No.: _____ Class: _____

a. Date first obtained: _____ Expiration: _____

b. Has License ever been suspended or revoked? _____

If yes, describe when and why: _____

c. Any current claims against License or Bond? _____

If yes, describe claims: _____

Principals in Company (List all – attach additional sheets if necessary):

NAME	TITLE (If Applicable)	LICENSE NO.
_____	_____	_____
_____	_____	_____
_____	_____	_____

VIOLATIONS OF FEDERAL, STATE OR LOCAL LAWS
B2016-28
FEDERAL PROJECT NO. STPL-5249 (030)

1. Has your firm or its officers been assessed any penalties by an agency for noncompliance or violations of Federal, State or Local labor laws and/or business or licensing regulations within the past five (5) years relating to your construction projects?

Yes/No: _____ Federal/State: _____

If "yes," identify and describe, (including agency and status): _____

Have the penalties been paid? Yes/No: _____

2. Does your firm or its officers have any ongoing investigations by any public agency regarding violations of the State Labor Code, California Business and Professions Code or State Licensing Laws?

Yes/No: _____ Code/Laws: _____ Section/Article: _____

If "yes," identify and describe, (including agency and status): _____

**BID BOND (10%)
B2016-28
FEDERAL PROJECT NO. STPL-5249 (030)**

KNOW ALL MEN BY THESE PRESENTS: That we, _____

as principal, and _____

as sureties, are held and firmly bound unto the City of Torrance, State of California, in the penal sum of _____ dollars (\$ _____), for the payment whereof we hereby bind ourselves, our successors, heirs, executors or administrators jointly and severally, firmly by these presents.

The condition of this obligation is such that, whereas the above bounded principal is about to file with and submit to the City of Torrance a bid or proposal for the performance of certain work as required in the City of Torrance, Project No. B2016-28, FEDERAL PROJECT NO. STPL-5249 (030) said work being: the Crenshaw Boulevard Rehabilitation, I-120 project, and in compliance with the Specifications therefor under an invitation of said City contained in a notice or advertisement for bids or proposals; now if the bid or proposal of the said principal shall be accepted and if the said work be thereupon awarded to the principal by said City and if the said principal shall enter into a contract with the said City in accordance with said bid or proposal, or if the bid or proposal of the said principal is rejected, then this bond shall be void and of no effect and otherwise in full force and effect.

WITNESS our hands this _____ day of _____, 20____.

Principal

Surety/Attorney-in-Fact

Signature

Name: _____
Local Address: _____

Phone No.: _____
Fax No.: _____

NOTICE TO BIDDERS FEDERAL REQUIREMENTS

A bidder is required to submit the following forms with its Bid Proposal:

- Equal Employment Opportunity Certification (p. C-18)
- Noncollusion Affidavit (p. C-19)
- Debarment and Suspension Certification (p. C-20)
- Nonlobbying Certification for Federal-Aid Contracts (p. C-21)

The three (3) lowest, responsive bidders will be required to submit the following form to the City's Public Works Department and within 4 business days after the bid opening. The three (3) lowest, responsive bidders shall be determined by the City of Torrance at the Bid Opening.

- Exhibit 15-G Local Agency Bidder DBE Commitment (Construction Contracts) (p. C-26)

Note: For Exhibit 15-G, a bidder is hereby notified by the City of Torrance that it must review EXHIBIT 10-I Notice to Proposers Disadvantaged Business Enterprise Information and be familiar with its requirements. The document can be downloaded from the Caltrans website at: <http://www.dot.ca.gov/hq/LocalPrograms/lam/forms/lapmforms.htm>

Each bidder is required to submit written confirmation from each DBE stating that it is participating in the contract. Include that confirmation with the DBE Commitment form. A copy of a DBE's quote will serve as written confirmation that the DBE is participating in the contract.

If a bidder does not submit the DBE Commitment form and confirmation **within 4 business days after the bid opening**, the City of Torrance may determine your bid non-responsive.

If applicable, the following form must be submitted with the bid:

- Disclosure of Lobbying Activities (p. C-23)

If you are the successful bidder on this project, you will be requested to submit the following form to the City:

- DBE Information – "Good Faith Efforts," Exhibit 15-H (p. C-57)

The document can be downloaded from the Caltrans website at: <http://www.dot.ca.gov/hq/LocalPrograms/lam/forms/lapmforms.htm>

At the end of construction, the selected contractor will be required to submit the following forms to the City:

- Exhibit 17-F Final Report – Utilization of Disadvantaged Businesses

The document can be downloaded from the Caltrans website at:
<http://www.dot.ca.gov/hq/LocalPrograms/lam/forms/lapmforms.htm>

- Exhibit 17-O Disadvantaged Business Enterprises (DBE) Certification Status Change

The document can be downloaded from the Caltrans website at:
<http://www.dot.ca.gov/hq/LocalPrograms/lam/forms/lapmforms.htm>

THE BIDDER'S SIGNATURE ON THE BIDDER'S PROPOSAL
SUBMITTED WITH ITS BID SHALL CONSTITUTE
AN ENDORSEMENT AND EXECUTION OF THIS CERTIFICATION

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 clauses, as required by Executive Orders 10925, 11114, or 11246, and that,
where required, he has filed with the Joint Reporting Committee, the Director of the Office of
Federal Contract Compliance, a Federal Government contracting or administering agency, or the
former President's Committee on Equal Employment Opportunity, all reports due under the
applicable filing requirements.

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts, which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime CONTRACTORS and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b) (1) prevents the award of contracts and subcontracts unless such CONTRACTOR submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

Note: Providing false information may result in criminal prosecution or administrative sanctions

Exhibit 12-E, Attachment C

THE BIDDER'S SIGNATURE ON THE BIDDER'S PROPOSAL
SUBMITTED WITH ITS BID SHALL CONSTITUTE
AN ENDORSEMENT AND EXECUTION OF THIS CERTIFICATION

NONCOLLUSION AFFIDAVIT
(Title 23 United States Code Section 112 and
Public Contract Code Section 7106)

To the CITY of TORRANCE, DEPARTMENT OF PUBLIC WORKS.

In conformance with Title 23 United States Code Section 112 and Public Contract Code 7106 the bidder declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Note: The above Noncollusion Affidavit is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Noncollusion Affidavit. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

Note: Providing false information may result in criminal prosecution or administrative sanctions

Exhibit 12-E, Attachment D

THE BIDDER'S SIGNATURE ON THE BIDDER'S PROPOSAL
SUBMITTED WITH ITS BID SHALL CONSTITUTE
AN ENDORSEMENT AND EXECUTION OF THIS CERTIFICATION

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 other 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 Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Certification.

Exhibit 12-E, Attachment E

THE BIDDER'S SIGNATURE ON THE BIDDER'S PROPOSAL
SUBMITTED WITH ITS BID SHALL CONSTITUTE
AN ENDORSEMENT AND EXECUTION OF THIS CERTIFICATION

NON-LOBBYING CERTIFICATION FOR FEDERAL-AID CONTRACTS

The prospective participant certifies, by signing and submitting this bid or proposal, 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 proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

Note: Providing false information may result in criminal prosecution or administrative sanctions

Exhibit 12-E, Attachment F

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 influence 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.

SF-LLL-Instructions Rev. 06-04-90«ENDIF»

FEDERAL LOBBYING RESTRICTIONS

Section 1352, Title 1352, Title 31, United States Code prohibits Federal funds from being expended by the recipient or any lower tier subrecipient 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 Proposal. Standard Form - LLL, "Disclosure of Lobbying Activities," with instructions for completion of the Standard Form is also included in the Proposal. Signing the Proposal 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), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal Action.

**INSTRUCTIONS - LOCAL AGENCY BIDDER
DBE COMMITMENT (CONSTRUCTION CONTRACTS)**

ALL BIDDERS:

PLEASE NOTE: This information may be submitted with your bid. 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 DBE commitment will be grounds for finding the bid nonresponsive

The form requires specific information regarding the construction contract: Local Agency, Location, Project Description, Total Contract Amount, Bid Date, Bidder's Name, and Contract DBE Goal.

The form has a column for the Contract Item Number and Item of Work and Description or Services to be Subcontracted or Materials to be provided by DBEs. Prime contractors shall indicate all work to be performed by DBEs including, if the prime is a DBE, work performed by its own forces, if a DBE. The DBE shall provide a certification number to the Contractor and expiration date. Enter the DBE prime's and subcontractors' certification numbers. The form has a column for the Names of DBE contractors to perform the work (who must be certified on the date bids are opened and include the DBE address and phone number).

IMPORTANT: Identify **all** DBE firms participating in the project 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 DBE participation 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 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 Local Agency Contract Award, Federal-aid Project Number, Federal Share, Contract Award Date fields and verify that all information is complete and accurate before signing and filing.

DISADVANTAGED BUSINESS ENTERPRISE (DBE)

Under 49 CFR 26.13(b):

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

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

To ensure equal participation of DBEs provided in 49 CFR 26.5, the Agency shows a goal for DBEs.

Make work available to DBEs and select work parts consistent with available DBE subcontractors and suppliers.

Meet the DBE goal shown elsewhere in these special provisions or demonstrate that you made adequate good faith efforts to meet this goal.

It is your responsibility to verify that the DBE 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

All DBE participation will count toward the California Department of Transportation's federally mandated statewide overall DBE goal.

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

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

You receive credit towards the goal if you employ a DBE trucking company that performs a commercially useful function as defined in 49 CFR 26.55(d)(1) through (4) and (6).

DBE Commitment Submittal

Submit Local Agency Bidder DBE Commitment (Construction Contracts), Exhibit 15-G, 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 DBE 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 DBE Commitment form to the Agency. DBE 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 DBE Commitment form unless the Agency requests it. If the Agency requests you to submit a DBE Commitment form, submit the completed form within 4 business days of the request.

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

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

Good Faith Efforts Submittal

If you have not met the DBE goal, complete and submit the "DBE 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 DBEs 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 DBE Commitment form shows that you have met the DBE goal or if you are required to submit the DBE 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 DBE 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 DBE 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 DBE participation. For each item listed, show the dollar value and percentage of the total contract. It is your responsibility to demonstrate that sufficient work to meet the goal was made available to DBE firms.
2. Names of certified DBEs and dates on which they were solicited to bid on the project. Include the items of work offered. Describe the methods used for following up initial solicitations to determine with certainty if the DBEs were interested, and the dates of the follow-up. Attach supporting documents such as copies of letters, memos, facsimiles sent, telephone logs, telephone billing statements, and other evidence of solicitation. You are reminded to solicit certified DBEs through all reasonable and available means and provide sufficient time to allow DBEs to respond.
3. Name of selected firm and its status as a DBE for each item of work made available. Include name, address, and telephone number of each DBE that provided a quote and their price quote. If the firm selected for the item is not a DBE, provide the reasons for the selection.
4. Name and date of each publication in which you requested DBE participation for the project. Attach copies of the published advertisements.
5. Names of agencies and dates on which they were contacted to provide assistance in contacting, recruiting, and using DBE firms. If the agencies were contacted in writing, provide copies of supporting documents.

6. List of efforts made to provide interested DBEs with adequate information about the plans, specifications, and requirements of the contract to assist them in responding to a solicitation. If you have provided information, identify the name of the 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 DBEs 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.

The Agency may consider DBE commitments of the 2nd and 3rd bidders when determining whether the low bidder made good faith efforts to meet the DBE goal.

AWARD AND EXECUTION OF CONTRACT

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.

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 or more.

BUY AMERICA REQUIREMENTS

Attention is directed to the "Buy America" requirements of the Title 23 United States Code, Section 313 and the regulations adopted pursuant thereto. In accordance with said 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 any other coating that protects or enhances the value of such 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 also specifically certify that all manufacturing processes for the materials occurred in the United States, except for the exceptions allowed herein. The requirements imposed by said law and regulations do not prevent a minimal use of foreign steel and iron materials if the total combined cost of such materials used does not exceed one-tenth of one percent (0.1%) 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 any foreign steel and iron prior to incorporating such materials into the work.

SUBCONTRACTOR AND DBE RECORDS

Use each DBE subcontractor as listed on the List of Subcontractors form and the Local Agency Bidder DBE Commitment (Construction Contracts), Exhibit 15-G, forms unless you receive authorization for a substitution.

The Agency requests the Contractor to:

1. Notify the Engineer of any changes to its anticipated DBE participation
2. Provide this notification before starting the affected work

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.

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

Prior to the fifteenth of each month, the CONTRACTOR shall submit the Monthly DBE Trucking Verification form, from the previous month, to the Engineer. For each delinquent monthly form, the amount of \$5,000 will be withheld from payment until a satisfactory and accurate form is submitted.

If a DBE is decertified before completing its work, the DBE must notify the Engineer in writing of the decertification date. If a business becomes a certified DBE before completing its work, the business must notify the Engineer in writing of the certification date. On work completion and within 30 days of contract acceptance, the Contractor shall complete and submit to the Engineer a Disadvantaged Business Enterprises (DBE) Certification Status Change, Exhibit 17-O, form.

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 – Exhibit 17-F" 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. The amount of \$10,000 will be withheld from payment until a satisfactory form is submitted.

PERFORMANCE OF DBE

DBEs must perform work or supply materials as listed in the Local Agency Bidder DBE Commitment (Construction Contracts), Exhibit 15-G, included in the Bid.

Do not terminate or substitute a listed DBE for convenience and perform the work with your own forces or obtain materials from other sources without authorization from the Agency.

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

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

Notify the original DBE of your intent to use other forces or material sources and provide the reasons. Provide the DBE with 5 days to respond to your notice and advise you and the Agency of

the reasons why the use of other forces or sources of materials should not occur. Your request to use other forces or material sources must include:

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

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

The substitute DBE must be certified as a DBE at the time of request for substitution. Unless the Agency authorizes (1) a request to use other forces or sources of materials or (2) a good faith effort for a substitution of a terminated DBE, the Agency does not pay for work listed on the Local Agency Bidder DBE Commitment (Construction Contracts), Exhibit 15-G, form unless it is performed or supplied by the listed DBE or an authorized substitute.

SUBCONTRACTING

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 City of Torrance may exercise the remedies provided under Pub Cont Code § 4110. The City of Torrance may refer the violation to the Contractors State License Board as provided under Pub Cont Code § 4111.

The Contractor shall perform work equaling at least 30 percent of the value of the original total bid with the Contractor's own employees and equipment, owned or rented, with or without operators.

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.

Do not use a debarred contractor; a current list of debarred contractors is available at the Department of Industrial Relations' Web site.

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 14 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.

PROMPT PROGRESS PAYMENT TO SUBCONTRACTORS

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

PROMPT PAYMENT OF FUNDS WITHHELD TO SUBCONTRACTORS

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

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Attachment A 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.).

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

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

a. Financial decisions _____

b. Management decisions, such as:

1. Estimating _____

2. Marketing and sales _____

3. Hiring and firing of management personnel _____

4. Purchasing of major items or supplies _____

c. Supervision of field operations _____

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

Affidavit

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

_____	_____
Name of Firm	Name of Firm
_____	_____
Signature	Signature
_____	_____
Name	Name
_____	_____
Title	Title
_____	_____
Date	Date

Date _____
State of _____
County of _____

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

Notary Public _____
Commission expires _____
[Seal]
Date _____
State of _____
County of _____

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

Notary Public _____
Commission expires _____
[Seal]

Attachment B Required Contract Provisions Federal-Aid Construction Contracts

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

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

ATTACHMENTS

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

I. GENERAL

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

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

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

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

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

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

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

II. NONDISCRIMINATION

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

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

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

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

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

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

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

6. Training and Promotion:

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

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

III. NONSEGREGATED FACILITIES

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

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

IV. Davis-Bacon and Related Act Provisions

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

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

1. Minimum wages

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

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

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

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

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

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

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

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

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

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

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

2. Withholding

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

3. Payrolls and basic records

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

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

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

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

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

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

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the

"Statement of Compliance" required by paragraph 3.b.(2) of this section.

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

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

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

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

rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

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

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

b. Trainees (programs of the USDOL).

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

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

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

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

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

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

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

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

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

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

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

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

10. Certification of eligibility.

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

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

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

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

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

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

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

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

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

VI. SUBLETTING OR ASSIGNING THE CONTRACT

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

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

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant

Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

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

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

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

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

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

VII. SAFETY: ACCIDENT PREVENTION

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

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

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

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

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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

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

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

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

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

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

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

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

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

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

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

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

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

1. Instructions for Certification – First Tier Participants:

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

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

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

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

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant

(such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

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

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

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

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

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

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

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

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

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

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

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

2. Instructions for Certification - Lower Tier Participants:

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

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

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

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

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

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

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

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

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

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

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

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

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

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

FEMALE AND MINORITY GOALS

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

The nationwide goal for female utilization is 6.9 percent.

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

MINORITY UTILIZATION GOALS

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

Economic Area		Goal (Percent)
179	Fresno-Bakersfield, CA	
	SMSA Counties:	19.1
	0680 Bakersfield, CA	
	CA Kern	26.1
180	2840 Fresno, CA	
	CA Fresno	23.6
	Non-SMSA Counties:	
	CA Kings; CA Madera; CA Tulare	
	Los Angeles, CA:	11.9
	SMSA Counties:	
	0360 Anaheim-Santa Ana-Garden Grove, CA	28.3
	CA Orange	
4480 Los Angeles-Long Beach, CA		
CA Los Angeles	21.5	
6000 Oxnard-Simi Valley-Ventura, CA		
CA Ventura	19.0	
6780 Riverside-San Bernardino-Ontario, CA		
CA Riverside; CA San Bernardino	19.7	
7480 Santa Barbara-Santa Maria-Lompoc, CA		
CA Santa Barbara	24.6	
Non-SMSA Counties		
CA Inyo; CA Mono; CA San Luis Obispo		
181	San Diego, CA:	
	SMSA Counties	16.9
	7320 San Diego, CA	
	CA San Diego	18.2
Non-SMSA Counties		
CA Imperial		

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

FEDERAL TRAINEE PROGRAM

For the Federal training program, the number of trainees or apprentices is _____.

This section applies if a number of trainees or apprentices is specified in the special provisions.

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

You have primary responsibility for meeting this training requirement.

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

Include these training requirements in your subcontract.

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

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

Before starting work, submit to the City/County of _____:

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

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

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

Do not employ as an apprentice or trainee an employee:

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

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

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

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

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

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

The City/County of _____ reimburses you 80 cents per hour of training given an employee on this contract under an approved training program:

1. For on-site training
2. For off-site training if the apprentice or trainee is currently employed on a Federal-aid project and you do at least one of the following:

- Contribute to the cost of the training
- Provide the instruction to the apprentice or trainee
- Pay the apprentice's or trainee's wages during the off-site training period

3. If you comply this section.

Each apprentice or trainee must:

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

Furnish the apprentice or trainee:

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

TITLE VI ASSURANCES

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

- (1) Compliance with Regulations: CONTRACTOR shall comply with the regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the REGULATIONS), which are herein incorporated by reference and made a part of this agreement.
- (2) Nondiscrimination: CONTRACTOR, with regard to the work performed by it during the AGREEMENT, shall not discriminate on the grounds of race, color, sex, national origin, religion, age, or disability in the selection and retention of sub-applicants, including procurements of materials and leases of equipment. CONTRACTOR shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the agreement covers a program set forth in Appendix B of the Regulations.
- (3) Solicitations for Sub-agreements, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by CONTRACTOR for work to be performed under a Sub-agreement, including procurements of materials or leases of equipment, each potential sub-applicant or supplier shall be notified by CONTRACTOR of the CONTRACTOR'S obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- (4) Information and Reports: CONTRACTOR shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the California Department of Transportation or FHWA to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of CONTRACTOR is in the exclusive possession of another who fails or refuses to furnish this information, CONTRACTOR shall so certify to the California Department of Transportation or the FHWA as appropriate, and shall set forth what efforts CONTRACTOR has made to obtain the information.
- (5) Sanctions for Noncompliance: In the event of CONTRACTOR's noncompliance with the nondiscrimination provisions of this agreement, the California Department of

Transportation shall impose such agreement sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

- (a) withholding of payments to CONTRACTOR under the Agreement within a reasonable period of time, not to exceed 90 days; and/or
 - (b) cancellation, termination or suspension of the Agreement, in whole or in part.
- (6) Incorporation of Provisions: CONTRACTOR shall include the provisions of paragraphs (1) through (6) in every sub-agreement, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

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

EXHIBIT 15-H DBE INFORMATION —GOOD FAITH EFFORTS

DBE INFORMATION - GOOD FAITH EFFORTS

Federal-aid Project No. STPL-5249 (030) Bid Opening Date July 20, 2016

The City of Torrance established a Disadvantaged Business Enterprise (DBE) goal of 3% for this project. The information provided herein shows that a good faith effort was made.

Lowest, second lowest and third lowest bidders shall submit the following information to document adequate good faith efforts. Bidders should submit the following information even if the "Local Agency Bidder DBE Commitment" form indicates that the bidder has met the DBE goal. This will protect the bidder's eligibility for award of the contract if the administering agency determines that the bidder failed to meet the goal for various reasons, e.g., a DBE firm was not certified at bid opening, or the bidder made a mathematical error.

Submittal of only the "Local Agency Bidder DBE Commitment" form may not provide sufficient documentation to demonstrate that adequate good faith efforts were made.

The following items are listed in the Section entitled "Submission of DBE Commitment" of the Special Provisions:

- A. The names and dates of each publication in which a request for DBE participation for this project was placed by the bidder (please attach copies of advertisements or proofs of publication):

Publications	Dates of Advertisement

- B. The names and dates of written notices sent to certified DBEs soliciting bids for this project and the dates and methods used for following up initial solicitations to determine with certainty whether the DBEs were interested (please attach copies of solicitations, telephone records, fax confirmations, etc.):

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

- C. The items of work which the bidder made available to DBE firms including, where appropriate, any breaking down of the contract work items (including those items normally performed by the bidder with its own forces) into economically feasible units to facilitate DBE participation. It is the bidder's responsibility to demonstrate that sufficient work to facilitate DBE participation was made available to DBE firms.

Items of Work	Bidder Normally Performs Item (Y/N)	Breakdown of Items	Amount (\$)	Percentage Of Contract

- D. The names, addresses and phone numbers of rejected DBE firms, the reasons for the bidder's rejection of the DBEs, the firms selected for that work (please attach copies of quotes from the firms involved), and the price difference for each DBE if the selected firm is not a DBE:

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

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

- E. Efforts made to assist interested DBEs in obtaining bonding, lines of credit or insurance, and any technical assistance or information related to the plans, specifications and requirements for the work which was provided to DBEs:

- F. Efforts made to assist interested DBEs in obtaining necessary equipment, supplies, materials or related assistance or services, excluding supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate:

G. The names of agencies, organizations or groups contacted to provide assistance in contacting, recruiting and using DBE firms (please attach copies of requests to agencies and any responses received, i.e., lists, Internet page download, etc.):

Name of Agency/Organization	Method/Date of Contact	Results

H. Any additional data to support a demonstration of good faith efforts (use additional sheets if necessary):

NOTE: USE ADDITIONAL SHEETS OF PAPER IF NECESSARY.

SECTION D

**DOCUMENTS TO BE COMPLETED AND DELIVERED TO CITY
AFTER AWARD OF CONTRACT (PUBLIC WORKS AGREEMENT)
BY THE CITY COUNCIL**

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____ as Principal(s) and _____ a corporation, incorporated, organized, and existing under the laws of the State of _____, and authorized to execute bonds and undertakings and to do a general surety business in the State of California, as Surety, are jointly and severally held and firmly bound unto the City of Torrance, a municipal corporation, located in the County of Los Angeles, State of California, in the full and just sum of: _____ Dollars (\$ _____), lawful money of the United States of America, for the payment of which sum, well and truly to be made, we bind ourselves and our respective heirs, executors, administrators, representative, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that: **WHEREAS,** said Principal(s) have/has entered into, or are/is about to enter into, a certain written contract or agreement, dated as of the _____ day of _____, 20____, with the said City of Torrance for the Construction of the Crenshaw Boulevard Rehabilitation, I-120 (Sepulveda Boulevard to Skypark Drive and Pacific Coast Highway to south City limit), B2016-28, Federal Project No. STPL-5249 (030) all as is more specifically set forth in said contract or agreement, a full, true and correct copy of which is hereunto attached, and hereby referred to and by this reference incorporated herein and made a part hereof;

NOW, THEREFORE, if the said Principal(s) shall faithfully and well and truly do, perform and complete, or cause to be done, performed and complete, each and all of the covenants, terms, conditions, requirements, obligations, acts and things, to be met, done or performed by said Principal(s), including any guarantee period as set forth in, or required by, said contract or agreement, all at and within the time or times, and in the manner as therein specified and contemplated, then this bond and obligation shall be null and void; otherwise it shall be and remain in full force, virtue and effect.

The said Surety, for value received, hereby stipulates and agrees that no amendment, change, extension of time, alteration or addition to said contract or agreement, or of any feature or item or items of performance required therein or thereunder, shall in any manner affect its obligations on or under this bond; and said Surety does hereby waive notice of any such amendment, change, extension of time, alteration, or addition to said contract or agreement, and of any feature or item or items of performance required therein or thereunder.

PERFORMANCE BOND (CONTINUED)

In the event any suit, action or proceedings is instituted to recover on this bond or obligation, said Surety will pay, and does hereby agree to pay, as attorney's fees for said City, such sum as the Court in any such suit, action or proceeding may adjudge reasonable.

EXECUTED, SEALED AND DATED this _____ day of _____,
201____.

CORPORATE SEAL

PRINCIPAL(S):

BY _____

BY _____

CORPORATE SEAL

SURETY:

BY _____

LABOR AND MATERIAL BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____
As Principal(s) and _____ a
corporation, incorporated, organized, and existing under the laws of the State of _____,
and authorized to execute bonds and undertakings and to do a general surety business in the
State of California, as Surety, are jointly and severally held and firmly bound unto:

- (a) The State of California for the use and benefit of the State Treasurer, as ex-officio Treasurer and custodian of the Unemployment Fund of said State; and
- (b) The City of Torrance, California; and
- (c) Any and all persons who do or perform or who did or performed work or labor upon or in connection with the work or improvement referred to in the contract or agreement hereinafter mentioned; and
- (d) Any and all material, persons, companies, firms, association, or corporations, supplying or furnishing any materials, provisions, provender, transportation, appliances or power, or other supplies used in, upon, for or about or in connection with the performance of the work or improvement contracted to be executed, done, made or performed under said contract or agreement; and
- (e) Any and all persons, companies, firms, associations, or corporations furnishing, renting, or hiring teams, equipment, implements or machinery for, in connection with, or contributing to, said work to be done or improvement to be made under said contract or agreement; and
- (f) Any and all persons, companies, firms, associations, or corporations who supply both work and materials;

and whose claim has not been paid by said Principal(s), in full and just sum of _____ Dollars (\$_____), lawful money of the United States of America, for the payment of which will and truly to be made, said Principal(s) and said Surety do hereby bind themselves and their respective heirs, executors, administrators, representatives, successors and assigns, jointly and severally, firmly by these presents.

LABOR AND MATERIAL BOND (CONTINUED)

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH, THAT: WHEREAS, said Principal(s) have/has entered into or are/is about to enter into a certain written contract or agreement, dated as of the _____ day of _____ 20 ____, with the City of Torrance for the Construction of Crenshaw Boulevard Rehabilitation, I-120 (Sepulveda Boulevard to Skypark Drive and Pacific Coast Highway to south City limit), Bid No. B2016-28, Federal Project No. STPL-5249 (030) all as is more specifically set forth in said contract or agreement, a full, true and correct copy of which is hereunto attached, and hereby referred to and by this reference incorporated herein and made a part hereof;

NOW, THEREFORE, if the said Principal(s) (or any of his/her, its, or their subcontractors) under said contract or agreement fails or fail to pay:

- (1) For any materials, provisions, provender, transportation, appliances, or power, or other supplies; or
- (2) For the hire of any teams, equipment, implements, or machinery; or
- (3) For any work or labor; supplies, furnished, provided, used, done or performed in, upon, for or about or in connection with the said work or improvement; or
- (4) For amounts due under the Unemployment Insurance Act of the State of California with respect to such work or improvement;

the Surety on this bond will pay the same in an amount not exceeding the sum hereinabove specified in this bond; and, also, in case suit is brought upon this bond, said Surety will (and does hereby agree to) pay a reasonable attorney's fee, to be fixed and taxed as costs, and included in the judgment therein rendered.

This bond shall (and it is hereby made to) insure to the benefit of any and all persons entitled to file claims under Section 1192.1 of the Code of Civil Procedure of the State of California, so as to give a right of action to them or their assigns in any suit brought upon this bond, all as contemplated under the provisions of Section 4205 of the Government Code, and of Chapter 1 of Title 4 of Part 3 of the Code of Civil Procedure, of the State of California.

This bond is executed and filed in connection with said contract or agreement hereunto attached to comply with each and all of the provisions of the laws of the State of California above mentioned or referred to, and of all amendments thereto, and the obligors so intend and do hereby bind themselves accordingly.

LABOR AND MATERIAL BOND (CONTINUED)

The said Surety, for value received, hereby stipulates and agrees that no amendment, change, extension of time, alteration, or addition to said contract or agreement, or of any feature or item or items of performance required therein or thereunder, shall in any manner affect its obligations on or under this bond; and said Surety does hereby waive notice of any such amendment, change, extension of time, alteration, or addition to said contract or agreement, and of any feature or item or items of performance required therein or thereunder.

EXECUTED, SEALED AND DATED this _____ day of _____, 20_____

CORPORATE SEAL

PRINCIPAL:

BY _____

CORPORATE SEAL

SURETY:

BY _____

PUBLIC WORKS AGREEMENT

BIDDERS ARE TO REFER TO APPENDIX I FOR THE PRO FORMA PUBLIC WORKS AGREEMENT TO BE EXECUTED, UPON APPROVAL OF THE CITY COUNCIL, WITH THE CONFIRMED LOWEST, RESPONSIBLE BIDDER.

**CITY OF TORRANCE
CONSTRUCTION OR SERVICE CONTRACT ENDORSEMENT**

To be attached to and made a part of all policies insuring the liability of any person, form or corporation performing services under contract for the City of Torrance.

Notwithstanding any inconsistent expression in the policy to which this endorsement is attached, or in any other endorsement now or hereafter attached thereto, or made a part thereof, the protection afforded by said policy shall:

1. Include the City of Torrance as an additional insured. (To include the elected officials, appointed officials, and employees.)
2. Indemnify and save harmless the City of Torrance against any and all claims resulting from the undertaking specified in the contract known as:

**PROPOSAL, SPECIFICATIONS, BOND AND AFFIDAVIT
FOR THE CONSTRUCTION OF
CRENSHAW BOULEVARD REHABILITATION, I-120 (SEPULVEDA BOULEVARD TO
SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTH CITY LIMIT)**

**B2016-28
FEDERAL PROJECT NO. STPL-5249 (030)**

This hold harmless assumption on the part of the underwriters shall include all costs of investigation and defense, including claims based on damage to substructures not shown, not located on the plans, or shown incorrectly.

3. Not be cancelled except by notice to the City Attorney of the City of Torrance at least thirty (30) days prior to the date of cancellation.
4. Provide single limit for Bodily Injury Liability and Property Damage Liability combined, \$1,000,000 each Occurrence, and \$1,000,000 Aggregate.
5. Limited classifications, restricting endorsements, exclusions or other special provisions contained in the policy shall not act to limit the benefits of coverage as they shall apply to the City of Torrance as enumerated in this endorsement. However, nothing herein contained shall affect any rights of the insurer against the insured.
6. It is further expressly agreed by and between the parties hereto that the following two provisions, (a) and (b), are a part of this contract:
 - (a) That the Contractor specifically agrees to comply with applicable provisions of Section 1777.5 of the Labor Code relating to the employment by contractor or subcontractor under it, of journeyman or apprentices, or workmen, in any apprenticeable craft or trade.
 - (b) By my signature hereunder, as Contractor, I certify that I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for Workers' 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.

The limits of liability as stated in this endorsement apply to the insurance afforded by this endorsement notwithstanding that the policy may have lower limits of liability applying elsewhere in the policy.

Duly Authorized Agent

Attached to and forming part of
Policy No. _____
of the _____

Date: _____
Expiration Date: _____

WORKERS' COMPENSATION INSURANCE CERTIFICATION

In compliance with Section 7-4 of the Standard Specifications, the Contractor shall complete and submit the following certification with a Certificate of Insurance before execution of the contract.

I am aware of, and will comply with, Section 3700 of the Labor Code, requiring every employer to be insured against liability for Workers' Compensation or to undertake self-insurance before commencing any of the work.

CONTRACTOR

By: _____

Title: _____

SECTION E

SPECIAL PROVISIONS

The following Special Provisions supplement and amend the Standard Specifications for Public Works Construction (2012 Edition) and the Standard Specifications of the State of California Department of Transportation (Caltrans), latest edition, as noted herein. These Special Provisions have been arranged into a format that parallels the Standard Specifications for Public Works Construction.

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PART 1 - GENERAL PROVISIONS

SECTION 1 - TERMS, DEFINITIONS, ABBREVIATIONS, UNITS OF MEASURE, AND SYMBOLS

1-2 TERMS AND DEFINITIONS. Add or redefine the following:

Agency – The City of Torrance, herein referred to as CITY.

Board – The City Council of the City of Torrance, herein referred to as City Council.

Engineer –The Public Works Director and/or City Engineer of the City of Torrance, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.

Claim - A separate demand by the Contractor for (A) a time extension, (B) payment of money or damages arising from work done by or on behalf of the Contractor pursuant to the Contract and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (C) an amount the payment of which is disputed by the Agency.

1-3 ABBREVIATIONS.

1-3.2 Common Usage:

Add the following abbreviations:

Approx	Approximate
CA	City and/or Consulting Arborist
Exist.	Existing
L.A.C.D.P.W.	Los Angeles County Department of Public Works
Med.	Median
M.L.	Main Line
OH	Overhead
Ped.	Pedestrian
Reconst.	Reconstruct
Temp.	Temporary
Theo.	Theoretical
WM	Wire mesh or water meter

SECTION 2 - SCOPE AND CONTROL OF THE WORK

2-1 AWARD AND EXECUTION OF CONTRACT. Replace the entire subsection with the following:

Within ten (10) working days after the date of the CITY'S award of contract, the Contractor shall execute and return all Contract Documents required by the CITY. The CITY reserves the right to terminate the award if the above requirement is not met. Such termination will result in the forfeiture of the Proposal Guaranty.

The Contract shall not be considered binding upon the CITY until executed by the authorized CITY officials.

2-4 CONTRACT BONDS. Revise the second sentence of the fourth paragraph to read as follows:

The "Performance Bond" shall remain in effect for one year following the date specified in the Notice of Completion or, if no Notice of Completion is recorded, for one year following the date of final acceptance by the Engineer.

2-5. PLANS AND SPECIFICATIONS

2-5.1 General. Add the following sentence to the first paragraph to read as follows:

The Contractor shall maintain a control set of Plans and Specifications on the Work site at all times. All final locations determined in the field, and any deviations from the Plans and Specifications, shall be marked in red on this control set to show as-built conditions. Upon completion of the Work, the Contractor shall submit the control set to the Engineer for approval. Final payment will not be made until this requirement is met.

Add the following subsections:

2-5.1.1 Plans. Included as part of the Contract Documents are the following, which show the location, character, dimensions or details of the Work:

1) Project Plans

The existing utility information and data provided with the Contract Documents are based on existing plans and documents. The plans and data are provided for information only. The Owner does not guarantee their accuracy and correctness. If the Bidder in preparing the Bid Proposal uses this information, the Bidder assumes all risks resulting from conditions differing from the information shown. The Bidder, in consideration for the information being provided, hereby releases the Owner and Consulting Engineer from any responsibility of obligation as to the accuracy of such information or for any additional compensation for work performed due to assumptions based on the use of such information.

2) Standard Plans

- a. City of Torrance Standard Plans, latest edition
- b. Standard Plans for Public Works Construction, latest edition, promulgated by Public Works Standards, Inc.
- c. Standard Plans of the State of California Department of Transportation (Caltrans), latest edition
- d. California Manual of Uniform Traffic Control Devices (MUTCD), latest edition

Applicable Standard Plans and information for this project are included in the Appendices of these Specifications.

2-5.1.2 Specifications. The Work shall be performed or executed in accordance with these Special Provisions and the following:

- 1) Standard Specifications for Public Works Construction, latest edition and supplements thereto, hereinafter referred to as the Standard Specifications, as written and promulgated by Public Works Standards, Inc. The Standard Specifications are published by BNi Building News, Inc., 1612 South Clementine Street, Anaheim, CA 92802, Phone: (800) 873-6397.

- 2) Sections 56-2, 84, 85, and 86 of the State of California Department of Transportation (Caltrans) Standard Specifications, latest edition

2-5.2 Precedence of Contract Documents. Replace the entire subsection with the following:

If there is a conflict between any of the Contract Documents, the document highest in precedence shall control. The order of precedence shall be as follows:

- 1) Permits issued by other agencies.
- 2) Change Orders (including Plans and Specifications attached thereto).
- 3) Public Works Agreement
- 4) Addenda
- 5) Special and General Provisions
- 6) Plans
- 7) City Standard Plans
- 8) Other Standard Plans
- 9) Standard Specifications for Public Works Construction
- 10) Reference Specifications

With reference to the Plans/Drawings, the order of precedence is as follows:

- 1) Change Order plans govern over Addenda and Contract plans
- 2) Addenda plans govern over Contract plans
- 3) Contract plans govern over standard plans
- 4) Detail plans govern over general plans
- 5) Figures govern over scaled dimensions

Within the Specifications, the order of precedence is as follows:

- 1) Change Orders
- 2) Permits from other agencies/Supplemental Agreements
- 3) Special Provisions
- 4) Instruction to Bidders
- 5) Referenced Standard Plans
- 6) Referenced Standard Specifications

If the Contractor, in the course of the Work, becomes aware of any claimed errors or omissions in the Contract Documents or in the CITY's fieldwork, the Contractor shall immediately inform the Engineer. The Engineer shall promptly review the matter, and if the Engineer finds an error or omission has been made the Engineer shall determine the corrective actions and advise the Contractor accordingly. If the corrective work associated with an error or omission increases or decreases the amount of work called for in the Contract, the CITY shall issue an appropriate Change Order in accordance with 3-3. After discovery of an error or omission by the Contractor, any related work performed by the Contractor shall be done at the Contractor's risk unless authorized by the Engineer.

2-5.3 Submittals

2-5.3.2 Working Drawings. Add the following:

In addition to the shop drawings required per Table 2-5.3.2 (A), the following shop drawings are required:

Item	Subsection Number	Title	Subject
18	7-8.6.3	Storm Water Pollution Prevention Plan (SWPPP)	Water Pollution Control

Revise the fourth paragraph of the Standard Specifications to read as follows:

Shop drawings listed above shall be prepared, wet stamped, and signed by a Civil or Structural Engineer registered by the State of California.

2-5.3.4 Supporting Information. Replace the second paragraph with the following:

Submittals are required for the following:

- 4) Construction schedule per Section 6-1.
- 8) Concrete mix designs per Section 201-1.1
- 9) Asphalt concrete job mix formulas and/or mix designs per 203-6.
- 10) CMB Mix Design/Properties
- 11) Proposed Hauling Route(s) for Construction Materials
- 12) Trench backfill (100-E-100)
- 13) Landscape Materials and appurtenances as shown on plans and in these specifications
- 14) Precast Concrete Pavers with sand base
- 15) 4" Schedule 80 PVC Sleeve, fittings, and appurtenances
- 16) 4" Welded Steel Irrigation Sleeve, fittings and appurtenances
- 17) Detectable Warning Surface for curb ramps per Section 303-5.5.5
- 18) Pedestrian Countdown Displays
- 19) Video Detection equipment for traffic signals
- 20) Internally Illuminated Street Name Signs (IISNS)

In addition to the above, submittals may be required for any product, manufactured item, or system not specifically listed above.

2-5.4 Examination of Documents. The bidder shall examine carefully the entire site of the work, including but not restricted to the conditions and encumbrances related thereto, the Plans and Specifications, and the proposal and contract forms therefore. The submission of a bid shall be conclusive evidence that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of the work to be performed, the quantities of material to be furnished and as to the requirements of the proposal, Plans, Specifications, and the contract.

2-6 WORK TO BE DONE Add the following:

The Work generally consists of the rehabilitation of asphalt concrete pavement, cold milling, localized pavement repair, placement of asphalt concrete, repair and construction of concrete curb, gutter, driveways, sidewalk, access ramps, landscaping, installing video detection system, traffic loop detector replacement, signing, striping, traffic control and all other incidental work in these Specifications and City of Torrance Plan No. ST-1037.

2-9 SURVEYING

2-9.1 Permanent Survey Markers. Replace the entire Subsection 2-9.1 with the following:

The Contractor shall not disturb survey monuments, lot stakes (tagged), centerline ties, or benchmarks without notifying the Engineer. The Contractor shall be responsible to have a CA Registered Land Surveyor document all surveying monuments, lot stakes (tagged), centerline ties, and bench marks that may be disturbed during construction. In the event that identification numbers on survey monuments are illegible, it shall be the responsibility of the Contractor to obtain all information necessary to restore the monuments in their correct location. The Contractor or its Surveyor shall file a Corner Record Form at the Los Angeles County Surveyor referencing survey monuments subject to disturbance prior to the start of construction and also prior to the completion of construction, including a location for reestablishment of disturbed monuments. Copies of the records shall be provided to the City. **Final payment will not be made until the aforementioned documentation is provided to the CITY.**

All surveying shall be performed by a CA Registered Licensed Land Surveyor or a Registered Civil Engineer authorized to practice land surveying within the state. All monuments and centerline ties shall be tied out and reset in accordance with Section 8771 (Land Surveyors Act) of the Business and Professions Code of the State of California.

The contract unit price for SURVEY MONUMENTS shall include full compensation for furnishing all labor, materials, equipments, tools and incidentals for doing all the work involved in preserving and/or recording and reestablishing the survey monuments, complete in place, and no additional compensation shall be made.

2-9.2 Survey Service. Replace the first two paragraphs with the following:

All construction surveying necessary to complete the Work shown on the Plans and provided in these Contract Documents shall be accomplished by or under the direction of a Registered Land Surveyor or Registered Civil Engineer authorized to practice land surveying in the State of California, retained and/or provided by the Contractor. The CITY reserves the right to direct additional construction survey work to be performed at no additional cost when the City determines it is required to adequately construct the Work.

The Contractor shall notify the Engineer in writing at least 2 working days prior to the actual survey. The Contractor shall provide any required traffic control necessary for construction surveying. Prior to disturbing survey monuments, the Contractor shall notify the Engineer in accordance with Section 2-9.1.

Stakes shall be set and stationed by the Contractor for curbs, curbs and gutters, sidewalks, access ramps, cross gutters, driveways, headers, storm drains, sewers, water lines, spandrels, catch basins, rough grade, and other items as necessary. A corresponding cut or fill to finished grade (or flow line) shall be indicated on a grade sheet. A copy of each grade sheet shall be furnished to the Engineer. If any construction survey stakes are lost or disturbed and need to be replaced, such replacement shall be by the Contractor at its expense.

Construction stakes shall consist of the following:

- a. One set of paving stakes.
- b. Line and grade of new curb and gutter.
- c. Line and grade of existing features shown on the plan to be replaced in kind sufficient for their construction.

The Contractor shall submit to the City within 2 days after completion of each respective survey, setting of each stake and heading check a copy of the survey notes and calculations certified by the licensed Land Surveyor for the following:

- a. Level and horizontal control circuit for survey control.
- b. Grade sheets for pipeline stakes.
- c. Pipe heading checks.

2-9.5 Payment

Payment for CONSTRUCTION SURVEYING shall be on a Lump Sum basis per the Contract unit price. All costs for construction surveying including, but not limited to, construction staking, professional services, office calculations, furnishing all labor, materials, equipment, tools and incidentals, and for doing all work involved shall be considered as included.

2-10 AUTHORITY OF THE BOARD AND THE ENGINEER. Add the following:

Failure of the Contractor to comply with the requirements of the Contract Documents, or to follow the directions of the Engineer, and/or to immediately remedy such noncompliance or to follow directions, may, upon notice from the Engineer, result in the suspension of the Contract monthly progress payments. Any monthly progress payments so suspended may remain in suspension until the Contractor is in compliance with the Contract Documents and the directions of the Engineer, as determined by the Engineer.

2-11 INSPECTION. Replace the entire subsection with the following:

The Work is subject to inspection and approval by the Engineer. The Contractor shall notify the Engineer a minimum of 48 hours in advance of the required inspection.

The Engineer will make, or have made, such inspections and tests as he deems necessary to see that the Work is in conformance with the Contract Documents. In the event such inspections or tests reveal noncompliance with the Contract Documents, the Contractor shall bear the cost of such corrective measures as deemed necessary by the Engineer, as well as the cost of subsequent re-inspection and re-testing.

Work done in the absence of inspection by the Engineer may be required to be removed and replaced under the inspection of the Engineer, and the entire cost of removal and replacement, including the cost of all materials which may be furnished by the CITY and used in the work thus removed, shall be borne by the Contractor, regardless of whether the work removed is found to be defective or not. Work covered without the approval of the Engineer shall, if so directed by the Engineer, be uncovered to the extent required by the Engineer, and the Contractor shall similarly bear the entire cost of performing all the work and furnishing all the materials necessary for the removal of the covering and its subsequent replacement, including all costs for additional inspection.

The Engineer and any authorized representatives shall at all times have access to the Work during its construction at shops and yards as well as the Work site. The Contractor shall provide every reasonable facility for ascertaining that the materials and workmanship are in accordance with the Contract Documents.

Inspection of the Work shall not relieve the Contractor of the obligation to fulfill all conditions of the Contract.

2-11.1 Special Inspection Fees. If the Contractor elects to work under this Contract more than 8 hours/day or more than 40 hours/week, Saturday, Sunday, or CITY holidays, the Contractor shall arrange with the Engineer for the required inspection service and pay the Special Inspection Fees which will be charged at the following rates:

Mondays through Fridays	-	\$150.00 per hour
Saturdays, Sundays, Holidays	-	\$1,400.00 per day

Fees may be deducted from payments due to the Contractor at the discretion of the Engineer.

If the Contractor works under this contract at times other than within the allowed working hours without permission from or prior arrangement with the Engineer, the Contractor will be charged a lump sum amount of \$500.00 for each occurrence, in addition to the above fees. The amount will be deducted from a Progress Payment.

2-11.2 General Requirements. The Contractor shall comply with the following requirements:

- 1) No excavation or open trench may be backfilled without first securing Health Department approval. If any piping, reclaimed or potable, is installed prior to plan check approval and/or inspection, all or any portion of the system may be required to be exposed and corrected as necessary.
- 2) Unused or abandoned potable water lines are to be severed as close to water mains as practical, capped, and a 10-foot section of abandoned line removed and cemented under Health Department supervision.
- 3) A dye or pressure test must be utilized to confirm the physical separation of the reclaimed and potable water system. Said testing shall be performed in conjunction with the Water Department and the Health Department and conducted before the introduction of reclaimed water.

2-11.3 Inspections During Construction. During the construction, the Contractor shall make the Work site available for periodic inspections by the regulatory agencies. These agencies may include: Los Angeles County Department of Health Services, Los Angeles Regional Water Quality Control Board, the State Water Resources Control Board, Division of Drinking Water and CITY Water Department.

2-11.3.1 Material Inspection/Testing and other City Expenses.

- (a) If a City subcontractor hired to perform material inspection and/or testing is required to work additional time to perform inspection and testing as a result of an action or delay caused by the Contractor, except for specific work allowed by the Engineer, the City subcontractor may charge the City an additional fee. The Engineer may deduct the additional fee for said inspection and testing from a Progress Payment to the Contractor. The Engineer also may deduct the cost to perform additional testing when an initial test fails to meet the requirements of this Contract. The typical rates for material testing and inspection are available upon request from the Public Works Department.
- (b) If the Contractor does not comply with a requirement of these Special Provisions or if it does not immediately respond, after being informed, to a request by the Engineer to amend a site condition that jeopardizes the public health, safety or welfare, the Engineer may direct City staff to perform the work. For each occurrence, the City will charge the

Contractor a base charge in the amount of \$750 in addition to all costs incurred by the City for administration, labor, equipment and materials. The standard rates for City staff are available upon request from the Public Works Department.

- (c) For each sign, drum, delineator, cone, barricade, warning device, or other type of required traffic control device that is not provided and/or replaced by the Contractor when required by the Traffic Control Plans and/or directed by the Engineer, the Engineer may deduct \$75 per day for each missing device from a Progress Payment.
- (d) Temporary lane closures (sawcutting, tree removal, AC dig-outs) maintained prior to 8:00 A.M. and/or after 4:00 P.M. may have a negative economic effect on the local residential, commercial or industrial community. Unless a temporary lane closure is otherwise authorized, the Engineer may deduct a fee from a Progress Payment for each temporary lane closure maintained prior to 8:00 A.M. or after 4:00 P.M. The fee will be assessed at a rate of \$700 per each travel lane per each thirty (30) minute interval, or fraction thereof.

SECTION 3 – CHANGES IN WORK

3-2 CHANGES INITIATED BY THE AGENCY

Section 3-2.2.1 General. Delete this subsection in its entirety. Add the following:

The City reserves the right to increase or decrease any bid item quantity, as necessary, to meet the City's needs and/or the project and/or budget requirements. If the City increases or decreases any bid item quantity by more than 25% of the original contract quantity, either the City or the Contractor may initiate discussions and/or negotiations regarding a potential adjustment to the contract unit bid price.

Section 3-2.2.2. Increases of More Than 25%. Delete this subsection in its entirety.

Section 3-2.2.3. Decreases of More Than 25%. Delete this subsection in its entirety.

3-3 EXTRA WORK

3-3.1 General. Add the following:

Payment for additional work and all expenditures in excess of the Contract Price must be authorized in writing by the Engineer. Such authorization shall be obtained by the Contractor prior to engaging in additional work. It shall be the Contractor's sole responsibility to obtain written approval from the Engineer for any change(s) in material or in the work proposed by suppliers or subcontractors. No payment shall be made to the Contractor for additional work which has not been approved in writing, and the Contractor hereby agrees that it shall have no right to additional compensation for any work not so authorized.

The Contractor shall be responsible to provide all data and to obtain all approvals required by the Specifications, including submittal of Daily Extra Work Reports. No claims or extras shall be approved by the Engineer unless all work was done under the direction of and subject to the approval of the Engineer. Disputed work claims shall comply with 3-3 as modified herein.

3-3.2.2 Basis for Establishing Costs

3-3.2.2.3 Tool and Equipment Rental. Replace the second paragraph of with the following:

The Contractor will be paid for the use of equipment at the lower of the actual rental rates paid by the Contractor or the rental rates listed for such equipment in either the "Rental Rate Blue Book" published by Dataquest, Inc., 1290 Ridder Park Drive, San Jose, California 95131; telephone (408) 971-9000 or the California Department of Transportation publication entitled "Labor Surcharge and Equipment Rates" available at the Caltrans web site, www.dot.ca.gov/hq/eqsc/inforesources.htm , which is in effect on the date upon which the work is accomplished, and that hereby is made a part of the Contract, regardless of ownership or any rental or other agreement, if such may exist, for the use of such equipment entered into by the Contractor. If it is deemed necessary by the Engineer to use equipment not listed in the said publication, a suitable rental rate will be established by the Engineer. The Contractor may furnish any cost data that might assist the Engineer in the establishment of such rental rate.

3-3.2.3 Markup. Add the following:

The markups mentioned hereinafter shall include, but are not limited to, all costs for the services of superintendents, project managers, timekeepers and other personnel not working directly on the change order, and pickup or yard trucks used by the above personnel. These costs shall not be reported as labor or equipment elsewhere except when actually performing work directly on the change order and then shall only be reported at the labor classification of the work performed.

3-3.2.3.1 Work by Contractor. Replace the entire subsection with the following:

The following percentages shall be added to the Contractor's costs and shall constitute the mark-up for all overhead and profit, which shall be deemed to include all items of expense not specifically designated as cost or equipment rental in Subsections 3-3.2.2.1, 3-3.2.2.2, and 3-3.2.2.3.

Labor	20
Materials	15
Equipment Rental	15
Other Expenditures	15

To the sum of the costs and markups provided for in this subsection, one (1) percent shall be added as compensation for bonding.

3-3.2.3.2 Work by Subcontractor. Replace the entire subsection with the following:

When any part of the extra work is performed by a subcontractor, the markup established in 3-3.2.3.1 shall be applied to the subcontractor's actual cost of such work. A markup of ten (10) percent on the first \$5,000 of the subcontracted portion of the extra work and a mark-up of 5 percent on work added in excess of \$5,000 of the subcontracted portion of the extra work may be added by the Contractor.

The markups specified in the two subsections above shall be considered as including, but not limited to, the Contractor's labor costs for personnel not working directly on the extra work, including the cost of any tools and equipment that they may use. Such costs shall not be reported as labor or equipment costs elsewhere except when they are actually used in the performance of

the extra work. Labor costs shall in that case be reported for the labor classification corresponding to the type and nature of extra work performed.

3-4 CHANGED CONDITIONS

Add the following:

This subsection does not apply to utilities.

SECTION 4 – CONTROL OF MATERIALS

4-1 MATERIALS AND WORKMANSHIP

4-1.1 General. Add the following paragraph after the second paragraph:

If the work, or any portion thereof, shall be damaged in any way, or if any defective materials or faulty workmanship shall be discovered at any time prior to the final payment, the Contractor shall forthwith, at its own cost and expense, repair said damage, or replace such defective materials, or remedy such faulty workmanship in a manner satisfactory to the Engineer.

4-1.2 Protection of Work and Materials. Add the following:

The Contractor shall assume all risks and expense of interference and delay in his operations, and the protection from or the repair of damage to improvements being built under the contract, as may be caused by water of whatever quantity from floods, storms, industrial waste, irrigation, underground or other sources. However, the Contractor shall be entitled to an extension of time in accordance with the provisions of Subsection 6-6. The Contractor shall also assume full responsibility and expense of protecting, or removing and returning to the site of Work, all equipment or materials under his care endangered by any action of the elements.\

Furthermore, the Contractor shall indemnify and hold the City harmless from all claims or suits for damages arising from his operations in dewatering the Work and control of water.

SECTION 5 – UTILITIES

5-1 LOCATION. Add the following:

The Contractor shall provide coordination with all the utility companies involved and shall provide protection from damage to their facilities. The Contractor shall be responsible for repair or replacement to said facilities made necessary by its failure to provide required protection. The Contractor is required to include utility requirements in the Construction Schedule per Section 6-1.

The Contractor shall utilize the services of "Underground Service Alert-Southern California" for utility locating in all public right-of-ways by calling 1-800-227-2600 at least 48 hours prior to any excavation.

Substitute the following for the last paragraph:

Prior to starting construction, the Contractor shall be responsible to determine the location and depth of all utilities which have been marked by the respective owners and which may affect or be

affected by its operations. The Contractor also shall determine the location and depth of each service connection, whether or not marked. Full compensation for such work shall be considered as included in the prices bid for other items or work. If a utility which was marked or a service connection is found to interfere with the work after construction has commenced, the Contractor shall be solely responsible for all costs of any delay and for any costs which could have been avoided if the Contractor had located the utility prior to start of construction.

5-2 PROTECTION. Add the following:

If, in the course of construction, the Contractor damages a sewer lateral or water lateral, the Contractor shall be responsible to completely expose said lateral from the main line to the point of connection at private property to verify integrity of all joints to the satisfaction of the Engineer. This shall not be considered to be extra work and no extra costs shall be allowed therefor.

Sewers, including lateral repairs, shall be constructed of Vitrified Clay Pipe, unless otherwise approved in writing by the Engineer.

Add the following after the final paragraph:

As noted in subsections 5-2.1, 5-2.2 and 5-2.3 utilities are classified and are to be handled in one of three ways by the Contractor in the course of performing the contract.

Add the following subsections:

5-2.1 Noninterfering Utilities

Utilities that are not abandoned by the owner and do not physically interfere with the permanent work in its final location shall be supported, protected and maintained in place by the Contractor, and the Contractor shall be solely responsible for any damage, loss or injury, or death resulting from his/her failure to do so and the Contractor shall indemnify and hold harmless the City from any and all such consequences. Noninterfering utilities may, with the permission of the owner and the Public Works Director, be relocated still farther from the permanent work in its final locations, but the Contractor shall not so consider, in submitting his bid, unless the relocation is shown on the plans.

5-2.2 Abandoned Utilities

Abandoned utilities are those portions of any utility which are no longer needed or desired by the owner and whose destruction is consented to by the owner and/or is permitted by notation on the plans. Abandoned utilities which physically interfere with the permanent work or with the construction thereof shall be removed by the Contractor and the Contractor shall be solely responsible for any damage, loss or injury, or death resulting from the removal and the Contractor shall indemnify and hold harmless the City from any and all such consequences.

5-2.3 Interfering Utilities

Any utility shall be deemed an interfering utility (1) which physically occupies any part of the space to be occupied by the permanent work in its final locations, or (2) whose length within the theoretical width of excavation for the permanent work exceeds five times the width of said theoretical excavation whether or not the utility physically interferes with the permanent work. Interfering utilities that are not abandoned by the owner shall be relocated so as not to interfere with the permanent work in its final location. Such relocation will be performed by the owner or the City unless otherwise shown on the plans.

The Contractor shall exercise caution to prevent damage to or movement of the utilities while constructing the permanent work along and adjacent to the utilities.

Should any manhole extend within a trench excavation, the Contractor shall choose one of the following methods of construction and shall assume all responsibilities thereof:

- (1) Support and maintain the manholes in place during the construction of the permanent work in open cut.
- (2) Remove the shaft and maintain the base of the manhole in place until the backfill is placed and compacted; then reconstruct the manhole shaft.
- (3) Use another method of construction which has been submitted to and approved by the Engineer. All costs for the work pertaining to the manholes that might be found to extend partially within the excavation limits or any protective measures required due to the proximity of the manholes and the permanent work at these locations shall be absorbed in the prices bid for the various items of work.

5-2.4 Protection of Underground Hazardous Utilities. This Subsection shall apply to projects where there are underground utilities within the Work area which may be potentially hazardous if damaged. A hazardous substance shall be defined as one having the potential for an immediate disaster such as, but not limited to, gasoline, electricity, fuel oil, butane, propane, natural gas, chlorine or other chemicals.

Abandoned or inoperative utilities designed to carry hazardous substances and unidentified or unknown utilities shall be considered hazardous until determined otherwise. Whenever the Contractor is directed by the Engineer to tap these lines, the Contractor shall provide personnel specialized in this work and payment therefore will be considered as extra work per 3-3 of these Special Provisions.

The Contractor shall comply with the following requirements when working around underground hazardous utilities:

- 1) The Contractor shall not trench or excavate within the area where a utility known to carry a hazardous substance exists until its location has been determined by excavation or other proven methods acceptable to the Engineer. The intervals between exploratory excavations or location points shall be sufficient to determine the exact location of the line. Unless otherwise directed by the Engineer, excavation for underground hazardous utilities shall be performed by the Contractor and paid for as specified per 5-1 of these Special Provisions.
- 2) If it is determined that the horizontal or vertical clearance between the utility known to carry hazardous substances and the construction limit is less than 300 mm (12 inches) (450mm (18 inches) if scarifying), the Contractor shall confer with its owner. Unless the owner elects to relocate the line or take it out of service, the Contractor shall not excavate until the line has been completely exposed within the limits of construction.
- 3) Once the physical location of the utility known to carry hazardous substances has been determined, the Contractor, in cooperation with and with the concurrence of the utility owner, shall determine how to protect and/or support the utility from damage before proceeding with the Work.

- 4) During all excavation and trenching operations, the Contractor shall exercise extreme caution and protect the utilities from damage.
- 5) The Contractor shall notify the Engineer, the public agency maintaining records for the jurisdiction in which the Project is located and the owner, if known, whenever previously unidentified or unknown underground utilities are encountered so that the location can be accurately established and made a part of permanent substructure records.

Full compensation for protecting underground hazardous utilities as specified or noted on the Plans shall be considered as included in the prices bid for the various items of work.

5-3 REMOVAL

Add the following:

It shall be the Contractor's responsibility irrespective of the notations on the plans to confirm or determine that a utility is to be abandoned before treating the same as an abandoned utility and shall assume all risks in so determining.

5-4 RELOCATION. Add the following:

Fire hydrants shall be relocated by Contractor per City of Torrance Standard Plan T705 or T706 as directed by the Engineer.

Water meters shall be relocated by Contractor per City of Torrance Standard Plan T703 or T704 as directed by the Engineer.

Water valves shall be relocated by the Contractor per City of Torrance Standard Plan T712.

Substitute the following for the last paragraph:

For the purpose of these specifications, service connections shall be construed to mean all, or any portion of, the pipe, conduit, cable, or duct which connects a utility main distribution line to the meter of an individual user, and further, shall include the meter and such portions of said pipe, conduit, cable or duct on the user's side of the meter which affect the contract work or its prosecution.

The City will arrange for the alteration or permanent relocation of only such service connections, except sewer house connections and water laterals, that interfere with the permanent work in its final location and such alteration or permanent relocation will be performed by others at no expense to the Contractor. The Contractor shall be responsible for the alteration or permanent relocation of sewer connections and water laterals, unless otherwise approved by the Engineer.

In instances where the alteration or permanent relocation of interfering service connections can be avoided by encasing same in the slabs or walls of poured-in place concrete structures the Contractor shall, when directed by the Engineer, so encase such service connections, and any costs for such work shall be absorbed in the unit prices or included in the lump sum amounts bid for the various items of work.

Service connections which do not interfere with the project structures shall be maintained in place by the Contractor. The cost of such work shall be absorbed in the unit prices or included in the lump sum amounts bid for the various items of work.

5-5 DELAYS. Substitute the following:

If the contractor while performing the contract discovers utility facilities not identified by the public agency in the contract plans or specifications, he shall immediately notify the City and utility in writing. The Contractor shall not be entitled to damage or additional payment, nor shall it be entitled to standby time for labor if a delay does occur. The Contractor also shall not be entitled to damage or additional payment for equipment not on the project during the occurrence of the event that caused the related delay. The Engineer will determine the extent of the delay attributable to such interferences, the affect of the delay on the project as a whole, and any commensurate extension of time.

Any failure of the City and/or utility company to accomplish relocations in a reasonable manner in light of the Contractor's operations (to the extent such operations would otherwise be feasible and in accordance with the contract and as disclosed to the City prior to the Contractor encountering any such utility) shall entitle the Contractor to an extension of contract time to the extent that, in the judgment of the Engineer, the Contractor's completion of the overall contract work has been delayed; however, the Contractor shall be entitled to no other remedy and, in submitting its bid, thereby waives such other remedies, if any, unless the relocation delay is the result of arbitrary, capricious or malicious conduct by the City.

SECTION 6 - PROSECUTION, PROGRESS AND ACCEPTANCE OF THE WORK

6-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF WORK

6-1.1 Construction Schedule. Replace the entire subsection with the following:

Within ten (10) working days after the date of the CITY's execution of the Contract, the Contractor shall submit a proposed construction schedule to the Engineer for approval. The schedule shall be in accordance with 6-1.3 and 6-1.4 and shall be in sufficient detail to show chronological relationship of all activities of the Work. These include, but are not limited to: estimated starting and completion dates of various activities, submittal of shop drawings to the Engineer for approval, procurement of materials and scheduling of equipment.

Prior to issuing the Notice to Proceed, the Engineer will schedule a Pre-Construction Meeting with the Contractor to review the proposed construction schedule and delivery dates, arrange utility coordination and clarify inspection procedures.

Prior to starting any Work, the Contractor may be required to attend a Community Meeting to be scheduled by the Engineer. The meeting, to be held in the evening, will address the residents' questions and concerns regarding the Work, what can be expected during construction and vehicular and pedestrian access that may be temporarily restricted during construction. Compensation for attending these meetings shall be considered a part of Mobilization or, when there is no bid item for Mobilization, shall be considered as part of the bid items of work for this contract.

Notwithstanding any other provisions of the Contract, the Contractor shall not be obligated to perform any work and the CITY shall not be obligated to accept or pay for any work performed by the Contractor prior to delivery of a Notice to Proceed. The CITY's knowledge of work being performed prior to delivery of the Notice to Proceed shall not obligate the CITY to accept or pay for such work. The Contractor shall provide all required Contract bonds and evidences of insurance prior to commencing work at the site.

6-1.2 Commencement of the Work. Delete the subsection in its entirety. Add the following subsections:

6-1.3 Criteria. The construction schedule shall conform to the following criteria:

- 1) The schedule shall be prepared using the latest version of Primavera, Microsoft Project or approved equal.
- 2) Work activities shall be based on the items of work per 2-6, and the following:
 - a) Contract Unit Price items shall be subdivided into those portions to be constructed during each stage or phase of construction.
 - b) Lump sum items shall be subdivided into those portions to be constructed during each stage or phase of construction.
- 3) Utility relocations in coordination with the Contractor per 5-4 of these Special Provisions shall be considered as activities.
- 4) Required submittals, working and shop drawings shall be included as activities.
- 5) The procurement of construction materials and equipment with long lead times for deliveries shall be included as activities.
- 6) Work to be performed by subcontractors shall be identified and shown as work activities.
- 7) Start and completion dates of each activity shall be illustrated.
- 8) Completion of all Work under the Contract shall be within the time specified in 6-7 of these Special Provisions and in accordance with the Plans and Specifications.

6-1.4 Requirements. In preparing the construction schedule, the following items shall be considered:

Sequence of Construction - The Contractor shall sequence the Work in a manner to expeditiously complete the project with a minimum of inconvenience to the adjacent residents and property owners and to conform to the following:

1. **Work requiring a lane closure is prohibited between Friday, November 18, 2016 and Monday, January 9, 2017, the City's Holiday Moratorium (per 7-10.2.8 of these Special Provisions).** Before discontinuing work for the holiday moratorium, all surfaces shall be restored flush to existing with no lips or trip hazards that could impede the progress of vehicles or pedestrians. The Contractor shall be responsible for maintaining the work site to this condition during the moratorium. If, during the moratorium, no work occurs on a working day, that day shall not be applied toward the contract working days.
2. **Working days for this project shall be Monday through Saturday.** Work may be performed only between the hours of 7:00 a.m. to 5:00 p.m. weekdays and 8:00 a.m. to 5:00 p.m. Saturdays, unless otherwise approved by the Engineer.
3. A move-in period of 10 calendar days will be allowed starting on the date in the Notice to Proceed. It shall be the Contractor's responsibility to allow passage of the Torrance

Transit System coaches through the construction area at all times. The Contractor shall notify the Torrance Transit Department at least 72 hours prior to construction affecting bus stop zones to allow said Transit System to temporarily abandon and relocate bus stop zones within the construction area.

4. Video Detection System

The Contractor shall install video detection systems at the following intersections:

- a. Crenshaw Blvd and Skypark Dr/Amsler St
- b. Crenshaw Blvd and Crest Rd
- c. Crenshaw Blvd and Rolling Hills Rd

All video detection systems shall be installed and fully operational prior to the start of pavement reconstruction or disruption of existing loop detectors in each respective area (Area 1, 2, 3 and Area 4, 5, 6).

5. Refuse collection. Refuse collection days are established and will not be changed.

The City utilizes automated refuse and recycling vehicles. After refuse collection, the City will attempt to place the refuse containers on parkways and driveways and off of the roadway areas. In some cases, however, this may not be possible, and the contractor will be responsible for moving the receptacles out of the way.

6. Stockpile area. Schedule shall indicate date for cleanup of stockpile area.

7. Tree and Stump removals per 300-1.3.2(d) shall be performed before concrete removals.

8. Sawcutting of PCC curb, gutter, sidewalk, driveways, curb ramps

For sawcutting activities, the Contractor may simultaneously close only one (1) northbound curb lane **and** one (1) southbound curb lane on Crenshaw Blvd. Said lane closures are allowed only between 9:00 a.m. and 3:30 p.m. weekdays and only between 8:00 a.m. and 4:00 p.m. on Saturdays.

9. PCC removal

All concrete removed shall be hauled off the Work site (including the Contractor's storage yard) no later than the calendar day following the day that the removal is performed. If the calendar day following the removal is a non-working day (Sunday, etc.) the concrete shall be hauled off the Work site on the same day it was removed. Unless otherwise authorized by the Engineer, failure by the Contractor to haul concrete from the Work site and/or Contractor's storage yard(s) in a timely manner may result in a liquidated damage assessed upon the Contractor. Such liquidated damage shall be determined by the Engineer and will be deducted, accordingly, from a Progress Payment due to the Contractor.

10. PCC construction

Contractor is allowed to close only one (1) northbound curb lane **or** one (1) southbound curb lane on Crenshaw Blvd on a 24-hour basis to complete the work. Contractor may work from 7:00 a.m. to 5:00 p.m. on weekdays and 8:00 a.m. to 5:00 p.m. on Saturdays during 24-hour lane closures.

Construction of PCC sidewalks, driveways, access ramps, curbs, gutters, and cross gutters shall be formed and poured within 5 working days following removal of the existing material at any location.

PCC cross-gutter removal and reconstruction required per plans shall occur prior to any pavement work. Their locations are at Crenshaw and the following intersecting streets:

- a. Hillside Drive (Eastside)
- b. Clarellen Street (Eastside)
- c. Dalemead Street (Eastside-partial, Westside)
- d. 238th Street (Eastside)
- e. 236th street (Westside)
- f. 232nd Street (Eastside)
- g. 231st Street (Eastside)
- h. 230th Place (Eastside)
- i. 228th Street (Eastside-partial)

Steel plate cover can be used during removal and curing of PCC cross gutters as needed.

Open trenches and curing concrete related to cross gutter work shall be plated and open to traffic by 4:00 p.m. such that vehicle access is provided during non-working hours. **Cross gutters at consecutive side streets may not be closed simultaneously.**

Any adjacent trench (i.e. 1-foot wide slot trench) required to remove and construct said PCC construction shall be restored per these Specifications and no later than 2 calendar days following the PCC construction.

Failure by the Contractor to comply with these requirements in a timely manner may result in a liquidated damage assessed upon the Contractor. Such liquidated damage shall be determined by the Engineer and will be deducted, accordingly, from a Progress Payment due to the Contractor.

11. Pavement removal - All pavement removed as a result of PCC work, AC dig-outs, and cold milling shall be hauled off the Work site the same day that the removal is performed.

12. AC Dig-Outs

Dig-out work requiring more than one lane closure shall take place between 9:00 a.m. and 3:30 p.m. on Monday through Friday and between 8:00 a.m. and 4:00 p.m. on Saturdays. Open trenches shall be plated by 4:00 P.M. such that vehicle access is provided during non-working hours.

13. Area 1, 2, 3 and Area 4, 5, 6 shall be considered separate work areas with regards to milling, overlay, cat-tracking, and pavement markings and markers work. The Contractor shall complete this work in one area before beginning in the other area.

14. Pavement Mill and Overlay

The contractor is required to construct the pavement operations per these specifications and the Traffic Control Plans. All pavement milling and overlay shall be complete in one stage prior to the start of work in any subsequent stage.

The Contractor may not simultaneously perform paving operations in Area 1, 2, 3 with Area 4, 5, 6.

The following is required:

Area 1, 2, 3:

Work is divided into four (4) separate stages as shown on the Traffic Control plans. The Contractor must work in only one stage at a time.

Crenshaw Blvd (south City limit to Pacific Coast Highway): The Contractor shall first cold mill existing asphalt and construct first 1.5" AC overlay in Stage 1, leave traffic control in place overnight, then adjust traffic control for work in Stage 2 on the following day. The same shall follow for Stages 3 and 4. The Contractor shall maintain access to all driveways and cross streets, except temporarily during cold mill and paving operations.

For work near Pacific Coast Highway, the Contractor shall adhere to Caltrans Encroachment Permit conditions and hours of closure.

Following cold mill and paving of first 1.5" AC overlay in all of Area 1, 2, 3, the Contractor shall apply final 1.5" AC surface cap over all of Area 1, 2, 3 in one day.

Area 4, 5, 6:

Work in Area 4, 5, 6 is also divided into four (4) separate stages as shown on the Traffic Control Plans. The Contractor must work in only one stage at a time.

Crenshaw Boulevard (Skypark Drive to Sepulveda Boulevard): The Contractor shall first cold mill existing asphalt and construct first 1.5" AC overlay in Stage 1, leave traffic control in place overnight, then adjust traffic control for work in Stage 2 on the following day. The same shall follow for Stages 3 and 4. The Contractor shall maintain access to all driveways and cross streets, except temporarily during cold mill and paving operations.

Following cold mill and paving of first 1.5" AC overlay in all of Area 4, 5, 6, the Contractor shall then apply the final 1.5" AC surface cap over all of Area 4, 5, 6.

SPECIAL CONDITION: For each stage, other than for weather conditions or unanticipated subgrade or changed conditions, the Contractor must place the initial 1.5" overlay the same day the milling work is performed. **Otherwise, the City will assess a penalty of \$5,000 per calendar day to the Contractor.**

For all Areas and all Stages, the Contractor must install and maintain temporary yellow and white reflective tabs until such time as the final permanent pavement striping and markings are installed.

15. All new traffic detector loops shall be installed PRIOR TO the installation of permanent thermoplastic pavement markings.

16. Permanent pavement markings and markers

Within 3 working days following the installation of the final asphalt concrete surface course, the Contractor shall complete the "cat-tracking" of all proposed pavement markings shown on the Plans. The CITY will inspect all "cat-tracking" within 2 working days and notify the Contractor of any needed corrections or adjustments. Upon approval of the "cat-tracking" by the Engineer, the Contractor shall then complete the installation of all thermoplastic pavement markers and markings, between 7 and 14 calendar days following completion of all paving work in a particular area. Accordingly, the Contractor is required to provide and maintain all temporary striping and/or reflectorized yellow and white pavements tabs until such permanent thermoplastic paint is applied.

17. Demolition of existing landscaping/irrigation, median concrete/hardscape

Work must be complete before the final 1.5" AC overlay is placed in Area 1, 2, 3.

Contractor is allowed to simultaneously close only one (1) northbound lane and one (1) southbound lane on Crenshaw Blvd to perform the work. Said lane closures are allowed only between 9:00 a.m. and 3:30 p.m. weekdays and only between 8:00 a.m. and 4:00 p.m. on Saturdays.

18. Irrigation systems - Irrigation systems disrupted by the Contractor shall not be left inoperable for more than three working days.

19. Hardscape/Landscape

New hardscape/landscape and irrigation within the limits of Area 1, 2, 3 must be installed before the final 1.5" overlay in Area 1, 2, 3 is completed.

Lane closures for this work are allowed only between 9:00 a.m. and 3:30 p.m. weekdays and only between 8:00 a.m. and 4:00 p.m. on Saturdays.

Should the Contractor fail to meet one or any of the above requirements, the Engineer reserves the right to prohibit the Contractor from making further removals until the clean up, construction, or rehabilitation of sprinklers is in conformance with the aforementioned requirements. Furthermore, if after notice is given to the Contractor to perform work to meet these requirements, and the Contractor refuses or for any reason fails to perform sufficiently to meet these schedules, CITY may perform said work and charge the Contractor for all costs incurred.

6-1.5 Updates. The Contractor shall submit 2 paper copies of the updated construction schedule to the Engineer on the first working day of each month.

If the Contractor decides to make a major change in the method of operations after commencing construction, or if the schedule fails to reflect the actual progress, the Contractor shall submit to the Engineer a revised construction schedule in advance of beginning revised operations.

Full compensation for complying with all requirements of Section 6-1.5 Updates shall be per the Contract Unit Price for CONSTRUCTION SCHEDULE. If the Contractor fails to submit an updated Construction Schedule to the Engineer on the first working day of each month, the CITY will deduct one-fifth the amount of the Contract Unit Price for each work day after the due date, up to maximum of \$300, that each monthly schedule update is not submitted.

6-7 TIME OF COMPLETION

6-7.1 General. Replace the first sentence with the following:

Time shall be of the essence in the Contract. The Contractor shall begin Work after the mailing by the Engineer to the Contractor, first class mail, postage prepaid, a Notice to Proceed and shall diligently prosecute the same to completion within 120 working days from the start date specified in the Notice to Proceed.

6-8 COMPLETION, ACCEPTANCE AND WARRANTY

6-8.1 Completion. Replace the entire subsection with the following:

If, in the Engineer's judgment, the Work has been completed and is ready for acceptance, the Engineer will so certify and will determine the date when the Work was completed. This will be the date when the Contractor is relieved from responsibility to protect the Work. The Engineer may cause a Notice of Completion to be filed and recorded with the Los Angeles County Recorder's Office. At the Engineer's option, the Engineer may certify acceptance to the City Council who may then cause a Notice of Completion to be filed and recorded with the Los Angeles County Recorder's Office.

6-8.3 Warranty. Add the following subsection:

6-8.3.1 Manufacturer's Warranties. Manufacturer's warranties shall not relieve the Contractor of liability under these Specifications. Such warranties only shall supplement the Contractor's responsibility. The Engineer may, at his option, require a manufacturer's warranty on any product offered for use.

6-9 LIQUIDATED DAMAGES. In each of the two paragraphs, substitute "\$1,000" in place of "\$250" as the amount of the liquidated damages per each consecutive calendar day.

Add the following section:

6-11 SEQUENCE OF CONSTRUCTION

6-11.1 Multiple Headings. In order to meet the contract schedule, the Contractor will be allowed to initiate and maintain two or more construction headings. However, the Contractor will not be allowed to have multiple phases of work occurring that have the corresponding traffic control devices in conflict with each other.

SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

7-2 LABOR

Add the following subsections:

7-2.3 Payroll Records. Add the following:

Any payroll and payroll records required for this project shall be submitted, for each week in which any contract work is performed, to the Engineer. A retention of \$5,000 per report per pay

period will be withheld from a progress payment for a late or missing report. A report shall be deemed as late or missing when not submitted to the Engineer within 10 calendar days from the close of the pay period for which the report applies. In addition, a non-refundable deduction of \$100 per report per day will be deducted from payments due the Contractor for each late or missing report. The \$100 non-refundable deduction per day will be incurred beginning on the first day the report is late or missing.

Add the following subsections:

7-2.5 Subcontractor and DBE Records

At the completion of the contract if the Contractor does not submit its Subcontractor and DBE Records to the Engineer a retention in the amount of \$10,000 per record will be withheld from a progress payment for a late or missing record. A record shall be deemed as late or missing when not submitted to the Engineer within 15 calendar days from the completion of the contract. In addition, a non-refundable deduction of \$300 per record per day will be deducted from payments due the Contractor for each late or missing record. The \$300 non-refundable deduction per day will be incurred beginning on the first day the record is late or missing.

7-2.6 Department of Industrial Relations' monitoring and enforcement of prevailing wage laws

California Labor Code:

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

SB 854 amended the Labor Code to require all contractors bidding on public work to register with the Department of Industrial Relations (DIR) and to pay an annual fee. The registration requires contractors to provide the State with evidence of the contractors' compliance with a number of statutory requirements. The registration requirement took effect on July 1, 2014 to fund the Department of Industrial Relations' monitoring and enforcement of prevailing wage laws. The registration period is open now, and contractors and subcontractors wishing to work on a public works project must be registered by March 1, 2015. For public agencies/awarding bodies, the new law requires that all public works projects with bids due after March 1, 2015, or awarded on or after April 1, 2015, use only registered contractors and subcontractors. The bill also requires awarding bodies to include notice of the registration requirement in their bid invitations and bid documents. In addition, public agencies must also file notice of their public works projects using DIR approved forms.

Registration is completed through an online application and requires a non-refundable \$300 fee to be paid by the contractors and subcontractors. The registration process requires contractors to:

- provide workers' compensation coverage to its employees

- hold a valid Contractors State License Board license
- have no delinquent unpaid wage or penalty assessments
- not be subject to federal or state debarment

Contractors must pay an annual renewal fee by July 1 of each year. The registration form is located on the DIR's website at <http://www.dir.ca.gov/DLSE/dlsepublicworks.html>.

To help awarding bodies and contractors comply with the new requirements, the DIR will post a database of registered contractors and subcontractors on its website. While non-registered contractors may not be awarded public works contracts after the effective date, inadvertently listing an unregistered subcontractor on a bid will not necessarily invalidate that bid. In addition, the registration requirement does not apply to private jobs that are determined to be public works after the contract has been awarded.

The City is required to provide notice of award to the DIR on all projects. Said notice is by an online application and within five (5) days of project award. The online application is at: <https://www.dir.ca.gov/pwc100ext/>

7-3 INSURANCE

7-3.2 General Liability Insurance. Replace the second sentence of the second paragraph with the following:

The Contractor must maintain at its sole expense the following insurance, which will be full coverage not subject to self-insurance provisions:

- 1) Automobile Liability, including owned, non-owned and hired vehicles, with at least the following limits of liability:
 - a) Combined single limits of \$2,000,000 per occurrence.
- 2) General Liability including coverage for premises, products and completed operations, independent contractors, personal injury and contractual obligations with combined single limits of coverage of at least \$3,000,000 per occurrence, with an annual aggregate of no less than \$5,000,000.

Add the following:

The Contractor must include all subcontractors as insureds under its policies or must furnish separate certificates and endorsements for each subcontractor.

7-3.3 Worker's Compensation Insurance. Add the following after the fourth paragraph:

Worker's Compensation Insurance shall be with limits as required by the State of California and Employer's Liability with limits of at least \$1,000,000.

7-3.4 Auto Liability Insurance Delete subsection in its entirety.

7-5 PERMITS. Replace the second paragraph with the following:

The Contractor shall obtain a City of Torrance Business License and a no-fee Construction Excavation Permit before commencing construction. The Contractor shall obtain no-fee Electrical

and Plumbing permits from the Building and Safety Department before commencing installation of new electrical services or on-site irrigation systems, as applicable.

Full compensation for complying with the above requirements shall be considered as included in the prices bid for the appropriate items of work.

Add the following subsections:

7-5.1 State Encroachment Permit. A State of California Department of Transportation (Caltrans) Encroachment Permit will be obtained by the City. Changes will be incorporated into the bid phase or contract via addendum or change order upon receipt of the permit.

However, the Contractor shall submit to Caltrans, a signed application requesting a separate permit authorizing the Contractor to perform the work within Caltrans right-of-way for the CITY. The Contractor shall pay all charges, fees and bonds for this permit. The application shall be made to the State of California, Department of Transportation, 120 South Spring Street, Los Angeles, CA 90012, telephone (213) 897-3631.

Full compensation for complying with the above requirements shall be considered as included in the lump sum price for CALTRANS PERMIT AND FEES REIMBURSEMENT. However, this is not the amount that will be paid to the Contractor. The amount that shall be paid to the Contractor shall be the actual permit and inspection fees paid to the State with no mark-up or extra costs, except the Contractor shall be solely responsible for any fee charged to re-inspect rejected or incomplete work.

Unless otherwise authorized by the State Encroachment Permit, all work within Caltrans Right-of-Way shall be performed in accordance with the latest State of California Department of Transportation Standard Specifications and said permit.

7-6 THE CONTRACTOR'S REPRESENTATIVE

Add a third paragraph to the section stating the following:

The Contractor's Representative shall be approved by the CITY prior to the start of the Work. If the designated representative is rejected, the Contractor shall immediately designate another representative in writing and submit to the City for consideration. The CITY shall have the authority to require the Contractor to remove its representative and/or alternate representative at any time and at no cost to the CITY.

7-8 WORK SITE MAINTENANCE

7-8.1 General. The second paragraph is amended to read:

Unless directed otherwise by the Engineer, the Contractor shall furnish and operate a self-loading motor sweeper with spray nozzles at least once each working day to keep paved areas acceptably clean to the City whenever construction, including restoration, is incomplete.

7-8.6 Water Pollution Control

7-8.6.1 General. Replace the entire subsection with the following:

NPDES General Permit, Notice of Intent (NOI) and Notice of Termination (NOT)

Construction activities including clearing, grading and excavating that result in land disturbances of equal to or greater than one acre are covered by the National Pollutant Discharge Elimination System General Construction Permit, State Water Board Order No. 2012-0006-DWQ and any amendments thereto. A copy can be downloaded at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/wqo12.shtml

Dischargers obtaining coverage will file electronically for coverage under Order No. 2012-0006-DWQ. Order No. 2012-0006-DWQ is a Risk Based permitting approach. The Contractor is required to review the State Water Resources Control Board website and determine this project's risk level.

Order No. 2012-0006-DWQ includes, in Attachment A, requirements for all Linear Underground/Overhead Projects (LUPs) that are covered under the Small LUP General Permit 2003-007-DWQ. LUPs will be broken into project segments designated as LUP Type 1, Type 2, and Type 3. These LUP Types are analogous to the risks levels for traditional construction projects.

This General Construction Permit regulates pollutants in discharges of storm water associated with construction activity. To obtain authorization for proposed storm water discharges, pursuant to this General Construction Permit, the CITY must submit to the Storm Water Multiple Application and Reporting Tracking System (SMARTS) a Notice of Intent (NOI), compliance and monitoring data and Annual Reports, when required, and a Notice of Termination (NOT). The Contractor shall provide to the CITY, at the required time, all required information necessary for the CITY to comply with these requirements.

The Contractor shall provide to the CITY its Storm Water Pollution Prevention Plan (SWPPP) both in hardcopy and pdf format, so the City may submit the SWPPP to the SMARTS online.

Following Construction and the Contractor's installation of any post-construction storm water Best Management Practices BMPs (for CITY approval), the Contractor shall notify the CITY in writing to request for consideration to terminate coverage under the General Construction Permit for a complete project and to submit a NOT via the SMARTS.

Full compensation for preparation, administration and all other work related of the NOI, NOT, required fees, construction, and post construction BMPs, sampling, analysis and reporting as required by Order No. 2012-0006-DWQ and all other related costs shall be considered as included in the bid for NPDES COMPLIANCE.

7-8.6.2 Best Management Practices (BMPs). Replace the entire subsection with the following:

Best Management Practices shall be defined as any program, technology, process, siting criteria, operating method, measure, or device which controls, prevents, removes, or reduces pollution. The Contractor shall obtain and refer to the California Stormwater Quality Association's: Stormwater Best Management Practice Handbook Portal: Construction. The publication is available from CASQA.

The Contractor shall have a minimum of two (2) readily accessible copies of each publication on the Work site at all times. The Contractor shall implement BMPs in conjunction with the following construction operation and activities:

	Clearing, Grading and Excavating
	Water Conservation Practices

CONSTRUCTION PRACTICES	Dewatering
	Paving Operations
	Structure Construction and Painting
MATERIAL MANAGEMENT	Material Delivery and Storage
	Material Use
	Spill Prevention and Control
WASTE MANAGEMENT	Solid Waste Management
	Hazardous Waste Management
	Contaminated Soil Management
	Concrete Waste Management
	Sanitary/Septic Waste Management
VEHICLE AND EQUIPMENT MANAGEMENT	Vehicle and Equipment Cleaning
	Vehicle and Equipment Fueling
	Vehicle and Equipment Maintenance

The Contractor shall implement the following BMPs in conjunction with the previously listed construction operation activities:

VEGETATIVE STABILIZATION	Scheduling of Planting
	Preservation of Existing Vegetation
	Temporary Seeding and Planting
	Mulching
PHYSICAL STABILIZATION	Geotextiles and Mats
	Soil Stabilizer/Dust Control
	Temporary Stream Crossing
	Stabilized Construction Roadway
	Stabilized Construction Entrance
RUNOFF DIVERSION	Sodding, Grass Plugging, and Vegetative Buffer strips
	Earth Dikes, Drainage Swales, and Lined Ditches
	Top and Toe of Slope Diversion Ditches/Berms
	Slope Drains and Subsurface Drains
VELOCITY REDUCTION	Flared Culvert End Sections
	Outlet Protection/Velocity Dissipation Devices
	Check Dams
	Slope Roughening/Terracing/Rounding
SEDIMENT TRAPPING	Slit Fences
	Straw Bale Barrier
	Sand Bag Barrier
	Brush or Rock Filter
	Storm Drain Inlet Protection
	Sediment Traps
	Sediment Basin

Additional BMPs may be required as a result of a change in actual field conditions, contractor activities, or construction operations. When more than one BMP is listed under each specific BMP category, the Contractor shall select the appropriate and necessary number of BMPs within each category in order to achieve the BMP objective.

BMPs for contractor activities shall be continuously implemented throughout the year. BMPs for erosion control and sedimentation shall be implemented during the period from October 15 to

April 15, and whenever the National Weather Service predicts rain within 24 hours. BMPs for erosion control and sedimentation shall also be implemented prior to the commencement of any contractor activity or construction operation that may produce run-off, and whenever run-off from other sources may occur.

The CITY, as a permittee, is subject to enforcement actions by the State Water Resources Control Board, the Environmental Protection Agency and private citizens. The CITY may assess the Contractor a penalty of \$1,000 for each calendar day that the Contractor has not fully implemented the appropriate BMPs and/or is otherwise in noncompliance with these provisions. In addition, the CITY will deduct, from the final payment due the Contractor, the total amount of any fines levied on the CITY, plus legal and staff costs, as a result of the Contractor's lack of compliance with these provisions and/or less than complete implementation of the appropriate BMPs.

Full compensation for the implementation of BMPs, including the construction, removal, and the furnishing of all necessary labor, equipment, and materials, shall be considered as included in the price bid for NPDES COMPLIANCE.

7-8.6.3 Storm Water Pollution Prevention Plan (SWPPP). Replace the entire subsection with the following:

Construction activities covered by the General Permit require submittal by the Contractor of a Storm Water Pollution Prevention Plan (SWPPP) prior to the start of any clearing, demolition, grading or excavation. A Storm Water Pollution Prevention Plan (SWPPP) shall be defined as a report that includes site map(s), identification of construction and contractor activities that could pollute storm water, and a description of measures and practices to control the potential pollutants. The preparation and implementation of the SWPPP is intended to ensure that the Contractor will make every reasonable effort to prevent the pollution of water resources during the period of construction. The size and nature of this Contract place it under the regulations of the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharge Associated with Construction Activity. In the State of California, these regulations are adopted by the State Water Resources Control Board. These regulations require a SWPPP for any work where clearing, grading, and excavation result in a land disturbance of one or more acres. As a result, the Contractor shall prepare, submit to the CITY for review and approval, and implement a SWPPP for this Contract in compliance with these regulations.

The Contractor must submit the initial SWPPP document (2 hard copies and one pdf copy) to the CITY no later than fifteen (15) working days following the approval by the City Council of the Contract. The City will review the SWPPP within seven (7) calendar days. Should revisions be required, the Contractor shall again submit 2 hard copies and one pdf copy of the revised SWPPP. The City may take up to three (3) working days to re-review each revision. After the City determines the SWPPP is acceptable and has no exceptions, the City will submit (upload) the SWPPP document to the online SMARTS system. The Contractor must allow for up to 7 calendar days for issuance of the WDID number, following upload of the document. No work may commence and no Notice to Proceed will be issued prior to the issuance of the WDID number. The Contractor shall consider this in its schedule in accordance with Section 6-1 of these Special Provisions. The SWPPP shall remain on the construction site while site is under construction, during working hours, commencing with the initial construction activity and ending with Notice of Termination.

If, during construction operations, field conditions change in a manner which, in the opinion of the Engineer, significantly deviates from how the SWPPP, as approved by the CITY, addressed the current construction operation, the Engineer may direct the Contractor to revise the current

construction operation and/or the SWPPP. Such directions will be made in writing and will specify the items of work for which the SWPPP is inadequate. No further work on these items will be permitted until the Contractor revises the construction operations to the satisfaction of the Engineer and/or until the Contractor submits a revised SWPPP and receives CITY approval. The Engineer will notify the Contractor of the acceptance or rejection of the revised SWPPP within seven (7) working days from the date of submittal.

Full compensation for preparation of the SWPPP, all revisions to the SWPPP, and all other related costs, excluding the WDID permit fee from the State Water Resources Control Board, shall be considered as included in the bid price for STORM WATER POLLUTION PREVENTION PLAN.

Full compensation for the WDID permit fee (Construction annual fee by acre), pursuant to the above requirements, shall be considered as included in the allowance price for NPDES PERMIT FEE. The amount that will be paid to the Contractor will be the actual permit and inspection fees paid to the State and the cost of postage and/or delivery fee (FED EX; UPS; USPS, etc.) paid to the State with no other mark-up or extra costs, except the Contractor shall be solely responsible for any fee charged to re-inspect rejected or incomplete work. Permit fee amounts can be viewed at: http://www.swrcb.ca.gov/water_issues/programs/stormwater/gen_const_faq.shtml#4

7-8.6.5 Payment. Delete this subsection in its entirety.

Add the following subsections:

7-8.7 Temporary Light, Power, and Water. Add the following:

The Contractor shall furnish, install, maintain, and remove all temporary light, power, and water at its own expense. These include piping, wiring, lamps and other equipment necessary for the Work. The Contractor shall not draw water from any fire hydrant (except to extinguish a fire), without obtaining permission from the water agency concerned.

The Contractor shall obtain a construction water meter from the CITY by calling Global Water at 855-354-5623. A \$1,000 deposit is required and refundable upon return of the meter in good working condition. The Contractor shall pay for the water used, at the CITY's current water rates.

Some water mains in Torrance are owned/operated by California Water Service. For rental of a hydrant meter the contractor shall call California Water Service at (310) 257-1400.

7-8.8 Contractor's Storage Yard. The Contractor shall be responsible for obtaining a storage yard for the duration of the Work. If the proposed location of the yard is located within the boundaries of the CITY, the Contractor shall obtain prior approval from the Engineer.

7-8.9 Graffiti Removal. The Contractor shall maintain the Work, all of its equipment, and all traffic control devices, including signage, free of graffiti throughout the duration of the Contract. The Contractor shall respond to any request from the Engineer to remove graffiti within 4 hours of notification. Should the Contractor fail to respond to such request, the CITY reserves the right to make other arrangements for the requested graffiti removal and deduct the cost from any monies due the Contractor.

7-9 PROTECTION AND RESTORATION OF EXISTING IMPROVEMENTS. Add the following paragraphs:

The Contractor shall be responsible to protect all new concrete work from being etched, scratched or otherwise marked or having wet slough material deposited thereon. If new concrete

work is marked, the Contractor shall replace it at its expense in accordance with 303-5.7 of these special provisions.

The Contractor shall perform all private lawn, hardscape, and parkway restorations, (not included in the project plans) including restoration of irrigation systems and existing curb drains within five (5) days after the adjacent improvements have been constructed at his own expense. The Contractor shall not delay restorations for tree plantings.

Add the following subsections:

7-9.1 Replacement of Lawns. When the Contract requires the removal and replacement of lawns or sod, including parkways, the Contractor shall comply with the following minimum requirements: the area to be replanted shall be regraded and covered with two inches of an approved topsoil; the grass seed or sod shall be for grass or sod of the same type as was removed, or an approved equal, and grass shall be sown at the rate recommended by the seed distributing company; Bandini steer manure or approved equal shall be applied to the planted area at the rate recommended by the vendor. The Contractor shall water and care for replaced lawns until the grass has attained a complete cover and has been given its first cutting, unless other arrangements are made with the property owners. The lawn restoration, as above described, shall be completed prior to the final payment.

Topsoil shall be in accordance with 212-1.1.

7-9.2 Replacement of Sprinkler Systems. Damaged sprinklers shall be replaced so that the area watered by the original system will be adequately watered by the reconstructed system without undue waste of water. Overspray on any area no longer planted should be avoided, and any revised shape or layout of the remaining planted area will be adequately watered. Any additional material or work required to obtain said adequate coverage shall be furnished by the Contractor, at its expense. The Contractor shall be responsible to replace any lawn or plant damaged from lack of irrigation resulting from the Contractor's operations, at its expense, to the satisfaction of the Engineer.

7-9.3 Parkway Trees. The Contractor shall exercise all necessary precautions so as not to damage or destroy any trees or shrubs and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the Engineer. All existing trees and shrubs that are damaged during construction shall be trimmed or replaced by the Contractor or a certified tree company to the satisfaction of the Engineer. Tree trimming and replacement shall be accomplished in accordance with the following requirements:

- (a) Trimming. Symmetry of the tree shall be preserved; no stubs, splits torn branches or torn roots left; clean cuts to be made close to trunk or large branch. Spikes shall not be used for climbing live trees. All cuts over one and one-half inches in diameter shall be coated with a suitable tree wound paint as approved by the Engineer.
- (b) Replacement. The Contractor shall immediately notify the Engineer if any tree is damaged by its operations. If, in the opinion of the Engineer, the damage is such that replacement is necessary, the Contractor shall replace the tree at its own expense. The tree shall be of a like variety as the tree damaged, subject to the approval of the Engineer. The size of the tree shall be the size of the tree replaced or 3" in diameter, whichever is smaller.

7-9.4 Street Furniture. The Contractor shall be responsible for removal, storage and replacement of trash receptacles, bus benches, bus enclosures, newspaper boxes, mail boxes, etc. and coordination with the Owners as required throughout construction. Replacement of the removed items shall be per the direction of the Owner or Engineer.

7-9.5 Protection of Existing Pavement Surfaces from Tack Coat and Oil. When work requires the placement of a tack coat pursuant to Subsection 302-5.4, the Contractor shall protect existing pavement surfaces outside of the work limits from the spreading of tack coat and oil adhering to truck tires exiting work area. The protected area shall extend the full width of the street and be by either of the following methods:

1) The Contractor shall wet the existing pavement surface to a distance of ten (10) feet away from the work limit. The wetted area shall be maintained as such until placement of asphalt concrete pavement is completed; OR

2) The Contractor shall provide a thin spreading of sand or rock dust material to a distance of five (5) feet away from the work limit. The sand or rock dust area shall be maintained as such until placement of asphalt concrete pavement is completed. The Contractor shall be responsible to remove the sand or rock dust immediately after the placement of asphalt concrete pavement is completed.

7-9.6 Curb Addresses. The Contractor shall be responsible to repaint addresses (4-inch high black numbers on white background) on curb faces when printed addresses have been removed due to curb construction.

7-10 PUBLIC CONVENIENCE AND SAFETY

7-10.1 Access

7-10.1.2 Vehicular Access Replace the entire subsection with the following

The Contractor's operations shall cause no unnecessary inconvenience. The access rights for the public shall be considered at all times. Unless otherwise authorized, traffic shall be permitted to pass through the Work, or an approved detour shall be provided.

Safe and adequate vehicular access shall be provided and maintained to: fire hydrants; commercial and industrial establishments; churches, schools and parking lots; service stations and motels; hospitals; police and fire stations; and establishment of similar nature. Access to these facilities shall be continuous and unobstructed unless otherwise approved by the Engineer.

Vehicular access to residential driveways shall be maintained to the property line except when necessary construction precludes such access. When the Contractor begins excavation of a residential driveway, safe access shall be provided within 4 hours and not later than the end of the same workday in which excavation began.

Unless otherwise authorized, work shall be performed in only one-half the roadway at one time. One half shall be kept open and unobstructed until the opposite side is ready for use. If one-half a street only is being improved, the other half shall be conditioned and maintained as a detour.

The Contractor shall provide the necessary measures to prevent public access to private residences during removal and replacement of existing barrier structures, such as wood and chain link fences, during non-working hours.

The Contractor shall be responsible to provide at least 48 hours written notice to each affected property before closing or partially closing any driveway or pedestrian access.

Unless the Contractor makes other arrangements satisfactory to the owners, the Contractor shall provide and maintain safe, adequate vehicular access to places of business and public gathering as stated herein below:

- (a) For each establishment (such as, but not limited to, gas stations, markets, and other "drive-in" business) on the corner of an intersection, which has a driveway (or driveways) on each intersecting street, the Contractor shall provide vehicular access to at least one driveway on each intersecting street insofar as the access is affected by the Contractor's operations.
- (b) For each establishment (such as, but not limited to, motels, parking lots and garages) which has a one-way traffic pattern with the appropriate entrance driveway and exit driveway, the Contractor shall provide vehicular access to the entrance driveway and the exit driveway insofar as the access is affected by the Contractor's operations.
- (c) The Contractor shall provide vehicular access to all schools and parking lots including, but not limited to, apartment building parking lots.
- (d) The Contractor shall provide vehicular access to all establishments requiring such access for receiving or delivering materials or supplies and for delivery of mail.
- (e) The Contractor shall make every reasonable effort to provide maximum access to churches on their Sabbath days. In addition, the Contractor shall not park or store equipment at the site of a church on its Sabbath days.
- (f) At least three (3) days prior to starting work in any location, the Contractor shall distribute written notices to all homeowners and residents that will be impacted by the work. The City will provide the notice.
- (g) The Contractor shall provide a minimum 1-inch thick temporary asphalt surface for an access ramp or sidewalk if it is not able to install the permanent improvement within 5 working days following the removal of the existing material at any location. The offset at any transverse or longitudinal joint shall not be more than one-half (1/2) inch. On the temporary asphalt surface: the running slope shall not exceed 1:20; the cross slope shall not exceed 1:50. The Contractor shall not be allowed any additional compensation for the installation and removal of temporary asphalt.
- (h) The Contractor shall protect the work from traffic. Should the slurry seal be damaged, the Contractor shall provide satisfactory repairs at no cost to the City.

Should any change in these requirements be necessitated by extraordinary occurrences or requirements during the execution of the Work, the Contractor shall obtain prior written approval of the Engineer.

All costs for the above requirements shall be included in the Contract Unit Price for "TRAFFIC CONTROL".

7-10.1.3 Pedestrian Access. Replace the entire subsection with the following:

The Contractor's operations shall cause no unnecessary inconvenience. The access rights for the public shall be considered at all times, unless otherwise approved by the Engineer.

Safe and adequate pedestrian access shall be provided and maintained to: fire hydrants; commercial and industrial establishments; churches, schools and parking lots; service stations and motels; hospitals; police and fire stations; and establishment of similar nature. Access to these facilities shall be continuous and unobstructed unless otherwise approved by the Engineer.

Safe and adequate pedestrian zones and public transportation stops, as well as pedestrian crossings of the Work at intervals not exceeding 300 feet, shall be maintained unless otherwise approved by the Engineer.

All costs for the above requirements shall be included in the Contract Unit Price for TRAFFIC CONTROL.

7-10.2 Work Area Traffic Control

7-10.2.1 General. Delete subsection in its entirety.

7-10.2.2 Traffic Control Plan (TCP). Replace the entire subsection with the following:

The approved TCP included in the Contract shall be strictly adhered to, and the Contractor hereby understands and agrees that its failure to provide any facility or device as shown on the TCP, or its deviation from said Plan, unless otherwise approved by the Engineer shall constitute a breach of Contract.

7-10.2.3 Payment. Replace entire subsection with the following:

Full compensation for complying with the submittal requirements, furnishing, placing and removing traffic control shall be per the Contract Unit Price for TRAFFIC CONTROL.

Add the following subsections:

7-10.2.4 Minimum Requirements for Maintaining Traffic Flow. The Contractor shall observe the following minimum requirements:

- a) Unless otherwise shown on the Traffic Control Plans, permitted by this Contract or authorized by the Engineer, all roadways, driveways, travel and turning lanes, sidewalks and access ramps shall remain open at all times.
- b) The Contractor shall provide adequate steel plating to cover and protect a newly poured PCC cross gutter with spandrels and integral curb in order to allow traffic flow and not close a street. A minimum lane width of 14 feet shall be provided over the steel plating.
- c) The contractor shall implement traffic control according to the traffic control plans, however, at a minimum, the Contractor shall maintain one (1) ten (10) foot-wide lane open in each direction between the hours of 9:00 a.m. and 3:30 p.m. All travel lanes shall be kept open all other times.
- d) Any travel lane adjacent to the curb and within the work zone shall be, at a minimum, a twelve (12) foot-wide lane.

- e) Reduction in lane requirements may be afforded only with prior written approval from the Engineer.
- f) Traffic signs, flaggers, warning devices, safety traffic devices and, on select streets, electronic arrow boards for diverting and directing traffic shall be furnished, installed and maintained by the Contractor throughout the project.
- g) The Contractor must provide access through the work zone in non-working hours by means of temporary ramps. Open trenches shall either be covered by steel plates, or ramped with crushed miscellaneous base. No drop-off at either transverse or longitudinal joints shall be allowed at any time. Temporary ramps, including those for driveway access, shall be constructed with either crushed miscellaneous base or temporary asphalt, as appropriate, with a minimum of 1" to 12" slope in both longitudinal and transverse directions.

All costs for the above requirements shall be included in the Contract Unit Price for Traffic Control.

7-10.2.5 Temporary Pavement Markings. If permanent pavement markings cannot be restored by the end of the work shift in which they were obliterated, temporary markings shall be provided by the Contractor prior to leaving the Work site on all streets except any street closed to through traffic. These temporary markings shall be as follows:

Temporary lanelines and/or centerlines shall consist of day/night reflectorized raised pavement markers, approved by the Engineer, spaced approximately twenty-four (24) feet apart. A list of approved day/night reflectorized raised pavement markers may be obtained from the CITY.

Where approved by the Engineer, the Contractor may use reflectorized lines approximately twenty-four (24) inches long and four (4) inches wide, spaced approximately twenty-four (24) feet apart.

Right edgelines shall not be simulated with dashes or pavement markers; however, portable delineators, guide markers, etc., may be used by the Contractor where it is considered desirable to enhance the edge of traveled way due to curvilinear alignment, narrowing pavement, etc., and shall be used when directed by the Engineer.

Locations where no-passing zone centerline delineation has been obliterated shall be posted by the Contractor with a sign package consisting of a **W20-1 "ROAD WORK AHEAD"** and **SC13 "DO NOT PASS"**.

All temporary pavement markings and signs shall be maintained, or replaced as necessary by the Contractor, until permanent pavement markings are restored.

All costs associated with the above requirements shall be included in the Contract Unit Price for Traffic Control.

7-10.2.6 Temporary Pavement Markers/Delineation. Temporary pavement delineation shall be furnished, placed, maintained and removed in accordance with the provisions of Section 12-3.01, of the Caltrans Standard Specifications. Nothing in these Special Provisions shall be construed as to reduce the minimum standards specified in the Manual of Traffic Controls published by Caltrans or as relieving the Contractor from responsibility as provided in 7-10 of these Special Provisions.

Whenever the work causes obliteration of pavement markers and/or delineation, the Contractor shall set in place temporary pavement markers/delineation prior to opening the traveled way to traffic. All pavement markers/delineation, including but not limited to lane lines, centerlines,

directional arrows, pavement legends, etc, shall be provided at all times for traveled ways open to traffic.

All work necessary to establish temporary pavement markers/delineation shall be performed by the Contractor. Surfaces on which temporary pavement delineation is to be applied shall be cleaned of all dirt and loose material and shall be dry when the pavement delineation is applied. Temporary pavement markers/delineation shall not be applied over existing pavement delineation or other temporary pavement delineation.

Temporary pavement markers/delineation shall be maintained until replaced with permanent pavement markers/delineation. Temporary pavement delineation shall be removed when 1) it conflicts with the permanent pavement delineation; 2) a new traffic pattern is established or 3) as determined by the Engineer.

Temporary pavement delineation shall consist of temporary reflective raised pavement markers placed on lane lines and centerlines at longitudinal intervals of not more than 24 feet apart. Temporary reflective raised markers shall be the same color as the lane line or centerline the markers replace. Temporary reflective raised pavement markers shall be, at the option of the Contractor, one of the following or approved equal:

Apex Universal Product No. 2SCSM-1W or 2SCSM-2Y markers manufactured by Apex Universal, 11033 Forest Place, Santa Fe Springs, CA 90607, Telephone (562) 944 8878.

Flex-O-Lite Raised Construction Marker (RCM), manufactured by Flex-O-Lite, Lukens Company, P.O. Box 4366, St. Louis, MO 63123-0166, Telephone (800) 325-9525.

Temporary reflective raised pavement markers shall be placed as directed by the Engineer. Temporary reflective raised pavement markers shall be applied to the pavement surface with the adhesive in accordance with the manufacturer's instructions. Epoxy adhesive shall not be used to apply temporary reflective raised pavement markers in areas where the pavement will not be removed.

Temporary lane line or centerline delineation consisting of temporary reflective raised pavement markers placed on longitudinal intervals of not more than twenty-four (24) feet, shall be used on lanes opened to public traffic for a maximum of fourteen (14) days. Prior to the end of the fourteen (14) days the planned permanent pavement delineation, except permanent pavement markers, shall be placed. If the planned permanent pavement delineation, exclusive of permanent pavement markers, is not placed within fourteen (14) days, the Contractor shall provide, at its expense, additional temporary pavement delineation as directed by the Engineer. The additional temporary pavement delineation to be provided shall be equivalent to the pattern specified for the permanent traffic lines as determined by the Engineer.

Full compensation for furnishing, placing, maintaining, and removing the temporary pavement markers/delineation shall be considered as included in the Contract Unit Price for TRAFFIC CONTROL.

7-10.2.7 Temporary "No Parking" Signs. The Contractor is responsible to post "Temporary No Parking" signs at least forty-eight (48) hours in advance of the first date of work and the required enforcement. If work is to begin on either a Monday or Tuesday, the Contractor shall post the signs on a Friday. Each sign must include text indicating the beginning and end dates and the hours in effect. "Tow-Away" and "No Parking" must be shown on each sign face. If it is required to temporarily restrict parking 24 hours/day then "Tow-Away" and "No Parking Anytime" must be shown on each sign face. The signs shall be mounted on either 1" x 2" X 3' high wood stakes, Type

II barricades, or 39-inch high delineators. Signs shall be spaced at approximately 100' intervals on the effected side(s) of the street. Signs shall not be posted on trees, traffic signal poles, utility poles, street lights, or any other street furniture.

Signs shall be professionally made of moisture-resistant, heavy duty cardboard or other approved material. All signs shall be maintained by the Contractor and kept free of graffiti. Any sign that becomes illegible or is removed shall be replaced within twenty-four (24) hours. The Contractor shall only be permitted to restrict parking for the minimum time necessary to complete on-going work. The Contractor shall be responsible to remove and repost "Temporary No Parking" signs when work will be delayed for more than five (5) consecutive days, or if the work must go beyond the end date shown on the signs, or otherwise directed by the Engineer.

The Contractor shall obtain approval for the signs and the placement thereof from the Engineer. Immediately after this approval and posting, the Contractor shall notify Torrance Police Department, Traffic Division, at (310) 618-5557 for review and enforcement. The parking restriction cannot be enforced until the signs have been in place 48 hours and the Police notified.

The Contractor shall maintain said signs through the day of work, and shall remove all of said signs on or within one (1) calendar day of the completion of work within the restricted parking area.

If, in the event a street scheduled for slurry or cape sealing was missed, the Contractor shall immediately remove all "No Parking" signs and notify all residents and others previously notified, with printed notices, that due to unforeseen circumstances, the Contractor was not able to seal the street as previously notified, that the street will be rescheduled in approximately 1 to 2 weeks, and that they will be re-notified. The Contractor shall, on the job site prior to the start of each day's work, have an adequate supply of approved letters of notification to residents for missed streets.

Full compensation for furnishing, placing, maintaining and removing temporary signs shall be considered as included in the Contract Unit Price for Traffic Control.

7-10.2.8 Holiday Moratorium. No reduction in lane widths on any major street shall be permitted during the CITY's holiday period construction moratorium, which begins on the Monday prior to Thanksgiving and ends on the Friday following New Year's Day. No traffic signal shall be out of operation for any period of time during said moratorium.

7-10.2.9 Refuse Collection. Refuse collection days are established and will not be changed. Consult the Engineer regarding the refuse collection schedule. The Contractor shall ensure streets and alleys affected by the work are accessible to the CITY's automated trash trucks on designated pick up days. In alleys, Contractor shall be responsible to provide and maintain access to large trash containers during the course of the work.

7-10.2.10 Protection of Permanent Pavement Markings, Manholes, Valves. The Contractor shall, in areas outside of the work zone, protect existing raised pavement markers, thermoplastic legends and markings.

The contractor shall be responsible for replacing or restoring any damaged items to the satisfaction of the Engineer.

Full compensation for the items in this subsection shall be considered as included in the Contract Unit Price for the type of marking or marker damaged.

7-10.5.3 Steel Plate Covers. Replace the entire subsection with the following:

When backfilling operations of an excavation in the traveled way, whether transverse or longitudinal cannot be properly complete within a work day, steel plate bridging with a non-skid

surface and shoring may be required to preserve unobstructed traffic flow. In such cases, the following conditions shall apply:

1. Steel plate used for bridging shall extend a minimum of 12-inches beyond the edges of the trench.
2. Steel plate bridging shall be installed to operate with minimum noise.
3. The trench shall be adequately shored to support the bridging and traffic loads.
4. Temporary paving with cold asphalt concrete shall be used to feather the edges of the plates, if plate installation by Method (2) described below, is used.
5. Bridging shall be secured against displacement by using adjustable cleats, shims, or other devices.

Steel plate bridging and shoring shall be installed using either the following Method (1) or Method (2):

Method (1) (For speeds more than 45 mph)

The Pavement shall be cold planed to a depth equal to the thickness of the plate and width and length equal to the dimensions of the plate.

Method (2) (For speeds 45 mph or less)

Approach plate(s) and ending plate (if longitudinal placement) shall be attached to the roadway by a minimum of two (2) dowels pre-drilled into the corners of the plate and drilled 2-inches into the pavement. Subsequent plates are butted to each other. Fine grade asphalt concrete shall be compacted to form ramps, maximum slope of 8.5% with a minimum 12- inches taper to cover all edges of the steel plates. When steel plates are removed, the dowel holes in the pavement shall be backfilled with either graded fines of asphalt concrete mix, concrete slurry or an equivalent slurry that is satisfactory to the City and/or Caltrans.

The Contractor shall be responsible for maintenance of the steel plates, shoring and asphalt concrete ramps.

The following table shows the advisory minimal thickness of steel plate bridging required for a given trench width (A-36 grade steel, designed for HS20-44 truck loading).

<u>Trench Width</u>	<u>Minimum Plate Thickness</u>
10"	1/2"
1'-11"	3/4"
2'-7"	7/8"
3'-5"	1"
5'-3"	1 1/4"

For spans greater the 5'-3" a structural design shall be prepared by a California registered civil engineer.

All steel plates within the right-of-way whether used in or out of the travel way shall be without deformation. Steel plates shall be non-skid. Advanced signs shall be required for steel plates within traveled ways (Type P per the Watch Manual or a Rough Road sing (W33) per Caltrans requirements).

Add the following subsection:

7-10.6 Street Closures, Detours, Barricades

In addition to the requirements of this subsection, the Contractor shall conform to the requirements for street closures, detours, and barricades as stipulated in the Special Provisions. However, deviations from the requirements stipulated in the Special Provisions may be permitted upon written approval of the Public Works Director when such deviations are in the best interest of the City.

The Contractor shall notify the Engineer at least ten (10) working days in advance of closing or partially closing any street or alley and comply with their requirements. In addition, the Contractor shall notify the Torrance Police Department-Traffic Division at (310) 618-5557 and Torrance Fire Department at (310) 781-7042 at least two (2) working days in advance of such closing.

It shall be the Contractor's responsibility to allow passage of the Torrance Transit System coaches through the construction area at all times. The Contractor shall notify the Torrance Transit Department at (310) 618-6266 at least 48 hours prior to construction affecting bus stop zones to allow said Transit System to temporarily abandon and relocate bus stop zones within the construction area.

The Contractor shall immediately notify the above parties upon completion of the construction work and opening or reopening of any street or alley.

The Contractor shall install, maintain, and remove all temporary delineators, barricades, lights, warning signs and other devices necessary to control traffic as specified in the project plans and these specifications. Materials for a temporary facility may be provided from new or used materials. If used materials are provided, they shall be sound, in good condition and otherwise meet the requirements of new materials. All traffic control devices shall be free of graffiti, and the Contractor shall be responsible to immediately clean and/or replace any device to the satisfaction of the Engineer.

Full compensation for furnishing, installing, maintaining and removing the above traffic control devices shall be considered as included in the Contract Unit Price for TRAFFIC CONTROL.

Where streets in which improvements are being constructed are specified hereinafter to be closed to through traffic, it shall be understood that such closures shall apply only to the portions of such streets where construction is actually in progress.

The Contractor shall conform to Section 74.6.8 of the Torrance Municipal Code. In addition, the Contractor shall comply with directions from the Engineer to provide protection at excavations, trenches and/or other potentially hazardous construction areas. The Contractor shall be required to erect temporary railing (Type K) per Caltrans Standard Plan T3, five-foot high chain link fences, or equivalent protection, to completely enclose all open excavations over three feet (3') in depth. Fencing shall be approved by the Engineer, and provide adequate security. Fencing may be removed during working hours to the extent necessary to provide access and working room, in which case the Contractor shall provide equivalent security, to the satisfaction of the Engineer, during said periods. Any excavation not secured to the satisfaction of the Engineer shall be completely backfilled prior to the end of each day's construction activities. The Engineer may require additional security devices, lighting or other protection in addition to said fencing. Full compensation for furnishing, placing and removing temporary protection shall be considered as included in the price for the various items of work.

Add the following section:

7-15 PROJECT CONSTRUCTION SIGNS AND PORTABLE CHANGEABLE MESSAGE SIGNS

The Contractor shall furnish and install two Project Construction Signs at locations to be determined by the Engineer. The signs shall be in accordance with the sample shown in Appendix VII.

Full compensation for furnishing, installing, maintaining and removing signs shall be per unit per the Contract Unit Price.

The Contractor shall furnish and install four (4) Portable Changeable Message signs (PCMS) on the construction site for use and relocation during construction. The City will allow only the following PCMS manufactures and models:

1. Manufactured by **Solar Tech** and be model MB2
2. Manufactured by **ADDCO** and be model DH500-ALS
3. Manufactured by **WANCO** and be model WVT3 Mini Three-Line Message

The Contractor shall install a locking device on each PCMS to prohibit access to the computer keyboard. The Contractor shall provide to the Engineer the key or combination to each locking device and the computer password to each PCMS **OR** possess any equipment, on any working day, to enter or modify a message for each PCMS as directed by the Engineer. Contractor shall relocate each PCMS as directed by Engineer at no additional cost to the City.

Full compensation for furnishing, installing, maintaining, entering/modifying message screens, relocation on the job site and removal shall be per unit per the Contract Unit Price for Portable Changeable Message Signs. If the Contractor does not possess the equipment or tools, or fails on any working day, to enter or modify a message for a PCMS, the Engineer may deduct \$50 per day, per each PCMS, from a Progress Payment until said message is entered or modified.

SECTION 9 - MEASUREMENT AND PAYMENT

9-1 MEASUREMENT OF QUANTITIES FOR UNIT PRICE WORK

9-1.2 Methods of Measurement. Add the following subsections:

9-1.2.1 Payment for Labor and Materials

The Contractor shall pay and cause the subcontractors to pay any and all accounts for labor, including Worker's Compensation premiums, State Unemployment and Federal Social Security payments and all other wage and salary deductions required by law. The Contractor also shall pay and cause the subcontractors to pay any and all accounts for services, equipment and materials used by it and the subcontractors during the performance of work under this contract. All such accounts shall be paid as they become due and payable. If requested by the Engineer, the Contractor shall immediately furnish the City with proof of payment of such accounts.

9-1.2.2 Measurement and Payment

Payment of each item will include full compensation for furnishing all labor, materials, tools, equipment and backup equipment; transportation and technical competence for performing all work necessary to complete each item as indicated on the plans and as specified in these Contract Documents, including but not limited to obtaining all applicable certifications necessary for specialty

personnel and major equipment in conformance with Subsection 7-5, and all other applicable permits; securing a storage yard to store all equipment and materials to be used on the job, disposal of waste materials, restoration of the site, etc. The storage yard may also be used as a temporary storage for excavated materials, and traffic control items. Costs for mobilization/demobilization shall be included in the unit price bid for MOBILIZATION.

9-2 LUMP SUM WORK. Replace the second paragraph with the following:

The Contractor shall, within five (5) working days of receipt of a request from the Engineer, submit a complete breakdown of lump sum bid prices showing the value assigned to each part of the work, including an allowance for profit and overhead. In submitting the breakdown, the Contractor certifies that it is not unbalanced and that the value assigned to each part of the work represents its estimate of the actual cost, including profit and overhead, of performing that part of the work. The breakdown shall be sufficiently detailed to permit its use by the Engineer as one of the bases for evaluating requests for payment. No extra costs shall be allowed for providing these breakdowns.

9-3 PAYMENT

9-3.2 Partial and Final Payment. Replace the third paragraph with the following:

For each progress estimate, 5 percent will be deducted and retained by the CITY, and the remainder less the amount of all previous payments will be paid. In addition, 125% of the amount of unreleased "STOP" Notices will be withheld.

Add the following:

The Contractor shall submit all requests for payment on a Progress Payment Invoice.

Prior to submittal of said invoice, all items for which payment is requested shall be checked and approved in writing by the Engineer. No payments will be made unless all back-up data is submitted with the payment request and the Progress Payment Invoice is signed by both Contractor and Engineer.

9-3.4 Mobilization. Replace the entire subsection with the following:

Mobilization shall include the provisions of the Construction Schedule; Sewage Spillage Prevention; Emergency Response Plan; site review; obtaining all permits, insurance, and bonds; moving onto the site all plant and equipment; furnishing and erecting plants, temporary buildings, and other construction facilities, and removal of same at completion of the Work; and other work, all as required for the proper performance and completion of the Work.

Mobilization shall include, but not be limited to, the following items:

- a. Moving on to the site of all Contractor's equipment required for the first month's operations
- b. Installing temporary construction power and wiring
- c. Establishing fire protection system
- d. Developing construction water supply
- e. Providing on-site sanitary facilities and portable water facilities, as required
- f. Arranging for and erection of Contractor's work and storage yard
- g. Submittal of all required insurance certificates and bonds, including subcontractors.
- h. Obtaining all required permits
- i. Posting all OSHA required notices and establishment of safety programs

- j. Potholing and other research and review as necessary to verify site conditions and utility locations
- k. Having the Contractor's Superintendent present at the job site full-time
- l. Demobilizing for the City's Holiday Moratorium (per 7-10.2.8 of these Special Provisions), maintaining the work site during said moratorium, and remobilizing to begin work following the moratorium
- m. Removal (including all spray-painted markings on any surface), cleanup, and restoration

Add the following subsection:

9-3.5 Noncompliance with Plans and Specifications

Failure of the Contractor to comply with any requirement of the Plans and Specifications, and/or to immediately remedy any such noncompliance upon notice from the Engineer, may result in suspension of Contract Progress Payments. Any Progress Payments so suspended shall remain in suspension until the Contractor's operations and/or submittals are brought into compliance to the satisfaction of the Engineer. No additional compensation shall be allowed as a result of suspension of Progress Payments due to noncompliance with the plans or specifications. The Contractor shall not be permitted to stop work due to said suspension of Progress Payments.

Add the following section:

9-4 CLAIMS

The Contractor shall not be entitled to the payment of any additional compensation for any cause, including any act, or failure to act, by the CITY, or the happening of any event, thing or occurrence, unless the Contractor shall have given the CITY due written notice of potential claim as hereinafter specified.

The written notice of potential claim shall set forth the reasons for which the Contractor believes additional compensation will or may be due, the nature of the costs involved, and, insofar as possible, the amount of the potential claim. Said notice shall be submitted on a form approved by the CITY at least forty-eight (48) hours (two working days) in advance of performing said work, unless the work is of an emergency nature, in which case the Contractor shall notify and obtain approval from the Engineer prior to commencing the work. The Engineer may require the Contractor to delay construction involving the claim, but no other work shall be delayed, and the Contractor shall not be allowed additional costs for any said delay but may be allowed an extension of time if the Engineer agrees that the work delayed is a controlling element of the Construction Schedule. The Contractor shall be required to submit any supporting data (or a detailed written explanation justifying further delay) within five (5) work days of a request from the Engineer and shall be responsible for all costs associated with any delays resulting from late and/or incomplete submittals. By submitting a Bid, the Contractor hereby agrees that this subsection shall supersede 6-6.3 and 6-6.4 of the Standard Specifications.

It is the intention of this subsection that differences between the parties arising under and by virtue of the Contract be brought to the attention of the Engineer at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action promptly taken. The Contractor hereby agrees that it shall have no right to additional compensation for any claim that may be based on any such act, failure to act, event, thing or occurrence for which no written notice of potential claim as herein required was timely filed.

PART 2 - CONSTRUCTION MATERIALS

SECTION 200 – ROCK MATERIALS

200-2 UNTREATED BASE MATERIALS

200-2.1 General. Replace the entire subsection with the following:

Untreated base for pavement, curb, gutter, cross gutters, bus pads, hardscape and other improvements shall be either Crushed Aggregate Base conforming to 200-2.2 or Crushed Miscellaneous Base conforming to 200-2.4.

SECTION 201 – CONCRETE, MORTAR AND RELATED MATERIALS

201-1 PORTLAND CEMENT CONCRETE

201-1.2.4 Chemical Admixtures.

e) Specific Performance Admixtures (SPA). Replace the last sentence with the following:

Integral color for concrete must be in liquid form, corresponding exactly to the color specified on the Plans, and must be added at the batch plant. Any concrete loads that do not conform to these requirements or do not match concrete already poured shall be removed from the Work and replaced at the Contractor's expense.

SECTION 203 – BITUMINOUS MATERIALS

203-6 ASPHALT CONCRETE

203-6.1 General. Add the following:

Asphalt concrete shall be Class and Grade B-PG-64-10 for the 5-inch thick base course in dig out areas and Type and Grade C2-PG-64-10 for surface and leveling courses of 1.5-inch thickness each in dig out and cold mill areas.

SECTION 209 – STREET LIGHTING AND TRAFFIC SIGNAL MATERIALS

209-3 COMPONENTS FOR STREET LIGHTING AND TRAFFIC SIGNAL SYSTEMS

209-3.1 General. Add the following:

Electroliers shall be as shown on the Plans and shall conform to the specifications and requirements of the Edison Company.

SECTION 210 – PAINT AND PROTECTIVE COATINGS

210-1 PAINT

Add the following subsection:

210-1.6 Paint for Traffic Striping, Pavement Marking, and Curb Marking

210-1.6.1. General

All permanent striping and pavement markings shall be hot applied alkylid thermoplastic in accordance with the provisions of Section 84-2.02 of the Caltrans Standard Specifications.

210-1.6.2. Thermoplastic Paint, State Specifications

Thermoplastic traffic stripes and pavement markings shall conform to the provisions of Section 84 of the Caltrans Standard Specifications. Contractor shall paint a solid black stripe between all double thermoplastic striping.

Add the following subsections:

210-1.7 Test Reports and Certifications

At the time of delivery of each shipment of material, the Contractor shall, upon request, deliver to the Engineer certified copies of manufacturer's test report. The test report shall indicate the name of manufacturer, type of material, date of manufacture, quantity, State Specification number, manufacturer's lot or batch number, and results of the required tests. The test report shall be signed by an authorized representative of the manufacturer. The certified test reports and the testing required in connection therewith shall be at no cost to the CITY.

210-1.8. Paint for Exterior Surfaces of Ductile Iron Pipe. The exterior surfaces of ductile iron pipe, fittings, valves and appurtenances that will be exposed to the atmosphere inside structure or above ground shall be painted with three coats of "Rustoleum No. 7773" or approved equal. The final coat color shall be selected by Engineer or identified on plans. Total thickness of coating shall be 6 mils.

210-1.9 Coating for Valves. Except as otherwise provided, all ferrous surfaces (excluding non-corrosive surfaces) in water passages of all valves 4-inches and larger shall be fuse coated with an epoxy coating in accordance with the "Standard for Protective Epoxy Interior Coatings for Valves and Hydrants" (AWWA C550).

210-1.10 Painting and Coating of Reclaimed Water Valves. Metal valves (except bronze and stainless steel valves) located in vaults and structures shall have a zinc prime coat, fusion epoxy (interior of valves only) intermediate and finish coat.

210-1.10.1 Surface Preparation. Surface preparation shall conform to the following requirements:

Prime Coat: Self-curing, two-component inorganic zinc rich coating recommended by the manufacturer for overcoating with a epoxy finish coat. Minimum zinc content shall be 14 pounds per gallon. Apply to a thickness of 3 mils. Products: Tnemec N90E92, Porter 311 Zinc-Lock, Ameron Dimetcote 9, or approved equal.

Intermediate and Finish Coat: 100 percent solids, thermosetting or catalytic, fusion bonded, dry powder epoxy, suitable for the intended service as recommended by the manufacturer, Scotchkote 134 or approved equal.

Valves shall be coated on their interior metal surfaces excluding seating areas and bronze and stainless steel pieces. Sandblast surfaces in accordance with SSPC SP-5. Remove all protuberances, which may produce pinholes in the lining. Round all sharp edges to be coated. Remove any contaminants, which may prevent ponding of the lining. Coat the interior ferrous surfaces using one of the following methods:

- 1) Apply powdered thermosetting epoxy per the manufacturer's application recommendations to a thickness of 10 to 12 mils.
- 2) Apply two coats of catalytically setting epoxy (Keysite 740, Gilpon, or equal) to a dry film thickness of 10 to 12 mils total. Follow the paint manufacturer's application recommendations including minimum and maximum drying time between required coats.

All epoxy lining shall be fusion epoxy applied by the manufacturer. Coat interior surfaces of cast iron valves at the place of manufacturer. Do not coat seating areas and plastic, bronze, stainless steel, or other high alloy parts.

210-1.11 Reclaimed Water Color Coding. It is required that above-ground or exposed facilities be color coded to differentiate reclaimed water facilities from potable water or wastewater facilities as follows:

Valve Box Covers	Two Coats Purple (Pantone 512)
Air Valves and Piping	Two Coats Purple (Pantone 512)
Blow-Offs/Covers	Two Coats Purple (Pantone 512)

210-1.12 Concrete Vaults and Manholes. The interior and exterior of concrete vaults and manholes shall be coated with crystalline waterproofing. Crystalline waterproofing shall be cementitious coating containing components that will diffuse into the concrete by water, react with lime, and create an impervious, waterproof, calcified barrier in the substrate. Technical requirements are as follows:

- 1) Permeability at 2.6×10^{-8} cm/sec (2 coats) minimum per Army (COE CRD-C 48-55 or CRD-6 48-73).
- 2) Compatibility; shall produce no degradation of substrate.

SECTION 212 – LANDSCAPE AND IRRIGATION MATERIALS

212-1 LANDSCAPE MATERIALS. Add the following:

All work specified in this section shall conform to the applicable requirements of ANSI Standard Z60.1-1980, "Nursery Stock," and to the rules and grading provisions adopted by the American Association of Nurserymen, Inc.

212-1.1 Topsoil

212-1.1.1 General. Add the following:

Unless otherwise specified on the Plans or required by the Engineer, topsoil shall be Class "C" in accordance with the requirements of 212-1.1.4. Imported soil, if required, shall be Class "A" topsoil in accordance with the requirements of 212-1.1.2.

The Contractor shall provide an Agricultural Soil Suitability Report for topsoil to be furnished, and the requirements for fertilization and amendments as specified herein may be modified as necessary by the Engineer prior to start of the work of this section.

212-1.2 Soil Fertilizing and Conditioning Materials

212-1.2.3 Commercial Fertilizer. Add the following:

Commercial Fertilizer shall be 12-12-12 (N-P-K.) Slow release tablets, if used, shall be 12-12-12 (N-P-K).

212-1.2.4 Organic Soil Amendment. Add the following:

Type I organic soil amendment shall be used. The Contractor shall supply the Engineer with a sample of the proposed amendment accompanied by a laboratory analytical analysis from a testing agency registered by the State, which states that the amendment complies with the specifications.

212-1.2.5 Mulch. Add the following:

Bark mulch shall be shredded cedar, pine, or fir bark or equal commercial product. Typical mulch size shall be three inches by one-half inch (3" x 1/2"). Submit two (2) samples to the Engineer for approval prior to installation. The material shall be free of seeds, debris, and deleterious materials, and shall have a rich brown color when supplied.

212-1.4 Plants

212-1.4.1 General. Add the following:

All plants furnished by the Contractor shall be true to type or name as shown on the Plans and shall be tagged in accordance with the standard practice recommended by the Agricultural Code of the State of California; however, determination of plant species or variety shall be made by the Engineer, whose decision shall be final.

All plants shall have been grown in nurseries that have been inspected by the governing authorities. Inspection of plant materials required by City, County, State, or Federal authorities shall be the responsibility of the Contractor, and it shall have secured permits or certificates prior to delivery of plants to site. Certificates of inspection shall be filed with the Engineer.

The Contractor shall obtain clearance from the County Agricultural Commissioner, as required by law, before planting plants delivered from outside the County in which they are to be planted. Evidence that such clearance has been obtained shall be filed with the Engineer.

Plants shall be subject to inspection and approval or rejection by the Engineer at place of growth and/or upon delivery to the site at any time before or during progress of the work. Inspections shall include:

- a) Quantity, quality, size, and variety
- b) Ball and root condition
- c) Latent defects and injuries resulting from handling, disease and insects
- d) Uniformity of plant materials

The Contractor shall notify the Engineer forty-eight (48) hours before the delivery of plant material, so the plants can be inspected prior to planting.

The Contractor is responsible to coordinate contract growing any plant material that is not readily available at local nurseries. The Contractor shall research the availability of every plant at the beginning of the project to allow sufficient time to contract grow plant material for installation without delays. Contract grown plant material shall be grown to the size indicated on the plans and delivered to the site in a healthy and vigorous condition.

212-1.4.2 Trees. Add the following:

Trees shall be of the type and size as shown on the Plans or specified in the Specifications.

For single-trunk trees: the trunk shall be straight, slightly tapered at the crown, free of disfigurements or gnarls and well hardened off. The tree shall be free of disease and parasites.

For multi-trunk trees: the trunk shall be well hardened off and the tree free of disease and parasites.

212-1.5 Headers, Stakes, and Ties

212-1.5.3 Tree Stakes. Replace the first paragraph with the following:

Tree stakes shall be either 2-inch diameter lodge pole pine, treated with copper nanthanate or pressure treated with chromated copper arsenate, or galvanized steel pipe, per 308-4.6.1 (Method A) and City of Torrance Standard Plan No. T401.

Add the following:

Tree ties shall be a commercially manufactured tie, split plastic hose with a minimum length of twenty inches (20"). Split plastic hose ties shall be "Cinch-tie" by V.I.T. or approved equal.

212-2 IRRIGATION SYSTEM MATERIALS

212-2.1 Pipe and Fittings

212-2.1.1 General. Replace the entire subsection with the following:

Irrigation pipe materials and fittings shall be as designated on the Plans and shall comply with 212-2.1.3.

Add the following subsection:

212-2.1.6 Swing Joint Risers. Risers shall be $\frac{3}{4}$ inch double swing type per APWA Standard Plan No. 517-3 modified to allow substitution of Schedule 80 PVC for galvanized steel pipe and 4" minimum nipples. At the sole discretion of the Engineer, swing pipe per Rainbird Model SP-100 or approved equal may be substituted for swing joint risers.

212-2.2 Valves and Valve Boxes

212-2.2.4 Remote Control Valves. Add the following:

Electric Remote Control Valves shall be Bermad, 710 series, FVM or approved equal.

212-2.2.6 Quick-coupling Valves and Assemblies. Add the following:

Quick couplers shall be Rainbird Model No. 33D-LRC or approved equal.

212-2.2.7 Valve Boxes. Replace the entire subsection with the following:

Valve boxes shall be made of durable green plastic with locking lids in accordance with APWA Standard Plan No. 506-3. Boxes shall be sized to give maintenance freedom and access. All valve box lid locks shall use a common key.

212-2.3 Backflow Preventer Assembly. Add the following:

The backflow preventer shall be FEBCO Model No. 825Y or approved equal conforming to the requirements of Los Angeles County Department of Health Services.

212-2.4 Sprinkler Equipment. Add the following:

The full-circle, part-circle or rectangular spray nozzles shall be capable of meeting the requirements for the area or radius shown on the Plans. The pop-up sprinklers shall be Toro, Series 640 or approved equal. Spray plastic nozzles shall be Toro, Series 570 Stream Spray Nozzles or approved equal. Bubbler heads shall be Toro, Series 570 Flood Bubbler Nozzles or approved equal.

Add the following subsection:

212-2.5 Pressure Relief Valve. Pressure Relief Valve shall be Cash Acme Model No. F-72 or approved equal; and shall be set at 125 psi.

212-3 ELECTRICAL MATERIALS

212-3.2 Conduit and Conductors

212-3.2.2 Conductors. Add the following:

Neutral Wires: (White (#12 AWG). Do not interconnect neutral wires between controllers.

Spare Wires: Two (2) red and one (1) white spare wires (#12 AWG) shall be run in each direction from furthest valve of furthest valve manifold on each mainline run to each controller.

Loop 36-inch excess wire into each single valve box and into one valve box in each group of valves.

Pilot wires: (14 AWG) or larger as recommended by controller manufacturer for the corresponding run distance. Contractor shall field verify run distances prior to installation.

Wireless Connections: Neutral, pilot, and spare wires shall be installed with two-foot (2') excess coiled wire length at each end enclosure, valve box or pull box. For low voltage installations, a continuous wire shall be used between the controller and remote control valves. Each and every wire splice shall be soldered (using 60-40 solder) together, then encased in the waterproofed epoxy of the "Scotch-Pac" or "Pen-Tite" connectors. Wire splices shall be made only in valve or pull boxes. Under no circumstances shall splices exist without prior approval from the Engineer.

Add the following subsections:

212-3.4 Controller Enclosure.

The enclosure shall be per the irrigation legend on the irrigation drawings.

212-2.4 Sprinkler Equipment. Add the following:

All full-circle, part-circle or rectangular spray nozzles shall be capable of meeting the requirements for area or radius shown on Plans. If spray pattern requires modification to avoid overspray onto paving, nozzles shall be changed to a different radius or pressure compensating screens shall be added to reduce throws, at no additional cost to the CITY. Use of adjustment screws on sprinkler heads or manual adjustment of remote control valves to permanently adjust throw radius shall NOT be allowed. Pop-up sprinklers shall be per irrigation legend and details on the irrigation drawings.

212-3.5 Hydraulic Tubing. Hydraulic tubing shall be ¼ inch polyethylene tubing, Toro Model 900-14 or approved equal. Splicing shall be with waterproof plastic coupling devices, Toro Model 900 or approved equal. The Contractor shall remove all damaged tubing and all tubing that has interior deposits resulting from Contractor's construction activities.

SECTION 213 – ENGINEERING GEOSYNTHETICS

213-5 GEOSYNTHETICS AND GEOGRIDS

Replace the first paragraph with the following:

Geotextile fabric shall be non-woven conforming to the requirements of AASHTO Designation M288-99.

Delete the last three paragraphs. Add the following:

Where specified in the plans for the purpose of separation between underlying subgrade and aggregate or miscellaneous base, Non-woven geotextiles shall meet the requirements of Type 250N indicated in Table 213-5.2(A).

Where specified in the plans, specifications or Appendices, for the purpose of separation between an underlying AC pavement leveling course and an AC pavement surface course, the Propex Petromat Non-woven paving fabric - Style 4598 shall be installed per the manufacturers specifications. Geotextiles shall be furnished in rolls wrapped with protective covering to protect them against ultraviolet radiation and abrasion. Torn wrappers shall be repaired within 48 hours using an approved protective covering. Each roll of fabric shall be marked or tagged to identify the manufacturer, type, length, width, and production identification number.

Add the following subsection:

213-6 MOISTURE BARRIER

The moisture barrier shall conform to the following specifications:

Color

Black

Thickness	.030 Mil.
Depth	30 inches
Tensile Strength	3,850 psi
Flexural Stiffness	120,000 psi
Vicat Softening Point	127 C
Low Temperature Brittleness	-76

The moisture barrier shall be by Century Products (714) 532-7084 or approved equal.

SECTION 214 – TRAFFIC STRIPING, CURB AND PAVEMENT MARKINGS, AND PAVEMENT MARKERS

Delete the entire Section 214 and replace with Section 85 of the Caltrans Standard Specifications (latest edition).

85-1.05 RETRO-REFLECTIVE PAVEMENT MARKERS

85-1.051 Blue Pavement Markers

Blue pavement markers shall conform to Section 3B-11, "Raised Pavement Markers", of the California Manual on Uniform Traffic Control Devices (MUTCD), current edition.

85-1.055 Adhesives. Add the following:

At the option of the Contractor, a hot melt bituminous adhesive may be used to cement the markers to the pavement, instead of the Rapid Set Type or Standard Set Type adhesive specified in Section 85-1.06 of the Caltrans Standard Specifications. The bituminous adhesive material, if used, shall conform to the following:

<u>ASTM Test Specification</u>	<u>Method</u>	<u>Requirement</u>
Flash Point, COC °F	D 92	550 Min.
Softening Point, °F	D 36	200 Min.
Brookfield Viscosity, 400° F	D 2196	3,000-7,500 cP
Penetration, 100g 5 sec., 77° F	D 5	10-20 dmm
Filler Content, % by weight (Insoluble in 1,1,1 Trichloroethane)	D 2371	50-75

SECTION 217 - SIGNAGE

217-1 ROADSIDE SIGNS. All roadside signs shall conform to the provisions of Section 56-2 of the Caltrans Standard Specifications amended as follows:

56-2.02 Materials. Revise the entire subsection with the following:

The various materials and fabrication thereof of roadside signs shall conform to the requirements of 56-2.02 A and 56-2.02 D.

56-2.02A Metal Posts. Delete the first paragraph.

PART 3 - CONSTRUCTION METHODS

SECTION 300 – EARTHWORK

300-1 CLEARING AND GRUBBING

300-1.3 Removal and Disposal of Materials

300-1.3.1 General. Replace the entire subsection with the following:

Unless otherwise stated on the Plans or Specifications, all material removed from the Work shall become the property of the Contractor and shall be disposed of in a lawful manner. Removals shall include, but not limited to:

- 1) All excess excavation material
- 2) Trees, shrubs, stumps and planting wells
- 3) Debris
- 4) Miscellaneous piles of debris
- 5) Irrigation system including but not limited to Irrigation line, valves, sprinkler heads, hose bibs backflow preventers and control boxes. Irrigation line underneath street pavement shall be cut and capped as shown on the plans and abandoned in place.
- 6) Interfering portions of curb, gutter, asphalt and PCC concrete pavements and sidewalks (including base where applicable)
- 7) Signs and posts as shown on the plans
- 8) Abandoned underground conduits in conflict with construction
- 9) Miscellaneous items as shown on the plans

The Contractor shall conform to the following requirements:

- 1) The Contractor shall not start any removal work unless it is prepared to perform reconstruction work within 24 hours of the time removals were begun, unless otherwise approved by the Engineer.
- 2) The Contractor shall complete forming and pouring of PCC construction within five (5) working days following the removal of existing material at any location.
- 3) The Contractor shall not remove on-site improvements until it is prepared to construct the adjacent street section and shall promptly restore all such improvements as applicable, upon completion of the adjacent street work.

All concrete removed shall be hauled off the Work site no later than the calendar day following the day that the removal is performed.

Prior to making removals, the Contractor shall meet with the Engineer to verify the limits of removals, locations of joins, to establish smooth joins and to ensure proper drainage. The Contractor may make minor changes in the location of joins and the limits of removals, provided a smooth join and proper drainage can be achieved and it has obtained prior written approval from the Engineer.

In order to protect the public streets from deterioration due to hauling of materials, the Contractor shall submit, prior to the Pre-Construction Meeting, for approval a proposed route for

hauling of materials for disposal. Upon approval, the Contractor shall strictly adhere to that route, unless written permission from the Engineer is obtained to change the route.

300-1.3.2 Requirements

- (a) **Bituminous Pavement.** Replace the first and second sentences with the following: Bituminous pavement shall be removed to neatly sawed edges.

Add subparagraphs (d) and (e):

- (d) **Trees.** The City maintains a tree conservation policy. Unless otherwise shown, all trees are to be protected in place. Demolition and destruction of trees and tree parts, including trunks, branches and foliage, shall be limited to tree removals as shown on the Plans. Root pruning and removals shall be limited to the minimum required to construct new improvements where trees are to be conserved.

The Engineer shall place a visible removable "tag" on each tree proposed to be removed at least five (5) work days and no earlier than ten (10) work days prior to removal. Said "tag" is intended to give adjacent residents proof of trees to be removed or saved. Tags shall be on the sidewalk side of trees and located at least five feet (5') above ground.

The Contractor shall remove only trees that have been marked by the Engineer for removal. Trees shall be removed in a workmanlike manner so as not to injure other standing trees, plants, and improvements which are to be preserved.

Stumps shall be ground down three feet (3') below ground surface within five (5) feet of the center of the stump. All surface roots shall be removed within the parkway.

The Contractor shall conform to the following requirements:

- 1) The cutting down or removal of trees is prohibited after the prescribed working hours unless permission is granted by the Engineer.
- 2) All debris from pruning or removing a tree shall be cleaned up and hauled away from the Work site on the same day that the tree is cut or pruned. Firewood-size logs may be left neatly piled for residents to pick up for no longer than three (3) days.
- 3) All holes created from removal of tree stumps shall be backfilled and graded to finish level by the end of the workday.
- 4) Sprinkler systems disrupted by the Contractor shall be capped or restored by the end of the workday. Capped systems shall be restored to original working condition within three (3) days.

Add the following section:

300-1.3.3 Construction and Demolition Debris Recycling

GENERAL

Consistent with the Agency's efforts to comply with the California Integrated Waste Management Act of 1989 (AB 939), the Contractor shall reduce, reuse, and/or recycle to the maximum extent feasible, the construction and demolition debris (debris) generated by this Contract hereby diverting the debris from disposal facilities, saving landfill space, and conserving virgin materials and natural resources.

DEFINITIONS

Shall be as defined in the TORRANCE MUNICIPAL CODE, DIVISION 4, CHAPTER 3, ARTICLE 8 (or Section 43.8.1).

RECYCLING SUMMARY

The Contractor shall prepare and submit a Recycling Summary report using the form included as Appendix IV summarizing the disposal, reuse, and/or recycling activities which occurred throughout the Contract duration. This report shall be submitted by the Contractor to the Agency, before or with its request for the final Progress Payment for said Contract.

Failure of the Contractor to submit the Recycling Summary within the time specified will result in damages being sustained by the Agency. Such damages are, and will continue to be, impracticable and extremely difficult to determine. For failure to submit the Recycling Summary, as required, the Contractor shall pay to the Agency, or have withheld from monies due it, the sum of \$10,000 for a contract of \$500,000 or more. The Contractor shall pay to the Agency, or have withheld from monies due it, 2% of the total contract amount for a contract of \$499,999 or less.

Execution of the Contract shall constitute agreement by the Agency and Contractor that \$10,000 (2% for contracts \$499,999 or less) is the minimum value of the costs and actual damage caused by the failure of the Contractor to submit the Recycling Summary within the time specified. Such sum is liquidated damages and shall not be construed as a penalty, and may be deducted from payments due the Contractor.

PAYMENT

The cost of construction and demolition debris recycling and completing the Recycling Summary report shall be considered as included in the Contract Unit Price for the various Bid items. The quantities reported will be used for information gathering purposes and not for purposes of payment to the Contractor.

300-1.4 Payment. Replace the entire subsection with the following:

When the Contract does not include a pay item for clearing and grubbing, payment under this section shall be by the following:

- a) **Bituminous Pavement.** There shall be no separate payment for removal of bituminous pavement, and all costs related thereto shall be considered as included in the Contract Unit Prices for the items of work for which the removal is required.
- b) **Concrete Pavement, Cross-Gutters and Alley Intersections.** Payment for removal and disposal of concrete cross-gutters, shall be included in the Contract Price for the appurtenant items of work and shall include sawcutting, complete removal of adjacent pavement and subgrade (within 1-foot of the proposed

gutter), underlying subgrade and base, disposal, subgrade preparation and compaction, disposal, and all labor and equipment necessary to complete the required removal.

- c) **Concrete Curb, Walk, Gutters and Driveways.** Payment for removal and disposal of concrete curb, curb and gutter, sidewalk, access ramps and driveways shall be included in the Contract Unit Price for the appurtenant items of work. Removals shall include sawcutting, complete removal of adjacent pavement and subgrade (within 1-foot of gutter) root pruning, complete removal of underlying subgrade and base, subgrade preparation and compaction, disposal, and all labor and equipment necessary to complete the required removal.
- d) **Trees.** Payment for tree removals and disposal shall be per the Contract Unit Price and shall include all work involved in tagging, cutting and complete removal of trunks, branches, stumps and roots to a depth of 3 feet below existing grade, excavation, hauling, disposal, backfilling tree wells, restoration and replanting of removal areas; and other appurtenant work.
- e) **Painted Curb.** There is no separate payment for removal of paint on concrete curb. Full compensation for furnishing all labor materials, tools, equipment and incidentals as shown on the plans and specified in these Special Provisions shall be included in the contract unit price for traffic striping, markings and pavement markers.

300-2 UNCLASSIFIED EXCAVATION

300-2.2 Unsuitable Material

300-2.2.1 General. Replace the first paragraph with the following:

If unsuitable material is found, the Contractor shall remove said material to the limits to be determined by the Engineer and shall replace said material with select fill or base material, as to be determined by the Engineer.

Alternatively, as determined and directed by the Engineer, the Contractor shall install geotextile fabric (Per Section 213 ENGINEERING GEOSYNTHETICS of these Special Provisions) on the subgrade to the limits determined by the Engineer in lieu of unsuitable material excavation and CMB backfill.

Payment for unsuitable material excavation and backfill shall be measured and paid for as either negotiated prices or force account work.

Payment for geotextile shall be per Section 300-10 GEOTEXTILES FOR SEPARATION of these Special Provisions.

300-2.9 Payment. Add the following:

Payment for the removal and disposal of bituminous pavement for street reconstruction areas shall be considered as included in the Contract Unit Price for SAWCUT AND REMOVE EXISTING PAVEMENT SECTION AND UNCLASSIFIED MATERIALS and shall include sawcutting, removal of underlying subgrade and base, disposal, subgrade preparation and compaction, labor and equipment.

300-10 GEOTEXTILES FOR SEPARATION

300-10.1 Subgrade Enhancement. Replace the entire subsection with the following:

Geotextiles for subgrade enhancement shall be non-woven and conform to 213-5 of these Special Provisions.

300-10.1.1 Placement. Replace the first paragraph with the following:

The installation area shall be prepared by clearing all debris or obstructions which may damage the geotextile. Trees and large bushes should be cut at ground level. In most cases, all native vegetation, roots and topsoil must be removed from the roadway subgrade prior to geotextile placement. Where required by the Contract Documents, soft and otherwise unsuitable areas shall be identified, excavated, and backfilled with selected material in accordance with 300-2.2 of these Special Provisions. Stabilization of these areas may be enhanced by use of a geotextile at the bottom of the excavation before backfilling. However, when designed for soft or wet subgrade conditions, native vegetation, roots, and topsoil may be left in place so as to limit disturbance and resulting shear strength loss of the subgrade soil.

Add the following after the third paragraph:

If site conditions require geotextile seaming, the geotextile shall be cut and seamed on the curve. The fold or overlap shall be in the direction of construction and shall be held in place as prescribed above.

Replace the eighth paragraph with the following:

The aggregate base or subbase (aggregate) shall be placed by end dumping adjacent to the geotextile or over previously placed aggregate. End dumping or tail gate dumping of aggregate on the geotextile will not be permitted. The aggregate shall be spread from the backdumped pile using a lightweight dozer or skip loader. A sufficient thickness of aggregate should be in place prior to dumping to minimize the potential of subgrade pumping and localized subgrade failure. Equipment shall not be allowed directly on the fabric.

The aggregate shall be placed on the geotextile in lifts not less than 6 inches thick. Traffic shall not be permitted directly on the geotextile. Sudden stops or turns by equipment operating on aggregate placed over the geotextile shall be avoided. A smooth drum roller shall be used to achieve specified aggregate density. Any ruts occurring during construction shall be filled with additional aggregate and compacted to the specified density. Vibratory compaction shall not be used on the initial lift over the geotextile.

Replace the ninth paragraph with the following:

Damaged geotextiles, as identified by the Engineer, shall be repaired immediately. The damaged area plus an additional 3 feet around the damaged area shall be cleared of all fill material. A geotextile patch extending 3 feet beyond the perimeter of the damage shall be constructed as directed by the Engineer. Sewing of a geotextile patch may be required over soft subgrades as directed by the Engineer. Damaged geotextiles shall be repaired at no cost to the CITY.

Add the following section:

300-11 MOISTURE BARRIER

300-12.1 General. Moisture barrier placed adjacent to all median planting areas shall conform to 213-6 of these Special Provisions.

300-12.2 Placement. Moisture barrier shall be placed prior to topsoil placement and landscaping. Placement shall be in accordance with the project plans and details and the manufacturer's recommendation.

300-12.3 Measurement and Payment. Measurement and payment for PVC MOISTURE BARRIER shall be measured per linear foot of moisture barrier placed, not including any barrier for overlaps and splices.

SECTION 301 – TREATED SOIL, SUBGRADE PREPARATION AND PLACEMENT OF BASE MATERIALS

301-2 UNTREATED BASE

301-2.1 General. Add the following:

Base is required under all PCC and AC improvements as shown on the Plans. Additional base may be required after review of work areas following removals. Prior to constructing new improvements, the Contractor shall verify with the Engineer that the base sections as shown on the Plans (including areas where no base is called for) are adequate. Payment for any changes shall be made pursuant to Section 3.

A minimum of 8-inches CMB shall be placed under curb, curb and gutter, cross gutters, spandrals and concrete bus pads. A minimum of 6-inches CMB shall be placed under driveways (includes portion to right-of way/property line), alley intersections, local depressions, stained median concrete (maintenance vehicle pullouts) and AC or PCC pavement on private property as part of driveway reconstruction. A minimum of 4-inches CMB shall be placed under sidewalks, access ramps and stained median concrete (noses and mow strip).

301-2.4. Measurement and Payment. Delete the second paragraph and add the following:

Payment for construction of CMB under AC pavement shall be per the Contract Unit Price per cubic yard.

Payment for construction of CMB under curb, curb and gutter, driveways, local depressions, sidewalks, stained median concrete paving and access ramps shall be considered as included in the unit price bid for the item of work and no additional compensation will be allowed therefore.

SECTION 302 – ROADWAY SURFACING

302-1 COLD MILLING OF EXISTING PAVEMENT

302-1.1 General

Cold Milling shall include edge milling, header milling and profile milling as necessary to provide the required grades and allow for a smooth pavement profile in preparation for asphalt concrete overlay paving. Milling limits shown on the plans are approximate. The Engineer may direct the Contractor to cold mill in other areas, as necessary for construction. Some adjustment of limits and

depths will be necessary to accommodate paving requirements. Care shall be exercised not to damage adjacent concrete including curbs without gutters. Gutters or curbs damaged shall be replaced at the Contractor's expense.

302-1.4.2 Equipment

Add the following:

The machine used for milling shall meet the following requirements:

The milling machine shall be specially designed and built for milling of bituminous pavement without the addition of heat, with the ability to plane portland cement concrete patches in the bituminous pavement. The cutting drum shall be a minimum of 60 inches wide and shall be equipped with carbide-tipped teeth placed in a variable lacing pattern to produce the desired finish.

The machine shall be capable of being operated at speeds from 0 to 40 feet per minute. It shall be self-propelled and have the capability of spraying water at the cutting drum to minimize dust. The machine shall be capable of removing the material next to the gutter of the pavement being reconditioned and be designed so that the operator can at all times observe the milling operation without leaving the controls. The machine shall be adjustable for slope and depth and shall deep cut in one pass a maximum of 3 inches without producing fumes or smoke.

The Contractor shall provide a smaller machine if required to trim areas inaccessible to the larger machine at manholes, gate valve covers, curb returns, and intersections. The smaller machine shall be equipped with 12 inch minimum-width cutting drum mounted on a chassis allowing it to be positioned without interrupting traffic or pedestrian flow.

302-1.7 Work Site Maintenance

Add the following:

During the milling operation, the Contractor shall sweep the entire street with mechanical equipment and remove all loosened material from Work site until completion of the removal work. The Contractor shall take all necessary measures to avoid dispersion of dust.

302-1.9 Traffic Signal Loop Detectors.

Add the following:

Before cold milling pavement that contains existing traffic signal detector loops, the Contractor MUST notify the Engineer at least 3 working days prior to commencing said work.

302-1.10 Pavement Transitions.

Delete the entire subsection and replace with the following:

Structures and vertical joints within the cold-milled areas that are transverse to through traffic and greater than 1 inch in height shall be ramped with temporary asphalt concrete pavement. Ramps shall be constructed the same day as the existing pavement is cold milling and removed the same day and just prior to placement of permanent paving. Ramp dimensions and compaction shall be approved by the Engineer.

302-1.12 Payment

Delete the entire subsection and replace with the following:

Payment for cold milling shall be per the Contract Unit Price per square foot complete up to the depth specified, including disposal of milled material, and shall include construction, removal and disposal of temporary asphalt concrete ramps and all other necessary work.

302-5 ASPHALT CONCRETE PAVEMENT

302-5.1 General

The Contractor shall apply any leveling course at least one day (24 hours) prior to placing either an AC overlay. Payment for any AC Leveling Course shall be per the contract unit price per ton.

302-5.4 Tack Coat. Add the following paragraph:

A Tack Coat shall be applied between base and finish courses when i) the finish course is not placed immediately after the base course (within 24 hours AND with no traffic using the base course surface); ii) to existing paved surfaces where new asphalt concrete overlaps or abuts existing pavement; and iii) along all edges of concrete gutters and PCC pavement slabs. There shall be no separate payment for Tack Coat.

302-5.5 Distribution and Spreading. Delete the fourth paragraph and replace with the following:

Asphalt concrete shall not be placed until the atmospheric temperature is a minimum of 55°F and rising and the surface temperature of the underlying material is a minimum of 50°F. Asphalt concrete also shall not be placed during unsuitable weather.

Fully automatic screeds will be required on this Project. A fully automatic screed shall have a sled, 30 feet in length, on the side of the machine which will receive the next mat of material. A joint maker, ski, etc., placed on the side of the machine to ride on the existing or previously constructed surface or mat of asphalt concrete material may be required as directed by the Engineer.

Delete Table 302-5.5(A) and replace with the following:

TABLE 302-5.5(A)

Specified Total Thickness of Pavement		Required Number of Courses	Class Of Mixture
Greater Than Inches	But Not More Than Inches		
0	1	-	(not allowed)
1	1-1/2	1	D2-PG 64-10
1-1/2	3	1	C2-PG 64-10
3	4	1	Base Course - B-PG 64-10 and/or Finish Course - C2-PG 64-10 as specified on Plans.
4	8	2 or more	Base Course - B-PG 64-10 for underlying course.

			Finish Course - C2-PG 64-10 for surface course.
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302-5.8 Manhole (and other structures). Add the following:

Contractor shall be required to remove manholes and utility access covers to below the depth to be removed and restore said covers to finish grade upon completion of paving.

Add the following subsection:

302-5.8.1 Payment. Payment shall be per the Contract Unit Price bid per each for adjustment of utility access covers and manholes to grade.

302-5.9 Measurement and Payment. Delete section in its entirety and replace with the following:

Payment for Asphalt concrete pavement shall be per the Contract Unit Price per ton, including subgrade and base preparation, base course, leveling course, tack coat, and all work necessary to install complete in place. There shall be no separate payment for tack coat, header paving or temporary pavement, and all costs for any said item shall be included in the bid price for the work.

SECTION 303 – CONCRETE AND MASONRY CONSTRUCTION

303-5 CONCRETE CURBS, WALKS, GUTTERS, CROSS GUTTERS, ALLEY INTERSECTIONS, ACCESS RAMPS AND DRIVEWAYS

303-5.1 Requirements

303-5.1.1 General. Replace the first sentence of the first paragraph with the following:

Concrete curbs, gutters, curb and gutters, sidewalks, walks, cross gutters, alley intersections, access ramps, driveways, stained median concrete paving and bus pads shall be constructed of Portland cement concrete of the class, compressive strength and other requirements prescribed in 201-1.

Replace the first sentence of the second paragraph with the following:

Unless otherwise specified on the Plans, and except as otherwise prescribed in 303-5.1.3 under the heading "Driveway Entrances," the minimum thickness of walks shall be 3-1/2 inches.

303-5.5. Finishing

303-5.5.2 Curb Add the following:

Unless otherwise approved by the Engineer, the entire affected concrete curb, gutter, cross-gutter, or spandrel portion shall be removed by sawcutting the adjacent AC pavement one (1) foot from the edge of the affected area to be removed. Where applicable, the contractor shall reconstruct this one (1) foot wide section with a 2-inch thick section of AC pavement (C2-PG-64-10) on a 4-inch (for 6-inch curb face) to 6-inch (for 8-inch curb face) thick section of 1-sack cement and sand slurry mix on an 8-inch thick section of untreated Base. If the affected curb and gutter is located in a spandrel, the spandrel shall be sawcut six inches (6") minimum from the flow line of the gutter and the spandrel reconstructed to match the existing spandrel portion to remain and be on 8 inches of untreated Base.

For concrete curb and gutter work located in a spandrel, sawcut spandrel to a distance of six inches (6") minimum from the flow line of the gutter to be removed. The Contractor shall reconstruct the spandrel to match the existing spandrel portion to remain and be on eight inches (8") of untreated Base. No extra payment will be allowed for the PCC spandrel construction.

For concrete curb and gutter reconstruction work adjacent to cold milling areas or areas where adjacent pavement will remain in place, sawcut adjacent AC pavement a distance of one foot (1') from edge of gutter to be removed. The Contractor shall reconstruct this one foot (1') wide section with a 5-1/2" thick section of 1-sack cement and sand slurry mix on eight inches (8") of Crushed Miscellaneous Base. The final surface elevation of the 1-sack cement and sand slurry mix shall be 1-1/8" below edge of gutter elevation to accommodate the 1-1/2" AC overlay and a 3/8" high "lip" along the edge of gutter.

For concrete curb and gutter reconstruction work adjacent to areas of pavement reconstruction, the Contractor has the following 2 options:

1. The entire portion may be removed without sawcutting and removing the adjacent AC pavement; however, any damaged pavement must be removed and temporary AC provided and maintained in its place until the adjacent pavement is removed as per the contract; or
2. Remove the entire affected concrete curb or curb and gutter portion by sawcutting the adjacent AC pavement a distance of six (6) inches from the face of curb or edge of gutter to be removed. The contractor shall reconstruct this six (6) inch wide section with a 2-inch thick section of temporary AC pavement on either Crushed Miscellaneous Base or imported fill with a sand equivalent of 30 or greater.

303-5.5.5 Alley Intersections, Access Ramps, and Driveways. Add the following:

Unless otherwise approved by the Engineer, the entire affected curb and gutter portion shall be removed by sawcutting the adjacent AC pavement one (1) foot from the edge of the PCC gutter. Where applicable, the contractor shall reconstruct this one (1) foot wide section with a 2-inch thick section of AC pavement (C2-PG-64-10) on a 4-inch thick section of 1-sack cement and sand slurry mix on an 8-inch thick section of untreated Base. If the affected curb and gutter is located in a spandrel, the spandrel shall be sawcut six inches (6") minimum from the flow line of the gutter and the spandrel reconstructed to match the existing spandrel portion to remain and be on 8 inches of untreated Base. No extra payment will be allowed for the PCC spandrel construction.

PCC Access Ramps shall be constructed at locations shown on the Plans and per the 2012 Standard Plans for Public Work Construction STD 111-5.

Access ramps constructed in existing curb returns may disturb survey markers. The Contractor shall follow the instructions in Section 2-9.1 for preserving, recording, and reestablishing survey markers.

Detectable Warning Surface. Access ramps shall have a single piece prefabricated detectable warning surface with dimensions of 36-inches (perpendicular to curb) by 48-inches wide (along curb) installed in accordance with the 2012 Standard Plans for Public Work Construction 111-5 and comply with the requirements of the Americans with Disabilities Act (ADA). Detectable warnings shall consist of raised truncated domes with a base diameter of nominal 0.9 inches, a top diameter of nominal 0.45 inches, a height of nominal 0.20 inches and a center-to-center spacing of nominal

2.35 in (60 mm). The edge of the detectable warning surface nearest the street shall be between 6" and 8" from the gutter flow line.

The detectable warning surface shall be a Cast-In-Place Replaceable Tactile Warning Surface Tile. The color of the detectable warning surface shall be Dark Gray (Federal Color No. 36118) or as approved by the Engineer prior to installation. The detectable warning system is to be manufactured with materials that are fully recyclable. The detectable warning surface shall be installed in accordance with the manufacturer's recommendations and instructions. The manufacturer shall provide a minimum 5-year warranty, guaranteeing replacement when there is a defect in the dome shape, color fastness, sound-on-cane acoustic quality, resilience or attachment. The warranty period shall begin on the date of acceptance of the Contract.

Driveways shall have a concrete thickness of 4 inches for single family residences and 6 inches for all other areas.

Work Requested by a Property Owner. The Contractor is allowed to perform work which is not a part of this Contract and in the project area if the work is requested, and paid for, by a property owner provided that:

- a. The Contractor shall inform the Engineer of the nature, quantity and location of the work requested by the property owner; and
- b. The requested work does not impact the schedule or cost of the contract work; and
- c. The Property Owner and Contractor are required to obtain all permits for requested work; and
- d. The Contractor is required to obtain all inspections and approvals.

303-5.7 Repairs and Replacements. Add the following:

The Contractor shall be responsible to protect all new concrete work from being etched, scratched or otherwise marked following replacement thereof. If new concrete work is marked, the Contractor shall replace it at its expense and no extra costs will be allowed.

303-5.9 Measurement and Payment. Replace the entire subsection with the following:

Payment for concrete curb and curb and gutter (excluding integral curb and curb/gutter associated with driveways, alley intersections, curb ramps, and cross-gutters) shall include all joints and keyways, Base, adjacent AC pavement reconstruction, protection of existing trees, parkway restoration, repainting of addresses on curb faces where painted addresses have been removed due to new curb construction and repainting of red curb (top and face) where red curb has been removed due to new curb construction and shall be per the Contract Unit Price per linear foot.

Payment for curb and curb gutter transitions to match existing and mountable curbs at connection points and maintenance vehicle pullouts will be measured and paid for as the standard curb or curb and gutter adjacent to the transitions.

Payment for concrete walks, sidewalks shall include all joints as shown in standard plans and construction details and shall include protection of existing trees, parkway restoration, Base and shall be per the Contract Unit Price per square foot.

Payment for driveways, cross-gutters and spandrels, and integral curbs along driveways and spandrels shall include all joints as shown in standard plans and construction details, reconstruction of adjacent 1' wide AC pavement and shall be per the Contract Unit Price per square foot.

No separate payment shall be made for restoring Portland Cement Concrete paving and Base located on private property behind a newly constructed driveway apron and shall be included in payments for adjacent work.

Add the following:

303-5.10 Hardscape

Hardscape shall consist of 3.5-inch thick PCC Safety Ribbon, PCC Strip, PCC Curb Return over 4-inch CMB, and interlocking concrete paving stones set in a sand laying course on 4" base on 90% compacted subgrade. Interlocking concrete paving stones materials shall be as follows:

Base shall be Crushed Miscellaneous Base (CMB) per these Special Provisions.

Sand Laying Course shall be clean washed sand with 100% passing a No. 4 sieve size and a maximum of 3% passing a No. 200 sieve size, commonly known as plaster sand. Provisions and quality of sand shall be the responsibility of the paving stone installer.

Interlocking Concrete Paving Stones shall be manufacturer, colors, shapes, and patterns as called out on the Plans unless a substitute has been approved by the City at least 14 days prior to delivery to the site. Paving stones shall be manufactured in a single run to insure uniformity of color.

Pavers shall have a minimum of compressive strength of 8,000 PSI in accordance with testing procedures ASTM C-140.

Materials used to manufacture pavers shall conform to the following:

Cement: ASTM C-150 (Portland Cement)

Aggregates: ASTM C-33 (washed, graded sand rock, no expanded shale or lightweight aggregates).

Paving stones shall be delivered and unloaded at the job site on pallets and bound in such a manner that no damage occurs to the product during hauling, handling, or unloading at the job site. Any pavers that are broken, chipped or otherwise damaged during delivery, storage, or installation shall be replaced at no cost to the City.

Contractor shall submit six (6) paving stones to the City within the color range selected from manufacturer's available colors as representatives of the colors supplied for the job. Samples must be approved by the City prior to delivery of the materials to the site. There shall be no payment for said samples.

Installation

Installation shall meet all guidelines and requirements set forth in the National Concrete Masonry Association Publication, "Concrete Block Pavements," TR94A, 1983. Contractor installing interlocking paving shall have a minimum of five years of experience installing such paving, and shall provide a list of completed installations at the City's request.

Construction and installation of interlocking pavers shall be of the highest craftsmanship and in accordance with the manufacturer's recommendations and details on the drawings. All construction shall be accurately fitted, set plumb and level, and free from surface blemishes, according to the lines, dimensions, patterns, and details as shown and called out on the

plans. Contractor shall carefully review and follow the manufacturer's specifications throughout the installation process.

The Sand Laying Course shall be uniform to insure an even surface, at a thickness of one inch, plus or minus 1/16". It shall be Compacted and moistened at an even rate per manufacturer's specifications, and screed to grade. Engineer will inspect and approve laying course prior to installation of pavers.

Interlocking Concrete Paving Stones shall be clean and free of foreign materials. Installation of pavers shall be hand tight and level, starting from a corner or straight concrete curb edge and proceeding forward over the undisturbed sand laying course. String lines shall be used to hold pattern lines true.

Paving stones shall be cut to fit designated area at edges as necessary, using a masonry saw. Cuts shall be straight across the full thickness of the pavers, with cut sides abutting adjacent concrete evenly and with a tight fit, with a maximum 1/8" tolerance. All edges of perimeter stones and sand leveling course.

A Roller Vibrator or Plate Vibrator shall be used to compact the stones and to vibrate the sand up into the joints between the stones.

Plaster sand shall be spread over the installed paving stones and vibrated in between the stones joints. Excess sand shall be swept into the joints or disposed of from the surface area.

Finished paving shall be plumb, level and true to line and grade, and shall properly coincide and align with adjacent work and elevations. City shall inspect and approve all portions before final cleanup and placement of street furnishing.

Contractor shall warranty the placement and finish grade level of paving stone installations for a period of one year after completion, and shall replace any unlevel portions of paving upon request by the City.

Continuous one (1) foot wide, 3.5-inch thick over 4" CMB PCC Safety Ribbon/PCC Strip shall be constructed adjacent to landscape areas as shown on the plans. PCC Safety Ribbon/PCC Strip shall have a natural color and smooth trowel finish, with score pattern at four (4) foot intervals and shall be poured over 95% compacted subgrade. Contractor shall construct a semi-circular 3.75 foot radius. 3.5-inch thick over 4-inch CMB at curb returns as shown on plans. PCC Curb Returns shall have a natural color and smooth trowel finish and shall be poured over 95% compacted subgrade.

Cleanup

Excess sand shall be swept into the joints or disposed of from the surface area. Upon completion of paving stone installation, surface shall be washed with water and cleaned to provide a clean finished workmanlike installation. Acid wash can be used, if necessary, to remove any stains or spilled cement.

305-5.10.1 Payment

Payment for interlocking concrete paving stones include all labor, material, subgrade preparation, compaction, placement of sand laying course, cutting, placement, addition of sand, vibrating of paving stones, clean up and all other work necessary to construct complete in place

as shown on plans, and shall be per the Contract Unit Price per square foot of PRECAST CONCRETE PAVERS INCLUDING SANDBASE and no additional costs shall be allowed.

Payment for PCC Safety Ribbon/Strip/Curb Return shall be per Contract Unit Price per square foot of CONSTRUCT 3.5" THICK PCC SAFETY RIBBON/STRIP/CURB RETURN OVER 4" CMB and shall include all work needed.

303-7 COLORED CONCRETE

303-7.3 METHOD B (INTEGRAL COLOR). ADD THE FOLLOWING SENTENCE:

Integral color for colored concrete shall be as called out on the Plans, and shall be mixed at the concrete plant, poured, and finished in a manner such that surface color is consistent throughout the project. Any areas where color appears mottled or inconsistent following curing shall be removed and replaced by the Contractor at no cost to the City.

Integral color concrete shall be marked with scoring pattern in the field as shown and called out on the Plans, with clean, straight score lines. Any areas where score lines are inconsistent following curing shall be removed and replaced by the Contractor at no cost to the City.

Payment for colored/ scored concrete will be made per square foot and includes materials and installation complete in place for colored and scored concrete.

SECTION 307 – STREET LIGHTING AND TRAFFIC SIGNAL SYSTEMS

Delete the entire Section 307, and replace with Section 86 ELECTRICAL SYSTEMS of the 2010 Caltrans Standard and Revised Standard Specifications.

86-1 GENERAL

86-1.01 Description. Replace the entire subsection with the following:

The Work shall consist of furnishing and installing, modifying or removing one or more traffic signals, traffic signal master controller assemblies and interconnection facilities, lighting systems, sign illumination systems, communication systems, electrical equipment in structures, provisions for future systems, or combinations thereof, all as shown on the Plans, and as specified in these Special Provisions.

The locations of signals, standards, lighting fixtures, signs, controls, services and appurtenances shown on the Plans are approximate and the exact locations will be established by the Engineer in the field.

All systems shall be complete and in operating condition at the time of acceptance of the Contract.

86-1.05 Warranties, Guaranties and Instruction Sheets. Add the following:

Guaranty for all Work, materials and labor shall be valid for a period of one year from the date of acceptance of the Work.

Full compensation for furnishing the guaranty will be considered as included in the Contract Unit Price for the items of work involved and no additional compensation will be allowed therefor.

86-1.06 Maintaining Existing and Temporary Electrical Systems. Add the following:

Maintenance of the existing traffic signals, street lighting, signs or approved temporary replacements shall be the responsibility of the Contractor. The Contractor shall provide twenty-four (24) hour telephone number where any intersection problem can be reported. Unless permission has been granted by the Engineer, the intersection must not be left on flash more than two (2) hours. Existing traffic signal system shall remain in operation during construction and until the new system is in operation.

All work to be done in connection with modification of traffic signals shall be performed in such a manner that the signals shall be in continuous operation, except for an approved duration between the hours of 9:00 AM and 3:00 PM on weekdays when a traffic signal may be turned off for necessary work. All signal indications, detectors and control equipment shall be maintained in operation except during shutdown hours as specified above. For permission to shutdown a traffic signal, Contractor shall notify the Engineer at least 48 hours prior to shutdown. If the traffic signal is at the intersection of two Arterial streets, the Contractor shall notify the Engineer at least 7 working days prior to shutdown. The placement of any temporary wiring necessary to maintain traffic signal operations shall provide a minimum of 18 feet vertical clearance for vehicles and a minimum of 10 feet over pedestrian areas. All safety regulations and precautions shall be observed in the installation work.

Full compensation for furnishing, installing, maintaining and removing temporary "STOP AHEAD" and "STOP" signs and for covering signs not in use shall be considered as included in the contract lump sum price paid for the signal item involved and no additional compensation will be allowed therefore.

Replace the third paragraph with the following:

The cost for maintaining existing and temporary electrical systems shall be included in the Contract Unit Price for Traffic Signals.

86-1.07 Scheduling of Work. Add the following:

The Contractor shall not begin sub-surface work until approval has been obtained from the Engineer. The Contractor shall be responsible to minimize the time between the sub-surface work and aboveground installations so as to minimize impact to the public. The Contractor's schedule for both sub-surface and aboveground work shall be based on a written estimated pole delivery date.

86-2 MATERIALS AND INSTALLATION

86-2.04 Standards, Steel Pedestals and Posts. Replace the first sentence of the first paragraph with the following:

Standards for traffic signals and steel pedestals for cabinets and other similar equipment shall be located as shown on the Plans.

Replace the twenty-third paragraph with the following:

The galvanized faying surfaces of the connections between signal mast arms and poles shall be free of surface imperfections, such as lumps, runs, and scum, which would prevent intimate, uniform contact between the faying surfaces.

Add the following:

Street lighting standards, equipment and appurtenances, and exact locations for poles, risers and handholes shall conform to the specification and requirements of the Edison Company.

On streets where sidewalks are 5 feet or less in width and adjacent to the curb, the street lighting conduit risers into proposed electroliers shall be placed at the back of the sidewalk unless otherwise indicated on the Plans. The Contractor shall coordinate locations with the Edison Company.

86-2.06 Pull Boxes

86-2.06A Materials. Replace the entire subsection with the following:

Pull boxes, covers and extensions for installation in the ground, structures or in sidewalk areas shall be of the sizes and details shown on the Plans and shall be precast of reinforced Portland Cement Concrete (PCC). In case of discrepancy, the following minimum sizes of pull boxes shall be used for the specified purpose:

1. Signal or Lighting Conduits	No. 5
2. Advance loop and interconnect locations	No. 5
3. Adjacent to Signal or Lighting Standards	No. 5
4. Adjacent to Controller Cabinet	No. 6
5. Adjacent to Service Cabinet	No. 5
6. Detector Termination	No. 5
7. With 4, or more, Conduits	No. 6
8. Telephone	No. 5

Plastic pull boxes shall not be used. All pull box lids shall be new and marked "TRAFFIC SIGNAL."

All ferrous metal parts shall be galvanized in conformance with the provisions in Section 75-1.05 of the Caltrans Standard Specifications.

86-2.06C Installation and Use. Replace the entire subsection with the following:

Pull boxes shall be installed at the locations shown on the Plans and shall be spaced at no more than 200-foot intervals. The Contractor may, at the Contractor's expense, install additional pull boxes to facilitate the work.

The bottoms of pull boxes installed in the ground or in sidewalk areas, shall be bedded in crushed rock as shown on the Plans. Grout in the bottom of pull boxes will not be required.

Where the sump of an existing pull box is disturbed by the Contractor's operations, the sump shall be reconstructed to the satisfaction of the Engineer.

86-2.08 Conductors. Add the following:

Three –conductor cable (3 CSC), five conductor cable (5 CSC) and twelve-conductor cable (12 CSC) shall be installed in lieu of individual conductors and shall conform to Section 86-2.08D of the CalTrans Standard Specifications Latest Edition.

All connections must have 4 twists, soldered by the hot iron, pouring or dipping method. (Open flame soldering will not be permitted) wire-nutted, taped with Scotch 33+ or equivalent vinyl tape, double layered, 50% overlap, and coated with “Scotchkote” or equivalent electrical coating.

Existing interconnect cable shall be re-pulled into new conduit as shown on the Plans.

New interconnect cable shall be 12 pair No. 19. All cable provided shall be certified by the manufacturer as meeting the requirements of the REA Specifications for Type PE-39 cable as related to the materials and construction methods used, and the electrical and mechanical characteristics of the actual cable supplied by the Contractor.

All conductors shall be THW. The Contractor shall provide all new conductors unless otherwise shown on the Plans or provided for in these Special Provisions.

Add the following subsection:

86-2.08F Conductors.

All loop lead-in wires shall be marked according to the resistor color code.

1. Phase 1 shall be marked with **brown** PVC tape.
2. Phase 2 shall be marked with **red** PVC tape.
3. Phase 3 shall be marked with **orange** PVC tape.
4. Phase 4 shall be marked with **yellow** PVC tape.
5. Phase 5 shall be marked with **green** PVC tape.
6. Phase 6 shall be marked with **blue** PVC tape.
7. Phase 7 shall be marked with **violet (purple)** PVC tape.
8. Phase 8 shall be marked with **gray** PVC tape.

Lane numbering shall be by phase and lane number. Lane one (#1) is the farthest left lane of a phase.

Loop numbering shall begin at the stop bar. Loop one (#1) is closest to the intersection.

Type II (jacketed) loop wire. Hot melt or epoxy sealant. Pothole filled with sealant-no cold mix.

Round loops, 6 feet in diameter shall be used. Loop stub-outs shall be placed before the BCR.

86-2.09 Wiring

86-2.09C Connectors and Terminals. Add the following:

Conductors #10 AWG or larger shall be spliced by the use of approved "C" shaped compression connectors.

86-2.09D Splicing and Terminations. Add the following:

No splicing shall be permitted except for signal and lighting commons. All conductors shall extend from the cabinet to the terminal compartment in each pole.

Conductors #10 AWG or larger shall be spliced by the use of approved "C" shaped compression connectors.

86-2.09E Splice Insulation. Replace the first sentence of the last paragraph with the following:

The Contractor shall use splice insulation "Method B".

86-2.11 Service. Add the following:

For each traffic signal, the existing electrical service point shall be reused, unless otherwise specified on the Plans.

For a service upgrade or a new service the Contractor shall install a 120/240 volt, Meyers type BF-III with type V photocell signal and lighting service with a Type III P.E.C. in a Meyers Service Cabinet with a four-clip meter socket and test switch for safety lights. The base must be 12.25 X 14.25 mounting bolt ring. The cabinet size is to be 16' wide with a swing open upper panel. The color shall be metal finished.

The service shall also contain a 100 AMP main breaker, 50 AMP traffic signal breaker (metered), 30 AMP safety light breaker, 15 AMP I.I.S.N.S breaker safety light breaker and a double ganged 20 Amp (unmetered) Safety Light breaker. Signal and I.I.S.N.S. circuits shall be 120V unmetered. Provision shall be made inside the service cabinet for mounting the photo-electric unit.

Install power pole riser, if applicable, and conductors to the service cabinet as directed by the serving utility.

The resistance to earth (utility ground) of the traffic signal controller cabinet ground rod(s) must not exceed 10 ohms. The ground rod for the controller cabinet shall be in the pullbox next to the cabinet, if possible at least 15 feet from the utility company ground. **Number 6 AWG cable is the minimum size acceptable for grounding.**

The controller base shall have three conduits which terminate in a pullbox next to the controller. One 2" for the service wires, and 2-3" conduits. One for the field output wires and one for the loops and interconnect. **Safety Light wiring shall not enter the controller cabinet.**

The Contractor shall pay all costs and fees required by the serving utility to complete the service connection. All such costs and fees shall be considered as included in the Contract Unit Price for Traffic Signals.

86-5 DETECTORS

86-5.01 Vehicle Detectors

86-5.01B Video Detection System

Video detection systems shall be furnished and installed in each cabinet at locations shown on the Project Plans. The video system equipment, cabling and auxiliary equipment shall be as shown below or equal, and as specified in the Appendices of this Specification and as noted on the Plans. The Engineer reserves the right to select equipment from any manufacturer for the video detection system. As such, the Engineer may ask the Contractor to provide and alternate material submittal and related cost proposal for said other equipment.

ITERIS

Part Number	Description
CAM-RZ4AWDR	Iteris Vantage Edge 2 Camera
CAMBRKT4	Iteris Universal Mounting Bracket
EDGE2 IOM32 or TS2-1M	Iteris TS-1 or TS-2 Interface Module
	10" Flat Panel Monitor
LAMVIEW ADPT	Iteris Lens Adjustment Module
EDGE2-4N	Iteris Vantage Edge 2 Processor- QUAD
	Turn On Support and Training
	Belden Precision Video Cable RG-59/U Type 20 AWG
Catalog # 01342	General Cable Carolprene Jacketed Type SJOW cord
	Iteris Vantage Input/Output & extension Modules

Considered equal is the Econolite Autoscope ENCORE camera with Autoscope ENCORE branch Cable (3-conductor/18AWG) and other compatible, required auxillary equipment from Econolite to provide a fully-operational video detection system.

One video detection camera shall be installed on each luminaire mast arm for each direction as shown on the Plans and details contained herein and in the appendix.

The Contractor shall have a manufacturer's representative present during installation of all cameras and cabinet modifications. The manufacturer's representative shall provide a minimum of 16 hours (2 days) of training with CITY staff.

86-5.01B (2) Detailed Specification for Video Detection System

86-5.01B (2.1) Video Detection System

See Appendix VI.

86-5.01B (2.2.3) Video Server

The contractor shall provide compatible Video Servers to be located at each intersection. The video server shall have four ports for analog video and both Ethernet and RS-232 ports capable of transmitting high-quality de-interlaced video at 30 frames per second (NTSC) per channel.

86-5.02 Push Button Assemblies. Add the following:

Pedestrian push buttons shall be Type B with minimum 2-inch diameter button to comply with ADA requirements and standards, and R62D signs (5"x7").

Add the following subsection:

86-5.03 Modulated Light Signal Detection System (Emergency Vehicle Preemption). Each modulated light signal detection system shall conform to the details shown on the Plans and these Special Provisions.

A complete, functioning 3M Opticom (tm) emergency vehicle preemption system shall be furnished and installed. The transmitting equipment is not included in this Contract.

Emergency vehicle preemption equipment to be furnished and installed or provided shall include:

- a) 3M model 721 or 722 optical detectors for each approach, as shown on Plans and as directed by the Engineer.
- b) 3M model 752 rack-mounted phase selector sufficient for 8-phase operation.
- c) 3M model 138 detector cable.
- d) One spare 3M model 752-phase selector.
- e) One spare 3M model 721 or 722 optical detector.

The system shall be designed to prevent simultaneous preemption by two or more emergency vehicles on separate approaches to the intersection.

The optical detector shall be mounted on the indicated signal mast arm by approved mast arm clamp. The detector shall not be mounted on the signal head.

Emergency vehicle preemption sequence of operation shall be approved by the Engineer prior to timing and activation of signals.

It shall be the responsibility of the Contractor that a knowledgeable representative for the manufacturer of the emergency vehicle preemption equipment be present for the first day of the traffic signal lighting function test to ensure proper installation and functioning of the equipment.

The optical detector shall be a lightweight, weatherproof, adjustable, bi-directional optical detector assembly. Internal circuitry shall transform optical energy from the optical emitter assembly into electrical signals for delivery via optical detector cable to the phase selection equipment.

The optical detector cable shall be a durable, shielded, 3-conductor cable with a drain wire and the necessary electrical characteristics to carry power to the optical detector from the phase selector and to carry the optical detector signal to the phase selector. It shall conform to the requirements of the manufacturer of the phase selector and optical detector.

The phase selector shall be installed in the traffic signal controller cabinet. It shall interface with the signal controller and provide the following functions while not compromising the control equipment fail-safe provisions:

Sufficient power to all optical detectors required for the intersection.

Sensitivity to the optical detector signal via adjustable range potentiometers.

Differentiation of signals by optical detectors from one or more emitters on a first-come, first-

served basis.

Outputs to signal the controller to cause selection of the desired phase green display for the approaching vehicle.

Smooth transition to not-priority operation upon passage of the vehicle through the intersection.

The Contractor shall provide a vehicle equipped with an emitter to test and verify satisfactory operation of the equipment.

86-6 LIGHTING Add the following:

Luminaires shall be Navion LED, model NVN-AE-02-E-U-T3-10K-4-AP.

After luminaires are installed, and the system is fully operational, permission from the Engineer to begin a 7 day test period will be required. For testing, the street lighting system is to be turned on, and remain on for 7 days. The contractor shall check the system daily to ensure all lamps are operational and submit report prior to final acceptance of the system by the City.

86-6.06 Sign Lighting Fixtures

86-6.06.5 Internally Illuminated Street Name Signs. Add the following:

Each Internally Illuminated Street Name Sign (IISNS) shall be wired hot with an individual photoelectric control. Photoelectric controls are to be mounted between the supports on the top of the sign.

All IISNS shall be lit using LED lamps.

All IISNS are to be Type A, Nu-Art Style (framed, hinged sign panel) with dimensions of 72" maximum length by 18" maximum height. All IISNS panels shall have white letters and numbers on a green background and shall include City of Torrance and block numbers. The IISNS sign format is available from the CITY and a typical format and layout is shown on the Plans.

The Contractor shall furnish and install new mounting hardware for any new and relocated IISNS sign.

The Contractor shall not place any order of materials for an IISNS until it has received written approval by the City. Otherwise, the Contractor will be responsible for any fees or expenses related to design modifications, restocking, and any other charges.

86-7 REMOVING, REINSTALLING OR SALVAGING ELECTRICAL EQUIPMENT

86-7.01 Removing Electrical Equipment. Replace the first paragraph with the following:

Existing electrical equipment shown on the Plans or specified in these Special Provisions to be removed and not reused or salvaged, and pull boxes, conduit and detector frames not reused, shall become the property of the Contractor, except the controller cabinet to be removed, which shall be salvaged to the CITY and delivered to the CITY Yard as directed by the Engineer.

86-8 PAYMENT

86-8.01 Payment. Replace the entire subsection with the following:

Payment for removal of existing and installation of new Internally Illuminated Street Name Signs will be made at the Contract Unit Price of REMOVE EXISTING INTERNALLY ILLUMINATED SIGN. FURNISH AND INSTAL NEW INTERNALLY ILLUMINATED STREET NAME SIGN ON EXISTING TRAFFIC SIGNAL MAST ARM and shall include all work needed.

Payment for removal of existing Pedestrian Indication, wiring modifications and installation of new countdown indication will be made at the Contract Unit Price of REMOVE EXISTING PEDESTRIAN INDICATION. FURNISH AND INSTALL NEW COUNTDOWN PEDESTRIAN INDICATION and shall include all work needed.

Payment for removal of existing detector loops, wiring modifications for said loops, and installation of new detector loops will be made at Contract unit Price of INSTALL TRAFFIC LOOP DETECTORS and shall include full compensation for all labor, materials, tools, equipment, and incidentals, for doing all the work involved in furnishing and installing traffic loop detectors.

Payment for installation of video detection system, including manufacturer's oversight will be made at the Contract Lump Sum Price of FURNISH AND INSTALL NEW VIDEO DETECTION SYSTEM, COMPLETE IN PLACE, INCLUDING ALL WIRING AND DISCONNECTION OF EXISTING PRIMARY DETECTOR LOOPS and shall include all work needed.

Full compensation for all additional material and labor, not shown on the Plans or specified, which are necessary to complete the installation of the various signal systems, shall be considered as included in the prices paid for the systems, or units thereof, and no additional compensation will be allowed therefor.

SECTION 308 – LANDSCAPE AND IRRIGATION INSTALLATION

308-2 EARTHWORK AND TOPSOIL PLACEMENT

308-2.1 General. Add the following:

The landscape work shall not begin until all other trades have repaired all areas of settlement, erosion, rutting, etc., and the soils have been re-established, recompactd and refinished to final grades. The Engineer shall be notified of all areas where the landscape work is prevented from being executed.

Surface drainage shall be provided by modeling the surfaces to facilitate the natural run-off of water. Low spots and pockets shall be filled with topsoil and graded to drain properly.

308-2.2 Trench Excavation and Backfill.

Subparagraph b) is amended as follows:

- b) Waterlines continuously pressurized – 36 inches (42 inches under roadways).

Subparagraph c) is amended as follows:

- c) Lateral sprinkler lines – 12 inches (30 inches under roadways).

308-2.3 Topsoil Preparation and Conditioning

308-2.3.1 General. Substitute Class A with Class C in the first sentence of the first paragraph.

Add the following:

Before soil preparation operations are started in any area, the Contractor shall remove and dispose of all trash and any other debris on the surface of the ground.

Mowing and spraying operations shall be performed in all areas throughout the limits of the landscape portion of the Work. The sequence of operations shall be determined by the Engineer. Before applying any chemical spray material, the Contractor shall obtain from the Engineer written approval of the material to be used, the rate, and method of application.

Stolon-type grasses and weeds shall be killed by spraying with an approved weed control chemical. Other weeds shall be mowed as close to the ground as possible. Such weeds or grasses shall be removed by grubbing prior to cultivating.

Any weed growth which subsequently appears shall be killed by additional spraying before the weeds exceed two (2) inches in height. At the time of planting, each area to be planted shall be free of living weeds of any height.

The Contractor immediately shall remove and dispose of mowed weed growth and all other debris generated by clearing and grubbing when so directed by the Engineer.

308-2.3.2 Fertilizing and Conditioning Procedures. Add the following:

The conditioning material per 1000 square feet shall be:

- a) Four (4) cubic yards nitrogen stabilized organic amendment derived from redwood, fir or cedar sawdust.
- b) Fifteen (15) lbs. 12-12-12 commercial fertilizer.
- c) Fifteen (15) lbs. soil sulfur.

The Contractor shall apply post-plant fertilizer at the rate of twenty pounds (20 lbs.) per 1,000 sq. ft., thirty (30) days after planting and once again at the end of the post-construction maintenance period.

308-2.4 Finish Grading. Replace the second paragraph with the following:

The finish grade below adjacent paving, curbs or headers shall be one inch in lawn areas and three inches in shrub or groundcover areas.

308-4 PLANTING

308-4.1. General. Add the following:

Planting work shall not begin until the area's irrigation system has been installed, operational and passed inspection.

Inspection and approval of specimens shall be required before delivery to site; all others on delivery. Any plants rendered unsuitable for planting because of this inspection shall be considered as samples and shall not be paid for. In case the sample plants inspected are found to

be defective, the Engineer reserves the right to reject the entire lot or lots of plants represented by the defective samples. Rejected plants shall be removed from the site immediately. Random samples will be inspected for root condition.

All plants shall be true to name, and one of each bundle or lot shall be tagged with the name and size of plants, in accordance with the standards of practice recommended by the American Association of Nurserymen. The root condition of plants furnished in containers shall be determined by removal of earth from the roots of not less than two (2) plants, nor more than 2 percent (2%) of the total number of plants of each species or variety, except when container-grown plants are from several different sources; in which case, the roots of not less than two (2) plants of each species or variety from each source shall be inspected by the Engineer at his option. The selection of plants to be inspected will be made by the Engineer.

All plants of the same species and container size (i.e., the same specification) shall be uniform in size and shape and at the same stage of growth to the satisfaction of the Engineer.

All plants shall be fully acclimated and in an active growing state.

The Contractor shall remove all lateral growth that is not acceptable and/or shape all plants to the satisfaction of the Engineer.

All plants shall be full-sized and shall have root systems at a fully developed state within the container.

Hair roots should extend to the edge of the container. No plant shall be root-bound. Root balls may require scarification to the satisfaction of the Engineer.

No boxed, balled or canned plants shall be planted if the ball is broken or cracked, whether before or during the process of planting. Any plant transplanted by the Contractor that dies or has bark, branch or die-back injury shall be replaced at the Contractor's expense with an equal plant to the satisfaction of the Engineer.

Before plants are transported to the planting area, they shall be properly pruned or cut back to reduce damage by wind and to force lateral growth.

No plants shall be transported to the planting area that are not thoroughly wet throughout the ball of earth surrounding the roots. Plants should not be allowed to dry out, nor shall any roots be exposed to the air except during the act of placement. Any plant that, in the opinion of the Engineer, is dry or in a wilted condition when delivered or thereafter, whether in place or not, will not be accepted and shall be replaced at the Contractor's expense.

All inspections herein specified shall be made by the Engineer. The Contractor shall request inspection at least 48 hours in advance of the time inspection is required. Inspection shall be required on the following stages of the work:

- a) During preliminary grading, soil preparation, and initial weeding.
- b) When plants are spotted for planting, but before planting holes have been excavated.
- c) When finish grading has been completed.
- d) When all specified work, except the maintenance period has been completed.
- e) Final inspection at the completion of the maintenance period.

The Contractor's failure to obtain inspection will extend the start and/or finish of the maintenance period as applicable, unless otherwise agreed to in writing by the Engineer.

308-4.5 Tree and Shrub Planting. Replace the fourth paragraph with the following:

All planting holes shall be backfilled with a prepared soil mix conforming to the following requirements:

- 4 parts by volume nitrogen-stabilized organic amendment
- 6 parts by volume on-site soil from area(s) approved by Engineer
- 1 lb. 12-12-12 commercial fertilizer per cubic yard of mix
- 2 lbs. iron sulfate per cubic yard of mix

The materials shall be thoroughly mixed to the bottom of the pit so that they are evenly distributed and without clods or lumps. Backfill shall be so placed in the pits that the plant will be at its natural growing height and the backfill material will be level one inch below surrounding soil after settlement.

Fertilizer planting tablets (twenty-one (21) gram size and shall be placed with each plant at the following rates:

- One (1) tablet per one (1) gallon container;
- Two (2) tablets per five (5) gallon container;
- Four (4) tablets per fifteen (15) gallon container;
- Eight (8) tablets per 24" box container
- One (1) tablet per each three inches (3") of box size greater than 24".

Center plant in pit or trench on slight pedestal. Face plants with fullest growth into prevailing wind. Set plant plumb and hold rigidly in position until soil has been tamped firmly around ball or roots. Position the plant in the hole and backfill no higher than halfway up the root ball. If required, place the recommended number of tablets evenly around the perimeter of, and immediately adjacent to, the root ball at a depth which is between the middle and the bottom of the root ball. Complete the backfilling, tamp (eliminating all air voids) and water. Do not pack.

Except for street trees, construct a berm 4" above finish grade, extending 4" to 6" beyond edge of root ball, forming a watering basin with a level bottom around each plant. After a minimum of 2 days soaking and the regular irrigation system is operating, the berm area shall be smoothed to finish grade.

308-4.8 Lawn Planting

308-4.8.2 Seed. Add the following to Method B.

Prior to the application of hydro-mulch, the fine grading of all lawn areas shall be inspected and approved by the Engineer. Seedbeds shall be treated with 5% Dieldrin in granular form at the rate of 3 1/2 pounds per 1000 square feet and lightly watered. After 24 hours (minimum) have elapsed, the seedbeds shall be prewetted prior to hydroseeding and shall be kept continually moist after hydroseeding.

All equipment used to apply hydromulch shall be subject to the approval of the Engineer. The equipment shall have a built-in agitation system and operating capacity sufficient to agitate, suspend and homogeneously mix a slurry containing not less than 40 lbs. of fiber mulch plus a combined total of 7 lbs. fertilizer solids for each 100 gallons of water.

Hydraulic spray nozzles shall provide a continuous non-fluctuating discharge. The slurry tank shall have a minimum capacity of 1,500 gallons and shall be mounted on a traveling unit, either self-propelled or drawn by a separate unit, which will place the slurry tank and spray nozzle within sufficient proximity to the areas to be seeded.

The slurry preparation shall take place at the site of Work and shall begin by adding water to the tank when the engine is at half throttle. When the water level has reached the height of the agitator shaft, good re-circulation shall be established and at this time the seed shall be added. Fertilizer shall then be added to the mixture after the seed and when the tank is at least one-third filled with water.

The engine throttle shall be opened to full speed when the tank is half filled with water. All the wood pulp mulch shall be added by the time the tank is two-thirds to three-fourths full. Spraying shall commence immediately when the tank is full.

Spray the area with a uniform visible coat using the dark color of the cellulose fiber or organic amendment as a visual guide. The slurry shall be applied in a downward drilling motion via a fan stream nozzle. It is important to ensure that all of the components enter and mix with the soil.

All slurry mixture which has not been applied within four (4) hours after mixing shall be rejected and removed from the Work at the Contractor's expense.

Special care shall be exercised by the Contractor to prevent any of the slurry from being spilled or sprayed anywhere except onto areas to be hydroseeded. Any spillage or overspray immediately shall be removed by and at the expense of the Contractor to the satisfaction of the Engineer.

Seed shall be applied at a minimum rate of five (5) pounds per 1000 square feet.

If complete and full germination is not obtained within 14 days, the Contractor shall hand seed with the same seed mixture and top dress with nitrohumous and redwood soil amendment all areas designated by the Engineer.

Add the following subsections:

308-4.10 Parkway Trees

308-4.10.1 General. The CITY maintains a tree conservation policy. The Contractor is required to assist the CITY in its efforts to conserve trees.

The Contractor shall be required to provide a Consulting Arborist (CA) to review and guide its operations that may impact trees to remain. The CA shall be required to have Certification as an Arborist by the International Society of Arboriculture (217-355-9411), unless otherwise approved by the Engineer.

The CA shall inspect all work locations and assess the impact of construction on existing trees to remain. If the CA determines that destructive impact is likely, Contractor is required to modify its operations to reduce the likelihood of damage to the fullest extent feasible. Contractor shall be responsible to schedule its operations in a manner that will permit the CA to view areas after removals and prior to construction, as necessary.

The CA shall spot-check representative operations and modifications employed to protect existing trees. A preliminary identification of trees that may potentially be impacted has been made by the Engineer. The CA shall check these and other locations to assure adequate protective

measures are taken.

There shall be no separate payment for the services of the CA. All costs for the CA shall be included in the prices bid for appurtenant work.

308-4.10.2 Conservation Methods. Manual operations shall be employed for the removal of sod and soil to establish a finished grade within 4 feet of existing trees to remain.

Tree root systems must remain adequate to withstand heavy windstorms.

Construction equipment, materials, sand, soil, gravel, or other material shall not be placed, parked or stored on the surface of any unpaved areas within the driplines (outermost reach of branches) of street trees. No chemicals, rinsates, or petroleum products shall be deposited within the driplines of street trees.

308-4.10.3 Root Barrier and Pruning. Roots shall be pruned immediately adjacent to the edge of the sidewalk and the back of curb. Cuts shall be 7.5-inches adjacent to sidewalk and 18-inches deep adjacent to curb and gutter. The cuts shall extend 6 feet in each direction along the curb from the center of the tree trunk for a total length of 12 feet or as directed by the Engineer.

Root pruning equipment shall be specifically designed for this purpose, sharpened adequately to sever roots in a clean manner, and equipped with padded tracks or rubber tires to prevent scraping or marking of the roadway or curbs.

Areas root pruned shall be backfilled with Class "C" topsoil either immediately upon completion of root pruning or upon completion of the adjacent work provided that adequate safety and warning devices are placed and maintained at each location.

The Contractor shall repair or replace all utility service connections and sprinkler systems within the right-of-way which are damaged or removed as a result of the root pruning operation. Repairs shall be initiated immediately upon the occurrence of damage or removal and completed by the end of each working day. Repairs and replacements shall be the equivalent of, or better than, the existing improvements in material, dimension, and function. All repairs shall be at the Contractor's expense and to the satisfaction of the Engineer.

Root sealer shall be approved by the Engineer a minimum of two (2) working days prior to the start of root pruning operations and shall be applied to all cut root areas which are larger than 50mm (2 inches) in diameter. The approved sealer shall be applied as soon as practical after the cuts have been made.

When constructing or replacing driveway approaches, roots shall not be cut by means of mechanical root cutting machines. If root removal is essential to driveway construction, roots shall be manually cut using hand implements with guidance from the CA.

Exposed tree roots shall be covered with mulch and watered from a period immediately following curb and gutter removal, until the area is backfilled following construction.

The root barrier shown in City of Torrance Standard Plan Nos. T401 and T402 is hereby deleted from this project.

308-4.11 Payment. Payment for providing prepared topsoil, furnishing and planting trees, shrubs, and plants shall be included in the lump sum Contract Unit Price for Landscaping and Irrigation.

The Contract Unit Price for Parkway Trees shall include full compensation to install the specified 24" box trees complete in place, as shown on the Plans and in accordance with these Special Provisions, including installation of the tree well, providing prepared topsoil, backfill, restoration of adjacent grass and parkway, and all appurtenant work.

308-5 IRRIGATION SYSTEM INSTALLATION

308-5.1 General. Add to the last paragraph:

The record drawings of the irrigation system shall show locations and depths of the following items:

- a) Points of connection.
- b) Routing of sprinkler pressure lines (dimension at a maximum of 100 feet along routing).
- c) All gate valves.
- d) Quick coupling valves.
- e) Rerouting of control wires.
- f) Other related equipment (as directed by Engineer).

The Contractor shall verify the water pressure available at the site before installation of the irrigation system to make sure there is adequate pressure to properly operate the irrigation heads and valves. If the pressure provided at Work site or any other Work condition will create problems that will prevent proper operation of the irrigation system, the Engineer shall be notified before commencement of any work. Minor additions and adjustments of heads, piping, and circuits shall be made at no additional cost to the CITY where it is necessary to make the irrigation system operate properly.

308-5.2 Irrigation Pipeline Installation

308-5.2.1 General. Add the following:

Trenching machines or other mechanical means of excavation shall not be used for excavation of trenches where such use may damage existing improvements. However, in any case, the Contractor will be held responsible for any damage to existing improvements caused by their operations and any damage so occurring shall be repaired to the satisfaction of the Engineer by and at the expense of the Contractor.

Trench excavation for pipelines shall be made on the alignments shown on the Plans. Unless otherwise shown, lateral water lines shall have a minimum cover of twelve inches (12") of soil. Main water lines shall have a minimum cover of 36" of soil.

Irrigation pipe shall be installed in conformance with 308-5.2.3. Pipe flushing and pressure testing shall conform to 308-5.6.

At any location where irrigation pipe has less than 15" of cover due to interferences or other adjustments, the Contractor shall, at its own expense, provide a galvanized sleeve or other protection to the satisfaction of the Engineer. No extra costs shall be allowed for this protection.

Bedding material for irrigation piping shall be sand conforming to the requirements of 200-1.5.3 (minimum SE of 75) and 200-1.5.5.

Backfill material placed in the pipe trenches and immediately over electrical wiring shall be select material free from stones or other material that might damage the pipe or insulation on the conductors.

Backfill of irrigation pipe shall conform to 308-2.2.

Densification of bedding material shall be per 306-1.3.3.

All trenches shall be compacted to the same compaction as the adjoining area and finished flush with adjoining grades.

Unless otherwise directed by the Engineer, pressure piping shall be provided with PCC thrust blocks. Thrust blocks shall be constructed at the following places:

- a) Where pipe changes direction at fittings.
- b) Where pipe changes size.
- c) Where line terminates.
- d) Around gate valves (bottom half of valve in concrete; bolts exposed for change of top half).

308-5.3 Installation of Valves, Valve Boxes, and Special Equipment. Modify the second sentence of the fifth paragraph to read:

In lawn areas, such equipment shall be installed in valve boxes as described in 212-2.2.7 of these Special Provisions. Boxes shall be set level on 1 cubic foot (1'x1'x1') of gravel. The top of the box shall be set at grade where adjacent to pavement.

Add the following after the fifth paragraph:

Remote Control Valves shall be installed in accordance with APWA Standard Plans and manufacturer's specifications. Remote control valves shall be 6 inches to 8 inches below finished grade, measured to top of cross arm in "open" position, or as detailed on the Plans.

Master RCV shall be installed adjacent to and downstream of the cross connection preventer.

Pressure Relief Valves shall be installed as shown on the Plans in a locking valve box per 212-2.2.7 of these Special Provisions. Set for 125 lb. operation.

Add to the last paragraph.

Backflow devices shall be installed in accordance with the requirements set forth by the Uniform Plumbing Code, latest edition and latest supplements thereto, on GSP, wrapped and set in PCC per City of Torrance Standard Plan No. T711.

308-5.4 Sprinkler Head Installation and Adjustment

308-5.4.2 Location, Elevation, and Spacing. Add the following to the first paragraph:

Any deviation to spacing and location of sprinkler heads shall be reported to the Engineer and have his approval before installation.

Add the following:

The Contractor shall coordinate the installation of all sprinkler heads, including pipe, with the Plans to avoid interfering with trees or other planting and/or permanent pavement.

No spray from sprinkler heads will be permitted to throw into public streets or onto walks, driveways or parking areas.

308-5.5 Automatic Control System Installation. Replace the entire subsection with the following:

Automatic controllers shall be installed approximately where shown on the Plans after having verified exact positioning with the Engineer. Units shall be installed plumb and in a manner as recommended by the manufacturer in the enclosure specified in 212-3.4 of the Special Provisions.

For low voltage installations, a continuous wire shall be used between the controller and remote control valves. Under no circumstances shall splices exist without prior approval. All wire shall be installed in PVC casing (no direct burial) unless otherwise approved by the Engineer. Said PVC casing shall be in addition to the galvanized casing where applicable.

Sizing of wire shall be according to the controller manufacturer's recommendations and in no case less than #14 in size.

All control wires shall be black in color. All ground wires shall be white in color. An extra wire (neither white nor black) shall be installed extending to the furthest valve for possible future use.

Stamped brass identification tags shall be connected to each wire exposed in access boxes and at each remote control valve. Tag size shall be 1" long by 1/2" high, with 1/4" high numbers deeply stamped thereon indicating valve sequence number. Tags shall be tied with bare copper tie wire. Sequence shall be approved by the Engineer. All splices shall be made in a valve box and inspected by the Engineer and all remote control valves shall be tested for operation prior to backfill.

Add the following subsections:

308-5.7 Controller Charts. Upon completion of the Work, the control system shall be in operating condition with an operational chart mounted in the controller cabinet.

The Contractor shall provide two controller charts for each controller supplied showing the area covered by the automatic controller on the maximum size sheet which the controller or controller cabinet door will allow. The chart may be a reduced drawing of the actual as-built system. However, in the event the controller sequence is not legible when the drawing is reduced, it shall be enlarged or redrawn to a size that will be readable.

The chart shall be a blackline print, and a different color shall be used to show area of coverage for each station.

When completed and approved, one of the charts shall be hermetically sealed between two pieces of plastic, each piece being a minimum 20 mils thick. This chart shall be mounted using Velcro or approved equal type of tape. The other chart shall be given to the Engineer.

These charts shall be completed and approved prior to final inspection of the irrigation system.

308-5.8 Electrical Service and Meters. The electrical meter shall be installed in an enclosure conforming to 212-3.4 of these Special Provisions. The Contractor shall provide the enclosure and any necessary pull boxes. The enclosure location shall be established in the field by the Engineer. The service location is shown on the Plan.

Southern California Edison Company (SCE) will furnish the electrical meter and will install the wires and conduits from the electric line to the electrical meter. It is the Contractor's responsibility to coordinate its 120 VAC electrical connections with SCE and include any delay in obtaining installation of the meter in its schedule. Controllers shall be fully automated and tested prior to start of maintenance period. SCE will bill the CITY directly for this connection.

308-5.9 Payment. Payment for the installation of the irrigation system shall be included in the lump sum Contract Unit Price for Landscaping and Irrigation. There shall be no separate payment for furnishing and installing pipe, fittings, valves, controllers, enclosures, special equipment, and electrical work.

308-6 MAINTENANCE AND PLANT ESTABLISHMENT. Replace the entire subsection with the following:

The Establishment and Maintenance Period shall begin on the first day after all planting in this Work is completed and accepted, and shall continue thereafter until 60 calendar days have passed. Notify the Engineer at least seven (7) days in advance of completion. Failure by the Contractor to notify the Engineer will delay the start of the Establishment and Maintenance Period.

Should the Establishment and Maintenance Period be extended beyond the prescribed 60 calendar days because of rejection by the Engineer for whatever reason, the entire installation shall remain the responsibility of the Contractor unless otherwise determined by the Engineer. Any rejected material shall be replaced and the 60 calendar day Establishment and Maintenance Period shall be restarted from that time for the replaced material only.

All areas landscaped or restored under this Contract shall be maintained by the Contractor. The Contractor, without any expense to the CITY, shall weed the planted areas as needed and shall remove all accumulated debris from the landscaped areas as needed and/or as called for by the Engineer.

One month after planting, fertilize plants with 12-12-12 (N-P-K) commercial fertilizer at the rate of 3 level tablespoons per 5-gallon plant basin. The Engineer may require additional fertilization at each monthly interval.

Apply Iron Sequestrene as specified by the manufacturer immediately at the onset of any symptom of iron chlorosis. Repeat fertilization monthly for duration of maintenance period.

The above fertilization schedule may be revised by the Engineer if, in his/her opinion, optimal plant health and growth is not being obtained. The Contractor shall comply with all changes as directed.

The Contractor shall be responsible to provide adequate water to all plants without overwatering. Water conservation is mandated. The Contractor shall obtain approval from the Engineer for its proposed irrigation schedule and any changes thereto.

Add the following subsection:

308-6.1. Payment. Payment for Plant Establishment and Maintenance Period shall be on a lump sum basis per the Contract Unit Price. The Contract Unit Price shall include full compensation for all tools, materials, labor, equipment, water and incidentals to complete this work in accordance with the Plans and Special Provisions.

308-7 PAYMENT. Replace the entire section with the following:

The Contract Unit Price for 60 DAY CONTRACTOR MAINTENANCE PERIOD shall include full compensation to install the landscaping and irrigation systems (as detailed in this Section, including prepared topsoil) complete in place, as shown on the Plan and per these Specifications, excluding Plant Establishment and Maintenance.

Add the following section:

308-8 GUARANTEE. Add the following:

The Contractor, without expense to the CITY, shall adjust all irrigation heads to their appropriate operational heights, shall adjust and clean or replace, if necessary, all irrigation heads so that the planting areas are properly covered and they shall be adjusted so as to prevent excessive overflow into the adjacent street right-of-way.

The CITY reserves the right to make temporary repairs as necessary to keep the irrigation system equipment in operating condition. The exercise of this right by the CITY shall not relieve the Contractor of its responsibility under the terms of the Contract as herein specified.

Maintenance shall be done by qualified and experienced irrigation pipefitters.

All fifteen (15) gallon and larger trees installed under the contract shall be guaranteed to live and grow for one (1) year from the date of final acceptance of the contract work unless decline of the tree is specifically attributable to causes unrelated to installation, plant material quality, and the Contractor's maintenance practices.

All other plant material shall be guaranteed to live and grow for a period of ninety (90) calendar days from the date of final acceptance of the contract work unless decline of the plant material is specifically attributable to causes unrelated to installation, plant material quality, and the Contractor's maintenance practices.

Any plant material found to be dead, missing, or in poor condition during the post-construction maintenance period, shall be replaced immediately at the Contractor's expense. The Engineer shall be the sole judge as to the condition of the material. Replacement shall be made to the same specifications required for the original plantings.

During the guarantee period, should the Contractor fail to expeditiously replace dead plant material upon written notification by the Engineer, the City shall cause the work to be corrected and bill the actual costs incurred to the Contractor.

308-9 PAYMENT

Add the following subsections:

308-9.1 Payment.

Payment for specified bid items as shown on plans, and these special provisions for providing and amending top soil including fertility test; furnishing and planting trees, including stakes and root barrier; furnishing and planting shrubs and ground cover plants; furnishing and installing PVC moisture barrier surrounding landscaped areas and shredded bark mulch; furnishing and installing complete irrigation system, PVC pipe, and welded steel irrigation sleeve and all appurtenances; and relocation of bus stop benches and trash receptacles shall include full compensation for all labor, materials and equipments to complete this work and shall be per the Contract Unit Price or Contract Lump Sum Price in accordance with plans, specifications and bid schedule.

SECTION 310 - PAINTING

Use Sections 84-1 and 84-2 of the Caltrans Standard Specifications.

SECTION 84: TRAFFIC STRIPES AND PAVEMENT MARKINGS

84-1 GENERAL Add the following:

The Contractor shall paint red curb markings as shown on the signing and striping plans. When street addresses painted on curb faces have been eliminated due to work associated with this contract, each street address shall be restored by painting on the face of new curb. Background shall be white in color and address numbers shall be black in color and 4 inches in height. Existing paint markings on curbs shall be removed prior to applying the new paint markings.

84-1.01 Description. Replace the first two paragraphs with the following:

This work shall consist of applying thermoplastic traffic stripes (traffic lines) and pavement markings at the locations and in accordance with the details shown on the Plans or designated by the Engineer, and as specified in these Specifications and Special Provisions.

The thermoplastic material shall conform to the provisions of 84-2.02 of the Caltrans Standard Specifications.

84-2.06 Payment. Replace the entire subsection with the following:

Payment for traffic striping, pavement marking, and curb markings shall be on a lump sum basis per the Contract Unit Price and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, necessary to complete the Work.

All costs for establishing alignment of traffic stripes, pavement markings, layout, temporary pavement painting, and sandblasting of existing lines and markings shall be included and no extra costs will be allowed.

SECTION 314 – TRAFFIC STRIPING, CURB AND PAVEMENT MARKINGS,

AND PAVEMENT MARKERS

Delete the entire Section 314 and replace with Sections 85-1.06, 85-1.07 and 85-1.09 of the Caltrans Standard Specifications.

85-1.06 Placement. Add the following:

The solid 4" white lines at intersections shall have a marker installed at each end. These markers shall be placed on the line.

Markers shall not be installed on bike lane striping.

85-1.09 Payment. Add the following:

There shall be no separate payment for pavement markers. Full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in furnishing and placing pavement markings, complete in place, including adhesives and establishing alignment for pavement markers, as shown on the Plans, and specified in these Special Provisions shall be included in the Contract Unit Price for traffic striping and pavement markers as described in Section 84-2.06 of these Special Provisions.

SECTION 317 - SIGNAGE

317-1 ROADSIDE SIGNS. All signs shall be installed in accordance with the requirements of Section 56-4 of the Caltrans Standard Specifications, Caltrans Standard Plans and these Special Provisions. Roadside signs shall be installed at the locations shown on the Plans or where directed by the Engineer.

All signs shown on the signing and striping plans shall be new signs provided and installed by the contractor, except for existing signs specifically indicated to be relocated or to remain.

All signs shall be of 3M Diamond Grade Cubed, with 1160 protective anti-graffiti overlay film and matched components system warranty (12 years) on 0.080 Aluminum with "Torrance" and year on border.

56-4.03 CONSTRUCTION. Delete the third paragraph and last sentence of the eleventh paragraph.

Delete the entire subsection 56-2.05.

56-4.04 PAYMENT. Replace the entire subsection with the following:

Payment for roadside signs shall be per unit per the Contract Unit Price and shall include all labor, materials, tools, equipment, and individuals, and for doing all the work involved in furnishing and installing roadside signs, complete in place, as shown on the Plans and these Special Provisions, and as directed by the Engineer.

**SECTION F
FEDERAL REQUIREMENTS**

FEDERAL WAGE RATES FOR LOS ANGELES COUNTY

Construction of this project will be financed, in part, with Federal funds. Accordingly, the successful Contractor shall refer to and compensate its employees at the minimum federal wage rates. In July 2009, a new Office Bulletin (DLA-OB 09-03 - Using the Internet for Federal Wage Rates) was posted on the State's Local Assistance "Publications" website at <http://www.dot.ca.gov/hq/LocalPrograms/public.htm>

During the advertising period, the applicable federal wage rates no longer need to be physically included in the advertising package for local agency Federal-aid contracts. However if not physically included in the advertising package, the applicable federal wage rates must be referenced with an Internet Website address where they can be found.

The City of Torrance hereby notifies prospective bidders that the applicable federal wage rates for this project can be found at <http://www.dot.ca.gov/hq/esc/oe/federal-wages/>

Any revisions to the applicable federal wage rates, up to 10 days before bid opening, shall be identified by the issuance of an addendum with the corresponding Internet Website address of where the revisions can be found.

Impacts:

This Office Bulletin supersedes Chapter 12, Section 12.9 (Federal Wage Rates), Exhibit 12-D (PS&E Checklist), and Exhibit 12-E (PS&E Checklist Instructions) of the Local Assistance Procedures Manual.

APPENDIX I

**CITY OF TORRANCE PUBLIC WORKS AGREEMENT, PERMIT, AND BUSINESS
LICENSE**

PUBLIC WORKS AGREEMENT

This PUBLIC WORKS AGREEMENT ("Agreement") is made and entered into as of DATE (the "Effective Date"), by and between the CITY OF TORRANCE, a municipal corporation ("CITY"), and CONTRACTOR NAME, TYPE OF ENTITY ("CONTRACTOR").

RECITALS:

- A. The CITY wishes to retain the services of an experienced and qualified CONTRACTOR to construct the **PROJECT NAME & BID NUMBER**;
- B. In order to obtain the desired services, The CITY has circulated a Notice Inviting Bids for the construction of the **PROJECT NAME & BID NUMBER** (the "NIB"); and
- C. CONTRACTOR has submitted a Bid (the "Bid") in response to the NIB. CONTRACTOR represents that it is qualified to perform those services requested in the Plans and Specifications. Based upon its review of all Bids submitted in response to the NIB, The CITY is willing to award the contract to CONTRACTOR.

AGREEMENT:

1. SERVICES TO BE PERFORMED BY CONTRACTOR

CONTRACTOR will provide the services and install those materials listed in the Plans and Specifications, which are on file in the Public Works Department. The NIB and the Plans and Specifications are made a part of this Agreement. A copy of the Bid is attached as Exhibit A.

2. TERM

Unless earlier terminated in accordance with Paragraph 4 below, this Agreement will continue in full force and effect for two years from the Effective Date.

3. COMPENSATION

A. CONTRACTOR's Fee.

For services rendered pursuant to this Agreement, CONTRACTOR will be paid in accordance with CONTRACTOR's Bid; provided, however, that in no event will the total amount of money paid the CONTRACTOR, for services initially contemplated by this Agreement, exceed the sum of \$INSERT DOLLAR AMOUNT ("Agreement Sum"), plus a contingency of \$INSERT DOLLAR AMOUNT, if first approved in writing by the CITY.

B. Schedule of Payment.

Provided that the CONTRACTOR is not in default under the terms of this Agreement, upon presentation of an invoice, CONTRACTOR will be paid monthly, within 30 days after the date of the monthly invoice.

4. **TERMINATION OF AGREEMENT**

A. Termination by CITY for Convenience.

1. CITY may, at any time, terminate the Agreement for CITY's convenience and without cause.
2. Upon receipt of written notice from CITY of such termination for CITY's convenience, CONTRACTOR will:
 - a) cease operations as directed by CITY in the notice;
 - b) take actions necessary, or that CITY may direct, for the protection and preservation of the work; and
 - c) except for work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.
3. In case of such termination for CITY's convenience, CONTRACTOR will be entitled to receive payment for work executed; and costs incurred by reason of such termination, along with reasonable overhead and profit on the work not executed.

B. Termination for Cause.

1. If either party fails to perform any term, covenant or condition in this Agreement and that failure continues for 15 calendar days after the nondefaulting party gives the defaulting party notice of the failure to perform, this Agreement may be terminated for cause; provided, however, that if during the notice period the defaulting party has promptly commenced and continues diligent efforts to remedy the default, the defaulting party will have such additional time as is reasonably necessary to remedy the default.
2. In the event this Agreement is terminated for cause by the default of the CONTRACTOR, the CITY may, at the expense of the CONTRACTOR and its surety, complete this Agreement or cause it to be completed. Any check or bond delivered to the CITY in connection with this Agreement, and the money payable thereon, will be forfeited to and remain the property of the CITY. All moneys due the CONTRACTOR under the terms of this

Agreement will be retained by the CITY, but the retention will not release the CONTRACTOR and its surety from liability for the default. Under these circumstances, however, the CONTRACTOR and its surety will be credited with the amount of money retained, toward any amount by which the cost of completion exceeds the Agreement Sum and any amount authorized for extra services.

3. Termination for cause will not affect or terminate any of the rights of the CITY as against the CONTRACTOR or its surety then existing, or which may thereafter accrue because of the default; this provision is in addition to all other rights and remedies available to the CITY under law.

C. Termination for Breach of Law.

In the event the CONTRACTOR or any of its officers, directors, shareholders, employees, agents, subsidiaries or affiliates is convicted (i) of a criminal offense as an incident to obtaining or attempting to obtain a public or private contract or subcontract, or in the performance of a contract or subcontract; (ii) under state or federal statutes of embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, or any other offense indicating a lack of business integrity or business honesty which currently, seriously, and directly affects responsibility as a public consultant or contractor; (iii) under state or federal antitrust statutes arising out of the submission of bids or proposals; or (iv) of violation of Paragraph 20 of this Agreement; or for any other cause the CITY determines to be so serious and compelling as to affect CONTRACTOR's responsibility as a public consultant or contractor, including but not limited to, debarment by another governmental agency, then the CITY reserves the unilateral right to terminate this Agreement or to impose such other sanctions (which may include financial sanctions, temporary suspensions or any other condition deemed appropriate short of termination) as it deems proper. The CITY will not take action until CONTRACTOR has been given notice and an opportunity to present evidence in mitigation.

5. **FORCE MAJEURE**

If any party fails to perform its obligations because of strikes, lockouts, labor disputes, embargoes, acts of God, inability to obtain labor or materials or reasonable substitutes for labor or materials, governmental restrictions, governmental regulations, governmental controls, judicial orders, enemy or hostile governmental action, civil commotion, fire or other casualty, or other causes beyond the reasonable control of the party obligated to perform, then that party's performance shall be excused for a period equal to the period of such cause for failure to perform.

6. **RETENTION OF FUNDS**

CONTRACTOR authorizes the CITY to deduct from any amount payable to CONTRACTOR (whether or not arising out of this Agreement) any amounts the payment of which may be in dispute or that are necessary to compensate the CITY for any losses, costs, liabilities, or damages suffered by the CITY, and all amounts for which the CITY may be liable to third parties, by reason of CONTRACTOR's negligent acts or omissions or willful misconduct in performing or failing to perform CONTRACTOR's obligations under this Agreement. In the event that any claim is made by a third party, the amount or validity of which is disputed by CONTRACTOR, or any indebtedness exists that appears to be the basis for a claim of lien, the CITY may withhold from any payment due, without liability for interest because of the withholding, an amount sufficient to cover the claim. The failure of the CITY to exercise the right to deduct or to withhold will not, however, affect the obligations of CONTRACTOR to insure, indemnify, and protect the CITY as elsewhere provided in this Agreement.

7. **THE CITY'S REPRESENTATIVE**

The Public Works Director is designated as the "City Representative," authorized to act in its behalf with respect to the work and services specified in this Agreement and to make all decisions in connection with this Agreement. Whenever approval, directions, or other actions are required by the CITY under this Agreement, those actions will be taken by the City Representative, unless otherwise stated. The City Manager has the right to designate another City Representative at any time, by providing notice to CONTRACTOR.

8. **CONTRACTOR REPRESENTATIVE(S)**

The following principal(s) of CONTRACTOR are designated as being the principal(s) and representative(s) of CONTRACTOR authorized to act in its behalf with respect to the work specified in this Agreement and make all decisions in connection with this Agreement:

REPRESENTATIVE 1
REPRESENTATIVE 2

9. **INDEPENDENT CONTRACTOR**

The CONTRACTOR is, and at all times will remain as to the CITY, a wholly independent contractor. Neither the CITY nor any of its agents will have control over the conduct of the CONTRACTOR or any of the CONTRACTOR's employees, except as otherwise set forth in this Agreement. The CONTRACTOR may not, at any time or in any manner,

represent that it or any of its agents or employees are in any manner agents or employees of the CITY. CITY has no duty, obligation, or responsibility to CONTRACTOR's agents or employees under the Affordable Care Act. CONTRACTOR is solely responsible for any tax penalties associated with the failure to offer affordable coverage to its agents and employees under the Affordable Care Act and any other liabilities, claims and obligations regarding compliance with the Affordable Care Act with respect to CONTRACTOR's agents and employees. CITY is not responsible and shall not be held liable for CONTRACTOR's failure to comply with CONTRACTOR's duties, obligations, and responsibilities under the Affordable Care Act. CONTRACTOR agrees to defend, indemnify and hold CITY harmless for any and all taxes and penalties that may be assessed against CITY as a result of CONTRACTOR's obligations under the Affordable Care Act relating to CONTRACTOR's agents and employees.

10. BUSINESS LICENSE

The CONTRACTOR must obtain a City business license prior to the start of work under this Agreement, unless CONTRACTOR is qualified for an exemption.

11. OTHER LICENSES AND PERMITS

CONTRACTOR warrants that it has all professional, contracting and other permits and licenses required to undertake the work contemplated by this Agreement.

12. FAMILIARITY WITH WORK

By executing this Agreement, CONTRACTOR warrants that CONTRACTOR (a) has thoroughly investigated and considered the scope of services to be performed, (b) has carefully considered how the services should be performed, and (c) fully understands the facilities, difficulties and restrictions attending performance of the services under this Agreement. If the services involve work upon any site, CONTRACTOR warrants that CONTRACTOR has or will investigate the site and is or will be fully acquainted with the conditions there existing, prior to commencement of services set forth in this Agreement. Should CONTRACTOR discover any latent or unknown conditions that will materially affect the performance of the services set forth in this Agreement, CONTRACTOR must immediately inform the CITY of that fact and may not proceed except at CONTRACTOR's risk until written instructions are received from the CITY.

13. CARE OF WORK

CONTRACTOR must adopt reasonable methods during the life of the Agreement to furnish continuous protection to the work, and the equipment, materials, papers, documents, plans, studies and other components to prevent losses or damages, and will be responsible for all damages, to persons or property, until acceptance of the work by the CITY, except those losses or damages as may be caused by the CITY's own negligence.

14. CONTRACTOR'S ACCOUNTING RECORDS; OTHER PROJECT RECORDS

Records of the CONTRACTOR's time pertaining to the project, and records of accounts between the CITY and the CONTRACTOR, will be kept on a generally recognized accounting basis. CONTRACTOR will also maintain all other records, including without limitation specifications, drawings, progress reports and the like, relating to the project. All records will be available to the CITY during normal working hours. CONTRACTOR will maintain these records for three years after final payment.

15. PREVAILING WAGE

All Services rendered pursuant to this agreement must be provided in accordance with all ordinances, resolutions, statutes, rules, regulations, and laws of City and any Federal, State, or local governmental agency of competent jurisdiction. Contractor is aware of the requirements of California Labor Code Sections 1720, et seq., and 1770, et seq., as well as of California Code of Regulations, Title 8, Sections 1600, et seq., (collectively, the "Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on "Public works" and "Maintenance" projects. If the Services are being performed as part of an applicable "Public works" or "Maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is ONE THOUSAND DOLLARS (\$1,000) or more, Contractor agrees to fully comply with the Prevailing Wage Laws including, but not limited to, requirements related to the maintenance of payroll records and the employment of apprentices.

Pursuant to California Labor Code Section 1725.5, no contractor or subcontractor may be awarded a contract for public work on a "Public works" project unless registered with the California Department of Industrial Relations ("DIR") at the time the contract is awarded. If the Services are being performed as part of an applicable "Public works" or "Maintenance" project, as defined by the Prevailing Wage Laws, this project is subject to compliance monitoring and enforcement by the California Department of Industrial Relations ("DIR"). Contractor will

maintain and will require all subcontractors to maintain valid and current DIR Public Works Contractor registration during the term of this Agreement. Contractor must notify City in writing immediately, and in no case more than twenty-four (24) hours, after receiving any information that Contractor's or any of its subcontractor's DIR registration status has been suspended, revoked, expired, or otherwise changed.

It is understood that it is the responsibility of Contractor to determine the correct salary scale. Contractor will make copies of the prevailing rates of per diem wages for each craft, classification, or type of worker needed to execute the Services available to interested parties upon request, and post copies at Contractor's principal place of business and at the project site, if any. The statutory penalties for failure to pay prevailing wage or to comply with State wage and hour laws will be enforced. Contractor must forfeit to City TWENTY FIVE DOLLARS (\$25.00) per day for each worker who works in excess of the minimum working hours when Contractor does not pay overtime. In accordance with the provisions of Labor Code Sections 1810 et seq., eight (8) hours is the legal working day.

Contractor must also comply with State law requirements to maintain payroll records and must provide for certified records and inspection of records as required by California Labor Code Section 1770 et seq., including Section 1776. Contractor will defend (with counsel selected by City), indemnify, and hold City, its elected officials, officers, employees, and agents free and harmless from any claim or liability arising out of any failure or alleged failure to comply with the Prevailing Wage Laws. It is agreed by the parties that, in connection with performance of the Services, including, without limitation, any and all "Public works" (as defined by the Prevailing Wage Laws), Contractor will bear all risks of payment or non-payment of prevailing wages under California law and/or the implementation of Labor Code Section 1781, as the same may be amended from time to time, and/or any other similar law. Contractor acknowledges and agrees that it will be independently responsible for reviewing the applicable laws and regulations and effectuating compliance with those laws. Contractor will require the same of all subcontractors.

16. INDEMNIFICATION

CONTRACTOR will indemnify, defend, and hold harmless CITY, the Successor Agency to the Former Redevelopment Agency of the City of Torrance, the City Council, each member thereof, present and future, its officers, agents and employees from and against any and all liability, expenses, including defense costs and legal fees, and claims for damages whatsoever, including, but not limited to, those arising from breach of contract, bodily injury, death, personal injury, property damage, loss of use, or property loss however the same may be caused and regardless of the responsibility for negligence. The obligation to indemnify, defend and hold harmless includes, but is not limited to, any liability or expense,

including defense costs and legal fees, arising from the negligent acts or omissions, or willful misconduct of CONTRACTOR, its officers, employees, agents, subcontractors or vendors. It is further agreed, CONTRACTOR's obligations to indemnify, defend and hold harmless will apply even in the event of concurrent negligence on the part of CITY, the City Council, each member thereof, present and future, or its officers, agents and employees, except for liability resulting solely from the negligence or willful misconduct of CITY, its officers, employees or agents. Payment by CITY is not a condition precedent to enforcement of this indemnity. In the event of any dispute between CONTRACTOR and CITY, as to whether liability arises from the sole negligence of the CITY or its officers, employees, agents, subcontractors or vendors, CONTRACTOR will be obligated to pay for CITY's defense until such time as a final judgment has been entered adjudicating the CITY as solely negligent. CONTRACTOR will not be entitled in the event of such a determination to any reimbursement of defense costs including but not limited to attorney's fees, expert fees and costs of litigation.

17. NON-LIABILITY OF THE CITY'S OFFICERS AND EMPLOYEES

No officer or employee of the CITY will be personally liable to CONTRACTOR, in the event of any default or breach by the CITY or for any amount that may become due to CONTRACTOR.

18. INSURANCE

- A. CONTRACTOR must maintain at its sole expense the following insurance, which will be full coverage not subject to self-insurance provisions:
1. Automobile Liability, including owned, non-owned and hired vehicles, with at least the following limits of liability:
 - a. Combined single limits of \$2,000,000 per occurrence.
 2. General Liability including coverage for premises, products and completed operations, independent contractors, personal injury and contractual obligations with combined single limits of coverage of at least \$3,000,000 per occurrence, with an annual aggregate of no less than \$5,000,000.
 3. Workers' Compensation with limits as required by the State of California and Employers Liability with limits of at least \$1,000,000.
- B. The insurance provided by CONTRACTOR will be primary and non-contributory.

- C. CITY, the Successor Agency to the Former Redevelopment Agency of the City of Torrance, the City Council and each member thereof, members of boards and commissions, every officer, agent, official, employee and volunteer must be named as additional insureds under the automobile and general liability policies.
- D. CONTRACTOR must provide certificates of insurance and/or endorsements to the City Clerk of the City of Torrance before the commencement of work.
- E. Each insurance policy required by this Paragraph must contain a provision that no termination, cancellation or change of coverage can be made without thirty days notice to the CITY.
- F. CONTRACTOR must include all subcontractors as insureds under its policies or must furnish separate certificates and endorsements for each subcontractor. All coverage for subcontractors will be subject to all of the requirements of this Paragraph 18.

19. SUFFICIENCY OF INSURERS

Insurance required by this Agreement will be satisfactory only if issued by companies admitted to do business in California, rated "B+" or better in the most recent edition of Best's Key Rating Guide, and only if they are of a financial category Class VII or better, unless these requirements are waived by the Risk Manager of the CITY ("Risk Manager") due to unique circumstances. In the event the Risk Manager determines that the work or services to be performed under this Agreement creates an increased or decreased risk of loss to the CITY, the CONTRACTOR agrees that the minimum limits of any insurance policies and/or the performance bond required by this Agreement may be changed accordingly upon receipt of written notice from the Risk Manager; provided that CONTRACTOR will have the right to appeal a determination of increased coverage by the Risk Manager to the City Council of the CITY within 10 days of receipt of notice from the Risk Manager.

20. CONFLICT OF INTEREST

- A. No officer or employee of the CITY may have any financial interest, direct or indirect, in this Agreement, nor may any officer or employee participate in any decision relating to the Agreement that effects the officer or employee's financial interest or the financial interest of any corporation, partnership or association in which the officer or employee is, directly or indirectly interested, in violation of any law, rule or regulation.

- B. No person may offer, give, or agree to give any officer or employee or former officer or employee, nor may any officer or employee solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, preparation or any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any way pertaining to any program requirement, contract or subcontract, or to any solicitation or proposal.

21. NOTICE

- A. All notices, requests, demands, or other communications under this Agreement will be in writing. Notice will be sufficiently given for all purposes as follows:

1. Personal delivery. When personally delivered to the recipient: notice is effective on delivery.
2. First Class mail. When mailed first class to the last address of the recipient known to the party giving notice: notice is effective three mail delivery days after deposit in an United States Postal Service office or mailbox.
3. Certified mail. When mailed certified mail, return receipt requested: notice is effective on receipt, if delivery is confirmed by a return receipt.
4. Overnight delivery. When delivered by an overnight delivery service, charges prepaid or charged to the sender's account: notice is effective on delivery, if delivery is confirmed by the delivery service.
5. Facsimile transmission. When sent by fax to the last fax number of the recipient known to the party giving notice: notice is effective on receipt. Any notice given by fax will be deemed received on the next business day if it is received after 5:00 p.m. (recipient's time) or on a non-business day.
6. Addresses for purpose of giving notice are as follows:

CONTRACTOR: CONTRACTOR'S NAME AND ADDRESS

Fax: INSERT FAX NUMBER

CITY: City Clerk
City of Torrance
3031 Torrance Boulevard
Torrance, CA 90509-2970
Fax: (310) 618-2931

with a copy to: Attn: PROJECT MANAGER'S
NAME
Public Works Department
City of Torrance
20500 Madrona Avenue
Torrance, CA 90503
Fax: (310) 781-6902

- B. Any correctly addressed notice that is refused, unclaimed, or undeliverable because of an act or omission of the party to be notified, will be deemed effective as of the first date the notice was refused, unclaimed or deemed undeliverable by the postal authorities, messenger or overnight delivery service.
- C. Either party may change its address or fax number by giving the other party notice of the change in any manner permitted by this Agreement.

22. PROHIBITION AGAINST ASSIGNMENT AND SUBCONTRACTING

This Agreement and all exhibits are binding on the heirs, successors, and assigns of the parties. The Agreement may not be assigned or subcontracted by either the CITY or CONTRACTOR without the prior written consent of the other.

23. INTEGRATION; AMENDMENT

This Agreement represents the entire understanding of the CITY and CONTRACTOR as to those matters contained in it. No prior oral or written understanding will be of any force or effect with respect to the terms of this Agreement. The Agreement may not be modified or altered except in writing signed by both parties.

24. INTERPRETATION

The terms of this Agreement should be construed in accordance with the meaning of the language used and should not be construed for or against either party by reason of the authorship of this Agreement or any other rule of construction that might otherwise apply.

25. SEVERABILITY

If any part of this Agreement is found to be in conflict with applicable laws, that part will be inoperative, null and void insofar as it is in conflict with any applicable laws, but the remainder of the Agreement will remain in full force and effect.

26. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

27. GOVERNING LAW; JURISDICTION

This Agreement will be administered and interpreted under the laws of the State of California. Jurisdiction of any litigation arising from the Agreement will be in Los Angeles County, California.

28. COMPLIANCE WITH STATUTES AND REGULATIONS

CONTRACTOR will be knowledgeable of and will comply with all applicable federal, state, county and city statutes, rules, regulations, ordinances and orders.

29. WAIVER OF BREACH

No delay or omission in the exercise of any right or remedy by a nondefaulting party on any default will impair the right or remedy or be construed as a waiver. A party's consent or approval of any act by the other party requiring the party's consent or approval will not be deemed to waive or render unnecessary the other party's consent to or approval of any subsequent act. Any waiver by either party of any default must be in writing and will not be a waiver of any other default concerning the same or any other provision of this Agreement.

30. ATTORNEY'S FEES

Except as provided for in Paragraph 16, in any dispute, litigation, arbitration, or other proceeding by which one party either seeks to enforce its rights under this Agreement (whether in contract, tort or both) or seeks a declaration of any rights or obligations under this Agreement, the prevailing party will be awarded reasonable attorney's fees, together with any costs and expenses, to resolve the dispute and to enforce any judgment.

31. EXHIBITS

All exhibits identified in this Agreement are incorporated into the Agreement by this reference.

32. CONTRACTOR'S AUTHORITY TO EXECUTE

The persons executing this Agreement on behalf of the CONTRACTOR warrant that (i) the CONTRACTOR is duly organized and existing; (ii) they are duly authorized to execute this Agreement on behalf of the CONTRACTOR; (iii) by so executing this Agreement, the CONTRACTOR is formally bound to the provisions of this Agreement; and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which the CONTRACTOR is bound.

City of Torrance,
a municipal corporation

BUSINESS OR INDIVIDUAL NAME
TYPE OF ENTITY

Patrick J. Furey, Mayor

By: _____
SIGNER, TITLE

ATTEST:

Rebecca Poirier, MMC
City Clerk

APPROVED AS TO FORM:

JOHN L. FELLOWS III
City Attorney

By: _____

Attachment: Exhibit A: Bid
Revised: 12/9/15

EXHIBIT A

Bid



City of Torrance, Community Development Department

Permit Application Form

3031 TORRANCE BLVD. • TORRANCE, CA 90503

OWNER/APPLICANT INFORMATION

Name: _____

Address: _____

City/State: _____

Zip: _____

Phone: _____

Evacuation permits will not be issued without USA LD. number.

Underground Service Alert
Call 1-800/227-2600

USA LD. #: _____

CONTRACTOR INFORMATION ON FILE

State License #: _____

Class: _____ Exp. Date: _____

City Business #: _____

Workers Comp. #: _____

Exp. Date: _____

JOB LOCATION/ADDRESS

(or closest street address)

Please list cross streets: _____

DESCRIPTION OF WORK

Lin/Ft Trench _____

Width of Trench _____

Lin/Ft Curb & Gutter _____

Lin/Ft Bore _____

Sewer Connection _____

Number of Curb Drains _____

Sq/Ft Asphalt _____

Sq/Ft Concrete _____

Sq/Ft Dirt _____

Work Order Number *(for utility companies)*: _____

Applicant or Authorized Signature: _____

For further permit information, please call 310/618-5898 or Fax 310/618-2846.

Contractor Qualification List

Curly/Gutter	A(General Engineering) C8(Concrete Contractor)	Sewer Mainline	A(General Engineering) C34(Pipeline Contractor) C42(Sanitation Contractor)
Driveways	A(General Engineering) C8(Concrete Contractor)	Storm Drains	A(General Engineering) C34(Pipeline Contractor) C42(Sanitation Contractor)
Sidewalks	A(General Engineering) B(General Building) C8(Concrete Contractor)	U/G Utilities.....	A (General Engineering) C34 (Pipeline Contractor)
Street/Alley	A(General Engineering) C8(Concrete Contractor) C12(Earth and Paving Contractor)	U/G Electrical	A (General Engineering) C8 (Concrete Contractor) C12 (Earth and Paving Contractors)
Sewer Lateral	A (General Engineering) C34(Pipeline Contractor) C42(Sanitation Contractor)		

Contractor Qualification List

- 1) FOR INSPECTIONS 24 hour notice is required, before, during, and after construction. Call 310-618-5898, 7:30 AM - 5:30 PM, to SCHEDULE AN INSEPTION.
- 2) Provide TRAFFIC CONTROL per the "CITY OF TORRANCE CONSTRUCTION TRAFFIC CONTROL PROCEDURES." Street closures shall be per City of Torrance Standard T603. Major street lane closures between 8:30 AM - 3:30 PM only. ONE STANDARD ARROWBOARD REQUIRED FOR EACH LANE CLOSURE.
- 3) Permitt is not valid until two working days after notifying DIG-ALERT of project. USA # _____
- 4) Do not remove any trees or shrubs without approval of Torrance Tree Supervisor (310-781-6900).
- 5) Contractor will be billed for overtime inspection services. OVERTIME REQUESTS must be submitted for approval 24 hrs in advance.
- 6) Construction site CLEANUP and GRAFFITI removal must be completed prior to finaling of this permit. The work site shall be kept in a well maintained condition. Signage shall be free of graffiti, replaced if bent, vandalized or displays loss of reflectivity. Any graffiti on construction signs must be removed or replaced within 24 hours of notification.
- 7) Any street striping, crosswalk, raised reflective pavement marker or pavement markings damaged by this construction shall be replaced to the satisfaction of the Torrance Public Works Department (310-781-6900).
- 8) THIS PERMIT WILL BE REVOKED if any pollutant is released into or allowed to remain in any component of the city drainage system.
- 9) Trench backfill and pavement repairs shall be per City of Torrance Standard T116.
- 10) Any irrigation system components damaged by this construction shall be replaced to the satisfaction of Park Services (310-618-2930).
- 11) All survey monuments in the project area MUST be located and tied out and a Corner Record filed prior to the start of construction. Also, all destroyed monuments must be replaced prior to receiving final inspection.
- 12) It is the responsibility of the contractor to REPLACE any PAVEMENT removed by this construction.
- 13) The City of Torrance is held harmless from the results of any action or accidents caused by the permitter, his employees, or equipment in the performance of the work described or covered in this permit. Validation of this permit SHALL NOT be held to permit or to be an approval of the violation of any applicable provision of the City Code covering this work, or any other provisions of the City of Torrance Code. In the granting of a Construction & Excavation permit, the Community Development Director may impose such conditions thereon, in addition to those otherwise provided herein, as are reasonably necessary to prevent the proposed operations from being conducted in such a manner as to constitute or create a HAZARD TO LIFE or property or be detrimental to property.

**NOTICE
CITY OF TORRANCE
COMMUNITY DEVELOPMENT DEPARTMENT/
ENGINEERING DIVISION
NEW INSURANCE REGULATIONS**

The City of Torrance Community Development Department/Engineering Division will be requiring proof of liability insurance from each contractor applying for a Construction & Excavation permit to work in the public right-of-way or in a public easement beginning October 1, 2001. Insurance shall cover contractor and vehicles used in the construction. The attached requirements dated September 20, 2001 will detail the insurance limits.

All insurance certificates shall have an additional clause that states: *"The City of Torrance, the City Council and each member thereof, members of boards and commissions, every officer, agent, official, employee and volunteer"* as additional insured.

Contractors should bring in proof of insurance at the time of application for permit. For major companies that are self-insured, a letter stating this fact and signed by an officer of the firm will be acceptable. Annual insurance may also be kept on file for contractors working periodically within the City of Torrance.

If you have any questions, please contact the Engineering Division Permit Counter at 310-818-5896.

JEFFERY W. GIBSON
Community Development Director
City of Torrance

EFFECTIVE 8/11/03

8/11/03

**CITY OF TORRANCE
COMMUNITY DEVELOPMENT DEPARTMENT/
ENGINEERING DIVISION**

**PERMIT APPLICATION FORM
INSURANCE REQUIREMENTS**

Any entity performing work on City streets, right-of-way, and property must comply with the following requirements.

1. TYPE OF INSURANCE

Any entity performing work must maintain at their sole expense the following insurance, which shall be full coverage not subject to self-insurance provisions.

- General Liability including coverage for premises, products and completed operations, underground hazards, independent contractors, personal injury and contractual obligations with combined single limits of at least \$1,000,000 per occurrence.
- Automobile Liability, including owned, non-owned and hired vehicles, with at least the following limits of liability:
 - Primary Bodily Injury with limits of at least \$500,000 per person, \$1,000,000 per occurrence AND; Primary Property Damage with limits of at least \$500,000 per occurrence, OR
 - Combined single limits of at least \$1,000,000 per occurrence.
- Workers' Compensation with limits as required by the State of California and Employer's Liability with limits of at least \$1,000,000.

2. CERTIFICATES

- Certificates or an attached endorsement must be provided that contains the following provisions:
 - The City of Torrance, the City Council and each member thereof, members of boards and commissions, every officer, agent, official, employee and volunteer must be named as additional insured under the automobile and general liability policies.
 - The insurance policies required by this clause shall contain a provision that no termination, cancellation or change of coverage can be made without 30 days written notice to the City.

3. FILING REQUIREMENTS

- Certificates of insurance and/or endorsements must be provided to the Community Development Department, Permits and Records Section, 3031 Torrance Blvd., Torrance, CA 90503, prior to the issuance of the permit.

4. ADDITIONAL REQUIREMENT

- Insurance required of any entity performing work will be satisfactory only if issued by companies rated "B+" or better in the most recent edition of Best's Key Rating Guide, and only if they are of a financial category of a VII or better, unless these requirements are modified or waived by the City's Risk Manager.

Please call the Business License Office at 310-618-5923 for fee amounts. Payment must be submitted with your application.

FOR OFFICIAL USE ONLY

1. LICENSE NO. _____
 2. CATEGORY NO. _____
 HOME OCCUPATION HEALTH PERMIT SIC CODE



**City of Torrance, Revenue Division
 Business License Application**

3031 Torrance Boulevard, Torrance, California 90503 • 310/618-5828

PART I. APPLICANT TO ANSWER ALL QUESTIONS IN THIS SECTION (print or type)

3. BUSINESS NAME OR DBA _____
 4. CORPORATION (check if different from above)

5. BUSINESS ADDRESS _____ CITY _____ STATE _____ ZIP _____
 SUITE # _____

6. MAILING ADDRESS _____ CITY _____ STATE _____ ZIP _____
 SUITE # _____

7. NAME OF BUSINESS (check type of business being conducted at this location)
 8. NO. OF PERSONS WORKING AT LOCATION _____
 9. BUSINESS PHONE _____
 10. HOME PHONE _____

11. TITLE _____
 12. DRIVER'S LICENSE NO. _____
 13. STATE SALES TAX NO. _____
 14. SOCIAL SECURITY NO. _____
 15. PERM. NO. _____
 16. SQUARE FOOTAGE _____
 17. HOME PHONE _____

18. OWNERSHIP INFORMATION
 PARTNERSHIP CORPORATION SOLE OWNERSHIP
 NAMES OF OWNERS, PARTNERS, OR PRINCIPAL OFFICERS _____ HOME ADDRESS _____
 TITLE _____

19. I declare that I am the owner, partner, corporate officer or person with the power of attorney, and I understand if all the information provided above is not the true business license being applied for may be revoked as outlined in section 31.9-10 of the Torrance Municipal Code.
 20. I am duly authorized to make this application and all the information provided in this application is true and correct. The business will not provide any service, good or product which is illegal under Federal, State or Local Laws. I declare under penalty of perjury that the foregoing is true and correct.

SIGNATURE _____ DATE _____

PART II. FOR OFFICIAL USE ONLY

21. BUSINESS FEE
 YES NO
 OTHER (specify) _____

22. APPLICATION FEE FOR CORRECT PROCESSING FEE
 YES NO
 OTHER (specify) _____

23. PER PERSON FEE
 YES NO
 DATE _____

24. PENALTY FEE
 YES NO
 DATE _____

25. RECEIVED BY _____

26. CHECK NO. _____

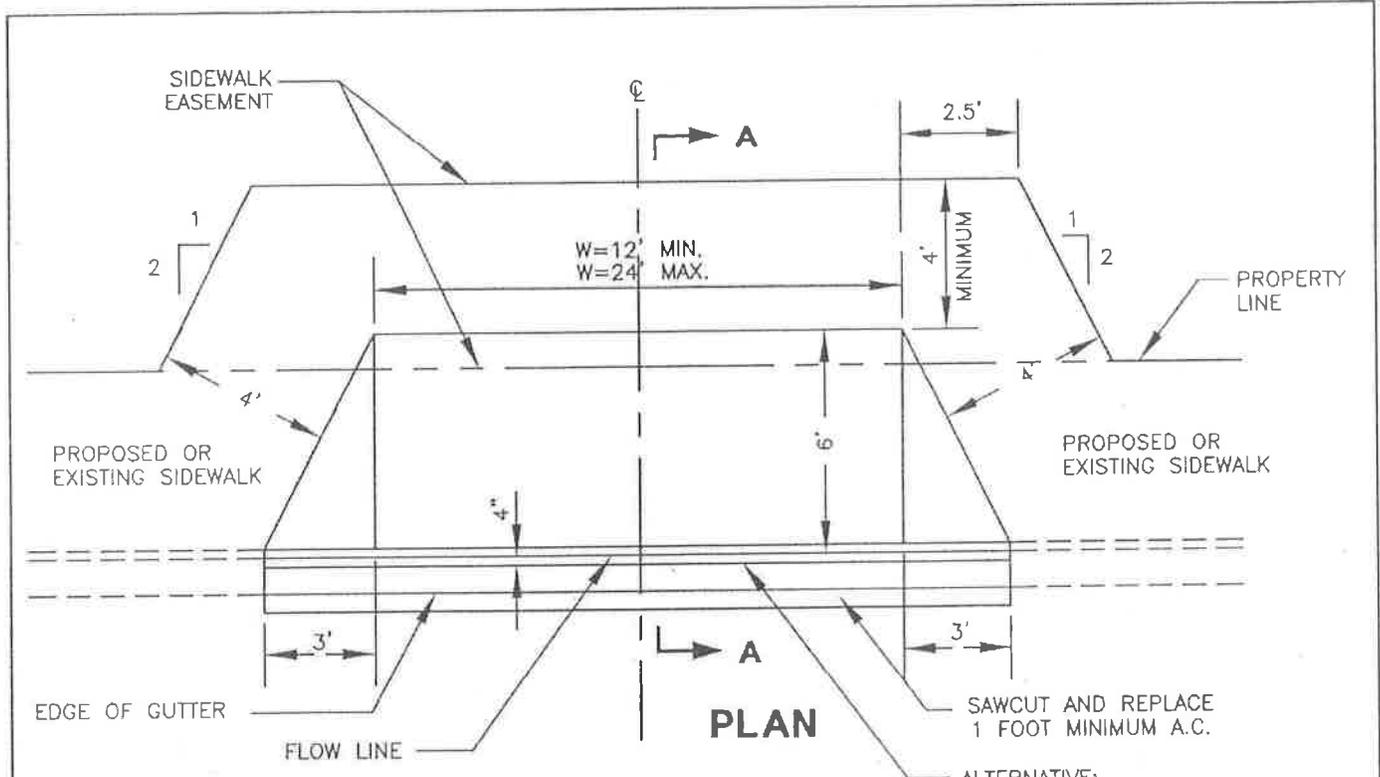
27. CASH _____

28. SIGNATURE _____

29. DATE _____

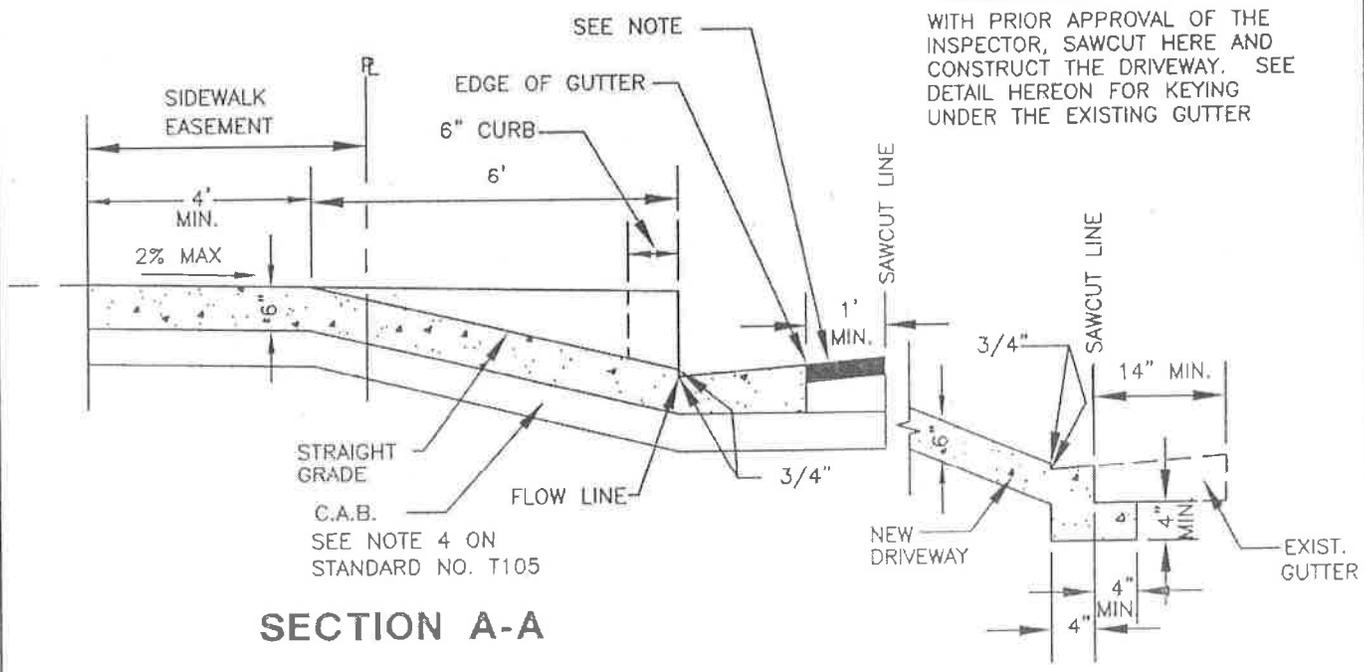
30. TOTAL AMOUNT \$ _____

APPENDIX II
CITY OF TORRANCE STANDARD PLANS



PLAN

ALTERNATIVE:
 WITH PRIOR APPROVAL OF THE INSPECTOR, SAWCUT HERE AND CONSTRUCT THE DRIVEWAY. SEE DETAIL HEREON FOR KEYING UNDER THE EXISTING GUTTER



SECTION A-A

DETAIL

NOTE:

WHERE APPLICABLE, THE CONTRACTOR SHALL RECONSTRUCT THIS ONE (1) FOOT WIDE SECTION WITH A 2-INCH THICK SECTION OF AC PAVEMENT (C2-PG-64-10) ON A 4-INCH THICK SECTION OF 2-SACK CEMENT AND SAND SLURRY MIX ON AN 8-INCH THICK SECTION OF UNTREATED BASE

CITY OF TORRANCE

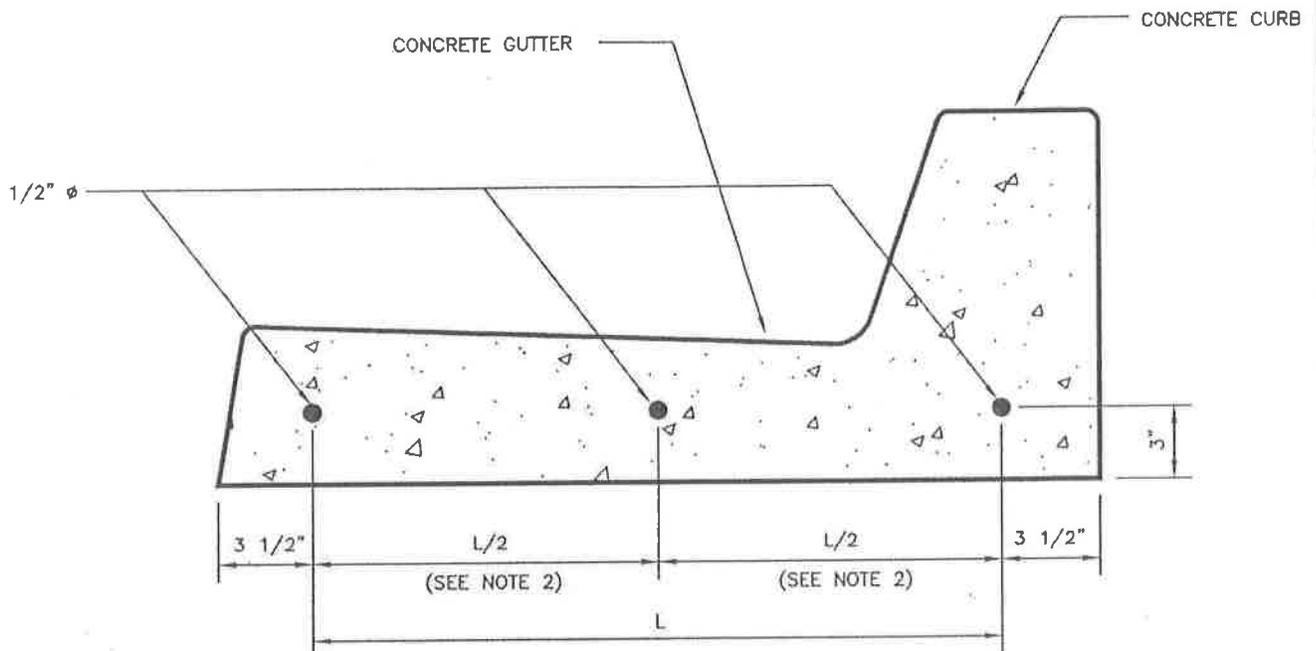
DRIVEWAY IN NARROW PARKWAY

STANDARD NO.
T108
 SHEET 1 OF 1

ROBERT J. BESTE
 PUBLIC WORKS DIRECTOR
 R.C.E. NO. 50737

TT/T108

DATE ISSUED
 FEB 15, 2007



DOWELS FOR STANDARD 8" CURB & 24" GUTTER

NOTES:

1. USE 3 SMOOTH DOWELS (1/2"φ), 24" LONG WITH ONE END BONDED 12".
2. IF L IS EQUAL OR LESS THAN 12" OMIT CENTER DOWEL AT L/2.
3. SEE APWA STANDARDS 112 & 120 FOR EXPANSION JOINT LOCATIONS AND OTHER CURB AND GUTTER DETAILS.

CITY OF TORRANCE

DATE ISSUED
FEB 15, 2007

DOWELS AT EXPANSION JOINTS

ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737

STANDARD NO.
T115
SHEET 1 OF 1

T115

TT/T1004

DATE ISSUED
19 FEB 2008

CITY OF TORRANCE - WORK AREA TRAFFIC CONTROL

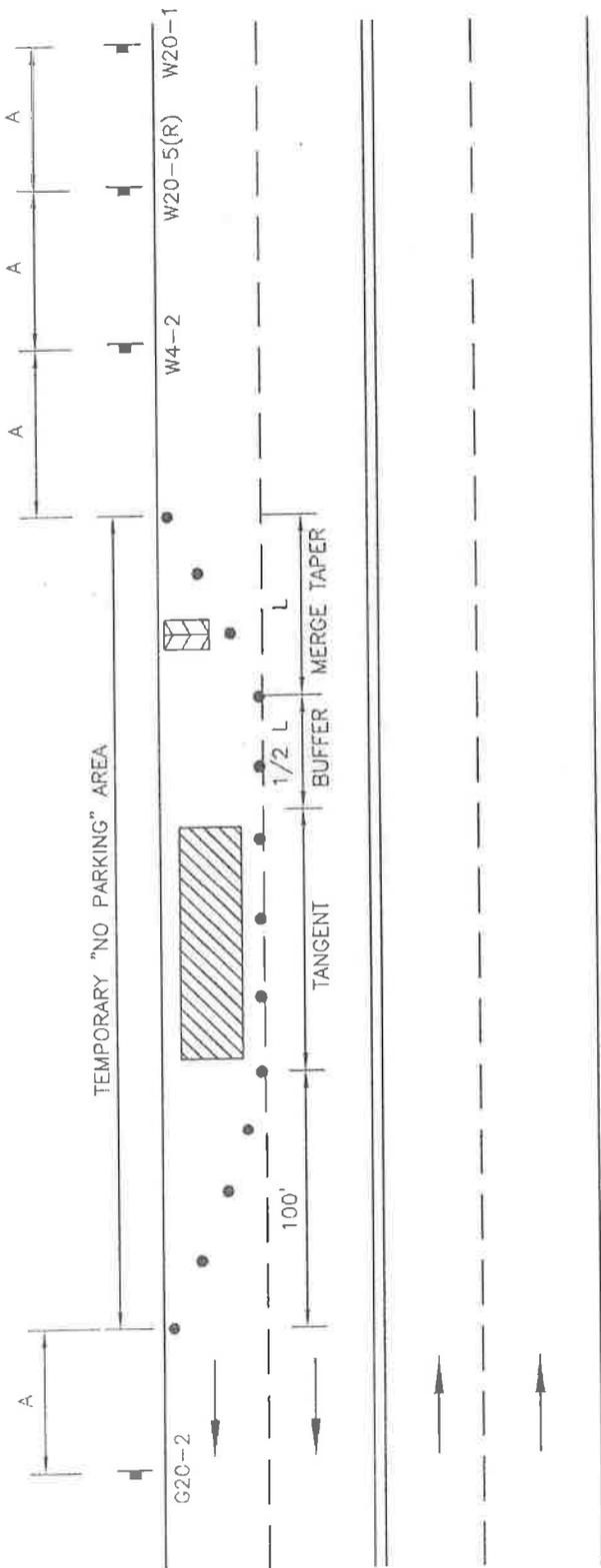
**ARTERIAL & COLLECTOR
RIGHT LANE CLOSURE**

STANDARD NO.
T1004

ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737



SHEET 1 OF 1



CONSTRUCTION SIGNS:

 W20-1 ROAD WORK AHEAD
 W20-5(R): RIGHT LANE CLOSED AHEAD
 W4-2 : LANE END (SYMBOL)
 G20-2 : END ROAD WORK (OPTIONAL)

DESIGN SPEED	MINIMUM RECOMMENDED DELINEATOR AND SIGN PLACEMENT		BUFFER LENGTH (1/2 L)
	MERGE TAPER LENGTH (L)	DISTANCE BETWEEN SIGNS (A)	
30 MPH	180 FT.	100 FT.	90 FT.
35 MPH	245 FT.	100 FT.	125 FT.
40 MPH	320 FT.	100 FT.	160 FT.
45 MPH	540 FT.	350 FT.	270 FT.
50 MPH	600 FT.	350 FT.	300 FT.

LEGEND:

-  TRAFFIC DRUM OR 36" POST TUBE
-  DELINEATOR
-  SIGN WITH FLAG TREE
-  FLASHING LEFT ARROW
-  WORK AREA
-  TRAFFIC DIRECTION

TT/T1005

DATE ISSUED
19 FEB 2008

CITY OF TORRANCE - WORK AREA TRAFFIC CONTROL

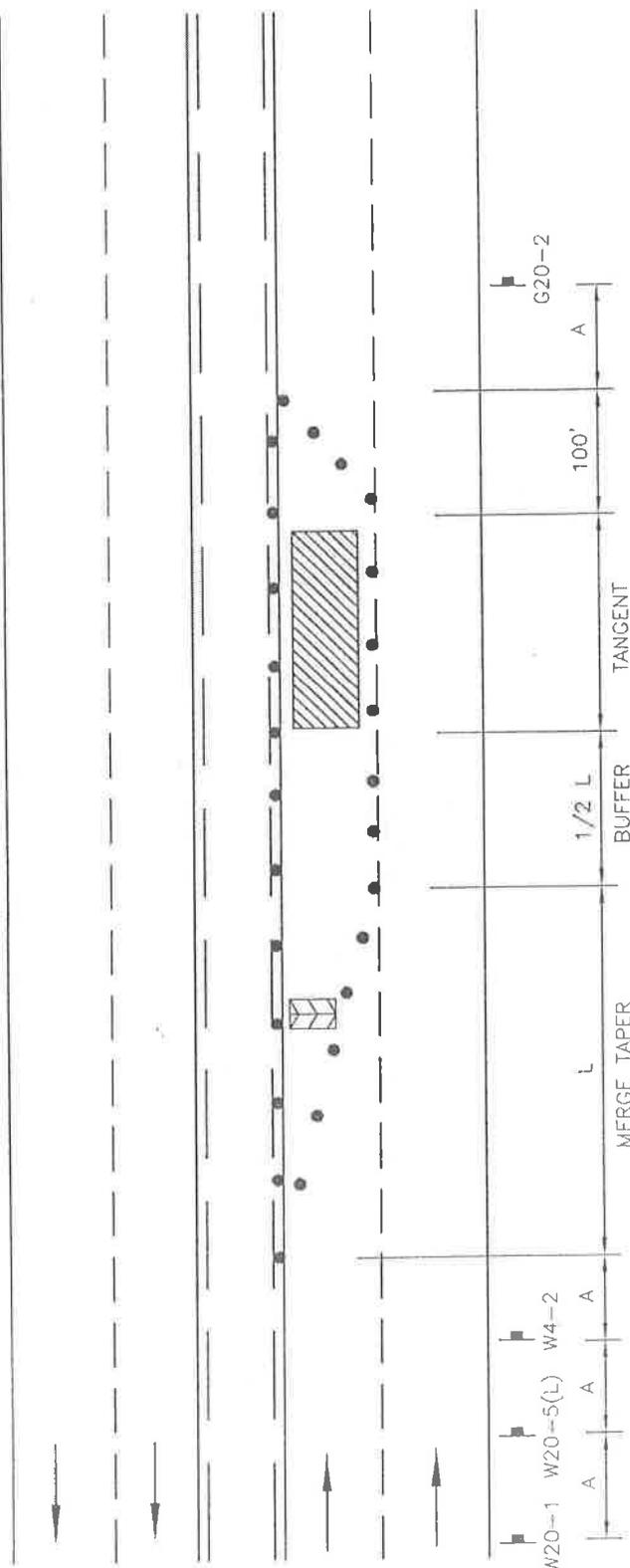
**ARTERIAL & COLLECTOR
LEFT LANE CLOSURE**

ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737

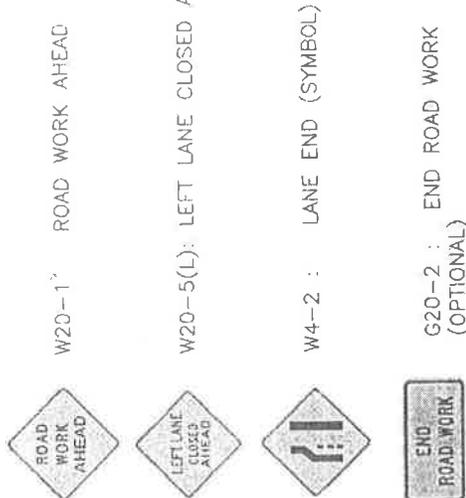


STANDARD NO.
T1005

SHEET 1 OF 1



CONSTRUCTION SIGNS:

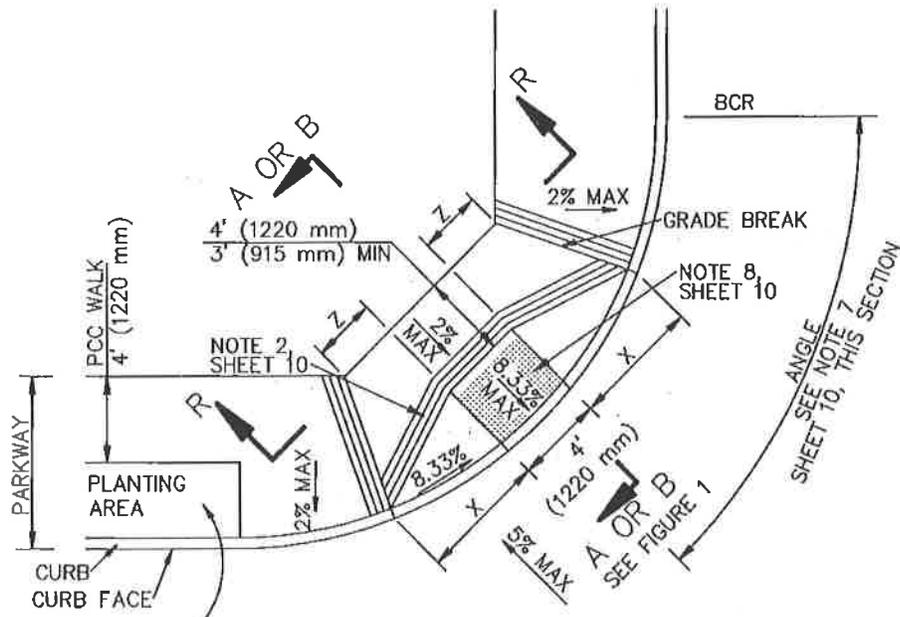


DESIGN SPEED	MERGE TAPER LENGTH (L)	DELINEATOR SPACING		DISTANCE BETWEEN SIGNS (A)	BUFFER LENGTH (1/2 L)
		(TAPER)	(TANGENT)		
30 MPH	180 FT.	30 FT.	60 FT.	100 FT.	90 FT.
35 MPH	245 FT.	35 FT.	70 FT.	100 FT.	125 FT.
40 MPH	320 FT.	40 FT.	80 FT.	100 FT.	160 FT.
45 MPH	540 FT.	45 FT.	90 FT.	350 FT.	270 FT.
50 MPH	600 FT.	50 FT.	100 FT.	350 FT.	300 FT.

- LEGEND:
- TRAFFIC DRUM OR 36" POST TUBE DELINEATOR
 - ▣ SIGN WITH FLAG TREE
 - ▣ FLASHING RIGHT ARROW
 - ▨ WORK AREA
 - TRAFFIC DIRECTION

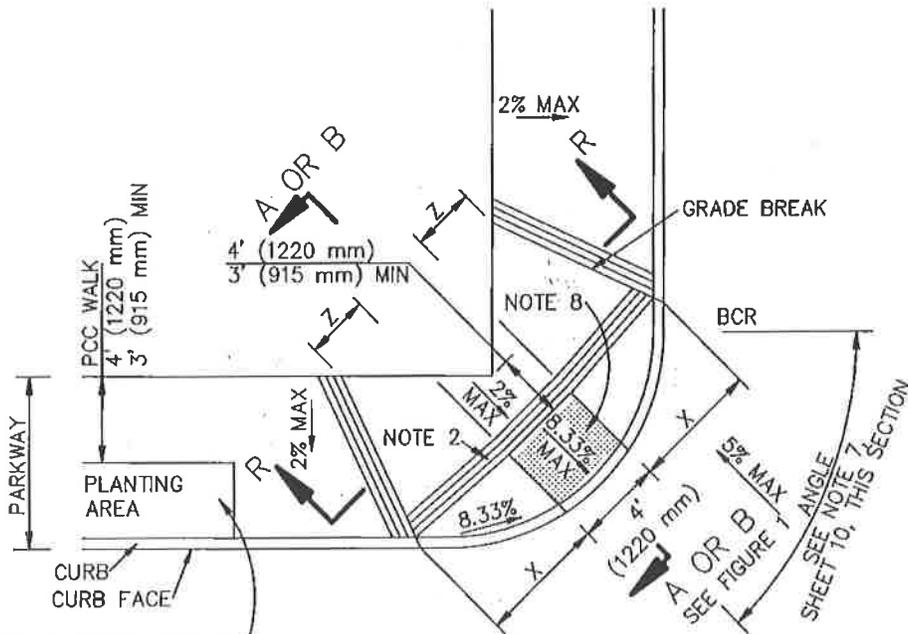
APPENDIX III

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION (SPPWC)



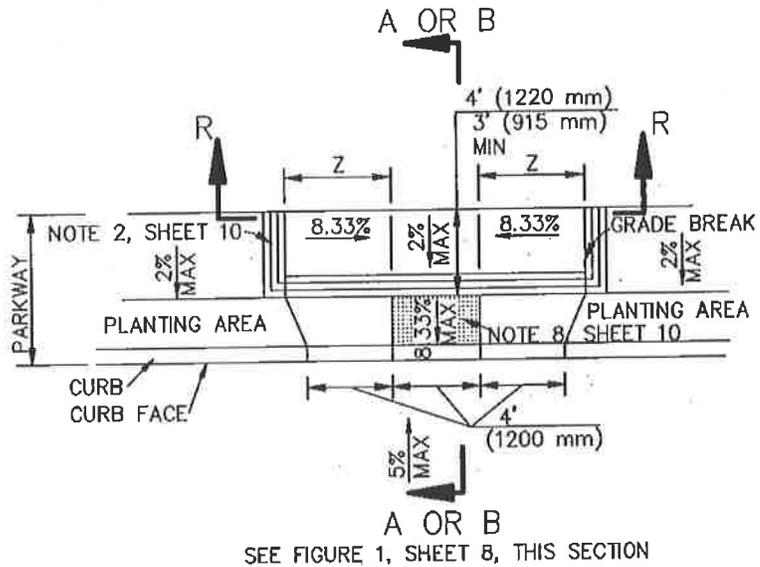
WHERE PLANTING AREA IS ADJACENT TO THE CURB RAMP, USE CASE A, TYPE 6

TYPE 3

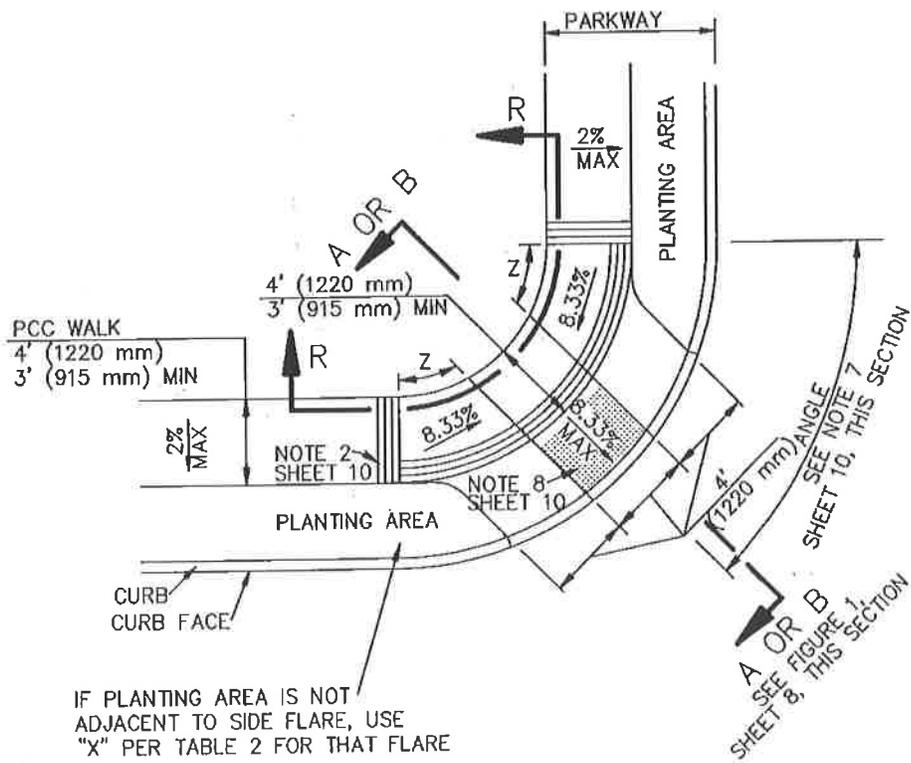


WHERE PLANTING AREA IS ADJACENT TO THE CURB RAMP, USE CASE A, TYPE 6

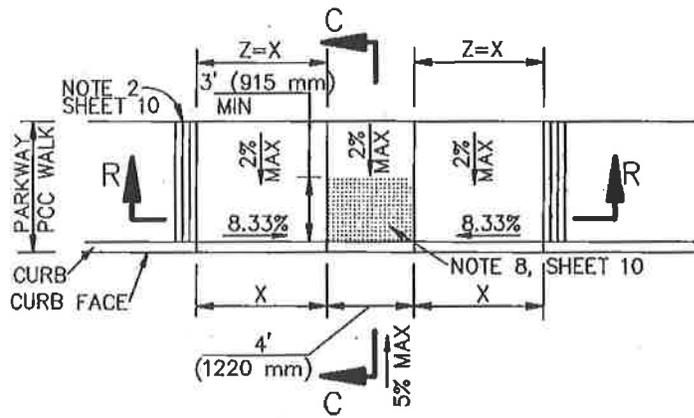
TYPE 4
CASE A



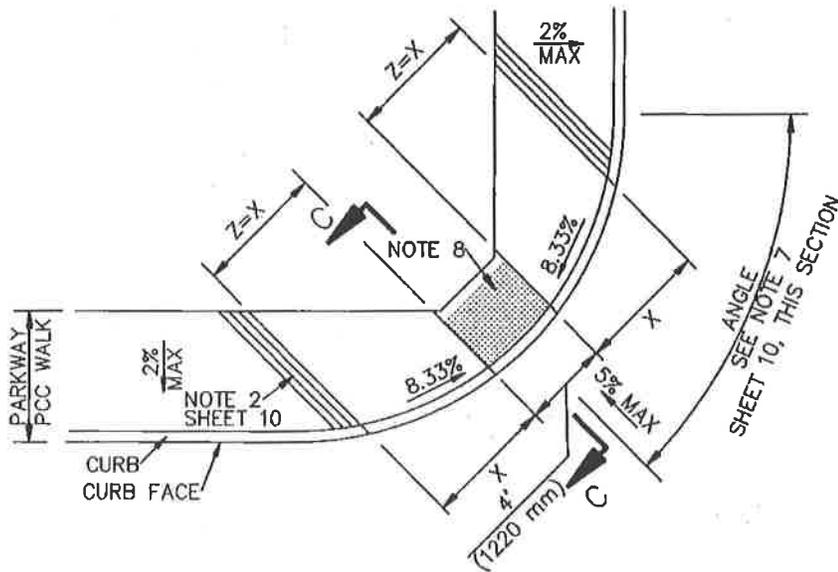
TYPE 5



TYPE 6
CASE A

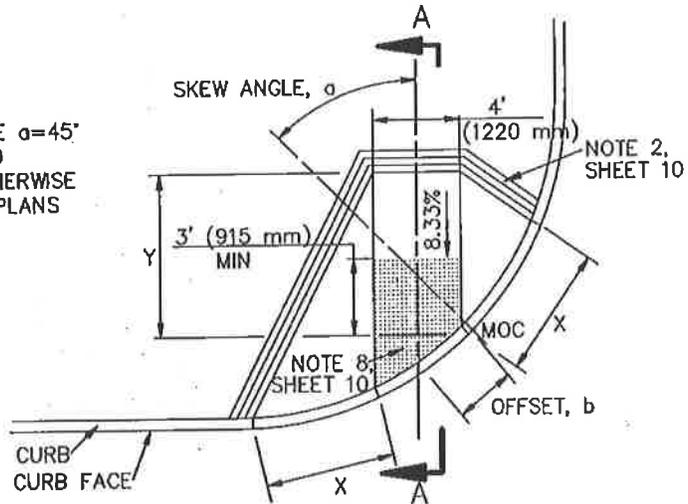


TYPE 1

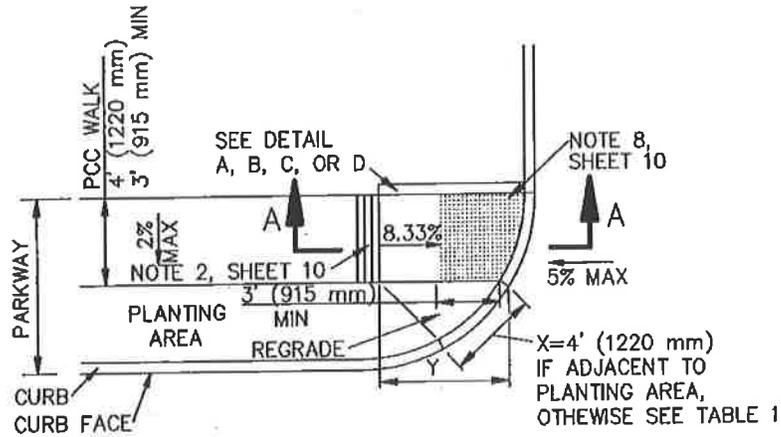


TYPE 2
CASE B

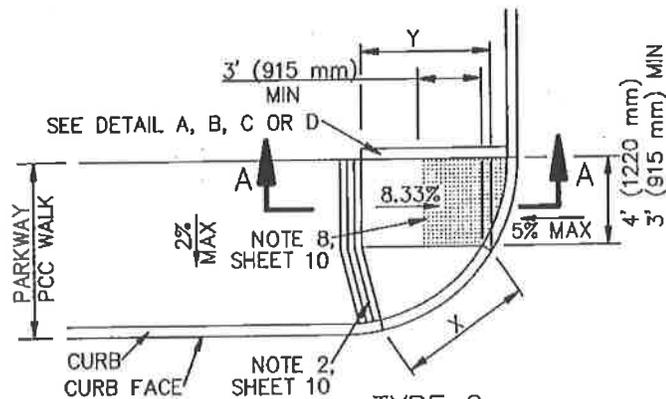
SKEW ANGLE $\alpha=45^\circ$
 OFFSET $b=0$
 UNLESS OTHERWISE
 NOTED ON PLANS



CASE C



TYPE 1



TYPE 2
 CASE D

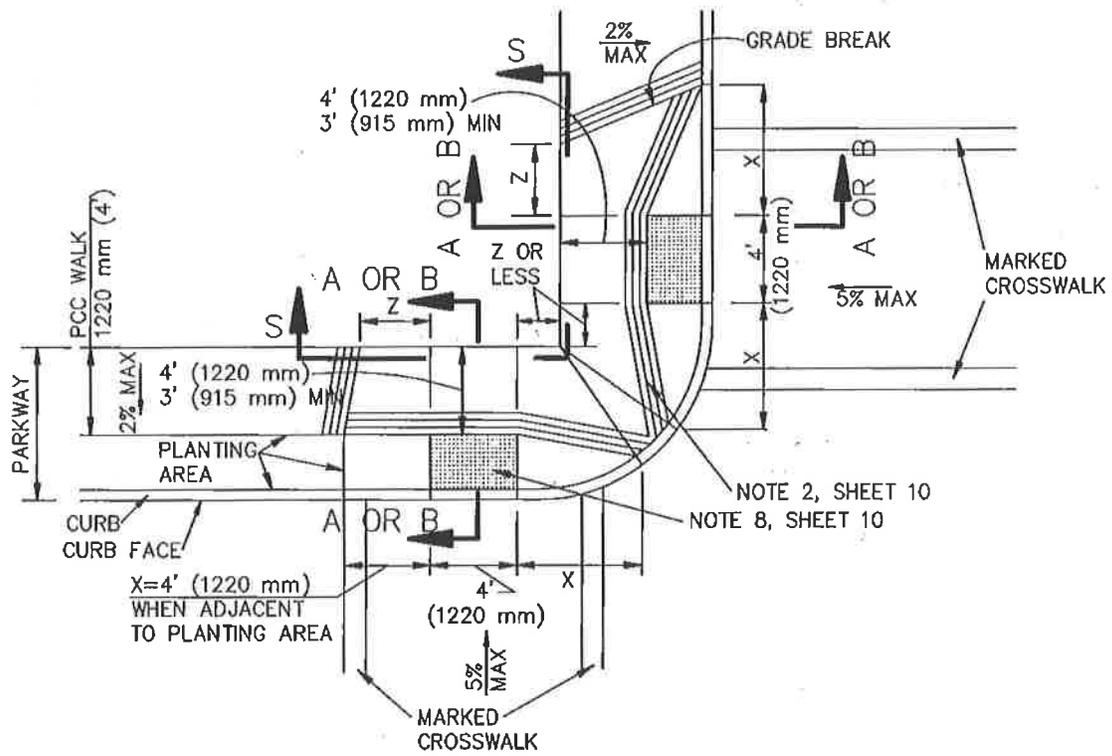
STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

CURB RAMP

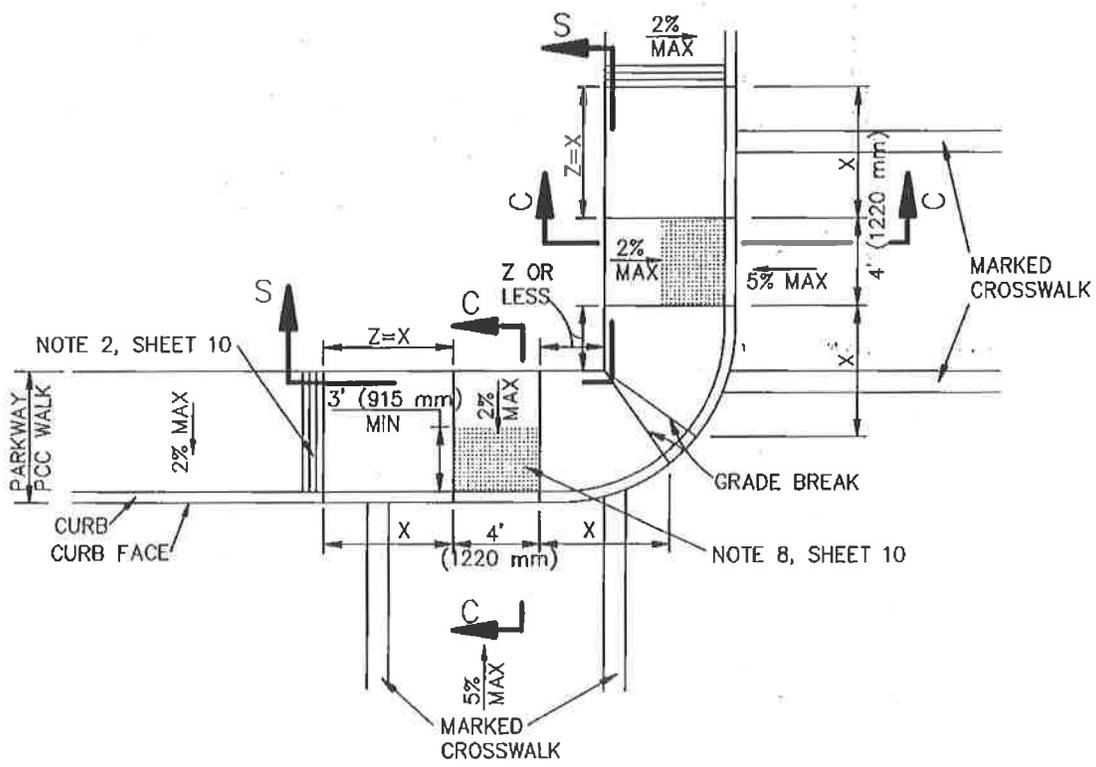
STANDARD PLAN

111-4

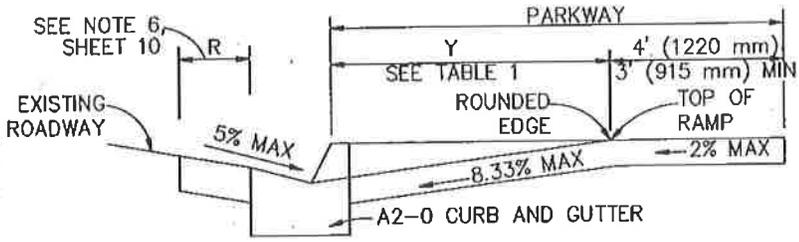
SHEET 5 OF 10



TYPE 1

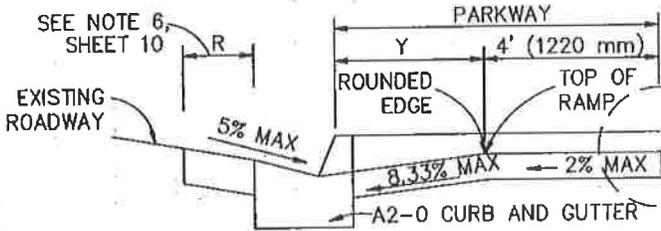


TYPE 2
CASE E



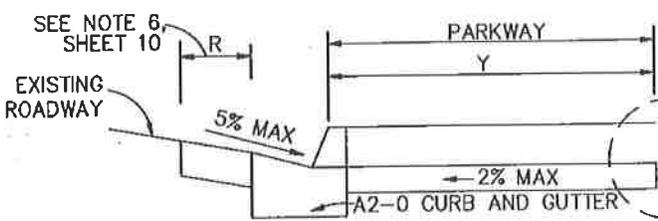
SECTION A-A

USE FIGURE 1 TO DETERMINE WHICH OF SECTIONS A-A, B-B OR C-C IS APPROPRIATE.



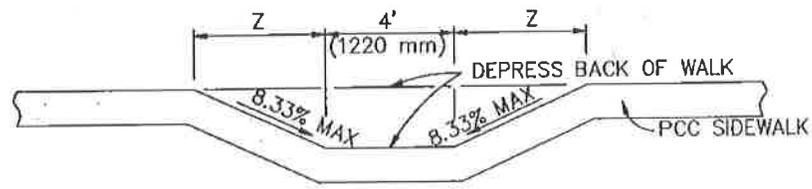
SECTION B-B

DEPRESS BACK OF WALK SEE DETAIL A, B, C OR D, SHEET 10.

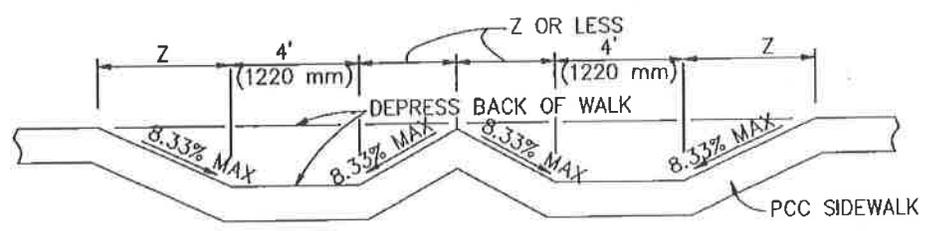


SECTION C-C

DEPRESS BACK OF WALK SEE DETAIL A, B, C OR D, SHEET 10.



SECTION R-R



SECTION S-S

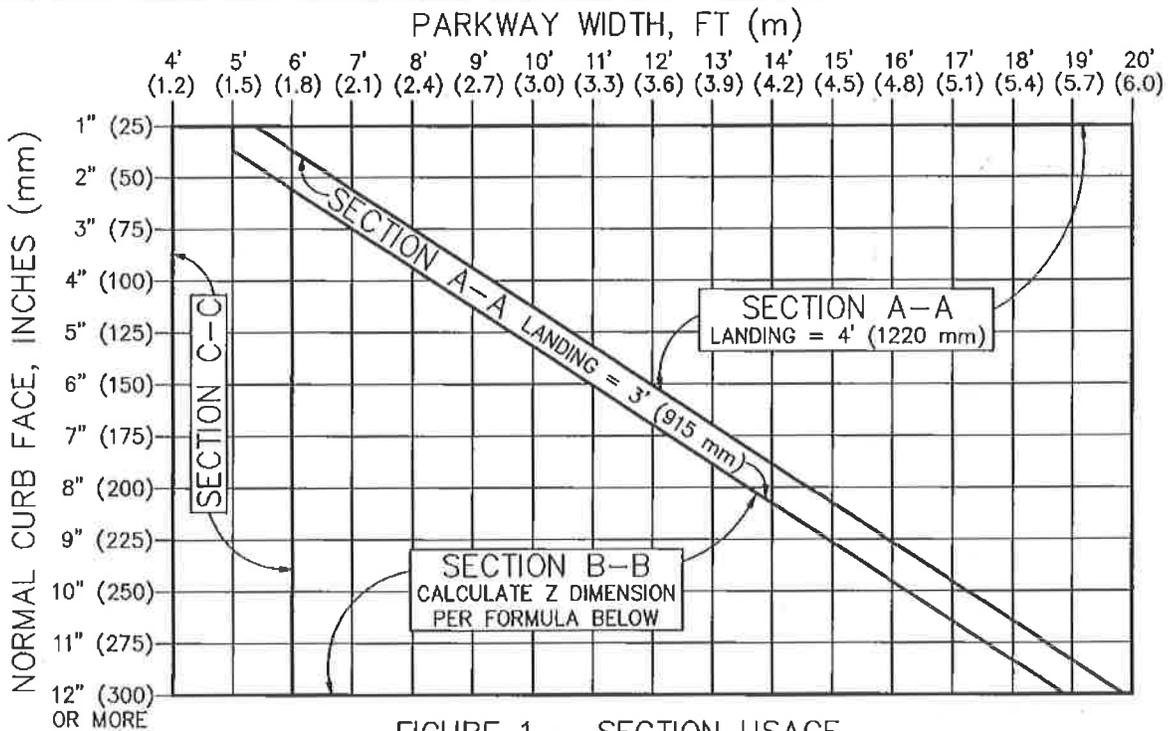


FIGURE 1 - SECTION USAGE

NORMAL CURB FACE, INCHES (mm)	X, FT (mm)	SECTION Y-Y Y, FT (mm)
2" (50)	4.00' (1200) MIN	2.63' (790)
3" (75)	4.00' (1200) MIN	3.95' (1185)
4" (100)	4.00' (1200)	5.26' (1580)
5" (125)	5.00' (1500)	6.58' (1975)
6" (150)	6.00' (1800)	7.90' (2370)
7" (175)	7.00' (2100)	9.21' (2765)
8" (200)	8.00' (2400)	10.53' (3160)
9" (225)	9.00' (2700)	11.84' (3555)
10" (250)	10.00' (3000)	13.16' (3950)
11" (275)	11.00' (3300)	14.47' (4340)
12" (300)	12.00' (3600)	15.79' (4735)

WHERE FIGURE 1 SHOWS USE OF SECTION B-B, FIGURE Z DIMENSION AS FOLLOWS:

W = PARKWAY WIDTH

L = LANDING WIDTH, 4' (1220 mm) TYP, 3' (915 mm) MIN

$$Z = [(Y+L)-W] \times 0.760$$

IF $(Y+L) < W$, THEN $Z = 0$

TABLE 1 SHOWS X FOR A FLARE SLOPE OF 8.33% AT THE CURB FACE. IF L IS 4' (1220 mm) OR MORE, X MAY BE MULTIPLIED BY 0.833 FOR A MAXIMUM FLARE SLOPE OF 10% AT THE CURB FACE.

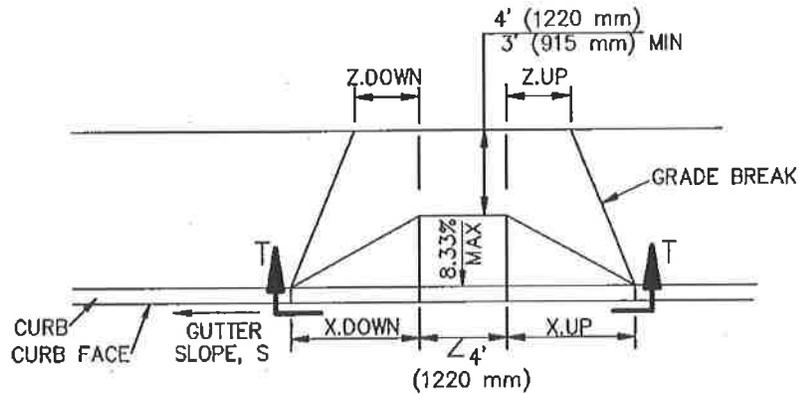
SEE SHEET 9 FOR STREET SLOPE ADJUSTMENT FACTORS, ALL STREETS

TABLE 1 - X AND Y VALUES

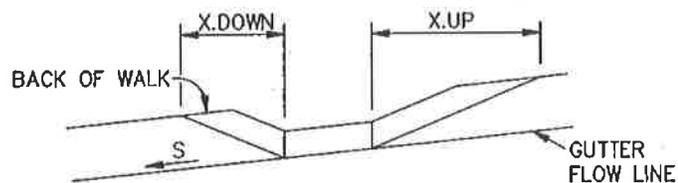
TABLE 1 REFERENCE FORMULAS:

$$X = CF / 8.333\%$$

$$Y = CF / (8.333\% - 2\% \text{ WALK CROSS SLOPE})$$



TYPICAL CURB RAMP



SECTION T-T
SLOPED STREET

FOR SLOPED STREETS, MULTIPLY THE DIMENSIONS PARALLEL TO THE STREET, X AND Z, UPSTREAM AND DOWNSTREAM OF THE RAMP, BY THE FACTORS IN THE FOLLOWING TABLE.

FOR EXAMPLE, $X.DOWN = X \times K.DOWN$

S	K.DOWN	K.UP
0%	1.000	1.000
0.2%	0.977	1.025
0.5%	0.943	1.064
1%	0.893	1.136
2%	0.806	1.316
3%	0.735	1.563
4%	0.676	1.923
5%	0.625	2.500

TABLE 2 - SLOPE ADJUSTMENTS

TABLE 2 REFERENCE FORMULAS:
 $K.DOWN = 8.333\% / (8.333\% + S)$
 $K.UP = 8.333\% / (8.333\% - S)$

STREET SLOPE ADJUSTMENTS

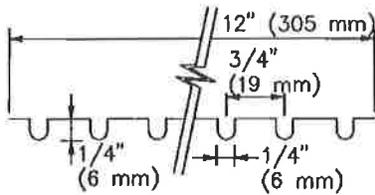
STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLAN

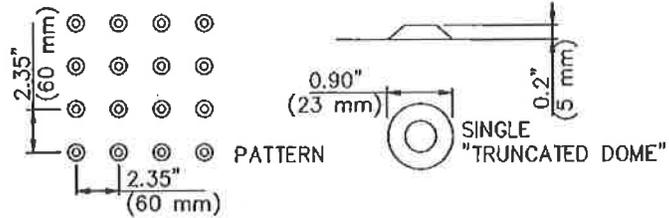
CURB RAMP

111-4

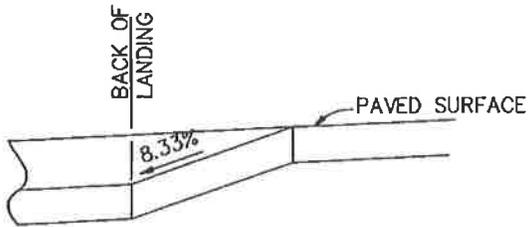
SHEET 9 OF 10



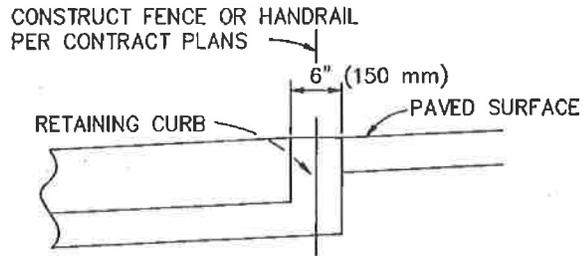
GROOVING DETAIL



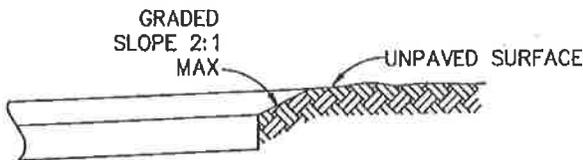
DETECTABLE WARNING DETAIL



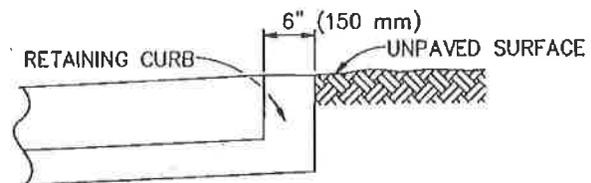
DETAIL A



DETAIL B



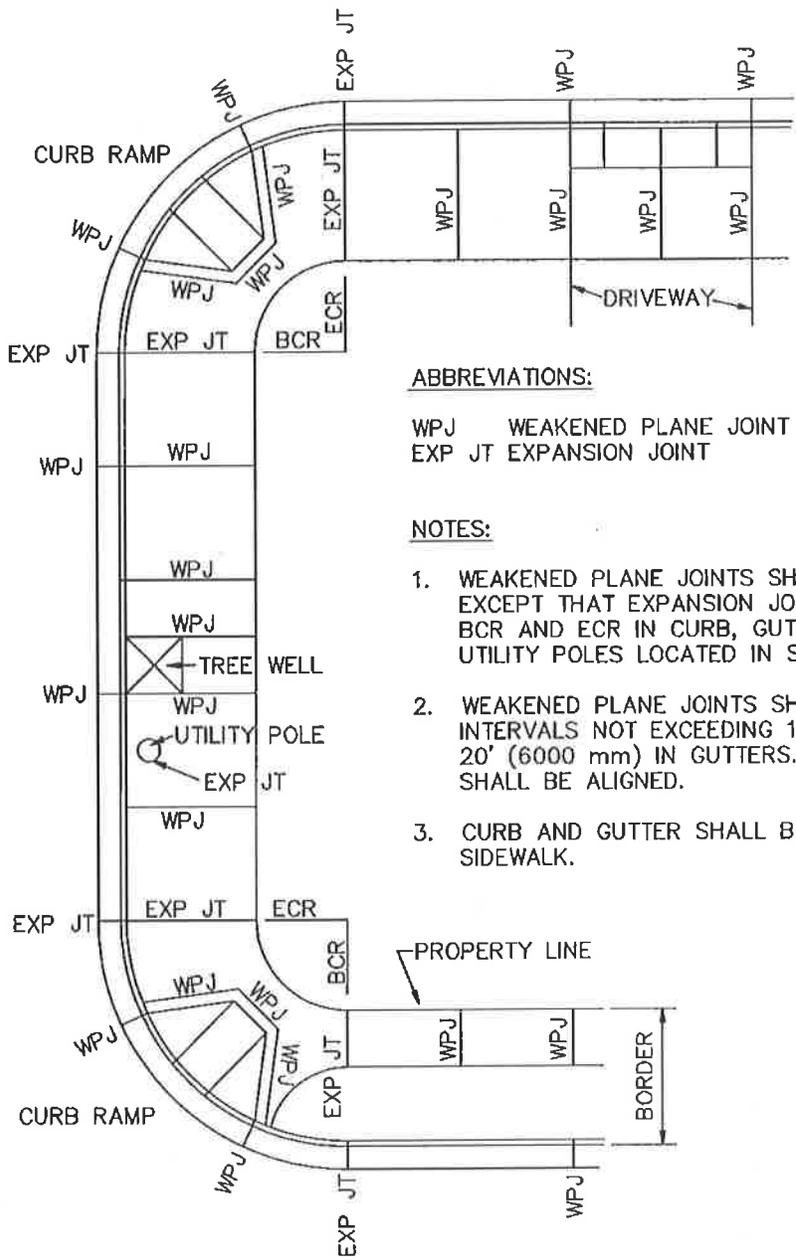
DETAIL C



DETAIL D

GENERAL NOTES:

1. CONCRETE SHALL BE CLASS 520-C-2500 (310-C-17) CONFORMING TO SSPWC 201-1.1.2 AND SHALL BE 4" (100 mm) THICK.
2. THE RAMP SHALL HAVE A 12" (305 mm) WIDE BORDER WITH 1/4" (6 mm) GROOVES APPROXIMATELY 3/4" (19 mm) OC. SEE GROOVING DETAIL.
3. THE RAMP SURFACE SHALL HAVE A TRANSVERSE BROOMED SURFACE TEXTURE CONFORMING TO SSPWC 303-1.9.
4. USE DETAIL "A" OR "B" IF EXISTING SURFACE BEHIND LANDING IS PAVED.
5. USE DETAIL "C" OR "D" IF EXISTING SURFACE BEHIND LANDING IS UNPAVED.
6. R = 3' (900 mm) UNLESS OTHERWISE SHOWN ON PLAN.
7. ANGLE = $\Delta/2$ UNLESS OTHERWISE SHOWN ON PLAN.
8. CONSTRUCT DETECTABLE WARNING SURFACE PER DETAIL THIS SHEET. MATERIALS SHALL BE PER CONTRACT DOCUMENTS.



ABBREVIATIONS:

WPJ WEAKENED PLANE JOINT BCR BEGINNING OF CURB RETURN
 EXP JT EXPANSION JOINT ECR END OF CURB RETURN

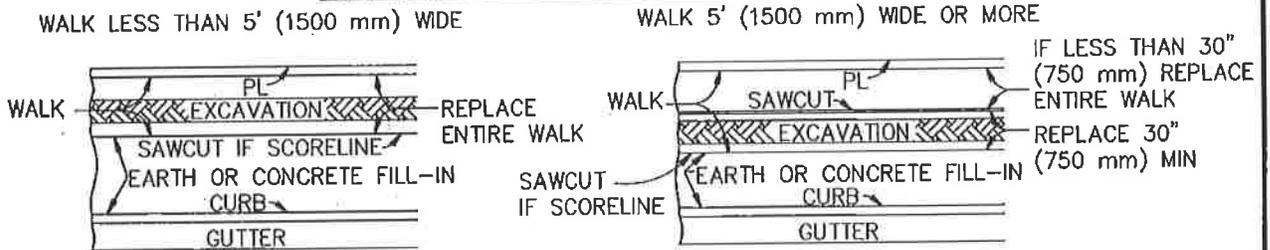
NOTES:

1. WEAKENED PLANE JOINTS SHALL BE USED FOR ALL JOINTS, EXCEPT THAT EXPANSION JOINTS SHALL BE PLACED AT THE BCR AND ECR IN CURB, GUTTER AND SIDEWALK, AND AROUND UTILITY POLES LOCATED IN SIDEWALK AREAS.
2. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT REGULAR INTERVALS NOT EXCEEDING 10' (3000 mm) IN WALKS AND 20' (6000 mm) IN GUTTERS. JOINTS IN CURB AND WALK SHALL BE ALIGNED.
3. CURB AND GUTTER SHALL BE CONSTRUCTED SEPARATELY FROM SIDEWALK.

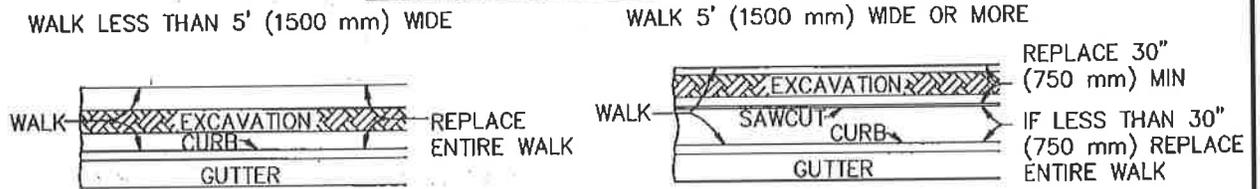
STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION		
PROMULGATED BY THE PUBLIC WORKS STANDARDS INC. GREENBOOK COMMITTEE 1984 REV. 1988, 2009	<h2 style="margin: 0;">CURB AND SIDEWALK JOINTS</h2>	STANDARD PLAN <h1 style="margin: 0;">112-2</h1>
USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION		
		SHEET 1 OF 1

WALK OR FILL-IN REPLACEMENT FOR EXCAVATIONS MADE PARALLEL TO CURB OR PROPERTY LINE

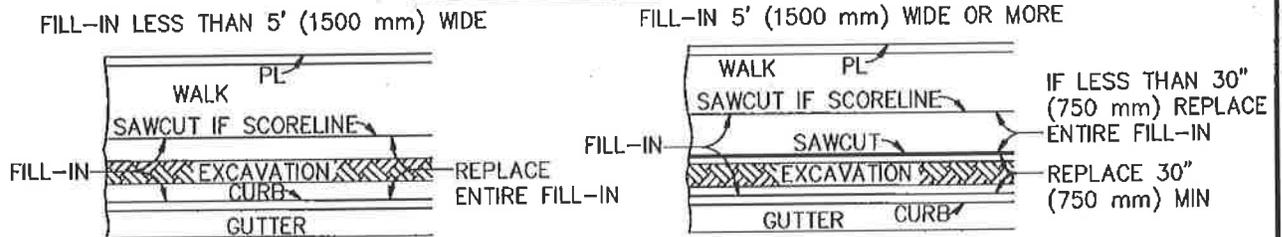
WALK ADJACENT TO PROPERTY LINE



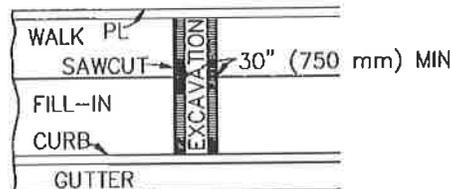
WALK ADJACENT TO CURB



FILL-IN REPLACEMENT



WALK OR FILL-IN REPLACEMENT FOR EXCAVATIONS MADE NORMAL TO CURB OR PROPERTY LINE



THESE REQUIREMENTS ALSO APPLY TO ENDS OF PARALLEL EXCAVATIONS.

IF AN EXCAVATION FALLS WITHIN 30" (750 mm) OF AN EXPANSION JOINT, CONSTRUCTION JOINT, WEAKENED PLANE JOINT, OR EDGE, THE CONCRETE SHALL BE REMOVED AND REPLACED TO THE JOINT OR EDGE.

IF AN EXCAVATION FALLS WITHIN 12" (300 mm) OF A SCORELINE, THE CONCRETE SHALL BE REMOVED AND REPLACED TO THE SCORELINE. THE SCORELINE SHALL BE SAWCUT BEFORE CONCRETE REMOVAL.

THE MINIMUM LENGTH OF REPLACEMENT IN BOTH CASES SHALL BE 30" (750 mm).

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

PROMULGATED BY THE
PUBLIC WORKS STANDARDS INC.
GREENBOOK COMMITTEE
1993
REV. 1996, 2009

SIDEWALK & DRIVEWAY REPLACEMENT

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLAN

113-2

SHEET 1 OF 2

NOTES

1. CONCRETE WALK, FILL-IN AND DRIVEWAYS REMOVED IN CONNECTION WITH CONSTRUCTION SHALL BE REPLACED TO NEATLY SAWED EDGES. ALL CUTS SHALL BE PARALLEL TO OR PERPENDICULAR TO THE CURB; ON CURVES, THE CUT SHALL BE RADIAL TO THE CURB.
2. DRIVEWAY APRONS IN WHICH THE "W" DISTANCE IS LESS THAN 11' (3300 mm) SHALL BE REPLACED IN THEIR ENTIRETY IF CUT IN ANY AREA.
3. DRIVEWAY APRONS IN WHICH THE "W" DISTANCE IS 11' (3300 mm) OR MORE MAY BE CUT WITHIN THE "W" SECTION. THE MINIMUM REPLACEMENT SHALL BE 30" (750 mm) IN LENGTH. THE MINIMUM DISTANCE ALLOWED BETWEEN SUCH CUTS SHALL BE 14' (4200 mm).
4. DRIVEWAY APRONS IN WHICH THE "W" DISTANCE IS 11' (3300 mm) OR MORE MAY BE CUT IN THE "X" OR "R" SECTION. REPLACEMENT SHALL BE THE ENTIRE "X" OR "R" SECTION.
5. DRIVEWAY APRONS SHALL BE REPLACED FROM THE BACK OF THE CURB TO THE FRONT EDGE OF THE WALK, EXCEPT, WHERE WALK IS ADJACENT TO CURB, REPLACEMENT SHALL BE FROM BACK OF CURB TO BACK OF WALK.
6. WALK PORTIONS OF DRIVEWAYS SHALL BE REPLACED AS SHOWN ABOVE FOR EXCAVATIONS MADE PARALLEL OR NORMAL TO CURB.
7. REPLACEMENT OF THE "X" OR "R" SECTION SHALL MATCH EXISTING CONSTRUCTION.

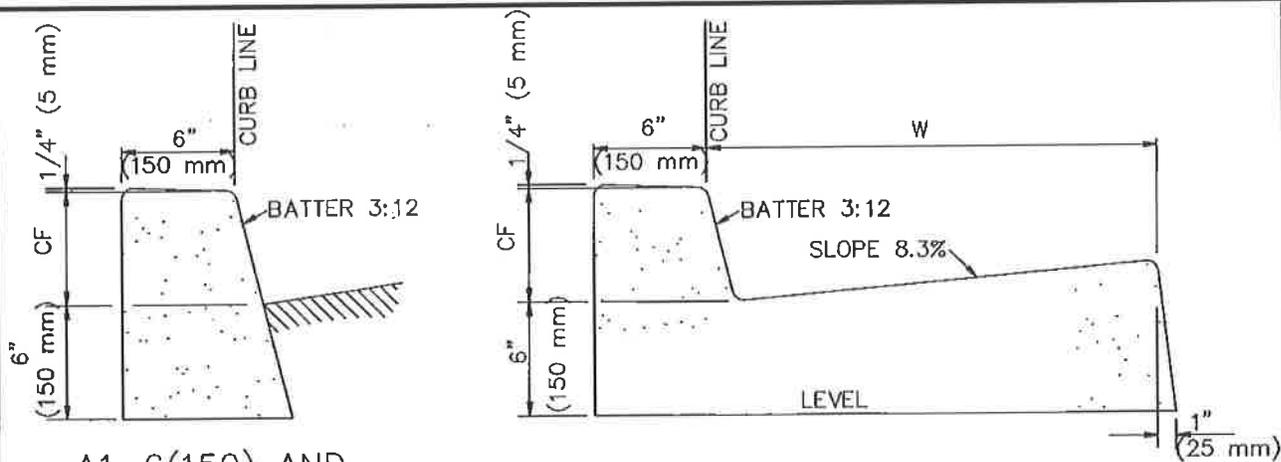
STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

SIDEWALK & DRIVEWAY REPLACEMENT

STANDARD PLAN

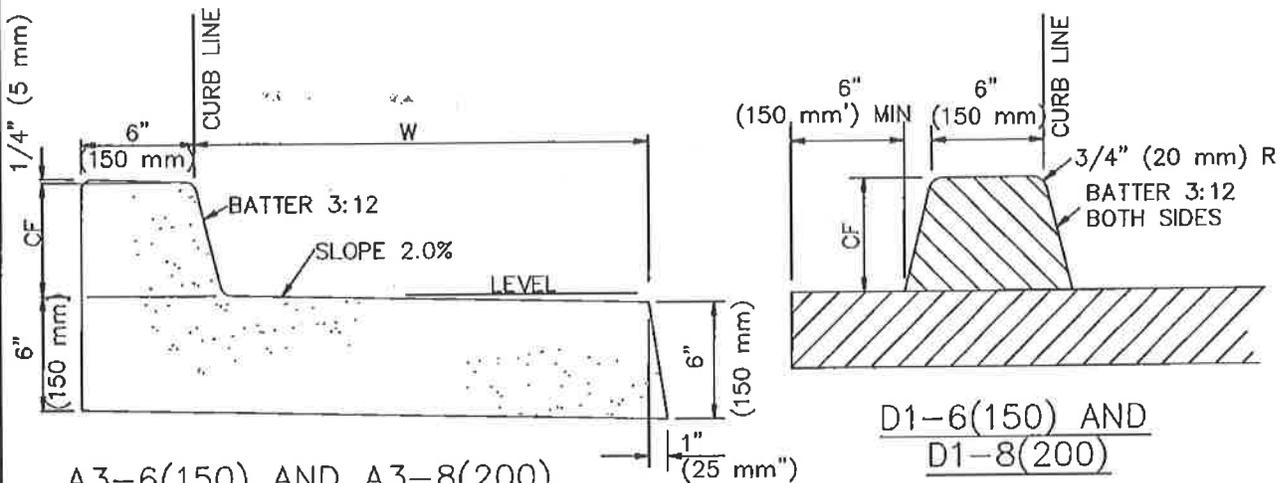
113-2

SHEET 2 OF 2



A1-6(150) AND
A1-8(200)

A2-6(150) AND A2-8(200)

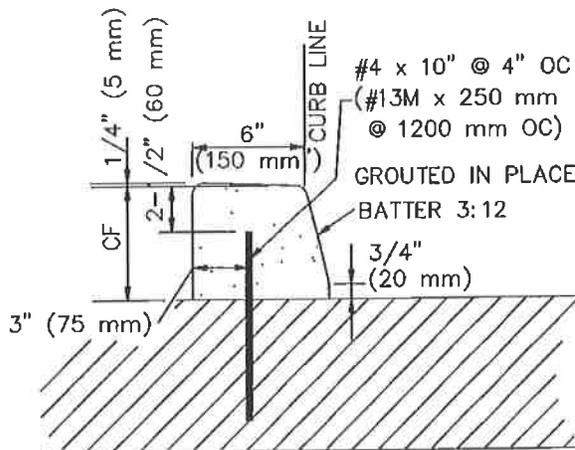


A3-6(150) AND A3-8(200)

D1-6(150) AND
D1-8(200)

NOTES:

1. THE LAST NUMBER IN THE DESIGNATION IS THE CURB FACE (CF) HEIGHT, INCHES (mm).
2. GUTTER WIDTH, W, IS 24" (600 mm) UNLESS OTHERWISE SPECIFIED.
3. TYPES A1, A2, A3 AND C1 SHALL BE CONSTRUCTED FROM PCC.
4. TYPE D1 CURB SHALL BE CONSTRUCTED FROM ASPHALT CONCRETE.
5. TYPE C1 CURB SHALL BE ANCHORED WITH STEEL DOWELS AS SHOWN OR WITH AN EPOXY APPROVED BY THE ENGINEER.
6. ALL EXPOSED CORNERS ON PCC CURBS AND GUTTERS SHALL BE ROUNDED WITH A 1/2" (15 mm) RADIUS.



C1-6(150) AND C1-8(200)

STANDARD PLAN FOR PUBLIC WORKS CONSTRUCTION

PROMULGATED BY THE
PUBLIC WORKS STANDARDS INC.
GREENBOOK COMMITTEE
1984
REV. 1998, 2009

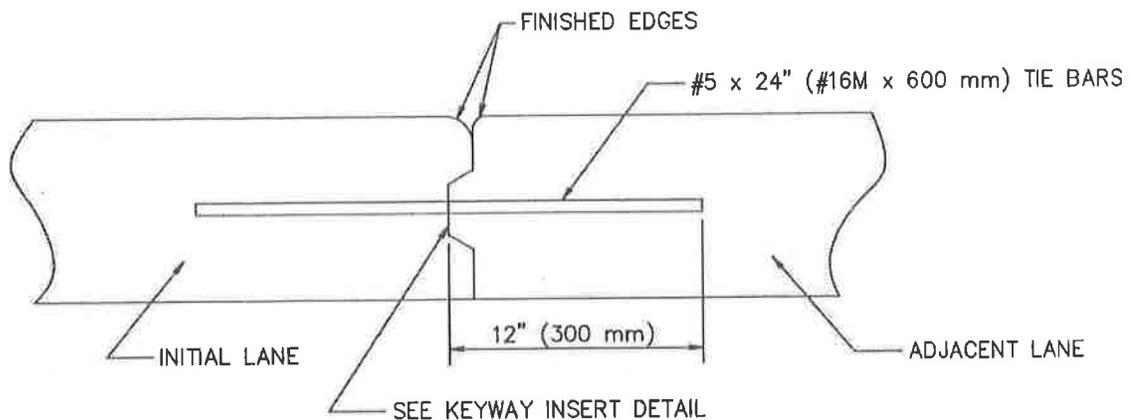
CURB AND GUTTER - BARRIER

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

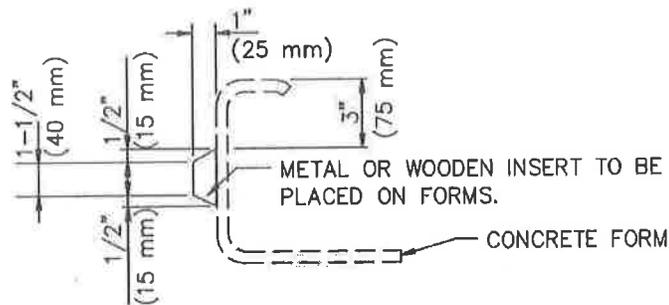
STANDARD PLAN

120-2

SHEET 1 OF 1



CONTACT JOINT WITH KEYWAY AND TIE BAR



KEYWAY INSERT DETAIL

NOTES:

1. LONGITUDINAL JOINTS SHALL BE LOCATED AS SHOWN ON PLAN. CONTACT OR WEAKENED PLANE JOINTS MAY BE USED AT THE CONTRACTOR'S OPTION.
2. TRANSVERSE WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT INTERVALS OF 15' (4500 mm) AND SHALL BE AT LEAST 5' (1500 mm) FROM ANY TRANSVERSE CONTACT JOINT. (SEE NOTE 5.)
3. TRANSVERSE CONTACT JOINTS SHALL BE CONSTRUCTED AS SHOWN HEREON AT ALL CONSTRUCTION JOINTS AND AS DIRECTED BY THE ENGINEER.
4. SPACE TIE BARS AT 36" (900 mm) ON-CENTER FOR TRANSVERSE JOINTS AND 45" (1200 mm) FOR LONGITUDINAL JOINTS. PLACE IN MIDDLE THIRD OF SLAB.
5. SEE SSPWC 302-6.5 FOR DETAILS ON CONCRETE PAVEMENT JOINTS.
6. CONSTRUCT CONTACT JOINTS IN THE APPROACH SLABS AT THE FIRST THREE TRANSVERSE JOINTS OF CONCRETE INTERSECTIONS.

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

PROMULGATED BY THE
PUBLIC WORKS STANDARDS INC.
GREENBOOK COMMITTEE
1993
REV. 1996, 2009

CONCRETE PAVEMENT JOINT DETAILS

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLAN

134-2

SHEET 1 OF 1

APPENDIX IV

CONSTRUCTION & DEMOLITION WASTE MANAGEMENT PLAN (WMP)

Building Permit Number: _____

CITY OF TORRANCE

Construction & Demolition Waste Management Plan (WMP)

THE REQUIREMENT IS TO REUSE OR RECYCLE AT LEAST 50% OF PROJECT WASTE AND 100% OF EXCAVATED SOIL AND LAND-CLEARING DEBRIS

- 1) As part of your application, you must complete the front and back of this page and the "estimate" or left side of the table on the backside of this page to the best of your ability, indicating that you will recycle at least 50% of the waste from the project and 100% of excavated soil and land-clearing debris.
- 2) As your project proceeds, collect and keep receipts of all waste disposed, recycled, reused or donated. Receipts must show material type, weight of material, how the material was treated and the facility used.
- 3) To final your project, you must then fill out the "actual" or right side of the table on the backside of this sheet, and submit it again with all the receipts to verify that at least 50% of the project's waste and 100% of excavated soil and land-clearing debris was diverted from the landfills.

Please note, if you are contracting with a different company to haul your waste or using a roll off box from another company, that company must have a business license to operate in the City of Torrance.

A COPY OF THIS WMP AND RECEIPTS (SHOWING MATERIAL TYPE, WEIGHT, TREATMENT AND FACILITY USED) FOR ALL RECYCLING AND DISPOSAL SHALL BE SUBMITTED BEFORE THE PROJECT WILL RECEIVE FINAL BUILDING APPROVAL. (FOR DEMO PERMITS, THE RECEIPTS FOR THE DEMOLITION WASTE SHOULD BE PROVIDED BEFORE THE FIRST FOOTING INSPECTION AFTER THE BUILDING PERMIT HAS BEEN ISSUED.)

Project Name: _____

Location: _____

Requesting Infeasibility Exemption: Yes No

Contractor Name: _____ Contact Name: _____

Address: _____ Contact Phone: _____

Recycler: _____ Recycler Contact: _____

Recycler Address: _____ Recycler Contact Phone: _____

CITY USE ONLY	
	Application (Date) Final (Date)
Approved	
Further explanation needed (see attached)	
Denied	
Infeasibility Exemption Approved	
Reviewed By	

Submit this form and the attached Waste Management Plan Table to: **WMP Compliance Official**

Alison Sherman, Public Works
asherman@TorranceCA.Gov
Fax: 310-781-6902

For questions or for in-person visit (by appointment only), please call 310-781-6900

CITY OF TORRANCE

Construction & Demolition Waste Management Plan Table

Project Name: _____

Total Estimated Waste Generated by Project: _____ (in tons).
 (Ask your hauler, recycler or site cleanup vendor to assist you. Use receipts from your previous jobs for estimates)

Complete and return with Building Permit Application			Complete and return with receipts prior to final building approval		
Material Type	Estimated Reused/ Recycled	Estimated Disposed/ Landfilled	Actual Reused/ Recycled	Actual Disposed/ Landfilled	Vendor or Facility Used (Destination)
	(In Tons)	(In Tons)	(In Tons)	(In Tons)	
Asphalt & Concrete					
Bricks/Masonry/Tiles					
Building Materials (doors, windows, fixtures, etc.)					
Cardboard					
Excavated dirt and land-clearing debris					
Dirt					
Landscape Debris (Plant & Tree Trimmings)					
Scrap Metal					
Unpainted Wood & Pallets					
Other (painted wood & drywall, roofing, etc.)					
Mixed C&D*					
Trash/Garbage					
TOTAL					

If you are requesting an infeasibility exemption and the estimated amount reused/recycled is less than 50%, please explain why (attach additional sheets if necessary):

Prepared by (print): _____ Date: _____

Signature: _____ Phone Number: _____

Must be signed by Contractor or Owner. Signatory accepts financial responsibility for penalties for non-compliance.

* Mixed C&D is defined as a mixture of three or more materials (e.g. wood, drywall, roofing, etc.) from construction or demolition sites that will be taken to a facility capable of recycling those commingled materials.

Conversion Rates

The following conversion rates are estimates to help complete the Waste Management Plan by converting materials into tonnage format. The ranges vary widely, depending on how the materials are handled (compacted, loose, chipped, etc.). Use the conversion factors and receipts from any previous projects to help you estimate the potential amount of materials and diversion. Take into consideration the type and load of vehicles that will be used to haul the materials. Ask your hauler or recycler to assist you in estimating these numbers.

Material	Lbs/cy	Tons/cy
Asphalt	1,400 lbs/cy	0.7 tons/cy
Brick	2,430 lbs/cy	1.21 tons/cy
Cardboard	100 lbs/cy	0.05 tons/cy
Concrete	2,600 lbs/cy (Sources range from 1,000 to 4,000)	1.3 tons/cy
Dirt/Soils	2,660 lbs/cy	1.33 tons/cy
Drywall	700 lbs/cy	0.35 tons/cy
Wood (chipped)	300 - 650 lbs/cy	0.15 – 0.3 tons/cy
Mixed C&D Debris	900 lbs/cy	0.45 tons/cy
Mixed Waste/Trash	100 - 350 lbs/cy	0.5 - 0.175 tons/cy

APPENDIX V
CALTRANS STANDARD PLANS

STATE COUNTY ROUTE TOTAL SHEETS

REGISTERED PROFESSIONAL ENGINEER

May 20, 2011

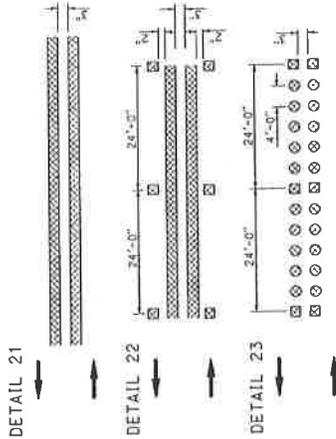
PLANS APPROVAL DATE

1247 W. 4th Street, Suite 100
San Francisco, CA 94118

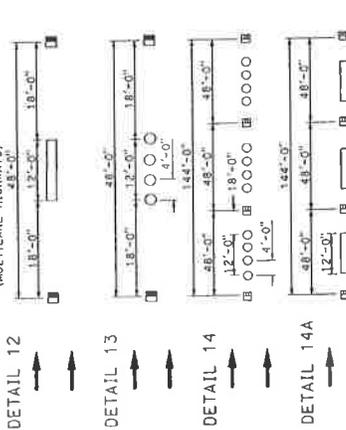
REGISTERED PROFESSIONAL ENGINEER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

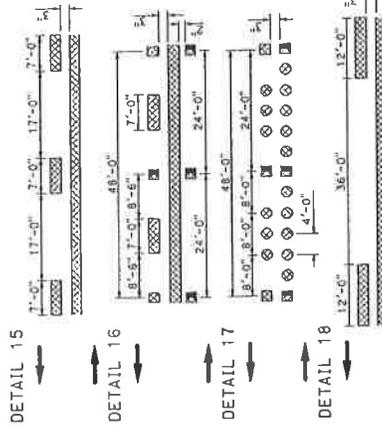
NO PASSING ZONES-TWO DIRECTION



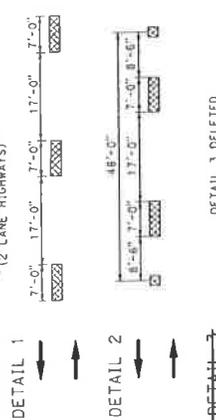
LANELINES (Cont)
(MULTILANE HIGHWAYS)



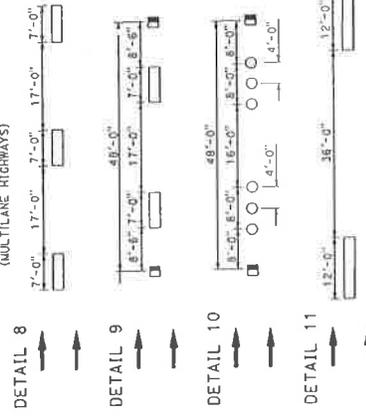
NO PASSING ZONES-ONE DIRECTION



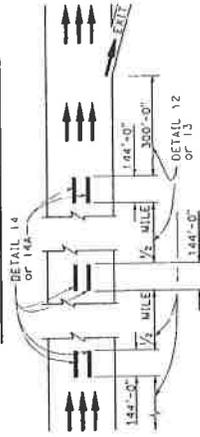
CENTERLINES
(2 LANE HIGHWAYS)



LANELINES
(MULTILANE HIGHWAYS)



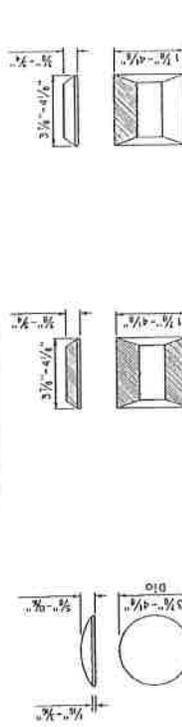
**TYPICAL LANE LINE DELINEATION
IN ADVANCE OF EXIT RAMP**



- LEGEND**
- MARKERS**
- TYPE A WHITE NON-REFLECTIVE
 - ⊙ TYPE AY YELLOW NON-REFLECTIVE
 - ⊞ TYPE C RED-CLEAR RETROREFLECTIVE
 - ⊞ TYPE D TWO-WAY YELLOW RETROREFLECTIVE
 - ⊞ TYPE G ONE-WAY CLEAR RETROREFLECTIVE
 - ⊞ TYPE H ONE-WAY YELLOW RETROREFLECTIVE
- LINE**
- ▬ 4" WHITE
 - ▬ 4" YELLOW
- DIRECTION OF TRAVEL →

NOTE:
Detail 14 is to be used in combination with Detail 13. Detail 14A is to be used in combination with Detail 12.

MARKER DETAILS



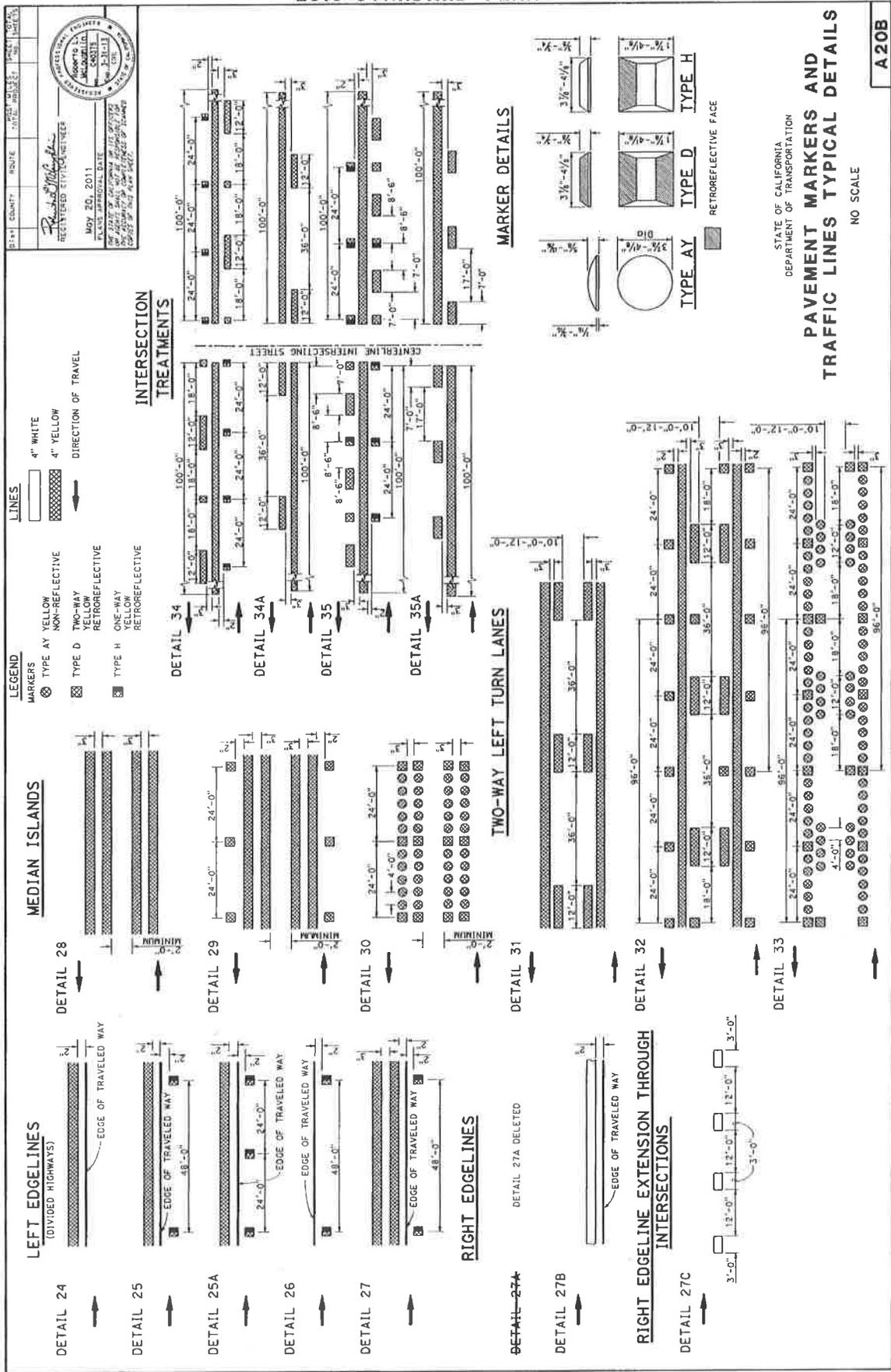
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**PAVEMENT MARKERS
AND TRAFFIC LINES
TYPICAL DETAILS**

NO SCALE

A20A

Return to Table of Contents



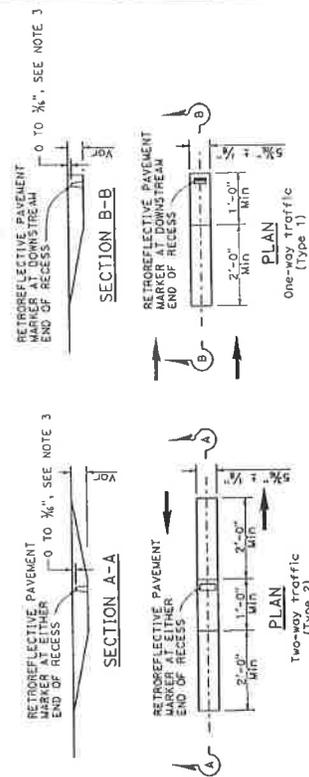
Return to Table of Contents

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 DIVISION OF MATERIALS
 DIVISION OF DESIGN
 DIVISION OF CONSTRUCTION
 DIVISION OF OPERATIONS
 DIVISION OF RESEARCH AND DEVELOPMENT
 DIVISION OF TRAFFIC ENGINEERING
 DIVISION OF UTILITIES
 DIVISION OF VISUAL QUALITY
 DIVISION OF WORKS PROGRAMS
 DIVISION OF TRANSPORTATION PLANNING AND PROGRAMS
 DIVISION OF TRANSPORTATION PROGRAMS

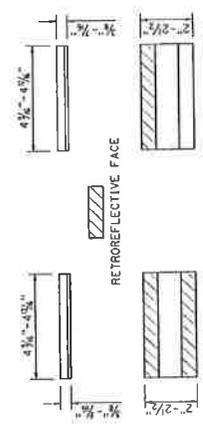
DATE: MAY 20, 2011
 PROJECT: [REDACTED]
 SHEET: [REDACTED]

RECESSED MARKER NOTES:

- See typical traffic line details for recessed pavement markers. Detail 144 requires a Type 2 recess.
- The retroreflective pavement markers shown for recessed installations are not to be recessed. Non-recessed installations, however, shall be 0 to 1/8" below the pavement surface.



RECESS DETAIL FOR RETROREFLECTIVE PAVEMENT MARKER



RETROREFLECTIVE PAVEMENT MARKER FOR RECESSED INSTALLATION

PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

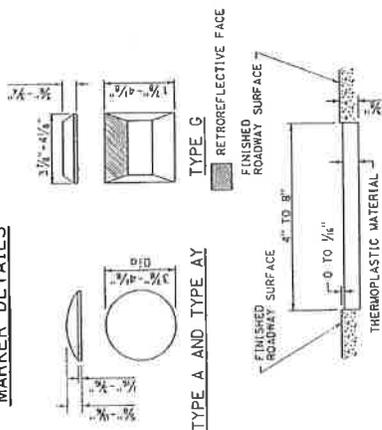
NO SCALE

A20D

LEGEND MARKERS

- TYPE A WHITE NON-REFLECTIVE
- ◐ TYPE AY YELLOW NON-REFLECTIVE
- ◑ TYPE G ONE-WAY CLEAR RETROREFLECTIVE
- ▨ 4" YELLOW LINE
- DIRECTION OF TRAVEL

MARKER DETAILS

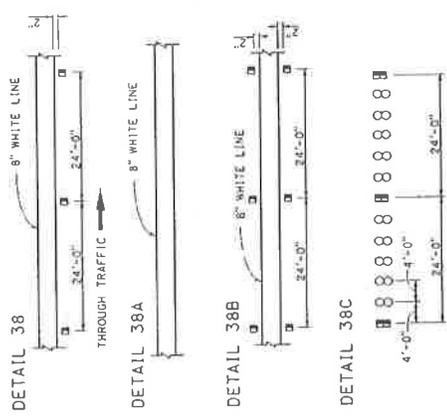


DETAIL FOR RECESSED THERMOPLASTIC STRIPE

RECESSED THERMOPLASTIC NOTES

- See typical traffic line details for pavement marking patterns.
- The top of the thermoplastic installed in recessed pavement shall be 0 to 1/8" below the pavement surface.

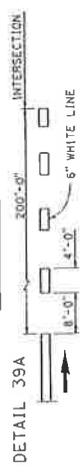
CHANNELIZING LINE



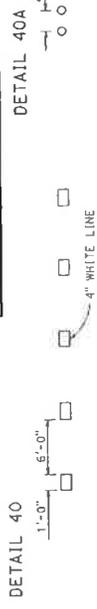
BIKE LANE LINE



INTERSECTION BIKE LANE



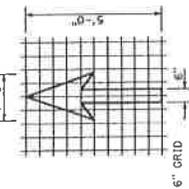
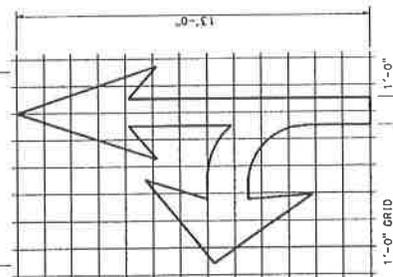
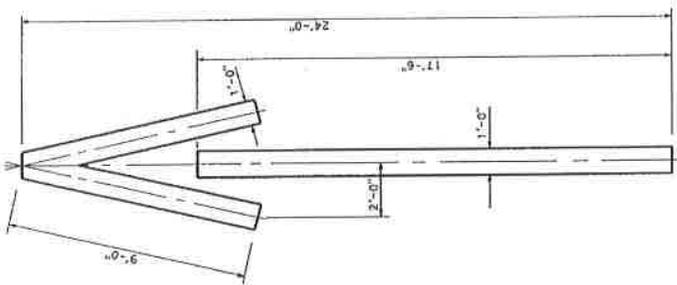
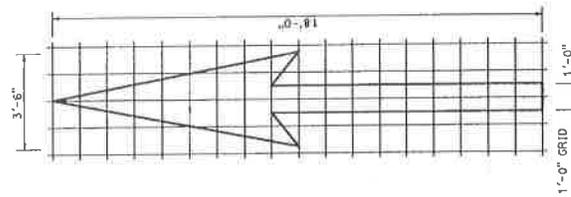
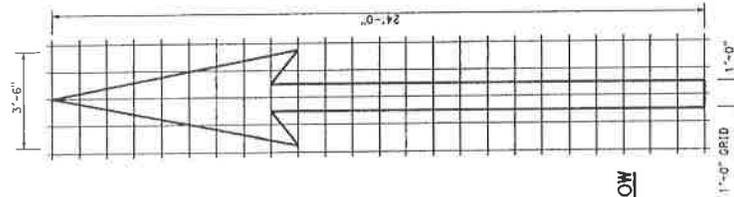
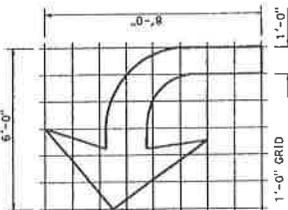
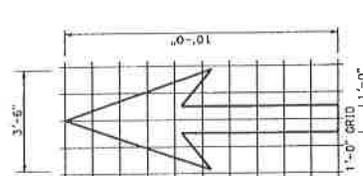
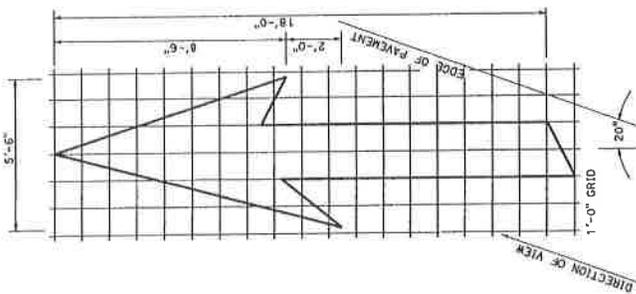
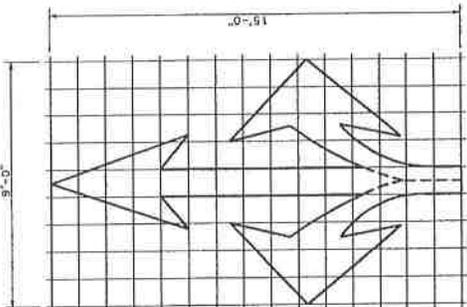
LANE LINE EXTENSIONS THROUGH INTERSECTIONS



CENTER LINE EXTENSIONS THROUGH INTERSECTIONS



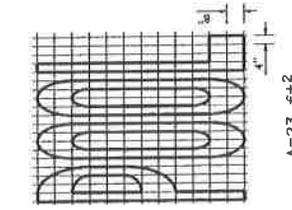
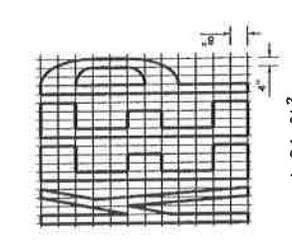
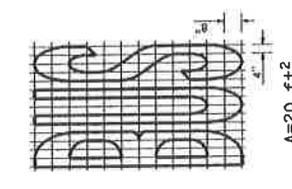
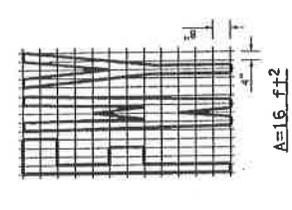
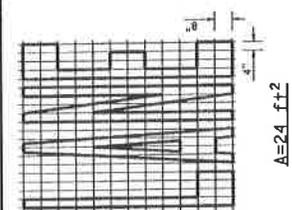
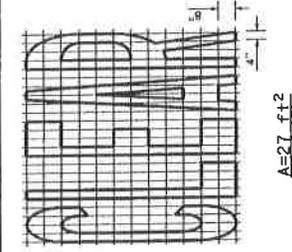
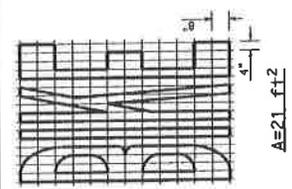
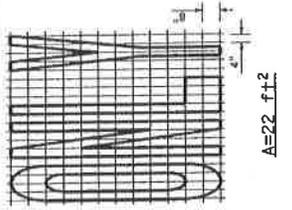
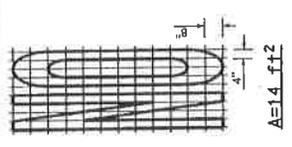
COUNTY ROUTE
 REGISTERED CIVIL ENGINEER
 APRIL 20, 2012
 PLANS EXPIRES DATE
 TO ACCOMPANY PLANS DATED



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
ARROWS**
NO SCALE

NOTE:
Minor variations in dimensions may be accepted by the Engineer.

DIST. COUNTY ROUTE DISTRICT DISTRICT NO. SHEET NO. TOTAL SHEETS
 REGISTERED CIVIL ENGINEER
 PROFESSIONAL LICENSE NO. 10001
 EXPIRES 12-31-13
 REGISTERED IN THE STATE OF CALIFORNIA
 REGISTERED CIVIL ENGINEER
 JULY 20, 2012
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 THE ABOVE IS A COMPLETE SET OF PLANS
 TO BE USED IN THE CONSTRUCTION OF THE PROJECT
 UNLESS OTHERWISE SPECIFIED
 TO ACCOMPANY PLANS DATED _____

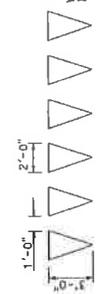


WORD MARKINGS		
ITEM	FT±	FT±
LANE	24	14
POOL	23	21
CAR	17	20
CLEAR	27	22
KEEP	24	16

- NOTES:**
- If a message consists of more than one word, it should read "up", i.e., the first word should be nearest the driver.
 - The space between words should be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
 - Minor variations in dimensions may be accepted by the Engineer.
 - Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.
 - The words "NO PARKING" pavement marking is to be used for parking restrictions. For typical locations of markings, see Standard Plans A9A and A98B.
 - The words "NO PARKING" shall be painted in white letters no less than 1/2" high and 1/2" wide in the board and located so that it is visible to traffic enforcement officials.

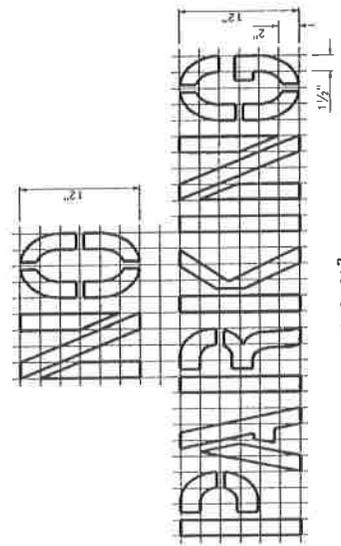


LIMIT LINE (STOP LINE)



YIELD LINE

DIRECTION OF TRAVEL



See Notes 6 and 7

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKINGS
WORDS, LIMIT AND YIELD LINES
 NO SCALE
 RSP A24E DATED JULY 20, 2012, SUPERSEDES STANDARD PLAN A24E,
 DATED MAY 20, 2011 - PAGE 17 OF THE STANDARD PLANS BOOK DATED 2010.
REVISED STANDARD PLAN RSP A24E

STATE COUNTY ROUTE TO BE CLOSED

REGISTERED CIVIL ENGINEER

APR 11, 2013

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

REGISTERED CIVIL ENGINEER

EXPIRES 04-11-2014

THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

REGISTERED CIVIL ENGINEER

EXPIRES 04-11-2014

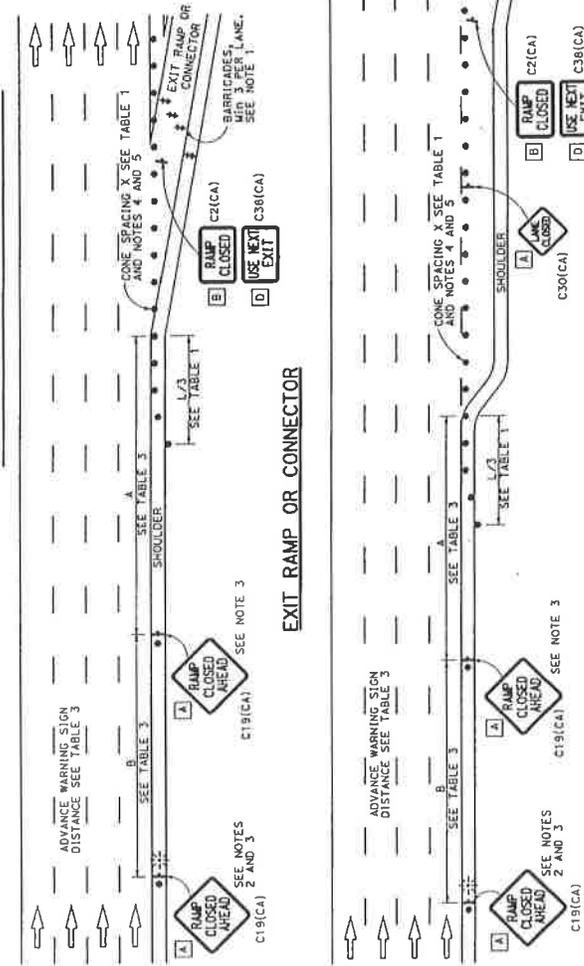
TYPICAL RAMP CLOSURES

SIGN PANEL SIZE (MIN)

- A 48" x 48"
- B 48" x 30"
- C 36" x 36"
- D 48" x 36"

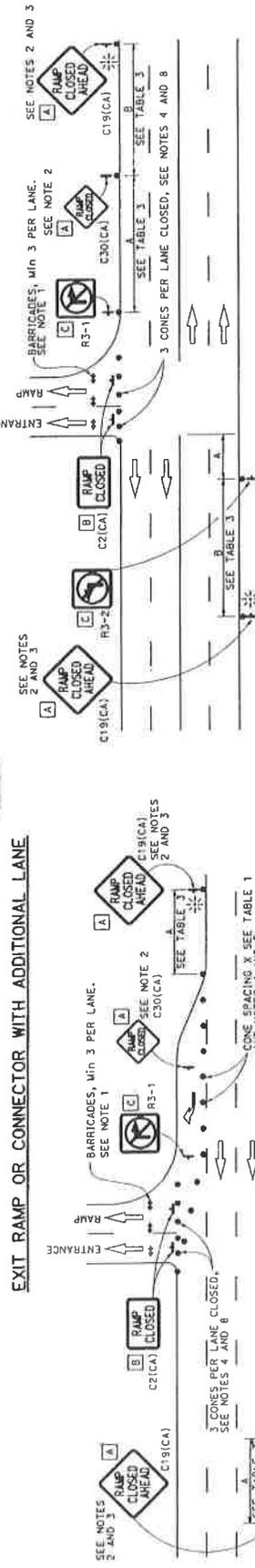
LEGEND

- ◆ TRAFFIC CONE
- ↑ TEMPORARY TRAFFIC CONTROL SIGN
- ⚡ BARRICADES
- ⚡ PORTABLE FLASHING BEACON

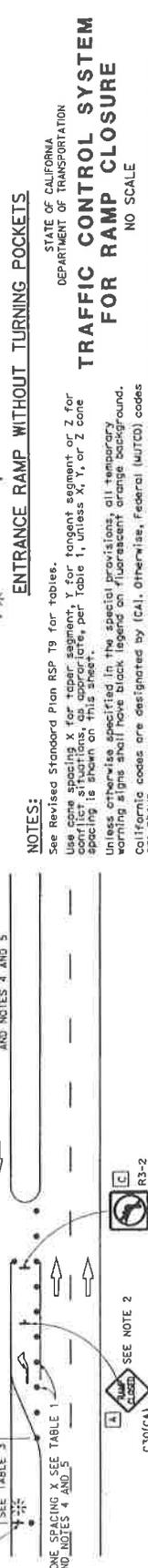


EXIT RAMP OR CONNECTOR

EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITHOUT TURNING POCKETS



- NOTES:**
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
 - In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C10(CA) "RAMP CLOSED" signs, black or orange overlay plates with the word "CLOSED" shall be placed on the ramp. The letter size on all overlay signs shall be the same as the sign. The letter size on the overlay shall be the same as the sign.
 - Each advance C19(CA) "RAMP CLOSED AHEAD" sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. A flashing beacon shall be placed on top of the first C19(CA) sign during hours of darkness.
 - All cones used for ramp closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
 - Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime ramp closures only.
 - At least one person shall be assigned to provide full time maintenance of traffic control devices, unless otherwise directed by the Engineer.
 - The existing "EXIT" signs shall be covered during ramp closures.
 - A minimum of 3 cones shall be placed transversely across each closed lane and shoulder.

- NOTES:**
- See Revised Standard Plan RSP T9 for tables.
- Use cone spacing X for taper segment, Y for tangent segment or Z for transition segment, per Table 1, unless A, Y, or Z cone spacing is shown on this sheet.
- Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.
- California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM
FOR RAMP CLOSURE**

NO SCALE

RSP T14 DATED APRIL 19, 2013, SUPERSEDES STANDARD PLAN T14 DATED MAY 20, 2011 - PAGE 242 OF THE STANDARD PLANS BOOK DATED 2010.

ENTRANCE RAMP WITH TURNING POCKETS

REVISED STANDARD PLAN RSP T14

DATE	COUNTY	ROUTE	POSTAL PROJECT NO.	SHEET NO.

REGISTERED ELECTRICAL ENGINEER
 Thomas Gabriel
 License No. 10000
 State of California
 Electrical Engineering
 July 19, 2013
 PLAN APPROVAL DATE
 THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 DIVISION OF TRANSPORTATION PLANNING AND DESIGN
 DIVISION OF TRAFFIC SIGNALS
 DIVISION OF TRAFFIC SIGNALS
 DIVISION OF TRAFFIC SIGNALS

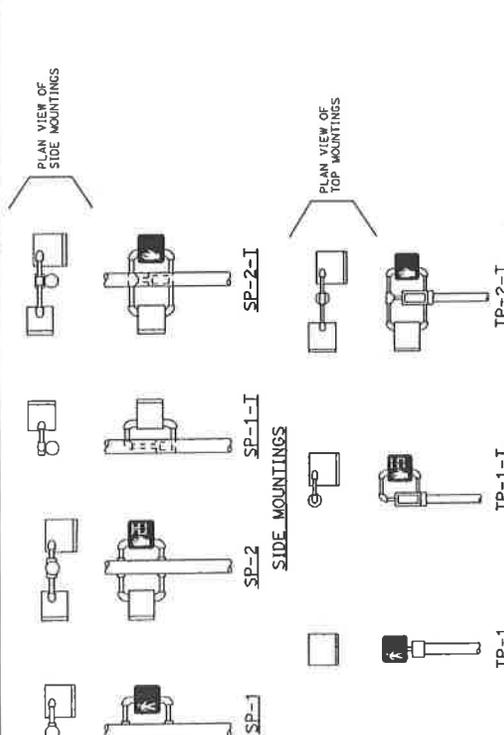
TO ACCOMPANY PLANS DATED _____

NOTES:

1. Mounting shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals.
3. See Standard Plan ES-4D for attachment fittings details.

ABBREVIATIONS:

- 1, 2 NUMBER OF SIGNAL FACES
- SP SIDE MOUNTED PEDESTRIAN SIGNAL
- T TERMINAL COMPARTMENT
- TP TOP MOUNTED PEDESTRIAN SIGNAL



**PEDESTRIAN SIGNALS AND MOUNTINGS
DETAIL A**



PERSON WALKING INTERVAL
 FLASHING UPRaised HAND INTERVAL
 STEADY UPRaised HAND INTERVAL
 PEDESTRIAN SIGNAL MODULE WITH COUNTDOWN
 PEDESTRIAN SIGNAL MODULE WITHOUT COUNTDOWN



**RAMP METERING SIGN
DETAIL D**

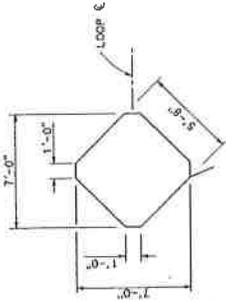
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (PEDESTRIAN SIGNAL AND
 RAMP METERING SIGN)**

NO SCALE

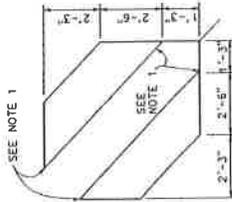
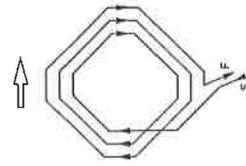
RSP ES-4B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-4B
 DATED MAY 20, 2011 - PAGE 444 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4B

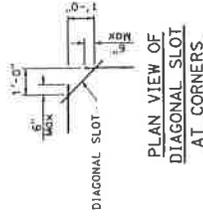
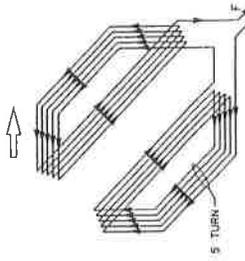
DIST.	COUNTY	ROUTE	POST MILES	SHEET NO.	TOTAL SHEETS
RECEIVED ELECTRICAL ENGINEER Thomas C. Smith REGISTERED ELECTRICAL ENGINEER No. 41532 State of California July 19, 2013 PLUS APPROVAL DATE THIS PLAN IS ON FILE IN THE OFFICE OF THE SUPERVISOR OF HIGHWAYS AND SHALL BE AVAILABLE FOR EXAMINATION BY THE PUBLIC AT ANY TIME.					
TO ACCOMPANY PLANS DATED _____					



WINDING DETAIL
 TYPE B LOOP DETECTOR CONFIGURATION
 SAWCUT DETAIL

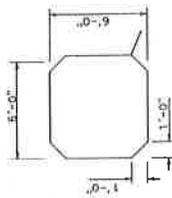
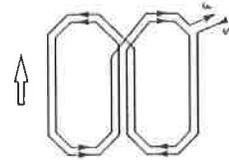
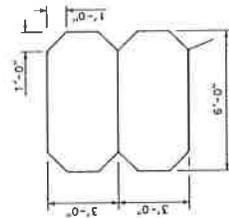


WINDING DETAIL
 TYPE D LOOP DETECTOR CONFIGURATION
 SAWCUT DETAIL

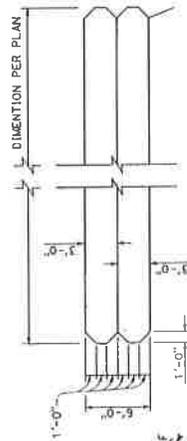
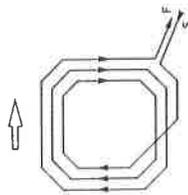


STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (DETECTORS)**
 NO SCALE

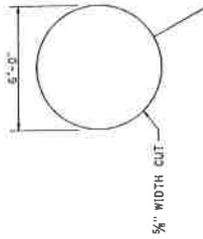
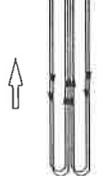
WINDING DETAIL
 TYPE Q LOOP DETECTOR CONFIGURATION
 SAWCUT DETAIL



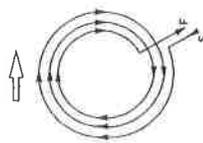
WINDING DETAIL
 TYPE A LOOP DETECTOR CONFIGURATION
 SAWCUT DETAIL



WINDING DETAIL
 TYPE C LOOP DETECTOR CONFIGURATION
 SAWCUT DETAIL



WINDING DETAIL
 TYPE E LOOP DETECTOR CONFIGURATION
 SAWCUT DETAIL



- NOTES:
1. Round corners of acute angle sawcuts to prevent damage to conductors.
 2. Typical distance separating loops from edge to edge is 10' for Type A, B, D and E installation in single loop.

RSP ES-5B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5B
 DATED MAY 20, 2011 - PAGE 449 OF THE STANDARD PLANS BOOK DATED 2010.

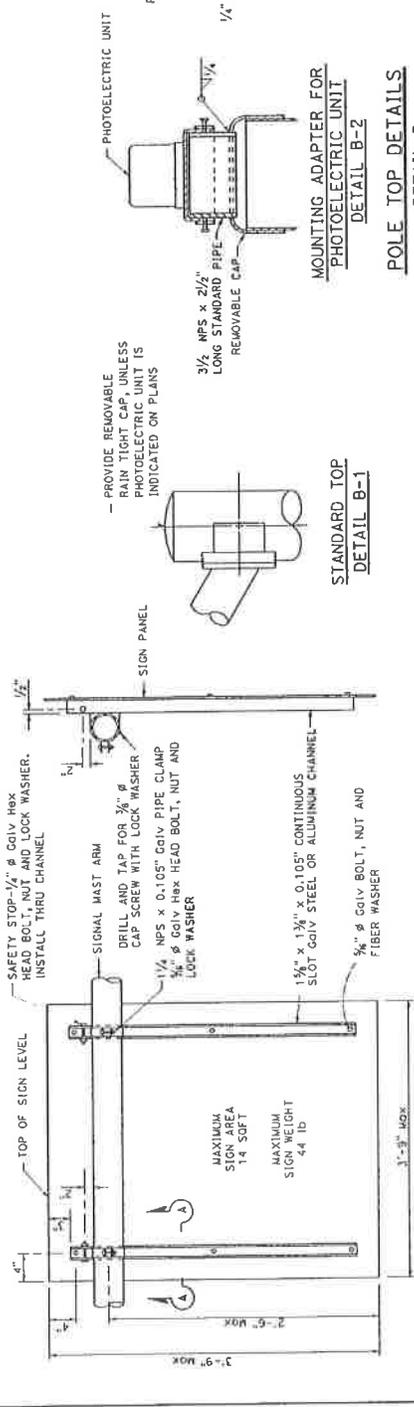
DIST. COUNTY ROUTE QTR. PROJECT SHEET NUMBER

REGISTERED CIVIL ENGINEER

MAY 20, 2011

PLANS, MATERIALS DATE

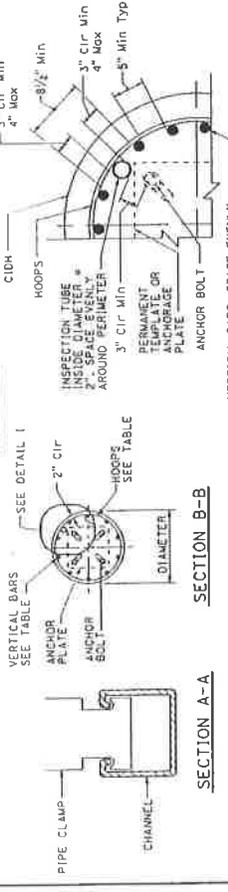
STATE OF CALIFORNIA
DIVISION OF HIGHWAYS
DESIGN DIVISION
1625 9TH STREET, SACRAMENTO, CA 95833



REAR VIEW

SIDE VIEW

SIGN MOUNTING DETAILS
DETAIL U



SECTION A-A

SECTION B-B

INSPECTION TUBE PLACEMENT

CIDH REINFORCING AND INSPECTION TUBE SCHEDULE			
CIDH DIAMETER	VERTICAL BARS	HOOPS (WELOD)	INSPECTION TUBE
2 FT	8-#5	#4 AT 6	2
2.5 FT	12-#6	#5 AT 6	4
3 FT	12-#7	#5 AT 6	4
3.5 FT	14-#8	2-#4 AT 7	5
4 FT	18-#9	2-#4 AT 7	5
5 FT	22-#10	2-#4 AT 7	6
6 FT	26-#11	2-#4 AT 7	7

* FOR SLIP BASE VERSIONS WITH 3 ANCHOR BOLTS USE 3 INSPECTION TUBES.

DETAIL I

DETAIL T-1

DETAIL T-2



DETAIL I

DETAIL T-1

DETAIL T-2

DETAIL C

DETAIL C-2

DETAIL C-1



ELEVATION

CAST-IN-DRILLED HOLE PILE FOUNDATION, REINFORCED PILE
DETAIL A

DUAL PHOTOELECTRIC UNIT MOUNTING DETAIL
DETAIL C

ALTERNATIVE MOUNTING ADAPTER
DETAIL B-3

POLE TOP DETAILS
DETAIL B

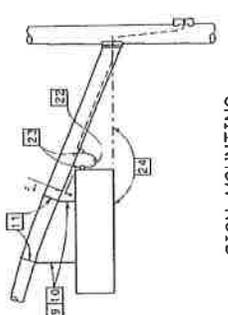
STANDARD TOP PHOTOELECTRIC UNIT
DETAIL B-2

PHOTOELECTRIC UNIT MOUNTING DETAIL
DETAIL B-1

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
DETAIL NO. 2)**
NO SCALE

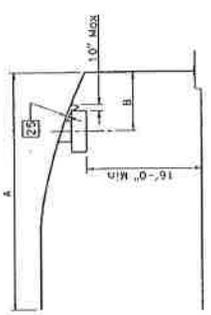
2010 STANDARD PLAN ES-7P

COUNTY ROUTE PROJECT FILE NO. SHEETS
 REGISTERED CIVIL ENGINEER
 MAY 20, 2011
 PLANS APPROVED DATE
 THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DIVISION OF TRANSPORTATION PLANNING AND RESEARCH
 12015 LEXINGTON AVENUE, SUITE 1000, NEW YORK, NY 10025
 PHONE: (212) 312-2000 FAX: (212) 312-2001
 WWW.STATEOFNEWYORK.GOV

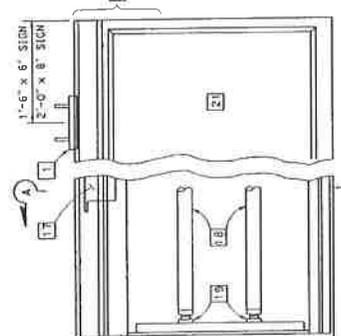


SIGN MOUNTING
DETAIL H

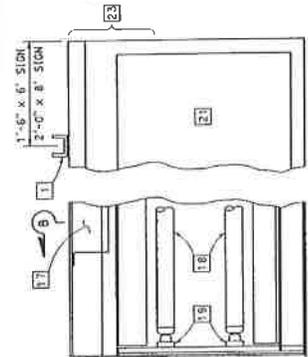
SIGN PLACEMENT	
A	B
PROJECTED LENGTH	8'-0" SIGN
20'-0"	7'-10"
25'-0"	9'-2"
30'-0"	9'-6"
35'-0"	10'-6"
40'-0"	11'-6"
45'-0"	12'-6"
50'-0"	13'-6"
55'-0"	
60'-0"	



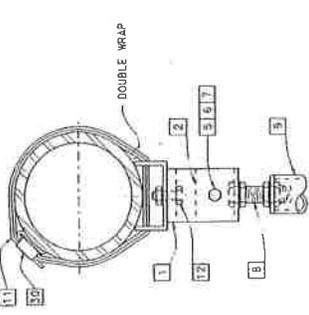
SIGN PLACEMENT
DETAIL G



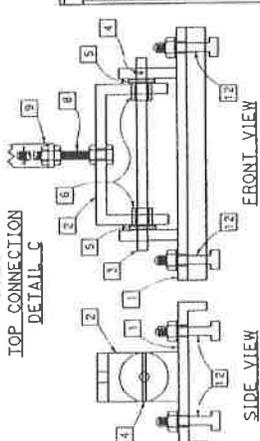
DETAIL A-1 TYPE A SIGN
DETAIL A



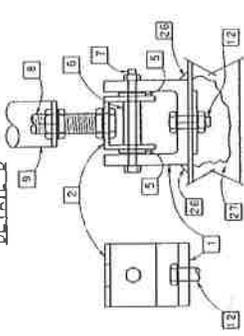
DETAIL B-1 TYPE B SIGN
DETAIL B



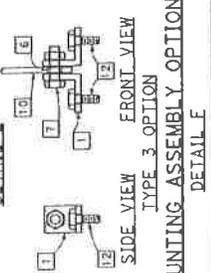
TOP CONNECTION
DETAIL C



SIDE VIEW
TYPE 1 OPTION
DETAIL D

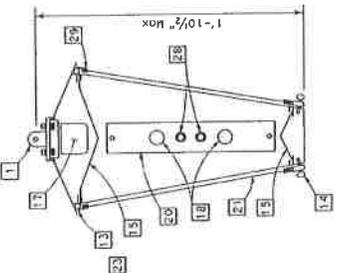


SIDE VIEW
TYPE 2 OPTION
DETAIL E

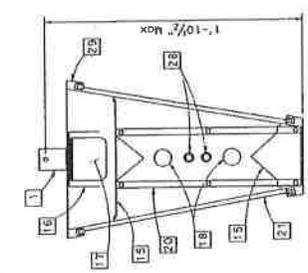


SIDE VIEW
TYPE 3 OPTION
DETAIL F

- LEGEND:
- 1 LOWER MOUNTING ASSEMBLY WITH GASKET.
 - 2 UPPER MOUNTING ASSEMBLY.
 - 3 ROD, 1/2" Ø, STAINLESS STEEL.
 - 4 LOCKING PIN, STEEL.
 - 5 FLAT WASHER, STAINLESS STEEL.
 - 6 BUSHING, BRONZE.
 - 7 BOLT, 1/2" Ø STAINLESS STEEL, WITH SELF-LOCKING NUT.
 - 8 BOLT, 1/2" Ø STAINLESS STEEL, WITH THREE NUTS, AND COTTER KEY. LENGTH AS REQUIRED FOR PROPER MOUNTING OF SIGN.
 - 9 BRACKET, 1/2" x 1 1/2" MINIMUM LENGTH VARIABLE.
 - 10 BRACKET, 2-PIECE ADJUSTABLE, 1/2" x 1 1/2" MINIMUM, TWO 1/2" Ø HEXAGON HEAD BOLTS WITH NUTS AND LOCKWASHERS.
 - 11 3/4" x 0.020" MINIMUM ROUNDED EDGE STAINLESS STEEL WITH 2" LONG BEND UNDER BUCKLE IF ATTACHING TO A MULTISIDED SECTION BEND UNDER SECTION SHALL BE LONG ENOUGH TO CONTACT AT LEAST 3 CORNERS.
 - 12 MOUNTING BOLT, 1/2" Ø MINIMUM, WITH NUT AND LOCKWASHER, OR SELF-LOCKING NUT AND COTTER KEY.
 - 13 CONTINUOUS HINGE.
 - 14 TRUMB SCREW, 3/8" Ø MINIMUM TWO PER SIDE ON 4'-0" CENTERS.
 - 15 REFLECTOR, 0.040" MINIMUM THICKNESS.
 - 16 ALUMINUM STIFFENER.
 - 17 FLUORESCENT BALLAST (2 REQUIRED).
 - 18 LAMP, F72T12CW FOR 6'-0" SIGN F82T12CW FOR 8'-0" SIGN
 - 19 LAMP HOLDER.
 - 20 LAMP HOLDER TURRET.
 - 21 SIGN PANEL, 1'-3" MINIMUM HEIGHT. MESSAGE IS SHOWN ELSEWHERE.
 - 22 CORD, 16/3 TYPE SJT. CONTINUOUS FROM SIGN TERMINAL BLOCK TO SIGNAL HEAD MOUNTING TERMINAL COMPARTMENT. USE 1/2" MINIMUM LENGTH OF CORD BETWEEN SIGN AND SIGNAL MAST ARM.
 - 23 CORD CONNECTOR, 90° ANGLE CONNECTOR AT SIGNAL HEAD AND STRAIGHT CONNECTOR AT THE SIGNAL MAST ARM. DRILL AND TAP BOTTOM OF THE SIGNAL MAST ARM.
 - 24 ADJUST FIXTURE LEVEL NO LOWER THAN CENTER OF SIGNAL MAST ARM CONNECTION.
 - 25 APPROXIMATE CLEARANCE, 1".
 - 26 1/2" FILLET WELD, 1 1/4" LONG.
 - 27 SIGN FRAME.
 - 28 FUSE HOLDER AND FUSE.
 - 29 CLOSE CELL NEOPRENE GASKET (CONTINUOUS).
 - 30 STAINLESS STEEL STRAP BUCKLE.



SECTION A-A



SECTION B-B

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(INTERNALLY ILLUMINATED
STREET NAME SIGN)**

NO SCALE

ES-7P

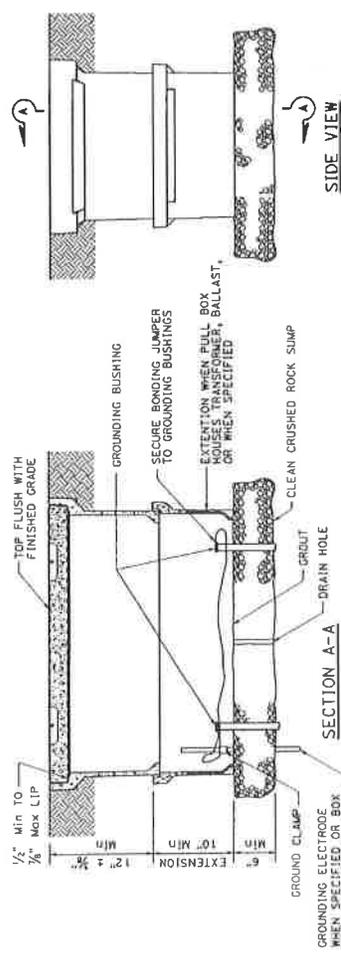
Return to Table of Contents

ROUTE	PROJECT NO.	DATE
COUNTY	TITLE SHEET	NO. OF SHEETS
RECEIVED BY: _____ PROJECT NO.: _____ DATE: July 19, 2013 APPROVAL DATE: _____ APPROVED BY: _____ LICENSE NO.: _____ EXPIRES: _____ REGISTERED ELECTRICAL ENGINEER		

TO ACCOMPANY PLANS DATED _____

NOTES:

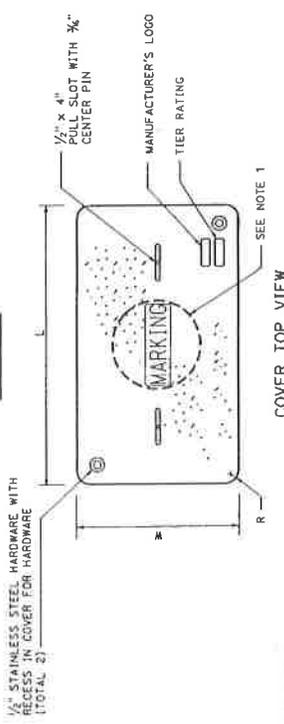
- Pull box covers shall be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" sprinkler control circuits, 50 V or less; "CALTRANS" on all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" telephone services;
 - No. 3/2 pull box.
 - "SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - No. 5, 6, 9 or 9A pull box.
 - "TRAFFIC SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - "LIGHTING-HIGH VOLTAGE" - Lighting or sign lighting circuits where voltage is above 600 V.
 - "IRRIGATION" - Circuits to irrigation controller 120 V.
 - "RAMP METER" - Ramp meter circuits.
 - "COUNT STATION" - Count or speed monitor circuits.
 - "COMMUNICATIONS" - Communication circuits.
 - "TOS COMMUNICATIONS" - TOS communication line.
 - "TOS POWER" - TOS power.
 - "TDC POWER" - Telephone demarcation cabinet power.
 - "CCTV" - Closed circuit television circuits.
 - "TMS" - Traffic monitoring station circuits.
 - "CMS" - Changeable message sign circuits.
 - "HAR" - Highway advisory radio circuits.
 - "BOOSTER PUMP" - Booster pump circuit.
- The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
- Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8". Top outside radius of covers and pull boxes shall have a 1/8" radius.
- Pull box extension may be another pull box as long as the bottom edge of the pull box can fit into the cover opening.
- All dimensions for the cover for non-traffic pull box are nominal values.



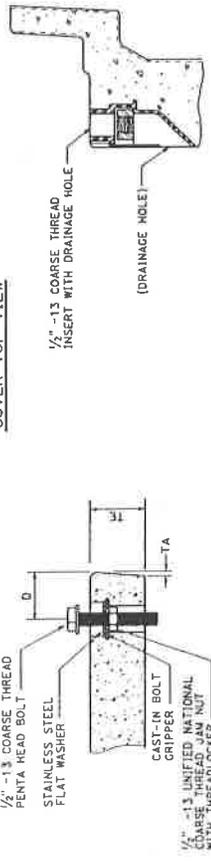
SIDE VIEW

INSTALLATION DETAILS

DETAIL A



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT OR SIMILAR

TYPICAL THREADED INSERT OR SIMILAR

PULL BOX	PULL BOX				COVER					
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	MAXIMUM WEIGHT	EXTENSION	L	W	R	TE	D	MAXIMUM WEIGHT
No. 3/2	12"	N/A	40 lb	1'-3 3/8"	10 1/2"	1 3/4"	1 3/4"	2"	1 1/4"	30 lb
No. 5	12"	10"	55 lb	1'-11 1/2"	1'-1 3/4"	1 3/4"	1 3/4"	2"	1 1/4"	60 lb
No. 6	12"	10"	70 lb	2'-6 1/2"	1'-8 1/2"	1 3/4"	1 3/4"	2"	1 1/4"	85 lb

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(NON-TRAFFIC PULL BOX)**

NO SCALE

RSP ES-8A DATED JULY 19, 2010, SUPERSEDES RSP ES-8A DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-8A

APPENDIX VI

VIDEO DETECTION

GENERAL PROCUREMENT SPECIFICATION

1. Video Detection - General

This specification sets forth the minimum requirements for a system that monitors vehicles on a roadway via processing of video images. The detection of vehicles passing through the field-of-view of an image sensor shall be made available to a large variety of end user applications as simple contact closure outputs that reflect the current real-time detector or alarm states (on/off) or as summary traffic statistics that are reported locally or remotely. The contact closure outputs shall be provided to a traffic signal controller and comply with the National Electrical Manufacturers Association (NEMA) type C or D detector rack or 170 input file rack standards.

The system architecture shall fully support Ethernet networking of system components through a variety of industry standard and commercially available infrastructures that are used in the traffic industry. The data communications shall support direct connect, [modem,] and multi-drop interconnects. Simple, standard Ethernet wiring shall be supported to minimize overall system cost and improve reliability, utilizing existing infrastructure and ease of system installation and maintenance. Both streaming video and data communications shall optionally be interconnected over long distances through fiber optic, microwave, or other commonly used digital communications transport configurations.

On the software application side of the network, the system shall be integrated through a client-server relationship. A communications server application shall provide the data communications interface between as few as one to as many as hundreds of Machine Vision Processor (MVP) sensors and a number of client applications. The client applications shall either be hosted on the same PC as the communications server or may be distributed over a local area network of PC's using the industry standard TCP/IP network protocol. Multiple client applications shall execute simultaneously on the same host or multiple hosts, depending on the network configuration. Additionally, a web-browser interface shall allow use of industry standard Internet web browsers to connect to MVP sensors for setup, maintenance, and playing digital streaming video.

1.1 System Hardware

The machine vision system hardware shall consist of three components: 1) a color, 559 step adjustment, 10x zoom, MVP sensor 2) a modular cabinet interface unit 3) a communication interface panel. Additionally, an optional Personal Computer (PC) shall host the server and client applications that are used to program and monitor the system components. The real-time performance shall be observed by viewing the video output from the sensor with overlaid flashing detectors to indicate the current detection state (on/off). The MVP sensor shall optionally store cumulative traffic statistics internally in non-volatile memory for later retrieval and analysis.

The MVP shall communicate to the modular cabinet interface unit via the communications interface panel and the software applications using the industry standard TCP/IP network protocol. The MVP shall have a built-in, Ethernet-ready, Internet Protocol (IP) address and shall be addressable with no plug in devices or converters required. The MVP shall provide standard MPEG-4 streaming digital video. Achievable frame rates shall vary from 5 to 30 frames/sec as a function of video quality and available bandwidth.

The modular cabinet interface unit shall communicate directly with up to eight (8) MVP sensors and shall comply with the form factor and electrical characteristics to plug directly into a NEMA type C or D detector rack providing up to thirty-two (32) inputs and sixty-four (64) outputs or a 170 input file rack providing up to sixteen (16) contact closure inputs and twenty-four (24) contact closure outputs to a traffic signal controller.

The communication interface panel shall provide four (4) sets of three (3) electrical terminations for three-wire power cables for up to eight (8) MVP sensors that may be mounted on a pole or mast arm with a traffic signal cabinet or junction box. The communication interface panel shall provide high-energy transient protection to electrically protect the modular cabinet interface unit and connected MVP sensors. The communications interface panel shall provide single-point Ethernet connectivity via RJ45 connector for communication to and between the modular cabinet interface module and the MVP sensors.

1.2 System Software

The MVP sensor embedded software shall incorporate multiple applications that perform a variety of diagnostic, installation, fault tolerant operations, data communications, digital video streaming, and vehicle detection processing. The detection shall be reliable, consistent, and perform under all weather, lighting, and traffic congestion levels. An embedded web server shall permit standard internet browsers to connect and perform basic configuration, maintenance, and video streaming services.

There shall be a suite of client applications that reside on the host client / server PC. The applications shall execute under Microsoft Windows XP, Vista or Windows 7. Available client applications shall include:

- Master network browser: Learn a network of connected modular cabinet interface units and MVP sensors, display basic information, and launch applications software to perform operations within that system of sensors.
- Configuration setup: Create and modify detector configurations to be executed on the MVP sensor and the modular cabinet interface unit.
- Operation log: Retrieve, display, and save field hardware run-time operation logs of special events that have occurred.
- Software install: Reconfigure one or more MVP sensors with a newer release of embedded system software.
- Streaming video player: Play and record streaming video with flashing detector overlay.
- Data retrieval: Fetch once or poll for traffic data and alarms and store on PC storage media.
- Communications server: Provide fault-tolerant, real-time TCP/IP communications to / from all devices and client applications with full logging capability for systems integration. The communications server shall operate as a Windows® Service.

2. Functional Capabilities

2.1 MVP Sensor

The MVP sensor shall be an integrated imaging color CCD array with zoom lens optics, high-speed, dual-core image processing hardware bundled into a sealed enclosure. Total weight of the map sensor shall be less than 4 lbs. and not more than 1 square foot equivalent pressure are (EPA) total. The CCD array shall be directly controlled by the dual-core processor, thus providing high-quality video for detection that has virtually no noise to degrade detection performance. It shall be possible to zoom the lens as required for setup and operation. It shall provide JPEG video compression as well as standard MPEG-4 digital streaming video with flashing detector overlay. The MVP shall provide direct real-time iris and shutter speed control. The MVP image sensor shall be equipped with an integrated 559 step adjustment, 10x zoom lens that can be changed using either configuration computer software. The digital streaming video output and all data communications shall be transmitted over the three-wire power cable.

2.1.2 Power

The MVP sensor shall operate on 110/220 VAC, 50/60Hz at a maximum of 15 watts. The camera and processor electronics shall consume a maximum of 5 watts and the remaining 10 watts shall support an enclosure heater.

2.1.3 Detection Zone Programming

Placement of detection zones shall be by means of a PC with a Windows XP, Vista or Windows 7 operating system, a keyboard, and a mouse. The PC monitor shall be able to show the detection zones superimposed on images of traffic scenes.

The detection zones shall be created by using a mouse to draw detection zones on the PC monitor. Using the mouse and keyboard it shall be possible to place, size, and orient detection zones to provide optimal road coverage for vehicle detection. It shall be possible to download detector configurations from the PC to the MVP sensor and cabinet interface module, to retrieve the detector configuration that is currently running in the MVP sensor, and to back up detector configurations by saving them to the PC fixed disks or other removable storage media.

The supervisor computer's mouse and keyboard shall be used to edit previously defined detector configurations to permit adjustment of the detection zone size and placement, to add detectors for additional traffic applications, or to reprogram the MVP sensor for different traffic applications or changes in installation site geometry or traffic rerouting.

2.1.4 Optimal Detection

The video detection system shall optimally detect vehicle passage and presence when the MVP sensor is mounted 30 feet (10 m) or higher above the roadway, when the image sensor is adjacent to the desired coverage area, and when the distance to the farthest detection zone locations are not greater than ten (10)

times the mounting height of the MVP. The recommended deployment geometry for optimal detection also requires that there be an unobstructed view of each traveled lane where detection is required. Although optimal detection may be obtained when the MVP is mounted directly above the traveled lanes, the MVP shall not be required to be directly over the roadway. The MVP shall be able to view either approaching or receding traffic or both in the same field of view. The preferred MVP sensor orientation shall be to view approaching traffic since there are more high contrast features on vehicles as viewed from the front rather than the rear. The MVP sensor placed at a mounting height that minimizes vehicle image occlusion shall be able to simultaneously monitor a maximum of six (6) traffic lanes when mounted at the road-side or up to eight (8) traffic lanes when mounted in the center with four lanes on each side.

2.1.5 Count Detection Performance

Using an installed camera that meets the optimal viewing specifications described above for count station traffic applications, the system will be able to accurately count vehicles with at least 98% accuracy under normal operating conditions (day and night), and at least 93% accuracy under artifact conditions.

Artifact conditions are combinations of weather and lighting conditions that result from shadows, fog, rain, snow, etc. The volume count will be accumulated for the entire roadway (all traveled lanes), and accumulated over time intervals that contain a minimum of one hundred (100) vehicles to ensure statistical significance.

2.1.6 Demand Presence Detection Performance

Using an installed camera that meets the optimal viewing specifications described above for intersection control traffic applications, the system will be able to accurately provide demand presence detection.

The demand presence accuracy will be based on the ability to enable a protected turning movement on an intersection stop line, when a demand exists. The probability of not detecting a vehicle for demand presence will be less than 1% error under all operating conditions. In the presence of artifact conditions, the MVP will minimize extraneous (false) protected movement calls to less than 7%.

To ensure statistical significance, the demand presence accuracy and error will be calculated over time intervals that contain a minimum of one hundred, protected turning movements.

These performance specifications will be achieved with a minimum of 2 presence detectors coupled with a single detector function (Type-9) to provide adequate road coverage to sample the random arrival pattern of vehicles at the stop line.

The calculation of the demand presence error will not include turning movements where vehicles do not pass through the presence detectors, or where they stop short or stop beyond the combined detection zones.

2.1.7 Speed Detection Performance

The MVP will accurately measure average (arithmetic mean) speed of multiple vehicles with more than 97% accuracy under all operating conditions for approaching and receding traffic.

The average speed measurement will include a minimum of 100 vehicles in the sample to ensure statistical significance. Optimal speed detection performance requires the camera location to follow the specifications described above for count station traffic applications with the exception that the camera must be higher than 13 m (40) feet.

The MVP will accurately measure individual vehicle speeds with more than 94% accuracy under all operating conditions for vehicles approaching the camera (viewing the front end of vehicles), and more than 90% accuracy for vehicles receding from the camera (viewing the rear end of vehicles).

These specifications will apply to vehicles that travel through both the count and speed detector pair and will not include partial detection situations created by lane-changing maneuvers.

To ensure statistical significance, the average speed accuracy and error will be calculated over time intervals that contain a minimum of one hundred vehicles.

Using a MVP sensor installed within the optimal viewing specifications described above or count station traffic applications.

2.2 Modular Cabinet Interface Unit

The modular cabinet interface unit shall provide the hardware and software means for up to eight (8) MVP sensors to communicate real-time detection states and alarms to a local traffic signal controller. It shall comply with the electrical and protocol specifications of the detector rack standards. The card shall have 1500 Vrms isolation between rack logic ground and street wiring.

The modular cabinet interface unit shall be a simple interface card that plugs directly into a 170 input file rack or a NEMA type C or D detector rack. The modular cabinet interface unit shall occupy only 2 slots of the detector rack. The modular cabinet interface unit shall accept up to sixteen (16) phase inputs and shall provide up to twenty-four (24) detector outputs.

2.3 Communications Interface Panel

The communications interface panel shall support up to six MVPs. The communications interface panel shall accept 110/220 VAC, 50/60 Hz power and provide predefined wire termination blocks for MVP power connections, a Broadband-over-Power-Line (BPL) transceiver to support up to 10Mb/s inter-device communications, electrical surge protectors to isolate the modular cabinet interface unit and MVP sensors, and an interface connector to cable directly to the modular cabinet interface unit.

The interface panel shall provide power for up to eight (8) MVP sensors, taking local line voltage 110/220 VAC, 50/60 Hz and producing 110/220 VAC, 50/60 Hz, at about 20 watts to each MVP sensor. Two 1.25-amp SLO-BLO fuses or two 625 MA 510 – BLO fuses at 220 VAC. shall protect the communications interface panel.

3. System Installation & Training

The supplier of the video detection system may supervise the installation and testing of the video detection system and computer equipment as required by the contracting agency.

Training is available to personnel of the contracting agency in the operation, set up, and maintenance of the video detection system. The MVP sensor and its support hardware / software is a sophisticated leading-edge technology system. Proper instruction from certified instructors is recommended to ensure that the end user has complete competency in system operation. The User's Guide is not an adequate substitute for practical classroom training and formal certification by an approved agency.

4. Warranty, Service, & Support

For a minimum of three (3) years, the supplier shall warrant the video detection system. An option for additional year(s) warranty for up to 6 years shall be available. Ongoing software support by the supplier shall include software updates of the MVP sensor, modular cabinet interface unit, and supervisor computer applications. These updates shall be provided free of charge during the warranty period. The supplier shall maintain a program for technical support and software updates following expiration of the warranty period. This program shall be available to the contracting agency in the form of a separate agreement for continuing support.

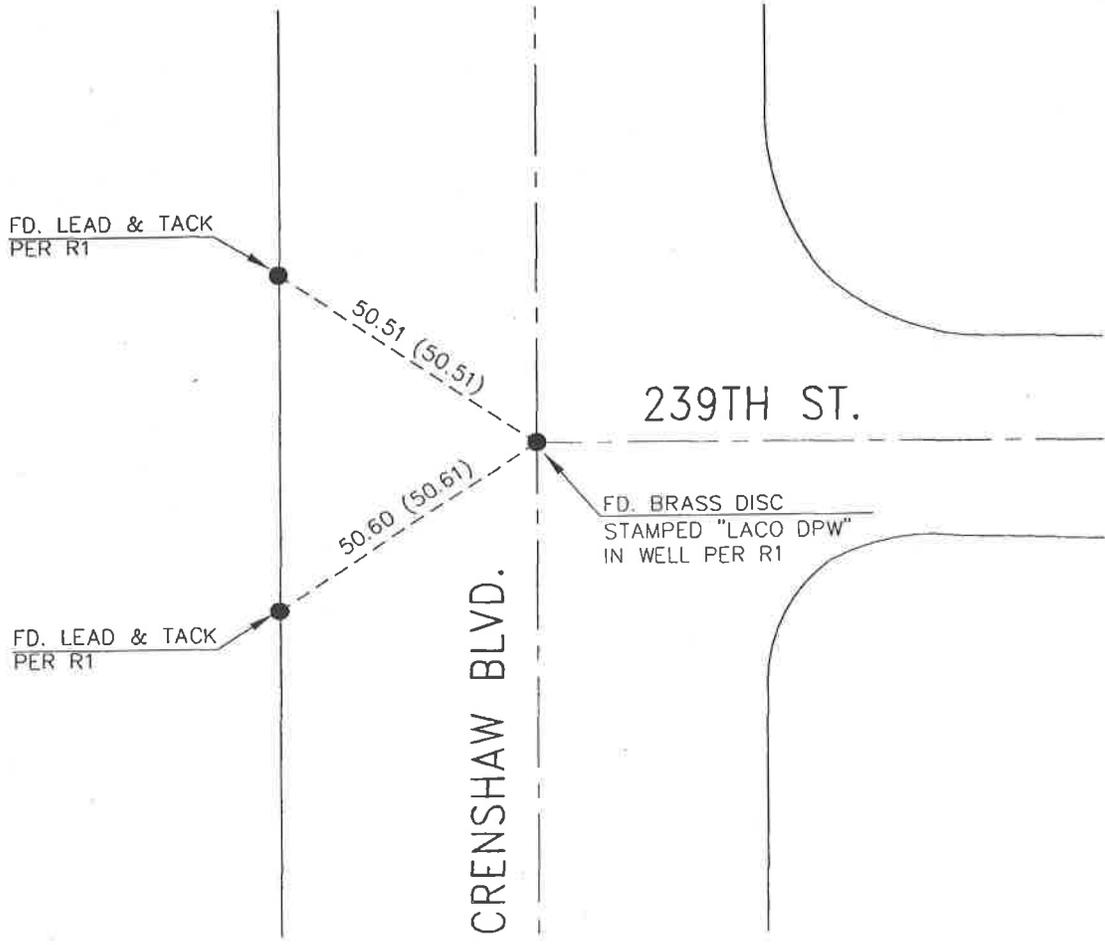
APPENDIX VII

PROJECT CONSTRUCTION SIGNS

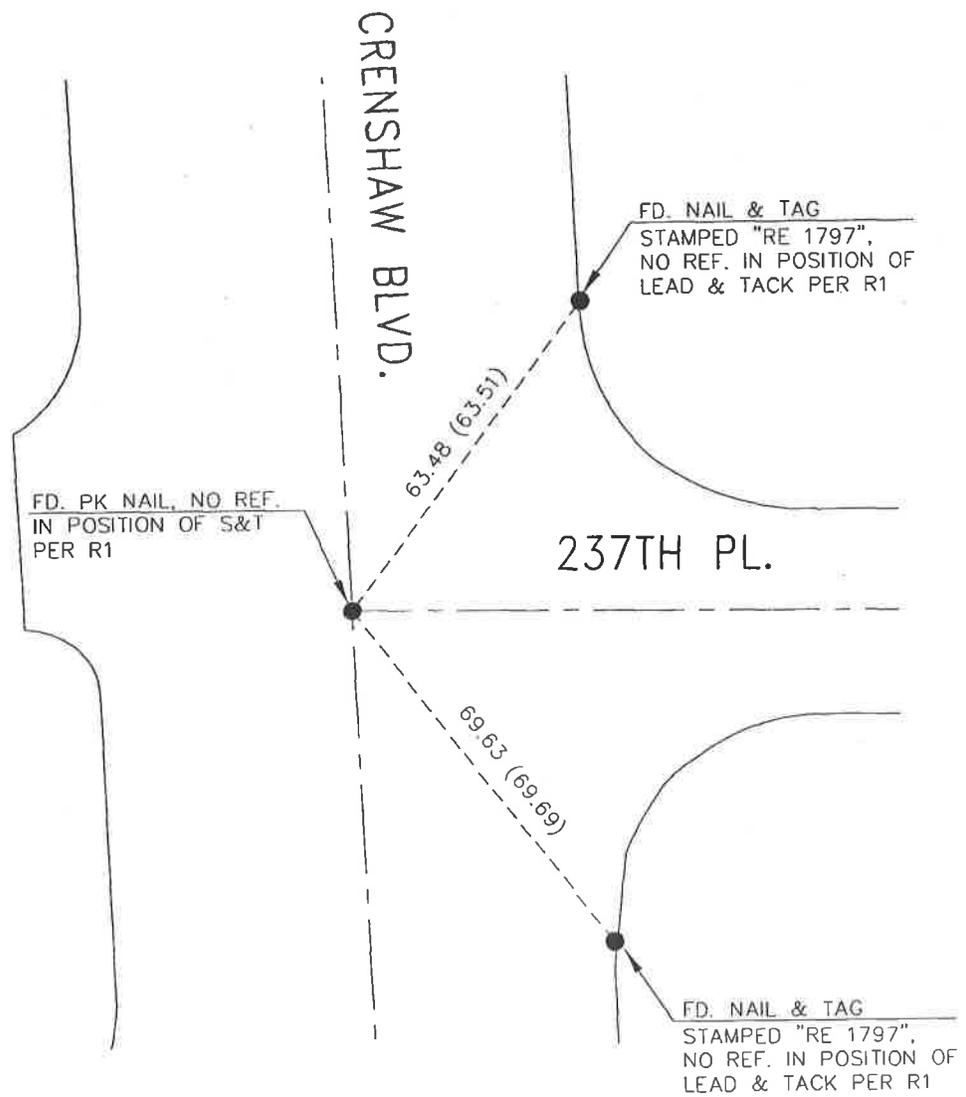
APPENDIX VIII

SURVEY CORNER RECORDS

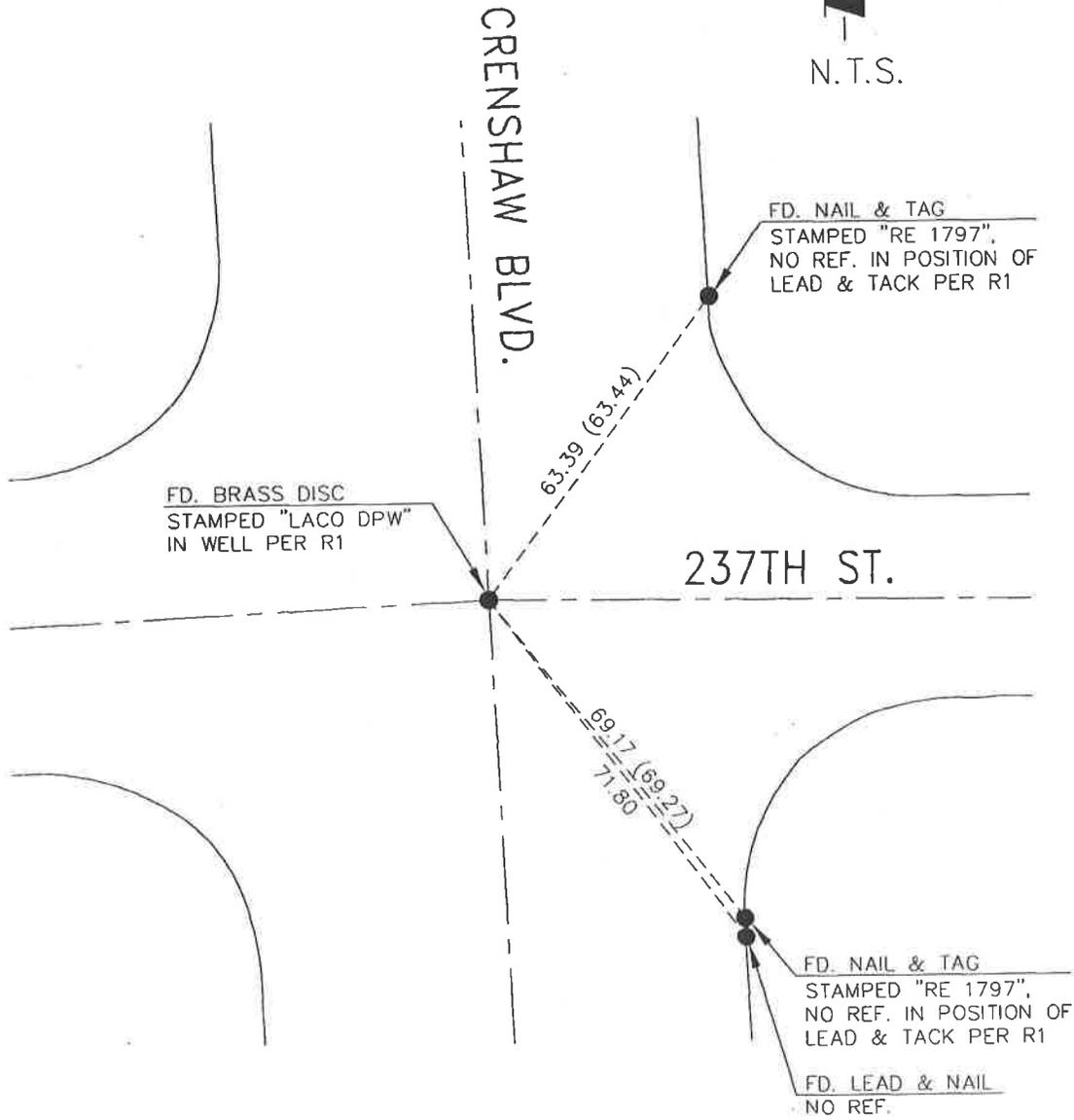
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- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER CITY OF TORRANCE FIELD BOOK 40-24-7



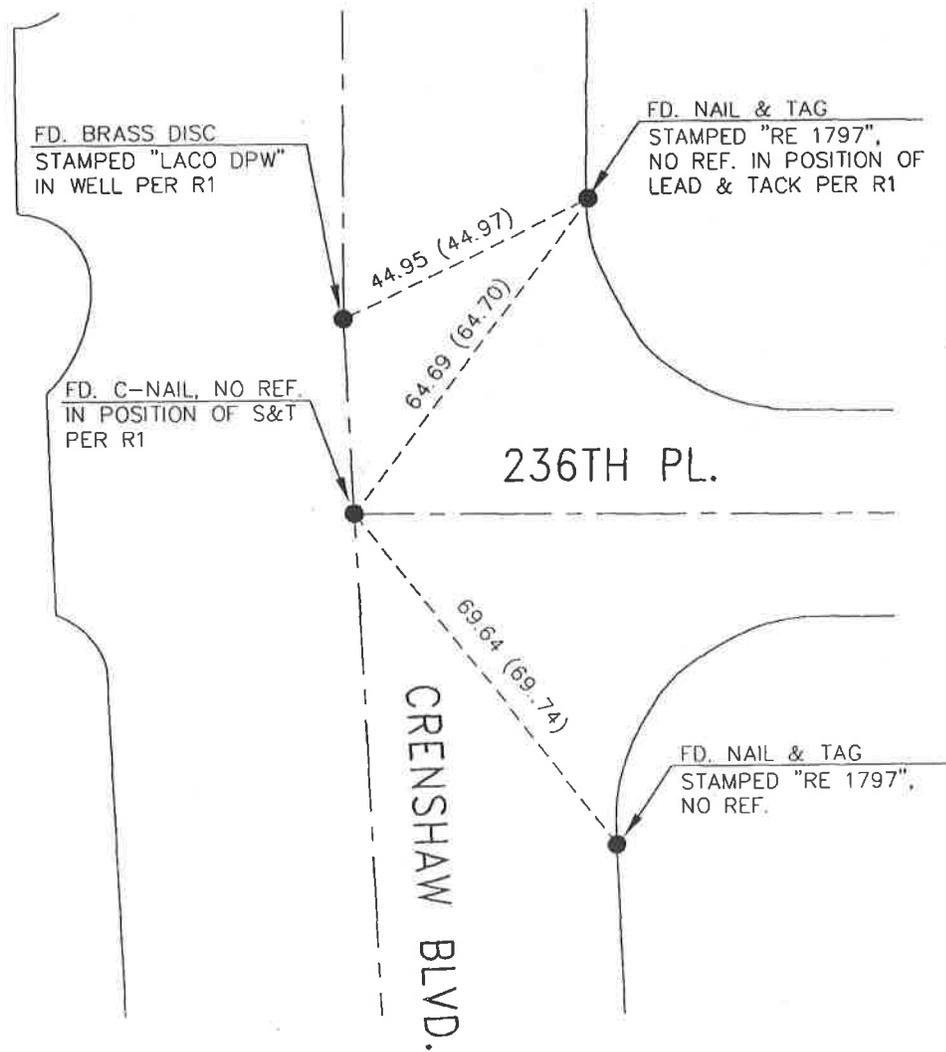
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- R1 REFERENCE PER CITY OF TORRANCE FIELD BOOK 40-24-2



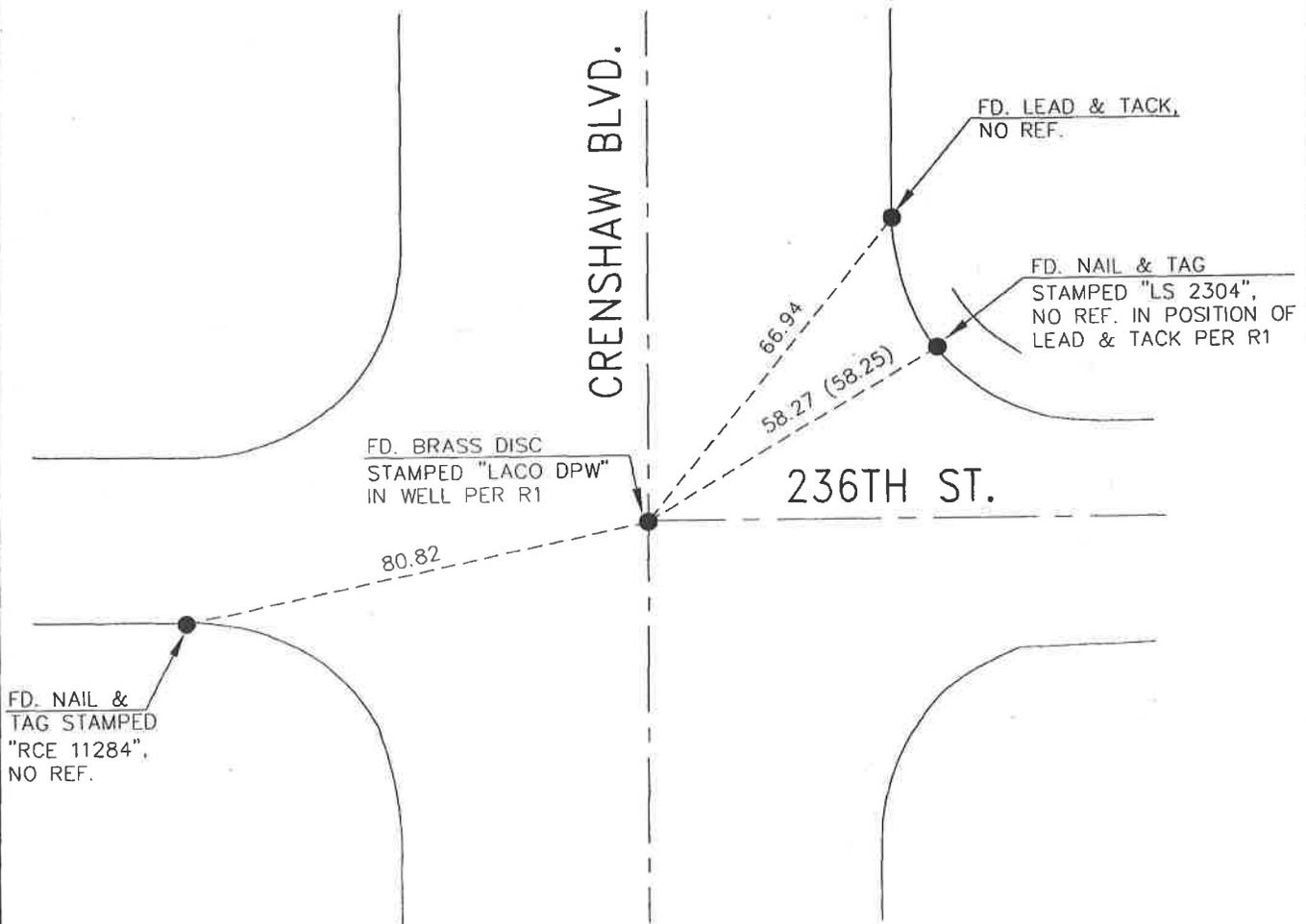
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- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER CITY OF TORRANCE FIELD BOOK 40-24-7



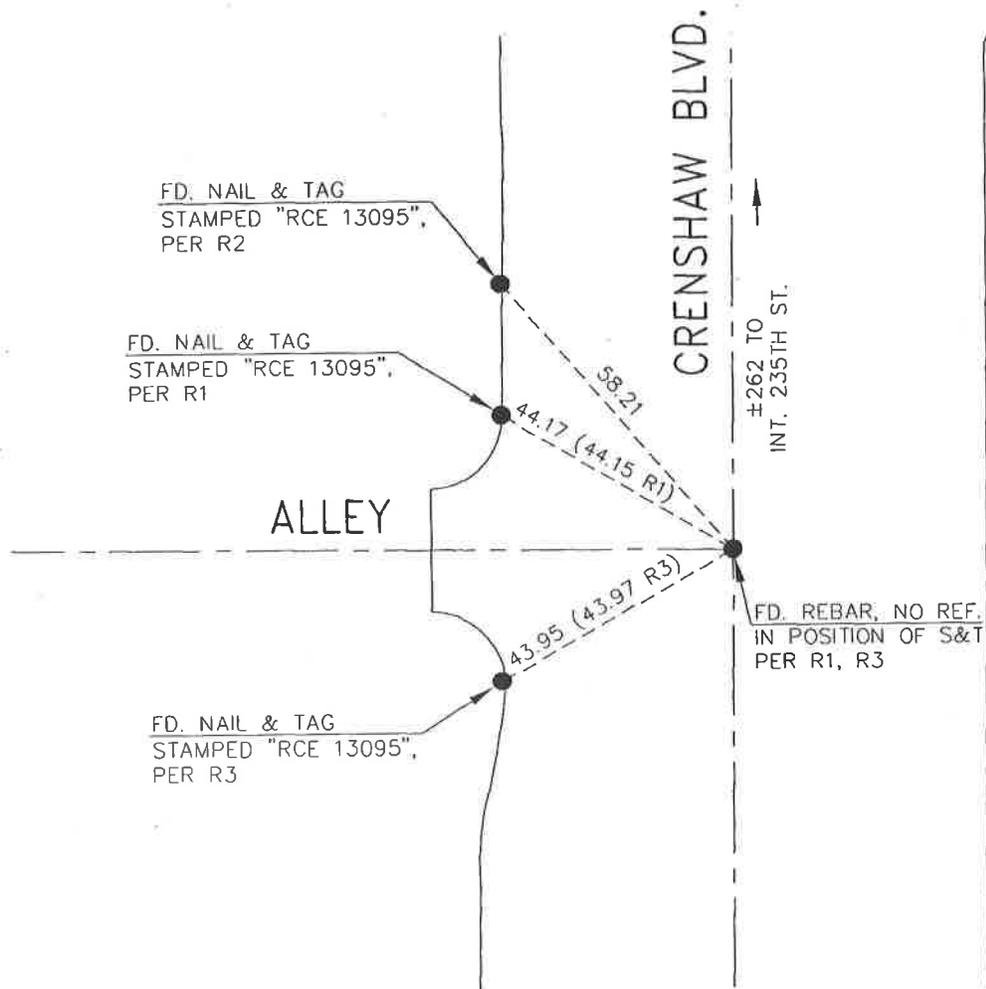
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- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER CITY OF TORRANCE FIELD BOOK 40-24-1



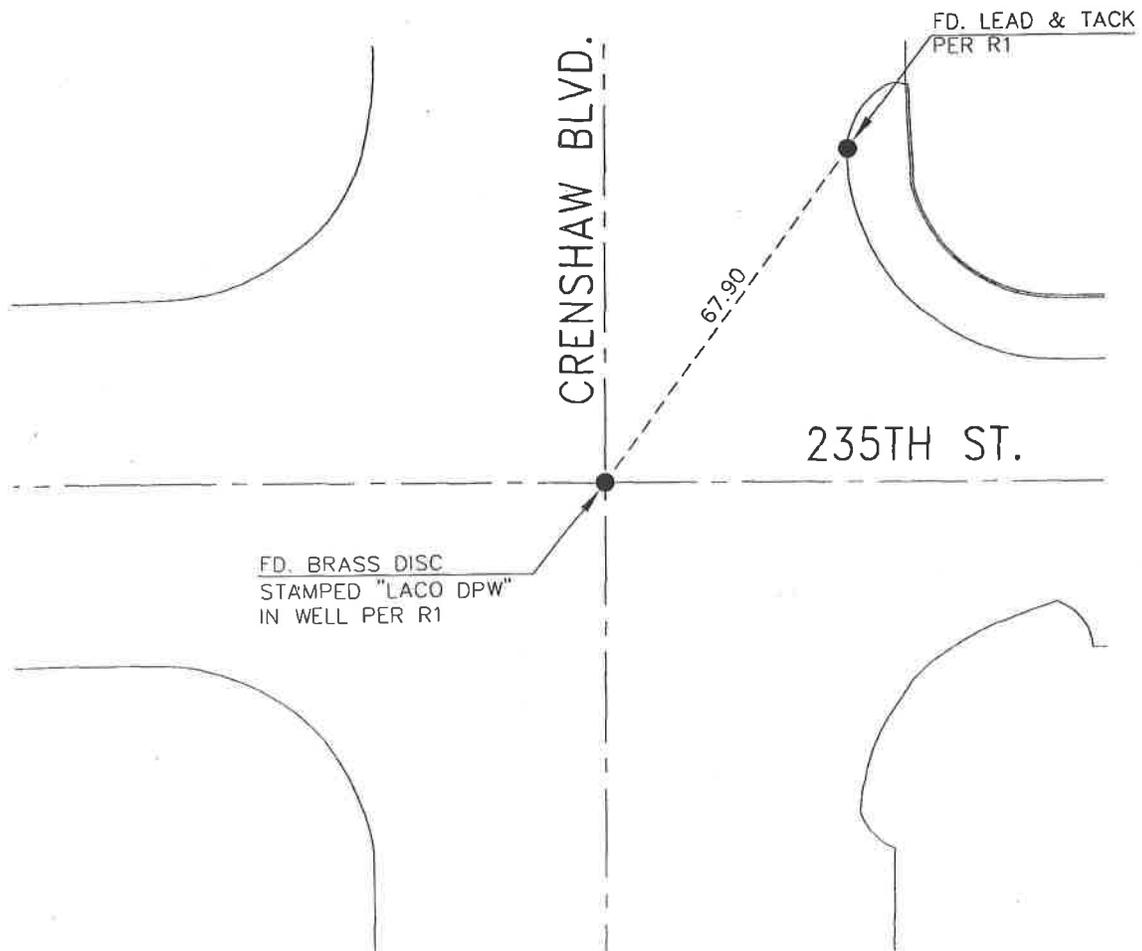
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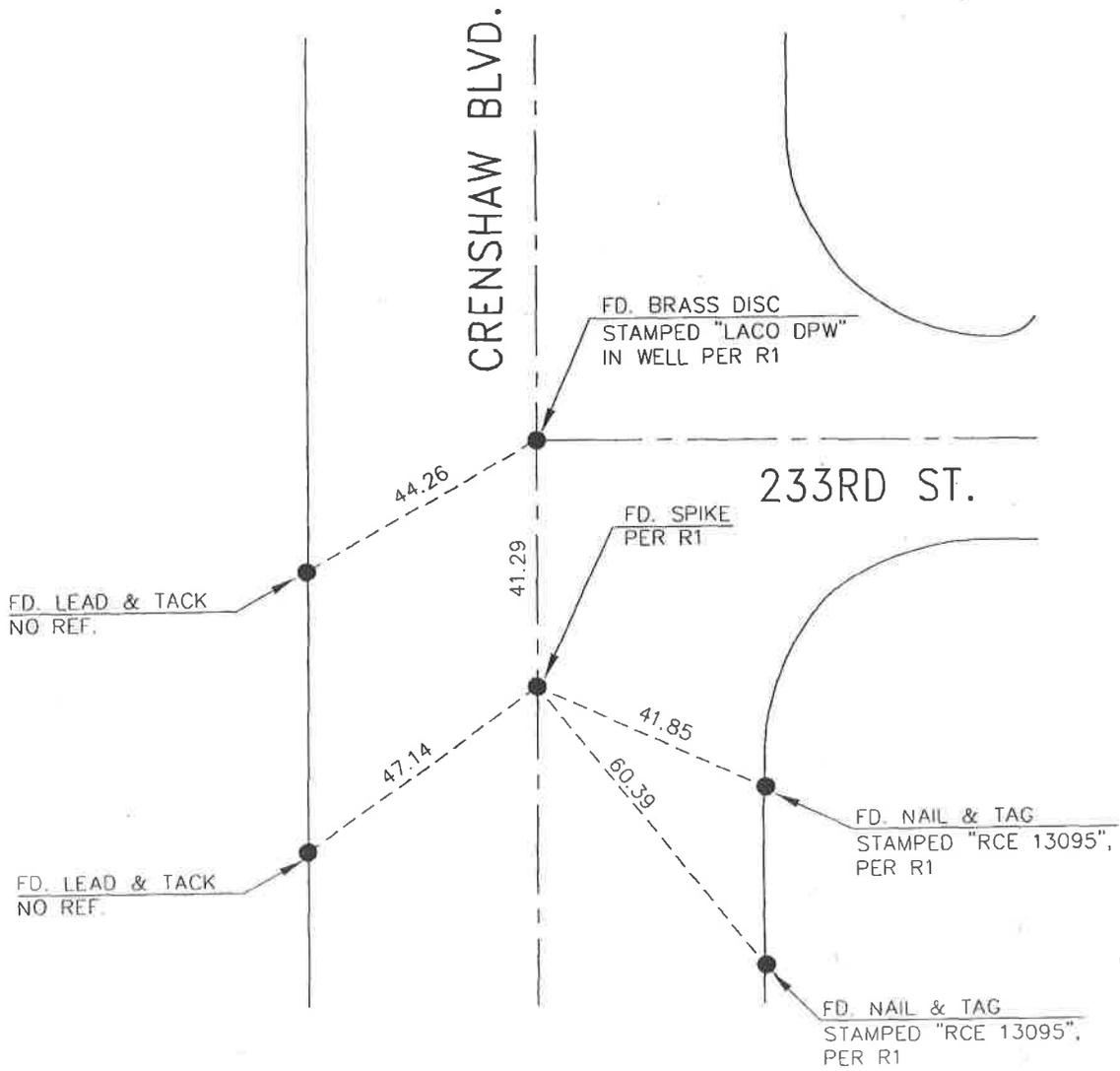
- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS
- R1 REFERENCE PER LOS ANGELES COUNTY ENGINEERING FIELD BOOK 4042 PG. 62
- R2 REFERENCE PER TRACT NO. 27763 MAP BOOK 776 PG. 9
- R2 REFERENCE PER CITY OF TORRANCE CENTERLINE TIE BOOK T-47-73



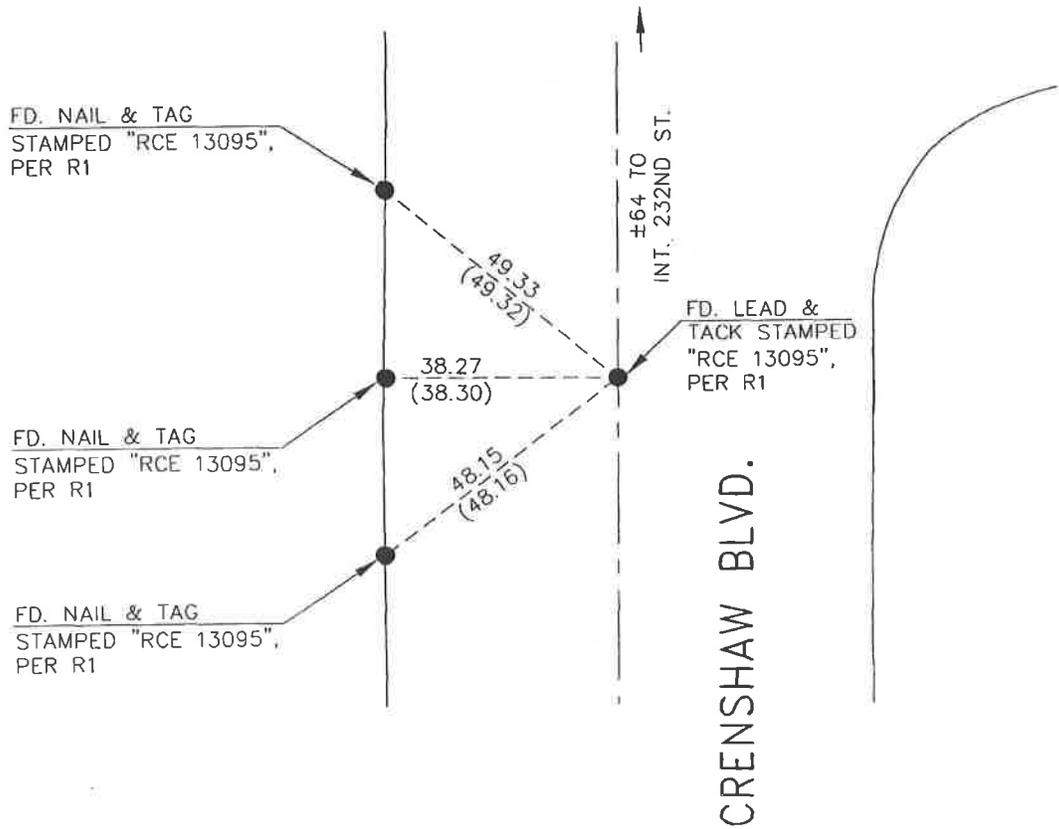
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- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY
RDFB 0418 PG. 28



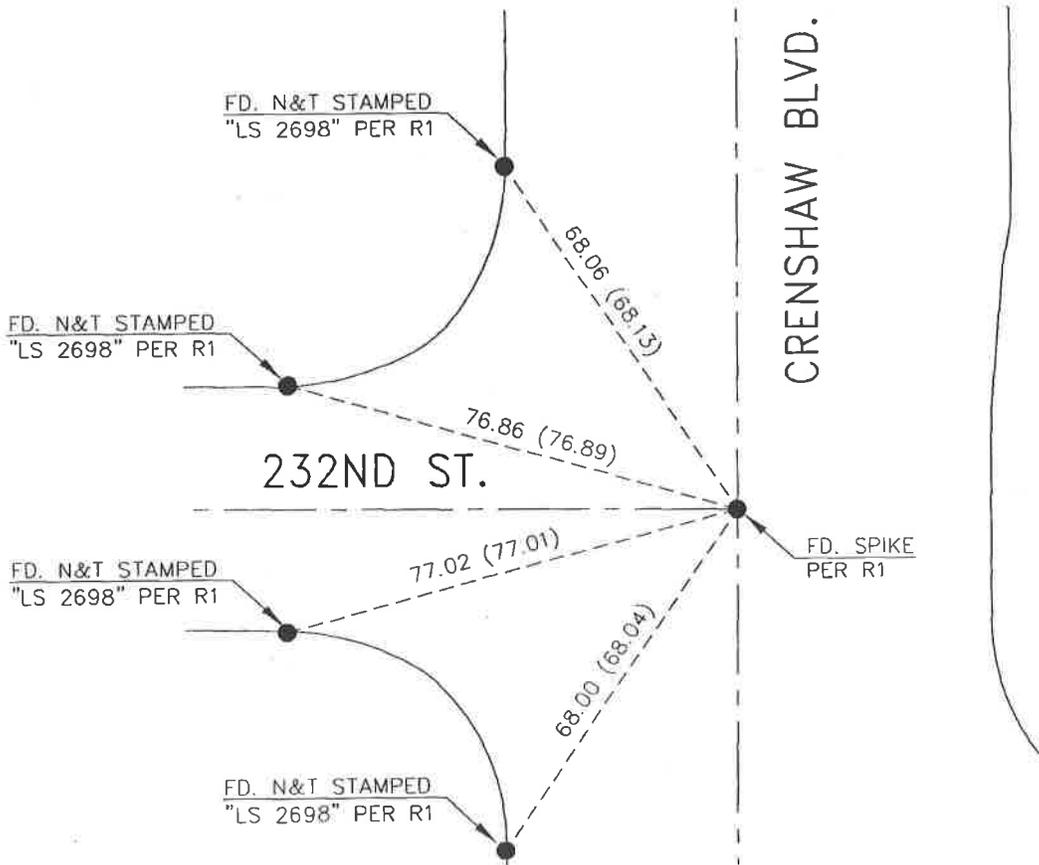
- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER TRACT NO. 23642 FILED IN COUNTY OF LOS ANGELES MAP BOOK 751 PG. 54



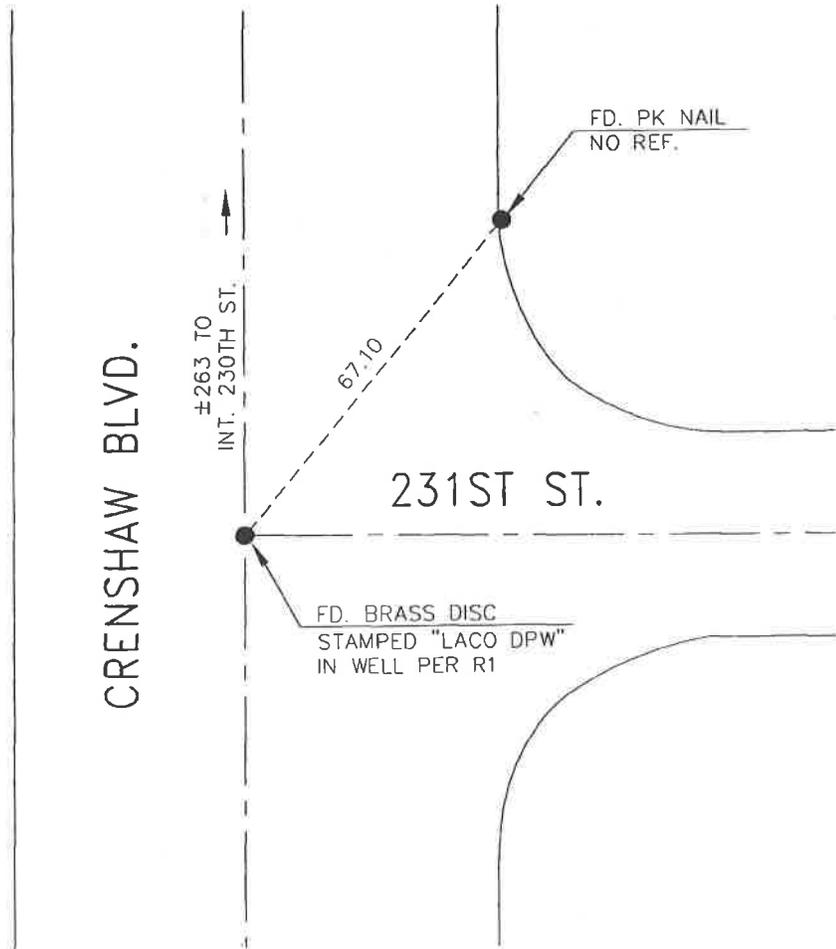
- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY
ENGINEER'S FIELD BOOK 4007 PG. 47



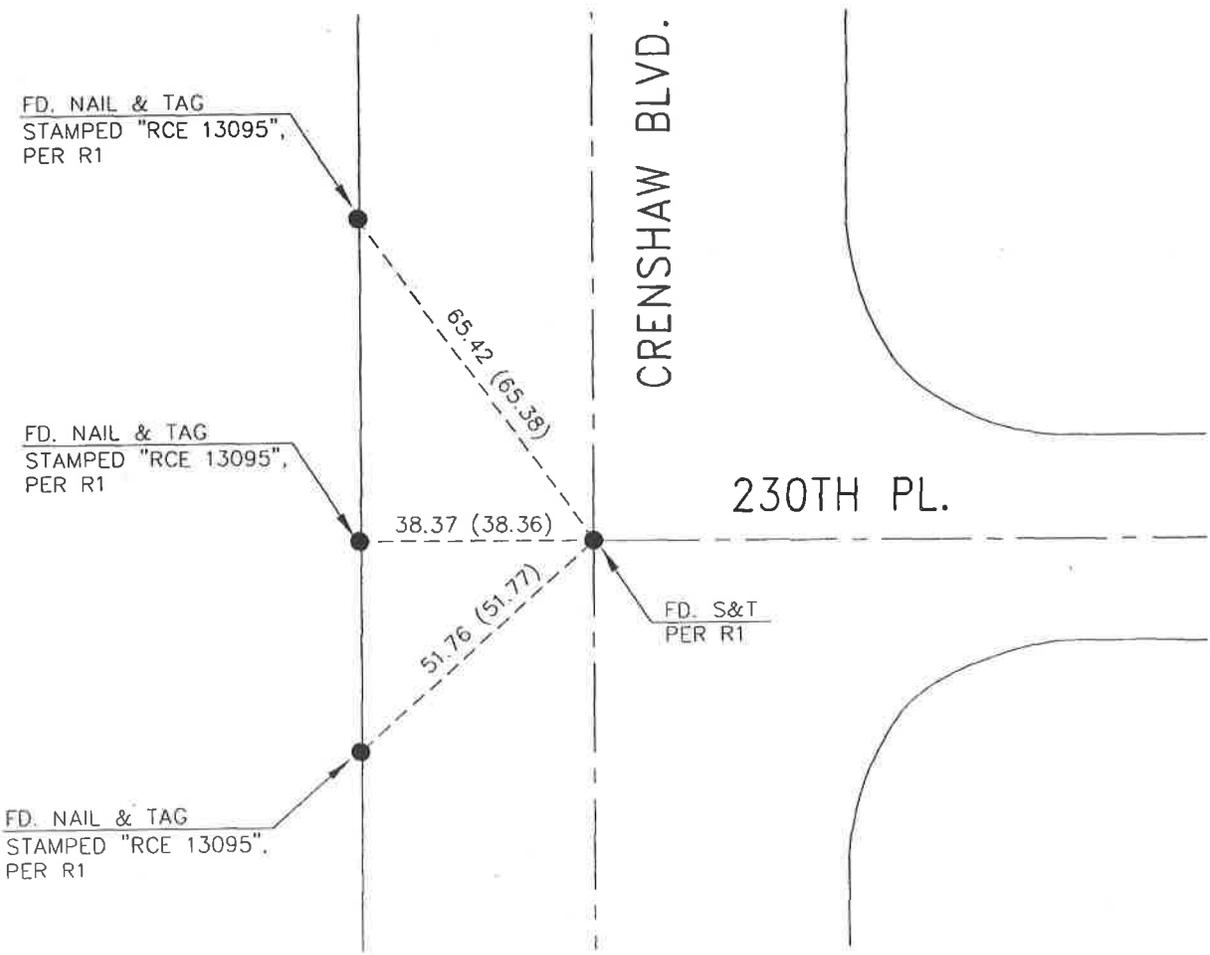
- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY ENGINEER'S FIELD BOOK 3052 PG. 82



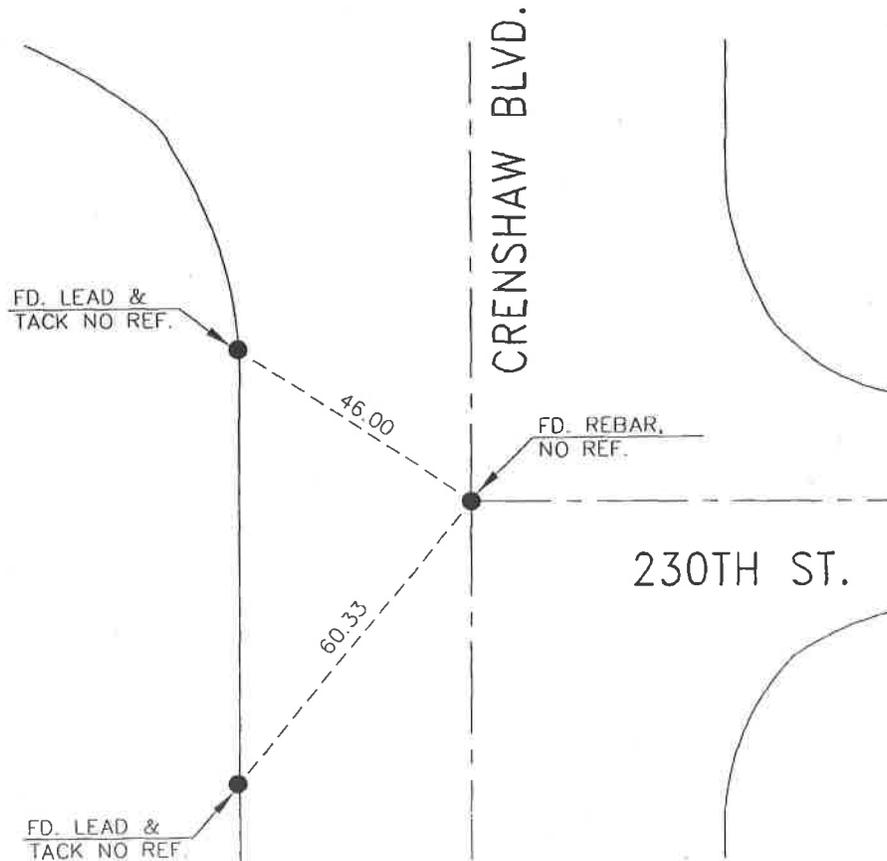
● FD. MONUMENTS AS NOTED
R1 REFERENCE PER LOS ANGELES COUNTY
RDFB 0418 PG. 28



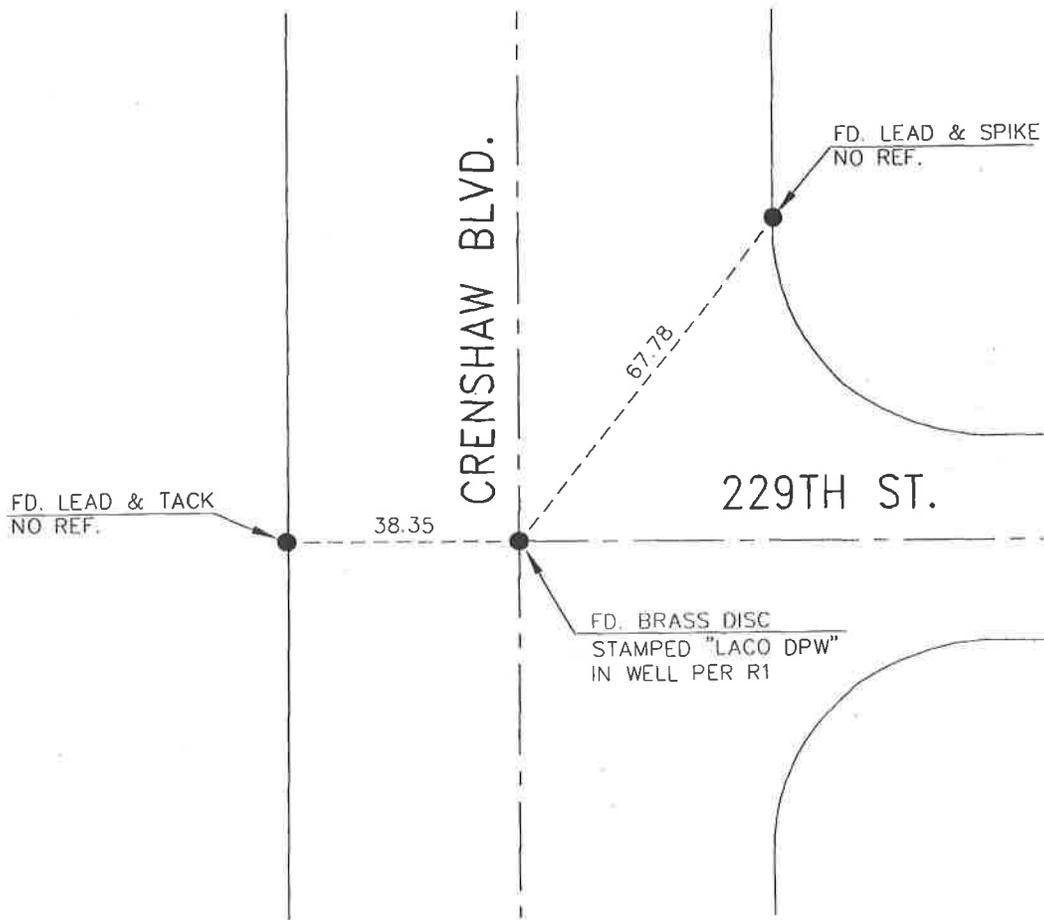
- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY ENGINEER'S FIELD BOOK 4035 PG. 42



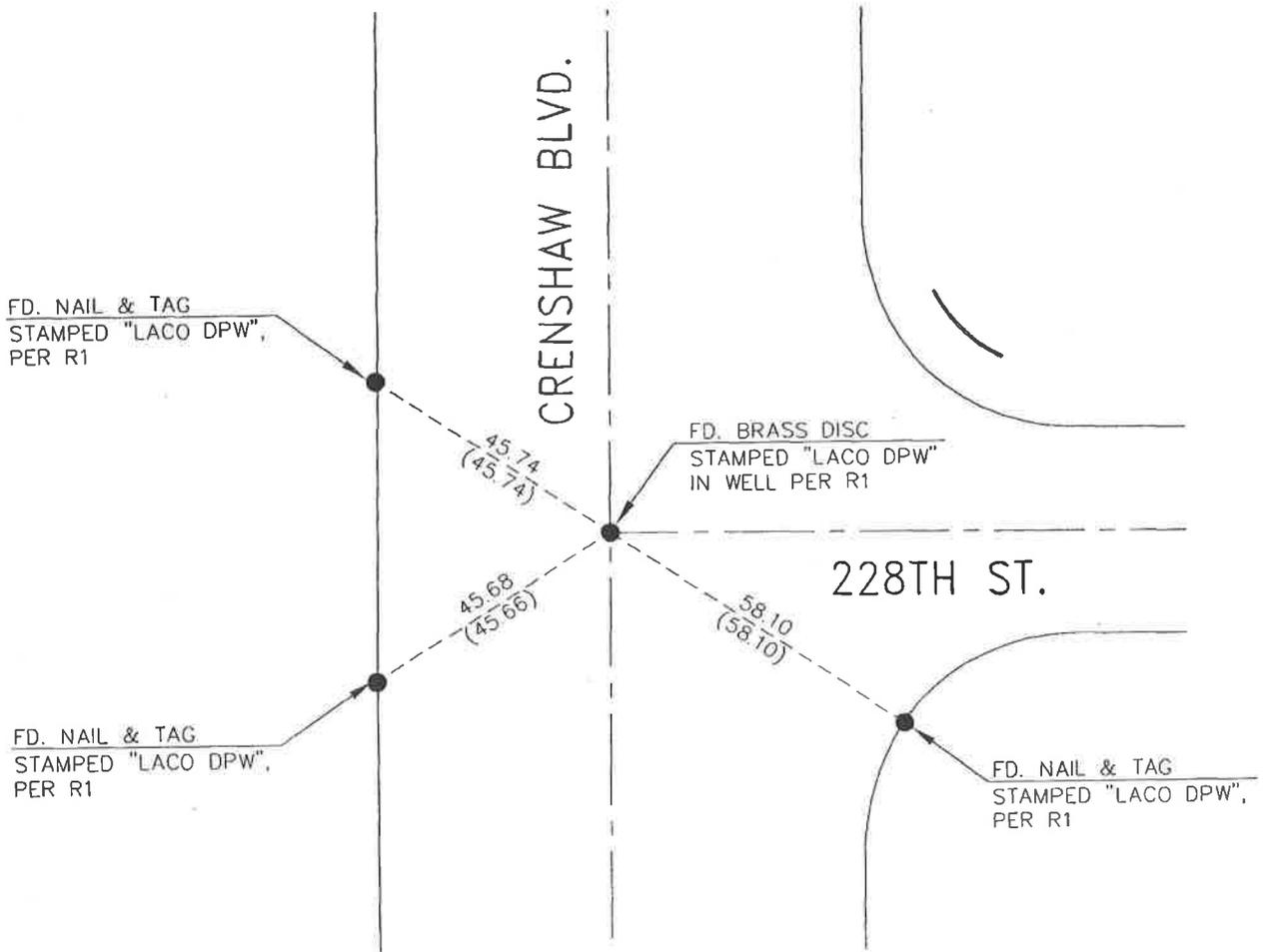
● FD. MONUMENTS AS NOTED
REFERENCE PER LOS ANGELES COUNTY
RDFB 0418 PG. 31



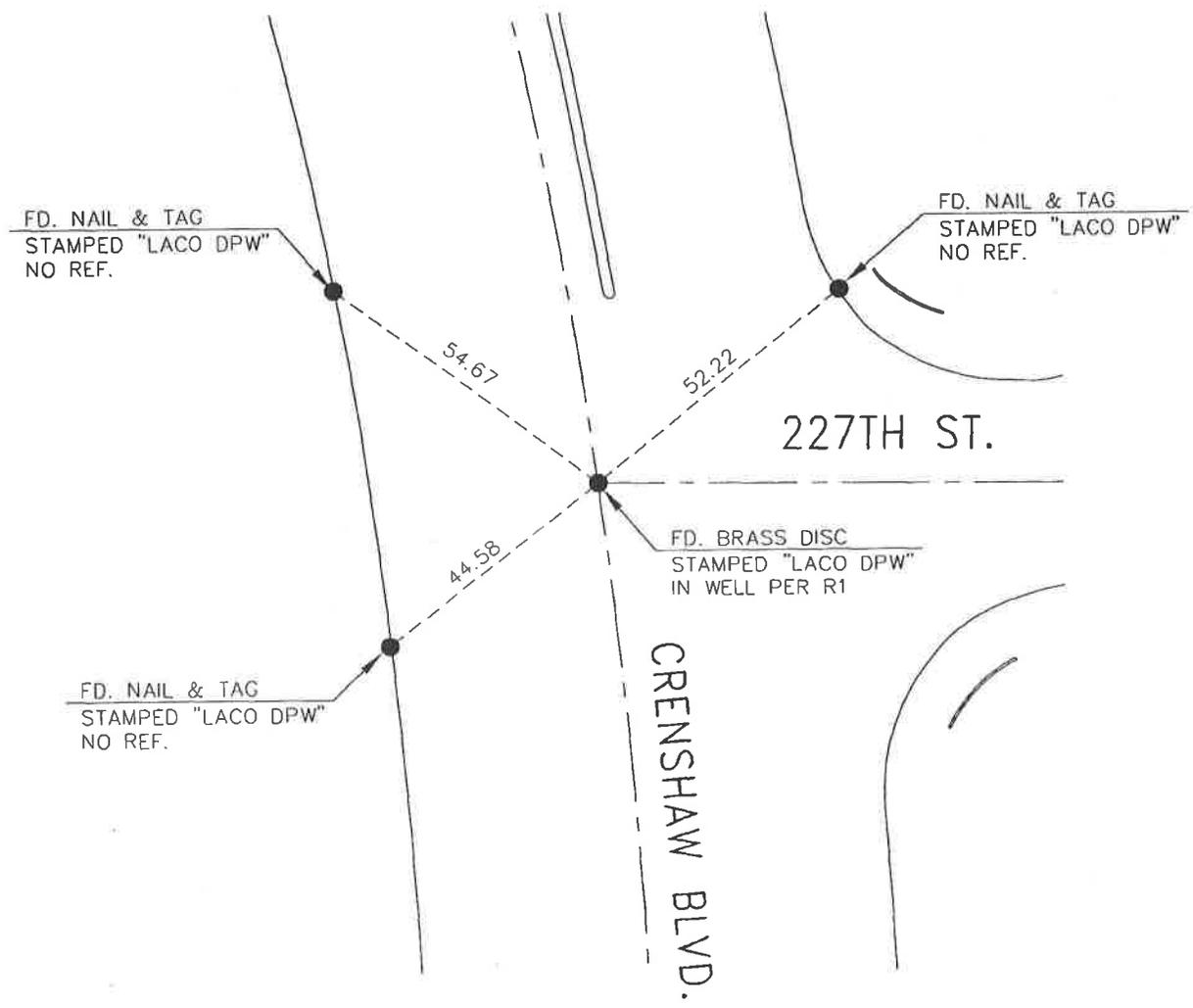
- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY
RDFB 0418 PG. 32



- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY
PWFB 0418 PG. 179B



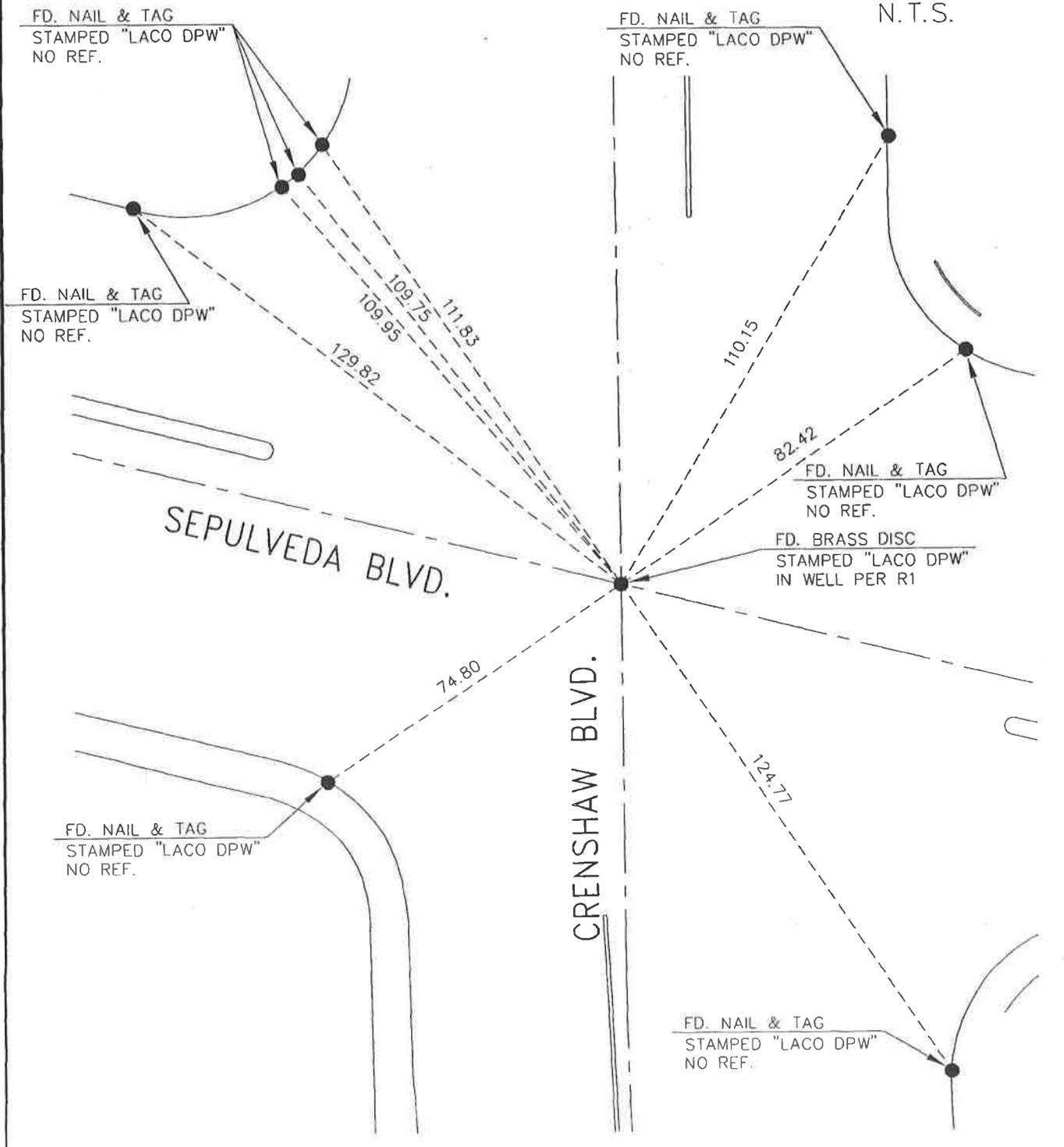
- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY
RDFB 0318 PGS. 92C, 93C.



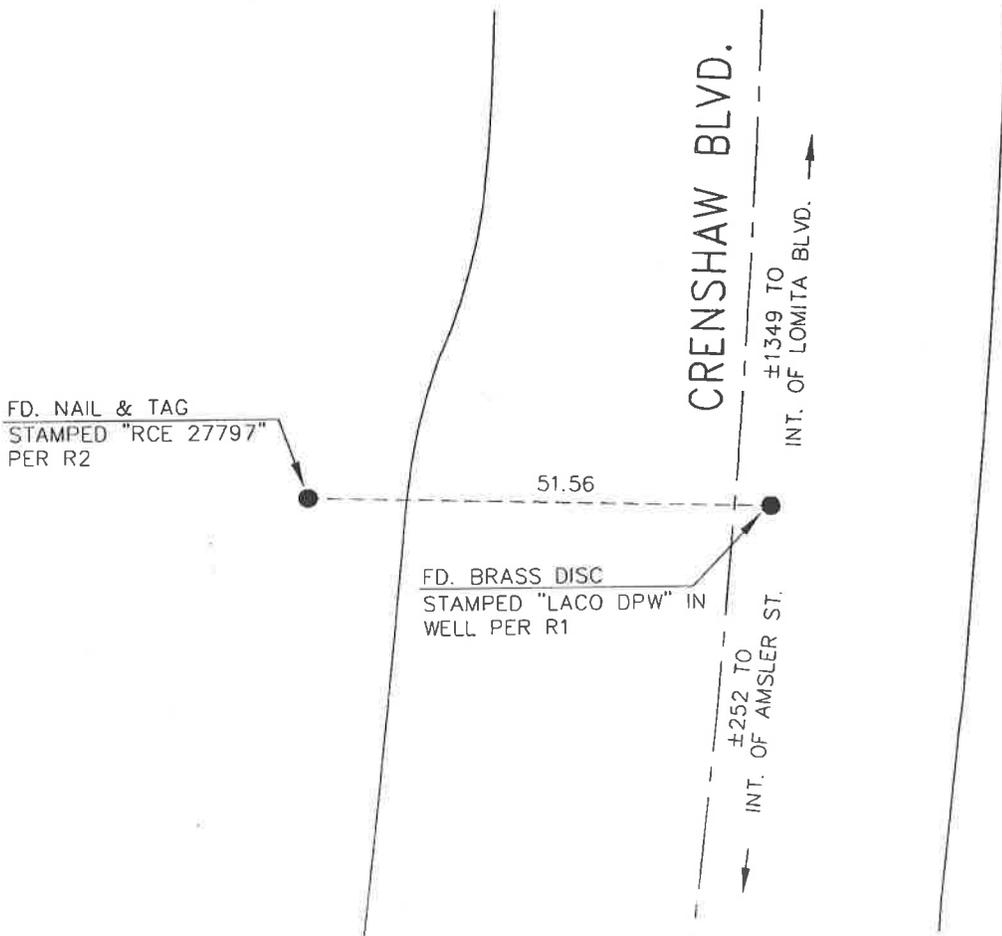
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() DENOTES REFERENCE MEASUREMENTS PER R1

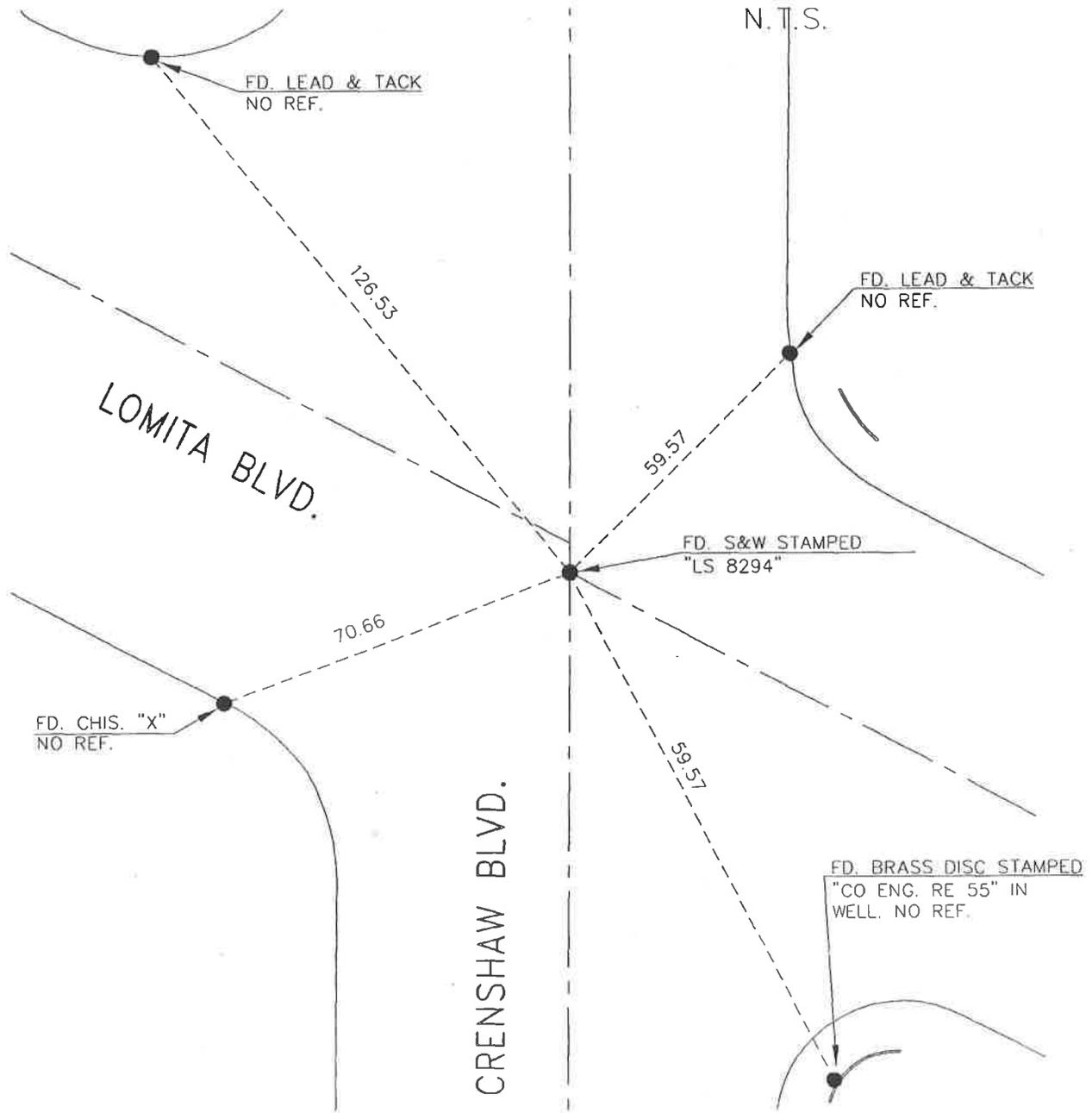
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RDFB 0318 PGS. 92C, 93C



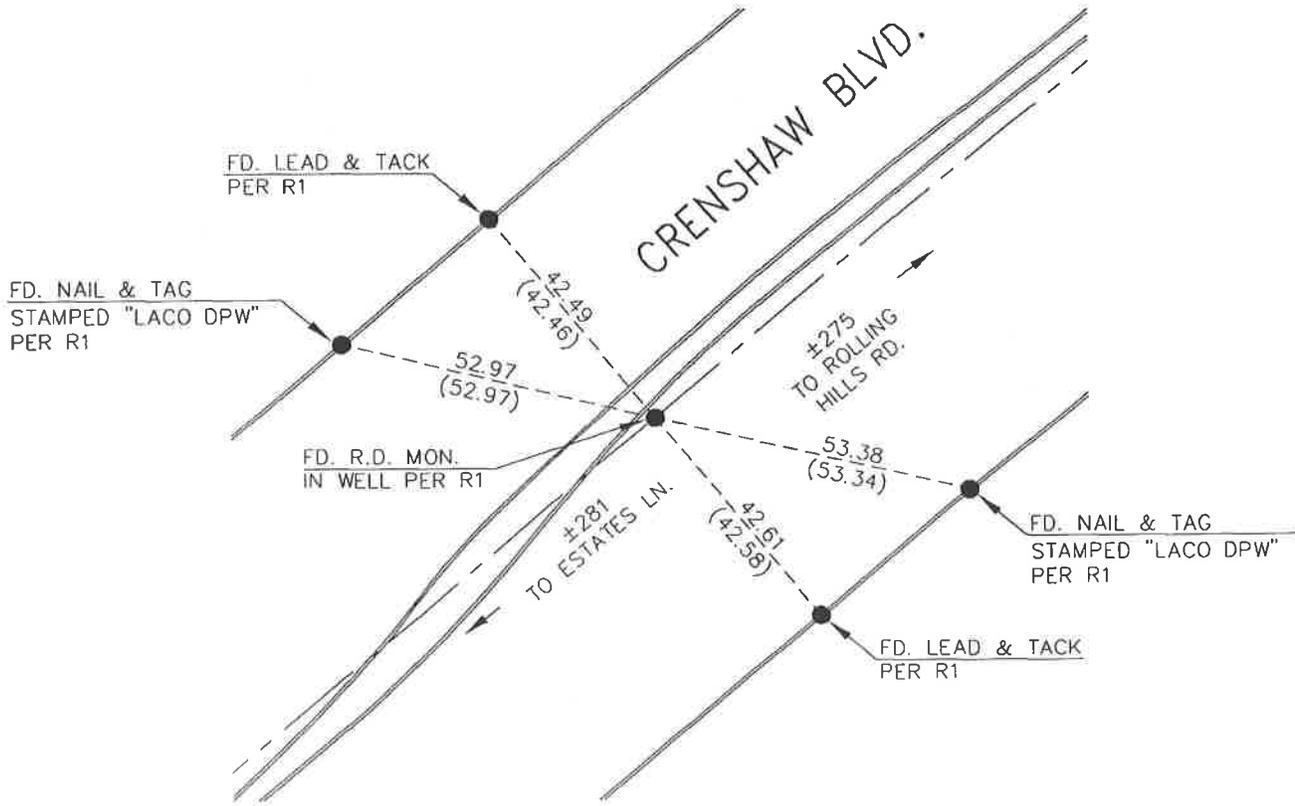
- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY
RDFB FQ 915 PG. 11
- R2 REFERENCE PER TRACT MAP NO. 49936
COUNTY OF LOS ANGES MAP BOOK 1191
PGS. 8-14



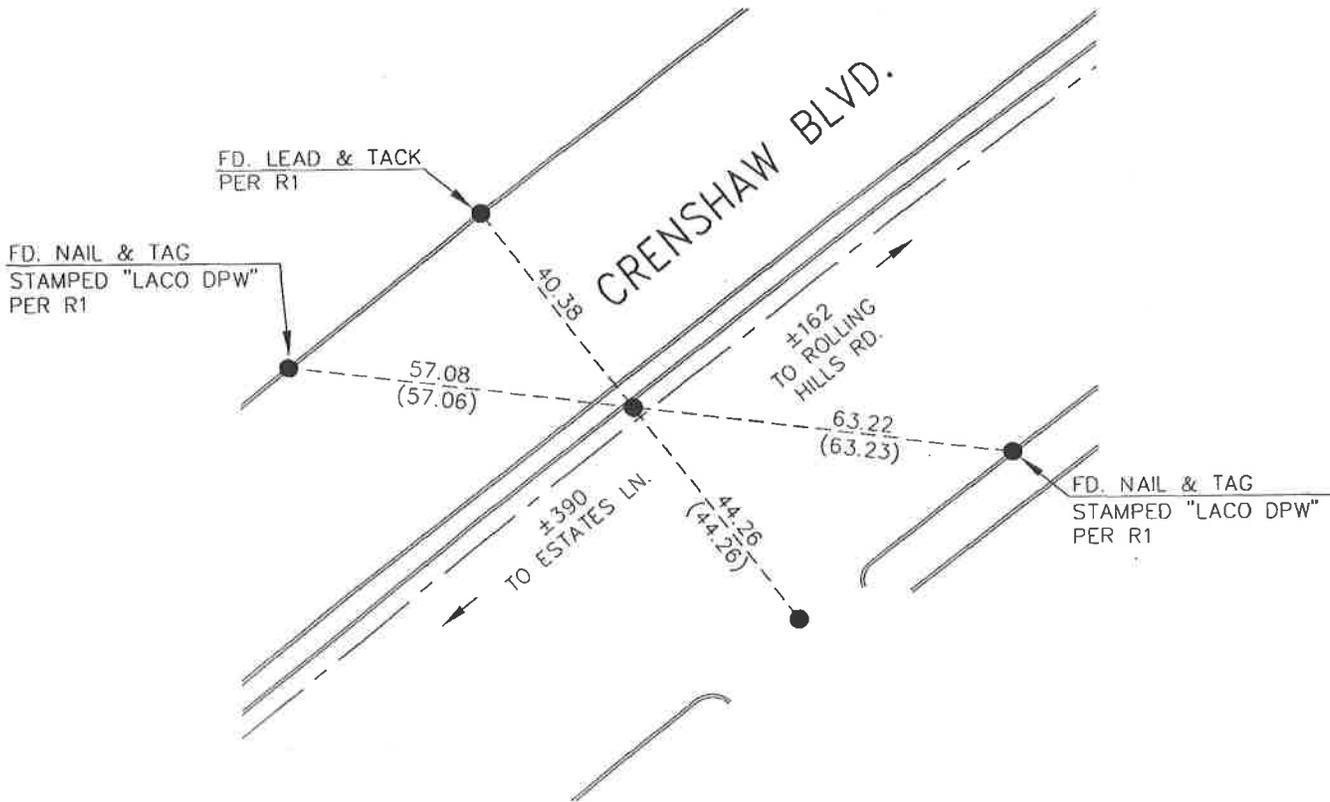
● FD. MONUMENTS AS NOTED
REFERENCE PER LOS ANGELES COUNTY
RDFB 0418 PGS. 96



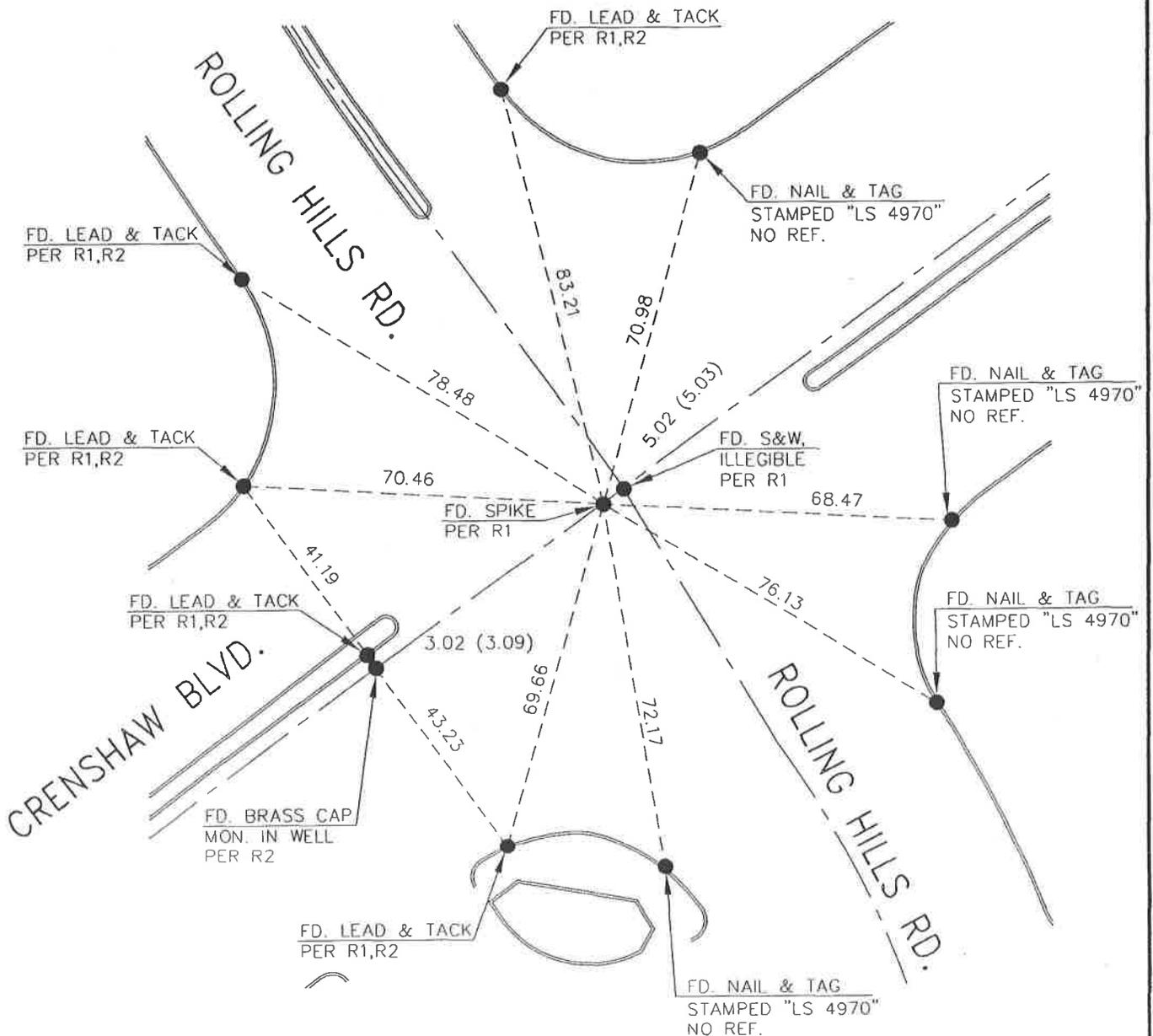
- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY
PWFB 0318 PG. 877



- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY
PWFB 0318 PG. 877



- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1,R2
- R1 REFERENCE PER LOS ANGELES COUNTY
PWFB 0318 PG. 1232
- R2 REFERENCE PER LOS ANGELES COUNTY
RDFB 0318 PG. 44B

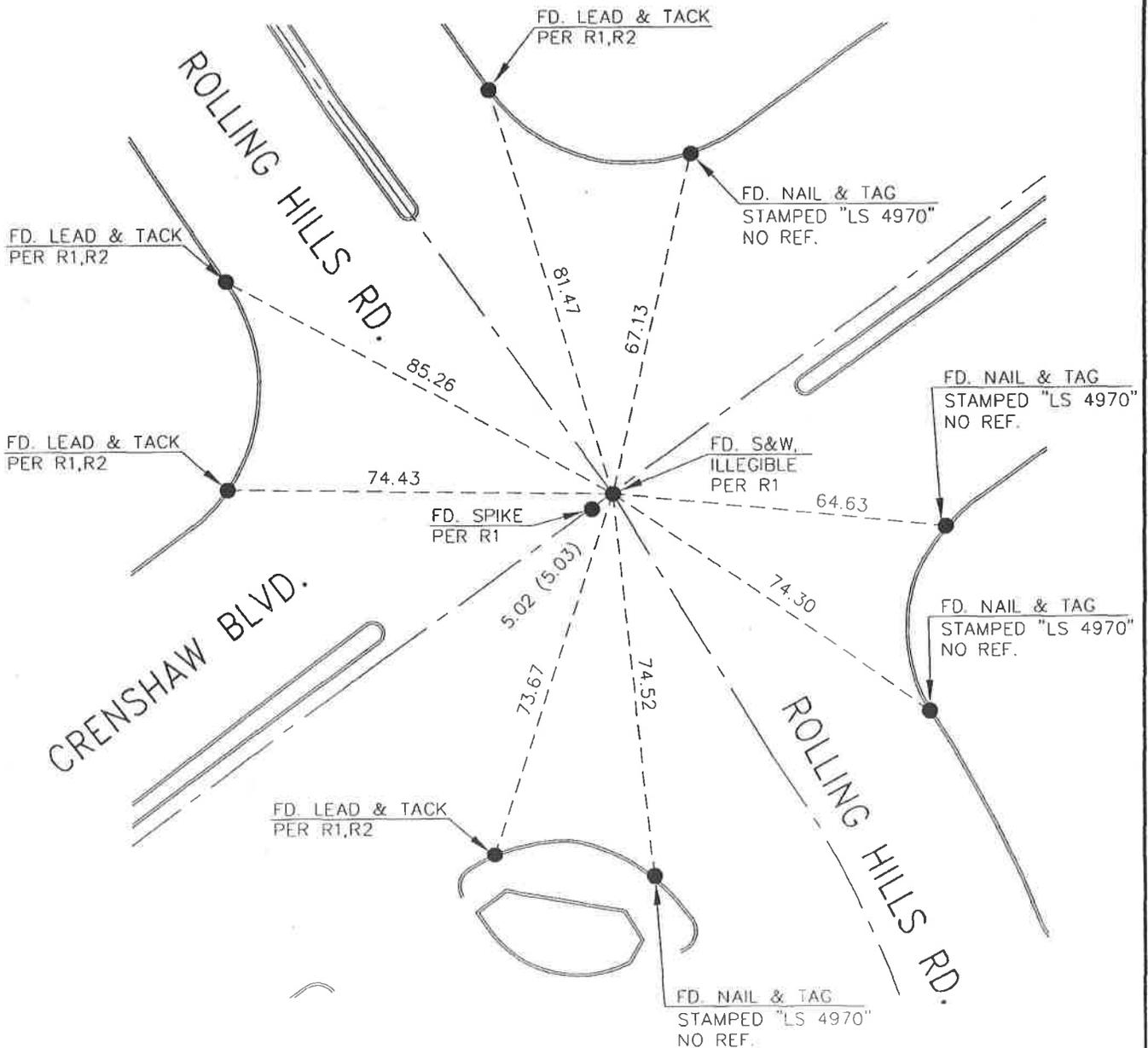


● FD. MONUMENTS AS NOTED

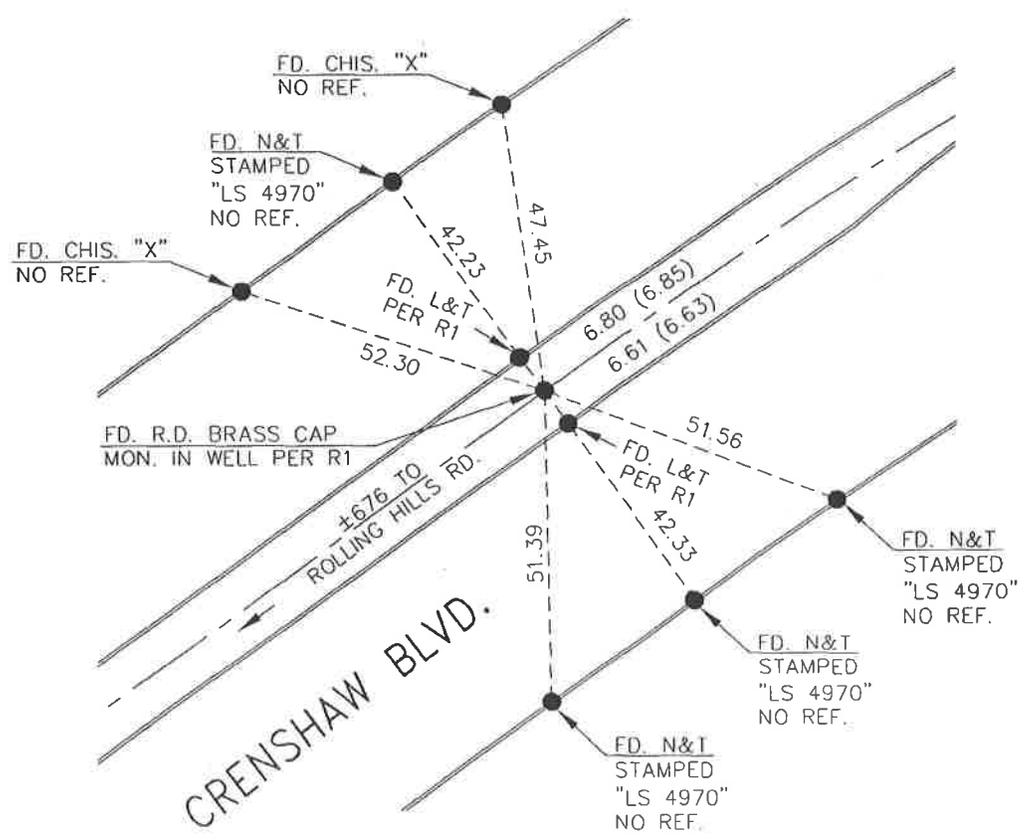
() DENOTES REFERENCE MEASUREMENTS PER R1,R2

R1 REFERENCE PER LOS ANGELES COUNTY
PWFB 0318 PG. 1232

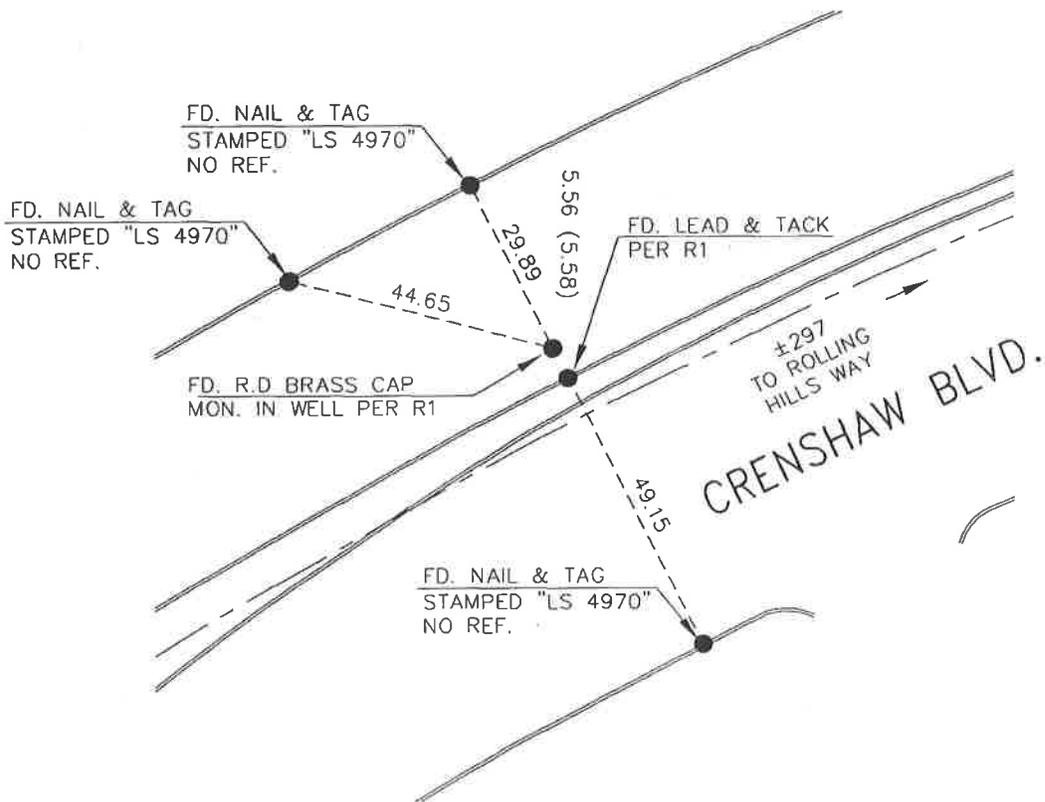
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RDFB 0318 PG. 44B



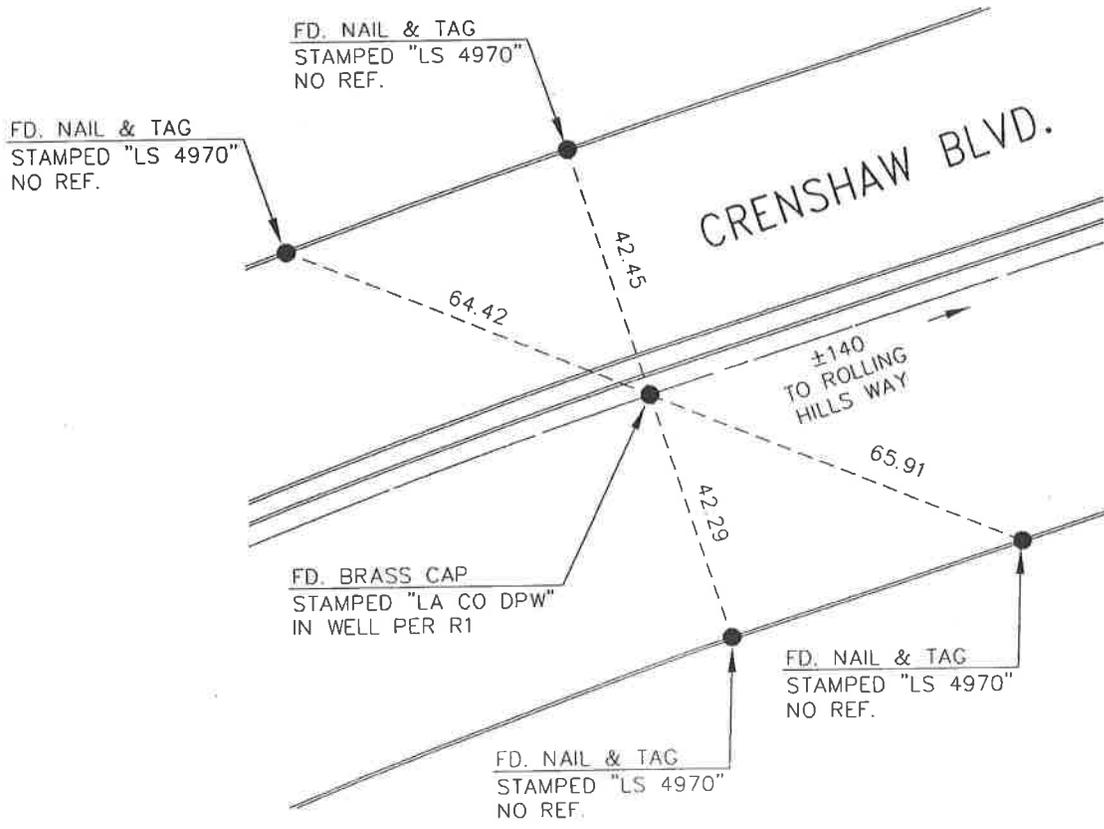
- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY
RDFB 0318 PGS. 92C, 93C.



- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY
RDFB 0318 PGS. 92C, 93C.



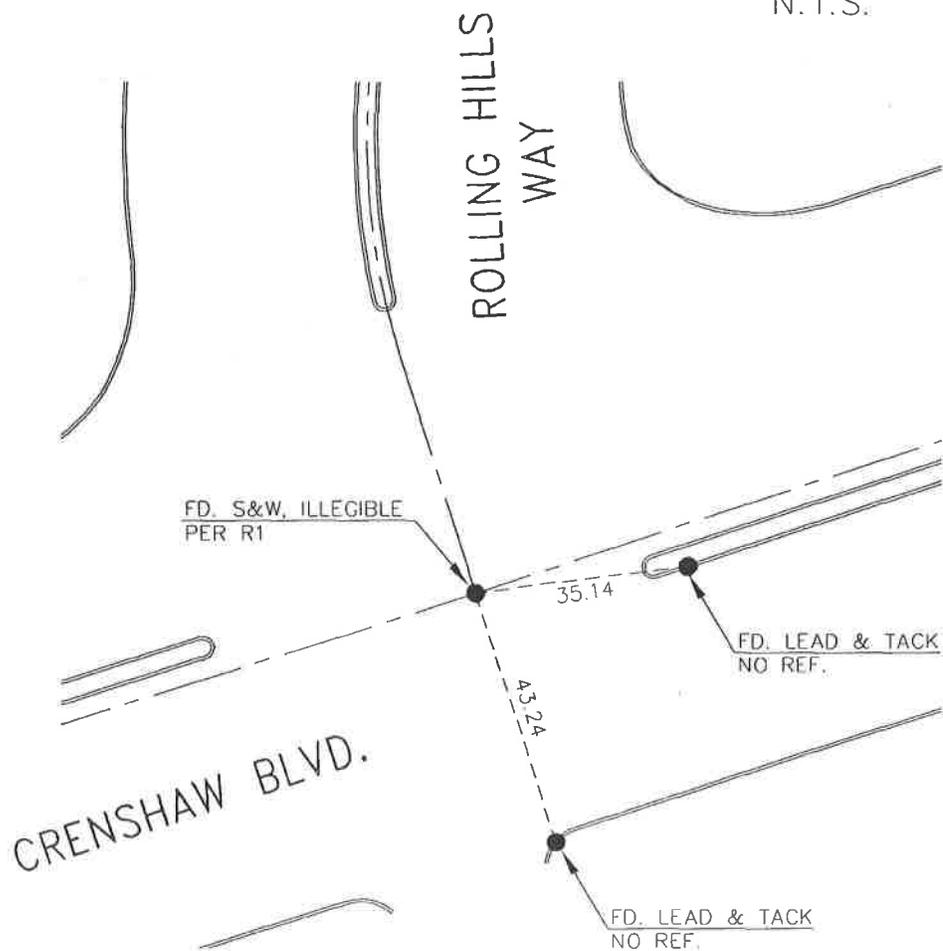
- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY
RDFB 0318 PGS. 92B, 93B.



● FD. MONUMENTS AS NOTED

() DENOTES REFERENCE MEASUREMENTS PER R1

R1 REFERENCE PER LOS ANGELES COUNTY
PWFB 0318 PG. 877



- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY
RDFB 0318 PGS. 90B, 91B.



FD. NAIL & TAG
STAMPED "LS 4970"
PER R1

FD. LEAD & TACK
PER R1

CRENSHAW BLVD.

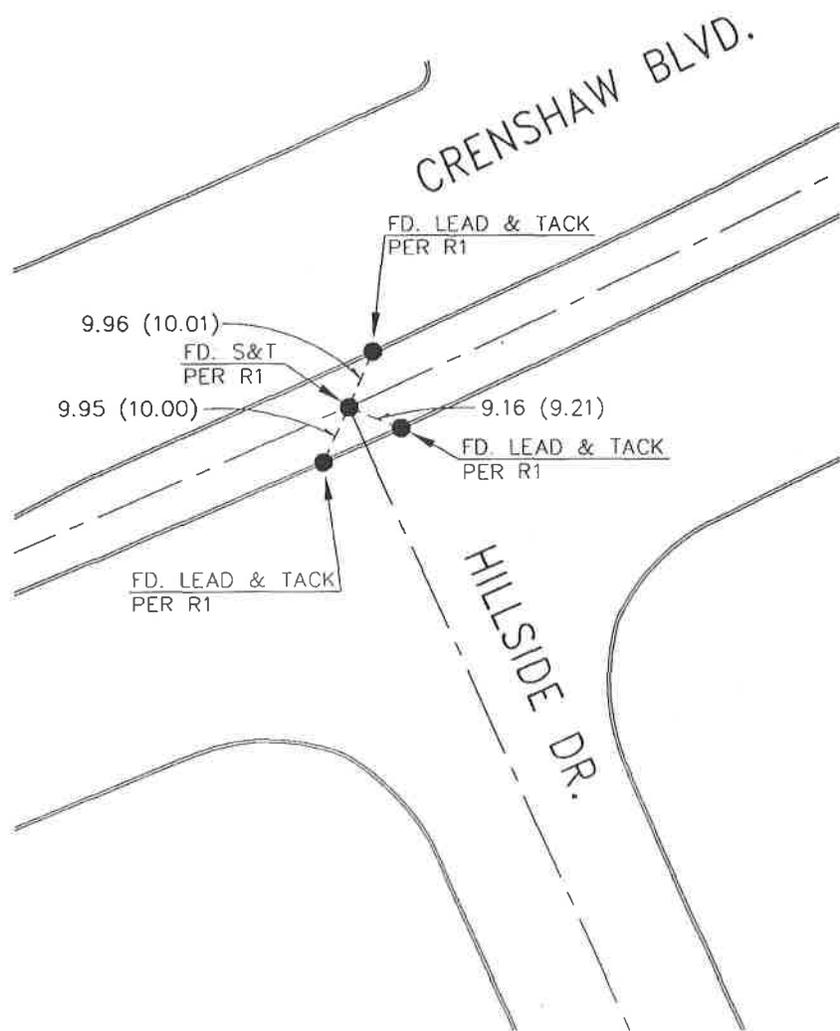
FD. S&W STAMPED
"RCE 29861" IN WELL
PER R1

FD. LEAD & TACK
PER R1

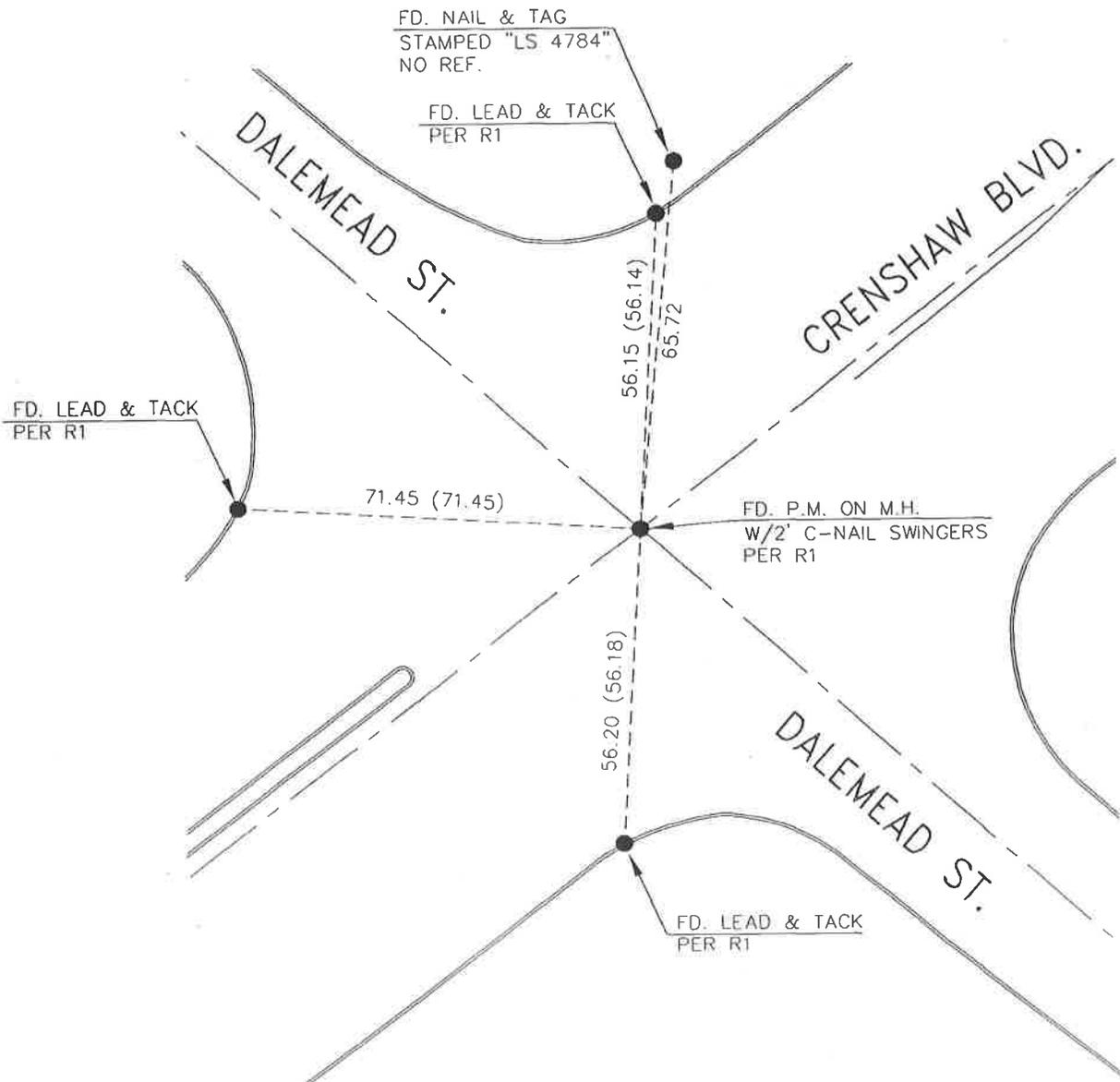
FD. LEAD & TACK
PER R1

CREST RD.

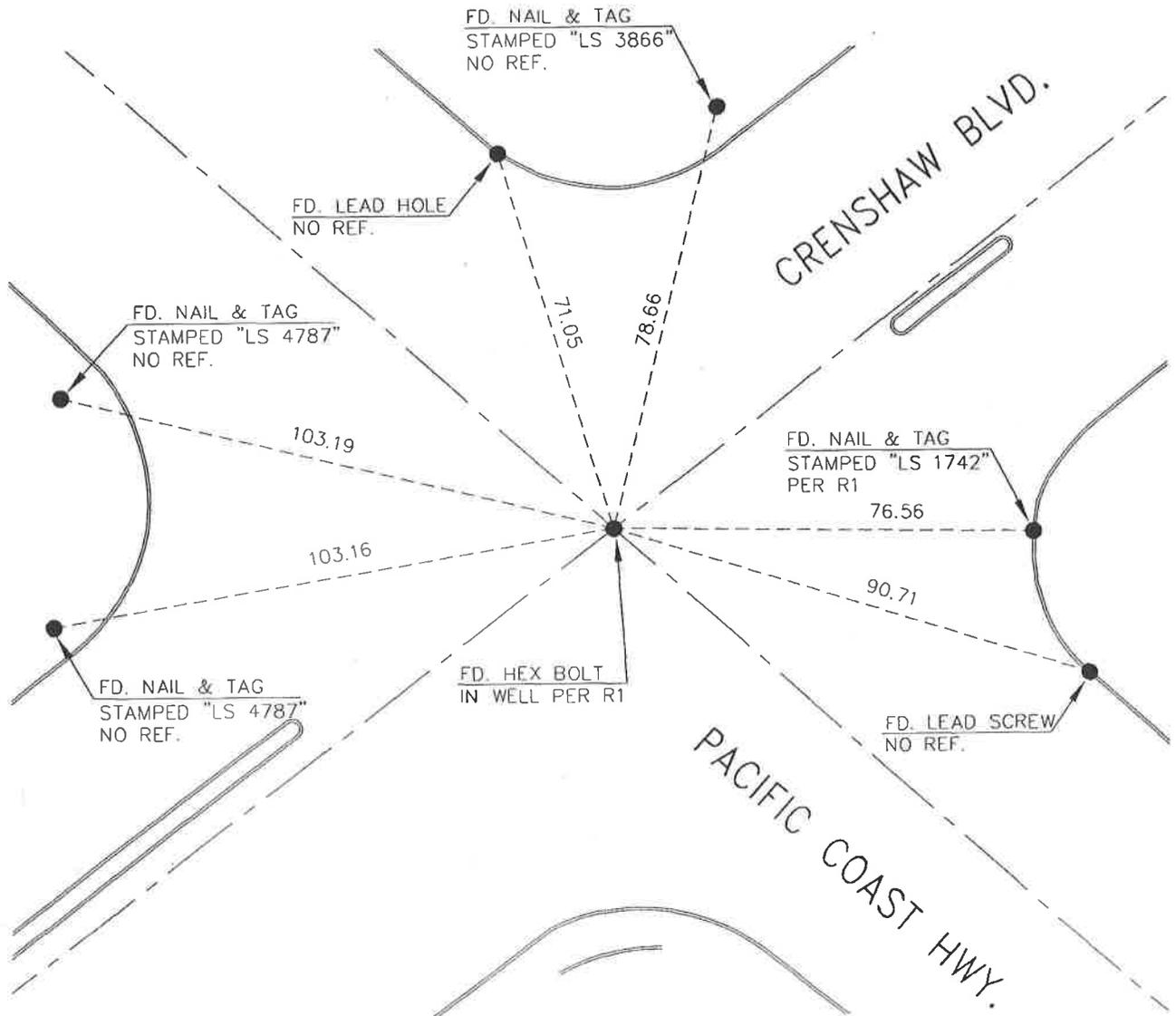
- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER CITY OF TORRANCE
CENTERLINE TIES SHEET T-53-C-3-2-11



- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY
RDFB 0318 PGS. 88C, 89C.



- FD. MONUMENTS AS NOTED
- () DENOTES REFERENCE MEASUREMENTS PER R1
- R1 REFERENCE PER LOS ANGELES COUNTY
RDFB 0318 PG. 88A, 89A



● FD. MONUMENTS AS NOTED

