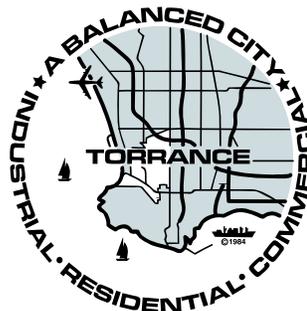


**BIDDER'S SUBMITTAL, SPECIFICATIONS, BOND
AND AFFIDAVIT
FOR THE CONSTRUCTION OF
MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION, I-122
AND
MEADOW PARK PARKING LOTS REHABILITATION, I-118**

B2014-29



**Craig Bilezerian
City Engineer**

JULY 2014

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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 30, 2014**, after which time they will be publicly opened and read at 3:15 p.m. in the Council Chambers of said City:

CONSTRUCTION OF

**MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION
AND
MEADOW PARK PARKING LOTS REHABILITATION**

B2014-29

Plans, Bid Schedule and Specifications are available on the City's website at <http://www.torranceca.gov/27164.htm>

Those who only view and/or print the Plans, Bid Schedule 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 forms 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 Office of the City Clerk, upon payment of \$30 if obtained at City Hall, or payment of \$40 if requested by mail. Both amounts include tax. Neither amount is refundable. The \$30 or \$40 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 90509
ATTN: B2014-29**

The Engineer's estimate of the contract total is between \$1,425,000 and \$1,675,000, based on the various scenarios of using either Bid Schedule A, Bid Schedule A-1 or Bid Schedule A-2 in conjunction with either Bid Schedule B or Bid Schedule B-1. All work shall be completed within a total of 100 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.

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

The City has determined that either a Class A or C-12 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.

Pursuant to Section 1770 et seq. of the California Labor Code, the minimum prevailing rate of per diem wages for each craft, classification, or type of workman needed to execute the Contract shall be those determined by the Director of Industrial Relations of the State of California. These wages are set forth in the General Prevailing Wage Rates for this project, available from the California Department of Industrial Relations' Internet web site at <http://www.dir.ca.gov/DLSR/PWD>.

The 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 Jason Thiem, Assistant Engineer in the Public Works Department at (310) 618-3049 or Ted Semaan, Engineering Manager at (310) 781-6900.

SECTION B

INSTRUCTIONS TO BIDDERS

CITY OF TORRANCE, CALIFORNIA

INSTRUCTIONS TO BIDDERS

A. QUALIFICATION 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.

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) Bid Bond (10%)
- 5) List of Subcontractors
- 6) References (2 pages)
- 7) Violations of Federal or State Law
- 8) Debarment and Suspension Certification

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 no DBE requirements.

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 Public Works Department. 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 eight (8) Bid proposal 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 Insurance as specified in the Public Works Agreement included in Section D of these 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 Jason Thiem, Assistant Engineer at Jthiem@TorranceCA.gov and to Ted Semaan, Engineering Manager at Tsemaan@TorranceCA.gov Please list "**Madison/Skypark RFI**" in the subject line of the email.

All questions must be received no later than 1:00 p.m. on the Wednesday 1 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 Jason Thiem directly at (310) 618-3049 or Ted Semaan at (310) 781-6900.

SECTION C
BID DOCUMENTS

BIDDER'S SUBMITTAL

**PROPOSAL, SPECIFICATIONS, BOND AND AFFIDAVIT FOR THE CONSTRUCTION OF
MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION
AND
MEADOW PARK PARKING LOTS REHABILITATION**

B2014-29

Company: _____

This Bid requires a Bidder to separately list its Total Bid pricing for the 6 potential construction options listed below. The Bidder must list its Total Bid price in numbers for each option. If a Bidder fails to list its Total Bid price for any one option, the Bidder would be considered non-responsive for that option only.

The City will determine the lowest responsible bidder for each of the options. For the purpose of awarding the contract, the City will select one of the options only and subsequently recommend award to the Bidder who is determined the lowest responsible bidder for the City's selected option.

In the event a Bidder does not correctly list its Total Bid pricing on this page, the City will determine the correct Total Bid pricing from the individual bid schedules included herein.

Construction Options (list Total Bid in numbers)

1. Total Bid (Bid Schedule A + Bid Schedule B): \$ _____
2. Total Bid (Bid Schedule A-1 + Bid Schedule B): \$ _____
3. Total Bid (Bid Schedule A-2 + Bid Schedule B): \$ _____
4. Total Bid (Bid Schedule A + Bid Schedule B-1): \$ _____
5. Total Bid (Bid Schedule A-1 + Bid Schedule B-1): \$ _____
6. Total Bid (Bid Schedule A-2 + Bid Schedule B-1): \$ _____

**PROPOSAL, SPECIFICATIONS, BOND AND AFFIDAVIT FOR THE CONSTRUCTION OF
MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION
& MEADOW PARK PARKING LOTS REHABILITATION**

B2014-29

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 schedules.

BID SCHEDULES

SCHEDULE "A" MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION (Work items per plan sheets)					
Item No.	Approx. Qty	Unit of Measure	Item Description	Unit Price	Total Bid
1	1	LS	CONSTRUCTION SURVEYING	\$	\$
2	22	EA	SURVEY MONUMENTS	\$	\$
3	1	ALLOW	PERMITS AND FEES	\$5,000	\$5,000
4	1	LS	NPDES COMPLIANCE / STORM WATER POLLUTION PREVENTION PLAN/ BMPs	\$	\$
5	1	LS	MOBILIZATION/DEMobilIZATION (NOT TO EXCEED 5% OF TOTAL BASE BID PRICE)	\$	\$
CONCRETE, LANDSCAPE AND UTILITY ADJUSTMENT WORK					
6	9,900	SF	REMOVE EXISTING P.C.C. SIDEWALK AND CONSTRUCT 3.5" THICK P.C.C. SIDEWALK PER SPPWC STD PLAN 112-2 AND 113-2 ON 4" CRUSHED MISCELLANEOUS BASE (CMB).	\$	\$
7	2,470	LF	REMOVE EXISTING P.C.C. CURB AND GUTTER AND CONSTRUCT TYPE A2-8 P.C.C. CURB AND GUTTER PER SPPWC STD PLAN 120-2 ON 8" CMB (W=2').	\$	\$
8	2,035	SF	REMOVE EXISTING P.C.C. DRIVEWAY APPROACH AND CONSTRUCT 6" THICK P.C.C. DRIVEWAY PER C.O.T. STD PLAN T105 ON 6" CMB.	\$	\$

SCHEDULE "A" MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION (Work items per plan sheets)					
9	6	EA	REMOVE EXISTING P.C.C. CURB RAMP AND CONSTRUCT 3.5" P.C.C. CURB RAMP PER STD PLAN 111-5 AND TYPE SPECIFIED ON PLAN ON 4" CMB.	\$	\$
10	6	EA	FURNISH AND INSTALL 36" X 48" DETECTABLE WARNING SURFACE PANEL ONTO ACCESS RAMP PER SPPWC STD 111-5	\$	\$
11	12	EA	ADJUST MANHOLE AND COVER TO FINISH GRADE	\$	\$
12	18	EA	ADJUST VALVE FRAME AND COVER TO FINISH GRADE	\$	\$
13	5	EA	REMOVE EXISTING TREE, ROOT PRUNE AND REGRADE TO SIDEWALK AND TOP OF CURB SLOPE PER CERTIFIED ARBORIST RECOMMENDATIONS.	\$	\$
14	4	EA	24" BOX - BRISBANE BOX PER C.O.T. STD PLAN T401	\$	\$
15	1	LS	PLANT ESTABLISHMENT AND MAINTENANCE (90 DAYS)	\$	\$
16	1	LS	SAWCUT AND REMOVE THE EXISTING CONCRETE IN FRONT OF THE BRICKS AND REPLACE IN KIND SLOPED TO JOIN THE PROPOSED BACK OF DEPRESSED SIDEWALK.	\$	\$
17	1,400	SF	REMOVE EXISTING LANDSCAPING, PRUNE ROOTS PER CERTIFIED ARBORIST RECOMMENDATION, REGRADE TO PROPOSED SIDEWALK AND TOP OF CURB AND INSTALL SOD. PROTECT EXISTING TREES UNLESS OTHERWISE NOTED.	\$	\$
18	9	EA	RE-ADJUST EXISTING PIPE CURB DRAIN TO ENSURE A MINIMUM OF 2% SLOPE POSITIVE WATER FLOW PER SPPWC STD PLAN 150-3.	\$	\$
PAVEMENT WORK					
19	125,175	SF	COLD MILL EXISTING ASPHALT (VARIES 3" TO 3.5" THICK)	\$	\$
20	2,150	CY	UNCLASSIFIED EXCAVATION	\$	\$
21	2,010	TON	CRUSHED MISCELLANEOUS BASE (CMB)	\$	\$
22	79,300	SF	MIX 5% PORTLAND CEMENT BY WEIGHT PER SECTION ON PLAN. REMOVE AND DISPOSE CEMENT TREATED SOIL AS NEEDED TO CONSTRUCT PROPOSED AC PAVEMENT SECTION.	\$	\$

SCHEDULE "A" MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION (Work items per plan sheets)					
23	2,775	TON	INSTALL ASPHALT CONCRETE (B-PG-64-10)	\$	\$
24	1,620	TON	INSTALL 2" OF ASPHALT CONCRETE (C2-PG-64-10)	\$	\$
25	-	-	(NOT USED)	-	-
26	-	-	(NOT USED)	-	-
27	-	-	(NOT USED)	-	-
28	-	-	(NOT USED)	-	-
TRAFFIC CONTROL AND TRAFFIC CONTROL WORK					
29	1	LS	SIGNING, THERMOPLASTIC STRIPING, MARKINGS AND PAVEMENT MARKERS	\$	\$
30	8	EA	REMOVE AND SALVAGE EXISTING PEDESTRIAN INDICATION MODULE AND REPLACE WITH NEW COUNTDOWN PEDESTRIAN INDICATION MODULE PER CALTRANS STANDARD PLANS ES-4B, DETAIL B	\$	\$
31	4	EA	FURNISH AND INSTALL NEW VIDEO DETECTION SYSTEMS, COMPLETE IN PLACE, INCLUDING ALL WIRING AND DISCONNECTION AND REMOVAL OF EXISTING PRIMARY DETECTORS LOOPS AND WIRING MARKED ON PLANS	\$	\$
32	1	LS	FURNISH AND INSTALL TEMPORARY VIDEO DETECTION SYSTEM, COMPLETE IN PLACE, INCLUDING ALL WIRING ON SHEET 9	\$	\$
33	12	EA	FURNISH AND INSTALL TRAFFIC SIGNAL INDUCTIVE LOOP DETECTOR AND WIRING	\$	\$
34	1	LS	TRAFFIC CONTROL	\$	\$
35	2	EA	PROJECT CONSTRUCTION SIGNS	\$	\$
36	6	EA	PORTABLE CHANGEABLE MESSAGE SIGNS	\$	\$

TOTAL BID PRICE (A) \$ _____
(Figures)*

TOTAL BID PRICE (A): _____
(Words)*

PRICES SHOWN ABOVE SHALL INCLUDE THE AMOUNTS ONLY FROM BID SCHEDULE A.

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

B2014-29

Bid Schedule "A-1" below is provided so the City may obtain pricing for an alternative pavement rehabilitation method. This method involves removing/replacing the existing pavement section with an asphalt concrete and crushed miscellaneous base section (CMB). The City may choose to award the contract for this alternative method, instead of the methods shown in either Bid Schedule "A" or "A-2".

SCHEDULE "A-1" MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION (Scope: Replace both roadways and intersection with new AC and CMB structural section)					
Item No.	Approx. Qty	Unit of Measure	Item Description	Unit Price	Total Bid
1	1	LS	CONSTRUCTION SURVEYING	\$	\$
2	22	EA	SURVEY MONUMENTS	\$	\$
3	1	ALLOW	PERMITS AND FEES	\$5,000	\$5,000
4	1	LS	NPDES COMPLIANCE / STORM WATER POLLUTION PREVENTION PLAN/ BMPs	\$	\$
5	1	LS	MOBILIZATION/DEMOBILIZATION (NOT TO EXCEED 5% OF TOTAL BASE BID PRICE)	\$	\$
CONCRETE, LANDSCAPE AND UTILITY ADJUSTMENT WORK					
6	9,900	SF	REMOVE EXISTING P.C.C. SIDEWALK AND CONSTRUCT 3.5" THICK P.C.C. SIDEWALK PER SPPWC STD PLAN 112-2 AND 113-2 ON 4" CRUSHED MISCELLANEOUS BASE (CMB).	\$	\$
7	2,470	LF	REMOVE EXISTING P.C.C. CURB AND GUTTER AND CONSTRUCT TYPE A2-8 P.C.C. CURB AND GUTTER PER SPPWC STD PLAN 120-2 ON 8" CMB (W=2').	\$	\$
8	2,035	SF	REMOVE EXISTING P.C.C. DRIVEWAY APPROACH AND CONSTRUCT 6" THICK P.C.C. DRIVEWAY PER C.O.T. STD PLAN T105 ON 8" CMB.	\$	\$
9	6	EA	REMOVE EXISTING P.C.C. CURB RAMP AND CONSTRUCT 3.5" P.C.C. CURB RAMP PER STD PLAN 111-5 AND TYPE SPECIFIED ON PLAN ON 4" CMB.	\$	\$
10	6	EA	FURNISH AND INSTALL 36" X 48" DETECTABLE WARNING SURFACE PANEL ONTO ACCESS RAMP PER SPPWC STD 111-5	\$	\$
11	12	EA	ADJUST MANHOLE AND COVER TO FINISH GRADE	\$	\$
12	18	EA	ADJUST VALVE FRAME AND COVER TO FINISH GRADE	\$	\$

**SCHEDULE "A-1" MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION
(Scope: Replace both roadways and intersection with new AC and CMB structural section)**

13	5	EA	REMOVE EXISTING TREE, ROOT PRUNE AND REGRADE TO SIDEWALK AND TOP OF CURB SLOPE PER CERTIFIED ARBORIST RECOMMENDATIONS.	\$	\$
14	4	EA	INSTALL 24" BOX - BRISBANE BOX PER C.O.T. STD PLAN T401	\$	\$
15	1	LS	PLANT ESTABLISHMENT AND MAINTENANCE (90 DAYS)	\$	\$
16	1	LS	SAWCUT AND REMOVE THE EXISTING CONCRETE IN FRONT OF THE BRICKS AND REPLACE IN KIND SLOPED TO JOIN THE PROPOSED BACK OF DEPRESSED SIDEWALK.	\$	\$
17	1,400	SF	REMOVE EXISTING LANDSCAPING, PRUNE ROOTS PER CERTIFIED ARBORIST RECOMMENDATION, REGRADE TO PROPOSED SIDEWALK AND TOP OF CURB AND INSTALL SOD. PROTECT EXISTING TREES UNLESS OTHERWISE NOTED.	\$	\$
18	9	EA	RE-ADJUST EXISTING PIPE CURB DRAIN TO ENSURE A MINIMUM OF 2% POSITIVE WATER FLOW PER SPPWC STD PLAN 150-3.	\$	\$
PAVEMENT WORK					
19	125,175	SF	COLD MILL EXISTING ASPHALT (VARIES FROM 3" TO 3.5")	\$	\$
20	3,475	CY	UNCLASSIFIED EXCAVATION	\$	\$
21	5,050	TON	INSTALL CRUSHED MISCELLANEOUS BASE (CMB)	\$	\$
22	-	-	(NOT USED)	-	-
23	3,030	TON	INSTALL ASPHALT CONCRETE (B-PG-64-10)	\$	\$
24	1,620	TON	INSTALL 2" OF ASPHALT CONCRETE (C2-PG-64-10)	\$	\$
25	-	-	(NOT USED)	-	-
26	-	-	(NOT USED)	-	-
27	-	-	(NOT USED)	-	-
28	-	-	(NOT USED)	-	-

**SCHEDULE "A-1" MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION
(Scope: Replace both roadways and intersection with new AC and CMB structural section)**

TRAFFIC CONTROL AND TRAFFIC CONTROL WORK					
29	1	LS	SIGNING, THERMOPLASTIC STRIPING, MARKINGS AND PAVEMENT MARKERS	\$	\$
30	8	EA	REMOVE AND SALVAGE EXISTING PEDESTRIAN INDICATION MODULE AND REPLACE WITH NEW COUNTDOWN PEDESTRIAN INDICATION MODULE PER CALTRANS STANDARD PLANS ES-4B, DETAIL B	\$	\$
31	4	EA	FURNISH AND INSTALL NEW VIDEO DETECTION SYSTEMS, COMPLETE IN PLACE, INCLUDING ALL WIRING AND DISCONNECTION AND REMOVAL OF EXISTING PRIMARY DETECTORS LOOPS AND WIRING MARKED ON PLANS	\$	\$
32	1	LS	FURNISH AND INSTALL TEMPORARY VIDEO DETECTION SYSTEM, COMPLETE IN PLACE, INCLUDING ALL WIRING ON SHEET 9	\$	\$
33	12	EA	FURNISH AND INSTALL TRAFFIC SIGNAL INDUCTIVE LOOP DETECTOR AND WIRING	\$	\$
34	1	LS	TRAFFIC CONTROL	\$	\$
35	4	EA	PROJECT CONSTRUCTION SIGNS	\$	\$
36	6	EA	PORTABLE CHANGEABLE MESSAGE SIGNS	\$	\$

TOTAL BID PRICE (A-1) \$ _____
(Figures)*

TOTAL BID PRICE (A-1): _____
(Words)*

PRICES SHOWN ABOVE SHALL INCLUDE THE AMOUNTS ONLY FROM BID SCHEDULE A-1.

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

B2014-29

Bid Schedule "A-2" below is provided so the City may obtain pricing for a second alternative rehabilitation method. This method involves replacing the existing pavement section with asphalt concrete (AC) and roller compacted concrete (RCC). The City may choose to award the contract for this alternative method, instead of the methods shown in either Bid Schedule "A" or "A-1".

SCHEDULE "A-2" MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION					
(Scope: Replace with an AC and RCC section)					
Item No.	Approx. Qty	Unit of Measure	Item Description	Unit Price	Total Bid
1	1	LS	CONSTRUCTION SURVEYING	\$	\$
2	22	EA	SURVEY MONUMENTS	\$	\$
3	1	ALLOW	PERMITS AND FEES	\$5,000	\$5,000
4	1	LS	NPDES COMPLIANCE / STORM WATER POLLUTION PREVENTION PLAN/ BMPs	\$	\$
5	1	LS	MOBILIZATION/DEMOBILIZATION (NOT TO EXCEED 5% OF TOTAL BASE BID PRICE)	\$	\$
CONCRETE, LANDSCAPE AND UTILITY ADJUSTMENT WORK					
6	9,900	SF	REMOVE EXISTING P.C.C. SIDEWALK AND CONSTRUCT 3.5" THICK P.C.C. SIDEWALK PER SPPWC STD PLAN 112-2 AND 113-2 ON 4" CRUSHED MISCELLANEOUS BASE (CMB).	\$	\$
7	2,470	LF	REMOVE EXISTING P.C.C. CURB AND GUTTER AND CONSTRUCT TYPE A2-8 P.C.C. CURB AND GUTTER PER SPPWC STD PLAN 120-2 ON 8" CMB (W=2').	\$	\$
8	2,035	SF	REMOVE EXISTING P.C.C. DRIVEWAY APPROACH AND CONSTRUCT 6" THICK P.C.C. DRIVEWAY PER C.O.T. STD PLAN T105 ON 8" CMB.	\$	\$
9	6	EA	REMOVE EXISTING P.C.C. CURB RAMP AND CONSTRUCT 3.5" P.C.C. CURB RAMP PER STD PLAN 111-5 AND TYPE SPECIFIED ON PLAN ON 4" CMB.	\$	\$
10	6	EA	FURNISH AND INSTALL 36" X 48" DETECTABLE WARNING SURFACE PANEL ONTO ACCESS RAMP PER SPPWC STD 111-5	\$	\$
11	12	EA	ADJUST MANHOLE AND COVER TO FINISH GRADE	\$	\$
12	18	EA	ADJUST VALVE FRAME AND COVER TO FINISH GRADE	\$	\$

SCHEDULE "A-2" MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION (Scope: Replace with an AC and RCC section)					
13	5	EA	REMOVE EXISTING TREE, ROOT PRUNE AND REGRADE TO SIDEWALK AND TOP OF CURB SLOPE PER CERTIFIED ARBORIST RECOMMENDATIONS.	\$	\$
14	4	EA	INSTALL 24" BOX - BRISBANE BOX PER C.O.T. STD PLAN T401	\$	\$
15	1	LS	PLANT ESTABLISHMENT AND MAINTENANCE (90 DAYS)	\$	\$
16	1	LS	SAWCUT AND REMOVE THE EXISTING CONCRETE IN FRONT OF THE BRICKS AND REPLACE IN KIND SLOPED TO JOIN THE PROPOSED BACK OF DEPRESSED SIDEWALK.	\$	\$
17	1,400	SF	REMOVE EXISTING LANDSCAPING, PRUNE ROOTS PER CERTIFIED ARBORIST RECOMMENDATION, REGRADE TO PROPOSED SIDEWALK AND TOP OF CURB AND INSTALL SOD. PROTECT EXISTING TREES UNLESS OTHERWISE NOTED.	\$	\$
18	9	EA	RE-ADJUST EXISTING PIPE CURB DRAIN TO ENSURE A MINIMUM OF 2% POSITIVE WATER FLOW PER SPPWC STD PLAN 150-3.	\$	\$
PAVEMENT WORK					
19	-	-	(NOT USED)	-	-
20	-	-	(NOT USED)	-	-
21	-	-	(NOT USED)	-	-
22	-	-	(NOT USED)	-	-
23	-	-	(NOT USED)	-	-
24	-	-	(NOT USED)	-	-
25	125,175	SF	EXCAVATION OF 9" EXISTING AC AND UNCLASSIFIED MATERIAL	\$	\$
26	13,908	SY	SUBGRADE PREPARATION	\$	\$
27	13,908	SY	RCC AT 6" DEPTH	\$	\$
28	2,160	TON	INSTALL 3" OF ASPHALT CONCRETE (C2-PG-64-10)	\$	\$

SCHEDULE "A-2" MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION (Scope: Replace with an AC and RCC section)					
TRAFFIC CONTROL AND TRAFFIC CONTROL WORK					
29	1	LS	SIGNING, THERMOPLASTIC STRIPING, MARKINGS AND PAVEMENT MARKERS	\$	\$
30	8	EA	REMOVE AND SALVAGE EXISTING PEDESTRIAN INDICATION MODULE AND REPLACE WITH NEW COUNTDOWN PEDESTRIAN INDICATION MODULE PER CALTRANS STANDARD PLANS ES-4B, DETAIL B	\$	\$
31	4	EA	FURNISH AND INSTALL NEW VIDEO DETECTION SYSTEMS, COMPLETE IN PLACE, INCLUDING ALL WIRING AND DISCONNECTION AND REMOVAL OF EXISTING PRIMARY DETECTORS LOOPS AND WIRING MARKED ON PLANS	\$	\$
32	1	LS	FURNISH AND INSTALL TEMPORARY VIDEO DETECTION SYSTEM, COMPLETE IN PLACE, INCLUDING ALL WIRING ON SHEET 9	\$	\$
33	12	EA	FURNISH AND INSTALL TRAFFIC SIGNAL INDUCTIVE LOOP DETECTOR AND WIRING	\$	\$
34	1	LS	TRAFFIC CONTROL	\$	\$
35	4	EA	PROJECT CONSTRUCTION SIGNS	\$	\$
36	6	EA	PORTABLE CHANGEABLE MESSAGE SIGNS	\$	\$

TOTAL BID PRICE (A-2) \$ _____
 (Figures)*

TOTAL BID PRICE (A-2): _____
 (Words)*

PRICES SHOWN ABOVE SHALL INCLUDE THE AMOUNTS ONLY FROM BID SCHEDULE A-2.

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

B2014-29

**SCHEDULE "B" MEADOW PARK PARKING LOT REHABILITATION
(Scope: 4' wide removal around the gutter. AC overlay)**

Item No.	Approx. Qty	Unit of Measure	Item Description	Unit Price	Total Bid
1B	1	LS	MOBILIZATION/DEMOBILIZATION (NOT TO EXCEED 5% OF TOTAL BASE BID PRICE)	\$	\$
2B	252	EA	REMOVE AND SALVAGE PCC WHEEL STOP	\$	\$
3B	16,600	SF	REMOVE EXISTING ASPHALT CONCRETE AND UNCLASSIFIED MATERIALS TO A DEPTH OF 3 INCHES (WIDTH = 4 FEET TYP.) COMPACT EXISTING SUBBASE TO 95% DENSITY.	\$	\$
4B	240	TON	INSTALL ASPHALT CONCRETE (TYPE B-PG-64-10) FOR THE RECONSTRUCTION AREAS.	\$	\$
5B	1,700	TON	INSTALL ASPHALT CONCRETE (TYPE III-C3-PG-64-10) FOR THE 1.5 INCH OVERLAY.	\$	\$
6B	-	-	(NOT USED)	-	-
7B	-	-	(NOT USED)	-	-
8B	1	LS	TRAFFIC CONTROL	\$	\$
9B	2	EA	ADJUST MANHOLE AND COVER TO FINISH GRADE	\$	\$
10B	268	EA	FURNISH AND INSTALL NEW PCC WHEEL STOPS & REBAR	\$	\$
11B	1	LS	SIGNING AND STRIPING	\$	\$
12B	-	-	(NOT USED)	-	-

TOTAL BID PRICE (B) \$ _____
(Figures)*

TOTAL BID PRICE (B): _____
(Words)*

PRICES SHOWN ABOVE SHALL INCLUDE THE AMOUNTS ONLY FROM BID SCHEDULE B.

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

B2014-29

Bid Schedule "B-1" below is provided so the City may obtain pricing for an alternative rehabilitation method as shown on the plans. The City may choose to award the contract that includes this alternative method, instead of the method shown in Bid Schedule "B".

SCHEDULE "B-1" MEADOW PARK PARKING LOT REHABILITATION (3" removal; 3" AC paving)					
Item No.	Approx. Qty	Unit of Measure	Item Description	Unit Price	Total Bid
1B	1	LS	MOBILIZATION/DEMOBILIZATION (NOT TO EXCEED 5% OF TOTAL BASE BID PRICE)	\$	\$
2B	252	EA	REMOVE AND SALVAGE PCC WHEEL STOP	\$	\$
3B	-	-	(NOT USED)	-	-
4B	-	-	(NOT USED)	-	-
5B	-	-	(NOT USED)	-	-
6B	187,000	SF	REMOVE EXISTING ASPHALT CONCRETE (VARIES 1.5 TO 3 INCHES) AND UNCLASSIFIED MATERIALS TO A DEPTH OF 3 INCHES. REGRADE AND COMPACT EXISTING SUBGRADE TO 95% DENISTY.	\$	\$
7B	3,625	TON	CONSTRUCT 3-INCH THICK ASPHALT CONCRETE (TYPE III-C3-PG-64-10)	\$	\$
8B	1	LS	TRAFFIC CONTROL	\$	\$
9B	2	EA	ADJUST MANHOLE AND COVER TO FINISH GRADE	\$	\$
10B	268	EA	FURNISH AND INSTALL NEW PCC WHEEL STOPS & REBAR	\$	\$
11B	1	LS	SIGNING AND STRIPING	\$	\$
12B	1	LS	NPDES COMPLIANCE/ STORM WATER POLLUTION PREVENTION PLAN/BMPs		

TOTAL BID PRICE (B-1) \$ _____
(Figures)*

TOTAL BID PRICE (B-1): _____
(Words)*

PRICES SHOWN ABOVE SHALL INCLUDE THE AMOUNTS ONLY FROM BID SCHEDULE B-1.

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

B2014-29

BIDDER'S SUBMITTAL B2014-29

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 – B2014-29

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)

B2014-29

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)

**BID BOND (10%)
B2014-29**

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. B2014-29, said work being: the MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION & MEADOW PARK PARKING LOTS REHABILITATION, 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.: _____

**LIST OF SUBCONTRACTORS
B2014-29**

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)
B2014-29

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)
B2014-29

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
B2014-29**

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): _____

(THE BIDDER'S SIGNATURE ON THE BIDDER'S SUBMITTAL
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 Bidder's Submittal on the signature portion thereof shall also constitute signature of this Certification.

Exhibit 12-E, Attachment E

SECTION D

**DOCUMENTS TO BE COMPLETED
AND DELIVERED TO CITY PRIOR
TO AWARD OF CONTRACT**

**PERFORMANCE BOND
B2014-29**

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 MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION & MEADOW PARK PARKING LOTS REHABILITATION, B2014-29, 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)

B2014-29

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 _____,
20____.

CORPORATE SEAL

PRINCIPAL(S):

BY _____

BY _____

CORPORATE SEAL

SURETY:

BY _____

**LABOR AND MATERIAL BOND
B2014-29**

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 materialmen, 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); B2014-29

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 MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION & MEADOW PARK PARKING LOTS REHABILITATION, Bid No. B2014-29, 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) B2014-29

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

This PUBLIC WORKS AGREEMENT ("Agreement") is made and entered into as of _____, 2014 (the "Effective Date"), by and between the CITY OF TORRANCE, a municipal corporation ("CITY"), and _____ ("CONTRACTOR").

RECITALS:

- A. The CITY wishes to retain the services of an experienced and qualified CONTRACTOR to construct MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION & MEADOW PARK PARKING LOTS REHABILITATION, B2014-29
- B. In order to obtain the desired services, The CITY has circulated a Notice Inviting Bids for the construction of the MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION & MEADOW PARK PARKING LOTS REHABILITATION, Notice Inviting Bids No. B2014-29 (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 one year 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 \$_____ ("Agreement Sum"), unless otherwise 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 19 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:

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. 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.

16. 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.

17. 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 \$3,000,000.
- 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 17.

18. 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.

19. 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.

20. 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: _____

Fax: _____

CITY: City Clerk
City of Torrance
3031 Torrance Boulevard
Torrance, CA 90509-2970
Fax: (310) 618-2931

with a copy to: Attn: Ted Semaan
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.

21. 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.

22. 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.

23. 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.

24. 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.

25. TIME OF ESSENCE

Time is of the essence in the performance of this Agreement.

26. 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.

27. 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.

28. 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.

29. ATTORNEY'S FEES

Except as provided for in Paragraph 15, 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.

30. EXHIBITS

All exhibits identified in this Agreement are incorporated into the Agreement by this reference.

31. 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

Frank Scotto, Mayor

By: _____

ATTEST:

Sue Herbers, City Clerk

APPROVED AS TO FORM:

JOHN L. FELLOWS III
City Attorney

By: _____
Patrick Q. Sullivan
Deputy City Attorney

Attachments: Exhibit A: Bid

EXHIBIT A

Bid

[To be attached]

**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
MADISON STREET AND SKYPARK DRIVE RECONSTRUCTION
AND
MEADOW PARK PARKING LOTS REHABILITATION
B2014-29**

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 amends the Standard Specifications for Public Works Construction (latest 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.

SECTION E - SPECIAL PROVISIONS

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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 (e.g. Engineering Manager, Project Engineer or Inspector) and, 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.

SECTION 2 - SCOPE AND CONTROL OF THE WORK

2-1 AWARD AND EXECUTION OF THE 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 City does not guarantee their accuracy. 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, 900 Park Center Drive, Suite E, Vista, CA 92081, Phone: (760) 734 - 1113
- 2) Sections 56-2, 84, 85, 86 and 90-10 of the State of California Department of Transportation (Caltrans) Standard Specifications, 2010

2-5.2 Precedence of the 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 section 3-3, "Extra Work". 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:

9. Asphalt Concrete mix design (C2-PG-64-10)
10. Asphalt Concrete mix design (TYPE III-C3-PG-64-10)
11. Asphalt Concrete mix design (B-PG-64-10)
12. Crushed Miscellaneous Base mix design/properties. Source location and certificates from suppliers
13. Pedestrian Countdown Displays
14. Video Detection Equipment
15. Proposed haul route(s) (Material disposal and delivery)
16. Detectable Warning Surface (truncated dome) per Section 303-5.5.5
17. Parkway Landscape Materials (Madison Street and Skypark Drive)
18. Concrete Mix Design (per the latest edition of the Green book)
19. Paint material data for pavement striping and markings (Meadow Park Parking Lot)
20. Striping Material for Yellow and White Thermoplastic (Madison Street and Skypark Drive)
21. Traffic Signs
22. See section 208-1.2 and 302-15.3 for RCC submittals.

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

2-6 WORK TO BE DONE. Add the following:

Madison Street and Skypark Drive

Bid Schedule A option: The Work generally consists of AC pavement reconstruction; cold milling; grading; compacting sub base; placement of CMB; processing, placement and grading of cement treated soil and asphalt concrete; repair of concrete curb, gutter, driveways, sidewalk, access ramps, parkway landscaping, installing video detection system, pedestrian countdown units, traffic loop detector replacement, signing, striping, traffic control and all other incidental work in these Specifications and Plans; OR

Bid Schedule A-1 option: The Work generally consists of AC pavement reconstruction; cold milling; grading; compacting sub base; placement of CMB; asphalt concrete paving; repair of concrete curb, gutter, driveways, sidewalk, access ramps, parkway landscaping, installing video

detection system, pedestrian countdown units, traffic loop detector replacement, signing, striping, traffic control and all other incidental work in these Specifications and Plans; OR

Bid Schedule A-2 option: The Work generally consists of the AC pavement reconstruction; cold milling; grading; compacting sub base; placement of CMB; placement of a 6" RCC and 3" of A.C. (C2-PG-64-10) section; repair of concrete curb, gutter, driveways, sidewalk, access ramps, parkway landscaping, installing video detection system, pedestrian countdown units, traffic loop detector replacement, signing, striping, traffic control and all other incidental work in these Specifications and Plans.

Meadow Park Parking Lot

Bid Schedule B option: The Work generally consist of removal of a 4-foot wide section of existing asphalt concrete along both sides of the longitudinal gutters and adjacent to driveways and remove excess subbase to a total depth of 3 inches. Then compact the sub base and restore the 4-foot wide trench with Type B-PG-64-10; removal of existing concrete wheel stops; install a tack coat; installation of a 1.5 inch asphalt concrete (TYPEIII-C3-PG-64-10) overlay; and the installation of new concrete wheel stops.

The Work also includes sweeping before and after asphalt application; application of weed killer; removal of grease spots (by grinding); parking lot traffic control; preparing and updating construction schedules; posting signs for "NO PARKING" and arranging for towing of cars, if necessary; and adjusting manholes and covers to finish grades. Also, notifying the nearby residents and businesses of the construction.

The Work shall include the removal of loose gravel from surfaces, parking areas, gutters, sidewalks, driveways and parkways after asphalt application. This shall be accomplished by the use of hand brooms, blowers, automatic sweepers and/or similar tools.

The Work shall include the layout ("cat-track") and paint parking stalls. It also includes the replacement of signs.

Bid Schedule B-1option: The Work generally consist of removing the existing asphalt concrete surface and subbase to a depth of 3 inches in total, then compact the sub base and install a 3 inch asphalt concrete overlay (TYPEIII-C3-PG-64-10). It also includes the removal of existing concrete wheel stops and the installation of new concrete wheel stops.

All other work is identical to that specified in paragraphs 2, 3 and 4 in the above option.

2-9 SURVEYING.

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

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 at Contractor's own cost. Documentation shall be provided to the Engineer that the surveying has been completed. The Contractor shall be financially responsible for the surveyor to perform Corner Record documentation including submitting Corner Record forms in the Office of the County Surveyor prior to the start of construction and also prior to the completion of construction for the replacement of all survey monuments, lot stakes (tagged), centerline ties and benchmarks.

The Contractor shall not disturb survey monuments, lot stakes (tagged), centerline ties, or benchmarks without notifying the Engineer and having the Contractor's surveyor document the location for reestablishment at the completion of the contract. All surveying shall be done by a Registered Licensed Land Surveyor or a Registered Civil Engineer authorized to practice land surveying within the state.

If monuments and centerline ties are to be disturbed during work, 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, and the Corner Records shall be filed with the Los Angeles County Surveyor as well as the Engineer. Copies of the records shall be provided to the City. **Final payment will not be made until the aforementioned documentations are provided to the CITY.**

Payment for SURVEY MONUMENTS shall be per the Contract unit price and shall include full compensation for furnishing all labor, materials, equipments, tools and incidentals for doing all the work involved in preserving and/or constructing of 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, 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 curb and gutter and replace in kind features.

Add the following:

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 construction staking, professional services, office calculations, traffic control, furnishing all labor, materials, equipment, tools and incidentals, and for doing all work involved shall be considered as included in the price for which such work is appurtenant thereto, and no additional allowance will be made.

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.

Add the following subsections:

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, when applicable, the Special

Inspection Fees which will be charged at the following rates:

Mondays through Fridays	-	\$135.00 per hour
Saturdays, Sundays, Holidays	-	\$1,200.00 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.

Special Inspection Fees may be waived at the sole discretion of the Engineer, when appropriate.

2-11.2 Inspections During Construction. During the construction, the Contractor shall make the Work site available for inspections by any regulatory agency.

2-11.3 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 maintained prior to 8:30 A.M. and/or after 3:30 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 8:30 A.M. or after 3:30 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

3-2 CHANGES INITIATED BY THE AGENCY

3-2.1 General. Delete this subsection in its entirety.

3-2.2 Contract Unit Prices.

3-2.2.1 General. Replace the entire subsection with 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.

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

3-2.2.3. Decreases of More Than 25 Percent. 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 Section 3-3 as modified herein.

3-3.2.2 Basis for Establishing Costs. Replace the second paragraph of part (c) 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. Replace the entire subsection with 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.

(a) Work by Contractor. 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(a), 3-3.2.2(b), and 3-3.2.2(c).

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.

(b) Work by Subcontractor. When any part of the extra work is performed by a subcontractor, the markup established in 3-3.2.3(a) 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 parts (a) and (b) 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 MATERIAL 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 Section 6-6, "Delays and Extension of Time". 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 per Section 6-1, "Construction Schedule and Commencement of the Work". Some Utility companies will adjust their above ground infrastructure to finish grade. The Contractor is responsible for coordination with those companies at no cost to the City.

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 or 811 at least 48 hours prior to any excavation.

The Contractor shall be solely responsible to check all utility record maps, books, and/or other data in the possession of the CITY, other agencies, and/or all utility companies, and no allowance shall be made for any failure to have done so.

The Contractor shall pothole existing utilities as shown on the plans, as directed by the Engineer or as deemed necessary by the Contractor. The cost of potholing herein specified shall be included in the prices paid for other items of work and no additional compensation will be allowed.

Underground lines that are potentially hazardous such as oil company lines, natural gas mains, and electrical conduits will be carefully located by the owner as provided in the Standard Specifications. The Contractor shall take special precautions in determining the precise location and depth of these structures to insure that they will not be damaged by its operations.

Replace the last paragraph with the following:

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 Subsection:

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.

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.

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.

5-5 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. Replace the entire subsection with the following:

6-1.1 General. 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 6-1.2 and 6-1.3 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.

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 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 section 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) Required submittals, working and shop drawings shall be included as activities.
- 4) The procurement of construction materials and equipment with long lead times for deliveries shall be included as activities.
- 5) Work to be performed by subcontractors shall be identified and shown as work activities.
- 6) Start and completion dates of each activity shall be illustrated.
- 7) 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.

6-1.3 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 owners and to conform to the following:

Madison Street and Skypark Drive

1. The Contractor may not begin any pavement reconstruction activities until it has completed the installation of all new PCC improvements (i.e. curb/gutter, cross gutters, sidewalk, driveways, access ramps, etc. for the entire project).
2. Concrete 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 (Saturday, 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.
3. PCC construction - 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. 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.

4. Some of the driveways marked for removal are the only access points for a business. The Contractor must coordinate with the Engineer, businesses and property owners to reconstruct the driveways with the least impact on business. The Contractor could reconstruct a driveway on the weekend provided that the driveway is opened on the following Monday by 6:00 a.m. If not, a penalty may be assessed by the Engineer.
5. The Contractor is required to work on tree and stump removals per 300-1.3.2(d), sidewalk, access ramps, curb, gutter, cross gutters and driveway replacements in a continuous operation and simultaneously with the work in item 1 above.
6. Work is divided into 4 separate stages as shown on the Traffic Control plans. The Contractor must work in only one stage at a time. Refer to the Traffic Control Plans for additional requirements and sequencing of construction. The Contractor may have the opportunity to construct any or all of the phases in a complete closure. The contractor would need the approval of the project Engineer. All complete closures will only be available during the weekend starting traffic control set up Friday at 8pm and opening the street to traffic that Monday at 5am. The Contractor will coordinate with the project engineer, Torrance PD, Fire, the surrounding businesses and any other affected party.
7. All pavement milling/reconstruction/paving shall be complete in one phase prior to the start of work in any subsequent phase. However, when approved by the Engineer, the Contractor may begin pavement reconstruction in a subsequent phase, prior to the application of permanent thermoplastic striping in the completed phase. Accordingly, the Contractor is required to provide and maintain temporary striping and/or reflectorized yellow and white tabbing in the completed phase until such permanent thermoplastic paint is applied.
8. Pavement removal - All pavement removed shall be hauled off the Work site no later than the same day that the removal is performed.
9. The A.C. surface course shall be constructed per the phasing in the Traffic Control. The Contractor has the option to adjust the phasing but the plan must be submitted/approved by the Engineer.
- 10. The Contractor must allow a 7 day cure period for Cement Treated Soil and maintain, to the satisfaction of the Engineer, the traffic control devices throughout the cure period.**
11. The A.C. surface course shall be constructed per the phasing in the Traffic Control plans.
12. Within 4 working days following the installation of the final surface course in any Phase, the Contractor shall complete the adjustment of all manholes, valves and any other required surface facilities. Some Utility companies will adjust their above ground infrastructure and the Contractor will have to coordinate and account for it in their schedule.

13. Within 5 working days following the installation of the final surface course in any Phase, 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 markings no earlier than 7 calendar days following the installation of the final surface course in any Phase, but under no circumstances no later than 10 calendar days following the installation of the final surface course in any Phase.
14. All new traffic detector loops shall be installed PRIOR to the installation of permanent thermoplastic pavement markings.
15. Irrigation systems - Irrigation systems disrupted by the Contractor shall not be left inoperable for more than three working days.
16. All Work shall only be performed between the hours of 7:00 a.m. and 3:30 p.m. unless otherwise approved by the Engineer.
17. A move-in period of 5 calendar days will be allowed starting on the date in the Notice to Proceed.
18. Holiday Moratorium per 7-10.1.6. of these Special Provisions.
19. Refuse collection. Refuse collection days are established and will not be changed. The refuse and recycling is handled by various private companies. The Contractor will have to coordinate with those companies.

The Contractor must provide a stable driving surface on refuse collection day that can accommodate the weight of the refuse collection vehicle AND the refuse collection activity.
20. Stockpile area. Schedule shall indicate date for cleanup of stockpile area.
21. 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.

Meadow Park Parking Lots

1. The Contractor has the following options regarding the phasing of work. The first is a complete closure starting 8pm on a Friday and opening up by 6pm on a Sunday. The other option is for the contractor to separate the work into at least three phases (West Lot, North half of the East lot, and South half of the West lot). The Contractor can only work in one phase at a time (see attached map). For this option, the Contractor shall ensure the driveway at the East lot remain accessible to the public and the public is allowed to park safely in the areas not being worked on.
2. All Work shall only be performed between the hours of 7:00 a.m. and 3:30 p.m. unless otherwise approved by the Engineer. Contractor must inform local business of upcoming construction 72 hours before starting work.

3. The Contractor shall remove the existing concrete wheel stops and pins. The Engineer will evaluate all wheel stops to see if they are salvageable. The ones that are will be stockpiled and then delivered to the City Yard (20500 Madrona Ave., Torrance, CA 90603). The ones that are not salvageable and the pins will be the property of the Contractor and disposed of.
4. Pavement removal - All pavement as a result of cold milling shall be hauled off the Work site on the same day that the milling or excavation is performed.
5. Within 4 working days following the installation of the final pavement overlay, the Contractor shall complete the adjustment of all manholes and any other required surface facilities.
6. If the 3 day weekend closure is chosen, the "cat-tracking" must be installed by 6AM the following Monday. If the phasing approach is chosen, within 1 working day following the installation of the final surface course in any Phase, 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 markings no earlier than 7 calendar days following the installation of the final surface course in any Phase, but under no circumstances no later than 10 calendar days following the installation of the final surface course in any Phase.
7. After the final striping and markings are complete, the new concrete wheel stops shall be installed.
8. Irrigation systems - Irrigation systems disrupted by the Contractor shall not be left inoperable for more than three working days.

Should the Contractor fail to meet any one or more 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 any item 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, including, but not limited to, additional penalties and/or damages.

6-1.4 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 6-1.4 Updates shall be per the Contract Unit Price for MOBILIZATION/DEMobilIZATION. 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.

6-1.5 Order of Work. The Contractor shall order materials and equipment requiring a delivery delay upon receipt of a written notice from the CITY that the City Council has approved an Award of Contract. Contractor shall provide written proof(s) of timely material order(s) and shall include any delivery delays in the Construction Schedule.

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 100 total working days from the start date specified in the Notice to Proceed. Madison Street and Skypark Drive Reconstruction shall be completed within 75 working days and Meadow Park Parking Lot Rehabilitation shall be completed within 25 working days from the start date specified in the Notice to proceed.

6-8 COMPLETION, ACCEPTANCE AND WARRANTY. Replace the second paragraph 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.

Add the following subsection:

6-8.1 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 "\$500" in place of "\$250" as the amount of the liquidated damages per each consecutive calendar day.

SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

7.2 LABOR

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.

7-3 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.

7-4 WORKER'S COMPENSATION INSURANCE. Add the following after the first sentence of the second paragraph:

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

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.

Full compensation for complying with the above requirements shall be considered as included in the bid as an Allowance in the Bid Contract price for PERMITS AND FEES. The Contractor will be reimbursed for fees paid in obtaining permits for specific activities. The amount that shall be paid to the Contractor shall be the actual permit and inspection fees paid with no mark-up cost or extra costs, with the exception that the Contractor shall be responsible for any fees charged to re-inspect rejected or incomplete work.

Add the following subsections:

7-5.1 State Encroachment Permit. A State of California Department of Transportation (Caltrans) Encroachment Permit has been obtained by the CITY and is attached in the Appendices. 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 bid as an Allowance in the Bid Contract price for PERMITS AND FEES The Contractor will be reimbursed for fees paid in obtaining permits for specific activities. The amount that shall be paid to the Contractor shall be the actual permit and inspection fees paid with no mark-up cost or extra costs, with the exception that the Contractor shall be responsible for any fees 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 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.

Add the following Subsections:

7-8.1.1 Cleanup and Dust Control. 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.

7-8.1.2 Temporary Light, Power, and Water.

The Contractor shall obtain a construction water meter from the CITY Contacting the Community Development Department @ (310) 618 - 2833, Attn: Mike Ritchey. 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.

7-8.6 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. 2009-0009-DWQ. Dischargers obtaining coverage will file electronically for coverage under Order No. 2009-0009-DWQ. Order No. 2009-0009-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. 2009-0009-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), Notice of Termination (NOT), compliance and monitoring data and Annual Reports when required. 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 system.

Following construction and the Contractor's installation of any post-construction storm water Best Management Practices (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 system.

Full compensation for preparation, administration and all other incidental work related to the NOI, NOT, construction, and post-construction BMPs, sampling, analysis and reporting as required by Order No. 2009-0009-DWQ and all other related costs shall be considered as included in the bid for NPDES COMPLIANCE/ STORM WATER POLLUTION PREVENTION PLAN/BMPs for Madison Street and Skypark Drive & Meadow Park Parking Lot (Bid Schedule B-1) and MOBILIZATION/DEMobilIZATION for Meadow Park Parking Lot (Bid Schedule B).

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, citing 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:

CONSTRUCTION PRACTICES	Clearing, Grading and Excavating
	Water Conservation 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/ STORM WATER POLLUTION PREVENTION PLAN/BMPs for Madison Street and Skypark Drive & Meadow Park Parking Lot (Bid Schedule B-1) and MOBILIZATION/DEMobilIZATION for Meadow Park Parking Lot (Bid Schedule B).

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 ten (10) 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, revisions to the SWPPP, and all other related costs shall be considered as included in the bid price for NPDES COMPLIANCE/ STORM WATER POLLUTION PREVENTION PLAN/BMPs for Madison Street and Skypark Drive & Meadow Park Parking Lot (Bid Schedule B-1) and not needed for Meadow Park Parking Lot Bid Schedule B.

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 Torrance Customer Service Operations ("CSO") at (310) 921-6449. 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 paragraph:

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. (Madison Street and Skypark Drive) The Contractor shall be responsible for protecting or removal and storage of trash receptacles, bus benches, bus enclosures, newspaper boxes, mail boxes, etc. and coordination with the Owners as required throughout construction. Payment of such work shall be considered as part of bid item for MOBILIZATION/DEMobilIZATION (NOT TO EXCEED 5% OF TOTAL BASE BID PRICE).

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 Traffic and Access. Replace the fourth paragraph with the following:

Meadow Park Parking Lot

Vehicular and pedestrian access to all driveways shall be maintained, except when necessary construction precludes such access. When access to a driveway or pedestrian walkway is to be restricted due to the work, Contractor shall notify the Engineer 48 hours prior to the restriction.

Unless the Contractor makes other arrangements satisfactory to the Engineer, the Contractor shall provide and maintain safe, adequate vehicular access to all vehicles and pedestrians:

Madison Street and Skypark Drive

Vehicular and pedestrian access to all driveways shall be maintained, except when necessary construction precludes such access. When access to a driveway or pedestrian walkway is to be restricted due to the work, Contractor shall notify the Engineer 48 hours prior to the restriction.

For the driveway reconstructions and other work, the Contractor will coordinate with the Engineer and businesses and determine a date and time that affects normal business the least. If the contractor selects a concrete mix that has an admixture to accelerate the cure time, it must

comply with the specifications of the Greenbook (latest edition). The Contractor shall submit the mix design to the Engineer for approval.

Add the following before the last paragraph:

The Contractor shall provide the necessary measures to prevent public access to private property 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.
- (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 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.

Add the following subsections:

7-10.1.1 Traffic Control Plan (TCP) The approved TCP 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.

7-10.1.2 Minimum Requirements for Maintaining Traffic Flow. The Contractor shall observe the following minimum requirements:

Madison Street and Skypark Drive & Meadow Park Parking Lot

- 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) Access to businesses and residents shall be maintained at all times at locations where driveways are to be replaced.
- c) Any travel lane adjacent to the curb and within the work zone shall be, at a minimum, a twelve (12) foot-wide lane.
- d) Reduction in lane requirements may be afforded only with prior written approval from the Engineer.
- e) 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.
- f) 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.

Meadow Park Parking Lot

- a) The Contractor must provide access through and in the parking areas during non-working hours. Open trenches shall either be covered by steel plates, or ramped with CMB or temporary asphalt concrete. 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 CMB or temporary asphalt concrete, as appropriate, with a maximum of 1" to 12" slope in both longitudinal and transverse directions.

7-10.1.3 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 or parking lot to traffic. All pavement markers/delineation, including but not limited to lane lines, centerlines, directional arrows, pavement legends, parking lot striping, 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.

7-10.1.4 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.

7-10.1.6 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.

7-10.1.7 Trash Collection. Trash collection days are established and will not be changed. Consult the Engineer regarding trash pick up 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.

7-10.1.8 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 cover and protect existing valve and manhole covers, utility caps, and similar items from damage and discoloration

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

7-10.3 Street Closures, Detours, Barricades.

Add the following paragraph after the first paragraph:

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 City Engineer when such deviations are in the best interest of the City.

Replace the second paragraph with the following:

The Contractor shall notify the Engineer at (310) 781-6900, 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 following offices at least two working days in advance prior to any street closure, or partial closure, or restriction to access:

Torrance Police Department	(310) 618-5557
Torrance Fire Department	(310) 781-7040
Torrance Sanitation Division	(310) 781-6904
United States Post Office	(310) 222-5902
Torrance Transit Department (Bus Operations)	(310) 618-6927

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

Add the following:

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.

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.

Revise the final sentence of the third paragraph to include:

Except as modified hereinafter or within the Special Provisions.

7-10.3.1 Temporary Steel Plates. 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:

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).

7-10.5 Measurement & Payment

Full compensation for furnishing, installing, maintaining, replacing and removing any and all traffic control devices shall be considered as included in the Contract Lump Sum Price for TRAFFIC CONTROL

Add the following subsection:

7-15 PROJECT CONSTRUCTION SIGNS AND PORTABLE CHANGEABLE MESSAGE SIGNS.

The Contractor shall furnish and install signs at locations to be determined by the Engineer. The signs shall be in accordance with the sample shown in the Appendices.

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

The Contractor shall furnish and install six (6) 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 **ADDSCO** and be model DH500-ALS
3. Manufactured by **WANCO** and be model WVT3 Mini Three-Line Message

Contact BC Rentals at (714) 279-6868 or via <http://bctrffic.com/message-boards.htm> for rental or purchase information.

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 AND PAYMENT. Add the following sections:

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.

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 to be provided by the CITY.

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 be not more than five percent (5%) of the total contract bid and shall include the provisions of the Construction Schedule; Emergency Response Plan; site review; obtaining all permits, insurance, and bonds; moving onto the site all plant and equipment; furnishing and erecting plants, potholing, 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) Submittal and modification, as required, of the Construction Schedule.
- (b) Moving on to the site of all Contractor's plant and equipment required for the first month's operations.
- (c) Having the Contractor's Superintendent present at the job site full-time.
- (d) Establishing fire protection system.
- (e) Developing construction water supply.
- (f) Providing on-site sanitary facilities and portable water facilities, as required.
- (g) Arranging for and erection of Contractor's work and storage yard.
- (h) Submittal of all required insurance certificates and bonds, including subcontractors.
- (i) Obtaining all required permits.
- (j) Posting all OSHA required notices and establishment of safety programs.
- (k) Potholing and other research and review as necessary to verify site conditions and utility locations

- (l) Removals, cleanup, and restoration including but not limited to the removal of all USA and/or other painted markings on concrete or asphalt surfaces following best management practices. If the removal method chosen is by pressure washing, the catch basins shall be protected at all times. All water and debris resulting from this cleanup method shall be swept up and/or vacuumed. Alternatively, a wire brush and a graffiti removal spray can be used.

Madison and Skypark

Full compensation for Mobilization/Demobilization and all other related costs shall be per the Contract Lump Sum Price for MOBILIZATION/DEMobilIZATION (NOT TO EXCEED 5% OF TOTAL BASE BID PRICE), and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, necessary to complete the Work.

Meadow Park Parking Lot

Full compensation for Mobilization/Demobilization and all other related costs shall be per the Contract Lump Sum Price for MOBILIZATION/DEMobilIZATION (NOT TO EXCEED 5% OF TOTAL BASE BID PRICE), and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, necessary to complete the Work.

9-3.5 Noncompliance with Plans and Specifications. Add the following section:

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.

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, driveways, hardscape and other improvements shall be Crushed Miscellaneous Base (CMB) conforming to Section 200-2.4.

SECTION 201 – CONCRETE, MORTAR, AND RELATED MATERIALS

201-8 ROLLER COMPACTED CONCRETE (RCC)

201-8.1 Requirements. Roller Compacted Concrete (RCC) consists of aggregate, portland cement and when specified or approved for use, other supplementary cementitious materials (fly ash, slag), and water. RCC is proportioned, mixed, placed, compacted, and cured in accordance with these special provisions. RCC mixture shall be designed by the Contractor.

201-8.2 Submittals. The following shall be submitted in conformance with the requirements of these special provisions:

- 1) Submit certified test data for each proposed mixture at least 20 calendar days prior to beginning paving operations in accordance with the quality management plan from the declared independent testing laboratory. Include the following information for each mix design:
 - a. Manufacturer certifications of material compliance
 - b. Types, pit or quarry locations, producers' names, gradings, specific gravities, and evidence not more than 90 days old of aggregates demonstrating compliance with 201-1.2.2
 - c. Combined aggregate gradation
 - d. Quantity, types, manufacturing locations, shipping locations, and certificates of each cementitious material showing compliance with 201-1.2.1 and 201-1.2.5
 - e. Type(s), brand names, producers' names, manufacturer's technical data sheets, range of dosages, and certificates of chemical admixtures showing compliance with 201-1.2.4
 - f. Source of supply for water and ice
 - g. Optimum moisture content and maximum wet density
 - h. Strength testing results for 3, 7 and 28 days from trial mixtures and field test records.
- 2) Field quality control test results
- 3) Independent testing firm accreditation certificate

- 4) Shift reports from continuous mixing plants or batch tickets from batch plants

201-8.3 Quality Control and Assurance.

201-8.3.1 Independent Testing Firm.

Only use an independent testing laboratory meeting the requirements of ASTM C1077 for preparing, handling, coring, storing and testing concrete specimens. Obtain the written qualifications of the testing firm, indicating their compliance with ASTM E329. Obtain the most recent certificates of calibration for testing equipment, showing that the equipment has been calibrated at a minimum 12-month interval by devices of accuracy traceable to either National Bureau of Standards or an established value. Submit to the Engineer all certification records for the testing firm and equipment. Provide testing personnel access to the paving and plant sites for inspection and sampling of the RCC layer and constituent materials.

201-8.3.2 Quality Control At Mixing Plant. Conduct quality control testing at the mixing plant in accordance with the requirements in the below table. Obtain specimens, as required, for post-construction testing.

Item	Method	Frequency or Lot Size	Acceptance
Plant Calibration	ASTM C685 for volumetric batch or continuous mixer;	Prior to start-up, after equipment changes, and after shutdowns longer than 14 days	Material tolerances given in ASTM C685
Plant Calibration	ASTM C94 for central rotary drum mixer	Prior to start-up, after equipment changes, and after shutdowns longer than 14 days	Material tolerances given in ASTM C94

201-8.3.3 Quality Control At Placement Site. Conduct quality control testing during placing operations to ensure the RCC material is placed, compacted, finished and cured in accordance with the requirements in the below table. Obtain specimens, as required, for post-construction testing.

Item	Method	Frequency or Lot Size	Acceptance
RCC Moisture Content	ASTM C566	Sample at point of placement from initial truck load and as required	±0.5 to of optimum moisture content per ASTM D1557
Cylinders for Compressive Strength	ASTM C1435 for molding cylinders; ASTM C31 for curing and handling cylinders; and ASTM C39 for testing cylinders	Three sets of three cylinders for every 2,500 SY of paving, or one day of production, whichever is less.	In accordance with 201-1.1.5
RCC Temperature	ASTM C1064	Each time cylinders are molded	Between 55 and 90 degrees F

Prepare the test specimens under the direct observation of the Engineer or Engineer's representative. One strength test is the average strengths of three cylinders. Make additional

sets of cylinders for field curing in order to determine opening to traffic time. Retain the compressive strength test results for inspection by the Engineer.

If the compressive strength measured at 3 & 7 days indicates that the 28-day compressive strength will be less than 3500 psi, investigate the potential causes of the low strengths and report to the Engineer within 24 hours. If the compressive strength measured at 7 days indicates 28-day compressive strengths less than 3200 psi, immediately stop production and notify the Engineer. Do not resume production until the cause of the discrepancy has been determined to the satisfaction of the Engineer. The Engineer may adjust compressive strength targets at 7 days as production continues based on field experience.

201-8.4 Materials.

201-8.4.1 General. The Engineer will approve all materials to be used for RCC construction based on laboratory tests or certifications of representative materials that will be used in the actual construction.

201-8.4.2 Portland Cement. Provide in conformance with 201-1.2.1

201-8.4.3 Aggregates. Provide in conformance with 201-1.2.2 except replace the third paragraph with the following:

Aggregates shall be nonreactive and conform to one or both of the following:

- 1) When the aggregate is tested in conformance with the requirements in ASTM C1293, the average expansion at 1 year shall be less than or equal to 0.040 percent;
- 2) When the aggregate is tested in conformance with the requirements in ASTM C1260, the average of the expansion at 16 days shall be less than or equal to 0.15 percent.

Aggregates found to be potentially reactive may be used only upon written approval of the engineer.

201-8.4.4 Water. Provide in conformance with 201-1.2.3

201-8.4.5 Chemical admixtures. Provide in conformance with 201-1.2.4

201-8.4.6 Supplementary Cementitious Materials. Provide in conformance with 201-1.2.5

201-8.4.7 Mixture Design. Proportion one or more mixtures in conformance with 201-1.1.4 with the following modifications:

- 1) Minimum cement content shall be 450 lb/CY.
- 2) Fifteen test cylinders shall be molded from the trial batch containing the optimum moisture content determined from ASTM D1557. Five of the cylinders shall be tested at 3 days, five at 7 days, and five at 28 days after molding.
- 3) The trial batch, resulting in 15 test cylinders, shall be conducted three times at three different cement contents that envelope the average required compressive strength (design compressive strength plus overdesign margin) of the mixture.

201-8.4.7.1 Test for Roller Compacted Concrete. Provide in conformance with 201-1.1.5 except replace the first paragraph with the table in 201-8.3.3.

201-8.4.7.2 Minimum Compressive Strength. Use a mixture design that achieves a minimum compressive strength of 4,000 psi within 28 days when specimens prepared according to ASTM C 1435 are tested according to ASTM C39.

201-8.4.7.3 Compaction Characteristics. The optimum moisture density relationship of the RCC shall be determined in accordance with ASTM D1557 using the approved design mixture.

201-8.4.7.4 Combined Aggregate Gradation.

Combined aggregate must be graded within the limits shown in the following table:

Sieve Size	Lower & Upper Specification Limits 1/2 in (12.5 mm)		Lower & Upper Specification Limits 3/4 in (19.0 mm)	
1 in. (25 mm)				
3/4 in. (19 mm)			95.0	100.0
1/2 in. (12.5 mm)	81.0	100.0	70.0	95.0
3/8 in. (9.5 mm)	71.0	91.0	60.0	85.0
No. 4 (4.75 mm)	49.0	70.0	40.0	60.0
No. 8 (2.36 mm)	33.0	54.0	30.0	50.0
No. 16 (1.18 mm)	24.0	40.0	20.0	40.0
No 30 (600 μm)	15.0	30.0	15.0	30.0
No 50 (300 μm)	10.0	25.0	10.0	25.0
No. 100 (150 μm)	3.0	16.0	6.0	18.0
No 200 (75 μm)	0.0	10.0	0.0	8.0

201-8.5 Equipment.

201-8.5.1 Mixing Plant. Locate the mixing plant within a thirty-minute haul time from the point of RCC placement. Use only plants capable of producing an RCC pavement mixture in the proportions defined by the final approved mix design and within the specified tolerances. The capacity of the plant must be a minimum of 200 tons per hour and sufficient to produce a uniform mixture at a rate compatible with the placement equipment. If the plant is unable to produce material at a rate adequate to prevent unnecessary cold joints and frequent paver stoppages, the Engineer may halt production until such time that a plant of appropriate capacity is used. Have the plant inspected and approved by the Engineer prior to production of material under these specifications.

201-8.5.2 Pugmill Plant. Use only pugmill plants of the central plant type with a twin-shaft pugmill mixer, capable of continuous mixing, equipped with synchronized metering devices and feeders to maintain the correct proportions of aggregate, cement, pozzolan, and water. Other pugmill plant requirements are as follows:

- 1) Aggregate Storage: If previously blended aggregate is furnished, storage may be in a stockpile from which it is fed directly to a conveyor feeding the mixer. If aggregate is furnished in two size groups, follow proper stockpiling techniques to ensure aggregate separation.
- 2) Aggregate Feed Rate: Use aggregate bins with a feed rate controlled by a variable speed belt, or an operable gate calibrated to accurately deliver any specified quantity of material.

If two aggregate size stockpile sources are used, the feed rate from each bin must be readily adjustable to change aggregate proportions, when required. Feed rate controls must maintain the established proportions of aggregate from each stockpile bin when the combined aggregate delivery is increased or decreased.

- 3) **Cement and Pozzolan Material Storage:** Supply separate and independent storage silos for portland cement and pozzolan. At plants with two or more silos in which different types of cement or cementitious materials are stored, ensure that each silo has a sign at each fill inlet to reduce the potential for loading errors. Make the sign from a durable material, with minimum two-inch high by ¼-inch wide letters that are raised, indented, or cut. Ensure that the sign clearly identifies the material that is in the silo and may be easily read even when completely coated with dust. Flat signs with painted or applied letters are not acceptable.
- 4) **Preblended Portland Cement and Pozzolan:** If using preblended portland cement and pozzolan (such as fly ash or slag), employ blending equipment acceptable to the Engineer and demonstrate, with a testing plan, the ability to successfully produce a uniform blended material meeting the mix design requirements. Perform testing on at least a daily basis to ensure both uniformity and proper quantities.
- 5) **Cement and Pozzolan Feed Unit:** Provide a satisfactory means of dispensing portland cement and pozzolan, volumetrically or by weight, to ensure a uniform and accurate quantity of cementitious material enters the mixer.
- 6) **Water Control Unit:** Use a water control unit capable of measuring the required amount of water for the approved mix by weight or volume. Ensure that the unit is equipped with an accurate metering device. Vary the amount of water to be used only with the approval of the Engineer.
- 7) **Gob Hopper:** For continuous operating pugmills, provide a gob hopper attached to the end of the final discharge belt to temporarily hold the RCC discharge in order to allow the plant to operate continuously.
- 8) **Production Capacity:** The plant shall have a minimum manufacturer's rated capacity of 200 tons per hour

201-8.5.3 Rotary Drum Mixer. Provide a rotary drum batch mixer capable of producing a homogeneous mixture, uniform in color, and having all coarse aggregate coated with mortar.

Equip the mixer with batching equipment to meet the following requirements:

- 1) **Weighing Equipment:** Measure the amounts of cement, pozzolan, and aggregate entering into each batch of RCC by direct weighing equipment. Use only weighing equipment that is readily adjustable in order to compensate for the moisture content of the aggregate or to change the proportionate batch weights. Include a visible dial or equally suitable device that will accurately register the scale load from zero to full capacity. The cement and pozzolan may be weighed separately or cumulatively in the same hopper on the same scale, provided the cement is weighed first.
- 2) **Weigh Hoppers:** Use only bulk cement and pozzolan weigh hoppers that are equipped with vibrators to operate automatically and continuously while weighing hoppers are being dumped. Ensure that the weigh hopper has sufficient capacity to hold not less than 10 percent in excess of the cementitious material required for one batch.

- 3) **Water Metering:** Measure the amount of water entering each batch of RCC by weight or volume. Use only equipment capable of measuring the water to within a tolerance of plus or minus one percent and equipped with an accurate gauge or dial measuring device. Vary the amount of water to be used only with the approval of the RCE. During batching, admit water to the mixer only through the water measuring device and then only at the time of charging.
- 4) **Mixing Time:** Use only drum mixers equipped with an accurate clock or timing device, capable of being locked, for visibly indicating the time of mixing after all the materials, including the water, are in the mixer.
- 5) **Recharging:** Discharge all material in the drum before recharging. Ensure that the volume of mixed material per batch does not exceed the manufacturer's rated capacity of the mixer.

201-8.5.4 Haul Trucks. Use trucks for hauling the RCC material from the plant to the paver with covers available to protect the material from inclement weather. To ensure adequate and continuous supply of RCC material to the paver, have a sufficient number of trucks. If the number of trucks is inadequate to prevent frequent starts and stops of the paver, cease production until additional trucks are obtained.

201-8.6 Mixing Process. Conform to applicable sections of ASTM C94 and ASTM C685. Use the same mixture for the entire project unless otherwise stated in the project documents. If, during production, the source of portland cement, pozzolan, or aggregates is changed, then suspend production and submit a new mix design to the Engineer for approval. Do not exceed the manufacturer's rated capacity for dry concrete mixtures in the mixing chamber. Keep the sides of the mixer and mixer blades free of hardened RCC or other buildups. Routinely check mixer blades for wear and replace if wear is sufficient to cause inadequate mixing.

- 1) **Mixing Time:** Use a mixing time adequate to ensure a thorough and complete mixing of all materials.
- 2) **Mixture Ingredient Tolerances:** Ensure that the mixing plant receives the quantities of individual ingredients to within the following tolerances:

Material	Variation by Weight
Cementitious Materials	± 2.0%
Water	± 3.0%
Aggregates	± 4.0%

- 3) **Plant Calibration:** Prior to commencement of RCC production, carry out a complete and comprehensive calibration of the plant in accordance with the manufacturer's recommended practice and ASTM C685. Provide all scales, containers, and other items necessary to complete the calibration. After completion of the initial calibration, calibrate the plant periodically as directed by the Engineer.
- 4) **Daily Reports:** Supply daily plant records of production and quantities of materials used that day to the Engineer. These records may be used as a check on plant calibration.

201-8.7 Transportation. Transport the RCC pavement material from the plant to the areas to be paved in dump trucks equipped with retractable protective covers for protection from rain or excessive evaporation. Ensure that the trucks are dumped clean with no buildup or hanging of RCC material in the corners. Have the dump trucks deposit the RCC material directly into the hopper of the paver or into a secondary material distribution system that deposits the material into

the paver hopper. Dump truck delivery must be timed and scheduled so that RCC material is spread and compacted within the specified time limits.

SECTION 203 – BITUMINOUS MATERIALS

203-6 ASPHALT CONCRETE

203-6.1 General. Add the following:

Madison Street and Skypark Drive: Asphalt concrete shall be Class and Grade B-PG-64-10 for the base course and C2-PG-64-10 for surface course.

Meadow Park Parking Lot Asphalt concrete shall be Class and Grade B-PG-64-10 for the base course (Schedule B) and Type III-C3-PG-64-10 for overlay or surface course (Schedule B or B-1).

SECTION 209 – STREET LIGHTING AND TRAFFIC SIGNAL MATERIALS

209-5 TRAFFIC SIGNAL MATERIALS

209-5.8 Detectors

209-5.8.2 Inductive Loop Detectors.

Delete entire subsection and replace with Section 86-5.01A of the Caltrans Standard Specifications (latest edition).

Inductive Loop Detectors shall be Type E per Caltrans Standard Plan ES-5B

SECTION 210 – PAINT AND PROTECTIVE COATINGS

210-1 PAINT

210-1.6.1 General. Add the following:

All permanent striping and pavement markings shall be in accordance with the provisions of Section 84-3.02 of the Caltrans Standard Specifications.

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 any 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:

Pre-plant commercial fertilizer shall be granular 12-12-12 (N-P-K). Post plant fertilizer shall be 14-7-3. Slow release tablets shall be 12-12-12 (N-P-K). These materials are listed for bidding purposes, but may be replaced by the recommendations of the Agricultural Soil Suitability Report.

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;
and
- d) Uniformity of plant materials.

The Contractor shall notify the Engineer seventy-two (72) 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.

Add the following section:

212-1.6 Moisture Barrier.

212-1.6.1 PVC Liner. Liner to provide barrier between paved and landscape areas shall be polyvinyl chloride, 20 mils thickness, non-permeable plastic sheeting purchased and delivered in rolls, and protected from puncture.

SECTION 214 – PAVEMENT MARKERS

Delete the entire Section 214 and replace with Section 85 " Pavement Markers" Standard Specifications (latest edition)

85-1.06 Placement. Add the following:

The 50-foot long 4" solid white lines at intersections shall have a marker Type "G" installed at each end. These markers shall be placed on the line.

Markers shall not be installed on bike lane striping.

Fire hydrant, type 1, two way blue reflective pavement markers shall also be include where applicable. The blue reflective pavement makers need to be in conformance section 214 and 312 of the Standard Specification or as directed by the Engineer.

85-1.09 Payment. 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 markers, 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 price for SIGNING, THERMOPLASTIC STRIPING, MARKINGS AND PAVEMENT MARKERS as described in Section 84-2.06 of these Special Provisions.

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, all excess excavation material, trees and plants, debris, interfering portions of curb, gutters, asphalt and PCC concrete pavements and sidewalks (including base, where applicable), and 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.

The limits for sidewalk, access ramps, curb, curb & gutter and driveways shown on the

plans are approximate. Prior to commencing removal operations, the Contractor shall meet with the Engineer to verify the limits of removals and 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 prior written approval is obtained 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. If a tree is to be removed and no tree installed in its place, the contractor must match the surrounding landscape such as installing grass if there is grass in the parkway.

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.
- 5) If a tree is removed and is not marked on the plans for a new tree, the contractor shall backfill and grade to finish level by the end of the workday. Sod shall be installed to cover the hole. The sod type shall match existing adjacent grass type.

(e) **Miscellaneous Removals and Relocations.** This work shall include all removals not specifically listed in the Proposal or otherwise covered by these Specifications, and all necessary relocations and restorations of walls, fences, plants, hardscape, signs and other items, whether shown on the Plans or not, and as necessary to complete the improvements.

Add the following section:

300-1.3.3 Construction and Demolition Debris Recycling.

300-1.3.3.2 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.

300-1.3.3.2 Definitions.

Shall be as defined in the TORRANCE MUNICIPAL CODE, DIVISION 4, CHAPTER 3, ARTICLE 8 (or Section 43.8.1).

300-1.3.3.3 RECYCLING SUMMARY.

The Contractor shall prepare and submit a Recycling Summary report using the form included in the Appendices 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:

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 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.
- c) **Trees.** Payment for tree removals and disposal shall be per the "REMOVE EXISTING TREE, ROOT PRUNE AND REGRADE TO SIDEWALK AND TOP OF CURB SLOPE PER CERTIFIED ARBORIST RECOMMENDATIONS" 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 match of existing parkway and replanting of removal areas; and other appurtenant work.
- d) **Miscellaneous Removal and Relocations.** Payment for miscellaneous removals and relocations shall be per the Contract Unit Price, and shall include full compensation for excavation, backfilling, grading, trimming plants, import if required, placing of top soil, disposing of surplus material and 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 temporary painted striping, permanent thermoplastic striping, thermoplastic pavement markings and 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. Payment for removal and replacement shall be made as Extra Work

or Force Account Work.

300-2.9 Payment. Add the following:

Payment for Unclassified Excavation shall be measured and paid per Cubic Yard (CY) for UNCLASSIFIED EXCAVATION, and shall include any sawcutting, removal of underlying subgrade and base, disposal, subgrade preparation, grading and compaction, and labor and equipments, and incidentals, necessary to complete the Work.

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, spandrels 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. (Madison Street and Skypark Drive) Delete the second paragraph and add the following:

Payment for CMB under AC pavement shall be measured and paid per Contract Unit Price for CRUSHED MISCELLANEOUS BASE (CMB) and shall include furnishing, installing, grading and compaction, and labor and equipments, and incidentals, necessary to complete the Work.

Payment for construction of CMB under curb, curb and gutter, driveways, local depressions, sidewalks, stained median concrete paving and access ramps shall include grading and compaction, and labor and equipments, and incidentals, necessary to complete. The work be considered as included in the unit price bid for the item of work and no additional compensation will be allowed therefore.

301-3 PORTLAND CEMENT TREATED MIXTURES. (Madison Street and Skypark Drive)

301-3.1 Soil-Cement

301-3.1.1 General Add the following sentence at the end of the paragraph.

A cement content of 5% unless otherwise directed by the Engineer. It shall be achieved by the mix-in place method.

Cement Treated Soil Construction Steps

- 1) Cold Mill existing asphalt
- 2) Remove excess materials to depth marked on plan. Note: interim grade should include allowance for panned pavement section and anticipated volume changes during mixing.
- 3) Spread Portland cement at a rate of 5.6 pounds per square foot.
- 4) Mix material layer to a depth specified on plan below the interim surface.
- 5) Mix material with water as required to obtain a 10% moisture content.
- 6) Re-grade and compact material to the design line and grade within 1 1/2 hours of introduction of the water. Note: Final grading should be performed as a cut. No silver fills should be permitted.
- 7) Apply asphalt emulsion or cut back asphalt curing seal and protect grade for 7 days prior to operating heavy equipment and/or trucks. Note: In lieu of a curing seal, keep layer surface moist for a 7-day cure period. No traffic is permissible during the curing period.
- 8) Construct new asphalt pavement section per plan.

301-3.1.12 Measurement and Payment. Replace the last sentence of the paragraph with the following:

Full compensation for Portland Cement Treated Soil shall include all labor, materials and equipment for preparing , mixing, spreading, shaping, grading, placing, compacting, trimming, finishing, curing, applying asphalt emulsion or cut back asphalt curing seal and shall be considered as included in the Contract Unit Prices for MIX 5% PORTLAND CEMENT BY WEIGHT PER SECTION ON PLAN. REMOVE AND DISPOSE CEMENT TREATED SOIL AS NEEDED TO CONSTRUCT PROPOSED AC PAVEMENT SECTION.

SECTION 302 – ROADWAY SURFACING

302-1 COLD MILLING OF EXISTING PAVEMENT

302-1.1 General. Add the following after the first paragraph:

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. Cold milling shall be to the depth as specified on the plans or directed by the Engineer. 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. There are areas within the project that require cold planing which are inaccessible to the type of milling machine as described herein above. Some of these areas include local depressions, curb return, curbs without gutters, utility manholes and vaults. The Contractor shall be required to use a smaller hand machine or other device to cold plane the required horizontal limits and depth at those locations.

Add the following after the third paragraph:

The Contractor shall assume ownership of all materials removed during the milling process, including any foreign debris existing within or on the pavement, and shall haul these materials to an approved disposal site or to his own storage yard.

The Contractor shall apply a tack coat prior to placing the AC overlay as described in Section 310-5.4, below. Prior to applying the tack coat, all milled areas, including joints and cracks, shall be cleaned with a vacuum type street cleaning equipment.

302-1.11 Measurement. Replace the entire subsection with the following:

Cold milling will be measured by the square foot.

302-1.12 Payment. Replace the entire subsection with the following:

Madison Street and Skypark Drive

Payment for cold milling shall be per Square Foot (SF) per COLD MILL EXISTING ASPHALT (VARIES 3" TO 3.5" THICK) 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 as specified in 302-5.2.5.

Meadow Park Parking Lot

Bid Schedule B

Measurement & Payment for Unclassified Excavation costs shall be measured and paid per Square Foot (SF) for REMOVE EXISTING ASPHALT CONCRETE AND UNCLASSIFIED MATERIALS TO A DEPTH OF 3 INCHES (WIDTH 4 FEET TYP.) COMPACT EXISTING SUBBASE TO 95% COMPACTION, and shall include sawcutting, removal of AC and base (if necessary), disposal, subgrade preparation, grading and compaction, and labor and equipments, and incidentals, necessary to complete the Work.

Bid Schedule B-1

Measurement & Payment for Unclassified Excavation costs shall be measured and paid per Square Foot (SF) for REMOVE EXISTING ASPHALT CONCRETE (VARIES 1.5 TO 3 INCHES) AND UNCLASSIFIED MATERIALS TO A DEPTH OF 3 INCHES. REGRADE AND COMPACT EXISTING SUBGRADE TO 95% COMPACTION, and shall include sawcutting, removal of AC and base (if necessary), disposal, subgrade preparation, grading and compaction, and labor and equipments, and incidentals, necessary to complete the Work.

302-5 ASPHALT CONCRETE PAVEMENT

302-5.4 Tack Coat. Add the following paragraph:

A Tack Coat shall be applied between asphalt concrete and cement treated soil or roller compacted concrete. A Tack Coat shall be applied between the AC base and AC finish courses when the finish course is not placed immediately after the base course, and to existing paved surfaces where new asphalt concrete overlaps or abuts existing pavement.

The work be considered as included in the unit price bid for the item of work and no additional compensation will be allowed therefore.

302-5.5 Distribution and Spreading. Delete the fourth paragraph and substitute the following:

Asphalt concrete shall not be placed until the atmospheric temperature is a minimum of 10°C (50°F) and rising, and the surface temperature of the underlying material is a minimum of 4°C (40°F). Asphalt concrete shall also not be placed during unsuitable weather.

Fully automatic screeds will be required on this Project. A fully automatic screed shall have a sled, 9.1m (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 substitute with the following:

TABLE 302-5.5(A)

Specified Total Thickness of Pavement		Required Number of Courses	Class Of Mixture
Greater Than mm(Inches)	But Not More Than mm(Inches)		
0	25mm (1)	1	D2-PG 64-10
25mm (1)	38mm (1-1/2)	1	D2-PG 64-10
38mm (1-1/2)	75mm (3)	1	C2-PG 64-10
75mm (3)	100mm (4)	2	Base Course - B-PG 64-10 Finish Course - C2-PG 64-10 or as directed
100mm (4)	-	2 or more	Base Course - B-PG 64-10 Other Courses - C2 -PG 64-10 or as directed

302-5.8 Manhole (and Other Structures). Add the following:

Contractor shall be required to coordinate with the utility companies. Some utility companies will adjust their above ground infrastructure.

Add the following subsection:

302-5.8.1 Payment.

Measurement & Payment for adjusting utility covers to grade lot shall be considered as included in the Contract Unit Price per Each Item (EA) for ADJUST VALVE FRAME AND COVER TO FINISH GRADE, and ADJUST MANHOLE AND COVER TO FINISH GRADE and shall include but not be limited to all site preparation, lowering of the utility (as applies), protection of the utility, raising of the utility, including abandoned or owned utilities and vault frames. This includes all necessary disposals and material including asphalt, PCC and base material necessary to fully comply with these specifications, labor and equipment.

302-5.9 Measurement and Payment

Madison Street and Skypark Drive

Payment for Asphalt concrete pavement shall be per the Contract Unit Price per ton as measured by the delivered and installed material tickets as approved by the construction inspector, and shall include subgrade and base preparation, base course, leveling course, tack coat, and all work, labor and materials 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 to which it is appurtenant.

Meadow Park Parking Lot

Bid Schedule B

Payment for Asphalt Concrete pavement (Type B-PG-64-10) used for the reconstruction areas shall be per the Contract Unit Price per ton for "INSTALL ASPHALT CONCRETE (TYPE B-PG-64-10) FOR THE RECONSTRUCTION AREAS." including all work, labor and materials 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 to which it is appurtenant.

Payment for Asphalt Concrete pavement (Type III-C3-PG-64-10) used for the overlay shall be per the Contract Unit Price per ton for "INSTALL ASPHALT CONCRETE (TYPE III-C3-PG-64-10) FOR THE 1.5 INCH OVERLAY." including tack coat, and all work, labor and material 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 to which it is appurtenant.

Bid Schedule B-1

Payment for Asphalt Concrete pavement (Type III-C3-PG-64-10) used for the overlay shall be per the Contract Unit Price per ton for "CONSTRUCT A 3-INCH THICK ASPHALT CONCRETE OVERLAY. (TYPE III-C3-PG-64-10)." including tack coat, and all work, labor and material 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 to which it is appurtenant.

302-15 JOINTED PLAIN CONCRETE PAVEMENT WITH ROLLER COMPACTED CONCRETE (JPCP-RCC)

302-15.1 General. Section 302-15 includes specifications for constructing JPCP with roller compacted concrete (JPCP—RCC). JPCP-RCC shall be constructed of roller compacted concrete prepared as prescribed in 201-8 Roller Compacted Concrete.

Ensure that the JPCP-RCC conforms to the lines, grades, thickness, and typical cross section shown in the plans or otherwise established by the Engineer.

JPCP-RCC shall be removed in accordance with 300-1.3.

302-15.2 Quality Assurance.

302-15.2.1 Prequalification.

Submit the information required in 302-15.2.1.1 or 302-15.2.1.2 for prequalification to perform the work on this project.

302-15.2.1.1 Completed Project Listing. Provide evidence of successful installation of JPCP-RCC on one prior project of comparable size and application. Include a brief project description for each project as well as the final contract amount, the owners name and contact information and the design engineer's name and contact information for each project listed.

302-15.2.1.2 Training. Provide evidence of roller compacted concrete pavement training that includes the following elements:

- 1) At least 16 hours long involving classroom training on RCC fundamentals and field training on RCC production and placement as well as field training
- 2) Includes hands-on placement of at least 667 square yards of JPCP-RCC at the training facility or location outside of the City's right-of-way with a thickness of 6 inches or greater using the same type of equipment proposed for the project work.
- 3) Completed at least 7 days before you start paving activities

Provide an instructor who is experienced with the specified pavement construction methods, materials, and tests. The instructor must be neither your employee nor a City field staff member. Upon training completion, the instructor must issue a certificate of completion to each participant.

302-15.2.2 Quality Management Plan. Submit a quality management plan to the Engineer at least 30 days prior to start of paving operations. As a minimum include the following information in the quality management plan:

- 1) Organizational chart that identifies the key individuals assigned to production and placement operations. Include the project manager, project superintendent, RCC production supervisor and quality control manager, or equivalents. Include all appropriate contact data and the chain of command for decision-making.
- 2) List of subcontractors, including proposed job site personnel, for any construction operations.
- 3) Identification of the independent testing firm, including personnel for both laboratory and field testing operations.
- 4) Construction schedule for all JPCP-RCC work.
- 5) List of all mixing, hauling, placing, compaction, curing and sawing equipment with manufacturer's data, specifications and certifications.
- 6) Outline of procedures for calibrating the mixing plant and monitoring materials during construction.
- 7) Plan for locating the mixing plant, required haul times to the furthest location of the placement, and set-retarding admixtures, if required to facilitate the delivery logistics.
- 8) The proposed placement pattern showing:

- 9) Lift thicknesses (if multiple lifts are necessary).
- 10) Paving width and staging plan.
- 11) Direction of paving operation.
- 12) Daily production, including trucking, placement and production rates.
- 13) Planned longitudinal and transverse cold joint locations.
- 14) Planned contraction joint locations for intersections and other than standard contraction joint spacing areas.
- 15) Location of mixing plant, cement and aggregate storage and water supply on or off site.
- 16) Certification for aggregate source, quality and sizing as required by the appropriate material specification.
- 17) Certification of all cementitious materials and chemical admixtures as required by the appropriate material specification.
- 18) If placement conditions and ambient temperature could result in concrete temperatures exceeding 90 degrees F or less than 40 degrees F, outline of procedures and methods for curing and weather protection for cold, hot, and rainy conditions.
- 19) Mixture design

302-15.2.3 Pre-Construction Meeting. Schedule a pre-construction meeting with the Engineer after submitting the quality management plan and prior to installation of a test section or the start of construction. Include project personnel identified in the quality management plan in the meeting, including but not limited to: general contractor representative, sitework contractor, RCC paving contractor, RCC plant manager, and construction testing laboratory representative.

302-15.3 Submittals. The following shall be submitted in conformance with the requirements of these special provisions:

- 1) Quality management plan
- 2) Completed JPCP-RCC project listing or training certificates for the proposed paving crew and instructor qualification.
- 3) Manufacturer's data and specifications for mixing plant, hauling, placing, spreading and compaction equipment
- 4) Layout of plant showing location of each aggregate storage bin, each cementitious material bin, water supply and mixing plant.
- 5) Methods of handling, storing, delivering and mixing of materials.
- 6) Type of curing compound to be used as well as application technique

302-15.4 Equipment.

302-15.4.1 General. Construct roller compacted concrete with any combination of equipment that will produce a completed pavement meeting the requirements for mixing, transporting, placing, compacting, finishing, and curing as provided in these special provisions. The Contractor, when submitting his bid for work under this contract, shall at the same time submit a list of equipment available and ready for use on the contract and he shall further certify that the equipment listed meets the requirements of these special provisions.

302-15.4.2 Paver. Place JPCP-RCC with high-density screed pavers subject to approval by the Engineer. Standard asphalt pavers may not be used. Use only pavers equipped with compacting devices including tamping bars, dual pressure bars, and vibrating screeds capable of producing an JPCP-RCC with a minimum of 90 percent of the maximum wet density in accordance with ASTM D 1557, prior to any additional compaction. Ensure that the paver is of suitable weight and stability to spread and finish the RCC material, without segregation, to the required thickness, smoothness, surface texture, cross-section, and grade.

302-15.4.3 Compactors. Use self-propelled steel drum vibratory rollers having a minimum static weight of 10 tons for primary compaction. For final compaction, use either a steel drum roller, operated in a static mode, or a rubber-tired weighing between 3 and 8 tons. Only use walk-behind vibratory rollers or plate tampers for compacting areas inaccessible to large rollers.

302-15.4.4 Water Trucks. Keep at least one water truck, or other similar equipment, on-site and available for use throughout the paving and curing process. Equip such equipment with a spreader pipe containing fog spray nozzles capable of evenly applying a fine spray of water to the surface of the JPCP-RCC without damaging the final surface.

302-15.4.5 Inspection of Equipment. Before start-up, the Contractor's equipment will be carefully inspected. Should any of the equipment fail to operate properly, cease work until the deficiencies are corrected.

302-15.4.6 Access for Inspection and Calibration. Provide the Engineer or Engineer's representative access at all times for any plant, equipment, or machinery to be used in order to check calibration, scales, controls, or operating adjustments.

302-15.5 Construction Requirements.

302-15.5.1 Test Section. No less than seven days prior to production of RCC for the project, the Contractor shall construct a test section of minimum dimension of 2000 square feet meeting the acceptance requirements detailed in this specification. This test area is to be installed using the mixing plant, equipment, and methods to be used in the final construction. If the test area complies with the acceptance testing, it may be incorporated into the work. The Contractor shall cooperate fully with the Engineer during construction and testing of test area. The Contractor shall construct the test area at location selected by the Contractor and approval by the Engineer, to resolve anticipated problems with equipment, mix behavior or compaction prior to starting the paving operation. Test area shall be constructed with more than 1 lane, one or more longitudinal construction joints, and one or more transverse construction joints so that joint finishing techniques can be established. During construction of test area, the Contractor shall establish optimum rolling pattern by taking nuclear density meter readings and observations to:

Determine sequence and number of passes

Determine correct operating characteristics of vibratory rollers

Determine maximum density of RCC mix

Ensure smooth surface finish

302-15.5.2 Preparation of Subgrade. Before RCC production begins, the area to be paved shall be graded and shaped to the lines and grades as shown in the Plans or as directed by the Engineer. During this process any unsuitable soil or material shall be removed and replaced with acceptable material. The subgrade shall be uniformly compacted in accordance with 301-1. The Contractor shall check for any soft or yielding subgrade areas by proof rolling with a loaded dump truck or pneumatic-tire roller over the entire area to be paved. All soft or yielding subgrade areas shall be corrected and made stable before JPCP-RCC construction begins.

Removing and replacing unsuitable material will be considered extra work. Payment for removing and replacing unsuitable material shall be made in conformance with 3-3.

302-15.5.3 Placing.

Subbase Condition: Prior to JPCP-RCC placement, ensure that the surface of the subbase is clean and free of foreign material, ponded water, and frost. Ensure that the subbase is uniformly moist at the time of JPCP-RCC placement. If sprinkling of water is required to remoisten certain areas, ensure that the method of sprinkling will not form mud or pools of freestanding water. Correct soft or yielding subbase areas prior to placement of JPCP-RCC as specified in 302-15.4.2 above.

302-15.5.3.1 Weather Conditions.

Cold Weather Precautions: Except by specific written authorization of the Engineer or designated representative, concrete shall not be placed when the temperature is below 40°F (4.5°C) and falling but may be placed when the temperature is above 35°F (1.7°C) and rising. The JPCP-RCC shall not be placed on any subgrade or subbase layer with a temperature below 35°F (1.7°C). The temperature measurement will be taken in the shade and away from artificial heat.

Hot Weather Precautions: During periods of hot weather or windy conditions, take special precautions to minimize moisture loss due to evaporation. Cooling of aggregate stockpiles by shading or the use of a fine mist may be required. Protective covers are required on dump trucks. Keep the surface of the newly placed JPCP-RCC continuously moist with fog sprayers until the curing compound can be placed.

Rain Limitations: Conduct no placement of JPCP-RCC during rainy conditions sufficient to be detrimental to the finished product. Placement may continue during light rain or mists provided the surface of the JPCP-RCC is not eroded or damaged in any way. Use dump truck covers during these periods. The Engineer may terminate paving at any time when, in the Engineer's judgment, the rain is detrimental to the finished product.

302-15.5.3.2 Paver Requirements. Place all JPCP-RCC with an approved paver as specified in 302-15.3.2 and also meet the following requirements:

- 1) Filling the Paver: Do not allow the quantity of RCC material in the paver to approach empty between loads. Maintain the material above the auger at all times during paving.
- 2) Stopping the Paver: Ensure that the paver proceeds in a steady, continuous operation with minimal starts and stops, except to begin a new lane. Maximum paver speed during lay down is 10 feet per minute.

- 3) Surface Condition: Ensure that the surface of the JPCP-RCC is smooth, uniform, and continuous without excessive tears, ridges, or aggregate segregation once it leaves the paver.

302-15.5.3.3 Inaccessible Areas. Pave all areas inaccessible to either roller or paver with cast-in-place concrete meeting the compressive strength requirements of these special provisions, alternatively these areas may be placed by hand and compacted with walk-behind vibratory rollers or plate tampers.

302-15.5.3.4 Adjacent Lane Pavement. Place adjacent paving lanes within 60 minutes. If more than 60 minutes elapses between placement of adjacent lanes, the vertical joint must be considered a cold joint and prepared in accordance with 302-15.4.5 below. At the discretion of the Engineer, this time may be increased or decreased depending on ambient conditions of temperature, wind, and humidity. Multiple pavers may be used in tandem to reduce the occurrence of cold joints.

302-15.5.3.5 Lane Width. The maximum lane width is 25 feet without prior approval from Engineer

302-15.5.3.6 Lift Thickness. Lift Thickness of compacted JPCP-RCC shall be as indicated on the Plans. The maximum lift thickness of compacted JPCP-RCC shall be 9 inches. If the plan thickness for the pavement exceeds 9 inches, the compacted layer thickness shall be one half of the plan thickness. In no case should the compacted layer thickness exceed 9 inches. No lift shall be less than 4 inches. The bottom layer shall be compacted to specified minimum density before the following layer is placed.

302-15.5.3.7 Multi-Lift Construction. Not more than 60 minutes shall elapse between the start of moist mixing and the end of compaction of any load of RCC in multi-layer construction. Where two or more layers are to be constructed consecutively, no more than 120 minutes shall elapse between the start of moist mixing of the material for the bottom layer and completion of finish, grading, and compaction of the top layer. No grading (or operating graders), compacting or finishing shall be allowed after the specified times have elapsed. For multi-layer construction, the surface of the underlying layers shall be kept moist by fog-spray until covered with the next layer.

302-15.5.3.8 Hand Spreading. Broadcasting or fanning the RCC material across areas being compacted is not permissible. Such additions of materials may only be done immediately behind the paver and before any compaction has taken place. Scarify all areas that require broadcasting or fanning of RCC. The surface must be scarified at least one inch deep prior to broadcasting fresh RCC over the top. Any segregated coarse aggregate shall be removed from the surface before rolling.

302-15.5.3.9 Segregation. If segregation occurs in the JPCP-RCC during paving operations, placement shall cease until the cause is determined and corrected to the satisfaction of the Engineer. If the segregation is judged by the Engineer to be severe, remove and replace the segregated area at no additional cost to the Owner.

302-15.5.4 Compaction.

302-15.5.4.1 Time to Start of Compaction. Ensure that compaction begins with the placement process and is completed within 60 minutes of the start of the mixing at the plant. The time may be increased or decreased at the discretion of the Engineer depending on ambient conditions of

temperature and humidity. Do not permit delays in rolling unless approved by the Engineer. Plan operations and supply sufficient equipment to ensure that these criteria are met.

302-15.5.4.2 Rolling. Determine the sequence and number of passes by vibratory and non-vibratory rollers to obtain the specified density and surface finish. Only operate rollers in the vibratory mode while in motion. Steel drum, combination and Rubber-tire rollers operated in static mode may be used for final compaction. Use additional rollers if specific density requirements are not obtained or if placing operations get ahead of the rolling operations.

302-15.5.4.3 Rolling Longitudinal and Transverse Joints. For fresh joints, do not operate the roller within 2 feet of the edge of a freshly placed lane until the adjacent lane is placed. Then, roll both edges of the two lanes together within the allowable time. If a cold joint is planned, then roll the complete lane and follow cold joint procedures as specified in 302-15.4.5.

302-15.5.4.4 Inaccessible Areas. Compact areas inaccessible to large rollers using walk-behind rollers or hand tampers.

302-15.5.4.5 Density Requirements. Field density tests will be performed every 1500 SY with a minimum 2 tests locations per day as soon as possible in Accordance with ASTM C1040 (Direct transmission mode), but no later than 30 minutes after the completion of the rolling. Only wet density shall be used for evaluation. The required density shall be a minimum of 98 percent of the maximum laboratory density obtained according to ASTM D1557 based on an average of 4 consecutive field density tests with no test below than 96%. If “breakdown” of the mixture is noted at lower density levels than 98 percent of the maximum laboratory density, then the minimum required density may be lowered at the discretion of the Engineer. The in-place density and moisture content may be determined with a nuclear moisture-density gauge. The gauge must be calibrated with oven dried samples per ASTM C566 if it is to be used for the determination of moisture content. JPCP-RCC properly placed and compacted, but not meeting the density requirements, shall be cored according to ASTM C42 and tested according to ASTM C39 at the Contractor's expense. If the tested area achieves 28-day design strength, it will be paid at the full unit price. If the tested area indicates strength less than 3500 psi but greater than 3150 psi, payment will be made as follows:

Compressive Strength (psi)	Price Reduction (percent of unit bid price)
3300-3499	5
3150-3299	15

If the cores indicate strengths less than 3150 psi at 28 days or longer, the Engineer will evaluate the results and may reject the affected area and require removal and replacement or elect to pay at a reduced rate.

302-15.5.5 Joints.

302-15.5.5.1 Fresh Vertical Joints. A joint is considered a fresh joint when an adjacent JPCP-RCC lane is placed within 60 minutes of placing the previous lane or as specified by the Engineer based on ambient conditions. Fresh joints do not require special treatment.

302-15.5.5.2 Cold Vertical Joints. Any planned or unplanned construction joints that do not qualify as fresh joints are considered cold joints. Prior to placing fresh RCC mixture against a compacted cold vertical joint, thoroughly clean the cold joint of loose or foreign material and curing

compound with water blasting. Wet the vertical joint face and maintain it in a moist condition immediately prior to placement of the adjacent lane.

- 1) **Sawing Cold Vertical Joints:** For uncompacted surfaces or slopes more than 15 degrees from the vertical, cut the joint vertically for the full depth. Within 2 hours of final compaction, the edge of a cold joint may be cut with approved mechanical equipment. For edges cut after 2 hours, sawcut to the full depth of the pavement. Demonstrate any modification or substitution of the sawcutting procedure to the Engineer for approval prior to use. In no case allow cutting of the edge to cause raveling or tearing of the surface. If the cold joint exhibits spalling or deterioration, the concrete shall be sawed full depth at a minimum 6 inches behind the spalling to create a new cold vertical joint. Moisten the cut edge immediately prior to placement of the adjacent lane.

302-15.5.5.3 Isolation Joints at Manholes (and Other Structures). Line structures such as manholes, valves, or concrete curb and gutter with premolded joint filler in conformance with 201-3 to create adequate isolation.

302-15.5.5.4 Contraction Joints. Construct transverse contraction joints in the JPCP-RCC by sawing. Only soft-cut or early entry saws shall be utilized as soon as possible behind the rolling operation and set to manufacturer's recommendations. Saw cut timing shall be optimized to avoid raveling the joint, but before random cracking begins. Cut all joints to a minimum 1 inch deep to a single saw blade width. Joints should be spaced at intervals equal to 24 times the nominal pavement thickness in inches as long as random cracking is controlled, otherwise the joints should be spaced at a closer interval. This joint spacing should be followed unless otherwise indicated on the Plans or directed by the Engineer. The joints will remain the width of a single saw cut and filling or sealing is not required.

For intersections and other areas of irregular shape, where the above standard contraction joint spacing would not adequately control cracking, prepare a jointing plan for the approval of the Engineer.

302-15.5.5.5 Expansion Joints. Expansion joints shall be installed as shown on the plans.

302-15.5.6 Finishing. Ensure that the finished surface of the JPCP-RCC, when tested with a 10-foot straightedge or crown surface template, does not vary from the straightedge or template by more than 1/4 inch at any one point and shall be within 5/8 inch of the specified finished grade. The 10-foot straightedge shall be furnished by the Contractor and shall be at the Work site prior to the commencing of the placing of the concrete.

302-15.5.6.1 Defective area Correction for Smoothness. Correct smoothness deficiencies from 302-15.5.6 using diamond grinding. After correction, verify the corrective work by measuring the smoothness according to 302-15.5.6.

302-15.5.6.1 Grinding. Diamond-grind the surface of all the JPCP-RCC in accordance with Section 42 of the Caltrans Revised Standard Specifications dated 7-19-13.

Meet pavement thickness and grade requirements after the grinding operation.

302-15.5.7 Curing. Immediately after final rolling and compaction testing, cure the pavement with a concrete curing compound conforming to the requirements of 201-4.1. Apply the curing compound on the pavement surface and edges no later than one hour after completion of finishing

operations. Keep the surface of the JPCP-RCC continuously moist until an approved curing compound is applied.

Spraying equipment for concrete curing compound shall be of the fully atomizing type, equipped with a tank agitator of an approved type which provides for continual agitation of the compound during application. The use of nonagitating-type, hand-pumped garden sprayers will not be permitted except for small and inaccessible areas as may be permitted by the Engineer.

Only when curing compound cannot be completed in a timely manner, apply water cure by water trucks equipped with fog spray nozzles, soaking hoses, sprinkling system, or other means such that a uniform moist condition on the surface of the JPCP-RCC is ensured. Apply this moisture in a manner that will not erode or damage the surface of the finished JPCP-RCC .

302-15.5.8 Traffic. Protect the JPCP-RCC from vehicular traffic during the curing period. After final rolling of the JPCP-RCC, no vehicular traffic except for pneumatic-tired curing equipment or saw-cutting equipment shall be permitted on the JPCP-RCC until cylinders, field-cured in accordance with ASTM C31, with the same temperature history as the pavement, reach a compressive strength of 2,500 psi or a until a minimum of 24 hours has passed since final rolling. Plastic sheeting meeting the requirements of ASTM C171 shall be provided and kept readily available to cover pavement less than 12 hours old if rainfall occurs. If the temperature drops below 40°F, then the period of time the temperature is below 40°F will be added to the minimum time to opening. Temperature will be based on the hourly ambient air temperature reported by the nearest National Weather Service station. Suitable barriers shall be placed and maintained to protect finished JPCP-RCC from equipment or vehicles. Suitable barriers shall be placed and maintained to protect finished JPCP-RCC from equipment or vehicles.

302-15.5.9 Maintenance. Maintain the JPCP-RCC in good condition until all work is completed and accepted. Perform such maintenance at no additional cost.

302-15.5.10 Thickness. Provide and operate equipment capable of extracting a small (approximately 1 inch diameter or greater) core to determine the pavement thickness every 2500 square yards. Extract samples in the presence of the Engineer or Engineer's representative unless otherwise directed. Repair the core holes using a packaged quick set repair mortar such as SikaQuick 1000 or approved equivalent or a Class 4000 or better ready-mixed concrete. Rod and neatly strike off the repair material. Alternatively non-destructive technology such as the use of a 3-D scanner can be utilized to scan the subgrade surface and paved surface to determine the pavement thickness.

302-15.5.11 Thickness Tolerance. The thickness of the completed JPCP-RCC is measured at staggered intervals not to exceed 2500 SY. Measure the core to the nearest 1/8 inch at three different, evenly spaced locations and record the average. Where the JPCP-RCC is deficient by more than 1/2 inch, correct such areas by removal and replacement. Where the measured thickness is more than 1/2 inch thicker than shown on the Plans, it is considered as the specified thickness, plus 1/2 inch. The average job thickness is the average of the depth measurements determined as specified above. Should this average thickness be more than 1/4 inch below the specified thickness, an adjusted unit price is used in calculating payment. This adjusted contract unit price bears the same ratio to the contract unit price as the square of the average thickness bears to the square of the specified thickness.

302-15.6 Double-Adjustment of Manholes (and Other Structures). Existing manholes, drain inlets, utility access covers, utility vaults, and other structures shall be double-adjusted in conformance with 302-5.8 and using the below sequence:

Locate extents of utility cover with construction survey prior to JPCP-RCC construction

Remove utility structure to subgrade elevation before paving operations

Cover the utility structure with a steel plate

Pave JPCP-RCC over the utility structure

Relocate the utility structure with construction survey

Sawcut to a depth of 1/3 the pavement thickness, remove and dispose of the JPCP-RCC above the utility structure. For the JPCP-RCC near the sawcut, chip away the material to create a roughened face that tapers inward (bottom toe of pavement extending the furthest).

Adjust the utility structure to final grade and infill the annulus between the utility structure and JPCP-RCC with portland cement concrete in conformance with 302-6.1.

Protect the portland cement concrete infill from vehicular traffic during the curing period. No vehicular traffic shall be permitted on the portland cement concrete infill until cylinders, field-cured in accordance with ASTM C31, with the same temperature history as the portland cement concrete infill, reach a compressive strength of 2,500 psi.

302-15.6.1 Payment. per section 302-5.8

302-15.7 Measurement and Payment

302-15.7.1 Measurement and Payment. The quantity measured for payment under this specification is the number of square yards of JPCP-RCC completed and accepted, and measured in place. Pavement constructed outside the area designated to be paved will be disregarded in computing the number of square yards. Construction of control joints will not be measured separately and no direct payment will be made for this work. The quantity, as measured above, will be paid for at the contract unit price for JPCP-RCC, of the thickness specified, which price and payment will be full compensation for furnishing all materials, equipment, tools, labor, and incidentals necessary to satisfactorily complete the work. Pavement that is deficient in thickness, but is permitted to be left in place, will be paid at the reduced unit price as provided in 302-15.5.11. No compensation will be allowed for the materials or labor involved in the removal of defective material. Measurement & Payment for RCC pavement costs shall be measured and paid per Square Yard (SY) for RCC AT 6" DEPTH. Payment includes all furnishing, installing, grading and compaction, and labor and equipments, and incidentals, necessary to complete the Work and all direct and indirect costs and expenses required to complete the work.

Measurement & Payment for Unclassified Excavation costs shall be measured and paid per Square Foot (SF) for EXCAVATION OF 9" EXISTING AC AND UNCLASSIFIED MATERIAL, and shall include sawcutting, removal of underlying subgrade and base, disposal, subgrade preparation, grading and compaction, and labor and equipments, and incidentals, necessary to complete the Work.

Measurement & Payment for subgrade preparation costs shall be measured and paid per Square Yard (SY) for SUBGRADE PREPARATION, and shall include removal of underlying subgrade, subgrade preparation, grading and compaction, and labor and equipments, and incidentals, necessary to complete 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:

For concrete curb or curb and gutter construction adjacent to areas where adjacent AC pavement will remain in place, and unless otherwise approved by the Engineer, the entire affected concrete curb except as noted otherwise per these Specifications (Type C1-6 curbs.), or curb and gutter 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-PG64-10) on a 6-inch thick section of Class 100-E-100 concrete 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 saw cut 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 or curb and gutter construction adjacent to areas of pavement reconstruction, the entire affected concrete curb or curb and gutter shall be removed by sawcutting the adjacent AC pavement from a minimum of six (6) inches to a maximum of one (1) foot from the edge of affected areas to be removed. The Contractor shall restore this trench section with 2-inch thick section of temporary AC pavement over select fill on 8-inch Crushed Miscellaneous Base so it is flush with adjacent pavement.

303-5.5.5. Alley Intersections, Access Ramps, and Driveways. Add the following:

For concrete curb and gutter construction adjacent to areas where adjacent AC pavement will remain in place and 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-PG64-10) on a 6-inch thick section of Class 100-E-100 concrete 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. For concrete curb or curb and gutter construction adjacent to areas of pavement reconstruction, the entire affected concrete curb or curb and gutter shall be removed by sawcutting the adjacent AC pavement from a minimum of six (6) inches to a maximum of one (1) foot from the edge of affected areas to be removed. The Contractor shall restore this section with 2-inch thick section of temporary AC pavement over select fill on 8-inch Crushed Miscellaneous Base so it is flush with adjacent pavement.

PCC Access Ramps shall be constructed at locations shown on the Plans and per SPPWC Standard Plan No. 111-4, included in Appendices, as directed by the Engineer. All ramps are to be located in the midpoint of curb return unless otherwise approved by the Engineer. The Contractor shall be responsible to establish elevations and grades as required to conform to all legal requirements.

Access ramps constructed in existing curb returns may obliterate survey tie points. The Contractor shall give a minimum of three (3) work days advance notice of each location to the Engineer prior to removals so the Engineer may address and/or direct re-establishment of the existing survey tie points.

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 SPPWC Standard Plan No. 111-4 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 inches. The edge of the detectable warning surface nearest the street shall be between 6" and 8" from the gutter flowline.

The detectable warning surface shall be a 0.1975 inch (,minimum) thick, removable cast in-place system on new ramp construction or a surface applied panel system for existing ADA compliant ramps. A sample of the system products that meet this specification is produces by ADA Solutions, inc. at www.adalite.com or Access Tile at www.accesstile.com. A contractor may propose an alternate, similar product for consideration by the Engineer. The color of the detectable warning surface shall be dark gray or as approved by the Engineer prior to installation. The detectable warning system is to manufactured with materials that are fully recyclable. The 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 day of acceptance of the Contract.

Driveways shall have a concrete thickness of 6 inches.

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:

Measurement & 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 be considered as included in the Contract Unit Price per Linear Foot (LF) for REMOVE EXISTING PCC CURB AND GUTTER AND CONSTRUCT TYPE A2-8 CURB AND GUTTER PER SPPWC STD PLAN 120-2 ON 8" CMB (W = 2), as measured in the field in the plan view, and 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, backfill of any necessary additional fill material, labor, grading and compacting, materials and equipment, complete in place.

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.

Measurement & Payment for concrete walks & sidewalks shall be considered as included in the Contract Unit Price per Square Foot (SF) for REMOVE EXISTING P.C.C. SIDEWALK AND CONSTRUCT 3.5" THICK P.C.C. SIDEWALK PER SPPWC STD PLAN 112-2 AND 113-2 ON 4" CRUSHED MISCELLANEOUS BASE (CMB), as measured in plan view, and shall include all joints as shown in standard plans and construction details and shall include protection of existing trees, parkway restoration, Base, labor materials and equipment, grading and compacting ,complete in place.

Measurement & Payment for driveways, spandrels, and integral curbs along driveways and spandrels shall be considered as included in the Contract Unit Price per Square Foot (SF) for REMOVE EXISTING P.C.C. DRIVEWAY APPROACH AND CONSTRUCT 6" THICK P.C.C. DRIVEWAY PER C.O.T. STD PLAN T105 ON 6" CMB, and shall include all joints as shown in standard plans and construction details, new PCC curb and gutter, driveway surface and the approach sidewalk ramps, grooved borders, new CMB, and the reconstruction of adjacent 1' wide AC pavement and all labor, material and equipment required to complete the work. The measured square footage shall only include the surface of the new PCC. AC slot paving area shall not be included in the total area.

Payment for restoring any necessary Portland Cement Concrete paving and Base located on private property behind a newly constructed driveway apron shall also be measured and paid for as part of the Concrete Driveway bid item.

Measurement & Payment for Access ramps with applicable integral retaining curbs for access ramps as shown on the plans shall be considered as included in the Contract Unit Price per Each Item (EA) for REMOVE EXISTING P.C.C. CURB RAMP AND CONSTRUCT 3.5" P.C.C. CURB RAMP PER STD PLAN SPECIFIED ON PLAN ON 4" CMB and shall include but not be limited to the installation of all work shown on the curb ramp detail including the curb and gutter within the ramp limits, slot paving, curb ramp surface, any necessary integral retaining curbs, dry-packing under any traffic signal poles within the ramp limits, protection of existing irrigation lines, truncated

domes, finishing, labor, materials and equipment to complete the work in place per project specifications. All PCC work bound by both the existing ramp removal limits and the proposed curb ramp limits, including the curb and gutter, integral retaining curb, and the 1' wide grooved border surface, are considered included under this bid item. All remaining PCC surface shall be paid for under the new sidewalk construction bid item.

Payment for FURNISH AND INSTALL 36" X 48" DETECTABLE WARNING SURFACE PANEL ONTO ACCESS RAMP PER SPPWC STD 111-4 will be made at the contract unit price for each, and includes all labor, materials and equipment listed in the manufacturer's instructions/installation procedure.

Measurement & Payment for SAWCUT AND REMOVE THE EXISTING CONCRETE IN FRONT OF THE BRICKS AND REPLACE IN KIND SLOPED TO JOIN THE PROPOSED BACK OF DEPRESSED SIDEWALK will be made on and lump sum basis, and shall include all joints as shown in standard plans and construction details and shall include protection of existing bricks, restoration, Base, labor materials and equipment, complete in place.

306-7 CURB DRAINS. Add the following:

Measurement & Payment for the replacement of the curb drain as shown on the plans shall be considered as included in the Contract Unit Price per Each Item (EA) for RE-ADJUST EXISTING PIPE CURB DRAIN TO ENSURE A MINIMUM OF 2% SLOPE POSITIVE FLOW PER SPPWC STD PLAN 150-3, and shall include but not be limited to the installation of the 1' wide slot paving, protection of existing curb drain, installation of rebar, connection to the existing pipe, assurance that said outlet has positive drainage flow and all work shown on the plan details including labor, material and equipment, complete in place.

SECTION 307 – STREET LIGHTING AND TRAFFIC SIGNAL SYSTEMS

Delete the entire Section 307, and replace with Section 86 "Electrical Systems" of the Caltrans Standard Specifications.

86-1 GENERAL

86-1.01 Summary. 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, 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 Contractor in the field.

Comply with part 4 of the California MUTCD. Nothing in this Section 86 is to be construed as to reduce the minimum standards in this manual.

All systems shall be complete and in operating condition at the time of acceptance of the Contract.

86-1.02 Regulations And Code. Delete the second paragraph.

86-1.03 Cost Break-Down. Delete the entire subsection.

86-1.04 Equipment List and Drawings. Replace the entire subsection with the following:

Unless otherwise permitted in writing by the Engineer, the Contractor shall within 15 days following approval of the contract, submit to the Engineer for review a list of equipment and materials which the Contractor proposes to install. The list shall be complete as to name of manufacturer, size and identifying number of each item. The list shall be supplemented by such other data as may be required, including schematic wiring diagrams and scale drawings of cabinets showing location and spacing of shelves, terminal blocks and equipment, including dimensioning. The above data shall be submitted, in duplicate, for review.

The Contractor shall furnish 3 sets of controller cabinet schematic wiring diagrams made by (1) wet blueprint, white background process using iron-sensitized paper, (2) the offset lithograph process or (3) the electrostatic process. The diagrams shall show the location of the installation and shall list the equipment installed in each controller cabinet. In addition, for each signal installation, the Contractor shall furnish an intersection sketch showing poles, detectors, field wire connection terminals and phasing as shown on the plans. One copy of the controller cabinet diagram and the intersection and phase diagram, as reviewed by the Engineer, shall be placed in a heavy duty plastic envelope and attached to the inside of the door of each controller cabinet.

All schematic wiring diagrams of the controller units and auxiliary equipment, all cabinet diagrams and all operation manuals shall be submitted at the time the controller assemblies are delivered for testing. The diagrams shall show in detail all circuits and parts. All parts shown thereon shall be identified by name or number and in such manner as to be readily interpreted.

All diagrams, plans and drawings shall be prepared using graphic symbols shown in ANSI publication Y32.2, entitled "IEEE Standard and American National Standard Graphic Symbols for Electrical and Electronic Diagrams."

All systems shall be complete and in operating condition at the time of acceptance of the Contract.

Add the following subsection:

86-1.055 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:

Unless otherwise authorized by the Engineer, all existing traffic signals shall remain in operation at all times. 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(s) at which its appropriate personnel can be contacted by the City for any problem with the above-referenced items. Unless permission has been granted by

the Engineer, a traffic signal must not remain in a flashing mode for 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 the modification of an existing traffic signal shall be performed in such a manner that the signal shall be in continuous operation, except for an approved duration when traffic signal may be inactivated off for necessary work. All signal indications, detectors and control equipment shall be maintained in operation except during shutdown hours, as specified by the Engineer. For permission by and coordination with the City to shutdown a traffic signal, the Contractor shall notify the Engineer at least 48 hours prior to shutdown. The placement of any temporary devices and/or 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 TRAFFIC CONTROL and no additional compensation will be allowed therefore and shall include furnishing, installing, and labor and equipments, and incidentals, necessary to complete the Work. .

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 MOBILIZATION/DEMobilIZATION (NOT TO EXCEED 5% OF TOTAL BASE BID PRICE).

Delete the fourth and fifth paragraphs.

Replace the sixth paragraph with the following:

If the Contractor fails to complete the repairs within this period, the repairs will be made by City forces at the Contractor's expense.

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

86-2.08 CONDUCTORS AND CABLES. Add the following:

Existing interconnect cable shall be re-pulled into new conduit as shown on the Plans. Pull rope shall be left in the conduit per plan.

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.

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".

86-4 TRAFFIC SIGNAL FACES AND FITTINGS

86-4.06 Pedestrian Signal Faces.

86-4.06A Types. Replace the first paragraph with the following:

Pedestrian signal faces shall be Type A with Dialight L.E.D. International symbol indications unless otherwise specified by the Engineer.

86-4.06B Front Screen. Replace the first paragraph with the following:

Front screen installation for each Type A signal must comply with the following:

Type A signals shall be provided with a 1-1/2 inch deep eggcrate or Z-crate type screen of 0.03 inch nominal thickness polycarbonate. The screening shall be mounted in a frame constructed of 0.04 inch minimum thickness aluminum alloy or polycarbonate. The screen shall be installed parallel to the face of the message plate and shall be held in place by the use of stainless steel screws. A visor is not required for this type of screen.

86-5 DETECTORS

86-5.01 Vehicle Detectors

86-5.01A Inductive Loop Detectors.

86-5.01A(4) Construction Materials. Replace the first paragraph with the following:

Conductor for each inductive loop detector shall be continuous and unspliced and shall conform to the following:

Type 1 loop wire shall be Type RHW-USE neoprene-jacketed or Type USE cross-linked polyethylene insulated, No. 12, stranded copper wire. The minimum insulation thickness at any point shall be 40 mils.

The contractor shall furnish and leave pull ropes in the conduits.

86-5.01A (5) Installation Details. Add the following:

The Contractor shall test the detectors with a motor-driven cycle, as defined in the California Vehicle Code that is licensed for street use by the Department of Motor Vehicles of the State of California.

Asphaltic emulsion sealant shall be used in all sawcuts.

The unladen weight of the vehicle shall not exceed 220 pounds and the engine displacement shall not exceed 100 cubic centimeters. Special features, components or vehicles designed to activate the detector will not be permitted. The Contractor shall provide an operator who shall drive the motor-driven cycle through the response or detection area of the detector at no less than three miles per hour and no more than seven miles per hours. The detector shall provide an indication in response to this test.

The contractor has the option to remove and dispose the existing conduit marked on the plan or leave in place and work around it. If the contractor decides to leave in place, then there will be no extra cost to the City.

Add the following subsection:

86-5.01B Video Detection System

Video detection system shall be furnished and installed in the cabinet at the location shown on the Plan. 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 Caroprene 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 auxiliary equipment from Econolite to provide a fully-operational video detection system.

One video detection camera (AutoScope Solo) shall be installed on luminaire mast arm for each direction as shown on the Project Plans and details contained in the appendix.

The Contractor must furnish and install a temporary camera per sheet 9. The camera must conform to these standards. The contractor must ensure the camera is operational during the construction process.

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 the Appendix

86-5.01B (2.2.3) Video Server

The contractor shall provide one compatible Video Server to be located at the 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.

86-7 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, temporary camera 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 Pedestrian Indication, wiring modifications and installation of new countdown indication will be made at the Contract Unit Price of "REMOVE AND SALVAGE EXISTING PEDESTRIAN INDICATION MODULE AND REPLACE WITH NEW COUNTDOWN PEDESTRIAN INDICATION MODULE PER CALTRANS STANDARD PLANS ES-4B, DETAIL B" and shall include furnishing, installing, and labor and equipments, and incidentals, necessary to complete the Work.

Payment for installation of existing detector loops, wiring modifications for said loops will be made at Contract unit Price of FURNISH AND INSTALL TRAFFIC SIGNAL INDUCTIVE LOOP DETECTOR AND WIRING and shall include full compensation for all labor, materials, work including leaving pull ropes in conduits, 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 unit Price of FURNISH AND INSTALL NEW VIDEO DETECTION SYSTEMS, COMPLETE IN PLACE, INCLUDING ALL WIRING AND DISCONNECTION AND REMOVAL OF EXISTING PRIMARY DETECTORS LOOPS AND WIRING MARKED ON PLANS and shall include furnishing, installing, and labor and equipments, and incidentals, necessary to complete the Work.

Payment for installation of the temporary video detection system, including manufacturer's and Caltrans oversight will be made at the Contract Lump Sum Price of FURNISH AND INSTALL TEMPORARY VIDEO DETECTION SYSTEM, COMPLETE IN PLACE, INCLUDING ALL WIRING ON SHEET 9 and shall include furnishing, installing, and labor and equipments, and incidentals, necessary to complete the Work.

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, recompacted and refinished to final grades. The Engineer shall be notified of all areas where the landscape work is prevented from being executed.

Finish soil level shall be two inches below tops of curbs and rock paving areas; if existing amended soil is inadequate to meet this grade. Contractor shall provide import topsoil as necessary, and shall mix import with native soil to prevent layering and facilitate permeability.

Surface drainage shall be provided by modeling the surfaces to facilitate the natural run-off of water forward the center of median islands to prevent flow onto adjacent street. Low spots and pockets shall be filled with topsoil and graded smooth to drain properly.

308-2.2 Trench Excavation and Backfill. Subparagraph 2) is amended as follows:

2) Waterlines continuously pressurized – 36 inches (42 inches under roadways).

Subparagraph 3) is amended as follows:

3) 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, existing landscape plants (including trees) 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 fifteen pounds (15 lbs.) per 1,000 sq. ft., thirty (30) days after planting and once again at the end of the post-construction maintenance period.

Prior to ordering soil amendment and fertilizer materials, the Contractor shall, at his/her own expense, obtain a minimum of five (5) samples of native site soil from different locations and have them tested at an approved soil analysis laboratory. Analysis shall include recommendations for soil amendment, backfill mix, and maintenance fertilization, and shall be

submitted to the CITY for review and approval. At the CITY's direction, Contractor shall follow recommendations of Agricultural Soil Suitability Report at no additional cost to the CITY unless there are significant differences in quantity and nature of amendments between bid documents and Agricultural Soil Suitability Report.

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 tested, 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:

Native shall be placed site soil without amendment in the bottom of planting holes up to the bottom of the new plant root ball.

New plant shall be set so that crown is one inch above the surrounding natural grade.

Planting holes shall be backfilled around the sides of the new plant root ball up to the surface with a prepared soil mix conforming to the following requirements (Note: this mix is for bidding purposes; see Section 308-2.3.2 for soil analysis requirements):

- 4 parts by volume nitrogen-stabilized organic amendment
- 6 parts by volume on-site soil*
- 1 lb. 12-12-12 commercial fertilizer per cubic yard of mix
- 2 lbs. iron sulfate per cubic yard of mix

*from area(s) approved by Engineer

The materials shall be thoroughly mixed so that they are evenly distributed and without clods or lumps. Backfill shall be placed to be one-half inch below surrounding soil after settlement, and a watering basin shall be formed around each plant.

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".

Plant shall be centered in pit or trench on slight pedestal. Plants with fullest growth shall face into prevailing wind. Plant shall be set plumb and hold rigidly in position until soil has been tamped firmly around ball or roots. Plant shall be positioned in the hole and backfill shall not be higher than halfway up the root ball. If required, the recommended number of tablets shall be placed 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. Once backfilling is completed, it shall be tamped (all air voids eliminated) and watered. It shall not be packed.

Contractor shall construct a 4" berm 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 three (3) days of soaking and when the regular irrigation system is operational the berm area shall be smoothed to finish grade.

308-4.8.3 Sod Add the following:

The type of sod shall be Marathon II, Species Dwarf Tall Fescue, Variety Encore or approved equal.

Full compensation for the materials and application of sod shall be in conformance with Section 308-4.8.3 of the standard specifications and shall be per the Contract Unit Price per square foot of REMOVE EXISTING LANDSCAPING, PRUNE ROOTS PER CERTIFIED ARBORIST RECOMMENDATION, REGRADE TO PROPOSED SIDEWALK AND TOP OF CURB AND INSTALL SOD. PROTECT EXISTING TREES UNLESS OTHERWISE NOTED and shall include removing existing landscaping including roots, removal of underlying subgrade, disposal, subgrade preparation, grading and compaction, adding fertilizer, installing sod and labor and equipments, and incidentals, necessary to complete the Work.

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 be a member of the American Society of Consulting Arborists (310-947-0483) and 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 4-inches wide and 14-inches and 18-inches deep adjacent to sidewalk and curb and gutter respectively. 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 No. T402 is hereby deleted from this project.

308-4.11. Payment. The Contract Unit Price for 24" BOX - BRISBANE BOX PER C.O.T. STD PLAN T401 shall include full compensation to furnish and install the specified trees complete in place, as shown on the Plans and Torrance standard plan T401 and in accordance with these Special Provisions, including installation of the tree well, moisture barrier, providing prepared

topsoil, backfill, restoration of adjacent grass and parkway, and shall include furnishing, installing, grading and compaction, and labor and equipments, and incidentals, necessary to complete the 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 90 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.

308-7 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.

308-8. PAYMENT. Replace the entire subsection with the following:

Payment for PLANT ESTABLISHMENT AND MAINTENANCE (90 DAYS) 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.

SECTION 310 - PAINTING

310-5 PAINTING VARIOUS SURFACES.

310-5.6 Painting Traffic Striping, Pavement Markings and Curb Markings. Delete the entire subsection 310-5.6 and replace with Sections 84-1 and 84-2 of the Caltrans Standard Specifications.

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:

Madison Street and Skypark Drive

All permanent striping and pavement markings shall be hot applied alkyd thermoplastic in accordance with the provisions of Section 84-2, "Thermoplastic Traffic Stripes and Pavement Markings" of the Caltrans Standard 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. The paint and pavement markings shall conform to the provisions of Section 84-3 of the Caltrans Standard Specifications.

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.

Meadow Park Parking Lots

This work shall consist of the reinstallation of all pavement markings (parking stall lines), other markings, and legends that previously existed prior to the start of the work. The Contractor shall jointly review with the Engineer all existing striping, markings, and legends prior to removal. An aerial photograph of the existing parking areas shall be provided by the Engineer to the Contractor for verification of the existing striping configurations.

The paint material shall conform to the provisions of 84-3.02 of the Caltrans Standard Specifications.

84-2.06 Payment. Replace the entire subsection with the following:

Madison Street and Skypark Drive

The contract lump sum price SIGNING, THERMOPLASTIC STRIPING, MARKINGS AND PAVEMENT MARKERS paid for thermoplastic traffic striping, pavement markings, legends, and arrows shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in applying thermoplastic traffic stripes; furnishing and placing retroreflective pavement markers, and thermoplastic pavement markings, complete in place, including adhesives, and establishing alignment for stripes, pavement markers, pavement markings and layout work, removing existing signs and installing new signs, temporary pavement painting as shown on the plans, as specified in the standard specifications and these special provisions, and as directed by the engineer and shall include furnishing, installing, and labor and equipments, and incidentals, necessary to complete the Work.

Meadow Park Parking Lot

Payment for traffic and parking stall striping, pavement markings, and labels shall be on a lump sum basis per the Contract Unity Price for SIGNING AND STRIPING and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, necessary to complete the signing and striping Work.

Add the following:

SECTION 313 – CURB STOPS (Meadow Park Parking Lot)

313-1 GENERAL

Prior to cold milling the asphalt concrete pavement, the Contractor shall carefully remove all concrete wheel stops and pins and store the wheel stops in a safe location and prevent them from being damaged. The Engineer will decide in the field if any existing concrete wheel stops are in a salvageable condition. The salvageable concrete wheel stops will be delivered by the contractor to the City Yard (20500 Madrona Ave., Torrance, CA 90603) and the unsalvageable is the contractor's responsibility to dispose of. All the existing pins will be disposed of by the Contractor.

After the final striping and markings are complete, the new concrete wheel stops shall be installed. The wheel stops shall be four (4) feet long and six (6) inches high. Material for new concrete wheel stops shall be in accordance with Sections 201 and 303 of the latest edition of the Standard Specifications for Public Works Construction unless specified otherwise. Portland cement concrete shall be Class A six sack mix developing not less than 3,250 psi compressive strength at 28 days. All cement shall be Type II. The location of the new wheel stops shall be per the direction of the engineer in the field. The Wheel stops shall be pinned in place with a pair of 3/4 inch in diameter steel rebar twelve (12) inches long.

NOTE: The Engineer will perform an inspection of any concrete wheel stop upon request by the Contractor.

313-1.1 Payment.

Full compensation for the removal of the existing concrete wheel stops and pins, including the coordination with the Engineer, delivering the salvageable wheel stops to the City Yard, disposing the unsalvageable, and the furnishing of all necessary labor, equipment, and materials, and incidentals, necessary to complete the work shall be considered as included in the price bid for " REMOVE AND SALVAGE PCC WHEEL STOPS."

Payment for installing new concrete wheel stops as will be made per the Contract Unit Price for "FURNISH AND INSTALL NEW PCC WHEEL STOPS & REBAR" in the Bidder's Proposal, and shall include all labor, materials, tools, equipment, and incidentals necessary to complete the Work as specified in the Specifications and these Special Provisions, and as directed by the Engineer.

Add the following Section:

SECTION 315 - SIGNAGE

315.1 ROADSIDE SIGNS. All signs shall be installed in accordance with the requirements of Section 56-2.03 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.

56-2.02 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.

56-2.03 CONSTRUCTION. Delete the third paragraph and last sentence of the eleventh paragraph.

Delete the entire subsection 56-2.05.

56-4.02 Metal Posts. Delete the first paragraph.

56-2.06 PAYMENT. Replace the entire subsection with the following:

Madison Street and Skypark Drive

Payment for roadside signs and/or posts, and Object Markers shall be per unit per the Contract Unit Price for SIGNING, THERMOPLASTIC STRIPING, MARKINGS AND PAVEMENT MARKERS and shall include all labor, materials, tools, equipment, 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.

Meadow Park Parking Lot

Payment for roadside signs and/or posts, and Object Markers shall be per unit per the Contract Unit Price for SIGNING AND STRIPING and shall include all labor, materials, tools, equipment, 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.

APPENDIX I

CITY OF TORRANCE PERMIT AND BUSINESS LICENSE



Permit Application Form

OWNER/APPLICANT INFORMATION

Name: _____

Address: _____

City/State: _____

Zip: _____

Telephone: _____

Fax: _____

Excavation permits will not be issued without USA I.D. Number.

Underground Service Alert
Call: 811

USA I.D. # _____

Date Received: _____

CONTRACTOR INFORMATION

State License #: _____

Class: _____ Exp. Date: _____

City Business #: _____

**CONTRACTOR: Certificate of Insurance
REQUIRED prior to issuance of permit.**

JOB LOCATION/ADDRESS (closest street address)

Please list cross streets: _____

DESCRIPTION OF WORK

LF Trench _____ Width of Trench _____ LF Curb & Gutter _____

LF Bore _____ Sewer Connection _____ Number of Curb Drains _____

SF Asphalt _____ SF Concrete _____

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 License Requirements

<p>Curb/Gutter.....A (General Engineering) C8 (Concrete Contractor)</p> <p>Driveways.....A (General Engineering) C8 (Concrete Contractor)</p> <p>Sidewalks.....A (General Engineering) B (General Building) C8 (Concrete Contractor)</p> <p>Street/Alley.....A (General Engineering) C8 (Concrete Contractor) C12 (Earth and Paving Contractor)</p>	<p>Sewer Lateral/Mainline.....A (General Engineering) C34 (Pipeline Contractor) C42 (Sanitation Contractor)</p> <p>Storm Drain Lateral/Mainline.....A (General Engineering) C34 (Pipeline Contractor) C42 (Sanitation Contractor)</p> <p>U/G Utilities.....A (General Engineering) (Water, Gas or Oil).....C34 (Pipeline Contractor)</p> <p>U/G Electrical.....A (General Engineering) C8 (Concrete Contractor) C12 (Earth and Paving Contractors)</p>
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Standard Requirements

- 1) **SCHEDULE INSPECTIONS 24 HOURS IN ADVANCE** (pre-job, work start, interim, final). Call 310-618-5898 between working hours of 7:30 AM – 5:30 PM. **Pre-job meetings for WATER permits shall be scheduled 72 hours in advance.**
- 2) **TRAFFIC CONTROL** shall be per City of Torrance standards or Manual on Uniform Traffic Control Devices (MUTCD). Street closure 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) Do not remove any trees or shrubs without approval of Torrance Public Works Department/Streetscape (310-781-6900).
- 4) **Contractor will be billed for overtime inspection services.** OVERTIME REQUESTS must be submitted for approval 24 hours in advance.
- 5) Construction site **CLEANUP** and **GRAFFITI (USA MARKINGS)** removal must be completed prior to finaling of this permit. Any graffiti on construction signs must be removed or the sign replaced within 24 hours of notification.
- 6) 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/Traffic Division (310-781-6900).
- 7) **THIS PERMIT WILL BE REVOKED** if any pollutant is released into or allowed to remain in any component of the City drainage system.
- 8) Trench backfill and pavement repairs shall be per City of Torrance Standard T116.
- 9) Any public irrigation system components damaged by this construction shall be replaced to the satisfaction of Community Services/Park Services Division (310-618-2930).
- 10) 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.
- 11) It is the responsibility of the contractor to **REPLACE** any **PAVEMENT** removed by this construction.
- 12) The City of Torrance is held harmless from the results of any action or accidents caused by the permittee, 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 OR BE DETRIMENTAL TO LIFE OR PROPERTY.**
- 13) See additional conditions attached to this permit.

**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 310-618-5898.

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.



City of Torrance, Revenue Division
Business License Application

3031 Torrance Blvd, Torrance, CA 90503 • 310/618-5828 • 310/618-5852 Fax

FOR OFFICIAL USE ONLY

1. LICENSE NO. _____ 2. CATEGORY NO. _____ 3. NAICS CODE _____

HOME OCCUPATION HEALTH PERMIT

PART I. APPLICANT TO ANSWER ALL QUESTIONS IN THIS SECTION (print or type)

4. BUSINESS NAME OR DBA _____ 5. CORPORATE NAME (IF DIFFERENT FROM ABOVE) _____

6. BUSINESS ADDRESS _____ SUITE # _____ CITY _____ STATE _____ ZIP _____

7. MAILING ADDRESS _____ SUITE # _____ CITY _____ STATE _____ ZIP _____

8. NATURE OF BUSINESS (state type of business being conducted at this location) _____ 9. NO. OF PERSONS WORKING IN TORRANCE _____ 10. BUSINESS PHONE _____ 11. CELL PHONE _____

12. NAME OF PERSON MAKING APPLICATION (must be an owner, partner or corporate officer) _____ 13. TITLE _____ 14. HOME PHONE _____ 15. EMAIL ADDRESS _____

16. RESIDENCE ADDRESS _____ CITY _____ STATE _____ ZIP _____ 17. DRIVER'S LICENSE # _____ 18. SOCIAL SECURITY # _____

19. STATE CONTRACTOR'S LICENSE # _____ 20. SQUARE FOOTAGE _____ 21. STATE SELLERS PERMIT # _____ 22. FED. TAX ID # _____ 23. STATE TAX ID # _____

24. OWNERSHIP INFORMATION

PARTNERSHIP CORPORATION SOLE OWNERSHIP

NAMES OF OWNER, PARTNERS, OR PRINCIPAL OFFICERS _____ TITLE _____ HOME ADDRESS _____ HOME PHONE _____

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 the business license being applied for may be revoked as outlined in section 31.9.10 of the Torrance Municipal Code.

I am duly authorized to make this application. All of 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

BASIC FEE _____ APPLICATION SENT FOR ZONING? YES NO _____ PROCESSING FEE _____ FIRE INSP. FEE _____ OTHER _____

PER PERSON FEE _____ OTHER (cont'd) _____

PENALTY FEE _____ HOLD _____ YES NO ENT. FEE _____ DANCE/PIANO FEE _____

RECEIVED BY _____ DATE _____ CHECK NO. _____ BANK NO. _____ CASH _____ TOTAL AMOUNT \$ _____

APPENDIX II

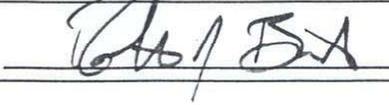
CITY OF TORRANCE STANDARD PLANS

TT/T105

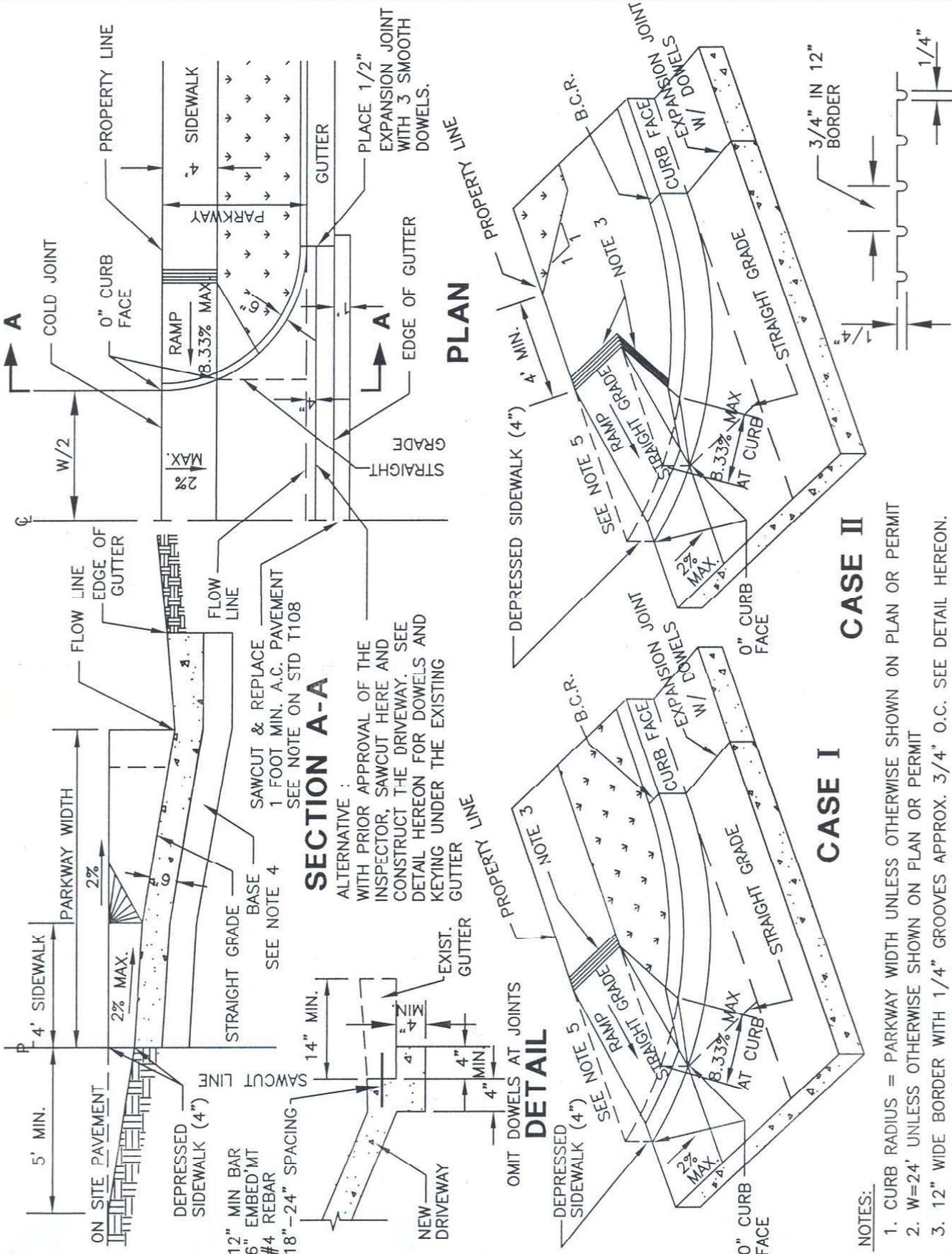
DATE ISSUED
FEB 15, 2007

CITY OF TORRANCE
**RADIUS DRIVEWAY
WITH DEPRESSED SIDEWALK**

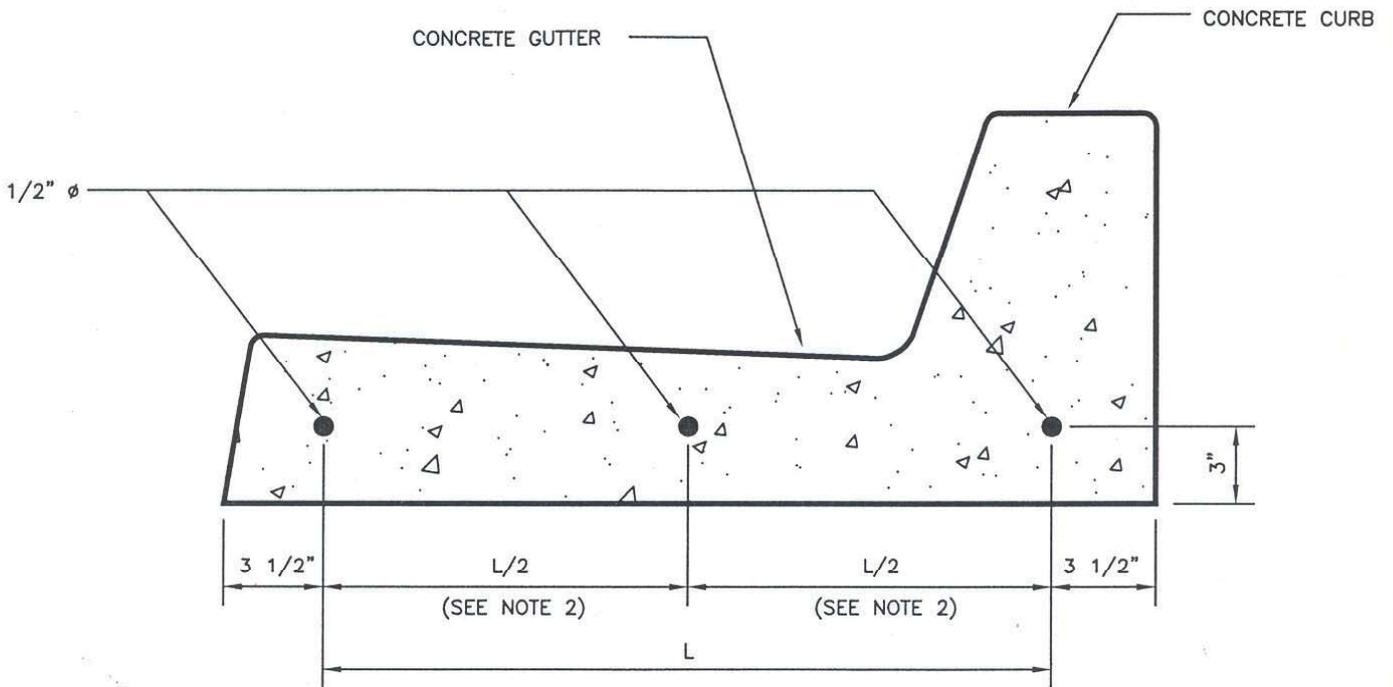
ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737



STANDARD NO.
T105
SHEET 1 OF 1



- NOTES:
1. CURB RADIUS = PARKWAY WIDTH UNLESS OTHERWISE SHOWN ON PLAN OR PERMIT
 2. W=24' UNLESS OTHERWISE SHOWN ON PLAN OR PERMIT
 3. 12" WIDE BORDER WITH 1/4" GROOVES APPROX. 3/4" O.C. SEE DETAIL HEREON.
 4. BASE UNDER THE DRIVEWAY SHALL BE 6" C.A.B. ON SANDY SOIL AND 8" C.A.B. ON CLAYEY SOIL. CMB MAY BE USED INSTEAD OF CAB.
 5. IF NEEDED, CONSTRUCT VARIABLE HEIGHT RETAINING CURB AT BACK OF WALK TO JOIN.

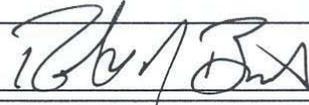


DOWELS FOR STANDARD 8" CURB & 24" GUTTER

NOTES:

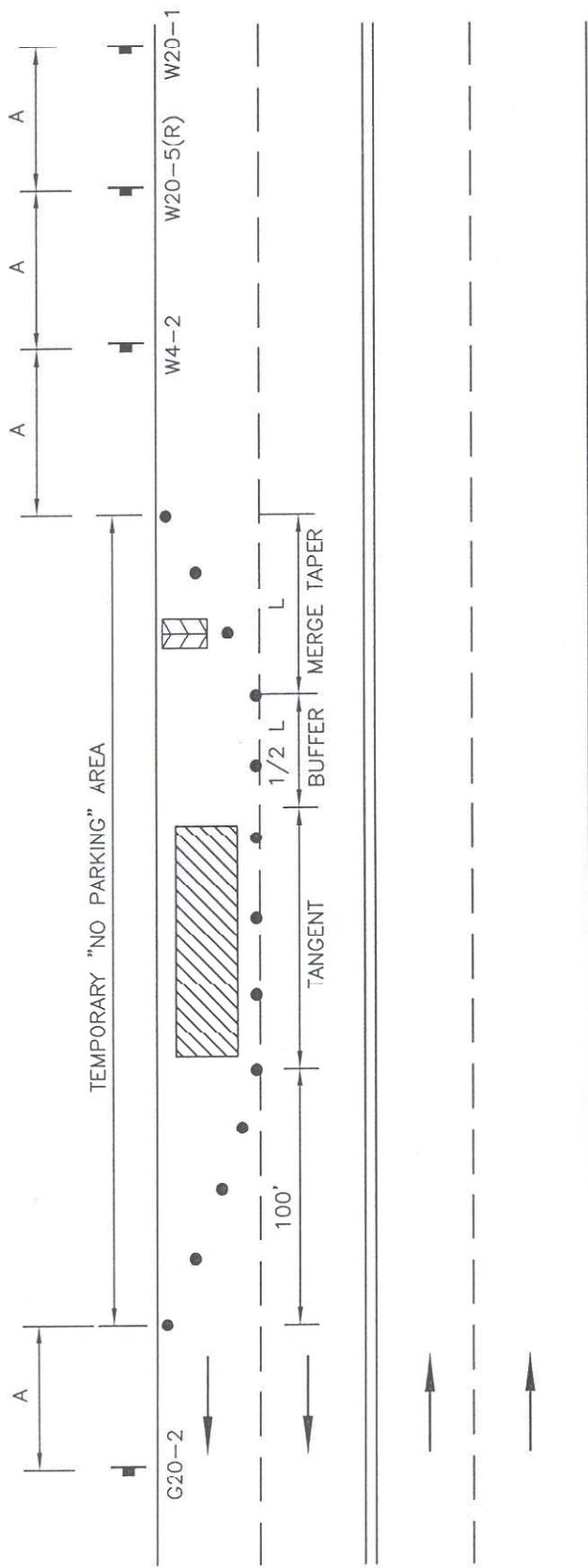
1. USE 3 SMOOTH DOWELS (1/2"φ), 24" LONG WITH ONE END BONDED 12".
2. IF L IS EQUAL OR LESS THAN 12" OMIT CENTER DOWEL AT L/2.
3. SEE APWA STANDARDS 112 & 120 FOR EXPANSION JOINT LOCATIONS AND OTHER CURB AND GUTTER DETAILS.

CITY OF TORRANCE

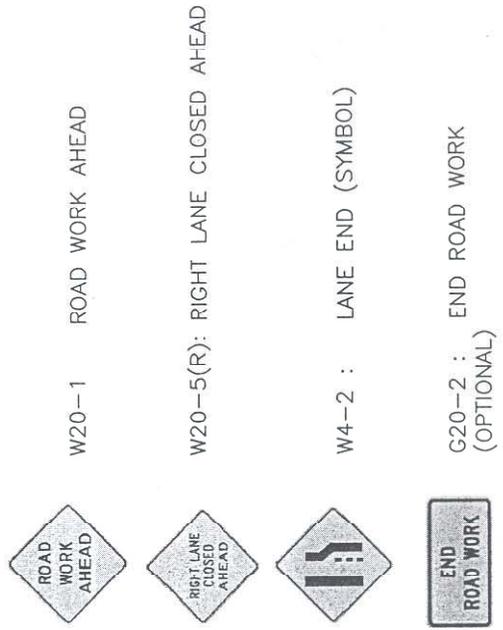
DATE ISSUED	DOWELS AT EXPANSION JOINTS	STANDARD NO.
FEB 15, 2007		T115
ROBERT J. BESTE PUBLIC WORKS DIRECTOR R.C.E. NO. 50737		 SHEET 1 OF 1

T115

TT/T1004



CONSTRUCTION SIGNS:



DESIGN SPEED	MINIMUM RECOMMENDED DELINEATOR AND SIGN PLACEMENT		BUFFER LENGTH (1/2 L)
	MERGE TAPER LENGTH (L)	DELINEATOR SPACING (TANGENT)	
30 MPH	180 FT.	60 FT.	90 FT.
35 MPH	245 FT.	70 FT.	125 FT.
40 MPH	320 FT.	80 FT.	160 FT.
45 MPH	540 FT.	90 FT.	270 FT.
50 MPH	600 FT.	100 FT.	300 FT.

- LEGEND:
- TRAFFIC DRUM OR 36" POST TUBE DELINEATOR
 - SIGN WITH FLAG TREE
 - ▨ WORK AREA
 - FLASHING LEFT ARROW
 - TRAFFIC DIRECTION

CITY OF TORRANCE - WORK AREA TRAFFIC CONTROL

DATE ISSUED
19 FEB 2008

**ARTERIAL & COLLECTOR
RIGHT LANE CLOSURE**

ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737

STANDARD NO.
T1004
SHEET 1 OF 1

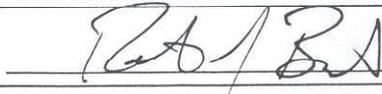
TT/T1005

DATE ISSUED
19 FEB 2008

CITY OF TORRANCE - WORK AREA TRAFFIC CONTROL

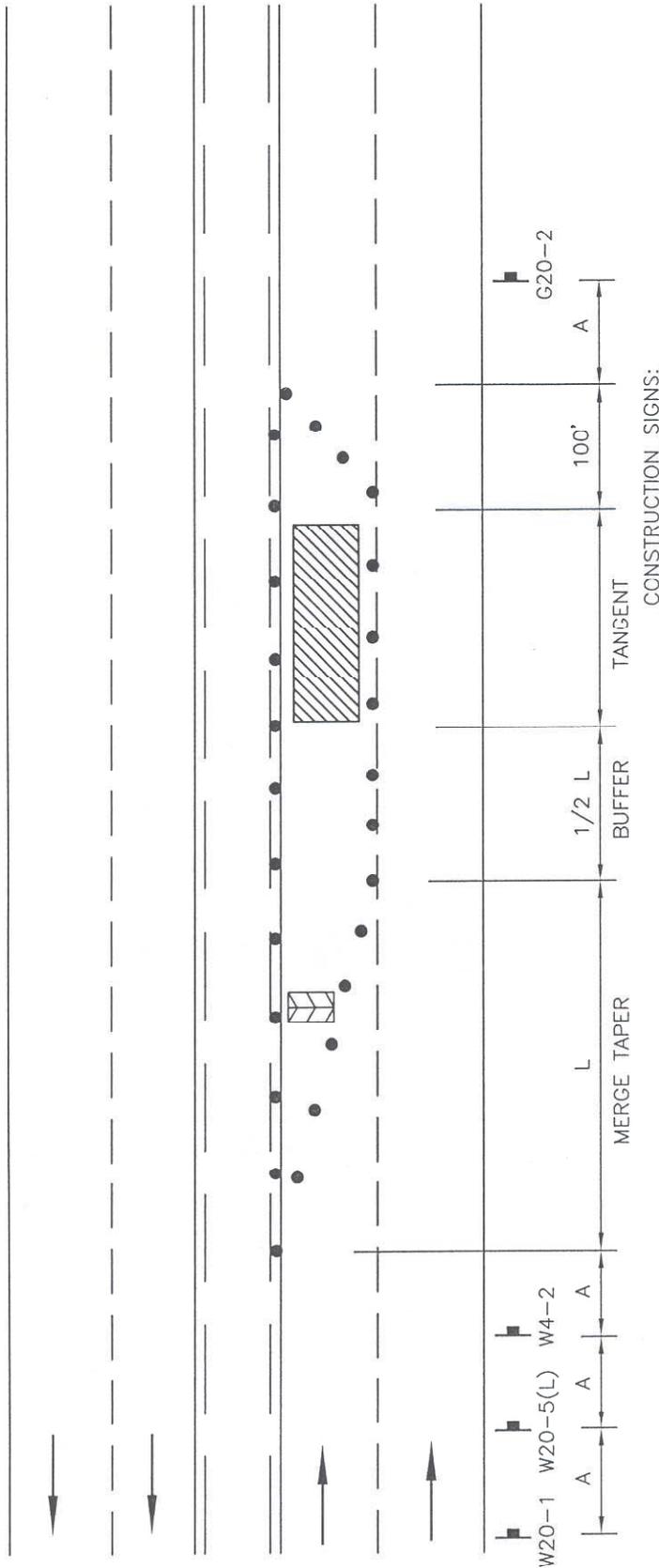
**ARTERIAL & COLLECTOR
LEFT LANE CLOSURE**

ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737



STANDARD NO.
T1005

SHEET 1 OF 1



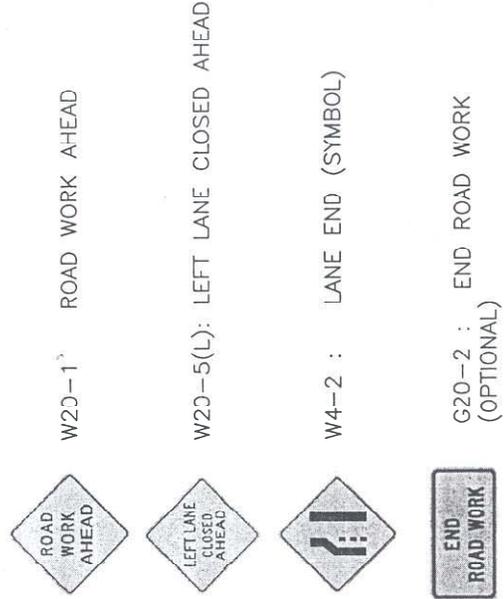
CONSTRUCTION SIGNS:

W20-1 : ROAD WORK AHEAD

W20-5(L) : LEFT LANE CLOSED AHEAD

W4-2 : LANE END (SYMBOL)

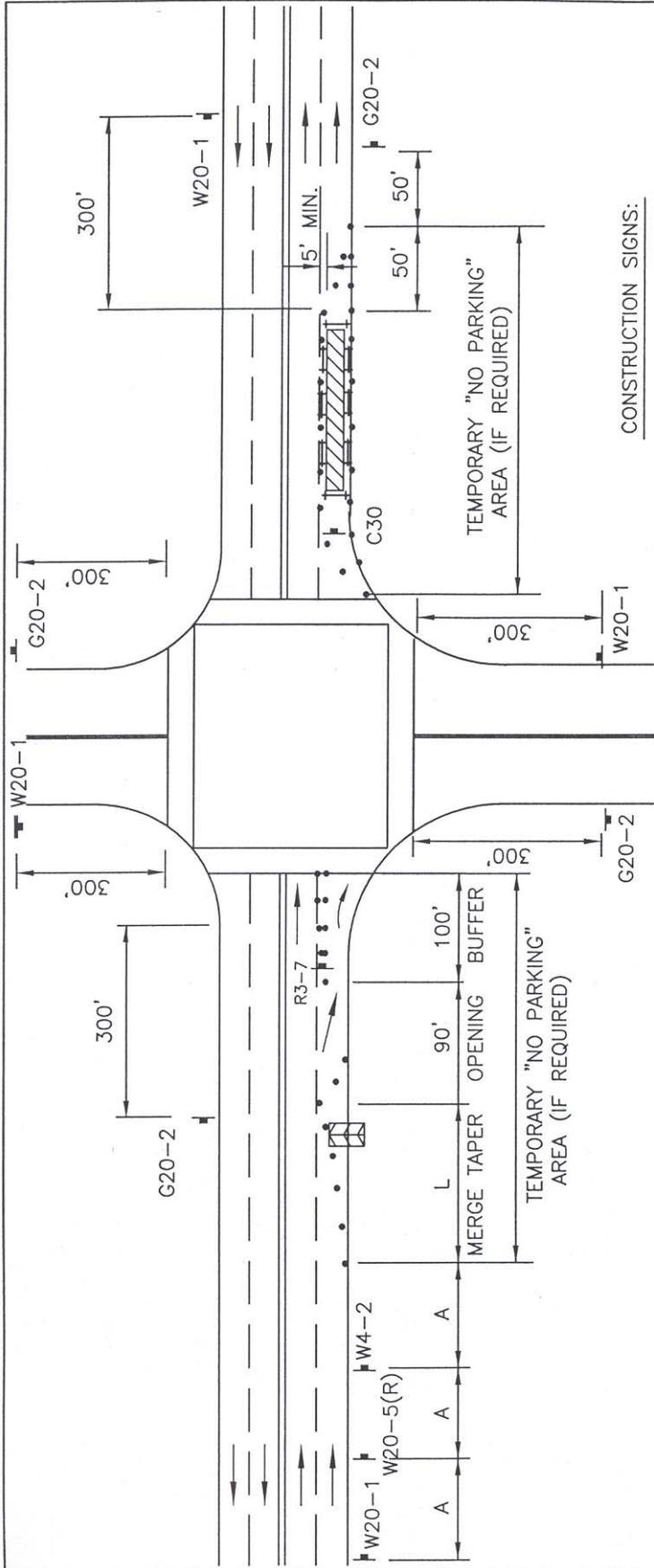
G20-2 : END ROAD WORK (OPTIONAL)



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

TT/T1011



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)
-  R3-7: RIGHT LANE MUST TURN RIGHT
-  C30: LAND CLOSED

DESIGN SPEED	MERGE TAPER LENGTH (L)	DELINEATOR SPACING		DISTANCE BETWEEN SIGNS (A)
		(TAPER)	(TANGENT)	
30 MPH	180 FT.	30 FT.	60 FT.	100 FT.
35 MPH	245 FT.	35 FT.	70 FT.	100 FT.
40 MPH	320 FT.	40 FT.	80 FT.	100 FT.
45 MPH	540 FT.	45 FT.	90 FT.	350 FT.
50 MPH	600 FT.	50 FT.	100 FT.	350 FT.

NOTE: MERGE TAPER LENGTH WAS CALCULATED BASED ON 12-FOOT WIDE LANES.

LEGEND:

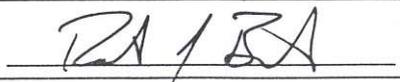
-  TRAFFIC DRUM OR 36" POST TUBE DELINEATOR
-  SIGN WITH FLAG TREE
-  TRAFFIC DIRECTION
-  FLASHING LEFT ARROW
-  WORK AREA
-  BARRICADE (FOR EXCAVATION ONLY)

CITY OF TORRANCE - WORK AREA TRAFFIC CONTROL

DATE ISSUED
1 SEP 2009

**RIGHT LANE CLOSURE
FOR WORK BEYOND INTERSECTION**

ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737



STANDARD NO.
T1011
SHEET 1 OF 1

TT/T1013

CITY OF TORRANCE - WORK AREA TRAFFIC CONTROL

DATE ISSUED

1 SEP 2009

**ARTERIAL & COLLECTOR STREET
RIGHT TURN LANE CLOSURE**

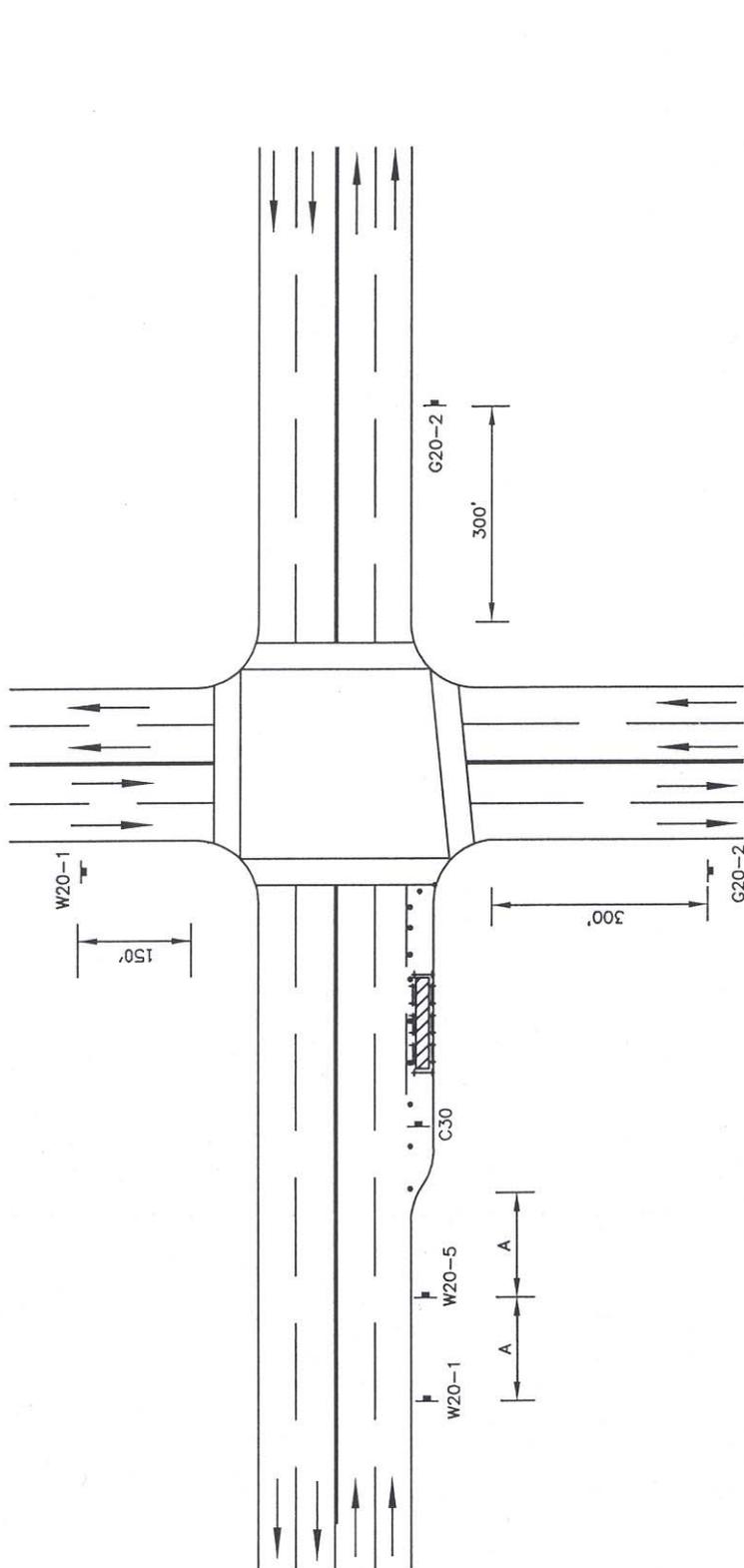
ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737



STANDARD NO.

T1013

SHEET 1 OF 1



MINIMUM RECOMMENDED DELINEATOR AND SIGN PLACEMENT

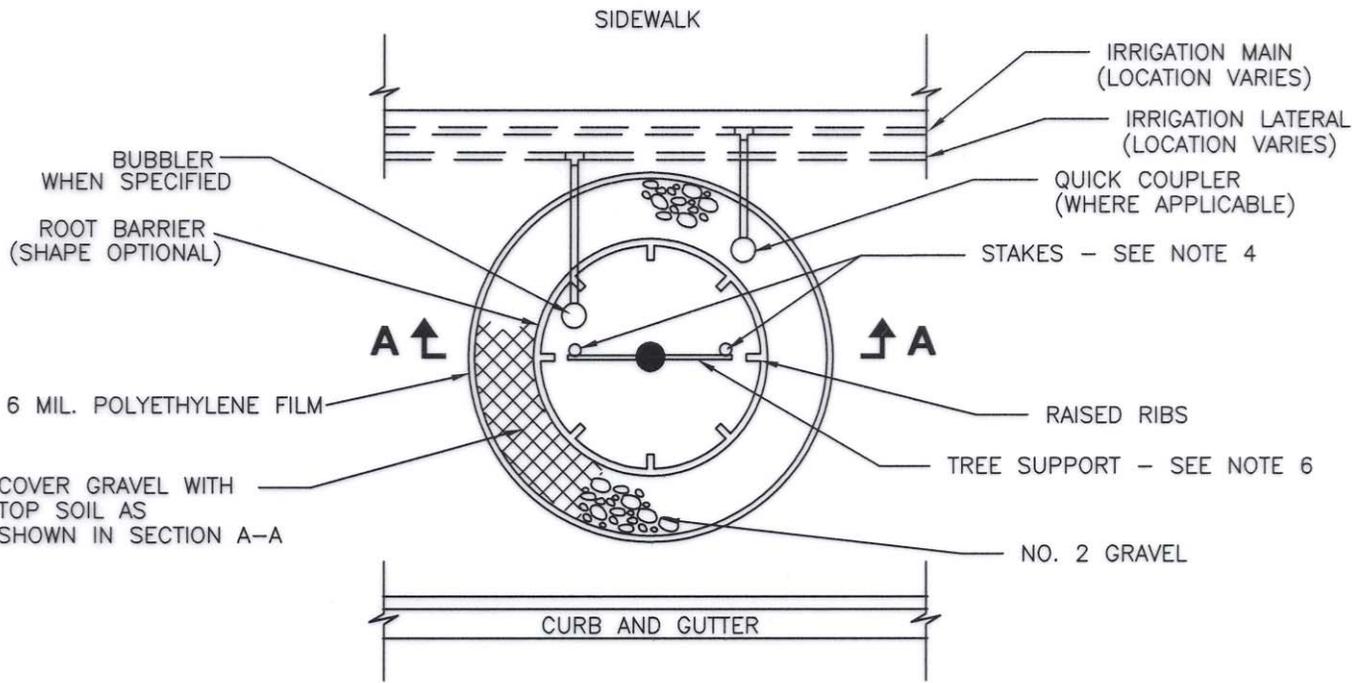
DESIGN SPEED	MERGE TAPER LENGTH (L)	DELINEATOR SPACING		DISTANCE BETWEEN SIGNS (A)
		(TAPER)	(TANGENT)	
30 MPH	180 FT.	30 FT.	60 FT.	100 FT.
35 MPH	245 FT.	35 FT.	70 FT.	100 FT.
40 MPH	320 FT.	40 FT.	80 FT.	100 FT.
45 MPH	540 FT.	45 FT.	90 FT.	350 FT.
50 MPH	600 FT.	50 FT.	100 FT.	350 FT.

CONSTRUCTION SIGNS:

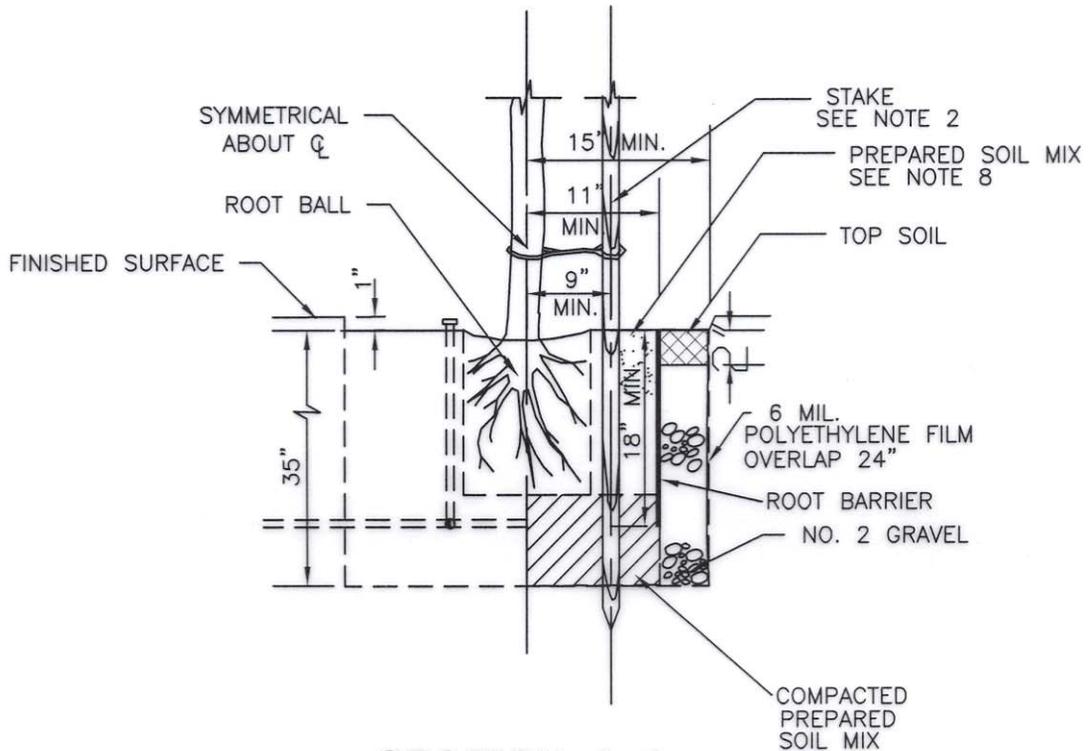
-  W20-1 ROAD WORK AHEAD
-  W20-5(R): RIGHT LANE CLOSED AHEAD
-  G20-2 : END ROAD WORK (OPTIONAL)
-  C30: LAND CLOSED

LEGEND:

-  TRAFFIC DRUM OR 36" POST TUBE DELINEATOR
-  SIGN WITH FLAG TREE
-  WORK AREA
-  TRAFFIC DIRECTION
-  BARRICADE (FOR EXCAVATION ONLY)



TREE - DIRT PARKWAY



SECTION A-A

CITY OF TORRANCE

TREE PLANTING

DATE ISSUED
23 SEP 2009

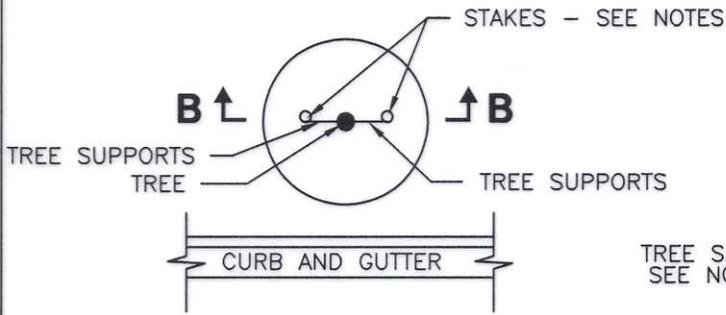
STANDARD NO.

T401

ROBERT J. BESTE
PUBLIC WORKS DIRECTOR
R.C.E. NO. 50737

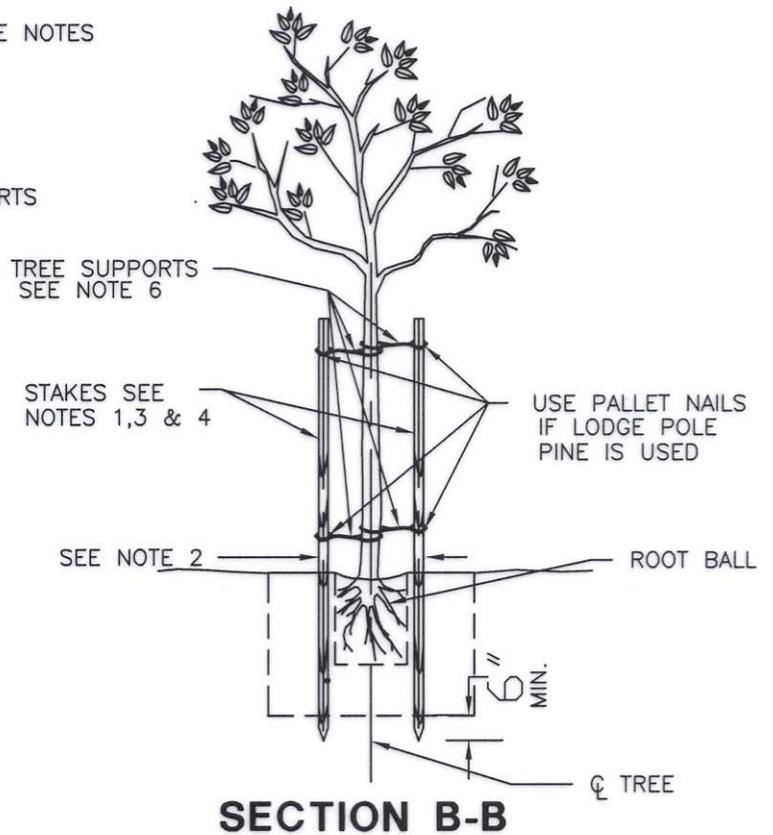
SHEET 1 OF 2

TT/T401



PLAN

LENGTH OF STAKES	
TREE SIZE	LENGTH
15 GAL.	10'
24" BOX	12'
30" BOX	12'
36"-48" BOX	SEE NOTE 5



SECTION B-B

NOTES:

1. STAKES SHALL BE EITHER 2" DIAMETER LODGE POLE PINE, TREATED WITH COPPER NANTHANATE OR PRESSURE TREATED WITH CHROMATED COPPER ARSENATE, OR GALVANIZED STEEL PIPE, PER SUBSECTION 308-4.6.1 (METHOD A) OF THE STD. SPEC'S
2. PLACE STAKES 18" APART FOR 15 GAL. TREE. PLACE STAKES AT OUTER EDGE OF ROOT BALL FOR LARGER SIZE (BOX) TREES.
3. HEIGHT OF STAKES SHALL NOT BE HIGHER THAN THE TOP OF THE TREE.
4. ALL STAKES SHALL BE ALIGNED IN THE EAST-WEST DIRECTION REGARDLESS OF CURB ORIENTATION.
5. FOR 36" OR LARGER BOX TREES - STAKE OR GUY AT THE DIRECTION OF THE STREETScape ADMINISTRATOR.
6. TREE TIES SHALL BE PER SUBSECTION 308-4.6.2 OF THE STANDARD SPECIFICATIONS.
7. THE STREETScape ADMINISTRATOR WILL DESIGNATE THE GROUND LOCATION OF ALL TREES BY PLACING OF STAKES OR OTHER SUITABLE MARKERS.
8. UNLESS OTHERWISE APPROVED BY STREETScape ADMINISTRATOR PREPARED SOIL MIX SHALL BE:
 - 4 PARTS BY VOLUME NITROGEN-STABILIZED ORGANIC AMENDMENT.
 - 6 PARTS BY VOLUME ON-SITE SOIL FROM AN AREA APPROVED BY THE STREETScape ADMINISTRATOR.
 - 2 LBS. IRON SULFATE PER CUBIC YARD OF MIX.
9. ROOT BARRIERS WHEN SPECIFIED ON PROJECT DRAWINGS OR IN PROJECT SPECIFICATIONS, SHALL BE FABRICATED FROM A HIGH DENSITY AND HIGH IMPACT PLASTIC SUCH AS POLYVINYL CHLORIDE, ABS OR POLYETHYLENE AND HAVE A MINIMUM THICKNESS OF 0.06". THE PLASTIC SHALL HAVE 1/2" TO 3/4" HIGH RAISED VERTICAL RIBS ON THE INNER SURFACE SPACED AT LEAST 6" BUT NOT MORE THAN 8" APART.

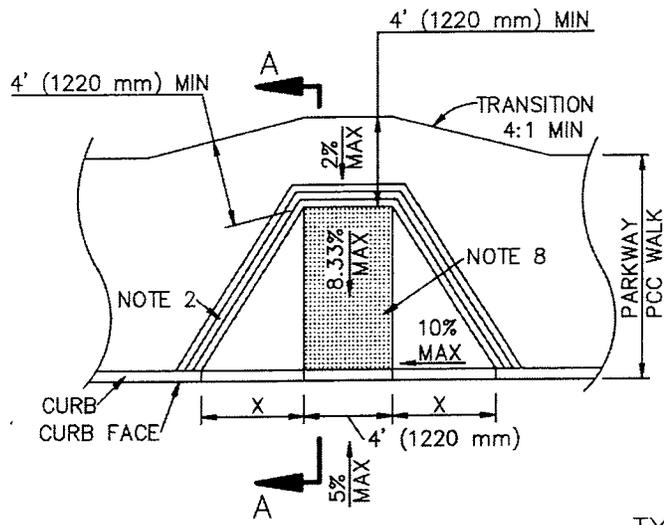
CITY OF TORRANCE

DATE ISSUED	TREE PLANTING	STANDARD NO.
23 SEP 2009		T401
ROBERT J. BESTE PUBLIC WORKS DIRECTOR R.C.E. NO. 50737		SHEET 2 OF 2

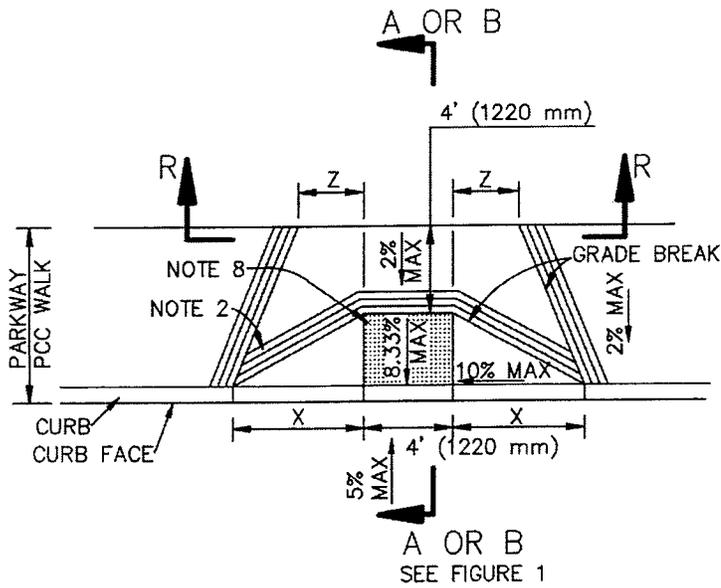
TT/T401

APPENDIX III

SPPWC STANDARD PLANS



TYPE 1



TYPE 2

CASE A

PARTS OF THIS STANDARD PLAN SHOW INSTALLATION FOR TYPICAL RETROFIT CONDITIONS, AND ARE NOT FULLY COMPLIANT WITH CALIFORNIA BUILDING CODE REQUIREMENTS FOR NEW DEVELOPMENT.

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

PROMULGATED BY THE
PUBLIC WORKS STANDARDS INC.
GREENBOOK COMMITTEE
1992
REV. 1996, 2000, 2005, 2009,
2013

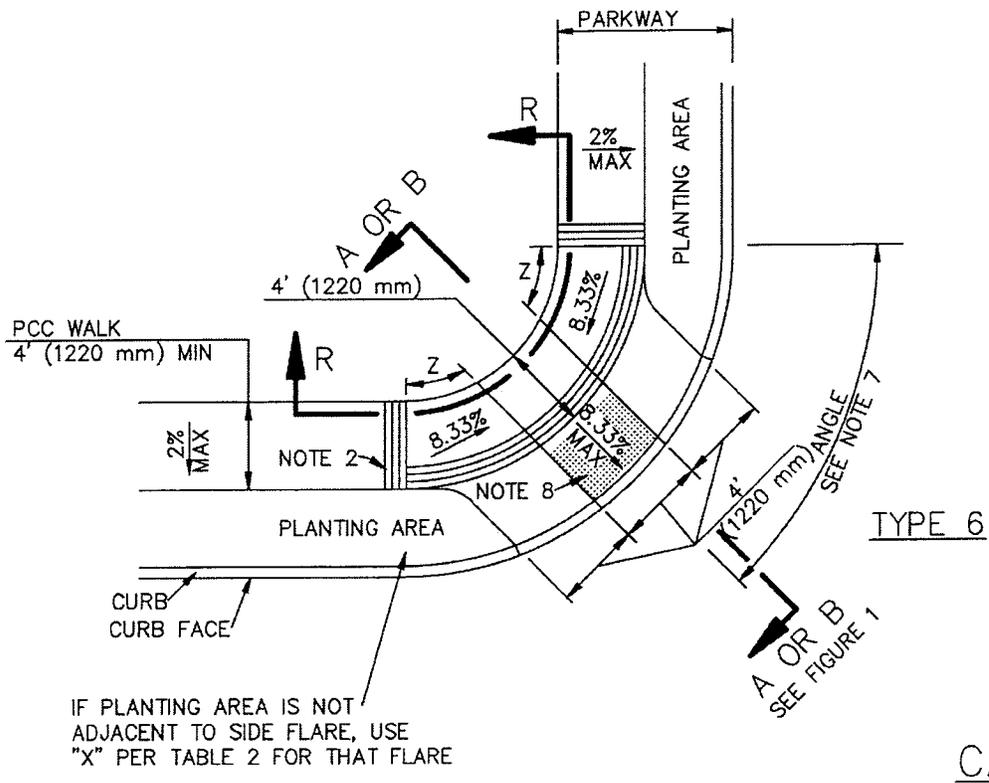
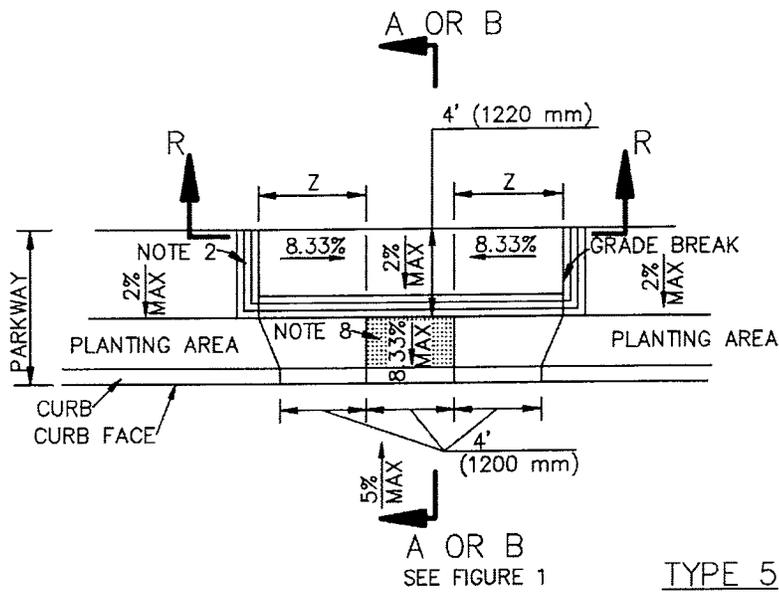
CURB RAMP

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

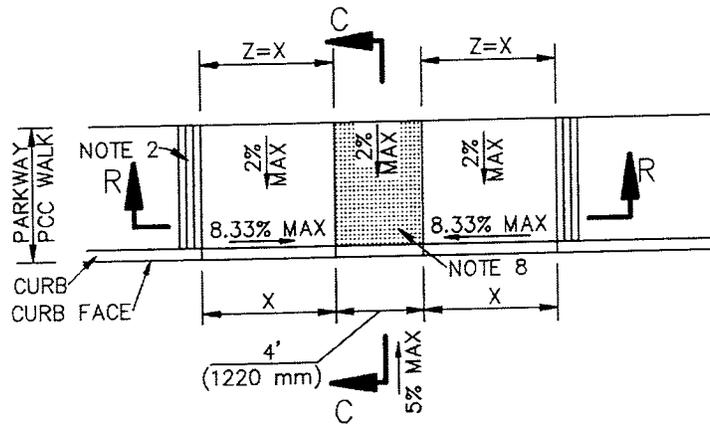
STANDARD PLAN

111-5

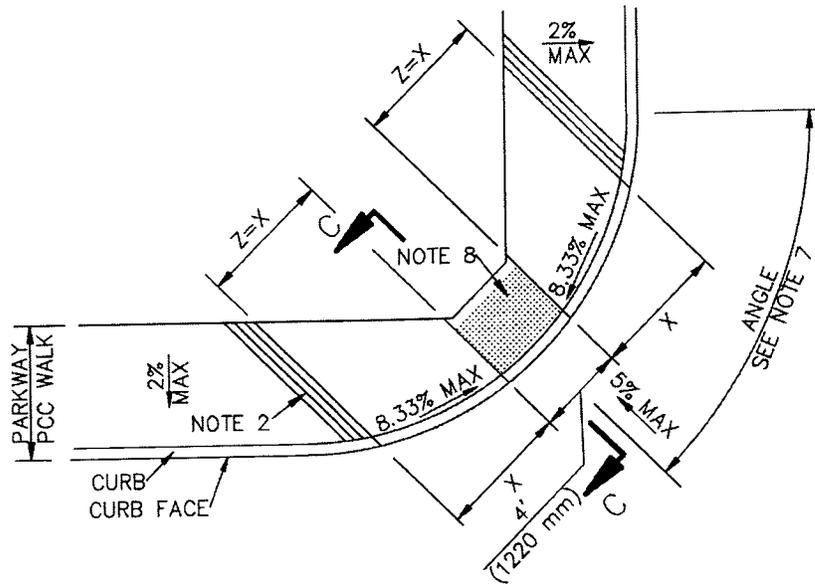
SHEET 1 OF 10



STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION CURB RAMP	STANDARD PLAN
	111-5 SHEET 3 OF 10



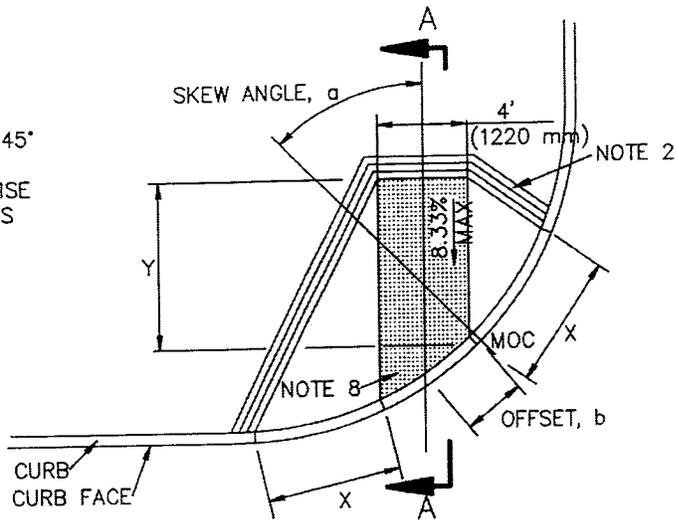
TYPE 1



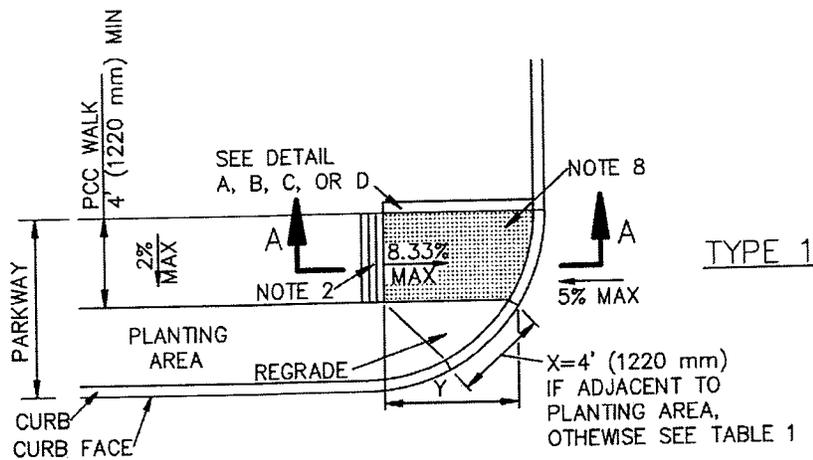
TYPE 2

CASE B

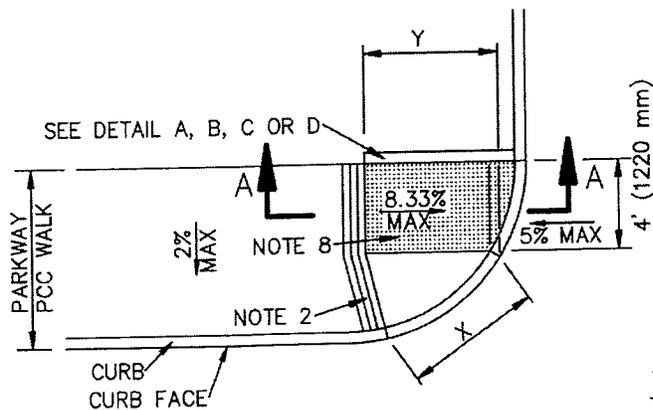
SKEW ANGLE $\alpha=45^\circ$
 OFFSET $b=0$
 UNLESS OTHERWISE
 NOTED ON PLANS



CASE C



TYPE 1



TYPE 2

CASE D

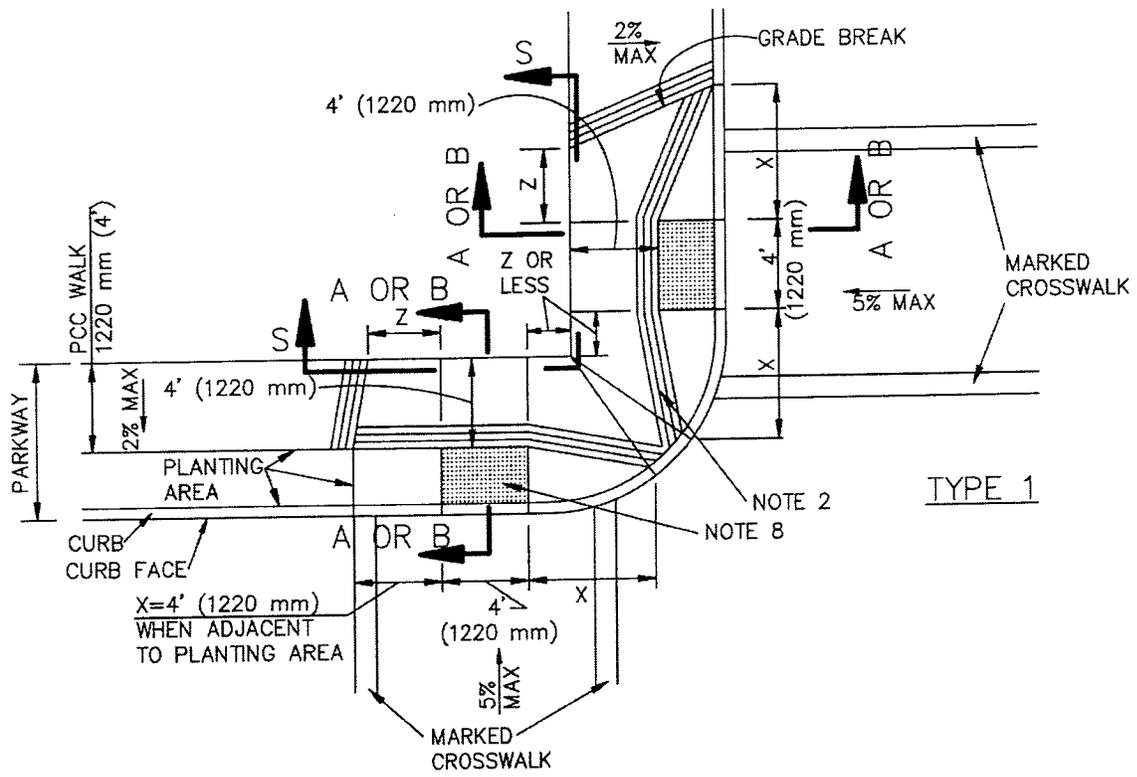
STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

CURB RAMP

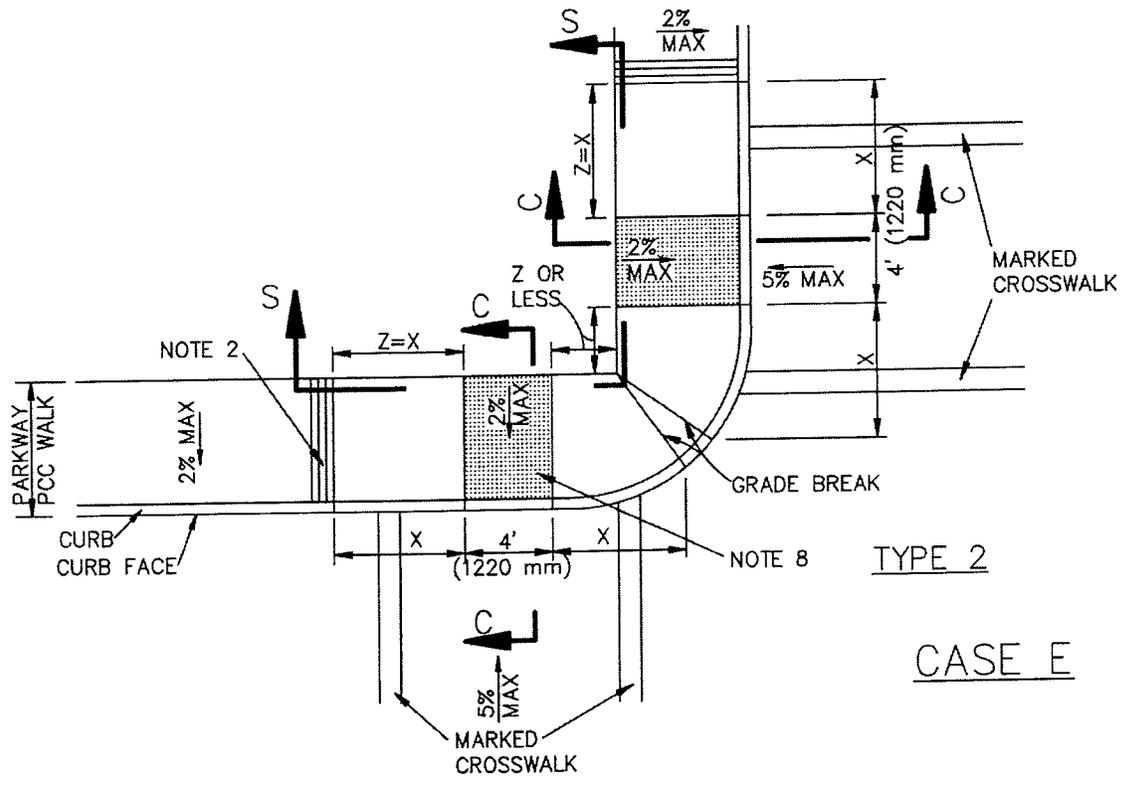
STANDARD PLAN

111-5

SHEET 5 OF 10

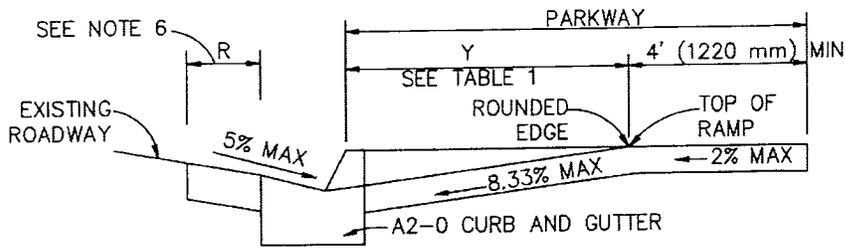


TYPE 1



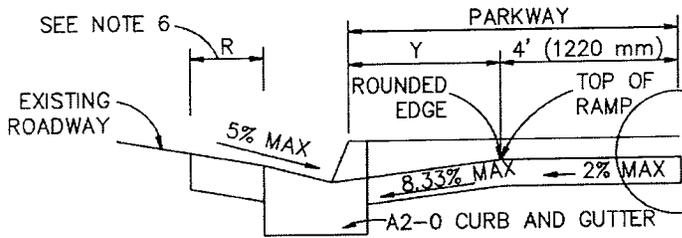
TYPE 2

CASE E



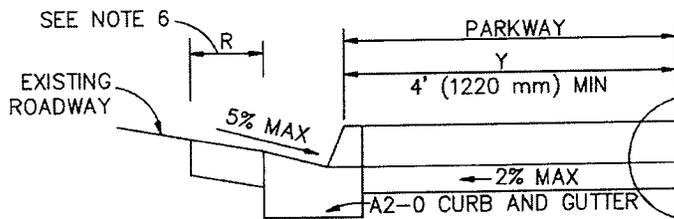
SECTION A-A

USE FIGURE 1 TO DETERMINE WHICH OF SECTIONS A-A, B-B OR C-C IS APPROPRIATE.



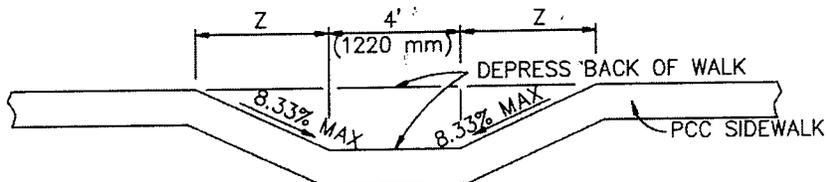
SECTION B-B

DEPRESS BACK OF WALK
SEE DETAIL A, B, C OR D,
SHEET 10.

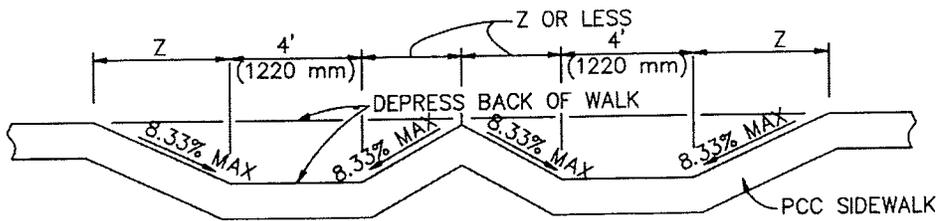


SECTION C-C

DEPRESS BACK OF WALK
SEE DETAIL A, B, C OR D,
SHEET 10.



SECTION R-R



SECTION S-S

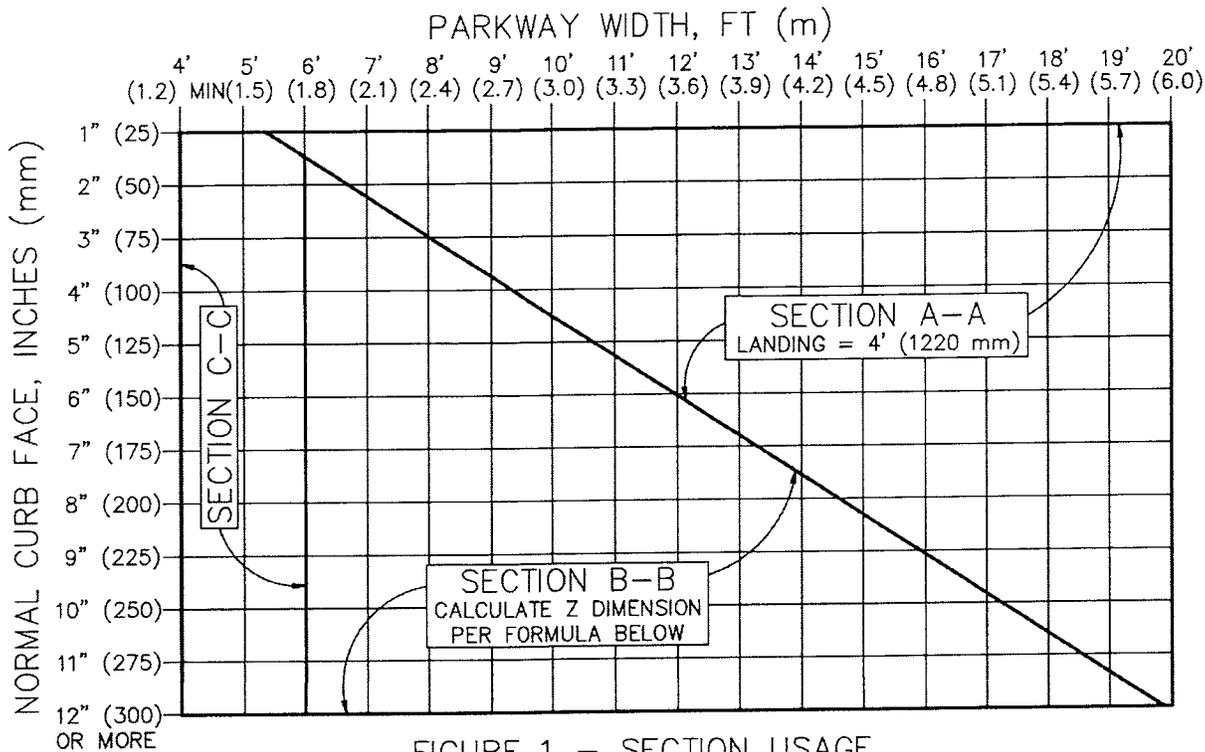


FIGURE 1 - SECTION USAGE

NORMAL CURB FACE, INCHES (mm)	X, FT (mm)	SECTION Y-Y, FT (mm)
2" (50)	4.00' (1220) MIN	2.63' (790)
3" (75)	4.00' (1220) MIN	3.95' (1185)
4" (100)	4.00' (1220) MIN	5.26' (1580)
5" (125)	4.17' (1275)	6.58' (1975)
6" (150)	5.00' (1525)	7.90' (2370)
7" (175)	5.83' (1775)	9.21' (2764)
8" (200)	6.67' (2035)	10.53' (3160)
9" (225)	7.50' (2285)	11.84' (3555)
10" (250)	8.33' (2540)	13.16' (3950)
11" (275)	9.17' (2795)	14.47' (4340)
12" (300)	10.00' (3050)	15.79' (4735)

WHERE FIGURE 1 SHOWS USE OF SECTION B-B, FIGURE Z DIMENSION AS FOLLOWS:

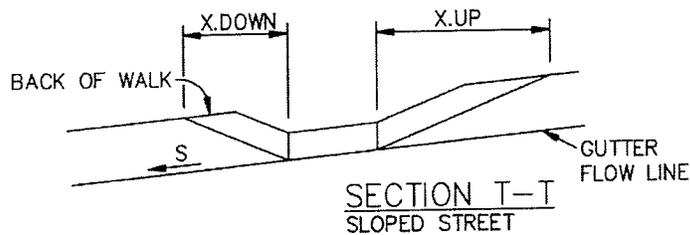
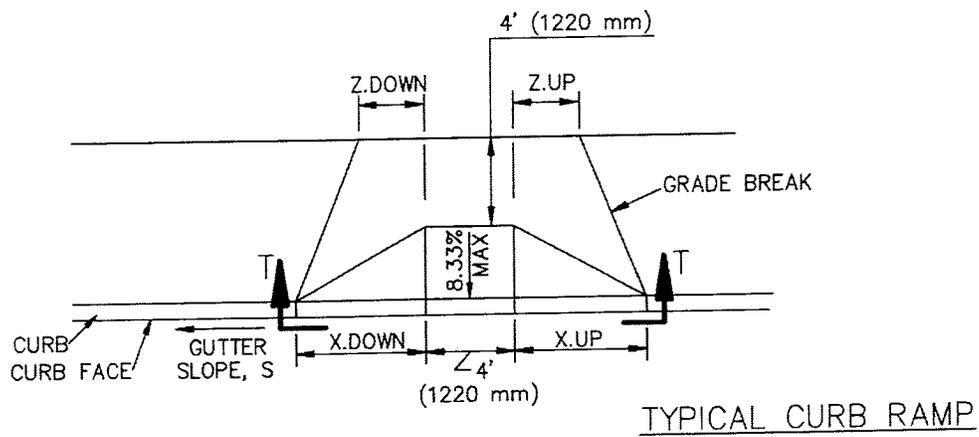
W = PARKWAY WIDTH
 L = LANDING WIDTH, 4' (1220 mm) TYP
 $Z = [(Y+L)-W] \times 0.760$

IF $(Y+L) < W$, THEN $Z = 0$

SEE SHEET 9 FOR STREET SLOPE ADJUSTMENT FACTORS, ALL STREETS

TABLE 1 - X AND Y VALUES

TABLE 1 REFERENCE FORMULAS:
 $X = CF / 8.333\%$
 $Y = CF / (8.333\% - 2\% \text{ WALK CROSS SLOPE})$



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

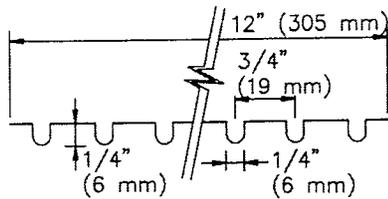
STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

CURB RAMP

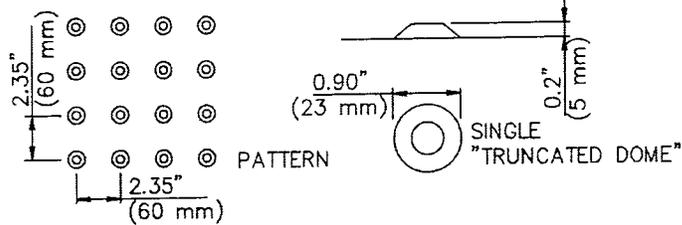
STANDARD PLAN

111-5

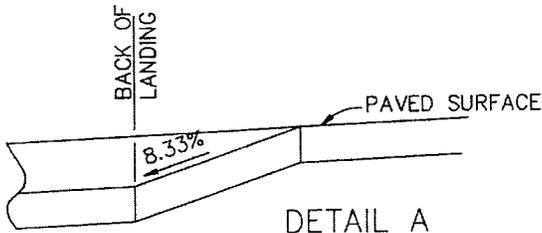
SHEET 9 OF 10



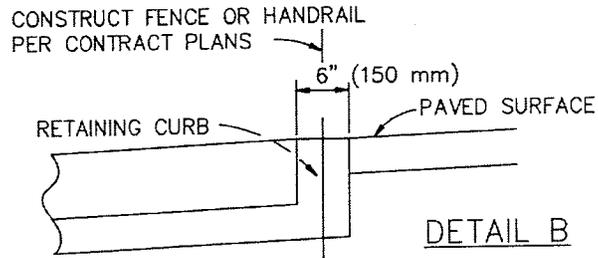
GROOVING DETAIL



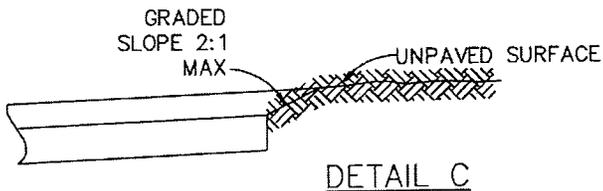
DETECTABLE WARNING DETAIL



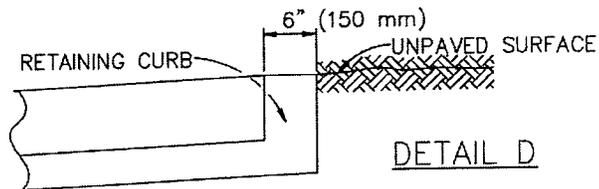
DETAIL A



DETAIL B



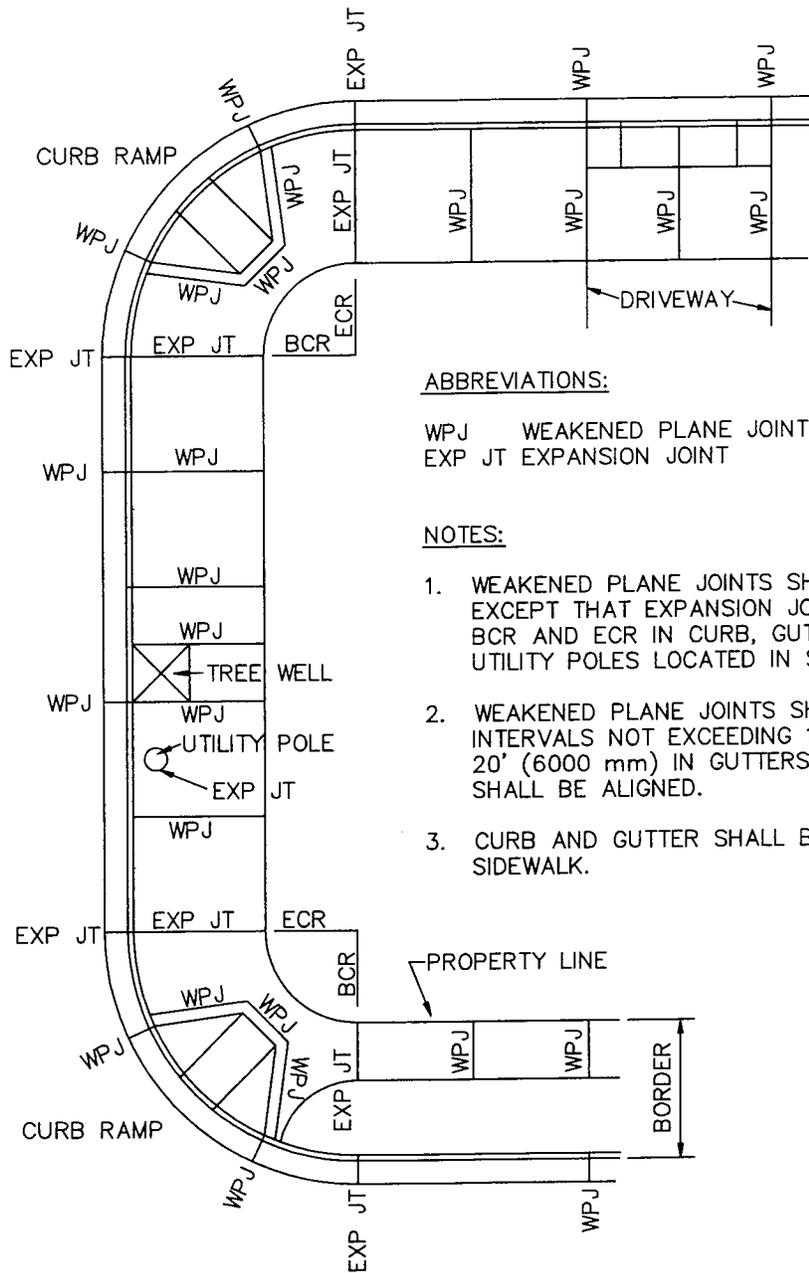
DETAIL C



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. SEE SHEET 7.
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. 1996, 2009

CURB AND SIDEWALK JOINTS

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

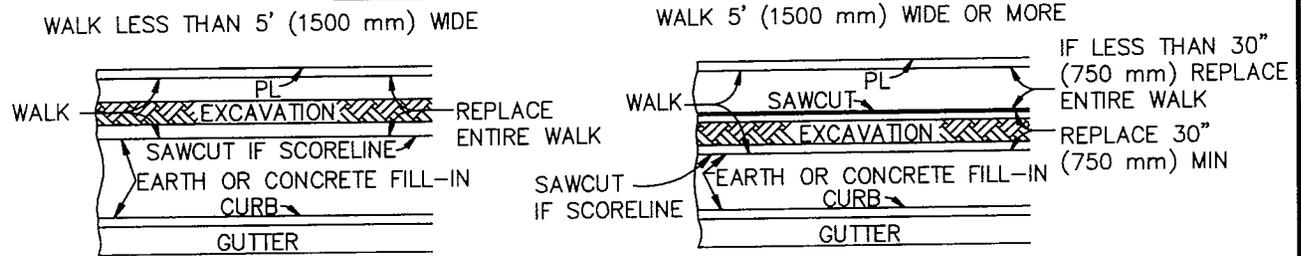
STANDARD PLAN

112-2

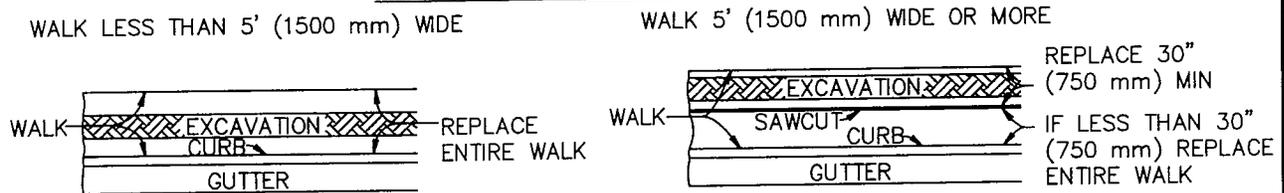
SHEET 1 OF 1

WALK OR FILL-IN REPLACEMENT FOR EXCAVATIONS MADE PARALLEL TO CURB OR PROPERTY LINE

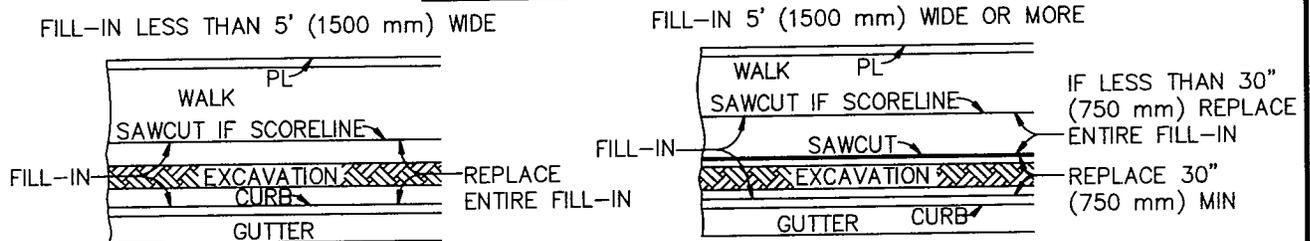
WALK ADJACENT TO PROPERTY LINE



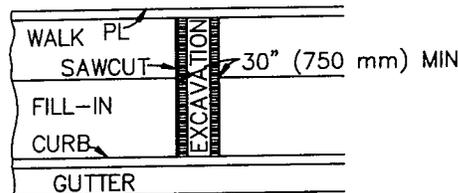
WALK ADJACENT TO CURB



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.

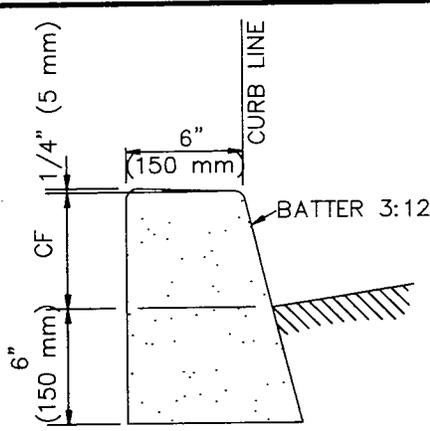
STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

SIDEWALK & DRIVEWAY REPLACEMENT

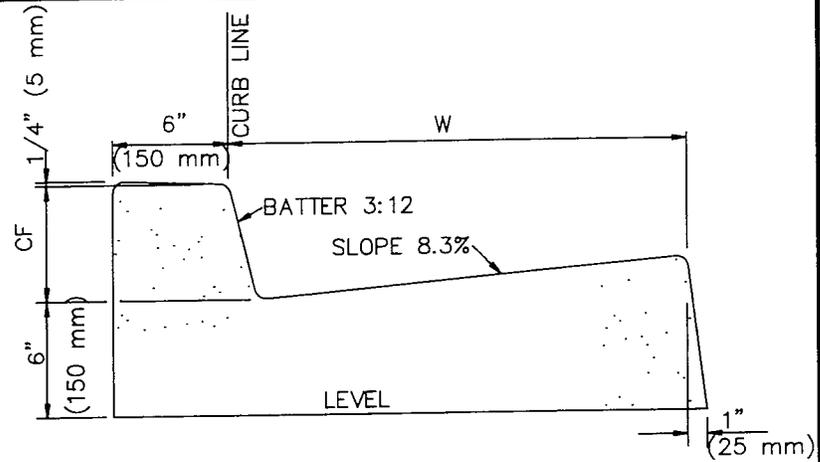
STANDARD PLAN

113-2

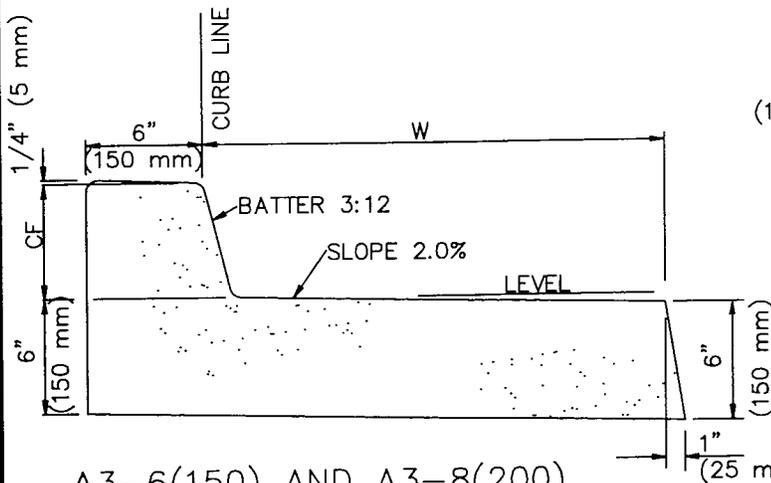
SHEET 2 OF 2



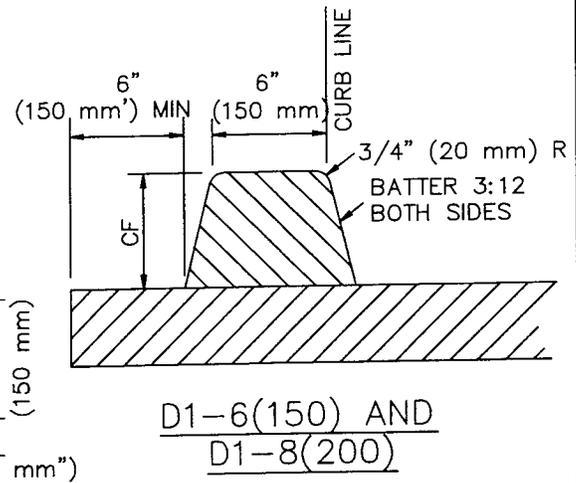
A1-6(150) AND
A1-8(200)



A2-6(150) AND A2-8(200)



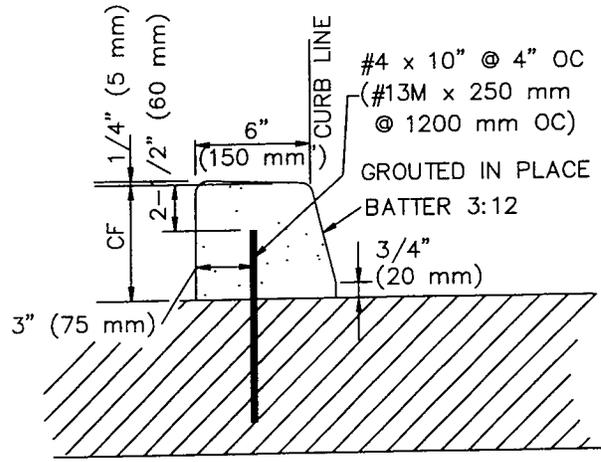
A3-6(150) AND A3-8(200)



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)

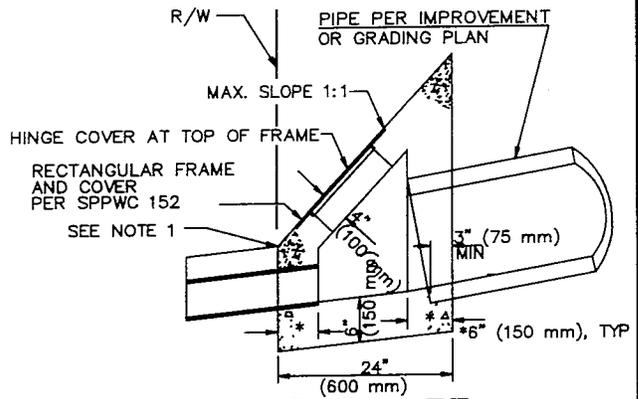
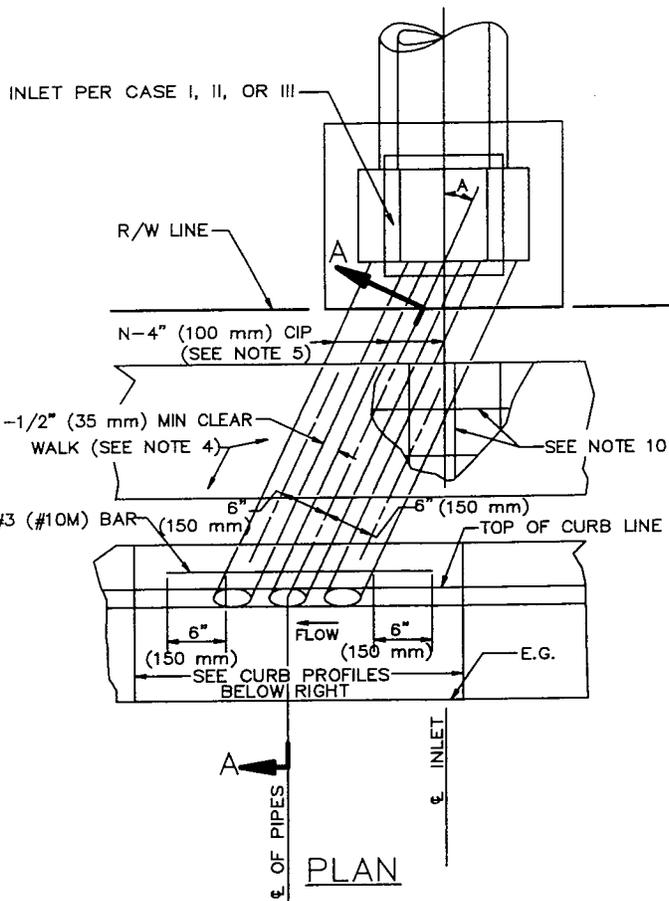
STANDARD PLAN FOR PUBLIC WORKS CONSTRUCTION

PROMULGATED BY THE
PUBLIC WORKS STANDARDS INC.
GREENBOOK COMMITTEE
1984
REV. 1996, 2009

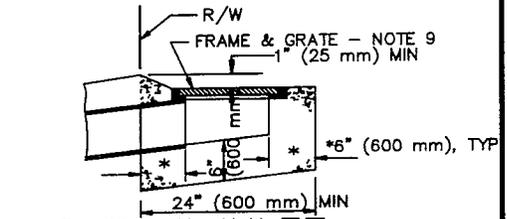
CURB AND GUTTER - BARRIER

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

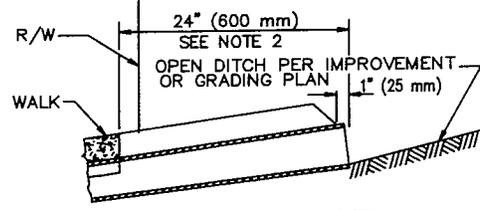
STANDARD PLAN
120-2
SHEET 1 OF 1



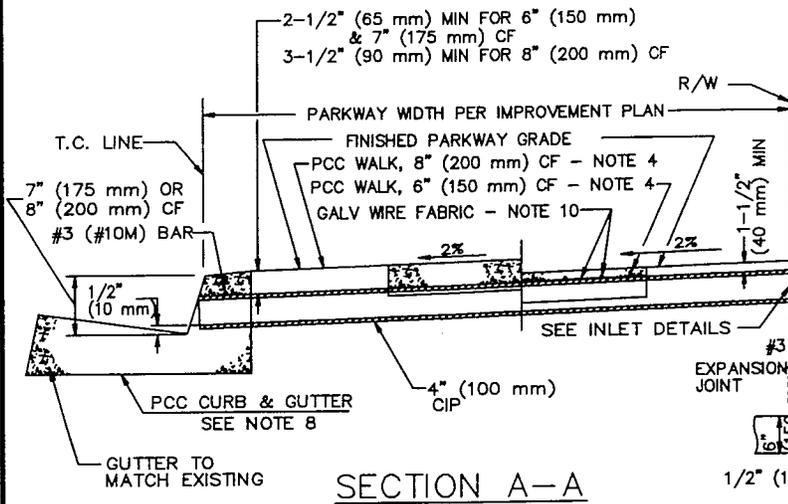
CASE I INLET
TRANSITION STRUCTURE SECTION



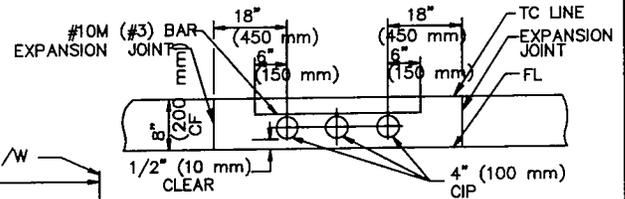
CASE II INLET
DROP INLET CATCH BASIN SECTION



CASE III INLET
GRADED DITCH SECTION

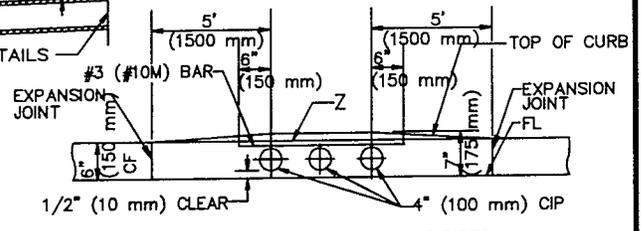


SECTION A-A



NOTE: APPLIES TO ANY NUMBER OF PIPES

CURB PROFILE
8\"/>



NOTE: APPLIES TO ANY NUMBER OF PIPES
Z = TOP-OF-CURB LINE SHOWN ON PROFILE

CURB PROFILE
6\"/>

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

PROMULGATED BY THE
PUBLIC WORKS STANDARDS INC.
GREENBOOK COMMITTEE
1984
REV. 1992, 1996, 2009

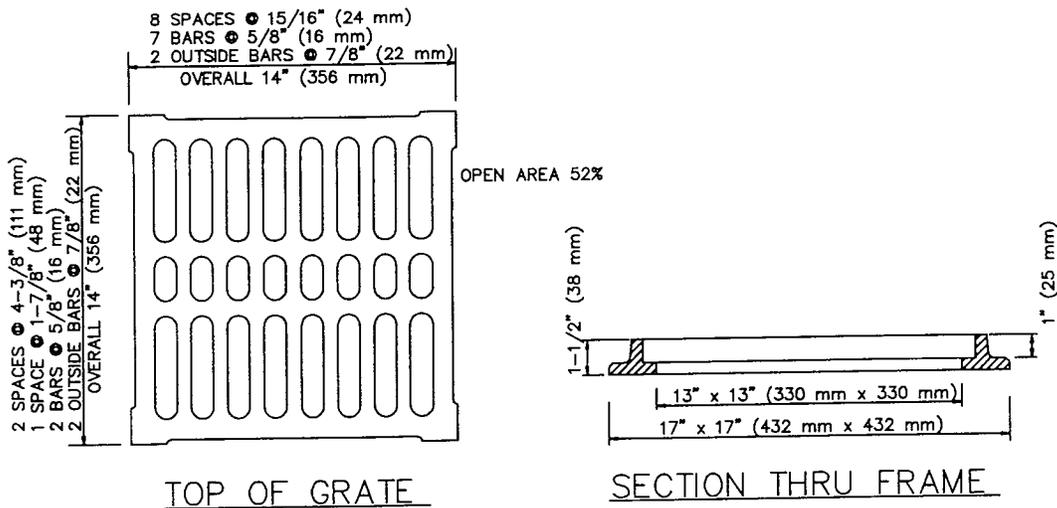
CURB DRAIN

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLAN
150-3
SHEET 1 OF 2

NOTES

1. IF THE TOP OF SLOPE IS ALLOWED WITHIN THE R/W, INLET CASE I BEGINS AT THE TOP RATHER THAN THE R/W LINE.
2. FOR OPEN DITCH (CASE INLET III), THE 24" (600 mm) EXTENSION BEYOND THE R/W LINE IS NOT REQUIRED WHEN BACK OF WALK IS 24" (600 mm) OR MORE FROM THE R/W LINE; HOWEVER, PIPE SHALL EXTEND TO R/W LINE.
3. TOP OF INLET STRUCTURE (CASE I AND II) TO BE FLUSH WITH ADJACENT SURFACE WHERE PRACTICAL.
4. CONSTRUCT PCC WALK WHEN SPECIFIED ON PLANS. THE CONTRACT PRICE PAID FOR PCC WALK ITEM SHALL INCLUDE WALK CONSTRUCTED IN CONJUNCTION WITH PARKWAY CULVERT.
5. "N" EQUALS NUMBER OF PIPES (MAXIMUM OF THREE) AS SPECIFIED ON PLANS.
6. INLET CASE TO BE SPECIFIED ON PLANS.
7. ANGLE A EQUALS 0°, UNLESS OTHERWISE SPECIFIED.
8. TYPE, DIMENSIONS AND ELEVATIONS OF P.C.C. CURB AND GUTTER PER PLANS.
9. UNLESS OTHERWISE SPECIFIED, FRAME AND GRATE FOR CASE II INLET SHALL BE GALVANIZED CAST IRON. WEIGHT OF FRAME AND GRATE SHALL BE 80 LBS (36 kg).
10. AT LOCATIONS WITH LESS THAN 8" (200 mm) CURB FACE, USE 6x6-10/10 (152x152-MW9.1xMW9.1) GALVANIZED WIRE FABRIC. WIRE FABRIC SHALL EXTEND 8" (200 mm) BEYOND THE EDGE OF CAST IRON PIPES.



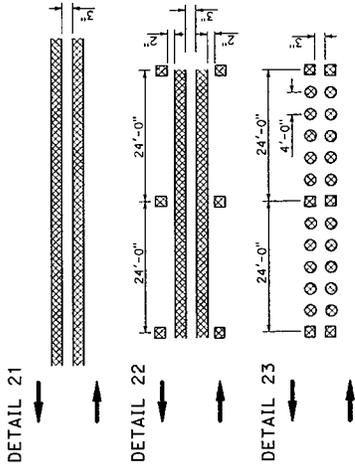
GRATE FOR CASE II INLET

APPENDIX IV

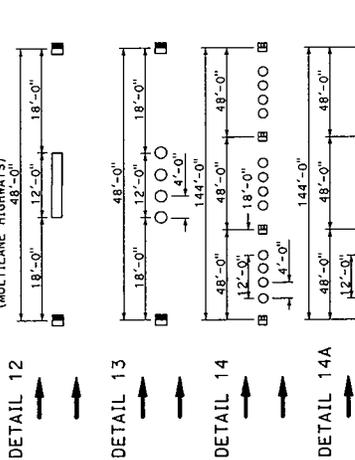
CALTRANS STANDARD PLANS

DISTRICT COUNTY ROUTE POST MILES PROJECT SHEET TOTAL SHEETS
 REGISTERED CIVIL ENGINEER
 Roberto L. Macdonald
 PROFESSIONAL ENGINEER
 No. 45113
 State of California
 EXP. DATE 06/30/11
 MAY 20, 2011
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
 HAS REVIEWED THESE PLANS AND APPROVES THEM FOR CONSTRUCTION OF THIS PROJECT.
 CONFORMS TO THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2009 EDITION.

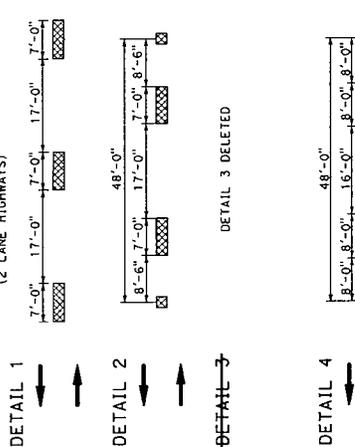
NO PASSING ZONES-TWO DIRECTION



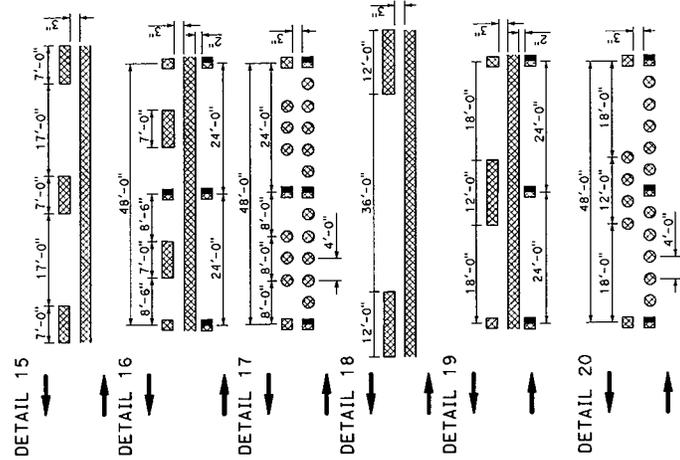
LANELINES (Cont)



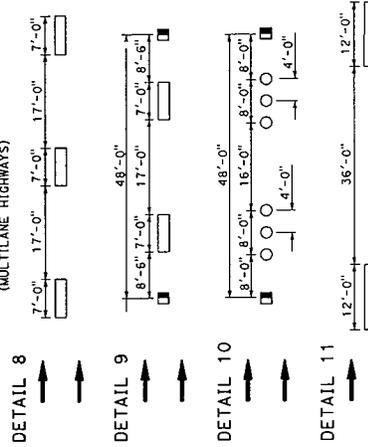
CENTERLINES



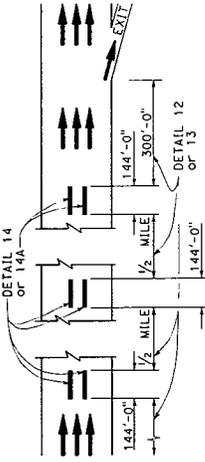
NO PASSING ZONES-ONE DIRECTION



LANELINES



TYPICAL LANE LINE DELINEATION IN ADVANCE OF EXIT RAMP

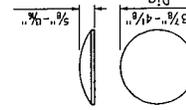


NOTE:
 Detail 14 is to be used in combination with Detail 13.
 Detail 13 is to be used in combination with Detail 12.

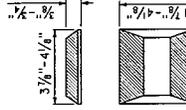
- LEGEND MARKERS**
- TYPE A WHITE NON-REFLECTIVE
 - ⊙ TYPE AY YELLOW NON-REFLECTIVE
 - ⊞ TYPE C RED-CLEAR RETROREFLECTIVE
 - ⊞ TYPE D TWO-WAY YELLOW RETROREFLECTIVE
 - ⊞ TYPE G ONE-WAY CLEAR RETROREFLECTIVE
 - ⊞ TYPE H ONE-WAY YELLOW RETROREFLECTIVE
- LINES**
- ▬ 4" WHITE
 - ▬ 4" YELLOW
- MARKER DETAILS**
- 3 3/8" x 4 1/8"
 - 3 3/8" x 4 1/8"
 - 3 3/8" x 4 1/8"
 - 3 3/8" x 4 1/8"

DIRECTION OF TRAVEL

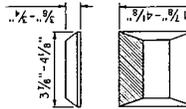
TYPE A AND TYPE AY



TYPE C AND TYPE D



TYPE G AND TYPE H



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKERS AND TRAFFIC LINES AND TYPICAL DETAILS

NO SCALE

A20A

D1+ COUNTY ROUTE TOTAL PROJECT SHEET NO. SHEETS
 REGISTERED CIVIL ENGINEER
 PROFESSIONAL ENGINEER
 ROBERTO L. MCGOUGH
 No. 40375
 Exp. 3-31-13
 REGISTERED IN THE STATE OF CALIFORNIA
 MAY 20, 2011
 PLANS APPROVAL DATE
 THE ENGINEER OR ARCHITECT SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THIS PLAN SHEET.

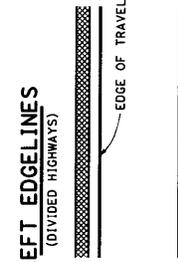
LEGEND

- MARKERS**
 TYPE AY YELLOW NON-REFLECTIVE
 TYPE D YELLOW RETROREFLECTIVE
 TYPE H ONE-WAY YELLOW RETROREFLECTIVE
- LINES**
 4" WHITE
 4" YELLOW
 DIRECTION OF TRAVEL

MEDIAN ISLANDS



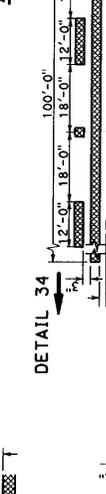
LEFT EDGELINES
(DIVIDED HIGHWAYS)



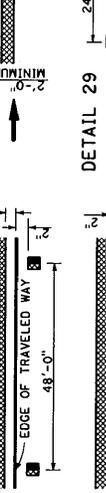
RIGHT EDGELINES



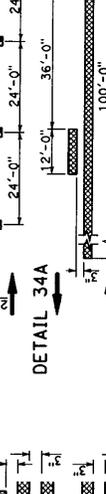
INTERSECTIONS



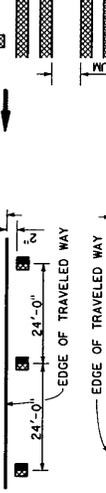
TREATMENTS



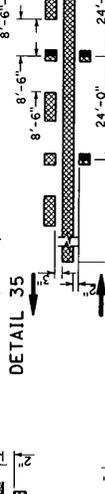
INTERSECTIONS



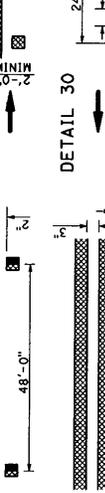
TREATMENTS



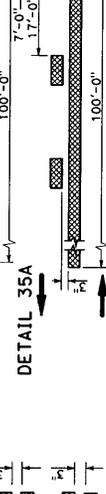
INTERSECTIONS



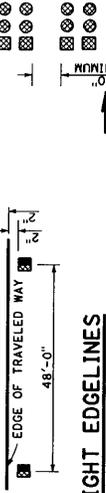
TREATMENTS



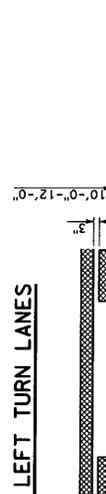
INTERSECTIONS



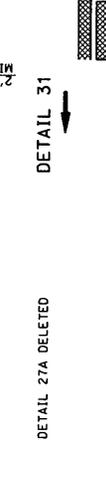
TREATMENTS



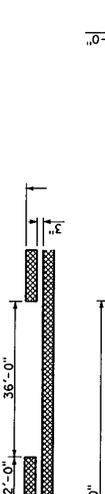
INTERSECTIONS



TREATMENTS



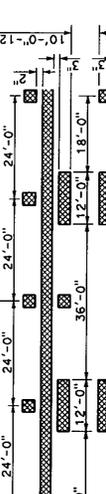
INTERSECTIONS



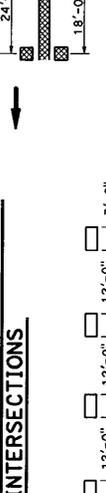
TREATMENTS



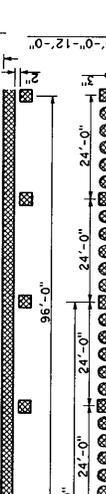
INTERSECTIONS



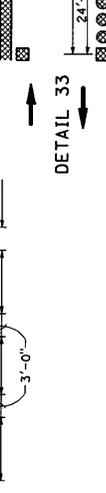
TREATMENTS



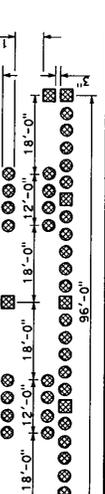
INTERSECTIONS



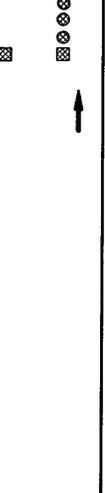
TREATMENTS



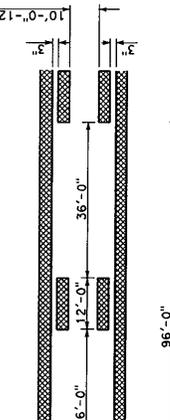
INTERSECTIONS



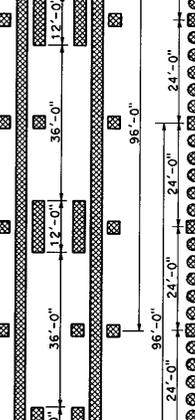
TREATMENTS



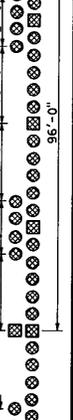
MARKER DETAILS



TWO-WAY LEFT TURN LANES



RIGHT EDGELINE EXTENSION THROUGH INTERSECTIONS



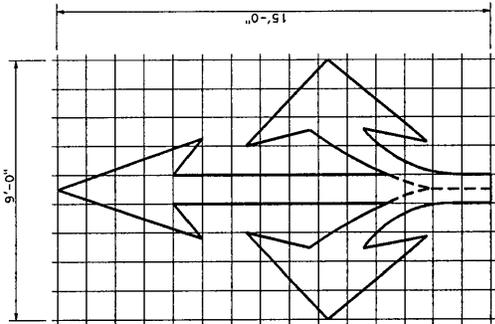
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS
 NO SCALE
A20B

0.541	COUNTY	ROUTE	POST MILES	SHEET	TOTAL SHEETS

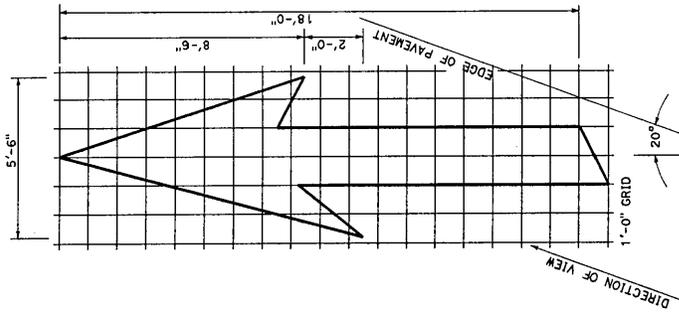


Roberto L. Melendez
 REGISTERED CIVIL ENGINEER
 APR 11 20, 2012
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 SHALL NOT BE HELD RESPONSIBLE FOR THE
 ACCURACY OR COMPLETENESS OF THE
 COPIES OF THIS PLAN SHEET.

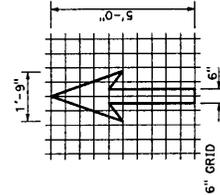
TO ACCOMPANY PLANS DATED _____



TYPE VIII ARROW
A=36 ft²

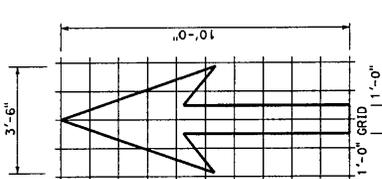


TYPE VI ARROW
A=42 ft²
Right lane drop arrow
(For left lane, use mirror image)

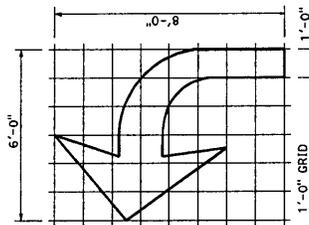


A=3.5 ft²

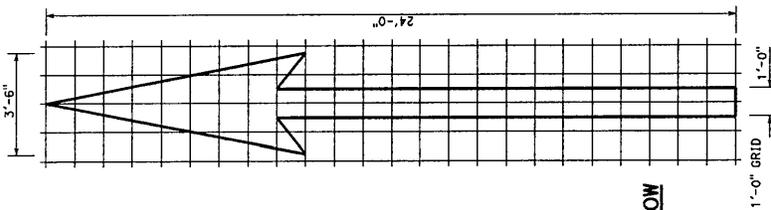
BIKE LANE ARROW



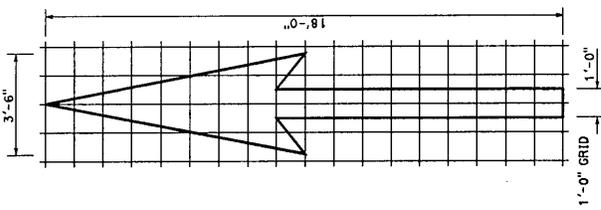
TYPE I 10'-0" ARROW
A=14 ft²



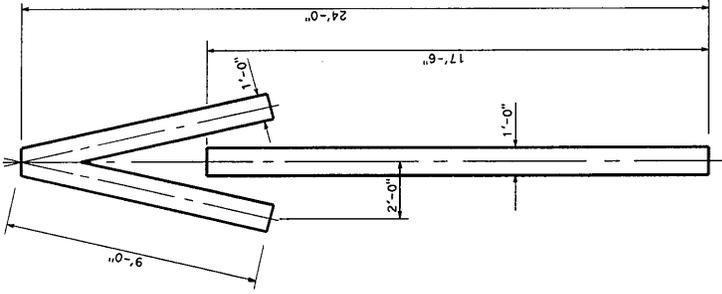
TYPE IV (L) ARROW
A=15 ft²
(For Type IV (R) arrow, use mirror image)



TYPE I 24'-0" ARROW
A=31 ft²



TYPE I 18'-0" ARROW
A=25 ft²



TYPE V ARROW
A=33 ft²

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
ARROWS**
NO SCALE

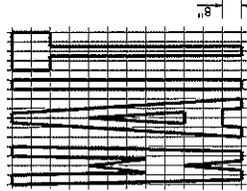
NOTE:
Minor variations in dimensions may be accepted by the Engineer.

RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A
DATED MAY 20, 2011 - PAGE 13 OF THE STANDARD PLANS BOOK DATED 2010.

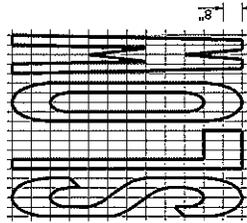
DIST	COUNTY	ROUTE	SHEET NO.	TOTAL SHEETS
			10	10

REGISTERED CIVIL ENGINEER
Richard M. ...
 May 20, 2011
 PLAN APPROVAL DATE
 I HEREBY CERTIFY THAT THE WORK ON THIS PLAN IS THE ACCURATE AND COMPLETE REPRESENTATION OF THE WORK AS SHOWN ON THIS PLAN SHEET.

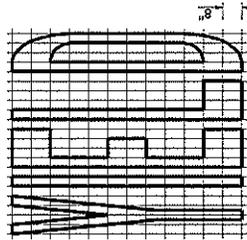
REGISTERED PROFESSIONAL ENGINEER
 No. 40075
 Exp. 3-31-13
 CIVIL
 STATE OF CALIFORNIA



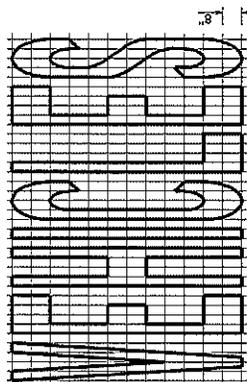
A=19 ft+2



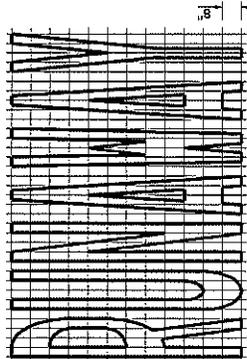
A=23 ft+2



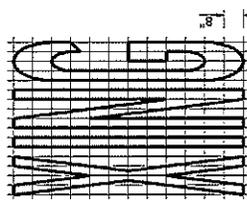
A=24 ft+2



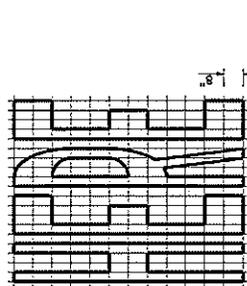
A=42 ft+2



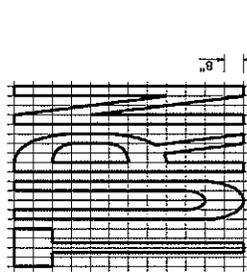
A=43 ft+2



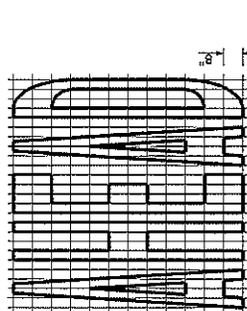
A=21 ft+2



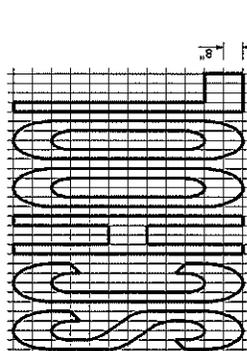
A=26 ft+2



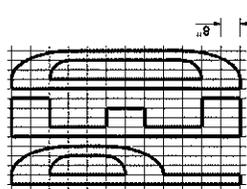
A=24 ft+2



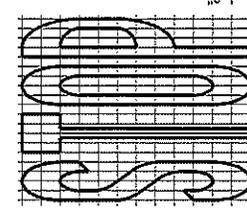
A=31 ft+2



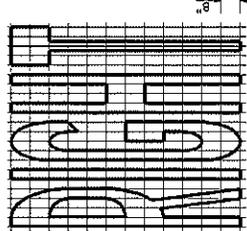
A=35 ft+2



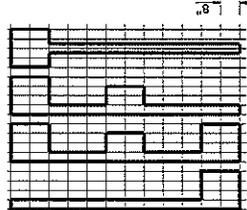
A=18 ft+2



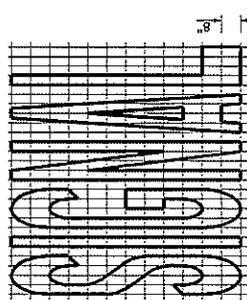
A=22 ft+2



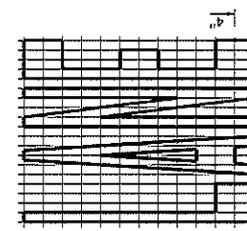
A=26 ft+2



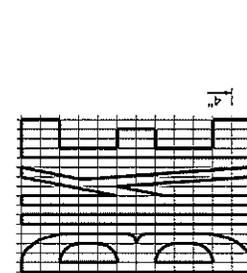
A=19 ft+2



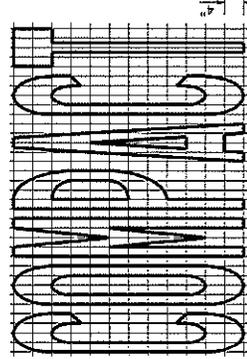
A=32 ft+2



A=6 ft+2



A=5 ft+2



A=10 ft+2

NOTES:

1. If a message consists of more than one word, it should read "up", i.e., the first word should be nearest the driver.
2. The space between words should be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.

WORD MARKINGS					
ITEM	ft+2	ITEM	ft+2	ITEM	ft+2
XING	21	YIELD	24	BIKE	5
AHEAD	31	SCHOOL	35	SLOW	23
WAIT	19	SIGNAL	32	STOP	22
LANE	6	TURN	24	LEFT	19
RIGHT	26	HERE	26	VEHICLES	42
				PED	18
				COMPACT	10
				RUNAWAY	43
				VEHICLES	42

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
 WORDS

NO SCALE

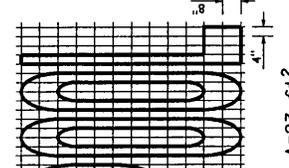
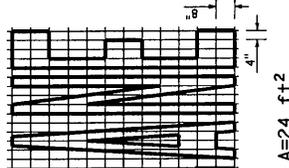
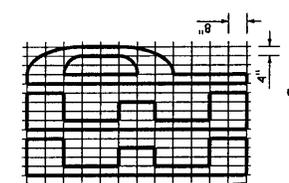
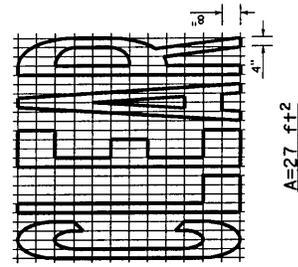
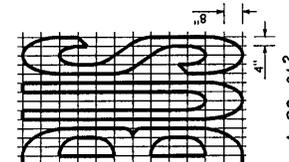
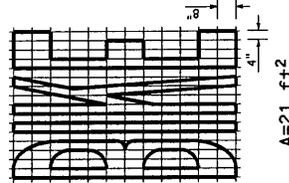
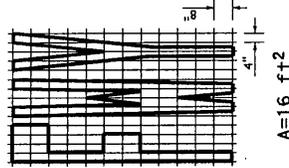
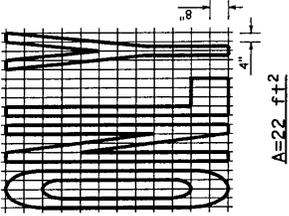
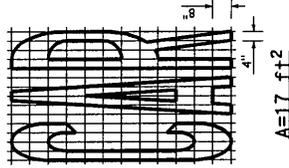
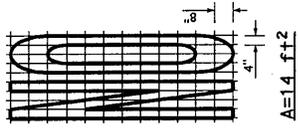
A24D

DIS. COUNTY	ROUTE	RSS MILES	SHEET TOTAL
		TOTAL PROJECT	NO. SHEETS

REGISTERED CIVIL ENGINEER
 July 20, 2012
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA ON THE OFFICER'S CERTIFICATE OF QUALIFICATION AND THE ACCURACY OF THE INFORMATION ON THESE PLANS IS THE RESPONSIBILITY OF THE ENGINEER.

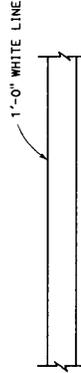
TO ACCOMPANY PLANS DATED _____

WORD MARKINGS			
ITEM	ft+2	ITEM	ft+2
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16

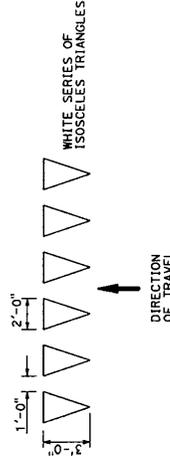


NOTES:

1. If a message consists of more than one word, it should read "up", i.e., the first word should be nearest the driver.
2. The space between words should be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.
5. The words "NO PARKING" pavement marking is to be used for parking facilities. For typical locations of markings, see Standard Plans A90A and A90B.
6. The words "NO PARKING" shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials.



LIMIT LINE (STOP LINE)



WHITE SERIES OF ISOSCELES TRIANGLES

DIRECTION OF TRAVEL

YIELD LINE

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

A=2, ft+2
See Notes 6 and 7

Dist	County	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Thomas Gabriel
 REGISTERED ELECTRICAL ENGINEER
 JULY 19, 2013
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA ON THE OFFICER'S CERTIFICATE OF QUALIFICATION FOR THE ACCURACY AND COMPLETENESS OF SEALED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 No. 41272
 ELECTRICAL
 THE STATE OF CALIFORNIA

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



RAMP METERING SIGN
DETAIL D

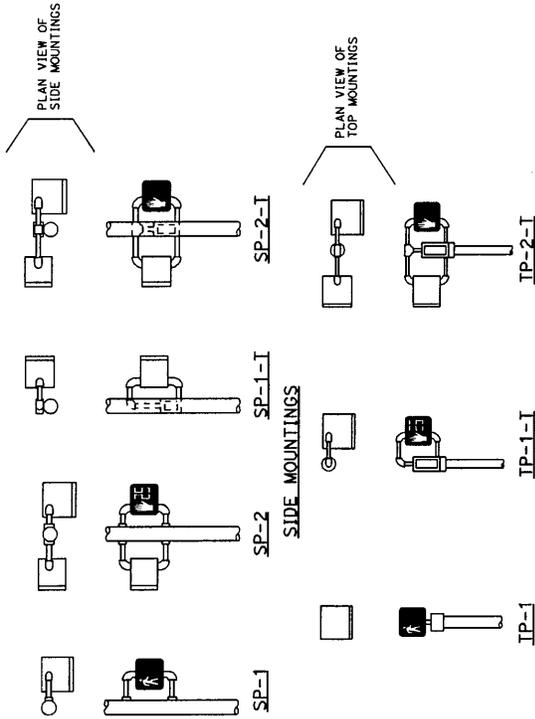
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**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



**TOP MOUNTINGS
PEDESTRIAN SIGNALS AND MOUNTINGS
DETAIL A**



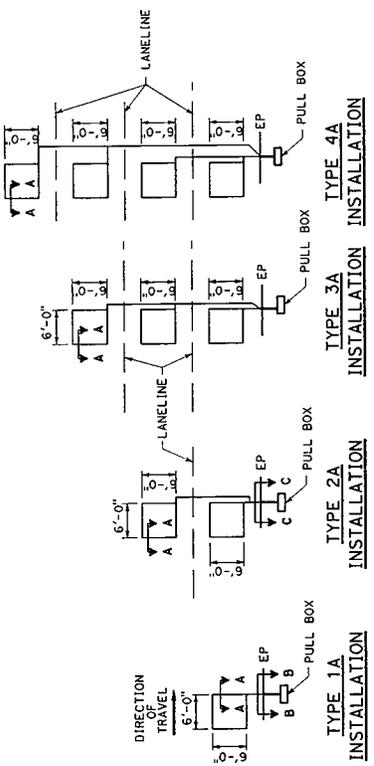
PERSON WALKING INTERVAL
FLASHING UPRAISED HAND INTERVAL
PEDESTRIAN SIGNAL MODULE WITH COUNTDOWN
DETAIL B



PERSON WALKING INTERVAL
STEADY UPRAISED HAND INTERVAL
PEDESTRIAN SIGNAL MODULE WITHOUT COUNTDOWN
DETAIL C

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

Jeffrey D. Wood
 REGISTERED ELECTRICAL ENGINEER
 MAY 20, 2011
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 AND AGENCIES ACCEPT THESE PLANS
 UNDER THE ASSURANCE OF COMPETENCY OF EXAMINER
 COPIES OF THIS PLAN SHEET:

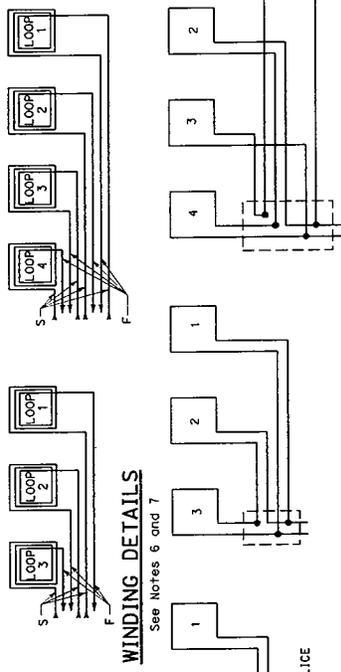


TYPE 1A INSTALLATION
TYPE 2A INSTALLATION
TYPE 3A INSTALLATION
TYPE 4A INSTALLATION

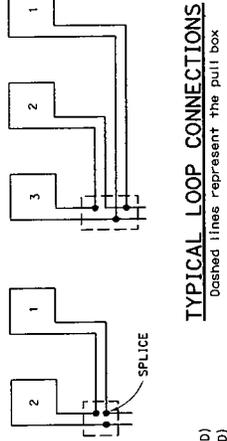
SAWCUT DETAILS

1. Type A loop detector configurations illustrated
2. 1A thru 4A = 1 Type A loop configuration in each lane.
3. 1B thru 4B = 1 Type B loop configuration in each lane.
4. 1C = 1 Type C loop configuration entering lanes as required.
5. 1D thru 4D = 1 Type D loop configuration in each lane.
6. 1E thru 4E = 1 Type E loop configuration in each lane.
7. 1F thru 4F = 1 Type F loop configuration in each lane.
8. Use Type A, B, C, D, E or F loop detector configurations only when specified or shown on plans.

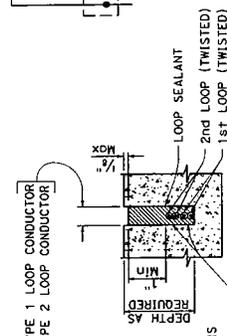
- LOOP INSTALLATION PROCEDURE**
1. Loops shall be centered in lanes.
 2. Saw slots in pavement for loop conductors as shown in details.
 3. Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
 4. Bottom of saw slot shall be smooth with no sharp edges.
 5. Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
 6. Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
 7. Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor.
 8. Identify and tag lead-in-cable with sensor number and phase.
 9. Install loop conductor in slot using a 3/16" to 1/4" thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
 10. No more than 2 twisted pairs shall be installed in one sawed slot.
 11. Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
 12. The additional length of each conductor for each loop shall be twisted together into a pair (2 turns per foot minimum) before being placed in the slot and conduit leading to the pull box.
 13. Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
 14. Fill slots as shown in details.
 15. Splice loop conductors to lead-in-cable. Splices shall be soldered.
 16. End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
 17. Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
 18. Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
 19. Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.



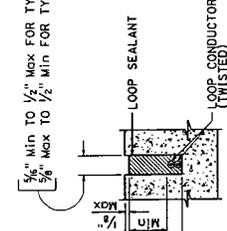
WINDING DETAILS
See Notes 6 and 7



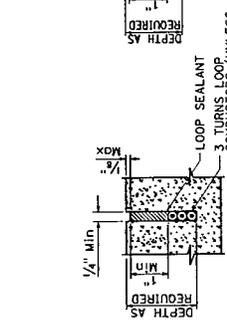
TYPICAL LOOP CONNECTIONS
Dashed lines represent the pull box



SECTION C-C



SECTION B-B



SECTION A-A

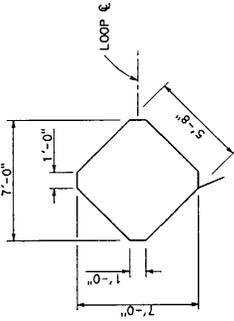
SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(DETECTORS)**
NO. SCALE

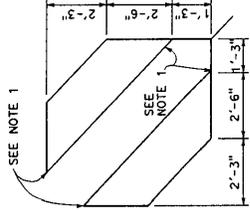
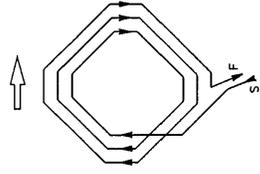
SIST. COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
San Diego	163		1	1

REGISTERED ELECTRICAL ENGINEER
 Thomas J. L. [Signature]
 No. 10128
 State of California
 July 19, 2013
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 DO NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF SEAMED
 COPIES OF THIS PLAN SHEET.

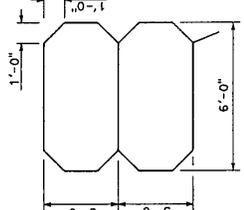
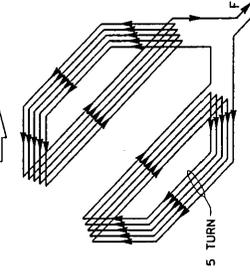
TO ACCOMPANY PLANS DATED _____



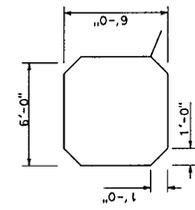
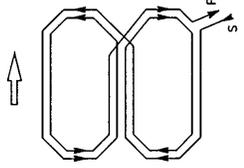
SAWCUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



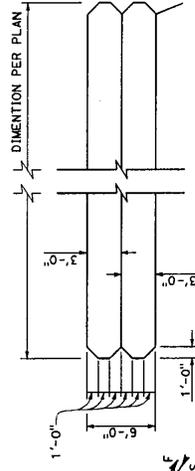
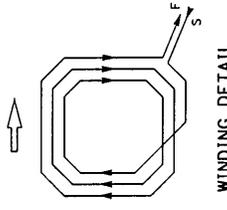
SAWCUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



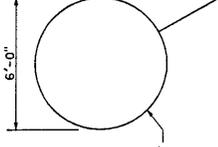
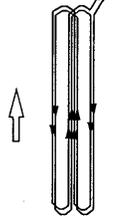
SAWCUT DETAIL
TYPE Q LOOP DETECTOR CONFIGURATION



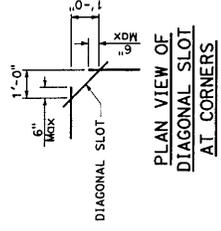
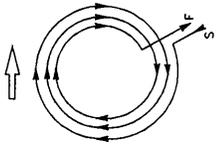
SAWCUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



SAWCUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



SAWCUT DETAIL
TYPE E LOOP DETECTOR CONFIGURATION



PLAN VIEW OF
DIAGONAL SLOT
AT CORNERS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(DETECTORS)
NO SCALE

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.

REVISED STANDARD PLAN RSP ES-5B

NOTES:

1. Round corners of acute angle sawcuts to prevent damage to conductors.
2. Typical distances separating loops from edge to edge is 10' for Type A, B, D and E installation in single lane.

APPENDIX V

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**

For questions or for in-person visit (by appointment only), please call 310-781-

Alison Sherman, Public Works
asherman@TorranceCA.Gov
Fax: 310-781-6902

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 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

CALTRANS ENCROACHMENT PERMIT

714-NRT-0581

STATE OF CALIFORNIA · DEPARTMENT OF TRANSPORTATION
ENCROACHMENT PERMIT RIDER
 TR-0122 (REV. 6/1999)

Collected By J. Aragaki	Permit No. (Original) 07-13-N-SN-1303
Rider Fee Paid \$ EXEMPT	Dist/Co/Rte/PM 07-LA-107 PM .43
Date 03/21/2014	Rider Number 07-14-N-RT-0581

TO: Torrance, City of
 20500 Madrona Avenue
 Torrance, CA 90503
 Attn: Ted Seman
 310-618-3073

, PERMITTEE

In compliance with (your, our) request of March 21, 2014 we are hereby amending the above numbered encroachment permit as follows DATE

Date of completion extended to: NO CHANGE January 1, 2015
DATE

Time Extension to 713-NSN-1303

Except as amended, all other terms and provisions of the original permit shall remain in effect.

COPIES TO: Maintenance Grillo	APPROVED: Carrie Bowen, District 7 Director
	BY: <i>For Zoe Yue</i> Zoe Yue, P.E., District Permit Engineer

FM 91 1437 (D7 Permit App)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
STANDARD ENCROACHMENT PERMIT APPLICATION
TR-0100 (REV. 07/2007)

Permission is requested to encroach on the State Highway right-of-way as follows:
(Complete all BOXES [write N/A if not applicable] Please print single sided)
This application is not complete until all requirements have been approved.

FOR CALTRANS USE	
PERMIT NO.	714-NRT-0581
DIST/CO/RTE/PM	07-24-107-043
SIMPLEX STAMP	
DATE OF SIMPLEX STAMP	5/21/2014

1. COUNTY Los Angeles	2. ROUTE LA 107	3. POSTMILE 0.43
4. ADDRESS OR STREET NAME Hawthorne Boulevard	5. CITY Torrance	
6. CROSS STREET (Distance and direction from site) Skypark Drive	7. PORTION OF RIGHT-OF-WAY Skypark/Hawthorne Blvd.	
8. WORK TO BE PERFORMED BY <input type="checkbox"/> OWN FORCES <input checked="" type="checkbox"/> CONTRACTOR		9. EST. START DATE May 2014
10. EST. COMPLETION DATE January 2015		
11. EXCAVATION	MAX. DEPTH 0	AVG. DEPTH 0
	AVG. WIDTH 0	LENGTH 0
12. EST. COST IN STATE HIGHWAY RIGHT-OF-WAY \$4,000.00		FUNDING SOURCE(S) <input type="checkbox"/> FEDERAL <input type="checkbox"/> STATE <input checked="" type="checkbox"/> LOCAL <input type="checkbox"/> PRIVATE
13. PIPES	PRODUCT TYPE N/A	DIAMETER N/A
	VOLTAGE / PSIG N/A	14. CALTRANS' PROJECT CODE

15. Double Permit Parent Permit Number _____
Applicant's Reference Number / Utility Work Order Number _____

16. Have your plans been reviewed by another Caltrans branch? NO YES (if "YES" Who? _____)

17. Completely describe work to be done within STATE highway right-of-way :
Attach 6 complete sets of plans (folded to 8.5" x 11"), and any applicable specifications, calculations, maps, etc.
All dimensions shall be in U.S. Customary (English) Units.

Applying for an extension to existing permit 713-NSN-1303. Extending the estimate completion date to January 2015.

18. Is a city, county, or other agency involved in the approval of this project?

YES (If "YES", check type of project and attach environmental documentation and conditions of approval.)

COMMERCIAL DEVELOPMENT BUILDING GRADING OTHER _____

CATEGORICALLY EXEMPT NEGATIVE DECLARATION ENVIRONMENTAL IMPACT REPORT OTHER _____

NO (If "NO", please check the category below which best describes the project, and complete page 4 of this application.)

DRIVEWAY OR ROAD APPROACH, RECONSTRUCTION, MAINTENANCE, OR RESURFACING FENCE

PUBLIC UTILITY MODIFICATIONS, EXTENSIONS, HOOKUPS MAILBOX

FLAGS, SIGNS, BANNERS, DECORATIONS, PARADES AND CELEBRATIONS EROSION CONTROL

OTHER _____ LANDSCAPING

19. Will this project cause a substantial change in the significance of a historical resource (45 years or older), or cultural resource? YES NO
(If "YES", provide a description)

20. Is this project on an existing highway or street where the activity involves removal of a scenic resource including a significant tree or stand of trees, a rock outcropping or a historic building? YES NO (If "YES", provide a description)

21. Is work being done on applicant's property? YES NO (If "YES", attach site and grading plans.)

ADA NOTICE: For individuals with sensory disabilities, this document is available in alternate format. For information, call (916) 654-6410, TTY 711 or write to Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
STANDARD ENCROACHMENT PERMIT APPLICATION

TR-0100 (REV. 07/2007)

PERMIT NO. 714-NRT-25871

22. Will this proposed project require the disturbance of soil? YES NO
 If "YES", estimate the area within State Highway right-of-way in square feet AND acres: _____ (ft²) AND _____ (acres)
 estimate the area outside of State Highway right-of-way in square feet AND acres: _____ (ft²) AND _____ (acres)
23. Will this proposed project require dewatering? YES NO
 If "YES", estimate total gallons AND gallons/month: _____ (gallons) AND _____ (gallons/month)
 SOURCE: STORM WATER NON-STORM WATER
 (*See Caltrans SWMP for definitions of non-storm water discharge: <http://www.dot.ca.gov/hq/env/stormwater/index.htm>)
24. How will any storm water or ground water be disposed of from within or near the limits of this proposed project?
 Storm Drain System Combined Sewer / Storm System Storm Water Retention Basin
 Other (explain): _____

PLEASE READ THE FOLLOWING CLAUSES PRIOR TO SIGNING THIS ENCROACHMENT PERMIT APPLICATION.

The applicant, understands and herein agrees that an encroachment permit can be denied, and/or a bond required for non-payment of prior or present encroachment permit fees. Encroachment Permit fees may still be due when an application is withdrawn or denied, and that a denial may be appealed, in accordance with the California Streets and Highways Code, Section 671.5. All work shall be done in accordance with Caltrans rules and regulations subject to inspection and approval.

The applicant, understands and herein agrees to the general provisions, special provisions and conditions of the encroachment permit, and to indemnify and hold harmless the State, its officers, directors, agents, employees and each of them (Indemnitees) from and against any and all claims, demands, causes of action, damages, costs, expenses, actual attorneys' fees, judgments, losses and liabilities of every kind and nature whatsoever (Claims) arising out of or in connection with the issuance and/or use of this encroachment permit and the placement and subsequent operation and maintenance of said encroachment for: 1) bodily injury and/or death to persons including but not limited to the Applicant, the State and its officers, directors, agents and employees, the Indemnities, and the public; and 2) damage to property of anyone. Except as provided by law, the indemnification provisions stated above shall apply regardless of the existence or degree of fault of Indemnities. The Applicant, however, shall not be obligated to indemnify Indemnities for Claims arising from the sole negligence and willful misconduct of State, its officers, directors, agents or employees.

An encroachment permit is not a property right and does not transfer with the property to a new owner

DISCHARGES OF STORM WATER AND NON-STORM WATER: *Work within State Highway right-of-way shall be conducted in compliance with all applicable requirements of the National Pollutant Discharge Elimination System (NPDES) permit issued to the Department of Transportation (Department), to govern the discharge of storm water and non-storm water from its properties. Work shall also be in compliance with all other applicable Federal, State and Local laws and regulations, and with the Department's Encroachment Permits Manual and encroachment permit. Compliance with the Department's NPDES permit requires amongst other things, the preparation and submission of a Storm Water Pollution Protection Plan (SWPPP), or a Water Pollution Control Program (WPCP), and the approval of same by the appropriate reviewing authority prior to the start of any work. Information on the requirements may also be reviewed on the Department's Construction Website at:*

<http://www.dot.ca.gov/hq/construc/stormwater>

25. NAME of APPLICANT or ORGANIZATION (Print or Type) City of Torrance		E-MAIL ADDRESS Tsemaan@TorranceCA.Gov	
ADDRESS of APPLICANT or ORGANIZATION WHERE PERMIT IS TO BE MAILED (Include City and Zip Code) 20500 Madrona Avenue, Torrance, CA 90503			
PHONE NUMBER 310-618-3073	FAX NUMBER 310-618-6902		
26. NAME of AUTHORIZED AGENT / ENGINEER (Print or Type)	IS LETTER OF AUTHORIZATION ATTACHED? <input type="checkbox"/> YES <input type="checkbox"/> NO	E-MAIL ADDRESS	
ADDRESS of AUTHORIZED AGENT / ENGINEER (include City and Zip Code)			
PHONE NUMBER	FAX NUMBER		
27. SIGNATURE of APPLICANT or AUTHORIZED AGENT 	28. PRINT OR TYPE NAME Ted Semaan	29. TITLE Engineering Manager	30. DATE March 20, 2014

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
STANDARD ENCROACHMENT PERMIT APPLICATION
TR-0100 (REV. 07/2007) *City of Torrance*

PERMIT NO. <i>714-NRT-0581</i>
WORK ORDER/REFERENCE NUMBER

FEE CALCULATION - FOR CALTRANS USE					
<input type="checkbox"/> CASH <input type="checkbox"/> CREDITCARD NAME ON CARD _____ PHONE NUMBER _____ <input type="checkbox"/> CHECK NUMBER _____ NAME ON CHECK _____ PHONE NUMBER _____ <input checked="" type="checkbox"/> EXEMPT <input type="checkbox"/> PROJECT CODE _____ <input type="checkbox"/> DEFERRED BILLING (Utility)					
CALCULATED BY	(1)		(2)		
REVIEW	1. FEE / DEPOSIT	DATE	2. FEE / DEPOSIT	DATE	TOTAL FEE / DEPOSIT
1. _____ HOURS @ \$ _____ *	\$ _____		\$ _____		\$ _____
2. _____ HOURS @ \$ _____ *					\$ _____
INSPECTION	1. FEE / DEPOSIT	DATE	2. FEE / DEPOSIT	DATE	TOTAL FEE / DEPOSIT
1. _____ HOURS @ \$ _____ *	\$ _____		\$ _____		\$ _____
2. _____ HOURS @ \$ _____ *					\$ _____
FIELDWORK					\$ _____
_____ HOURS @ \$ _____ *	\$ _____		\$ _____		\$ _____
EQUIPMENT & MATERIALS	DEPOSIT	DATE	DEPOSIT	DATE	DEPOSIT
	\$ _____		\$ _____		\$ _____
CASH DEPOSIT IN LIEU OF BOND	\$ _____		\$ _____		\$ _____
TOTAL COLLECTED	\$ _____		\$ _____		\$ _____
CASHIER'S INITIALS	_____		_____		\$ _____
* The Standard Hourly Rate is set annually by HQ Encroachment Permits. District Office staff do not have authority to modify this rate.					
PERFORMANCE BOND	<input type="checkbox"/>	DATE			AMOUNT \$
PAYMENT BOND	<input type="checkbox"/>	DATE			AMOUNT \$
LIABILITY INSURANCE REQUIRED?		<input type="checkbox"/> YES <input type="checkbox"/> NO			AMOUNT \$

STATE OF CALIFORNIA · DEPARTMENT OF TRANSPORTATION
ENCROACHMENT PERMIT
TR-0120 (REV 6/2007)

Permit No 713-NSN-1303	
Dist/Co/Rte/PM 07-LA-107-PM 1303	
Date June 20, 2013	
Fee Paid \$ (Exempt)	Deposit \$
Performance Bond Amount (1) \$	Payment Bond Amount (2) \$
Bond Company	
Bond Number (1)	Bond Number (2)

In compliance with (Check one):

- Your application of June 12, 2013 of _____
- Utility Notice No. _____ of _____
- Agreement No. _____ of _____
- RW Contract No. _____ of _____

TO: **City of Torrance**
20500 Madrona Avenue
Torrance, CA 90503

Attn: **Ted Semaan**
Phone: **310-618-3073**

PERMITTEE

and subject to the following, PERMISSION IS HEREBY GRANTED to:

encroach within the State's right of way for the purpose of **installing loop detectors and temporary video detection on Route 107 (Hawthorne Blvd.) at Skypark Dr. in the City of Torrance**; all in accordance with *current* State specifications and standards, the attached special provisions, and stamped permit plans dated **June 20, 2013**.

Permittee shall contact State permit inspector, **Mr. Ralph Griffo** at 213-999-1905, between the hours of 0700 and 0900, a minimum of 10 working days prior to the initial start of work to arrange a pre-construction meeting to ensure a complete understanding of the work and permit requirements. A confirmation notification should occur three days prior to closure or other potential traffic impacts.

THIS PERMIT IS NOT A PROPERTY RIGHT AND DOES NOT TRANSFER WITH THE PROPERTY TO A NEW OWNER.

The following attachments are also included as part of this permit (Check applicable):

- Yes No General Provisions
- Yes No Utility Maintenance Provisions
- Yes No Storm Water Special Provisions
- Yes No Special Provisions **A and Q**
- Yes No A Cal-OSHA Permit, if required: Permit No.
- Yes No As-Built Plans Submittal Route Slip for Locally Advertised Projects
- Yes No Storm Water Pollution Prevention Plan

In addition to fee, the permittee will be billed actual cost for:

- Yes No Review
- Yes No Inspection
- Yes No Field Work

(If any Caltrans effort expended)

Yes No The information in the environmental documentation has been reviewed and considered prior to approval of this permit.

This permit is void unless work is completed before **January 31, 2014**

This permit is to be strictly construed and no other work than specifically mentioned is hereby authorized.

No project work shall be commenced until all other necessary permits and environmental clearances have been obtained.

cc: MD Musa, Maintenance
R. Griffo, Inspector
File

APPROVED:

BY:

Zoe Yue, P.E., District Permit Engineer

Jeff Araqaki, Permit Engineer

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City of Torrance
713-NSN-1303
Page 2 of 4

SPECIAL PROVISIONS

The attached District's Standard Special Provisions are generalizations of the Department's Standard Specifications and are included only as a convenience to the Permittee; it shall not be construed as the only provisions pertaining to this permit. Permittee shall reference the current Department's Standard Specifications for complete and unabridged specification requirements.

1. By acceptance of this permit, the permittee understands and agrees to reimburse the State for all costs incurred for performing corrective work in the event that the permittee or permittee's representatives fail to install, replace, repair, restore, or remove facilities to state specifications for the immediate safe operation of the highway and satisfactory completion of all permit work. State forces may perform corrective work or it may be contracted out. Understood is that the above charges are in addition to permit fees, and an invoice will be sent to permittee for said charges after satisfactory completion of all work.
2. Permittee shall fully conform to the requirements of the Department of Transportation Statewide National Pollution Discharge Elimination System (NPDES) Storm Water Permit No. 2009-0009-DWQ, and NPDES No. CAS000002, adopted by the State Water Resources Control Board (Board) on July 1, 2009. The permittee shall also conform to the requirements of the General NPDES Permit of Construction Activities and any subsequent General Permit in effect at the time of issuance of this Encroachment Permit. These permits regulate storm water and no-storm water discharges associated with year-round construction or special event encroachment activities.
3. If permittee's own forces or a contractor performs the work authorized by this permit, permittee is solely accountable and liable for all damages and costs to Caltrans. Permittee will be required to reimburse the State for the cost incurred for all permit related field work performed by Caltrans maintenance forces when, as determined by Caltrans, it becomes necessary.

Permittee is required to have the signed permit with all Special Provisions and plans stamped "CALTRANS PERMIT PLANS" dated June 20, 2013 at the work site at all times while work is being conducted.

Permittee shall remain solely responsible for compliance with all requirements of this permit.

4. If contractor forces perform the work authorized by this permit, permittee's contractor shall furnish the State with a signed application requesting a separate Caltrans permit (Double Permit) authorizing the contractor to perform the work within the State's right of way on behalf of the permittee, and must provide a "Performance Bond" and a "Payment Bond" in the amount of \$10,000.00 (forms attached). Contractor's bonds may be waived if the contractor has bonds for 100 percent of the project with the permittee. **Contractor shall not begin work until the Double permit is approved.**

Permittee's contractor will be required to reimburse the State for the cost incurred for engineering inspection of the work within the State highway right of way and all other permit related field work performed by Caltrans maintenance forces when, as determined by Caltrans, it becomes necessary. **Estimated engineering inspection fees are \$492.00.**

Permittee's contractor is required to have the signed permit and the double permit with all Special Provisions and plans stamped "CALTRANS PERMIT PLANS" dated June 20, 2013 at the work site at all times while work is being conducted.

Permittee shall remain solely responsible for compliance with all requirements of this permit.

5. All work performed pursuant to this permit shall be performed in accordance with the **current** Department of Transportation's Standard Specifications, Standard Plans, Encroachment Permit Utility Provisions, and shall comply with all provisions of this permit and the instructions of the State permit inspector. Any violation of this permit shall constitute grounds for revocation of the permit.
6. It is the responsibility of the permittee, permittee's agents, or contractors to comply with all provisions of this permit and instructions from the State permit inspector. Permittee shall keep the permit package or copies thereof, at the work site at all times and show it upon request to any Department representative or law enforcement officer. When the permit package is not available, then immediate suspension of permit will occur.
7. Permittee shall furnish the necessary inspection to provide for public safety and to insure that all work within or affecting the State's right of way pursuant to this permit is in accordance with State Standards and requirements. The State permit inspectors will monitor the work authorized under this permit and the work is subject to the approval of the State permit inspectors.
8. Prior to performing any work pursuant to this permit, the permittee shall obtain all necessary permits and authorizations required of other governmental agencies and by law. The permittee shall make the necessary arrangements with the appropriate agencies to monitor and test performed work to ensure accordance with requirements of those agencies.

City of Torrance
713-NSN-1303
Page 3 of 4

9. Typically, working hours and traffic control are authorized only between 0900 and 1500, Monday through Friday, holidays excluded.
10. Permittee shall obtain a Closure ID and Log number from the State permit inspector. The permittee shall notify the State permit inspector and the Traffic Management Center (TMC) by telephone twice at (323) 259-2352 immediately prior to and after the installation of a lane/ramp closure. Inform Caltrans' dispatcher the "10-97 closure number _____" before closure installation, and the "10-98 closure number _____" after closure and all signs have been removed with lane/ramp opened to traffic. Permittee should also provide the Caltrans' dispatcher with an on-site phone number where information regarding this permit may be readily obtained during the closure period.
11. All striping, pavement markings, and markers obliterated by the work authorized by this permit shall be replaced in kind or better, as directed by the State permit inspector at no cost to the State.
12. Existing traffic signal, lighting, electrical systems, and underground installations (shown on the permit plans or not) damaged by the work authorized by this permit shall be replaced in kind, restored in kind, or better as directed by the State permit inspectors at no cost to the State.
13. All repairs shall be made within ten (10) working days after incurring the damage. All damage causing an imminent danger to public safety shall be repaired immediately.
14. A minimum of 2 days prior to start of any excavation authorized by this permit, permittee shall notify Underground Service Alert at 1-800-422-4133. To identify the Caltrans electrical systems, permittee shall call the State Electrical Permit Inspector Ralph Griffo at 213-999-1905. Existing traffic signal, lighting, electrical systems, fiber optic cable, and underground installations (shown on contract plans or not) damaged by the contractor's operation shall be replaced or restored in kind or better at the permittee's expense. If the repair costs exceed the amount of the deposit for this permit, the permittee shall immediately suspend all work until additional payment is received to cover the cost of the repair work.
15. To prevent any delay for installation of signal equipment, permittee/contractor shall coordinate with the State Electrical Permit Inspector Ralph Griffo at 213-999-1905.
16. NO CLOSURES SHALL BE PERMITTED ON OFFICIAL STATE OR FEDERAL HOLIDAYS AND THE DAY PRECEDING A STATE OR FEDERAL HOLIDAY. NO ONE WAY TRAFFIC CONTROL AND USE OF EQUIPMENT THAT MAY CAUSE A FIRE SHALL BE PERMITTED DURING A "RED FLAG" DAY.
17. If the work cannot be initiated by the permit expiration date and permittee wishes to extend the expiration date, a time extension application shall be submitted for review and approval. Permittee shall apply for a time extension at 30 days in advance of expiration date, otherwise permit closure will occur and permit may be cancelled.
18. American National Standards Institute (ANSI) compliant Class II vests and hard hats shall be worn while working within State's right of way. Workers working at night will be required to wear ANSI Class III warning garments. Class III compliance can be achieved by combining ANSI Class E pants worn with an ANSI Class II vest.
19. Permittee shall pay for any temporary wiring or service connections required to keep the existing traffic signal system in effective operation duration modifications.
20. Permittee shall pothole and positively identify the fiber optics cable (FOC) before any excavation work to ensure that the excavation area is clear of any FOC.
21. In the event the fiber optics cable (FOC) is damaged, temporary fusion splicing will be required within 24 hours to restore the damaged cable, and the permittee shall replace the FOC from vault to vault at the permittee's expense.
22. All equipment supplied to the worksite shall be new.
23. Electrical conduits shall not be less than 1½" in inside diameter. If trenching is allowed, the backfill for the conduits shall consist of either red sand or have a red dye added to the mixture. All conduits shall be installed at 30" below the traveled way and 18" beneath sidewalk grade.
24. All traffic loop detector installations shall have a minimum 3 1/2" cover. A maximum of two loops shall be allowed for all lead-in sawcuts. All damaged loops shall be replaced within ten (10) working days. All loops shall be round. Type 2 wire with hot melt installation shall be used.
25. There shall be no official turn-on of any traffic signal until all equipment is properly installed. All problems with shorts or open circuits shall be already resolved. All loop detection systems shall be operating as specified by the State Electrical Inspector or the State Electrical Operations Engineer.

City of Torrance
713-NSN-1303
Page 4 of 4

26. There shall be no turn on of new or modified traffic signal until all construction barricades are removed, all mechanical fittings are finished, and all holes are refilled.
27. The permittee shall provide the State Permit Electrical Inspector with PDF of the as-built plans and a hard copy of them prior to the completion of this permit.
28. There shall be three (3) days notification prior to any traffic signal system shut down or turn on. There shall be no shutdowns or turn-ons on Fridays or any day before a holiday.
29. Backfill shall be 1½-sack sand-cement slurry minimum or as directed by State Permit Inspector.
30. Pedestrian traffic shall be maintained and provided for at all times.
31. Adjustments in the plans as directed by the State Permit Inspector, due to field conditions, shall not be considered a change in the work. Any changes constituting a change of intent of the final construction shall be submitted to the Permit Office for review.
32. Permittee shall be responsible for the clean-up of all debris associated with the construction of the permit work in the State right-of-way as directed by the State Permit Inspector.
33. The permittee shall furnish the necessary inspection to provide for public safety and to insure that all work within or affecting the State right-of-way pursuant to this permit shall be performed in accordance with State standards and requirements. The work authorized under this permit will be monitored by and will be subject to the approval of the State Permit Inspector.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
STANDARD ENCROACHMENT PERMIT APPLICATION
TR-0100 (REV. 07/2007)

FOR CALTRANS USE	
PERMIT NO.	713-NSD-1303
DIST/CO/RTE/PM	07-LA-107-PH043
SIMPLEX STAMP	
DATE OF SIMPLEX STAMP	6/14/13

Permission is requested to encroach on the State Highway right-of-way as follows:
(Complete all **BOXES** [write N/A if not applicable] Please print single sided)
This application is not complete until all requirements have been approved.

1. COUNTY Los Angeles		2. ROUTE LA 107	3. POSTMILE 0.43
4. ADDRESS OR STREET NAME Hawthorne Boulevard		5. CITY Torrance	
6. CROSS STREET (Distance and direction from site) Skypark Drive		7. PORTION OF RIGHT-OF-WAY Skypark Dr./ Hawthorne Blvd.	
8. WORK TO BE PERFORMED BY <input type="checkbox"/> OWN FORCES <input checked="" type="checkbox"/> CONTRACTOR		9. EST. START DATE September 2013	10. EST. COMPLETION DATE November 2013
11. EXCAVATION	MAX. DEPTH 0	AVG. DEPTH 0	AVG. WIDTH 0
	LENGTH 0	SURFACE TYPE Asphalt	
12. EST. COST IN STATE HIGHWAY RIGHT-OF-WAY \$4,000.00		FUNDING SOURCE(S) <input type="checkbox"/> FEDERAL <input type="checkbox"/> STATE <input checked="" type="checkbox"/> LOCAL <input type="checkbox"/> PRIVATE	
13. PIPES	PRODUCT TYPE N/A	DIAMETER N/A	VOLTAGE / PSIG N/A
14. CALTRANS PROJECT E.A. NUMBER			

15. Double Permit Parent Permit Number _____
Applicant's Reference Number / Utility Work Order Number _____

16. Have your plans been reviewed by another Caltrans branch? NO YES (If "YES" Who? _____)

17. Completely describe work to be done within STATE highway right-of-way :
Attach 6 complete sets of FOLDED plans (folded 8.5" x 11"), and any applicable specifications, calculations, maps, etc.
All dimensions shall be in U.S. Customary (English) Units.

The City of Torrance is planning a street reconstruction project. The project area includes the Skypark Drive and Madison Street intersection heading North to Lomita Boulevard and West to Hawthorne Boulevard. All the work area is within the City's right of way and are requesting permission to

1. Remove and install traffic loops on Skypark Drive heading West to Hawthorne Boulevard.
2. Install a temporary video detection camera wired overhead to control traffic when the loops are cut on Skypark Drive.
3. Install traffic control on Hawthorne Boulevard to restrict traffic turning left and right into Skypark Drive from Hawthorne Boulevard for construction phase 3 only. During this phase, Skypark Drive will be closed for a weekend and Caltrans would be notified two weeks in advance.

South
GRIFFO

18. Is a city, county, or other agency involved in the approval of this project?
 YES (If "YES", check type of project and attach environmental documentation and conditions of approval.)
 COMMERCIAL DEVELOPMENT BUILDING GRADING OTHER _____
 CATEGORICALLY EXEMPT NEGATIVE DECLARATION ENVIRONMENTAL IMPACT REPORT OTHER _____

NO (If "NO", please check the category below which best describes the project, and complete page 4 of this application.)
 DRIVEWAY OR ROAD APPROACH, RECONSTRUCTION, MAINTENANCE, OR RESURFACING FENCE
 PUBLIC UTILITY MODIFICATIONS, EXTENSIONS, HOOKUPS MAILBOX
 FLAGS, SIGNS, BANNERS, DECORATIONS, PARADES AND CELEBRATIONS EROSION CONTROL
 OTHER _____ LANDSCAPING

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19. Will this project cause a substantial change in the significance of a historical resource (45 years or older), or cultural resource? YES NO
(If "YES", provide a description)

20. Is this project on an existing highway or street where the activity involves removal of a scenic resource including a significant tree or stand of trees, a rock outcropping or a historic building? YES NO (If "YES", provide a description)

21. Is work being done on applicant's property? YES NO (If "YES", attach site and grading plans.)

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

CITY OF TORRANCE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
STANDARD ENCROACHMENT PERMIT APPLICATION
 TR-0100 (REV. 07/2007)

PERMIT NO. 713-PSD-1303

22. Will this proposed project require the disturbance of soil? YES NO
 If "YES", estimate the area within State Highway right-of-way in square feet AND acres: _____ (ft²) AND _____ (acres)
 estimate the area outside of State Highway right-of-way in square feet AND acres: _____ (ft²) AND _____ (acres)
23. Will this proposed project require dewatering? YES NO
 If "YES", estimate total gallons AND gallons/month: _____ (gallons) AND _____ (gallons/month)
 SOURCE: STORMWATER NON-STORMWATER
 (*See Caltrans SWMI² for definitions of non-storm water discharge: <http://www.dot.ca.gov/hq/env/stormwater/index.htm>)
24. How will any storm water or ground water be disposed of from within or near the limits of this proposed project?
 Storm Drain System Combined Sewer / Storm System Storm Water Retention Basin
 Other(explain): _____

PLEASE READ THE FOLLOWING CLAUSES PRIOR TO SIGNING THIS ENCROACHMENT PERMIT APPLICATION.

The applicant, understands and herein agrees to that an encroachment permit can be denied, and/or a bond required for non-payment of prior or present encroachment permit fees. Encroachment Permit fees may still be due when an application is withdrawn or denied, and that a denial may be appealed, in accordance with the California Streets and Highways Code, Section 671.5. All work shall be done in accordance with Caltrans rules and regulations subject to inspection and approval.

The applicant, understands and herein agrees to the general provisions, special provisions and conditions of the encroachment permit, and to indemnify and hold harmless the State, its officers, directors, agents, employees and each of them (Indemnitees) from and against any and all claims, demands, causes of action, damages, costs, expenses, actual attorneys' fees, judgments, losses and liabilities of every kind and nature whatsoever (Claims) arising out of or in connection with the issuance and/or use of this encroachment permit and the placement and subsequent operation and maintenance of said encroachment for: 1) bodily injury and/or death to persons including but not limited to the Applicant, the State and its officers, directors, agents and employees, the Indemnitees, and the public; and 2) damage to property of anyone. Except as provided by law, the indemnification provisions stated above shall apply regardless of the existence or degree of fault of Indemnitees. The Applicant, however, shall not be obligated to indemnify Indemnitees for Claims arising from the sole negligence and willful misconduct of State, its officers, directors, agents or employees.

DISCHARGES OF STORM WATER AND NON-STORM WATER: Work within State Highway right-of-way shall be conducted in compliance with all applicable requirements of the National Pollutant Discharge Elimination System (NPDES) permit issued to the Department of Transportation (Department), to govern the discharge of storm water and non-storm water from its properties. Work shall also be in compliance with all other applicable Federal, State and Local laws and regulations, and with the Department's Encroachment Permits Manual and encroachment permit. Compliance with the Department's NPDES permit requires amongst other things, the preparation and submission of a Storm Water Pollution Protection Plan (SWPPP), or a Water Pollution Control Program (WPCP), and the approval of same by the appropriate reviewing authority prior to the start of any work. Information on the requirements may also be reviewed on the Department's Construction Website at:
<http://www.dot.ca.gov/hq/construc/stormwater>

25. NAME of APPLICANT or ORGANIZATION (Print or Type) E-MAIL ADDRESS
 City of Torrance T.Semaan@TorranceCA.Gov

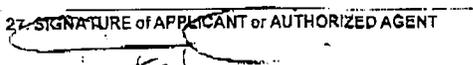
ADDRESS of APPLICANT or ORGANIZATION WHERE PERMIT IS TO BE MAILED (Include City and Zip Code)
 20500 Madrona Avenue, Torrance, CA 90503

PHONE NUMBER FAX NUMBER
 310-618-3073 310-618-6902

26. NAME of AUTHORIZED AGENT / ENGINEER (Print or Type) IS LETTER OF AUTHORIZATION ATTACHED? E-MAIL ADDRESS
 YES NO **OFFICE OF PERMITS**

ADDRESS of AUTHORIZED AGENT / ENGINEER (Include City and Zip Code)

PHONE NUMBER FAX NUMBER

27. SIGNATURE of APPLICANT or AUTHORIZED AGENT 28. PRINT OR TYPE NAME 29. TITLE 30. DATE
 Ted Semaan Engineering Manager June 12, 2013

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
STANDARD ENCROACHMENT PERMIT APPLICATION
 TR-0100 (REV. 07/2007)

PERMIT NO. 713-250-1303
 WORK ORDER/REFERENCE NUMBER _____

FEE CALCULATION -- FOR CALTRANS USE						
<input type="checkbox"/> CASH <input type="checkbox"/> CREDITCARD NAME ON CARD _____ PHONE NUMBER _____						
<input type="checkbox"/> CHECK NUMBER _____ NAME ON CHECK _____ PHONE NUMBER _____						
<input type="checkbox"/> EXEMPT <input type="checkbox"/> PROJECT EA _____ <input type="checkbox"/> DEFERRED BILLING (Utility)						
CALCULATED BY _____		(1)		(2)		
REVIEW		1. FEE / DEPOSIT	DATE	2. FEE / DEPOSIT	DATE	TOTAL FEE / DEPOSIT
1. <u>6</u> HOURS @ \$ <u>82</u>		\$ <u>492.00</u>		\$ _____		\$ _____
2. _____ HOURS @ \$ _____				\$ _____		\$ _____
INSPECTION		1. FEE / DEPOSIT	DATE	2. FEE / DEPOSIT	DATE	TOTAL FEE / DEPOSIT
1. <u>6</u> HOURS @ \$ <u>82</u>		\$ <u>492.00</u>		\$ _____		\$ _____
2. _____ HOURS @ \$ _____				\$ _____		\$ _____
FIELD WORK						
_____ HOURS @ \$ _____		\$ _____		\$ _____		\$ _____
EQUIPMENT & MATERIALS		DEPOSIT	DATE	DEPOSIT	DATE	DEPOSIT
		\$ _____		\$ _____		\$ _____
CASH DEPOSIT IN LIEU OF BOND		\$ _____		\$ _____		\$ _____
TOTAL COLLECTED		\$ <u>984.00</u>		\$ _____		\$ _____
CASHIER'S INITIALS		<u>EXEMPT</u>		_____		\$ _____
* The current hourly rate is set annually by Headquarters Accounting. District Office staff do not have authority to modify this rate.						
PERFORMANCE BOND		<input type="checkbox"/>	DATE	AMOUNT		
				\$ _____		
PAYMENT BOND		<input type="checkbox"/>	DATE	AMOUNT		
				\$ _____		
LIABILITY INSURANCE REQUIRED?			<input type="checkbox"/> YES <input type="checkbox"/> NO	AMOUNT		
				\$ _____		

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APPENDIX VIII

PROJECT CONSTRUCTION SIGN

APPENDIX IX

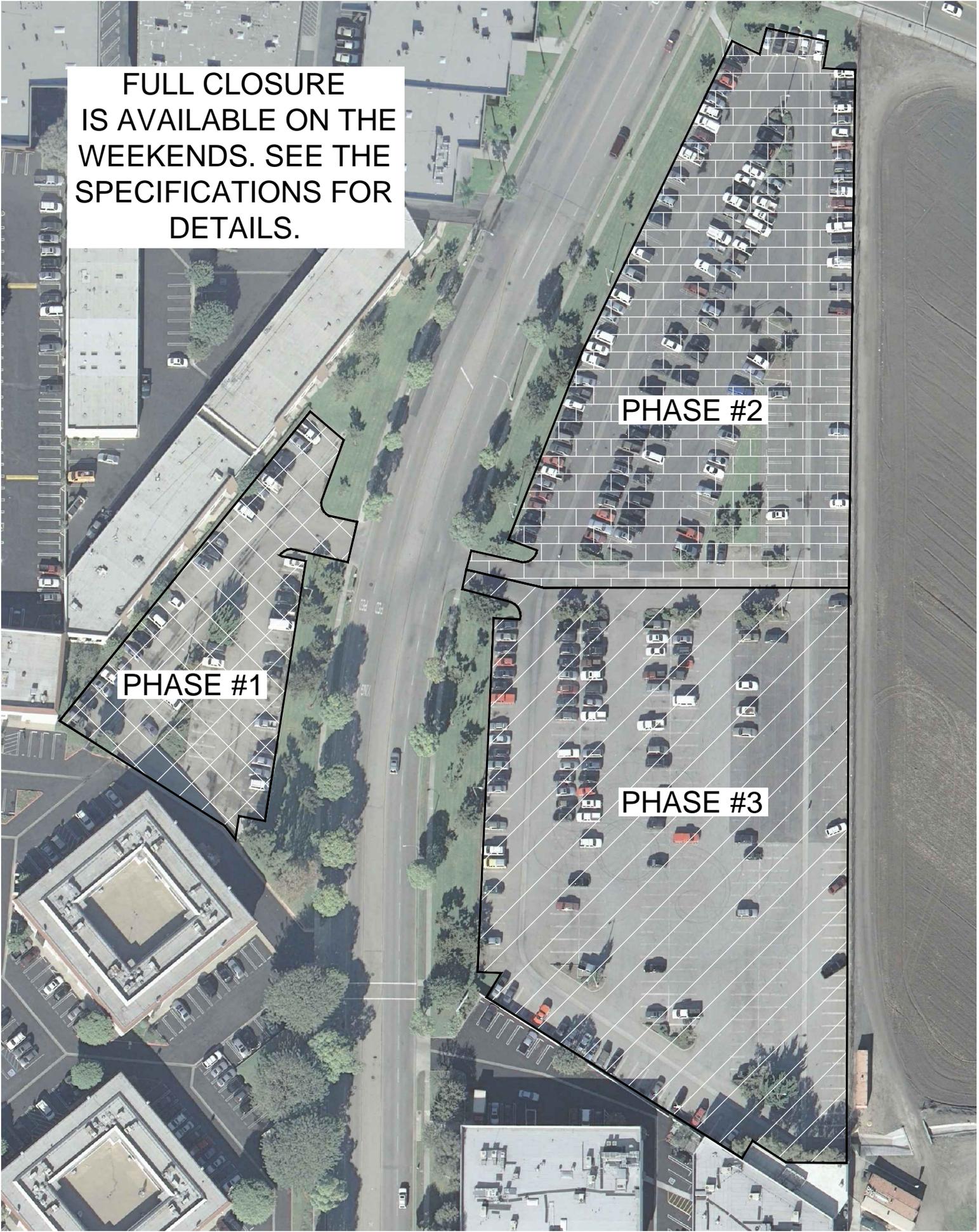
MEADOW PARK PARKING LOT PHASING

FULL CLOSURE
IS AVAILABLE ON THE
WEEKENDS. SEE THE
SPECIFICATIONS FOR
DETAILS.

PHASE #1

PHASE #2

PHASE #3



APPENDIX X

SURVEY MONUMENTS

FOUND MONUMENT DESCRIPTION:

- ① FOUND MH & 4 PM'S ON RIM PER CITY OF TORRANCE TIE SHEET T-59-33-11B AT MADISON ST. & SKYPARK DR. CENTERLINE.
- ② FOUND PUNCHED SPK FLUSH, NO REFERENCE; AT SKYPARK DR. B.C.
- ③ FOUND PUNCHED SPK FLUSH, NO REFERENCE; AT SKYPARK DR. CENTERLINE, 81.46' W'LY FROM SKYPARK DR CENTERLINE B.C.
- ④ FOUND PK FLUSH, NO REFERENCE; AT SKYPARK DR. CENTERLINE, 241.21' W'LY FROM SKYPARK DR CENTERLINE B.C.
- ⑤ FOUND PUNCHED SPK FLUSH, NO REFERENCE; AT SKYPARK DR. CENTERLINE, 382.73' W'LY FROM SKYPARK DR CENTERLINE B.C.
- ⑥ FOUND PUNCHED SPK/TIN FLUSH, NO REFERENCE; AT SKYPARK DR. CENTERLINE, 199.15' E'LY FROM HAWTHORNE BLVD. SERVICE RD. & SKYPARK DR. CENTERLINE INTERSECTION.
- ⑦ FOUND PUNCHED SPK/TIN FLUSH, NO REFERENCE; AT SKYPARK DR. CENTERLINE, 181.03' E'LY FROM HAWTHORNE BLVD. SERVICE RD. & SKYPARK DR. CENTERLINE INTERSECTION.
- ⑧ FOUND PUNCHED SPK FLUSH, NO REFERENCE; AT SKYPARK DR. CENTERLINE & HAWTHORNE BLVD. SERVICE RD. CENTERLINE INTERSECTION.
- ⑨ FOUND PUNCHED SPK FLUSH, NO REFERENCE; AT MADISON ST. CENTERLINE B.C., 13.11' N'LY FROM MADISON ST. & SKYPARK DR. CENTERLINE INTERSECTION.
- ⑩ FOUND PUNCHED SPK FLUSH, NO REFERENCE; AT MADISON ST. CENTERLINE P.C.C., 287.34' N'LY FROM MADISON ST. & SKYPARK DR. CENTERLINE INTERSECTION.
- ⑪ FOUND PUNCHED SPK FLUSH, NO REFERENCE; AT MADISON ST. CENTERLINE E.C., 453.52' N'LY FROM MADISON ST. & SKYPARK DR. CENTERLINE INTERSECTION.

(PROTECT IN PLACE) —→ ⑫ FOUND LEAD & TACK IN T.C., NO REFERENCE; POSSIBLY TIE POINT FOR MADISON ST. CENTERLINE E.C.

⑬ FOUND PUNCHED SPK FLUSH, NO REFERENCE; AT MADISON ST. CENTERLINE B.C., 596.24' S'LY FROM MADISON ST. & LOMITA BLVD. CENTERLINE INTERSECTION.

⑭ FOUND SPK FLUSH, NO REFERENCE; AT MADISON ST., 1.08' W'LY FROM MADISON ST. CENTERLINE AND 26.41' S'LY FROM MADISON ST. & 234TH CENTERLINE INTERSECTION.

⑮ FOUND PUNCHED SPK/W UNREADABLE FLUSH, NO REFERENCE; AT MADISON ST. & 234TH CENTERLINE INTERSECTION.

(PROTECT IN PLACE) —→ ⑯ FOUND PUNCHED SPK/W "CALTRANS" IN T.C., NO REFERENCE; POSSIBLY TIE POINT FOR 234TH ST. CENTERLINE B.C.

⑰ FOUND PK FLUSH, NO REFERENCE; AT MADISON ST. CENTERLINE, 5.68' N'LY FROM MADISON ST. & 234TH ST. CENTERLINE INTERSECTION.

⑱ FOUND PK NAIL FLUSH, NO REFERENCE; AT MADISON ST. CENTERLINE E.C., 271.13' S'LY FROM MADISON ST. & LOMITA BLVD. CENTERLINE INTERSECTION.

⑲ FOUND SPK FLUSH, NO REFERENCE; AT MADISON ST., 0.15' W'LY FROM MADISON ST. CENTERLINE AND 9.69' N'LY FROM MADISON ST. CENTERLINE E.C.

⑳ FOUND PK FLUSH, NO REFERENCE; AT MADISON ST., 0.16' W'LY FROM MADISON ST. CENTERLINE AND 10.68' N'LY FROM MADISON ST. CENTERLINE E.C.

(2 MONUMENTS FOUND) —→ ㉑ FOUND 2 LEAD & TACK IN T.C., NO REFERENCE; POSSIBLY TIE POINT FOR MADISON ST. CENTERLINE.

(PROTECT IN PLACE) —→ ㉒ FOUND RAMSET NAIL FLUSH, NO REFERENCE; AT MADISON ST. & LOMITA BLVD. CENTERLINE INTERSECTION.

㉓ FOUND LEAD & TACK IN T.C., NO REFERENCE; POSSIBLY TIE POINT FOR MADISON ST. & LOMITA BLVD. CENTERLINE INTERSECTION.

㉔ FOUND LEAD & TACK FLUSH IN WALK, NO REFERENCE; POSSIBLY PROPERTY CORNER OFFSET.

NOTE: A REFERENCE PLAN WITH THE LOCATIONS OF THE FOUND MONUMENTS WILL BE GIVEN TO THE CONTRACTOR THAT IS AWARDED THE CONTRACT.