CITY of CALABASAS

FOR USE WITH THE
STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION

PROJECT MANUAL

FOR

LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT

SPECIFICATION NO. 14-15-08

MEASURE R PROGRAM PROJECT #: MR311.08

MARCH 2015

PREPARED FOR: **CITY OF CALABASAS**
100 CIVIC CENTER WAY
CALABASAS, CALIFORNIA 91302

REVIEWED BY: .....
TATIANA L. HOLDEN, P.E.
ASSOCIATE CIVIL ENGINEER

APPROVED FOR CONSTRUCTION: .....
ROBERT YALDA, P.E., T.E.
PUBLIC WORKS DIRECTOR / CITY ENGINEER

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SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

PUBLIC NOTICE IS HEREBY GIVEN that the City of Calabasas as AGENCY, invites sealed bids for the above stated project and **will receive such bids in the office of the City Clerk, 100 Civic Center Way, Calabasas, California, 91302-3172 up to the hour of 2:00 p.m., on Thursday, APRIL 16, 2015**. **The bids will be publicly opened and read at 3:00 p.m. on April 16, 2015**, in the Calabasas City Hall Council Chambers.

The Measure R Las Virgenes Road Scenic Corridor Completion project to be constructed consists of roadway widening, installation of landscaped medians, new traffic signal and traffic signal modifications, construction of retaining walls with associated earthwork, paving, construction of sidewalk, ADA ramps, curb and gutter, landscape and hardscape, electrical work, signing, striping and other miscellaneous work as required by plans and specifications. Project location: Las Virgenes Road from Agoura Road to Lost Hills Road; Thomas Guide 62nd Edition, pages 558-H6, H7 and 588-G1, H1.

Copies of the plans, specifications, and contract documents will be available starting **Monday, April 6, 2015** from the City of Calabasas, 100 Civic Center Way, Calabasas, California 91302-3172 upon payment of a **$50.00 non-refundable fee if picked up or if purchaser covers cost of postage, or payment of a $65.00 non-refundable fee if mailed**. Bidders should contact Pauline Rubio-Brownell at (818) 224-1678, or by email at pbrownell@cityofcalabasas.com with questions and requests for the bid documents.

In accordance with the provisions of California Public Contract Code § 3300, and Business and Professions Code § 7028.15(e), the AGENCY has determined that the contractor shall possess a valid Class A contractor's license at the time that the contract is awarded. Prime contractor's sub-contractors shall possess all appropriate licenses in addition to complete work under City, County, State, and Federal guidelines. Failure to possess the specified license shall render a bidder's bid as non-responsive and shall bar award of the contract to any bidder not possessing the specified license at the time of the award.

CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS' STATE LICENSE BOARD. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS' STATE LICENSE BOARD, P.O. BOX 2600, SACRAMENTO, CA 95826. At the time the contract is awarded, the contractor shall be properly licensed in accordance with the laws of this state. The first payment for work or material shall not be made unless and until the Registrar of Contractors verifies to the AGENCY that the records of the Contractors' State License Board indicate that the contractor was properly licensed at the time the contract was awarded. Any bidder or contractor not so licensed shall be subject to all legal penalties imposed by law including, but not limited to, any appropriate disciplinary action by the Contractors' State Board. Failure of the bidder to obtain proper and adequate licensing for an award of a contract shall constitute a failure to execute the contract and shall result in the forfeiture of the security of the bidder. (Public Contract Code § 20103.5)

CONTRACTORS AND SUBCONTRACTORS ARE ALSO REQUIRED TO BE REGISTERED WITH THE CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS FOR ANY BID PROPOSAL SUBMITTED ON OR AFTER MARCH 1, 2015, AND FOR ANY CONTRACT FOR PUBLIC WORK ENTERED INTO ON OR AFTER APRIL 1, 2015. A contractor or subcontractor shall not be qualified to bid on, be listed on a bid proposal for, or perform any public work contract unless it is currently registered with the California Department of Industrial Relations as described in Labor Code § 1725.5.

Bids must be prepared on the approved bid forms in conformance with INSTRUCTIONS TO BIDDERS and submitted in the envelopes provided, sealed and plainly marked on the outside:

"SEALED BID FOR
LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
DO NOT OPEN WITH REGULAR MAIL"

The bid must be accompanied by a bid guarantee in the amount of 10% of the total bid by 2:00 p.m. ON THE DATE ADVERTISED FOR THE OPENING OF BIDS. More specifically, pursuant to Public Contract Code §§ 20170 and 20171, all bids for the project shall be presented, under sealed cover and shall be accompanied by one of the following forms of bidder's security in the amount of ten percent (10%) of the bid: (a) cash; (b) a cashier's check made payable to the City of Calabasas; (c) a certified check made payable to the City of Calabasas; or (d) a bidder's bond executed by an admitted surety insurer, made payable to the City of Calabasas. Such security shall be forfeited should the successful bidder to whom the contract is awarded fails to timely execute the contract and to deliver the necessary bonds and insurance certificates as specified in the contract documents.

To the extent applicable, at any time during the term of the Agreement for the proposed project, the successful bidder may, at its own expense, substitute securities equivalent to the amount withheld as retention (or the retained percentage) in accordance with Public Contract Code § 22300.

Pursuant to California Civil Code § 9550, a payment bond is required to be submitted for all projects estimated in excess of $25,000.00.

The AGENCY has determined that the proposed project is a public works subject to the provisions of Labor Code § 1720 thereby requiring the Contractor to pay the prevailing wage rates for all work performed under the Contract. Accordingly, the proposed project is subject to compliance monitoring and enforcement by the California Department of Industrial Relations.

The AGENCY reserves the right to reject any and all bids.

If you have any questions, please contact Project Manager, *Tatiana Holden*, at 818-224-1674 or by email at tholden@cityofcalabasas.com

BY ORDER OF the City Council of the City of Calabasas, California.

SECTION A – NOTICE INVITING SEALED BIDS

LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

CALENDAR OF EVENTS*

Bid Advertisement	April 2, 2015
Bid Package available starting	April 6, 2015
Mandatory Pre-Bid Site Visit	10:00 AM, April 13, 2015
Bid Due Date and Time	2:00 PM, April 16, 2015
Bid Opening Date and Time	3:00 PM, April 16, 2015
Bid Results/Contractor Selection	April 20, 2015
Council approval of Contract	April 22, 2015
New Contract in Effect	May 7, 2015
Pre-Construction Meeting	May 14, 2015
Construction Start Date, not earlier than	June 1, 2015
A.E. Wright MS driveway improvements**	July 2015
Construction End Date, not later than	March 1, 2016

*All dates are subject to change

**The project activities have to be scheduled so that A.E. Wright MS driveway work must be performed during the month of July 2015

NOTICE INVITING SEALED BIDS

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In accordance with the provisions of California Public Contract Code § 3300, and Business and Professions Code § 7028.15(e), the AGENCY has determined that the contractor shall possess a valid Class A contractor's license at the time that the contract is awarded. Prime contractor's sub-contractors shall possess all appropriate licenses in addition to complete work under City, County, State, and Federal guidelines. Failure to possess the specified license shall render a bidder's bid as non-responsive and shall bar award of the contract to any bidder not possessing the specified license at the time of the award.

CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS' STATE LICENSE BOARD. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS' STATE LICENSE BOARD, P.O. BOX 2600, SACRAMENTO, CA 95826. At the time the contract is awarded, the contractor shall be properly licensed in accordance with the laws of this state. The first payment for work or material shall not be made unless and until the Registrar of Contractors verifies to the AGENCY that the records of the Contractors' State License Board indicate that the contractor was properly licensed at the time the contract was awarded. Any bidder or contractor not so licensed shall be subject to all legal penalties imposed by law including, but not limited to, any appropriate disciplinary action by the Contractors' State Board. Failure of the bidder to obtain proper and adequate licensing for an award of a contract shall constitute a failure to execute the contract and shall result in the forfeiture of the security of the bidder. (Public Contract Code § 20103.5)

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To the extent applicable, at any time during the term of the Agreement for the proposed project, the successful bidder may, at its own expense, substitute securities equivalent to the amount withheld as retention (or the retained percentage) in accordance with Public Contract Code § 22300.

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The AGENCY reserves the right to reject any and all bids.

If you have any questions, please contact Project Manager, *Tatiana Holden*, at 818-224-1674 or by email at tholden@cityofcalabasas.com

BY ORDER OF the City Council of the City of Calabasas, California.

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SECTION B – INSTRUCTIONS TO BIDDERS

LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
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INSTRUCTIONS TO BIDDERS
LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
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B1.01 INSPECTION OF SITE OF WORK

Bidders are required to inspect the site of the work in order to satisfy themselves, by personal examination or by such other means as they may prefer, of the location of the proposed work and as to the actual conditions of and at the site of work. If, during the course of his/her examination, a bidder finds facts or conditions which appear to him/her to conflict with the letter or spirit of the contract documents, or with any other data furnished him/her, he/she may apply to the AGENCY in writing in accordance with **B1.04 INTERPRETATION OF CONTRACT DOCUMENTS** for additional information and explanation before submitting his/her bid.

The submission of a proposal by the bidder shall constitute the acknowledgment that, if awarded the contract, he/she has relied and is relying on his/her own examination of (a) the site of the work, (b) the access to the site, and (c) all other data, matters, and things requisite to the fulfillment of the work and on his/her own knowledge of existing services and utilities on and in the vicinity of the site of the work to be constructed under the contract, and not on any representation or warranty of the AGENCY. No claim for additional compensation will be allowed which is based upon a lack of knowledge of these items.

B1.02 EXAMINATION OF CONTRACT DOCUMENTS

Each bidder shall thoroughly examine and be familiar with legal and procedural documents, general conditions, specifications, drawings and addenda (if any). The submission of a proposal shall constitute an acknowledgment upon which the AGENCY may rely that the bidder has thoroughly examined and is familiar with the contract documents. The bidders' attention is directed to the need, if any, for special invoicing for this project. The failure or neglect of a bidder to receive or examine any of the contract documents shall in no way relieve him/her from any obligations with respect to his/her proposal or to the contract. No claim for additional compensation will be allowed which is based upon a lack of knowledge of any contract document.

B1.03 CONTRACT PERIOD/CONSTRUCTION COMPLETION DATE

Bidder's attention is called to the provisions set forth in **SECTION E, STANDARD SPECIFICATIONS**, particularly those pertaining to the contract period and liquidated damages for avoidable delays.

The CONTRACTOR shall begin work within fifteen (15) calendar days after the date of the Notice to Proceed, and shall diligently prosecute said work to completion before the expiration **186 WORKING DAYS.** The CONTRACTOR shall pay to the AGENCY liquidated damages in accordance with the Section 6-9 of the General Provisions of The Standard Specifications (Section E) per day, for each and every calendar day, or portion thereof, of delay in finishing the work in excess of the number of working days prescribed above.

B1.04 INTERPRETATION OF CONTRACT DOCUMENTS

No oral interpretations will be made to any bidder as to the meaning of the contract documents. Requests for an interpretation shall be made in writing and delivered to the AGENCY at least five (5) working days before the time announced for opening the proposals. Interpretations by the AGENCY will be in the form of addenda to the contract documents and, when issued, will be sent as promptly as is practical to all parties to whom the contract documents have been issued. AGENCY makes no guarantee that all bidders

will receive all addenda. Copies of addenda will be made available for inspection at the office where contract documents are on file for inspection as indicated on the Invitation for Bids. All such addenda shall become part of the contract. All questions shall be addressed to Tatiana Holden, Project Manager, City of Calabasas, (818) 224-1600, FAX (818) 225-7338.

B1.05 SOIL INFORMATION

Soil reports have been prepared for the area where the retaining walls will be constructed and are available upon request.

B1.06 PROPOSAL

Proposals shall be made on the forms enclosed in **SECTION C** of these specifications with or without removal from the bound contract documents. All proposals shall give the prices proposed, both in words and in numbers, shall give all other information requested herein, and shall be signed by the bidder or his/her authorized representative, with his/her address. If the proposal is made by an individual, his/her name, signature and mailing address must be shown; if made by firm or partnership, the name and mailing address of the firm or partnership and the signature of at least one of the general partners must be shown; if made by a corporation, the proposal shall show the name of the state under the laws of which the corporation is chartered, the name and mailing address of the corporation, and the name and title of the person who signs on behalf of the corporation. If the proposal is made by a corporation, a certified copy of the bylaws or resolution of the board of directors of the corporation shall be furnished demonstrating the authority of the officer signing the proposal to execute contracts on behalf of the corporation.

Each proposal shall be enclosed in a sealed envelope, labeled as specified in **SECTION A - NOTICE INVITING SEALED BIDS**. Bidders are warned against making erasures or alterations of any kind, and proposals which contain omissions, erasures or irregularities of any kind may be rejected. No oral, telegraphic or telephonic proposals or modifications will be considered.

In conformance with the Business and Profession Code, § 7028.15, the CONTRACTOR must state clearly his/her license number and expiration date. In addition he/she shall sign a statement that these representations were made under the penalty of perjury. This statement shall be made on the **EXPERIENCE STATEMENT** in **SECTION C**.

The CONTRACTOR will be required to pay prevailing wage pursuant to California Law, including California Labor Code §§ 1770 et seq. Copies of the prevailing rate of per diem wages are on file at the offices of the AGENCY.

B1.07 ADDENDA

Each proposal shall include specific acknowledgment in the space provided on **SECTION C - BID PROPOSAL** of receipt of all addenda issued during the bidding period. Failure to so acknowledge may result in the proposal being rejected as not responsive.

B1.08 BID PRICES

Bid prices shall include everything necessary for the completion of construction and fulfillment of the contract including, but not limited to, furnishing all materials, equipment, tools, plant and other facilities and all management, superintendence, labor and services, except as may be provided otherwise in the contract documents. In the event of a difference between a price quoted in words and a price quoted in numbers for the same quotation, the words shall be the amount bid.

In preparing bid prices, bidder represents that he/she has carefully examined the Contract Documents and the site where the work is to be performed and that he/she has familiarized himself with all local conditions and federal, state and local laws, ordinances, rules, and regulations that may affect the performance of the work in any manner. The bidder further represents that he/she has studied all surveys and investigation reports about subsurface and physical conditions pertaining to the job site, that he/she has performed such additional surveys and investigations as he/she deems necessary to complete the work at his/her bid price, and that he/she has correlated the results of all such data with the requirements of the Contract Documents. The submittal of a bid shall be conclusive evidence that the bidder has investigated and is satisfied as to the conditions to be encountered, including locality, uncertainty of weather and all other contingencies, and as to the character, quality, quantities, and scope of the work.

The plans and specifications for the work show subsurface conditions or otherwise hidden conditions as the Design Engineer supposes or believes them to exist, but is not intended or to be inferred that the conditions as shown thereon constitute a representation that such conditions are actually existent. Except as otherwise specifically provided in the Contract Documents, the AGENCY, the Design Engineer and their consultants or agents shall not be liable for any loss sustained by the CONTRACTOR as a result of any variance of such conditions as shown on the plans and the actual conditions revealed during the progress of the work or otherwise.

The CONTRACTOR shall perform an independent take-off of the plans and bid accordingly. Quantities listed in the **BID SCHEDULE** in **SECTION C** are intended only as a guide for the CONTRACTOR as to the anticipated order of magnitude of work. CONTRACTOR shall be responsible for verifying all estimated quantities. CONTRACTOR will be reimbursed for the quantity of items actually installed as required by the Contract Documents and shown on the plans to neat line and grade.

The CONTRACTOR will not be reimbursed for unauthorized work performed outside of that required by the Contract Documents.

B1.09 TAXES

No mention shall be made in the proposal of sales tax, use tax, or any other tax, as all amounts bid will be deemed and held to include any such taxes which may be applicable.

B1.10 RECOGNITION OF BONDING COMPANIES

All bonding companies used by the CONTRACTOR in this contract must be recognized by the Federal Government within Circular 570. All proposals or contracts received that include bonds posted by bonding companies not recognized in Circular 570 will result in the disqualification of the bid proposal and forfeiture of the bid bond.

B1.11 QUALIFICATION OF BIDDERS

Each bidder shall be skilled and regularly engaged in the general class or type of work called for under the contract. A statement setting forth his/her experience shall be submitted by each bidder on the **EXPERIENCE STATEMENT** form provided in **SECTION C**.

Each bidder shall possess a valid CONTRACTOR's License issued by the CONTRACTOR's State License Board at the time his/her bid is submitted. The class of license shall be applicable to the work specified in the contract. Each bidder shall also have no less than five (5) years of experience in the magnitude and character of the work bid.

It is the intention of the AGENCY to award a contract to a bidder who furnished satisfactory evidence that he/she has the requisite experience and ability, and that he/she has sufficient capital, facilities, and

plant to enable him/her to prosecute the work successfully and properly, and to complete it within the time stated in the contract.

To determine the degree of responsibility to be credited to the bidder, the AGENCY will weigh any evidence that the bidder has performed satisfactorily other contracts of like nature, magnitude and comparable difficulty and comparable rates of progress. If in the opinion of the AGENCY, a bidder is determined to be insufficiently qualified, then that bidder will not be considered for award of the contract.

B1.12 DESIGNATION OF SUPPLIERS AND SUBCONTRACTORS

Each proposal shall have listed on the **DESIGNATION OF SUPPLIERS AND SUBCONTRACTORS** form provided in **SECTION C** the name, license number, and address of each subcontractor to whom the bidder proposes to sublet portions of the work in excess of one-half of one percent of the total amount of his/her bid. For the purpose of this paragraph, a subcontractor is defined as one who contracts with the CONTRACTOR to furnish materials and labor, or labor only for the performance of work at the site of the work or who will specially fabricate a portion of the work off the site pursuant to detailed drawings in the contract documents.

Public Contract Code § 4104 requires all bidders to list subcontractors who will perform work in excess of one-half of one percent of the total bid, or in the case of streets and highways, one-half of one percent of the total bid or $10,000, whichever is greater.

Public Contract Code § 6109 prohibits a CONTRACTOR from performing work with a subcontractor who is debarred pursuant to Labor Code §§ 1777.1 or 1777.7.

B1.13 PROPOSAL GUARANTEE

The proposal shall be accompanied by a proposal guarantee bond duly completed on the form provided herewith by a guarantee company authorized to carry on business in the State of California for payments to the AGENCY in the sum of at least 10% of the total amount of the bid proposal, or alternatively by a certified or cashier's check payable to the AGENCY, or cash, in the sum of at least 10% of the total amount of the bid proposal. The amount payable to the AGENCY under the proposal guarantee shall be forfeited to the AGENCY in case of failure or neglect of the bidder to furnish, execute and deliver to the AGENCY the required bonds, evidence of insurance and to enter into, execute and deliver to the AGENCY the agreement on the form provided herewith, within ten (10) days after being notified in writing by the AGENCY that the award has been made and the agreement is ready for execution.

B1.14 MODIFICATION OF PROPOSAL

A modification of a bid proposal already received will be considered only if the modification is received before the time announced for the opening of bids. All modifications shall be made in writing, executed and submitted in the same form and manner as the original bid proposal.

B1.15 WITHDRAWAL OF PROPOSAL

A proposal may be withdrawn by a written request signed by the bidder. Such requests must be delivered to the AGENCY's designated official prior to the bid opening hour stipulated in **SECTION A – NOTICE INVITING SEALED BIDS**. Proposals may not be withdrawn after that time without forfeiture of the proposal guarantee. The withdrawal of a proposal will not prejudice the right of the bidder to submit a new proposal, providing there is time to do so.

B1.16 POSTPONEMENT OF BID OPENING

The AGENCY reserves the right to postpone the date and time for opening of bids at any time prior to the date and time announced in **SECTION A–NOTICE INVITING SEALED BIDS**.

B1.17 DISQUALIFICATION OF BIDDERS

If there is reason to believe that collusion exists among the bidders, none of the bids of the participants in such collusion will be considered. In the event that any bidder acting as a prime CONTRACTOR has an interest in more than one proposal, all such proposals will be rejected, and the bidder will be disqualified. This restriction does not apply to subcontractors or suppliers who may submit quotations to more than one bidder, and while doing so, may also submit a formal proposal as a prime CONTRACTOR.

B1.18 REJECTION OF PROPOSALS

The AGENCY reserves the right to reject any and all proposals, to waive any irregularity, and to reject any proposals which are incomplete, obscure or irregular; any proposals which omit a bid on any one or more items on which bids are required; which omit unit prices if unit prices are required; in which unit prices are unbalanced in the opinion of the AGENCY; which are accompanied by insufficient or irregular bid security; or which are from bidders who have previously failed to perform properly or to timely complete contracts of any nature.

B1.19 AWARD OF CONTRACT

The Contract will be awarded, if at all, to the lowest responsible and responsive bidder, whose bid proposal is not rejected for cause by the AGENCY. However, until an award is made, the AGENCY reserves the right to reject any or all bids, and to waive technical errors or discrepancies, if to do so is deemed to best serve the interests of the AGENCY. In no event will an award be made until all necessary investigations are made as to the responsibility and qualifications of the bidder to whom it is proposed to make such an award.

Each bidder's attention is directed to the possibility that the award of the project may be delayed for various reasons. The AGENCY reserves the right to delay the award of the project for 45 calendar days. After 45 calendar days, the low bidder may at any time request release from its bid without penalty.

The acceptance of a proposal will be evidenced by a Notice of Award of Contract in writing, delivered by mail to the bidder whose proposal is accepted. No other act of the AGENCY shall constitute acceptance of a proposal. The award of contract shall obligate the bidder whose proposal is accepted to furnish a performance bond, payment bond and maintenance bond, as well as evidence of insurance and to execute the contract set forth herein.

B1.20 RETURN OF PROPOSAL GUARANTEES

Within ten (10) calendar days after the bids are opened, the AGENCY will release the proposal guarantees accompanying the proposals which are not to be considered in making the award. Proposal guarantees for the two lowest bidders will be held until the contract has been fully executed, after which they will be returned to the respective bidders.

B1.21 EXECUTION OF CONTRACT

The contract agreement shall be executed in duplicate by the successful bidder and returned, together with the contract bonds and evidence of insurance, within ten (10) calendar days after the notification of the contract award by the AGENCY in writing. In case of failure of the successful bidder to execute the

contract agreement within ten (10) calendar days after such notice, or any subsequent extension approved by AGENCY, the AGENCY at its option may consider the bidder in default, in which case the bid bond or proposal guarantee accompanying the bid shall become the property of the AGENCY. After execution by the AGENCY, one original contract shall be returned to the CONTRACTOR.

B1.22 FLEXIBILITY OF BID SCHEDULE

It is the intent of the AGENCY to award a contract to the lowest responsible and responsive bidder and the flexibility shown in the bid schedule is necessary to ensure a project within the AGENCY's budget limits and constraints.

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SECTION C – PROPOSAL INFORMATION AND DOCUMENTS

LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

Proposal Information and Documents:

- □ Bid Proposal
- □ Bid Schedule
- □ Bid Bond
- □ Bid Guarantee
- □ Bidder Information
- □ Experience Statement
- □ Designation of Suppliers and Subcontractors
- □ Statement Regarding Insurance Coverage
- □ Statement Regarding Contractor's Licensing Laws

BID PROPOSAL
LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
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The undersigned, as bidder, declares that he/she has examined all of the contract documents and specifications contained in this project manual for the above referenced project, and that he/she will contract with the AGENCY on the form of contract provided herewith to do everything necessary for the fulfillment of this contract at the price, and on the terms and conditions therein contained.

The following are included and are to be considered as forming a part of this proposal: **BID PROPOSAL, BID SCHEDULE, BID BOND, NONCOLLUSION AFFIDAVIT, BID GUARANTEE** (if submitted in lieu of Bid Bond), **BIDDER INFORMATION, EXPERIENCE STATEMENT, DESIGNATION OF SUPPLIERS & SUBCONTRACTORS, BIDDER'S STATEMENT REGARDING INSURANCE COVERAGE**, and **STATEMENT REGARDING CONTRACTOR'S LICENSING LAWS**.

CONTRACTOR acknowledges receipt and inclusion of addenda _____ to _____ into this bid proposal and the contract documents.

Attached is a Bid Bond duly completed by a guarantee company authorized to carry on business in the State of California in the amount of at least 10% of the total amount of this proposal, or alternatively, there is attached a certified or cashier's check payable to the AGENCY or evidence of a cash payment to the AGENCY, in the amount of at least 10% of the total amount of our proposal.

If this proposal is accepted, we agree to sign the contract form and to furnish the Performance Bond and the Payment Bond (each to be 100% of the bid amount), the Maintenance Bond (to be 50% of the bid amount), and the required evidences of insurance within ten (10) calendar days after receiving written Notice of Award of Contract.

We further agree if our proposal is accepted and a contract for the performance of the work is entered into with the AGENCY, to so plan the work and to prosecute it with such diligence that all of the work shall be completed within the time stipulated in **SECTION E - TIME OF COMPLETION**.

NAME OF BIDDER:_____

MAILING ADDRESS:_____

_____

STATE OF INCORPORATION:_____

AUTHORIZED SIGNATURE:_____

TITLE:_____

DATE:_____

(If Company is a Corporation, provide corporate resolution per **B 1.06 PROPOSAL.**)

BID SCHEDULE
LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

The cost of all labor, services, material, equipment and installation necessary for the completion of the work itemized under this schedule, even though not shown or specified, shall be included in the unit price for the various items shown herein. For a description of the work associated with each bid item, see **SECTION F–SPECIAL PROVISIONS**. The AGENCY reserves the right to increase or decrease the quantity of any item or omit items as may be necessary, and the same shall in no way affect or void the contract, except that appropriate additions or deductions from the contract total price will be made at the stipulated unit price in accordance with these Contract Documents.

The AGENCY reserves the right to reject any and all bids, to waive any informality in a bid, and to make awards in the interest of the AGENCY.

The CONTRACTOR shall perform an independent take-off of the plans and bid accordingly. Quantities listed in this Bid Schedule are intended only as a guide for the CONTRACTOR as to the anticipated order of magnitude of work. The CONTRACTOR shall be responsible for verifying all estimated quantities. The CONTRACTOR will be reimbursed for the quantity of items actually installed as required by the Contract Documents, including addenda, and shown on the plans to neat line and grade.

The CONTRACTOR will not be reimbursed for work performed for his convenience, or as required to adapt to field conditions, or for unauthorized work performed outside of that required by the Contract Documents.

The CONTRACTOR shall be responsible for calculating and providing totals for the bid schedule. The proposal schedule shall include all costs for labor, services, material, equipment, and installation associated with completing the work in place per the plans, specifications and details.

NAME OF BIDDER:_____

CONTRACTOR'S LICENSE NO.:_____

AUTHORIZED SIGNATURE:_____

TITLE:_____

DATE:_____

BID SCHEDULE (Continued)

LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

CIP PROJECT BID ITEMS

ITEM NO.	DESCRIPTION	PAYMENT REFERENCE	EST. QTY.	UNIT	UNIT PRICE	EXTENDED AMOUNT
1	Mobilization, Bond, Insurance, and As-built	701-2	1	LS	$	$
2	Protect Survey Monuments	702-2	1	LS	$	$
3	Traffic Control	704-10	1	LS	$	$
4	SWPPP	706-3	1	LS	$	$
5	Measure R Construction Sign	705-2	2	EA	$	$
6	Clearing and Grubbing	707-2	1	LS	$	$
7	Tree Removal	708-9	8	EA	$	$
8	Remove existing A.C. Pavement and Base (20" approximate depth)	708-9	1186	CY	$	$
9	Remove existing A.C. Pavement and Base per plan	708-9	84397	SF	$	$
10	Remove Concrete Curb & Gutter	708-9	154	LF	$	$
11	Sawcut	717-2	12,157	LF	$	$
12	Remove 2" AC pavement (Cold Mill)	711-9	281185	SF	$	$
13	Construct Asphalt Concrete (3" ARHM overlay)	711-9	281185	SF	$	$
14	Construct ADA curb ramp	712-17	16	EA	$	$
15	Install truncated dome	712-17	14	EA	$	$

16	Remove Guard Rail and Fence, Chain Link Fence	708-9	1	LS	$	$
17	Remove Existing Driveway	708-9	615	EA	$	$
18	Construct Concrete Curb and 24" Gutter (Reverse Slope, Type A3-8)	712-17	3225	LF	$	$
19	Construct 8" AC pavement	711-9	74470	SF	$	$
20	Construct 6" Reinforced Concrete pavement	712-17	475	SF	$	$
21	Construct Concrete Curb & 24" Gutter (Type A2-8)	712-17	1800	LF	$	$
22	Construct Concrete Curb & 12" Gutter (Type B2-8)	712-17	1550	LF	$	$
23	Construct Concrete Curb (Type B3-8)	712-17	3070	LF	$	$
24	Construct 8" Concrete Curb (Type A1-8)	712-17	100	LF	$	$
25	Construct PCC Longitudinal Gutter	712-17	208	LF	$	$
26	Construct Concrete 4" PCC Sidewalk on 12" Compacted Subgrade	712-17	10302	SF	$	$
27	Construct 4" PCC Path/Ramp on 6" Compacted Subgrade	712-17	212	SF	$	$
28	Adjust Utility Manholes to Grade	713-8	25	EA	$	$
29	Adjust Utility Covers to Grade	713-8	63	EA	$	$
30	Adjust Fire Hydrant to Grade	713-8	1	EA	$	$
31	Relocate Fire Hydrant	722-2	3	EA	$	$
32	Adjust Street Light, Traffic Signal or Utility Pole to Grade	713-8	1	LS	$	$
33	Relocate utility cabinet (SCE Vault)	713-8	1	EA	$	$
34	Construct Concrete Driveway Apron	712-17	4	EA	$	$

35	Las Virgenes Road/Willow Glen Street Traffic Signal Installation	718-23	1	LS	$	$
36	Las Virgenes Road/Meadow Creek Lane Traffic Signal Modification	718-23	1	LS	$	$
37	Las Virgenes Road/A.E. Wright Traffic Signal Modification	718-23	1	LS	$	$
38	Construct Curb Opening Catch Basin	715-2	1	EA	$	$
39	Construct curb cut openings	714-2	5	EA	$	$
40	Construct 4" PVC	713-2	217	LF	$	$
41	Construct 6" PVC	715-2	101	LF	$	$
42	Construct Parkway Drain	715-2	11	EA	$	$
43	Construct 18" RCP Storm Drain	714-2	72	LF	$	$
44	Construct 12" concrete V-gutter	712-17	208	LF	$	$
45	Construct 24" concrete V-gutter	712-17	490	LF	$	$
46	Construct 6" area/wall drain	715-2	6	EA	$	$
47	Earthwork – fill and compaction	709-3	2,214	CY	$	$
48	Earthwork - Cut	709-3	66	CY	$	$
49	Remove Street Light	708-9	1	EA	$	$
50	Construct Reinforced Concrete Retaining Wall per Caltrans Std. Plan per plans	716-4	643	LF	$	$
51	Construct Soil Nail Retaining Wall	716-4	468	LF	$	$
52	Construct Decomposed Granite (DG) surface	715-2	1050	SF	$	$

53	Construct Median River Rock	726-2	1650	SF	$	$
54	Construct 3" AC Pavement on 9" Aggregate Base	711-9	3357	SF	$	$
55	Construct 6" Concrete Curb (Type A1-6)	712-17	401	LF	$	$
56	Construct 6" Concrete Curb & 24" Gutter (Type A2-6)	712-17	137	LF	$	$
57	Construct 3" AC Pavement on 12" Aggregate Base	711-9	3686	SF	$	$
58	Install Traffic Signs	721-9	1	LS	$	$
59	Relocate/Remove Traffic signs	721-9	1	LS	$	$
60	Construct Striping, Pavement Markings and Markers	721-9	1	LS	$	$
61	Landscaping	723-26	1	LS	$	$
62	Install Irrigation System	724-19	1	LS	$	$
63	Hand Rail	719-2	94	LF	$	$

The CONTRACTOR shall be responsible for calculating and providing unit prices for the schedule. The proposal schedule shall include all costs for services, labor, materials, equipment, and installation associated in completing the work in place per the Specifications and details.

Base Bid Schedule Total: $_____

Bid Schedule Total (in words):_____

_____

Note To Bidder

LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

NOTE: Bidders must bid on the Base Bid Items and Add-On items. The base bid items are the City CIP project with the standard public agency project requirements.

There is an Add- On project which is the private development street improvements project. The Add-on project does not include prevailing wage requirements.

The City will award the contract based on lowest responsive and responsible bidder for the Base Bid items.

The private development contract can be separately negotiated with the private developer. Bidders may contact Ben Young with Blue Marble Development at 702-251-0789 (office); 702-538-5108 (cell); or 702-489-8208 (fax) with the questions about the Add-on bid items and/or the contract requirements. The award of the construction contract for the Add-on items will be at the discretion of Blue Marble Development.

Bid Schedule for Add-On Project 4240 Las Virgenes Road
Tract No. 060488 (Private Development)

ITEM NO.	DESCRIPTION	PAYMENT* REFERENCE	EST. QTY.	UNIT	UNIT PRICE	EXTENDED AMOUNT
	Las Virgenes Road Improvements (Paxton Place)					
1	Traffic control	N/A	1	LS	$	$
2	Erosion control / SWPPP	N/A	1	LS	$	$
3	Soils engineering	N/A	1	LS	$	$
4	Construct Concrete Curb & Gutter (Type A2-8)	N/A	857	LF	$	$
5	Construct Concrete Curb and Gutter (Type A3-8)	N/A	855	LF	$	$
6	Construct Driveway Apron per Detail "F"	N/A	1	EA	$	$
7	Construct Concrete 4" PCC Sidewalk	N/A	6,667	SF	$	$

8	8" AC pavement	N/A	75,237	SF	$	$
9	19" aggregate base	N/A	75,237	SF	$	$
10	Tree Removal	N/A	14	EA	$	$
11	Remove Fence	N/A	1,157	LF	$	$
12	FH Adjustment (there are 4, but only 1 assumed need. adj.)	N/A	1	EA	$	$
13	AC pavement removal (4" & 12" base assumed)	N/A	77,000	SF	$	$
14	Remove Concrete Curb & Gutter	N/A	218	LF	$	$
15	Sawcut Existing Pavement (removal is note 15)	N/A	194	LF	$	$
16	Remove 2" AC pavement (Cold Mill)	N/A	720	SF	$	$
17	Construct Asphalt Concrete (3" RAC overlay)	N/A	720	SF	$	$
18	ADA ramp (SPPWC 111-4, case A, type 1)	N/A	2	EA	$	$
19	Remove existing guardrail	N/A	50	LF	$	$
20	ADA ramp (access @ project access drives)	N/A	4	EA	$	$
21	Driveway (reinforced) apron per detail G - sheet 2 (7" pcc)	N/A	1	EA	$	$
22	Construct Median (typical dtl A) (see landscape/irr plans)	N/A	7,000	SF	$	$
23	Construct Median (nose/dtl B) (see landscape/irr plans)	N/A	250	SF	$	$
24	Construct (Install) Street Light	N/A	3	EA	$	$
25	Remove Existing Landscape	N/A	33,150	SF	$	$
26	Adjust Street Light or Utility Pole to Grade	N/A	10	EA	$	$

27	Adjust Utility Manholes, Valve or Vault to Grade (4 Comm boxes not included)	N/A	3	EA	$	$
28	Construct Parkway Drain per SPPWC 151-2 type 1	N/A	1	EA	$	$
29	Construct curb cut openings	N/A	6	EA	$	$
30	Construct Parkway Drain per SPPWC 151-2 type 2	N/A	4	EA	$	$
31	Construct 36" concrete V-gutter	N/A	10	LF	$	$
32	Remove interfering portions of S/W, Ramp, (C&G-note 16)	N/A	1,746	SF	$	$
33	Install grated inlet per dtl 2 sht 10 (brooks or apr. equal).	N/A	2	EA	$	$
34	Mil 2" exist. AC construct 2" min overlay	N/A	720	SF	$	$
35	Remove Existing Driveway	N/A	548	SF	$	$
36	Const. Curb open. CB (SPPWC 300-3, W=7)-per SD plans	N/A	2	EA	$	$
37	Construct Concrete Curb & Gutter (Type B2-8)	N/A	748	LF	$	$
38	Construct Concrete Curb (Type B3-8)	N/A	1,109	LF	$	$
39	Construct Longitudinal Gutter SPPWC 151-2	N/A	123	LF	$	$
40	Construct ADA compliant Driveway SPPWC 110-2 - case B	N/A	2	EA	$	$
41	Sawcut & match existing sidewalk per SPPWC 113-2	N/A	10	EA	$	$
42	median river rock (cobblestone @ nose) - see note 24 & landscape plans	N/A	250	SF	$	$
43	Construct 6" Concrete Curb & 24" Gutter (Type A2-6)	N/A	35	LF	$	$
44	Curb Transition 8" to 6" (assume $ included in note #1)	N/A	3	EA	$	$

45	Construct Concrete Curb (Type A1-8)	N/A	25	LF	$	$
46	Install Irrigation System	N/A	1	LS	$	$
47	Signing and Striping	N/A	1	LS	$	$
48	Fill and Compaction	N/A	5,000	CY	$	$
49	Traffic Signal	N/A	1	LS	$	$
50	Clearing and grubbing	N/A	1	LS	$	$
51	Protect survey monuments	N/A	1	LS	$	$
52	Construction staking	N/A	1	LS	$	$
Private Drains at 4345 Las Virgenes Road						
53	Construct 18" RCP Storm Drain	N/A	97	LF	$	$
54	Construct 24" RCP Storm Drain	N/A	197	LF	$	$
55	Construct 36" RCP Storm Drain	N/A	323	LF	$	$
56	Construct Catch Basin	N/A	1	EA	$	$
57	Construct Manhole	N/A	4	EA	$	$
58	Construct Junction Structures	N/A	3	EA	$	$
59	Construct Transition Structures	N/A	2	EA	$	$
Las Virgenes Road Improvements (PD 1904)						
60	Curb Opening Catch Basin - SPPWC 300-3	N/A	1	EA	$	$
61	Local Depression for catch basin - SPPWC 313-3, case E	N/A	1	EA	$	$

62	Concrete Collar for RCP per SPPWC 380-4	N/A	1	EA	$	$
63	10" solid wall SDR-21 HDPE	N/A	30	LF	$	$
64	Storm Drain Manhole per SPPWC 321-2	N/A	1	EA	$	$
Las Virgenes Municipal Water District (Paxton Place)						
65	6" C900 PVC class DR14 water line	N/A	257	LF	$	$
66	10" C900 PVC class DR14 water line	N/A	220	LF	$	$
67	Fire Hydrant Assembly Complete	N/A	3	EA	$	$
68	10" Febco BFP	N/A	1	EA	$	$
69	10" Service/Meter (coordinate with LVMWD & developer)	N/A	1	EA	$	$
70	20" CMC/CML Steel Water Pipe - welded joints	N/A	865	LF	$	$
71	6" Febco DCDA	N/A	2	EA	$	$
72	1.5" water meter (box only - coordinate with LVMWD - see note 12)	N/A	1	EA	$	$
73	1.5 inch Febco RP BFP	N/A	1	EA	$	$
74	Point of connection	N/A	6	EA	$	$
75	1.5" domestic Service/Meter (coor. w/ LVMWD & developer)	N/A	1	EA	$	$
76	Remove existing 20" Steel Water Line	N/A	880	LF	$	$
77	10" water meter (box only - coordinate with LVMWD - see note 5)	N/A	1	EA	$	$
78	2" air/vac	N/A	1	EA	$	$
79	Pipe crossing per PW-102	N/A	16	EA	$	$

80	8"x8"x6" cut in tee	N/A	3	EA	$	$
81	45 degree bend - steel pipe	N/A	1	EA	$	$
82	10 inch tee with thrust blocks	N/A	2	EA	$	$
83	90 degree bend - pvc	N/A	3	EA	$	$
84	10 inch butteryfly valve	N/A	3	EA	$	$
85	Butt-strap closure connect. w/ fabricated jnts per LVMWD	N/A	2	EA	$	$
86	8"x8"x10" cut in tee w/megalug	N/A	1	EA	$	$
87	8" gate valve	N/A	2	EA	$	$
88	6" gate valve	N/A	6	EA	$	$
89	10" x 6" reducer	N/A	2	EA	$	$
90	6" tee	N/A	1	EA	$	$
91	Pipe end assmbly per LVMWD PW-131	N/A	1	EA	$	$

*Refer to applicable section of specifications **OR** 4240 Las Virgenes Road (Paxton Place private development) Plans for payment reference.

Add-On Total: $_____

Add-On Total (in words):_____

_____

_____ _____

(Company Name of Bidder) (Date)

BID BOND
LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

KNOW ALL MEN BY THESE PRESENTS that Bidder _____, as PRINCIPAL, and _____, as SURETY, are held and firmly bound unto the City of Calabasas as AGENCY, in the penal sum of _____ dollars ($_____), which is ten percent (10%) of the total amount bid by PRINCIPAL to AGENCY for the above stated project, for the payment of which sum, PRINCIPAL and SURETY agree to be bound, jointly and severally, firmly by these presents.

The SURETY, for value received, hereby stipulates and agrees that the obligations of said SURETY and its BOND shall be in no way impaired or affected by any extension of the time within which the AGENCY may accept such Bid; and said SURETY does hereby waive notice of any such extension.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that, whereas PRINCIPAL is about to submit a bid to AGENCY for the above stated project, if said bid is rejected, or if said bid is accepted and a contract is awarded and entered into by PRINCIPAL in the manner and time specified, and PRINCIPAL provides the required payment and performance bonds and insurance coverages to AGENCY, then this obligation shall be null and void, otherwise it shall remain in full force and effect in favor of AGENCY.

IN WITNESS WHEREOF the parties hereto have set their names, titles, hands, and seals this ____ day of _____, 20__.

PRINCIPAL* _____

_____

_____

_____

SURETY* _____

_____

_____

_____

*Provide BIDDER and SURETY name, address and telephone number and the name, title, address and telephone number for their authorized representatives. Power of Attorney must be attached.

CERTIFICATE OF ACKNOWLEDGMENT

State of California
County of _____

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

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

BID GUARANTEE
LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

Note: The following statement shall be used if other than a bid surety bond accompanies bid.

"Accompanying this proposal is a money order, certified check, cashier's check, payable to the order of the City of Calabasas in the amount of _____ Dollars ($_____) which is at least ten percent (10%) of the total amount of this bid. The proceeds of this bid guarantee shall become the property of the City of Calabasas provided this bid is accepted by said City, through action of its legally constituted contracting authorities, and the undersigned fails to execute a contract and furnish the required bonds and insurance within the stipulated time. Otherwise, the proceeds of this bid guarantee shall be returned to the undersigned."

NAME OF BIDDER: _____

MAILING ADDRESS: _____

_____

_____

AUTHORIZED SIGNATURE: _____

TITLE: _____

DATE: _____

BIDDER INFORMATION
LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

BIDDER certifies that the following information is true and correct:

Name of Bidder:_____

Business Address:_____

Telephone:_____FAX:_____

E-mail: _____

CONTRACTOR's License No.:_____ Date License Issued:_____

License Expiration Date:_____

The following are the names, titles, addresses, and phone numbers of all individuals, firm members, partners, joint venturers, and/or corporate officers having a principal interest in this proposal: (Name / Title / Address / Telephone)

_____

_____

_____

_____

Any voluntary or involuntary bankruptcy judgments against any principal having an interest in this proposal are as follows: (Type of Judgment / Date)

_____

_____

_____

All current and prior DBA's, aliases, and/or fictitious business names for any principal having an interest in this proposal are as follows: (Principal / DBA's / Applicable Dates)

_____

_____

_____

Prior Disqualification

Has your firm ever been disqualified from performing work for any City, County, Public or Private Contracting entity? Yes / No _____. If yes, provide the following information. (If more than once, use separate sheets):

Date: _____ Entity:_____

Location:_____

Reason:_____

Provide Status and any Supplemental Statement:_____

_____

_____

_____

_____

Has your firm been reinstated by this entity? Yes / No _____

Violations of Federal or State Law

A. Has your firm or its officers been assessed any penalties by any agency for noncompliance, violations of Federal or State 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 status):_____

_____

_____

_____

_____

Have the penalties been paid? Yes / No:_____

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

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

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

_____

_____

I declare under penalty of perjury under the laws of the State of California that all of the representations made in this **BIDDER INFORMATION** are true and correct. Executed this _____ day of _____, 20__, at _____, California.

Authorized Representative: Signature _____

Title _____

EXPERIENCE STATEMENT
LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

Pursuant to this **BID PROPOSAL** and **QUALIFICATION OF BIDDERS**, the following is a record of the Bidder's experience in construction of a type similar in magnitude and character to that contemplated under this contract. Included in this section should be a complete list of references for similar projects in terms of scope of work, value of work, and time constraints. The CONTRACTOR must demonstrate that he/she has experience with this type of project and can manage this project effectively. If necessary, additional numbered pages can be attached to this page. The CONTRACTOR must be properly licensed to perform the work in this project as determined by the State CONTRACTOR's License Board.

Project Title:_____ Client:_____

Date: _____ Project Value: _____ Contact: _____ Tel #_____

Description: _____

_____

_____

Subject to Federal Labor Standards: Yes No

Project Title:_____ Client:_____

Date: _____ Project Value: _____ Contact: _____ Tel #_____

Description: _____

_____

_____

Subject to Federal Labor Standards: Yes No

EXPERIENCE STATEMENT (Continued)
LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

Project Title:_____ Client:_____

Date: _____ Project Value: _____ Contact: _____ Tel #_____

Description: _____

_____

_____

Subject to Federal Labor Standards: Yes No

Project Title:_____ Client:_____

Date: _____ Project Value: _____ Contact: _____ Tel #_____

Description: _____

_____

_____

Subject to Federal Labor Standards: Yes No

I declare under penalty of perjury under the laws of the State of California that all of the representations made in this **EXPERIENCE STATEMENT** are true and correct. Executed this _____ day of _____, 20__, at _____, California.

Authorized Representative: Signature _____

Title _____

DESIGNATION OF SUPPLIERS AND SUBCONTRACTORS
LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

The following is a list of subcontractors and suppliers, as defined in 2-3 SUBCONTRACTS of the Standard Specifications, who will perform work or provide materials of value in excess of one-half of one percent of the total bid price or $10,000, whichever is greater.

No subcontractor shall perform work in excess of the amount specified in 2-3 SUBCONTRACTS of the Standard Specifications, without the written approval of the AGENCY.

The CONTRACTOR is responsible to ensure that appropriate provisions are to be inserted in all subcontracts to bind subcontractors to the contract requirements as contained herein.

Each subcontractor must agree to comply with all applicable Federal, State, and local requirements.

Name, License No., and Address of Subcontractor	Employer Tax Id #	MBE/ WBE (Y/N)	Work Subcontracted	Portion of Work (% of Contract Price)

Name, License No., and Address of Subcontractor	Employer Tax Id #	MBE/ WBE (Y/N)	Work Subcontracted	Portion of Work (% of Contract Price)

These representations are made under the penalty of perjury under the laws of the State of California. The undersigned hereby certifies that each subcontractor has been notified in writing of its equal opportunity obligations.

NAME OF BIDDER: _____

AUTHORIZED SIGNATURE: _____

Date: _____

STATEMENT REGARDING INSURANCE COVERAGE
LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

The undersigned representative of Bidder hereby certifies that he/she has reviewed the insurance coverage requirements specified in **7-3 LIABILITY INSURANCE** of Section E, Standard Specifications. Should Bidder be awarded the contract for the work, the undersigned further certifies that Bidder can meet all of these specification requirements for insurance including insurance coverage of his/her subcontractors.

NAME OF BIDDER: _____

MAILING ADDRESS: _____

_____

_____

AUTHORIZED SIGNATURE: _____

TITLE: _____

DATE: _____

STATEMENT REGARDING CONTRACTOR'S LICENSING LAWS
LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA
[Business & Professions Code § 7028.15]
[Public Contract Code § 20103.5]

I, the undersigned, certify that I am aware of the following provisions of California law and that I, or the entity on whose behalf this certification is given, hold a currently valid California CONTRACTOR's license as set forth below:

Business & Professions Code § 7028.15:

a) **It is a misdemeanor for any person to submit a bid to a public agency to engage in the business or act in the capacity of a CONTRACTOR within this state without having a license therefor,** except in any of the following cases:

(1)The person is particularly exempted from this chapter.

(2)The bid is submitted on a state project governed by Section 10164 of the Public Contract Code or on any local agency project governed by Section 20104 [now § 20103.5] of the Public Contract Code.

b) If a person has been previously convicted of the offense described in this section, the court shall impose a fine of 20 percent of the price of the contract under which the unlicensed person performed contracting work, or four thousand five hundred dollars ($4,500), whichever is greater, or imprisonment in the county jail for not less than 10 days nor more than six months, or both.

In the event the person performing the contracting work has agreed to furnish materials and labor on an hourly basis, "the price of the contract" for the purposes of this subdivision means the aggregate sum of the cost of materials and labor furnished and the cost of completing the work to be performed.

c) This section shall not apply to a joint venture license, as required by Section 7029.1. However, at the time of making a bid as a joint venture, each person submitting the bid shall be subject to this section with respect to his/her individual licenser.

d) This section shall not affect the right or ability of a licensed architect, land surveyor, or registered professional engineer to form joint ventures with licensed CONTRACTORs to render services within the scope of their respective practices.

e) Unless one of the foregoing exceptions applies, a bid submitted to a public agency by a CONTRACTOR who is not licensed in accordance with this chapter shall be considered nonresponsive and shall be rejected by the public agency. Unless one of the foregoing exceptions applies, a local public agency shall, before awarding a contract or issuing a purchase order, verify that the CONTRACTOR was properly licensed when the CONTRACTOR submitted the bid. Notwithstanding any other provision of law, unless one of the foregoing exceptions applies, the registrar may issue a citation to any public officer or employee of a public entity who knowingly awards a contract or issues a purchase order to a CONTRACTOR who is not licensed pursuant to this chapter. The amount of civil penalties, appeal, and finality of such citations shall be subject to Sections 7028.7 to 7028.13, inclusive. **Any contract awarded to, or any purchase order issued to, as CONTRACTOR who is not licensed pursuant to this chapter is void.**

f) Any compliance or noncompliance with subdivision (e) of this section, as added by Chapter 863 of the Statutes of 1989, shall not invalidate any contract or bid awarded by a public agency during which time that subdivision was in effect.

g) A public employee or officer shall not be subject to a citation pursuant to this section if the public employee, officer, or employing agency made an inquiry to the board for the purposes of verifying the license status of any person or CONTRACTOR and the board failed to respond to the inquiry within three business days. For purposes of this section, a telephone response by the board shall be deemed sufficient.

Public Contract Code § 20103.5:

In all contracts subject to this part where federal funds are involved, no bid submitted shall be invalidated by the failure of the bidder to be licensed in accordance with the laws of this state. However, at the time the contract is awarded, the CONTRACTOR shall be properly licensed in accordance with the laws of this state. The first payment for work or material under any contract shall not be made unless and until the Registrar of CONTRACTORs verifies to the AGENCY that the records of the CONTRACTORs' State License Board indicate that the CONTRACTOR was properly licensed at the time the contract was awarded. Any bidder or CONTRACTOR not so licensed shall be subject to all legal penalties imposed by law, including, but not limited to, any appropriate disciplinary action by the CONTRACTORs' State License Board. The AGENCY shall include a statement to that effect in the standard form of pre-qualification questionnaire and financial statement. **Failure of the bidder to obtain proper and adequate licensing for an award of a contract shall constitute a failure to execute the contract and shall result in the forfeiture of the security of the bidder.**

CONTRACTOR's License Number: _____

License Expiration Date: _____

Authorized Signature: _____

Date: _____

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SECTION D – CONTRACT INFORMATION AND DOCUMENTS

LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

Contract Information and Documents:

- □ Contract Agreement
- □ Payment Bond
- □ Faithful Performance Bond
- □ Maintenance Bond
- □ Non-Collusion Affidavit
- □ Worker's Compensation Insurance Certificate
- □ Insurance Endorsement

ARTICLES OF AGREEMENT

LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT, SPECIFICATION NO. 14-15-08, AGREEMENT IN THE CITY OF CALABASAS, CALIFORNIA

THIS LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT, SPECIFICATION NO. 14-15-08, AGREEMENT ("AGREEMENT") is made and entered into for the above-stated project this _____ day of_____, 20__ , BY AND BETWEEN the City of Calabasas, a municipal corporation, hereafter designated as "AGENCY", and CONTRACTOR'S BUSINESS NAME, a _____ (State) _____ (corporation, partnership, limited liability company, or other business form), hereafter designated as "CONTRACTOR."

WITNESSETH that AGENCY and CONTRACTOR have mutually agreed as follows:

ARTICLE I: Contract Documents

The contract documents for the LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT, SPECIFICATION NO. 14-15-08, shall consist of the Notice Inviting Sealed Bids, Instructions To Bidders, Bid Proposal, Bid Schedule, Standard Specifications, Special Provisions, and all referenced specifications, details, standard drawings, and appendices; together with two signed copies of the AGREEMENT, two signed copies of required bonds; one copy of the insurance certificates, permits, notices, and affidavits; and also including any and all addenda or supplemental agreements clarifying, amending, or extending the work contemplated as may be required to ensure its completion in an acceptable manner (collectively referred to herein as the "Contract Documents"). All of the provisions of the Contract Documents are made a part hereof as though fully set forth herein.

ARTICLE II: Scope of Work

For and in consideration of the payments and agreements to be made and performed by AGENCY, CONTRACTOR agrees to furnish all materials and equipment and perform all work required for the above-stated project, and to fulfill all other obligations as set forth in the aforesaid Contract Documents.

AGENCY hereby employs CONTRACTOR to provide the materials, do the work, and fulfill the obligations according to the terms and conditions herein contained and referred to, for the prices provided herein, and hereby contracts to pay the same at the time, in the manner, and upon the conditions set forth in this AGREEMENT.

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to this AGREEMENT, CONTRACTOR offers and agrees to assign to the AGENCY all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (Section 16700, et seq.) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services,

or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to CONTRACTOR, without further acknowledgment by the parties.

ARTICLE III: Compensation

A. CONTRACTOR agrees to receive and accept the prices set forth in the Bid Proposal and Bid Schedule as full compensation for furnishing all materials, performing all work, and fulfilling all obligations hereunder. In no event shall the total compensation and costs payable to CONTRACTOR under this Agreement exceed the sum of $_____ (_____ Dollars,) unless specifically approved in advance and in writing by AGENCY.

Such compensation shall cover all expenses, losses, damages, and consequences arising out of the nature of the work during its progress or prior to its acceptance including those for well and faithfully completing the work and the whole thereof in the manner and time specified in the aforesaid Contract Documents; and also including those arising from actions of the elements, unforeseen difficulties or obstructions encountered in the prosecution of the work, suspension or discontinuance of the work, and all other unknowns or risks of any description connected with the work.

B. This AGREEMENT is subject to the provisions of Article 1.7 (commencing at Section 20104.50) of Division 2, Part 3 of the Public Contract Code regarding prompt payment of CONTRACTORs by local governments. Article 1.7 mandates certain procedures for the payment of undisputed and properly submitted payment requests within 30 days after receipt, for the review of payment requests, for notice to CONTRACTOR of improper payment requests, and provides for the payment of interest on progress payment requests which are not timely made in accordance with that Article. This AGREEMENT hereby incorporates the provisions of Article 1.7 as though fully set forth herein.

C. At the request and expense of CONTRACTOR, securities equivalent to the amount withheld shall be deposited with AGENCY, or with a state or federally chartered bank in this state as the escrow agent, who shall then pay those moneys to CONTRACTOR upon AGENCY's confirmation of CONTRACTOR'S satisfactory completion of this AGREEMENT. At any time during the term of this AGREEMENT CONTRACTOR may, at its own expense, substitute securities for funds otherwise withheld as retention (or the retained percentage) in accordance with Public Contract Code § 22300.

ARTICLE IV: Labor Code

AGENCY and CONTRACTOR acknowledge that this AGREEMENT is subject to the provisions of Division 2, Part 7, Chapter 1 (commencing with Section 1720) of the California Labor Code relating to public works and public agencies and agree to be bound by all the provisions thereof as though set forth fully herein. Full compensation for conforming to the requirements of the Labor Code and with other Federal, State and local laws related to labor, and rules, regulations and ordinances which apply to any work performed pursuant to this AGREEMENT is included in the price for all contract items of work involved.

This AGREEMENT is further subject to prevailing wage law, including, but not limited to, the following:

A. The CONTRACTOR shall pay the prevailing wage rates for all work performed under the AGREEMENT. When any craft or classification is omitted from the general prevailing wage determinations, the CONTRACTOR shall pay the wage rate of the craft or classification most closely related to the omitted classification. The CONTRACTOR shall forfeit as a penalty to AGENCY $200.00 or any greater penalty provided in the Labor Code for each Calendar Day, or portion thereof, for each worker paid less than the prevailing wage rates for any work done under the AGREEMENT in violation of the provisions of the Labor Code whether such worker is employed in the execution of the work by CONTRACTOR or by any Subcontractor under CONTRACTOR. In addition, CONTRACTOR shall pay each worker the difference between such prevailing wage rates and the amount paid to each worker for each Calendar Day, or portion thereof, for which each worker was paid less than the prevailing wage rate.

B. CONTRACTOR shall comply with the provisions of Labor Code Section 1777.5 concerning the employment of apprentices on public works projects, and further agrees that CONTRACTOR is responsible for compliance with Section 1777.5 by all of its subcontractors.

C. Pursuant to Labor Code § 1725.5, CONTRACTOR and any subcontractor must be registered with the California Department of Industrial Relations for any bid proposal submitted on or after March 1, 2015, and for any contract for public work entered into on or after April 1, 2015. Further, this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

D. Pursuant to Labor Code § 1776, CONTRACTOR and any subcontractor shall keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with this AGREEMENT. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following: (1) The information contained in the payroll record is true and correct; and (2) The employer has complied with the requirements of Labor Code §§ 1811, and 1815 for any work performed by his or her employees on the public works project. The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours as required by Labor Code § 1776.

E. This AGREEMENT is further subject to 8-hour work day and wage and hour penalty law, including, but not limited to, Labor Code Sections 1810 and 1813, as well as California nondiscrimination laws, as follows:

CONTRACTOR shall strictly adhere to the provisions of the Labor Code regarding the 8-hour day and the 40-hour week, overtime, Saturday, Sunday and holiday work and nondiscrimination on the basis of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex or sexual orientation, except as provided in Section 12940 of the Government Code. Pursuant to the provisions of the Labor Code, eight hours' labor shall constitute a legal day's work. Work performed by CONTRACTOR's employees in excess of eight hours per day, and 40 hours during any one week, must include compensation for all hours worked in excess of eight hours per day, or 40 hours during any one week, at not less than one and one-half times the basic rate of pay. CONTRACTOR shall forfeit as a penalty to AGENCY $25.00 or any greater penalty set forth in the Labor Code for each worker employed in the execution of the work by CONTRACTOR or by any Subcontractor of CONTRACTOR, for each Calendar Day during which such worker is required or permitted to the work more than eight hours in one Calendar Day or more than 40 hours in any one calendar week in violation of the Labor Code.

F. This AGREEMENT is subject to Public Contract Code Section 6109: CONTRACTOR shall be prohibited from performing work on this project with a subcontractor who is ineligible to perform work on the project pursuant to Sections 1777.1 or 1777.7 of the Labor Code.

ARTICLE V: Work Site Conditions

A. In compliance with and pursuant to Government Code Section 4215, AGENCY shall assume the responsibility, as between the parties to this AGREEMENT, for the timely removal, relocation, or protection of existing main- or trunk-line utility facilities located on the site of any construction project that is a subject of this AGREEMENT, if such utilities are not identified by AGENCY in the plans and specifications made a part of the invitation for bids. The Contract Documents shall include provisions to compensate CONTRACTOR for the costs of locating, repairing damage not due to the failure of CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not indicated in the plans and specifications with reasonable accuracy, and for equipment on the project necessarily idled during such work. CONTRACTOR shall not be assessed liquidated damages for delay in completion of the project, when such delay was caused by the failure of AGENCY or the owner of a utility to provide for removal or relocation of such utility facilities.

B. To the extent that the work requires trenches in excess of five feet (5') and is estimated to cost more than $25,000, prior to any excavation, CONTRACTOR must provide the AGENCY, or a registered civil or structural engineer employed by the AGENCY to whom authority has been delegated to accept such plans, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the shoring system standards, the plan shall be prepared by a registered civil or structural engineer. Nothing in this section shall be deemed to allow the use of a shoring, sloping, or protective system less effective than that required by the Construction Safety Orders.

C. This AGREEMENT is further subject to Public Contract Code Section 7104 with regard to any trenches deeper than four feet (4') involved in the proposed work as follows:

CONTRACTOR shall promptly, and before the following conditions are disturbed, notify AGENCY, in writing, of any:

(1) Material that CONTRACTOR believes may be hazardous waste, as defined in Section 25117 of the Health and Safety Code, which is required to be removed to a Class I, Class II, or Class III disposal site in accordance with existing law.

(2) Subsurface or latent physical conditions at the site differing from those indicated by all available information provided prior to the deadline for submission of bids.

(3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

AGENCY shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or involve hazardous waste, and cause a decrease or increase in CONTRACTOR's cost of, or the time required for, performance of any part of the work, AGENCY shall issue a change order under the procedures described in this AGREEMENT.

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

ARTICLE VI: Insurance

A. With respect to performance of work under this AGREEMENT, CONTRACTOR shall maintain, and shall require all of its subcontractors to maintain, insurance as required by Section E "Standard Specifications" of the Contract Documents.

B. This AGREEMENT is further subject to Workers' Compensation obligations, including, but not limited to, California Labor Code Sections 1860 and 1861 as follows:

CONTRACTOR shall take out and maintain, during the life of this contract, Worker's Compensation Insurance for all of CONTRACTOR's employees employed at the site of improvement; and, if any work is sublet, CONTRACTOR shall require the subcontractor similarly to provide Worker's Compensation Insurance for all of the latter's employees, unless such employees are covered by the protection afforded by CONTRACTOR. CONTRACTOR and any of CONTRACTOR's subcontractors shall be required to provide AGENCY with a written statement acknowledging its obligation to secure payment of Worker's Compensation Insurance as required by Labor Code § 1861; to wit: 'I am aware of the provisions of Section 3700 of the Labor Code which require 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.' If any class of employees engaged in work under this AGREEMENT at the site of the Project is not protected under any Worker's Compensation law, CONTRACTOR shall provide and shall cause each subcontractor to provide adequate insurance for the protection of employees not otherwise protected. CONTRACTOR shall indemnify and hold harmless AGENCY for any damage resulting from failure of either CONTRACTOR or any subcontractor to take out or maintain such insurance.

ARTICLE VII: Indemnification

To the fullest extent permitted by law, CONTRACTOR shall, at its sole cost and expense, fully defend, indemnify and hold harmless AGENCY, its authorized representatives and their respective subsidiaries, affiliates, members, directors, officers, employees and agents (collectively, the "Indemnitees") from and against any and all claims, actions, demands, costs, judgments, liens, penalties, liabilities, damages, losses, and expenses, including but not limited to any fees of accountants, attorneys or other professionals (collectively "Liabilities"), arising out of, in connection with, resulting from or related to, any act, omission, fault or negligence of CONTRACTOR, CONTRACTOR's Representative, or any of its officers, agents, employees, Subcontractors or Suppliers, or any person or organization directly or indirectly employed by any of them (Collectively, the "Indemnitors"), in connection with or relating to or claimed to be in connection with or relating to the work performed under this AGREEMENT.

If CONTRACTOR is a joint venture or partnership, each venturer or partner shall be jointly and severally liable for any and all of the duties and obligations of CONTRACTOR that are assumed under or arise out of this AGREEMENT. Each of such venturers or partners waives notice of the breach or non-performance of any undertaking or obligation of CONTRACTOR contained in, resulting from or assumed under this AGREEMENT, and the failure to give any such notice shall not affect or impair such venturer's or partner's joint and several liability hereunder.

ARTICLE VIII: Binding Effect

AGENCY and CONTRACTOR each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto and to its partners, successors, assigns, and legal representatives in respect of all covenants, agreements, and obligations contained in the Contract Documents. This AGREEMENT is not assignable nor the performance of either party's duties delegable without the prior written consent of the other party. Any attempted or purported assignment or delegation of any of the rights of obligations of either party without the prior written consent of the other shall be void and of no force and effect.

ARTICLE IX: Dispute Resolution

A. Any court action arising out of this AGREEMENT shall be filed in the Los Angeles County Superior Court. Any alternative dispute resolution proceeding arising out of this AGREEMENT shall be heard in the County of Los Angeles.

B. AGENCY shall have full authority to compromise or otherwise settle any claim relating to this AGREEMENT or any part hereof at any time. AGENCY shall provide timely notification to

CONTRACTOR of the receipt of any third-party claim relating to this AGREEMENT. AGENCY shall be entitled to recover its reasonable costs incurred in providing the notification required by this section.

C. This AGREEMENT is further subject to the provisions of Article 1.5 (commencing at Section 20104) of Division 2, Part 3 of the Public Contract Code regarding the resolution of public works claims of less than $375,000. Article 1.5 mandates certain procedures for the filing of claims and supporting documentation by CONTRACTOR, for the response to such claims by the AGENCY, for a mandatory meet and confer conference upon the request of CONTRACTOR, for mandatory nonbinding mediation in the event litigation is commenced, and for mandatory judicial arbitration upon the parties' failure to resolve the dispute through mediation. This AGREEMENT hereby incorporates the provisions of Article 1.5 as though fully set forth herein.

ARTICLE X: Independent CONTRACTOR

CONTRACTOR is and shall at all times remain as to AGENCY, a wholly independent CONTRACTOR. Neither AGENCY nor any of its agents shall have control of the conduct of CONTRACTOR or any of CONTRACTOR's employees, except as herein set forth. CONTRACTOR shall 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 AGENCY.

ARTICLE XI: Taxes

CONTRACTOR is responsible for paying all retail, sales and use, transportation, export, import, special or other taxes and duties applicable to, and assessable against any work, materials, equipment, services, processes and operations incidental to or involved in this AGREEMENT. The CONTRACTOR is responsible for ascertaining and arranging to pay such taxes and duties. The prices established in this AGREEMENT shall include compensation for any taxes the CONTRACTOR is required to pay by laws and regulations in effect as of the execution of this AGREEMENT.

ARTICLE XII: Notices

All notices and communications shall be sent in writing to the parties at the following addresses:

AGENCY: TATIANA HOLDEN	CONTRACTOR: _____
CITY OF CALABASAS	CONTRACTOR'S BUSINESS NAME
100 Civic Center Way	Mailing Address
Calabasas, CA 91302-3172	City, State, Zip Code

ARTICLE XIII: Entire Agreement

This AGREEMENT supersedes any and all other agreements, either oral or written, between the parties and contains all of the covenants and agreements between the parties pertaining to the work of improvements described herein. Each party to this AGREEMENT acknowledges that no representations, inducements, promises or agreements, orally or otherwise, have been made by any party, or anyone acting on behalf of any party, which are not embodied herein, and that any

other agreement, statement or promise not contained in this AGREEMENT shall not be valid or binding. Any modification of this AGREEMENT will be effective only if signed by the party to be charged.

The benefits and obligations of this AGREEMENT shall inure to and be binding upon the representatives, agents, partners, heirs, successors and assigns of the parties hereto. This AGREEMENT shall be construed pursuant to the laws of the State of California.

ARTICLE XIV: Authority to Contract

The signatories hereto represent that they are authorized to sign on behalf of the respective parties they represent and are competent to do so, and each of the parties hereto hereby irrevocably waives any and all rights to challenge signatures on these bases.

ARTICLE XV: General Provisions

A. All reports, documents or other written material ("written products" herein) developed by CONTRACTOR in the performance of this Agreement shall be and remain the property of AGENCY without restriction or limitation upon its use or dissemination by AGENCY. CONTRACTOR may take and retain copies of such written products as desired, but no such written products shall be the subject of a copyright application by CONTRACTOR.

B. In the performance of this Agreement, CONTRACTOR shall not discriminate against any employee, subcontractor, or applicant for employment because of race, color, creed, religion, sex, marital status, sexual orientation, national origin, ancestry, age, physical or mental disability, medical condition or any other unlawful basis.

C. The captions appearing at the commencement of the sections hereof, and in any paragraph thereof, are descriptive only and for convenience in reference to this Agreement. Should there be any conflict between such heading, and the section or paragraph at the head of which it appears, the section or paragraph hereof, as the case may be, and not such heading, shall control and govern in the construction of this Agreement. Masculine or feminine pronouns shall be substituted for the neuter form and vice versa, and the plural shall be substituted for the singular form and vice versa, in any place or places herein in which the context requires such substitution(s).

D. The waiver by AGENCY or CONTRACTOR of any breach of any term, covenant or condition herein contained shall not be deemed to be a waiver of such term, covenant or condition or of any subsequent breach of the same or any other term, covenant or condition herein contained. No term, covenant or condition of this Agreement shall be deemed to have been waived by AGENCY or CONTRACTOR unless in writing.

E. Each right, power and remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise shall be cumulative and shall be in addition to every other right, power, or remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise. The exercise, the commencement of the exercise, or the forbearance of the exercise by any party of any one or more of such rights, powers or remedies shall not preclude the

simultaneous or later exercise by such party of any of all of such other rights, powers or remedies.

F. CONTRACTOR shall maintain any and all ledgers, books of account, invoices, vouchers, canceled checks, and other records or documents evidencing or relating to charges for services or expenditures and disbursements charged to AGENCY under this Agreement for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to CONTRACTOR under this Agreement. All such documents shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of AGENCY. In addition, pursuant to Government Code Section 8546.7, if the amount of public funds expended under this Agreement exceeds ten thousand dollars, all such documents and this Agreement shall be subject to the examination and audit of the State Auditor, at the request of AGENCY or as part of any audit of AGENCY, for a period of three (3) years after final payment under the Agreement.

IN WITNESS WHEREOF the parties hereto for themselves, their heirs, executors, administrators, successors, and assigns do hereby agree to the full performance of the covenants herein contained and have caused this AGREEMENT to be executed in duplicate by setting hereunto their names, titles, hands, and seals this _____ day of _____, 20__.

CONTRACTOR: CONTRACTOR's Business Name

_____

CONTRACTOR's Sign Name, Title
CONTRACTOR's License No. _____

AGENCY: _____ _____

Mayor of the City of Calabasas — Date

ATTESTED: _____ _____

City Clerk of the City of Calabasas — Date

APPROVED AS TO FORM: _____ _____

City Attorney of the City of Calabasas — Date

(EXECUTE IN DUPLICATE)

CERTIFICATE OF ACKNOWLEDGMENT

State of California
County of _____

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

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

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PAYMENT BOND
LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT, SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

WHEREAS, the City of Calabasas, as AGENCY has awarded to _____, as CONTRACTOR, a contract for the above-stated project;

AND WHEREAS, CONTRACTOR is required to furnish a bond in connection with the contract, to secure the payment of claims of laborers, mechanics, material persons, and other persons as provided by law;

NOW THEREFORE, we, the undersigned CONTRACTOR and SURETY, are held and firmly bound unto AGENCY and STATE of CALIFORNIA in the sum of _____ **DESCRIBE VERBALLY; 100% OF TOTAL CONTRACT AMOUNT—TO BE INSERTED BY CONTRACTOR]**Dollars ($_____)which is one hundred percent (100%) of the total contract amount for the above-stated project, for which payment well and truly to be made we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION IS SUCH that if CONTRACTOR, its heirs, executors, administrators, successors, assigns or subcontractors, shall fail to pay any of the persons named in Civil Code Section 9100, or amounts due under the Unemployment Insurance Code with respect to work or labor withheld, and to pay over to the Employment Development Department from the wages of employees of the CONTRACTOR and its subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to such work and labor, that the surety or sureties herein will pay for the same in an amount not exceeding the sum specified in this bond, otherwise the above obligation shall be void. In case suit is brought upon this bond, SURETY will pay reasonable attorneys' fees to the plaintiffs and AGENCY and STATE of CALIFORNIA in an amount to be fixed by the court.

This bond shall inure to the benefit to any of the persons named in Civil Code Section 9100 as to give a right of action to such persons or their assigns in any suit brought upon this bond.

The SURETY hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or the specifications accompanying it shall in any manner affect SURETY's obligations on this bond. The SURETY hereby waives notice of any such change, extension, alteration or addition and hereby waives the requirements of Section 2845 of the Civil Code as a condition precedent to any remedies AGENCY and STATE of CALIFORNIA may have.

IN WITNESS WHEREOF the parties hereto have set their names, titles, hands, and seals this ____day of _____, 20__.

CONTRACTOR* CONTRACTOR's Signer's Name, Title
CONTRACTOR's Business Name
Mailing Street Address
City, State, Zip Code
Telephone #

Surety* _____
_____
_____
_____

*Provide CONTRACTOR and SURETY name, address and telephone number and the name, title, address and telephone number for the respective authorized representatives. Power of Attorney must be attached.

(EXECUTE IN DUPLICATE)
CERTIFICATE OF ACKNOWLEDGMENT

State of California
County of _____

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

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

FAITHFUL PERFORMANCE BOND
LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT, SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

KNOW ALL PERSONS BY THESE PRESENTS That _____, hereinafter referred to as "CONTRACTOR" as PRINCIPAL, and _____, a corporation duly organized and doing business under and by virtue of the laws of the State of California and duly licensed for the purpose of making, guaranteeing, or becoming sole surety upon bonds or undertakings as Surety, are held and firmly bound unto the CITY OF CALABASAS, CALIFORNIA, hereinafter referred to as the "AGENCY", and STATE of CALIFORNIA in the sum of _____ **DESCRIBE VERBALLY; (100% OF TOTAL CONTRACT AMOUNT—TO BE INSERTED BY CONTRACTOR)** Dollars ($_____); which is fifty percent (100%) of the total contract amount for the above stated project; lawful money of the United States of America for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, assigns and successors, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH, that whereas CONTRACTOR has been awarded and is about to enter into a Contract with AGENCY to perform all work required pursuant to the contract documents for the project entitled: LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT, SPECIFICATION NO. 14-15-08 CONTRACT which Contract is by this reference incorporated herein, and is required by AGENCY to give this Bond in connection with the execution of the Contract;

NOW, THEREFORE, if CONTRACTOR and his or her Subcontractors shall well and truly do and perform all the covenants and obligations of the Contract on his or her part to be done and performed at the times and in the manner specified herein including compliance with all Contract specifications and quality requirements, then this obligation shall be null and void, otherwise it shall be and remain in full force and effect;

PROVIDED, that any alterations in the work to be done, or in the material to be furnished, which may be made pursuant to the terms of the Contract, shall not in any way release CONTRACTOR or the Surety thereunder, nor shall any extensions of time granted under the provisions of the Contract release either CONTRACTOR or said Surety, and notice of such alterations of extensions of the Contract is hereby waived by said Surety.

In the event suit is brought upon this Bond by AGENCY and STATE of CALIFORNIA and judgment is recovered, said Surety shall pay all costs incurred by AGENCY and STATE of CALIFORNIA in such suit, including a reasonable attorney's fee to be fixed by the Court.

IN WITNESS WHEREOF the parties hereto have set their names, titles, hands, and seals this _____day of _____ ,20____.

CONTRACTOR* CONTRACTOR's Signer's Name, Title
CONTRACTOR's Business Name
Mailing Street Address
City, State, Zip Code
Telephone #

Surety* _____
_____
_____
_____

*Provide CONTRACTOR and SURETY name, address and telephone number and the name, title, address and telephone number for the respective authorized representatives. Power of Attorney must be attached.

(EXECUTE IN DUPLICATE)

CERTIFICATE OF ACKNOWLEDGMENT

State of California
County of _____

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

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

MAINTENANCE BOND
LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT, SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

KNOW ALL PERSONS BY THESE PRESENTS THAT WHEREAS, the City of Calabasas, as AGENCY has awarded to _____, as CONTRACTOR, a contract for the above-stated project.

AND WHEREAS, CONTRACTOR is required to furnish a bond in connection with the contract guaranteeing maintenance thereof;

NOW, THEREFORE, we, the undersigned CONTRACTOR and SURETY, are held firmly bound unto AGENCY in the sum of [describe verbally, 50% of total contract amount here] _____**DESCRIBE VERBALLY; 50% OF TOTAL CONTRACT AMOUNT—TO BE INSERTED BY CONTRACTOR**]Dollars ($_____), which is fifty percent (50%) of the total contract amount for the above-stated project to be paid to AGENCY, its successors and assigns, for which payment well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that if CONTRACTOR shall remedy without cost to AGENCY any defects which may develop during a period of one (1) year from the date of recordation of the Notice of Completion of the work performed under the contract, provided such defects are caused by defective or inferior materials or work, then this obligation shall be void; otherwise it shall be and remain in full force and effect. In case suit is brought upon this bond, SURETY will pay reasonable attorneys' fees to the AGENCY in an amount to be fixed by the court.

IN WITNESS WHEREOF the parties hereto have set their names, titles, hands, and seals this____ day of _____, 20__.

CONTRACTOR* CONTRACTOR's Signer's Name, Title
CONTRACTOR's Business Name
Mailing Street Address
City, State, Zip Code
Telephone #

Surety* _____
_____
_____
_____

*Provide CONTRACTOR and SURETY name, address and telephone number and the name, title, address and telephone number for the respective authorized representatives. Power of Attorney must be attached.

(EXECUTE IN DUPLICATE)

CERTIFICATE OF ACKNOWLEDGMENT

State of California
County of _____

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

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (SEAL)

NON-COLLUSION AFFIDAVIT

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

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

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on the ___ day _____, 20__ at _____, California.

_____
CONTRACTOR's Signer's Name

_____
CONTRACTOR's Signer's Title

_____
CONTRACTOR's Business Name

Business Address:
CONTRACTOR's Business Name
Mailing Street Address
City, State, Zip Code
Telephone #

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WORKERS' COMPENSATION INSURANCE CERTIFICATE

The CONTRACTOR shall execute the following form as required by the California Labor Code, Sections 1860 and 1861:

> I am aware of the provisions of Section 3700 of the Labor Code which require 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.

DATE:_____

CONTRACTOR's Business Name

By:_____
(Signature)

_____
(Title)

Attest:

By:_____
(Signature)

_____
(Title)

NOTE: See Section 7 Responsibility of the CONTRACTOR, Paragraph 7-3 of the Standard Specifications for insurance carrier rating requirements.

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ENDORSEMENTS TO INSURANCE POLICY

Name of Insurance Company:_____

Policy Number:_____

Effective Date:_____

The following endorsements are hereby incorporated by reference into the attached Certificate of Insurance as though fully set forth thereon:

1. The naming of an additional insured as herein provided shall not affect any recovery to which such additional insured would be entitled under this policy if not named as such additional insured, and
2. The additional insured named herein shall not be held liable for any premium or expense of any nature on this policy or any extensions thereof, and
3. The additional insured named herein shall not by reason of being so named be considered a member of any mutual insurance company for any purpose whatsoever, and
4. The provisions of the policy will not be changed, suspended, canceled or otherwise terminated as to the interest of the additional insured named herein without first giving such additional insured twenty (20) days' written notice.
5. Any other insurance held by the additional insured shall not be required to contribute anything toward any loss or expense covered by the insurance, which is referred to by this certificate.
6. **The company provided insurance for this certificate is a company licensed to do business in the State of California with a Best's rating of A+ VIII or greater.**

It is agreed that the City of Calabasas, its officers and employees, are included as Additional Insureds under the contracts of insurance for which the Certificate of Insurance is given.

_____
Authorized Insurance Agent

Date:_____

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SECTION E – STANDARD SPECIFICATIONS

LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

STANDARD SPECIFICATIONS

0-1 INCORPORATION OF GREENBOOK. The latest edition of the Standard Specifications for Public Works Construction ("SSPWC" or "Greenbook") shall be incorporated by reference into these Standard Specifications, with the exception of Part 1 "General Provisions" which shall be replaced in its entirety by the following provisions. To the extent that anything in these Standard Specifications conflicts with the terms or requirements of the SSPWC, these provisions shall control.

1-1 TERMS. Unless otherwise stated, the words *directed, required, permitted, ordered, instructed, designated, considered necessary, prescribed, approved, acceptable, satisfactory*, or words of like meaning, refer to actions, expressions, and prerogatives of the Engineer.

1-2 DEFINITIONS

Acceptance – The AGENCY's formal written acceptance of a project that has been completed in all respects in accordance with the plans and specifications and any modifications thereof.

Addendum – Written or graphic instrument issued prior to the opening of Bids which clarifies, corrects, or changes the bidding or Contract Documents. The term Addendum shall include bulletins and all other types of written notices issued to potential bidders prior to opening of Bids.

AGENCY – The City of Calabasas.

Agent – Shall include persons and companies, other than the CONTRACTOR, retained by the City to perform design and construction services in relation to the Work.

Agreement – See Contract.

Assessment Act Contract – A Contract financed by special assessments authorized under a State Act or procedural ordinance of a City of County.

Base – A layer of specified material of planned thickness placed immediately below the pavement or surfacing.

Bid – The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work.

Bidder – Any individual, firm, partnership, corporation, or combination thereof, submitting a Bid for the Work, acting directly or through a duly authorized representative.

Board – The officer or body constituting the awarding authority of the AGENCY.

Bond – Bid, performance, and payment bond or other instrument of security.

Cash Contract – A Contract financed by means other than special assessments.

Change Order – A written order to the CONTRACTOR signed by the AGENCY directing an addition, deletion, or revision in the Work, or an adjustment in the Contract Price or the Contract time issued after the effective date of the Contract. A Change Order may or may not also be signed by the CONTRACTOR.

City – The City of Calabasas, California, as the AGENCY and Owner.

City Council – City Council of the City of Calabasas, California.

Code – The terms *Government Code, Labor Code*, etc., refer to codes of the State of California.

Construction Manager – Persons and/or company retained by the City to perform construction management services.

Contract – The written agreement between the AGENCY and the CONTRACTOR covering the Work.

Contract Documents – Including, but not limited to: the Contract, any Addendum (which pertain to the contract documents), Notice Inviting Bids, Instructions to Bidders; Bid (including documentation accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Contract, the Bonds, the general conditions, permits from other agencies, the Special Provisions, the Plans, Standard Plans, Standard Specifications, Reference Specifications, and all Modifications issued after the execution of the Contract.

CONTRACTOR – The individual, partnership, corporation, joint venture, or other legal entity having a Contract with the AGENCY to perform the Work. In the case of work being done under permit issues by the AGENCY, the permittee shall be construed to be the CONTRACTOR. The term "prime CONTRACTOR" shall mean CONTRACTOR.

Contract Price – The total amount of money for which the Contract is awarded.

Contract Unit Price – The amount stated in the Bid for a single unit of an item of work.

Days – Days shall mean consecutive calendar's days unless otherwise specified.

Design Engineer – Persons and/or company retained by the City to perform engineering design services.

Due Notice – A written notification, provided in due time, of a proposed action, where the contract requires such notification within a specified time (usually 48 hours or two working days) prior to the commencement of the contemplated action.

Electrolier – Street light assembly complete, including foundation, standard, luminaire arm, luminaire, etc.

Engineer – The City Engineer of the City of Calabasas, or his/her authorized representative.

Geotechnical Engineer – Person licensed to practice Soils Engineering or Geotechnical Engineering pursuant to the laws of the State of California and retained by the AGENCY during construction.

Geotextile – Synthetic fiber used in civil engineering applications, serving the primary functions of separation and filtration.

House Connection Sewer – A sewer, within a public street or right-of-way, proposed to connect any parcel, lot or part of a lot with a mainline sewer.

House Sewer – A sewer, wholly within private property, proposed to connect any building to a house connection sewer.

Luminaire – The lamp housing including the optical and socket assembles (and ballast if so specified).

Luminaire Arm – The structural member, bracket, or mast arm, which, mounted on the standard, supports the luminaire.

Modification – Includes Change Orders and Supplemental Agreements. A Modification may only be issued after the effective date of the Contract.

Notice of Award – The written notice by the AGENCY to the successful Bidder stating that upon compliance by it with the required conditions, the AGENCY will execute the Contract.

Notice to Proceed – A written notice given by the AGENCY to the CONTRACTOR fixing the date on which the Contract time will start.

Person – Any individual, firm, association, partnership, corporation, trust, joint venture, or other legal entity.

Plans – The drawings, profiles, cross sections, working drawings, and supplemental drawings, or reproductions thereof, approved by the Engineer, which show the location, character, dimensions, or details of the Work.

Private Contract – Work subject to AGENCY inspection, control, and approval, involving private funds, not administered by the AGENCY.

Prompt – The briefest interval of time required for a considered reply, including time required for approval by a governing body.

Proposal – See Bid.

Reference Specifications – Those bulletins, standards, rules, methods of analysis or test, codes, and specifications of other agencies, engineering societies, or industrial associations referred to in the Contract Documents. These refer to the latest edition, including amendments in effect and published at the time of advertising the project or issuing the permit, unless specifically referred to by edition, volume, or date.

Roadway – The portion of a street reserved for vehicular use.

Service Connection – Service connections are all or any portion of the conduit, cable, or duct, including meter, between a utility distribution line and an individual consumer.

Sewer – Any conduit intended for the reception and transfer of sewage and fluid industrial waste.

Special Provisions – Additions and revisions to the Standard Specifications setting for the conditions and requirements peculiar to the Work.

Specifications – Standard Specifications, Reference Specifications, Special Provisions, and specifications in Supplemental Agreements between the CONTRACTOR and the Board.

Standard – The shaft or pole used to support street lighting luminaire, traffic signal heads, mast arms, etc.

Standard Plans – "Standard Plans for Public Works Construction" or "SSPWC" – Latest edition of the Southern California Chapter of the American Public Works Association.

State Standard Specifications ("SSS") – Standard Specifications prepared by the State of California, Business and Transportation Agency, Department of Transportation.

State Standard Plans ("SSP") – Standard Plans prepared by State of California, Business and Transportation Agency, Department of Transportation.

State – State of California.

Storm Drain – Any conduit and appurtenances intended for the reception and transfer of storm water.

Street – Any road, highway, parkway, freeway, alley, walk, or way.

Subbase – A layer of specified materials of planned thickness between a base and the subgrade.

Subcontractor – An individual, firm, or corporation having a direct contract with the CONTRACTOR or with any other Subcontractor for the performance of a part of the Work.

Subgrade – For roadways, that portion of the roadbed on which pavement, surfacing, base, subbase, or a layer of other materials is placed. For structures, the soil prepared to support a structure.

Supervision – Supervision, where used to indicate supervision by the Engineer, shall mean the performance of obligations, and the exercise of rights, specifically imposed upon and granted to the AGENCY in becoming a party to the Contract. Except as specifically stated herein, supervision by the AGENCY shall not mean active and direct superintendence of details of the Work.

Supplemental Agreement – A written amendment of the Contract Documents signed by both parties.

Surety – Any individual, firm, or corporation, bound with and for the CONTRACTOR for the acceptable performance, execution, and completion of the Work, and for the satisfaction of all obligations incurred.

Tonne – Also referred to as "metric ton" — Represents a unit of measure in the International System of Units equal to 1,000 kilograms.

Utility – Tracks, overhead or underground wires, pipeline, conduits, ducts, or structures, sewers, or storm drains owned, operated, or maintained in or across a public right of way or private easement.

Work – That which is proposed to be constructed or done under the Contract or permit, including the furnishing of all labor, materials, equipment, and services.

Working Days – Any days, except: (1) Saturdays, Sundays, legal holidays on which Calabasas City Hall is closed for business; (2) days when work is suspended by the Engineer for reasons unrelated to the performance of the CONTRACTOR, and provided in Subsections 6-3 and 6-3.1; and (3) days determined to be non-working in accordance with Section 6-7 "Time of Completion"

1-3 ABBREVIATIONS

1-3.1 Common Usage Terms. These Standard Specifications incorporate by reference the list of common usage terms in the edition of the "Standard Plans for Public Works Construction" with the following additions:

ARAM	Asphalt Rubber Aggregate Membrane
ARHM	Asphalt Rubber Hot Mix

1-3.3 Institutions. These Standard Specifications incorporate by reference the list of commonly used institution terms in the edition of the "Standard Plans for Public Works Construction" (aka the Greenbook) with the following additions:

ACI	American Concrete Institute
AGCA	Associated General CONTRACTORs of America
APWA	American Public Works Association
ASME	American Society of Mechanical Engineers
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
IEEE	Institute of Electric and Electronic Engineers
NFPA	National Fire Protection Association
SSS	State of California Standard Specifications, latest edition, Department of Transportation
SSP	State of California Standard Plans, latest edition, Department of Transportation.
SSPWC	Standard Specifications for Public Works Construction
NEMA	National Electrical Manufacturers Association

1-4 UNITS OF MEASURE

1-4.1 General. The International System of Units, also referred to as SI or the metric system, is the principal measurement system in these specifications and shall be used for construction, unless otherwise stated in the Contract Documents. U.S. Standard Measures, also called U.S. Customary System, are included in parenthesis. SI units and U.S. Standard Measures in parenthesis may or may not be exactly equivalent. If U.S. Standard Measures are specified for use in the contract documents, then all values used for construction shall be U.S. Standard Measures shown in parenthesis. However, certain materials specifications and test requirements contained herein use SI units specifically and conversions to U.S. Standard Measures have not been included in these circumstances. When U.S. Standard Measures are not included in parenthesis, then the SI units shall control.

Reference is also made to ASTM E 380 for definitions of various units of the SI system and a more extensive set of conversion factors.

1-4.2 Units of Measure and Their Abbreviations.

U.S. Customary Unit (Abbreviations)	Equal To	SI Unit (Abbreviations)
1 mil (= 0.0001 in)	.....	25.4 micrometer (μm)
1 inch (in)	.....	25.4 millimeter (mm)
1 inch (in)	.....	2.54 centimeter (cm)
1 foot (ft)	.....	0.3048 meter (m)
1 yard (yd)	.....	0.9144 meter (m)
1 mile (mi)	.....	1.6093 kilometer (km)
1 square foot (ft^2)	.....	0.0929 square meter (m^2)
1 square yard (yd^2)	.....	0.8361 square meter (m^2)
1 cubic foot (ft^3)	.....	0.0283 cubic meter (m^3)
1 cubic yard (yd^3)	.....	0.7646 cubic meter (m^3)
1 acre	.....	0.4047 hectare (ha)
1 U.S. gallon (gal)	.....	3.7854 Liter (L)
1 fluid ounce (fl. oz.)	.....	29.5735 milliliter (mL)
1 pound mass (lb) (avoirdupois)	.....	0.4536 kilogram (kg)
1 ounce mass (oz)	.....	0.02835 kilogram (kg)
1 Ton (= 2000 lb avoirdupois)	.....	.09072 Tonne (= 907 kg)
1 Poise	.....	0.1 Pascal · second (Pa · s)
1 centistoke (cs)	.....	1 square millimeters per second (mm^2/s)
1 pound force (lbf)	.....	4.4482 Newton (N)
1 pounds per square inch (psi)	.....	6.8948 Kilopascal (kPa)
1 pound force per foot (lbf/ft)	.....	1.4594 Newton per meter (N/m)

U.S. Customary Unit (Abbreviations)	Equal To	SI Unit (Abbreviations)
1 foot-pound force (ft-lbf)	.....	1.3558 Joules (J)
1 foot-pound force per second ([ft-lbf]/s)	.....	1.3558 Watt (W)
1 part per million (ppm)		1 milligram /liter (mg/L)

Temperature Units and Abbreviations

Degree Fahrenheit (°F):
°F = (1.8 x °C) + 32

Degree Celsius (°C):
°C = (°F – 32) / 1.8

SI Units (abbreviation) Commonly Used in Both Systems

1 Ampere (A)

1 Volt (V)

1 Candela (cd)

1 Lumen (lm)

1 second (s)

Common Metric Prefixes

kilo (k)	10^{3}
centi (c)	10^{-2}
milli (m)	10^{-3}
micro (μ)	10^{-6}
nano (n)	10^{-9}
pico (p)	10^{-12}

1-5 SYMBOLS

Δ	Delta, the central angle or angle between tangents
∠	Angle
%	Percent
′	Feet or minutes
″	Inches or seconds
#	Number
/	per or (between words)
°	Degree
PL	Property line
CL	Centerline
SL	Survey line or station line

SECTION 2 – SCOPE AND CONTROL OF WORK

2-1 AWARD AND EXECUTION OF CONTRACT. Award and execution of Contract will be as provided for in the Specifications, Instructions to Bidders, or Notice Advertising for Bids. The City reserves the right to reject any or all proposals.

2-1.1 Investigation Of Site Conditions. Prior to submittal of the bid, Bidders must visit the site of work and complete their own investigations to satisfy themselves as to the existing conditions affecting the work to be done under these specifications. If the bidder chooses not to visit the site or conduct investigations, he will, nevertheless, be charged with the knowledge of conditions which reasonable inspection and investigation would have disclosed.

After the project is awarded the CONTRACTOR shall carefully study and compare the Contract Documents with each other and with information available to the CONTRACTOR and furnished by the Owner and shall immediately notify the Engineer of errors, inconsistencies or omissions discovered. If the CONTRACTOR performs any construction activity knowing it involves a recognized error, inconsistency or omission in the Contract Documents without such notice to the Engineer, the CONTRACTOR shall assume appropriate responsibility for such performance and may assume responsibility for the full costs for correction.

The CONTRACTOR shall make field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the CONTRACTOR with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered shall be reported to the Engineer immediately.

When existing conditions are encountered which, in the opinion of the Engineer, require temporary suspension of work for design modifications or for other determinations to be made, the CONTRACTOR shall move to other areas of work until such determinations are

made at no cost to the City. No additional compensation will be allowed by reason of such temporary suspension of work, or modifications to work, except as noted in Section 3 of these Standard Specifications ("Changes in Work") for specific items of work not included in the bid. Appropriate extension of item for completion may be allowed where justification in the opinion of the Engineer.

2-1.2 Award of Contract. The Contract will be awarded, if at all, to the lowest responsible and responsive Bidder determined as provided on the Proposal Form, whose proposal complies with all the requirements prescribed. Such award, if made, will be made within the number of days stated in the proposal form. Refusal or failure to deliver the executed contract, bonds, or insurance in the form provided in the Contract and approved by the AGENCY's attorney within the time provided herein shall be cause, at the AGENCY's option, for the annulment of the award and forfeiture of the bid security. In such event, the AGENCY may successively award the Contract to the next lowest responsible and responsive Bidder until a properly executed Contract, bonds, and insurance is obtained, or it may at any time reject all remaining bids and proceed as provided by law. The refusal or failure of a successive lowest responsible and responsive Bidder to execute the Contract may, at the AGENCY's option, result in an annulment of the award to that Bidder and the forfeiture of that Bidder's bid security. The periods of time specified above within which the award of the Contract may be made shall be subject to extension for such further period as may be agreed upon in writing between the AGENCY and the concerned Bidder.

The AGENCY reserves the right to waive any irregularities.

Within ten (10) calendar days after the date of the Notice of Award, the CONTRACTOR shall execute and return the following contract documents to the AGENCY:

Contract Agreement (in duplicate)
Faithful Performance Bond (in duplicate)
Maintenance Bond (in duplicate)
Payment Bond (in duplicate)
Public Liability and Property Damage Insurance Certificate (two original)
Additionally Insured Endorsement
Workers' Compensation Insurance Certificate (two original)

A corporation to which an award is made may be required, before the Contract agreement is executed by the AGENCY, to furnish evidence of its corporate existence, of its right to enter into contracts in the State of California, and that the officers signing the contract and bonds for the corporation have the authority to do so.

2-2 ASSIGNMENT. No Contract or portion thereof may be assigned without consent of the Board, except that the CONTRACTOR may assign money due or which will accrue to it under the Contract. If given written notice, such assignment will be recognized by the Board to the Extent permitted by law. Any assignment of money shall be subject to all property withholdings in favor of the AGENCY and to all deductions provided for in the Contract. All money withheld, whether assigned or not, shall be subject to being used by the AGENCY for completion of the Work, should the CONTRACTOR be in default.

2-3 SUBCONTRACTS.

2-3.1 General. Each Bidder shall comply with the Public Contract Code including Sections 4100 through 4113. The following excerpts or summaries of some of the requirements of this Chapter are included below for information:

The Bidder shall set for the in the Bid, as provided in 4104:

"(a) The name and location of the place of business of each subcontractor who will perform work or labor or render service to the prime CONTRACTOR in or about the construction of the work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the prime CONTRACTOR, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of 1 percent of the prime CONTRACTOR's total bid, or, in the case of bids or offers for the construction of streets or highways, including bridges, in excess of one-half of 1 percent of the prime CONTRACTOR's total bid or ten thousand dollars ($10,000), whichever is greater."

"(b) The portion of the work which will be done by each such subcontractor under this act. The prime CONTRACTOR shall list only one subcontractor for each such portion as is defined by the prime CONTRACTOR in his bid."

Subcontracting of more than one-half of one percent of the work for which no Subcontractor was designated in the original Bid will be allowed only in cases of public emergency or necessity and only after the Engineer makes a written finding of circumstances constituting public emergency or necessity.

The CONTRACTOR must obtain written consent of the City Council to substitute a Subcontractor designated in the original Bid, to permit any subcontract to be assigned or transferred, or to otherwise allow a subcontract to be performed by anyone other than the originally designated Subcontractor.

A violation of any of the above provisions will be considered a violation of the Contract, and the City may cancel the Contract and collect appropriate damages or assess the CONTRACTOR a penalty of not more than ten (10) percent of the subcontract involved.

If subcontracted work is not being performed in a satisfactory manner, the City will notify the CONTRACTOR of the need to take corrective action and the Engineer may report the facts to the City Council. Upon order by City Council and the CONTRACTOR's receipt of written instructions from the Engineer, the Subcontractor shall immediately be removed from the Work and may not again be employed on the Work.

2-3.2 Additional Responsibility. The CONTRACTOR shall give personal attention to the fulfillment of the Contract and shall keep the Work under its control.

The CONTRACTOR shall perform, with its own organization, Contract work amounting to at least 50 percent of the Contract Price except that any designated "Specialty Items" may be performed by subcontract and the amount of any such "Specialty Items" so performed may be deducted from the Contract Price before computing the amount required to be performed by the CONTRACTOR with its own organization. "Specialty Items" will be identified by the AGENCY in the Bid or Proposal. Where an entire item is subcontracted, the value of work subcontracted will be based on the Contract Unit Price. When a portion of an item is

subcontracted, the value of work subcontracted will be based on the estimated percentage of the Contract Unit Price. This will be determined from information submitted by the CONTRACTOR, and subject to approval by the Engineer.

Before the work of any Subcontractor is started, the CONTRACTOR shall submit to the Engineer for approval a written statement showing the work to be subcontracted giving the name and business of each Subcontractor and description and value of each portion of the work to be so subcontracted.

2-3.3 Status of Subcontractors. All persons engaged in the Work, including Subcontractors and their employees, will be considered employees of the CONTRACTOR. The CONTRACTOR will be held responsible for their work. The AGENCY will deal directly and solely with the CONTRACTOR and make all payments to the CONTRACTOR.

2-4 CONTRACT BONDS. Before execution of the Contract, the Bidder shall file surety bonds with the AGENCY to be approved by the Board in the amounts and for the purposes noted below. Bond issued by a surety who is listed in the latest version of U.S. Department of Treasury Circular 570, who is authorized to issue bonds in California, and whose bonding limitation shown in said circular is sufficient to provide bonds in the amount required by the Contract shall be deemed to be approved unless specifically rejected by the AGENCY. Bonds from all other sureties shall be accompanied by all of the documents enumerated in Code of Civil Procedure 995.660(a). The Bidder shall pay all bond premiums, costs, and incidentals.

Each bond shall incorporate, by reference, the Contract and be signed by both the Bidder and Surety and the signature of the authorized agent of the Surety shall be notarized.

The Bidder shall provide two good and sufficient surety bonds. The "Payment Bond" (Materials and Labor Bond) shall be for not less than 100 percent of the Contract Price, to satisfy claims of materials suppliers and mechanics and laborers employed by it on the Work, The bond shall be maintained by the CONTRACTOR in full force and effect until the Work is accepted by the AGENCY and until all claims for materials and labor are paid, and shall otherwise comply with the Civil Code.

The "Performance Bond" shall be for 100 percent of the Contract Price to guaranty faithful performance of all work, within the time prescribed, in manner satisfactory to the AGENCY, and that all materials and workmanship will be free from original or developed defects. The bond must remain in effect until the end of all warranty periods set forth in the Contract.

Should any bond become insufficient, the CONTRACTOR shall renew the bond within 10 days after receiving notice from the AGENCY.

Should any Surety at any time be unsatisfactory to the Board, notice will be given the CONTRACTOR to that effect. No further payments shall be deemed due or will be made under the Contract until a new Surety shall qualify and be accepted by the Board.

Changes in the Work or extensions of time, made pursuant to the Contract, shall in no way release the CONTRACTOR or Surety from its obligations. Notice of such changes or extensions shall be waived by the Surety.

The PAYMENT BOND shall remain in force until thirty-five (35) calendar days after the date of recordation of the Notice of Completion. The FAITHFUL PERFORMANCE BOND shall remain in force until the date of recordation of the Notice of Completion. The MAINTENANCE

BOND shall remain in force until one (1) year after the date of recordation of the Notice of Completion.

All bonds must be accompanied by a Power of Attorney.

2-5 PLANS AND SPECIFICATIONS.

2-5.1 General. The CONTRACTOR shall keep at the Work site a copy of the Plans and Specifications, to which the Engineer shall have access at all times.

The Plans, Specifications, and other Contract Documents shall govern the Work. The Contract Documents are intended to be complementary and cooperative. Anything specified in the Specifications and not shown on the Plans, or shown on the Plans and not specified in the Specifications, shall be as though shown on or specified in both.

The Plans shall be supplemented by such working drawings and shop drawings are necessary to adequately control the Work.

The CONTRACTOR shall ascertain the existence of any conditions affecting the cost of the Work through a reasonable examination of the Work site prior to submitting the Bid.

Existing improvements visible at the Work site, for which no specific disposition is made on the Plans, but which interfere with the completion of the Work, shall be removed and disposed of by the CONTRACTOR.

The CONTRACTOR shall, upon discovering any error or omission in the Plans or Specifications, immediately call it to the attention of the Engineer.

All final locations determined in the field, and any deviations from the Plans and Specification, shall be marked in red on the documents to show the as-built conditions. CONTRACTOR shall maintain a complete and accurate record of all changes of construction from that shown in these plans and specifications for the purpose of providing a basis for construction record drawings. No changes shall be made without prior written approval of the Engineer. Upon completion of the Project, CONTRACTOR shall deliver this record of all construction changes to the Engineer along with a letter which declares that other than these noted changes "the Project was constructed in conformance with the Contract Documents." Final payment will not be made until this requirement is met.

As the figured dimensions shown on the drawings and in the specifications of the Contract may not in every case agree with scaled dimensions, the figured dimensions shall be followed in preference to the scaled dimensions, and drawings to a large scale shall be followed in preference to the drawings to a small scale. Should it appear that the work to be performed, or any related matter, are not sufficiently detailed or explained in the Contract documents, the CONTRACTOR shall apply to the Engineer for such further explanations as necessary, and shall conform to such further explanations provided by the Engineer as part of the Contract to the extent that it is consistent with the terms of the Contract.

Caution: The engineer preparing these plans will not be responsible or liable for unauthorized changes to or uses of these plans. All changes to the plans must be approved in writing by the Engineer.

2-5.1.1 Records Of Construction Changes/ As-Builts. CONTRACTOR shall maintain a complete and accurate record of all changes of construction from that shown in these

Plans and Specifications for the purpose of providing a basis for construction record drawings. No changes shall be made without prior written approval of the City Engineer.

Upon completion of the Project, CONTRACTOR shall deliver this record of all construction changes to the Engineer along with a letter which declares that other than these noted changes that Project was constructed in conformance with the Contract Documents.

Caution: The engineer preparing these Plans will not be responsible for, or liable for, unauthorized changes to or uses of these Plans. All changes to the Plans must be approved in writing by City Engineer.

2-5.2 Precedence of Contract Documents. If there is a conflict between any of the Contract Documents, the document highest in precedence shall control. The precedence shall be as follows:

1) Permits issued by jurisdictional regulatory agencies.

2) Change Orders and/or Supplemental Agreements; whichever occurs last.

3) Contract/Agreement

4) Addenda.

5) Bid/Proposal.

6) Special Provisions.

7) Plans.

8) Standard Plans.

9) Standard Specifications.

10) Reference Specifications.

Detail drawings take precedence over general drawings.

2-5.3 Submittals.

2-5.3.1 General. Submittals shall be provided, at the CONTRACTOR's expense, as required in 2-5.3.2, 2-5.3.3 and 2-5.3.4, when required by the Plans or Special Provisions, or when requested by the Engineer.

Materials shall neither be furnished nor fabricated, nor shall any work for which submittals are required be performed, before the required submittals have been reviewed and accepted by the Engineer. Neither review nor acceptance of submittals by the Engineer shall relieve the CONTRACTOR from responsibility for errors, omissions, or deviations from the Contract Documents, unless such deviations were specifically called to the attention of the Engineer in the letter of transmittal. The CONTRACTOR shall be responsible for the correctness of the submittals.

The CONTRACTOR shall allow a minimum of 20 working days for review of submittals unless otherwise specified in the Special Provisions. Each submittal shall be accompanied by a letter of transmittal.

2-5.3.2 Working Drawings. Working drawings are drawings showing details not shown on the Plans which are required to be designed by the CONTRACTOR. Working drawings shall be of a size and scale to clearly show all necessary details.

Six copies and one reproducible shall be submitted. If no revisions are required, three of the copies will be returned to the CONTRACTOR. If revisions are required, the Engineer will return one copy along with the reproducible for resubmission. Upon acceptance, the Engineer will return two of the copies to the CONTRACTOR and retain the remaining copies and the reproducible.

2-5.3.3 Shop Drawings. Shop drawings are drawings showing details of manufactured or assembled products proposed to be incorporated into the Work. Shop drawings required shall be as specified in the Special Provisions.

2-5.3.4 Supporting Information. Supporting information is information required by the Specifications for the purposes of administration of the Contract, analysis for verifications of conformance with the Specifications, the operation and maintenance of a manufactured product or system to be constructed as part of the Work, and other information as may be required by the Engineer. Six copies of the supporting information shall be submitted to the Engineer prior to the start of the Work unless otherwise specified in the Special Provisions or directed by the Engineer. Supporting information for systems shall be bound together and include all manufactured items for the system. If resubmittal is not required, three copies will be returned to the CONTRACTOR. Supporting information shall consist of the following and is required unless otherwise specified in the Special Provisions:

1) List of Subcontractors per 2-3.2.
2) List of Materials per 4-1.4.
3) Certifications per 4-1.5.
4) Construction Schedule per 6-1.
5) Confined Space Entry Program per 7-10.4.4.
6) Concrete mix designs per 201-1.1
7) Asphalt concrete mix designs per 203-6.1.
8) Data, including, but not limited to, catalog sheets, manufacturer's brochures, technical bulletins, specifications, diagrams, product samples, and other information necessary to describe a system, product or item. This information is required for irrigation systems, street lighting systems, and traffic signals, and may also be required for any product, manufactured item, or system.

2-6 WORK TO BE DONE. The CONTRACTOR shall perform all work necessary to complete the Contract in a satisfactory manner. Unless otherwise provided, the CONTRACTOR shall furnish all materials, equipment, tools, labor, and incidentals necessary to complete the Work.

Any plan or method of work suggested by the AGENCY or the Engineer to the CONTRACTOR but not specified or required, if adopted or followed by the CONTRACTOR in whole or in part, shall be used at the risk and responsibility of the CONTRACTOR; and the AGENCY and the

Engineer shall assume no responsibility therefore and in no way be held liable for any defects in the work which may result from or be caused by use of such plan or method of work.

2-7 SUBSURFACE DATA. All soil and test hole data, water table elevations, and soil analyses shown on the drawings or included in the Specifications apply only at the location of the test holes and to the depths indicated. Soil test reports for test holes which have been drilled are available for inspection at the office of the Engineer. Any additional subsurface exploration shall be done by Bidder or the CONTRACTOR at their own expenses.

2-8 RIGHT-OF-WAY. Rights-of-way, easements, or rights-of-entry for the Work will be provided by the AGENCY. Unless otherwise provided, the CONTRACTOR shall make arrangements, pay for, and assume all responsibility for acquiring, using, and disposing of additional work areas and facilities temporarily required. The CONTRACTOR shall indemnify and hold the AGENCY harmless from all claims for damages caused by such actions.

When the CONTRACTOR arranges for additional work areas and facilities temporarily required by him/her, he/she shall provide the AGENCY with proof that the additional work areas and/or facilities have been left in a condition satisfactory to the owner(s) of said work areas and/or facilities prior to acceptance of the work.

2-9 SURVEYING. The CONTRACTOR will provide all necessary construction surveying, staking or markings for locating the limits of construction and shall comply with the provisions of 2-9 of these Standard Specifications. The CONTRACTOR shall bear all costs for restaking or marking.

Construction surveys shall be done only under the direction of the Engineer by a Registered (licensed) Land Surveyor or a Registered Civil Engineer authorized to practice land surveying within the state. The AGENCY will provide available record map information. The CONTRACTOR is responsible for obtaining all necessary record maps, centerline ties and survey notes from Los Angeles County.

The CONTRACTOR and his surveyor shall provide the Engineer with a copy of the constructing staking field notes used to construct the improvements. In addition the CONTRACTOR shall also prove a plot of the improvements to be constructed based on the surveyor's construction staking and markings prior to the installation of the improvements. The plot shall be the same scale as the improvement plans.

2-9.1 Permanent Survey Markers. The CONTRACTOR shall notify the Engineer, or the owner on a Private Contract, at least 7 days before starting work to allow for the preservation of survey monuments, lot stakes (tagged), and bench marks.

The CONTRACTOR shall protect existing survey monuments, if any exist within the work limits, during the entire project. Asphalt overlaying of existing survey monuments in the roadway will not be permitted. In the event a surveyed monument lies within an area to be cold planed, removed or reconstructed, the CONTRACTOR shall immediately notify the AGENCY's representative and protect said monument until the monument is relocated.

The CONTRACTOR shall reestablish destroyed survey monuments at the CONTRACTOR's expense.

The Engineer, or the owner at its cost, shall file a Corner Record Form referencing survey monuments subject to disturbance 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 survey monuments. The CONTRACTOR shall not disturb survey monuments, lot stakes (tagged), or bench marks without the consent of the Engineer or the owner on Private Contracts. The CONTRACTOR shall bear the expense of replacing any that may be disturbed without permission. Replacement shall be done only under the direction of the Engineer by Registered (licensed) Licensed Land Surveyor or a Registered Civil Engineer authorized to practice land surveying within the state.

When a change is made in the finished elevation of the pavement of any roadway in which a permanent survey monument is located, the CONTRACTOR shall adjust the monument cover to the new grade within 7 days of finished paving unless otherwise specified.

2-9.2 Survey Service. The Engineer will oversee surveying adequate for construction. The CONTRACTOR shall preserve construction survey stakes and marks for the duration of their usefulness. If any construction survey stakes are lost or disturbed and need to be replaced, such replacement shall be by the CONTRACTOR at his expense.

The CONTRACTOR shall notify the Engineer in writing at least 2 working days before survey services take place for the laying out of any portion of the Work. The CONTRACTOR shall dig all holes necessary for line and grade stakes.

Unless otherwise specified, stakes will be set and stationed by the CONTRACTOR for curbs, headers, sewers, storm drains, structures, and rough grade. A corresponding cut or fill to finished grade (or flowline) will be indicated on a grade sheet.

2-9.3 Line and Grade. The CONTRACTOR shall be responsible for all survey and layout of work.

The line and grades for construction will be parallel to and offset from the position of the work. From the established lines and grades, the CONTRACTOR shall extend the necessary lines and grades for construction of the work and shall be responsible for the correctness of same.

All work shall conform to the lines, elevations, and grades shown on the Plans.

Three consecutive points set on the same slope shall be used together so that any variation from a straight grade can be detected. Any such variation shall be reported to the Engineer. In the absence of such report, the CONTRACTOR shall be responsible for any error in the grade of the finished work.

Grades for underground conduits will be set at the surface of the ground. The CONTRACTOR shall transfer them to the bottom of the trench.

2-10 AUTHORITY OF BOARD AND ENGINEER. The Board has the final authority in all matters affecting the Work. Within the scope of the Contract, the Engineer has the authority to enforce compliance with the Plans and Specifications. The CONTRACTOR shall promptly comply with instructions from the Engineer or an authorized representative.

The decision of the Engineer is final and binding on all questions relating to: quantities; acceptability of materials, equipment, or work; execution, progress or sequence of work; and interpretation of the Plans, Specifications, or other drawings. This shall be precedent to any payment under the Contract, unless otherwise ordered by the Board.

2-11 INSPECTION. The Work is subject to inspection and approval by the Engineer. The CONTRACTOR shall notify the Engineer before noon of the working day before inspection is required. Work shall be done only in the presence of the Engineer, unless otherwise authorized. Any work done without proper inspection will be subject to rejection. 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 project site. The CONTRACTOR shall provide every reasonable facility for ascertaining that the materials and workmanship are in accordance with these specifications. Inspection of the Work shall not relieve the CONTRACTOR of the obligation to fulfill all conditions of the Contract.

The AGENCY shall inspect for compliance with requirements for 8-hour days and 40-hour weeks on normal working days. The CONTRACTOR shall reimburse the AGENCY, at rates established by the AGENCY, for any additional inspection, including inspection on legal holidays.

SECTION 3 – CHANGES IN WORK

3-1 CHANGES REQUESTED BY THE CONTRACTOR.

3-1.1 General. Changes in the Plans and Specifications, requested in writing by the CONTRACTOR, which do not materially affect the Work and which are not detrimental to the Work or to the interests of the AGENCY, may be granted by the Engineer. Nothing herein shall be construed as granting a right to the CONTRACTOR to demand acceptance of such changes.

3-1.2 Payment for Changes Requested by the CONTRACTOR. If such changes are granted, they shall be made at a reduction in cost or no additional cost to the AGENCY.

3-2 CHANGES INITIATED BY THE AGENCY.

3-2.1 General. The AGENCY may change the Plans, Specifications, character of the work, or quantity of work provided the total arithmetic dollar value of all such changes, both additive and deductive, does not exceed 25 percent of the Contract Price. Should it become necessary to exceed this limitation, the change shall be by written Supplemental Agreement between the CONTRACTOR and AGENCY, unless both parties agree to proceed with the change by Change Order.

Change Orders shall be in writing and state the dollar value of the change or establish the method of payment, any adjustment in the Contract time of completion, and when negotiated prices are involved, shall provide for the CONTRACTOR's signature indicating acceptance.

3-2.2 Contract Unit Prices.

3-2.2.1 General. If a change is ordered in an item of work covered by a Contract Unit Price, and such change does not involve substantial change in character of the work from that shown on the Plans or specified in the Specifications, then an adjustment in payment will be made. This adjustment will be based upon the increase or decrease in quantity and the Contract Unit Price.

If the actual quantity of an item of work covered by Contract Unit Price and constructed in conformance with the Plans and Specifications varies from the Bid quantity by

25 percent or less, payment will be made at the Contract Unit Price. If the actual quantity of said item of work varies from the Bid quantity by more than 25 percent, payment will be made per 3-2.2.2 or 3-2.2.3 as appropriate.

If a change is ordered in an item of work covered by a Contract Unit Price, and such change does involve a substantial change in the character of the work from that shown on the Plans or specified in the Specifications, an adjustment in payment will be made per 3-2.4.

3-2.2.2 Increases of More than 25 Percent. Should the actual quantity of an item of work covered by a Contract Unit Price and constructed in conformance with the Plans and Specifications, exceed the Bid quantity by more than 25 percent, payment for the quantity in excess of 125 percent of the Bid quantity will be made on the basis of an adjustment in the Contract Unit Price mutually agreed to by the CONTRACTOR and the AGENCY, or at the option of the Engineer, on the basis of Extra Work per 3.3.

The Extra Work per 3-3, basis of payment, shall not include fixed costs. Fixed costs shall be deemed to have been recovered by the CONTRACTOR through payment for 125 percent of the Bid quantity at the Contract Unit Price.

3-2.2.3 Decreases of More Than 25 Percent. Should the actual quantity of an item of work covered by a Contract Unit Price, and constructed in conformance with the Plans and Specifications, be less than 75 percent of the Bid quantity, an adjustment in payment will not be made unless so requested in writing by the CONTRACTOR. If the CONTRACTOR so requests, payment will be made on the basis of an adjustment in the Contract Unit Price mutually agreed to by the CONTRACTOR and the AGENCY, or at the option of the Engineer, on the basis of Extra Work per 3.3; however, in no case will payment be less than would be made for the actual quantity at the Contract Unit Price nor more than would be made for 75 percent of the Bid quantity at the Contract Unit Price.

3-2.3 Stipulated Unit Prices. Stipulated Unit Prices are unit prices established by the AGENCY in the Contract Documents. Stipulated Unit Prices may be used for the adjustment of Contract changes when so specified in the Special Provisions.

3-2.4 Agreed Prices. Agreed Prices are prices for new or unforeseen work, or adjustments in Contract Unit Prices per 3-2.2, established by mutual agreement between the CONTRACTOR and the AGENCY. If mutual agreement cannot be reached, the Engineer may direct the CONTRACTOR to proceed on the basis of Extra Work in accordance per 3-3, except as otherwise specified in 3-2.2.2 and 3-2.2.3.

3-2.5 Eliminated Items. Should any Bud item be eliminated in its entirety, payment will be made to the CONTRACTOR for its actual costs incurred in connection with the eliminated item prior to notification in writing from the Engineer so stating its elimination.

If material conforming to the Plans and Specifications is ordered by the CONTRACTOR for use in the eliminated item prior to the date of notification of elimination by the Engineer, and if the order for the material cannot be canceled, payment will be made to the CONTRACTOR for the actual cost of the materials. In this case, the material shall become the property of the AGENCY. Payment will be made to the CONTRACTOR for its actual costs for any further handling. If the material is returnable, the materials shall be returned and

payment will be made to the CONTRACTOR for the actual cost of charges made by the supplier for returning the material and for handling by the CONTRACTOR.

Actual costs, as used herein, shall be computed on the basis of Extra Work per 3-3.

3-3 EXTRA WORK.

3-3.1 General. New or unforeseen work will be classified as "extra work" when the Engineer determines that it is not covered by the Contract Unit Prices or stipulated unit prices.

3-3.2 Payment.

3-3.2.1 General. When the price for the extra work cannot be agreed upon, the AGENCY will pay for the extra work based on the accumulation of costs as provided herein.

3-3.2.2 Basis for Establishing Costs.

(a) Labor. The costs of labor will be the actual costs for wages of workers performing the extra work at the time the extra work is done, plus employer payments of payroll taxes, workers compensation insurance, liability insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs, resulting from Federal, State, or local laws, as well as assessments or benefits required by lawful collection bargaining agreements.

The use of a labor classification which would increase the extra work cost will not be permitted unless the CONTRACTOR establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental. The labor costs for foremen shall be proportioned to all of their assigned work and only that applicable to extra work will be paid.

Nondirect labor costs, including superintendence, shall be considered part of the markup of 3-3.2.3(a).

(b) Materials. The cost of materials reported shall be at invoice or lowest current price at which such materials are locally available and delivered to the job site in the quantities involved, plus sales tax, freight, and delivery.

The AGENCY reserves the right to approve materials and sources of supply, or to supply materials to the CONTRACTOR if necessary for the progress of the Work. No markup shall be applied to any materials provided by the AGENCY.

(c) Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of $200 or less.

Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed listed rates prevailing locally at equipment rental agencies, or distributors, at the time the work is performed.

The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals. Necessary loading and transportation costs for equipment used on the extra work shall be included.

If equipment is used intermittently and, when not in use, could be returned to its rental source at less expense to the AGENCY than holding it at the Work site, it shall be returned, unless the CONTRACTOR elects to keep it at the Work site, at no expense to the AGENCY.

All equipment shall be acceptable to the Engineer, in good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and approved modifications shall be used to classify equipment and it shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

The reported rental time for equipment already at the Work site shall be the duration of its use on the extra work. This time begins when equipment is first put into actual operation on the extra work, plus the time required to move it from its previous site and back, or to a closer site.

(d) Other Items. The AGENCY may authorize other items which may be required on the extra work, including labor, services, materials, and equipment. These items must be different in their nature from those required for the Work, and be of a type not ordinarily available from the CONTRACTOR of Subcontractors.

Invoices covering all such items in detail shall be submitted with the request for payment.

(e) Invoices. Vendors' invoices for materials, equipment rental and other expenditures shall be submitted with the request for payment. If the request for payment is not substantiated by invoices or other documentation, the AGENCY may establish the cost of the item involved at the lowest price which was current at the time of the report.

3-3.2.3 Markup.

(a) Work by CONTRACTOR. Unless otherwise provided in the Special Provisions, a reasonable allowance for overhead and profit shall be added to the CONTRACTOR's costs as determined under 3-3.2.2 and shall constitute the markup for all overhead and profit on work by the CONTRACTOR. The CONTRACTOR shall also be compensated for the actual increase in the CONTRACTOR's bond premium caused by the extra work.

(b) Work by Subcontractor. When any of the extra work is performed by a Subcontractor, the markup established in 303.2.3(a) shall be applied to the Subcontractor's costs as determined under 3-3.2.2. Unless otherwise provided in the Special Provisions, a reasonable allowance for the CONTRACTOR's overhead and profit shall be added to the sum of the Subcontractor's costs and markup and shall constitute the markup for all overhead and profit for the CONTRACTOR on work by the Subcontractor.

3-3.3 Daily Reports by CONTRACTOR. When the price for the extra work cannot be agreed upon, the CONTRACTOR shall submit a daily report to the Engineer on forms approved by the AGENCY. Included are applicable delivery tickets, listing all labor, materials, and equipment involved for that day, and other services and expenditures when authorized. Failure to submit the daily report by the close of the next working day may waive any rights for that day. An attempt shall be made to reconcile the report daily, and it shall be signed by the Engineer and the CONTRACTOR. In the event of disagreement,

pertinent notes shall be entered by each party to explain points which cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by Subcontractors or others shall be submitted through the CONTRACTOR.

The report shall:

1. Show names of workers, classifications, and hours worked.
2. Describe and list quantities of materials used.
3. Show type of equipment, size, identification number, and hours of operations, including loading and transportation, if applicable.
4. Describe other services and expenditures in such detail as the AGENCY may require.

3-4 CHANGED CONDITIONS. The CONTRACTOR shall promptly notify the Engineer of the following Work site conditions (hereinafter called changed conditions), in writing, upon their discovery and before they are disturbed.

1. Subsurface or latent physical conditions differing materially from those represented in the Contract;
2. Unknown physical conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in work of the character being performed; and
3. Material differing from that represented in the Contract which the CONTRACTOR believes may be hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.

The Engineer will promptly investigate conditions which appear to be changed conditions. If the Engineer determines that the conditions are changed conditions and will materially affect costs, a Change Order will be issued adjusting the compensation for such portion of the Work in accordance with 3-2.2. If the Engineer determines that conditions are changed conditions and they will materially affect performance time, the CONTRACTOR, upon submitting a written request, will be granted an extension of time subject to the provisions of 6-6.

If the Engineer determines that the conditions do not justify an adjustment in compensation, the CONTRACTOR will be notified in writing. This notice will also advise the CONTRACTOR of its obligation to notify the Engineer in writing if the CONTRACTOR disagrees.

Should the CONTRACTOR disagree with the decision, it may submit a written notice of potential claim to the Engineer before commencing the disputed work. In the event of such a dispute, the CONTRACTOR shall not be excused from any scheduled completion date provided by the Contract and shall proceed with all work to be performed under the Contract. However, the CONTRACTOR shall retain any and all rights provided by either Contract or law which pertain to the resolution of disputes and protests between the contracting parties. The CONTRACTOR shall proceed as provided in 3-5.

The CONTRACTOR's failure to give notice of changed conditions promptly upon their discovery and before they are disturbed shall constitute a waiver of all claims in connection therewith.

3-5 DISPUTED WORK. If the CONTRACTOR and the AGENCY are unable to reach agreement on disputed work, the AGENCY may direct the CONTRACTOR to proceed with the work. Payment shall be as later determined by mediation or arbitration, if the AGENCY and CONTRACTOR agree thereto, or as fixed in a court of law.

Although not to be construed as proceeding under extra work provisions, the CONTRACTOR shall keep and furnish records of disputed work in accordance with 3-3.

SECTION 4 – CONTROL OF MATERIALS

4-1 MATERIALS AND WORKMANSHIP.

4-1.1 General. All materials, parts, and equipment furnished by the CONTRACTOR in the Work shall be new, high grade, and free from defects. Quality of work shall be in accordance with the generally accepted standards. Materials and work quality shall be subject to the Engineer's approval.

Materials and work quality not conforming to the requirements of the Specifications shall be considered defective and will be subject to rejection. Defective work or material, whether in place or not, shall be removed immediately from the site by the CONTRACTOR, at its expense, when so directed by the Engineer.

If the CONTRACTOR fails to replace any defective or damaged work or materials after reasonable notice, the Engineer may cause such work or materials to be replaced. The replacement expense will be deducted from the amount to be paid to the CONTRACTOR.

Used or secondhand materials, parts, and equipment may be used only if permitted by the Specifications.

The CONTRACTOR and all subcontractors, suppliers, and vendors, shall guarantee that the entire Work will meet all requirements of this Contract as to the quality of materials, equipment, and workmanship. The CONTRACTOR, at no cost to the AGENCY, shall make any repairs or replacements made necessary by defects in materials, equipment, or workmanship that become evident within one year after the date of recordation of the Notice of Completion. Within this one year period, the CONTRACTOR shall also restore to full compliance with the requirements of this Contract any portion of the Work which is found not to meet those requirements. The CONTRACTOR shall defend, indemnify, and hold the AGENCY, its officers, agents, and employees harmless from claims of any kind due to injuries or damages arising, directly or indirectly, from said defects or noncompliance.

The CONTRACTOR shall make all repairs, replacements, and restorations within thirty-five (35) days after the date of the Engineers' written notice.

If, in the opinion of the Engineer, the defective work is not of sufficient magnitude or importance to make the work dangerous or undesirable, or if, in the opinion of the Engineer, the removal of such work is impractical or will create conditions which are dangerous or undesirable, the AGENCY shall have the right and authority to retain such work instead of requiring it to be removed and reconstructed, but will make such deductions thereof in the payments due or to become due to the CONTRACTOR as the AGENCY may deem just and reasonable.

4-1.2 Protection of Work and Materials. The CONTRACTOR shall provide and maintain storage facilities and employ such measures as will preserve the specified quality and fitness of materials to be used in the Work. Stored materials shall be reasonably accessible for inspection. The CONTRACTOR shall also adequately protect new and existing work and all items of equipment for the duration of the Contract.

The CONTRACTOR shall not, without the AGENCY's consent, assign, sell, mortgage, hypothecate, or remove equipment or materials which have been installed or delivered and which may be necessary for the completion of the Contract.

4-1.3 Inspection Requirements.

4-1.3.1 General. Unless otherwise specified, inspection is required at the source for such typical materials and fabricated items as bituminous paving mixtures, structural concrete, metal fabrication, metal casting, welding, concrete pipe manufacture, protective coating application, and similar shop or plant operations.

Steel pipe in sizes less than 450 mm (18 inches) and vitrified clay and cast iron pipe in all sizes are acceptable upon certification as to compliance with the specifications, subject to sampling and testing by the AGENCY. Standard items of equipment such as electric motors, conveyors, elevators, plumbing fixtures, etc., are subject to inspection at the job site only. Special items of equipment such as designed electrical panel boards, large pumps, sewage plant equipment, etc., are subject to inspection at the source, normally only for performance testing. The Specifications may require inspection at the source for other items not typical of those listed in this section.

4-1.3.2 Inspection of Materials Not Locally Produced. When the CONTRACTOR intends to purchase materials, fabricated products, or equipment from sources located more than 80 km (50 miles) outside the geographical limits of the AGENCY, an inspector or accredited testing laboratory (approved by the Engineer), shall be engaged by the CONTRACTOR at its expense, to inspect the materials, equipment or process. This approval shall be obtained before producing any material or equipment. The inspector or representative of the testing laboratory shall judge the materials by the requirements of the Plans and Specifications. The CONTRACTOR shall forward reports required by the Engineer. No materials or equipment shall be shipped nor shall any processing, fabrication or treatment of such materials be done without proper inspection by the approved agent. Approval by said agent shall not relieve the CONTRACTOR of responsibility for complying with the Contract requirements.

4-1.3.3 Inspection by the AGENCY. The AGENCY will provide all inspection and testing laboratory services within 80 km (50 miles) of the geographical limits of the AGENCY. For private contracts, all costs of inspection at the source, including salaries and mileage costs, shall be paid by the permittee.

4-1.4 Test of Materials. Before incorporation in the Work, the CONTRACTOR shall submit samples of materials, as the Engineer may require, at no cost to the AGENCY. The CONTRACTOR, at tis expense, shall deliver the materials for testing to the place and at the time designated by the Engineer. Except as elsewhere specified, the AGENCY will bear the cost of testing material and/or workmanship which meet or exceed the requirements indicated in the Standard Specifications and the Special Provisions. The CONTRACTOR shall bear the

cost of all other tests, including the retesting of material or workmanship that fails to pass the first test.

The CONTRACTOR shall notify the Engineer in writing, at least 15 days in advance, of its intention to use materials for which tests are specified, to allow sufficient time to perform the tests. The notice shall name the proposed supplier and source of material.

If the notice of intent to use is sent before the materials are available for testing or inspection, or is sent so far in advance that the materials on hand at the time will not last but will be replaced by a new lot prior to use on the Work, it will be the CONTRACTOR's responsibility to renotify the Engineer when samples which are representative may be obtained.

There will be inspection of this project to ensure strict adherence to these specifications. During the course of work, CONTRACTOR shall be responsible for calling the Project Engineer for testing and inspection (48) hours in advance. Work not properly tested and inspected will be subject to rejection.

Any work done in unauthorized areas or in a manner unacceptable to the inspector may not be accepted and/or paid for.

4-1.5 Certification. The Engineer may waive materials testing requirements of the Specifications and accept the manufacturer's written certification that the materials to be supplied meet those requirements. Materials test data may be required as part of the certification.

4-1.6 Trade Names or Equals. The CONTRACTOR may supply any of the materials specified or offer an equivalent. The Engineer shall determine whether the material offered is equivalent to that specified. Adequate time shall be allowed for the Engineer to make this determination.

Whenever any particular material, process, or equipment is indicated by patent, proprietary or brand name, or by name of manufacturer, such wording is used for the purpose of facilitating its description and shall be deemed to be followed by the words **or equal**. A listing of materials is not intended to be comprehensive, or in order of preference. The CONTRACTOR may offer any material, process, or equipment considered to be equivalent to that indicated. Approval of equipment and materials offered as equivalents to those specified must be obtained prior to the opening of bids as set forth in the Instructions to Bidders.

The CONTRACTOR shall, at its expense, furnish data concerning items offered by it as equivalent to those specified. The CONTRACTOR shall have the material tested as required by the Engineer to determine that the quality, strength, physical, chemical, or other characteristics, including durability, finish, efficiency, dimensions, service, and suitability are such that the item will fulfill its intended function.

Test methods shall be subject to the approval of the Engineer. Test results shall be reported promptly to the Engineer, who will evaluate the results and determine if the substitute item is equivalent. The Engineer's findings shall be final. Installation and use of a substitute item shall not be made until approved by the Engineer.

If a substitute offered by the CONTRACTOR is not found to be equal to the specified material, the CONTRACTOR shall furnish and install the specified material.

The specified Contract completion time shall not be affected by any circumstance developing from the provisions of this section.

Along with information supplied by the CONTRACTOR regarding equivalency of the proposed item, the CONTRACTOR shall clearly identify all deviations from the specified item. Deviations discovered by the Engineer after acceptance of an "or equal" item which were not identified by the CONTRACTOR with his/her submittal shall be cause for rejection of the "or equal" item. CONTRACTOR shall be due no additional compensation in time or money for acceptance or rejection of a proposed "or equal" item and subsequent replacement with the item specified. CONTRACTOR shall pay cost to AGENCY for items requiring more than two submittals and analysis of any shop drawing which requires more than a general review of an "or equal" item.

4-1.7 Weighing and Metering Equipment. All scales and metering equipment used for proportioning materials shall be inspected for accuracy and certified within the past 12 months by the State of California Bureau of Weights and Measures, by the County Director or Sealer of Weights and Measures, or by a scale mechanic registered with or licensed by the County.

The accuracy of the work of a scale service AGENCY, except as stated herein, shall meet the standards of the California Business and Professions Code and the California Code of Regulations pertaining to weighing devices. A certificate of compliance shall be presented, prior to operation, to the Engineer for approval and shall be renewed whenever required by the Engineer at no cost to the AGENCY.

All scales shall be arranged so they may be read easily from the operator's platform or area. They shall indicate the true net weight without the application of any factor. The figures of the scales shall be clearly legible. Scales shall be accurate to within 1 percent when tested with the plant shut down. Weighing equipment shall be so insulated against vibration or moving of other operating equipment in the plant area that the error in weighing with the entire plant running will not exceed 2 percent for any setting nor 1.5 percent for any batch.

4-1.8 Calibration of Testing Equipment. Testing equipment, such as, but not limited to pressure gages, metering devices, hydraulic systems, force (load) measuring instruments, and strain-measuring devices shall be calibrated by a testing AGENCY acceptable to the Engineer at intervals not to exceed 12 months and following repairs, modification, or relocation of the equipment. Calibration certificates shall be provided when requested by the Engineer.

4-1.9 Construction Materials Dispute Resolution (Soils, Rock Materials, Concrete, Mortar and Related Materials, Masonry Materials, Bituminous Materials, Rock Products, and Modified Asphalts). In the interest of safety and public value, whenever credible evidence arises to contradict the test values of materials, the AGENCY and the CONTRACTOR will initiate, an immediate and cooperative investigation. Test values of materials are results of the materials' tests, as defined by these Specifications or by the special provisions, required to accept the Work. Credible evidence is process observations or

test values gathered using industry accepted practices. A contradiction exists whenever work acceptance or performance becomes suspect. The investigation shall allow access to all test results, procedures, and facilities relevant to the disputed work and consider all available information and, when necessary, gather new and additional information in an attempt to determine the validity, the cause, and if necessary, the remedy to the contradiction. If the cooperative investigation reaches any resolution mechanism acceptable to both the AGENCY and the CONTRACTOR, the contradiction shall be considered resolved and the cooperative investigation concluded.

Whenever the cooperative investigation is unable to reach resolution, the investigation may then either conclude without resolution or continue by written notification of one party to the other requesting the implementation of a resolution process by committee. The continuance of the investigation shall be contingent upon recipient's agreement and acknowledged in writing within 3 calendar days after receiving a request. Without acknowledgement, the investigation shall conclude without resolution. The committee shall consist of three State of California Registered Civil Engineers. Within 7 calendar days after the written request notification, the AGENCY and the CONTRACTOR will each select one engineer. Within 14 calendar days of the written request notification, the two selected engineers will select a third engineer. The goal in selection of the third member is to complement the professional experience of the first two engineers. Should the two engineers fail to select the third engineer, the AGENCY and the CONTRACTOR shall each propose 2 engineers to be the third member within 21 calendar days after the written request notification. The first two engineers previously selected shall then select one of the court proposed engineers in a blind draw.

The committee shall be a continuance of the cooperative investigation and will re-consider all available information and if necessary gather new and additional information to determine the validity, the cause, and if necessary, the remedy to the contradiction. The committee will focus upon the performance adequacy of the material(s) using standard engineering principles and practices and to ensure public value, the committee may provide engineering recommendations as necessary. Unless otherwise agreed, the committee will have 30 calendar days from its formation to complete their review and submit their findings. The final resolution of the committee shall be by majority opinion, in writing, stamped and signed. Should the final resolution not be unanimous, the dissenter may attach a written, stamped, and signed minority opinion.

Once started, the resolution process by committee shall continue to full conclusion unless:

1. Within 7 days of the formation of the committee, the AGENCY and the CONTRACTOR reach an acceptable resolution mechanism; or
2. Within 14 days of the formation of the committee, the initiating party withdraws its written notification and agrees to bear all investigative related costs thus far incurred; or
3. At any point by the mutual agreement of the AGENCY and the CONTRACTOR.

Unless otherwise agreed, the CONTRACTOR shall bear and maintain a record for all the investigative costs until resolution. Should the investigation discover assignable causes for the contradiction, the assignable party, the AGENCY or the CONTRACTOR, shall bear all

costs associated with the investigation. Should assignable causes for the contradiction extended to both parties, the investigation will assign costs cooperatively with each party or when necessary, equally. Should the investigation substantiate a contradiction without assignable cause, the investigation will assign costs cooperatively with each party or when necessary, equally. Should the investigation be unable to substantiate a contradiction, the initiator of the investigation shall bear all investigative costs. All claim notification requirements of the contract pertaining to the contradiction shall be suspended until the investigation is concluded.

SECTION 5 – UTILITIES

5-1 LOCATION. The Permittee (in the case of Private Contracts) and the AGENCY (in the case of Cash or Assessment Act Contracts), will search known substructure records and furnish the CONTRACTOR with copies of documents which describe the location of utility substructures, or will indicate on the Plans for the project those substructures (except for service connections) which may affect the Work. Information regarding removal, relocation, abandonment, or installation of new utilities will be furnished to prospective bidders.

Where underground main distribution conduits such as water, gas, sewer, electric power, telephone, or cable television are shown on the Plans, the CONTRACTOR shall assume that every property parcel will be served by a service connection for each type of utility.

As provided in Section 4216 of the California Government Code, at least 2 working days prior to commencing any excavation, the CONTRACTOR shall contact the regional notification center (Underground Service Alert of Southern California) and obtain an inquiry identification number.

The California Department of Transportation is not required by Section 4216 to become a member of the regional notification center. The CONTRACTOR shall contact it for location of is subsurface installations.

The CONTRACTOR shall determine the location and depth of all utilities, including service connections, which have been marked by the respective owners and which may affect or be affected by its operations. If no pay item is provided in the Contract for this work, full compensation for such work shall be considered as included in the prices bid for other items of work.

5-1.1 Mandatory Notification Prior To Excavation. The CONTRACTOR's attention is direct to Section 4215.5 through 4217 of the Government Code of the State of California. This requires that two (2) working days prior to commencing <u>any</u> excavation <u>"Underground Service Alert of Southern California"</u> (USA) ("Digalert") shall be notified by phone, toll free 1-800-422-4133, or 811, for the assignment of an Inquiry Identification Number.

Construction CONTRACTOR shall contact all utility companies at least five (5) working days prior to commencing work and shall verify the location of any known utilities and determine whether or not a representative of each company will be present during excavation.

The known public utilities contacts are:

City of Calabasas, Larry Edmonson, Senior Public Works Inspector (818) 224-1683

Los Angeles County Department of Public Works, Road Maintenance	(310) 456-8014
Los Angeles County Fire Department, Station # 68	(818) 222-1107
Los Angeles County Fire Department, Station # 125	(818) 880-4411
Los Angeles County Department - Lost Hills/Malibu Sheriff's Dept.	(818) 878-1808
Los Angeles County Sewer Maintenance Division	(323) 233-3330
Los Angeles County Operational Services Division	(626) 458-1700
Las Virgenes Municipal Water District	(818) 251-2100
Pacific Bell	(805) 583-6640
Southern California Edison	(805) 358-8343
Southern California Gas Company	(818) 701-2532
Adelphia	(805) 732-9355
Charter Cablevision, Construction Department, Malibu	(310) 864-9172

The CONTRACTOR shall coordinate construction with public utility relocation activities.

The existing subsurface utilities shown have been indicated, based on the best available record information. However, to avoid or resolve any interference problems between these existing utilities and the proposed work, the CONTRACTOR shall field verify the vertical and horizontal locations of all utilities, such as water lines and water services, electronic conduits, telephone and television cable, storm drain facilities, and all other facilities and obstructions prior to beginning any excavations. If conflicts exist, revised grades and/or alignments may be established, if required. **Such field verification shall require exposing these utilities prior to the start of construction**.

Special reference is hereby made to Section 5-2, "Protection," of these Standard Specifications with respect to the protection, repair, and replacement of existing subsurface utilities.

Additionally, the CONTRACTOR shall also notify the following local entities of his/her schedule fourteen (14) days prior to commencing work, including local refuse collectors, street sweepers, the Post Office, Public Schools, and Bus Companies:

Waste Management, Inc.	(805) 955-9400
U.S. Post Office, Calabasas	(818) 347-4056
Las Virgenes School District	(818) 880-4000
Los Angeles Metropolitan Transportation Authority	(213) 922-6000
Venco Landscaping	(805) 981-2400
CleanStreet Street Sweeping	(310) 329-3078

No excavation shall commence unless the CONTRACTOR has obtained the USA Inquiry Identification Number.

5-1.2 Accuracy Of Utilities Information. The locations of known existing major utilities, whether above ground or underground, are indicated on the plans. Information and data reflected in the Contract Documents with respect to underground and above ground utilities at or contiguous to the site is based upon information and data furnished to the City and the Engineer by the owners of such utilities, and the City does not assume responsibility for the accuracy or completeness thereof. The CONTRACTOR shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.

The CONTRACTOR shall be responsible for determining the location and depth of all underground facilities, including service connections, which may affect or be affected by his/her operations and he/she shall include the cost to pothole all utilities within the limits of work in his/her bid. If an existing utility line, which has been marked by Underground Service Alert or is shown on the plans, is damaged by the CONTRACTOR, the CONTRACTOR shall repair the line and bear the cost thereof.

CONTRACTOR shall be aware that electrical conduits between street and traffic lights may exist beneath pavement and/or sidewalk in areas where such lights are in place and that said conduits are not shown on these plans.

In the event that the CONTRACTOR damages any existing utility lines that are not shown, shown incorrectly or the locations of which are not made known to the CONTRACTOR prior to excavation, a telephone call and written report shall be made immediately to the Utility owner, the Engineer, and to the City. If directed by the City, the CONTRACTOR shall make repairs under the provisions for changes and extra work contained in **SECTION 3 - CHANGES IN WORK** of these Standard Specifications.

5-2 PROTECTION.

Excavation, trenching, bedding and backfill construction shall be in accordance with the Contract Documents, the applicable City requirements, e.g. Public Works Policy 106 "Trench repair within paved right-of-way", the Standard Specifications, and the project drawings. All trenching including that for water, sewer, storm drain and utility conduits and all service connections and meter boxes (not permitted in driveways) shall be completed and inspected and approved by the agency having jurisdiction, and the structural backfill inspected and tested for compaction and approved before aggregate base, paving, and other permanent surface construction may commence.

Bedding and backfill material shall be tested by the CONTRACTOR to establish a procedure and to control his operations. Compliance testing will be performed by the Soil Engineer.

The CONTRACTOR shall not interrupt the service function or disturb the support of any utility without authority from the owner or order from the AGENCY. All valves, switches, vaults, and meters shall be maintained readily accessible for emergency shutoff.

Where protection is required to ensure support of utilities located as shown on the Plans or in accordance with 5-1, the CONTRACTOR shall, unless otherwise provided, furnish and place the necessary protection at its expense.

Upon learning of the existence and location of any utility omitted from or sown incorrectly on the Plans, the CONTRACTOR shall immediately notify the Engineer in writing. When

authorized by the Engineer, support or protection of the utility will be paid for as provided in 3-2.2.3 or 3-3.

The CONTRACTOR shall immediately notify the Engineer and the utility owner if any utility is disturbed or damaged. The CONTRACTOR shall bear the costs of repair or replacement of any utility damaged.

When placing concrete around or contiguous to any non-metallic utility installation, the CONTRACTOR shall at its expense:

1. Furnish and install a 50 mm (2 inch) cushion of expansion joint material or other similar resilient material; or
2. Provide a sleeve or other opening which will result in a 50 mm (2 inch) minimum-clear annular space between the concrete and the utility; or
3. Provide other acceptable means to prevent embedment in or bonding to the concrete.

Where concrete is used for backfill or for structures which would result in embedment, or partial embedment, of a metallic utility installation; or where the coating, bedding or other cathodic protection system is exposed or damaged by the CONTRACTOR's operations, the CONTRACTOR shall notify the Engineer and arrange to secure the advice of the affected utility owner regarding the procedures required to maintain or restore the integrity of the system.

5-3 REMOVAL. Unless otherwise specified, the CONTRACTOR shall remove all interfering portions of utilities shown on the Plans or indicated in the Bid documents as "abandoned" or "to be abandoned in place". Before starting removal operations, the CONTRACTOR shall ascertain from the AGENCY whether the abandonment is complete, and the costs involved in the removal and disposal shall be included in the Bid for the items of work necessitating such removals.

5-4 RELOCATION. When feasible, the owners responsible for utilities within the area affected by the Work will complete their necessary installations, relocations, repairs, or replacements before commencement of work by the CONTRACTOR. When the Plans or Specifications indicate that a utility installation is to be relocated, altered, or constructed by others, the AGENCY will conduct all negotiations with the owners and work will be done at no cost to the CONTRACTOR, except as provided in 301-1.6. Utilities which are relocated in order to avoid interference shall be protected in their position and the cost of such protection shall be included in the Bid for the items of work necessitating such relocation.

After award of the Contract, portions of utilities which are found to interfere with the Work will be relocated, altered or reconstructed by the owners, or the Engineer may order changes in the Work to avoid interference. Such changes will be paid for in accordance with 3-2.

When the Plans of Specifications provide for the CONTRACTOR to alter, relocate, or reconstruct a utility, all costs for such work shall be included in the Bid for the items of work necessitating such work. Temporary or permanent relocation or alteration of utilities requested by the CONTRACTOR for its convenience shall be its responsibility and it shall make all arrangements and bear all costs.

The utility owner will relocate service connections as necessary within the limits of the Work or within temporary construction or slope easements. When not otherwise required by the plans and specifications and when directed by the Engineer, the CONTRACTOR shall arrange for the

relocation of service connections as necessary between the meter and property line, or between the meter and limits of construction. The relocation of such service connections will be paid for in accordance with provisions of 3-3. Payment will include the restoration of all existing improvements which may be affected thereby. The CONTRACTOR may agree with the owner of any utility to disconnect and reconnect interfering service connections. The AGENCY will not be involved in any such agreement.

5-5 DELAYS. The CONTRACTOR shall notify the Engineer of its construction schedule insofar as it affects the protection, removal, or relocation of utilities. Said notification shall be included as a part of the construction schedule required in 6-1. The CONTRACTOR shall notify the Engineer in writing of any subsequent changes in the construction schedule which will affect the time available for protection, removal, or relocation of utilities.

The CONTRACTOR will not be entitled to damages or additional payment for delays attributable to utility relocations or alterations if correctly located, noted, and completed in accordance with 5-1.

The CONTRACTOR may be given an extension of time for unforeseen delays attributable to unreasonably protracted interference by utilities in performing work correctly shown on the Plans.

The AGENCY will assume responsibility for the timely removal, relocation, or protection of existing main or trunkline utility facilities within the area affected by the Work if such utilities are not identified in Contract Documents. The CONTRACTOR will not be assessed liquidated damages for any delay caused by failure of AGENCY to provide for the timely removal, relocation, or protection of such existing facilities.

5-6 COOPERATION. When necessary, the CONTRACTOR shall so conduct its operations as to permit access to the Work site and provide time for utility work to be accomplished during the progress of the Work.

SECTION 6 – PROSECUTION, PROGRESS, AND ACCEPTANCE OF THE WORK

6-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF WORK.

6-1.1 Pre-Construction Meeting And Submittal. A pre-construction meeting will be conducted by the City prior to commencement of construction at a time and place designated by the City. Those attending the meeting shall include, but not be limited to, the following:

a. The CONTRACTORs representative(s)

b. Sub-CONTRACTORs representative(s), if needed

c. City of Calabasas Director of Public Works

d. The Design Engineers

e. The Construction Engineers

f. The affected utility companies representatives

g. City of Calabasas Public Works Inspectors

h. City of Calabasas Public Works Landscape Division Manager

i. Caltrans' inspector and/or representative(s)

One week prior to this meeting the CONTRACTOR shall submit the following:

1. Construction Schedule
2. Traffic Control Plan
3. Emergency Contact List
4. List of Subcontractors
5. Storm Water Pollution Prevention Plan (SWPPP)

6-1.2 CONSTRUCTION SCHEDULE. After notification of award and prior to start of any work, the CONTRACTOR shall submit its proposed construction schedule to the Engineer for approval. The construction schedule shall be in the form of a tabulation, chart, or graph and shall be in sufficient detail to show chronological relationship of all activities of the project. 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. The construction schedule shall recognize the requirements of 5-5 and reflect completion of all work under the Contract within the specified time and in accordance with the Specifications.

Unless otherwise provided, the Contract time shall commence upon the date of issuance of a notice to proceed. The Work shall start within 15 days thereafter, and be diligently prosecuted to completion within the time provided in the Specifications.

If the CONTRACTOR desires 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.

The Engineer may waive these requirements for work constructed under permit.

Prior to issuing the Notice to Proceed, the Engineer will schedule and conduct a pre-construction meeting with the CONTRACTOR to review the proposed construction schedule and delivery dates, arrange utility coordination, discuss construction methods, and clarify inspection procedures.

6-1.3 Emergency Contact List. The CONTRACTOR shall provide the following information in writing and submit it with the signed contract, contract bonds and certificates of insurance. Failure to comply may result in delays in the processing of the contract documents.

1. Name of authorized representative at the job site.
2. Address and telephone number where the above person can be reached 24 hours a day.
3. Address of the nearest office of the CONTRACTOR, if any, and the name and telephone number of a person at that office who is familiar with the project.

4. Address and telephone number of the CONTRACTOR's main office and the name and telephone number of the person at that office familiar with the project.

6-2 PROSECUTION OF WORK. To minimize public inconvenience and possible hazard and to restore street and other work areas to their original condition and state of usefulness as soon as practicable, the CONTRACTOR shall diligently prosecute the Work to completion. If the Engineer determines that the CONTRACTOR is failing to prosecute the Work to the proper extent, the CONTRACTOR shall, upon orders from the Engineer, immediately take steps to remedy the situation. All costs of prosecuting the Work as described herein shall be included in the CONTRACTOR's Bid. Should the CONTRACTOR fail to take the necessary steps to fully accomplish said purposes, after orders of the Engineer to do so, the AGENCY may suspend the work in whole or in part, until the CONTRACTOR takes said steps at no cost to the AGENCY.

As soon as possible under the provisions of the Specifications, the CONTRACTOR shall backfill all excavations and restore to usefulness all improvements existing prior to the start of the Work.

If Work is suspended through no fault of the AGENCY, all expenses and losses incurred by the CONTRACTOR during such suspensions shall be borne by the CONTRACTOR. If the CONTRACTOR fails to properly provide for public safety, traffic, and protection of the Work during periods of suspension, the AGENCY may elect to do so, and deduct the cost thereof from monies due the CONTRACTOR. Such actions will not relieve the CONTRACTOR from liability.

The CONTRACTOR shall submit monthly progress reports to the Engineer by the tenth day of each month. The report shall include an updated construction schedule. Any deviations from the original schedule shall be explained. Progress payments will be withheld pending receipt of any outstanding reports.

6-3 SUSPENSION OF WORK.

6-3.1 General. The Work may be suspended in whole or in part when determined by the Engineer that the suspension is necessary in the interest of the AGENCY. The CONTRACTOR shall comply immediately with any written order of the Engineer. Such suspension shall be without liability to the CONTRACTOR on the part of the AGENCY except as otherwise specified in 6-6.3.

6-3.2 Archaeological and Paleontological Discoveries. If discovery is made of items of archaeological or paleontological interest, the CONTRACTOR shall immediately cease excavation in the area of discovery and shall not continue until ordered by the Engineer. When resumed, excavation operations within the area of discovery shall be as directed by the Engineer.

Discoveries which may be encountered may include, but not be limited to, dwelling sites, stone implements or other artifacts, animal bones, human bones, and fossils.

The CONTRACTOR shall be entitled to an extension of time and compensation in accordance with the provisions of 6-6.

6-4 DEFAULT BY CONTRACTOR. If the CONTRACTOR fails to begin delivery of material and equipment, to commence the Work within the time specified, to maintain the rate of delivery of material, to execute the Work in the manner and at such locations as specified, or fails to maintain the Work schedule which will insure the AGENCY's interest, or, if the

CONTRACTOR is not carrying out the intent of the Contract, the AGENCY may serve written notice upon the CONTRACTOR and the Surety on its Faithful Performance Bond demanding satisfactory compliance with the Contract.

The Contract may be canceled by the Board without liability for damage, when in the Board's opinion the CONTRACTOR is not complying in good faith, has become insolvent, or has assigned or subcontracted any part of the Work without the Board's consent. In the event of such cancellation, the CONTRACTOR will be paid the actual amount due based on Contract Unit Prices or lump sums bid and the quantity of the Work completed at the time of cancellation, less damages caused to the AGENCY by acts of the CONTRACTOR. The CONTRACTOR, in having tendered a Bid, shall be deemed to have waived any and all claims for damages because of cancellation of Contract for any such reason. If the AGENCY declares the Contract canceled for any of the above reasons, written notice to that effect shall be served upon the Surety. The Surety shall, within 5 days, assume control and perform the Work as successor to the CONTRACTOR.

If the Surety assumes any part of the Work, it shall take the CONTRACTOR's place in all respects for that part, and shall be paid by the AGENCY for all work performed by it in accordance with the Contract. If the Surety assumes the entire Contract, all money due the CONTRACTOR at the time of its default shall be payable to the Surety as the Work progresses, subject to the terms of the Contract.

If the Surety does not assume control and perform the Work within 5 days after receiving a notice of cancellation, or fails to continue to comply, the AGENCY may exclude the Surety from the premises. The AGENCY may then take possession of all material and equipment and complete the Work by AGENCY forces, by letting the unfinished Work to another CONTRACTOR, or by a combination of such methods. In any event, the cost of completing the Work shall be charged against the CONTRACTOR and its Surety and may be deducted from any money due or becoming due from the AGENCY. If the sums due under the Contract are insufficient for completion, the CONTRACTOR or Surety shall pay to the AGENCY within 5 days after the completion, all costs in excess of the sums due.

The provisions of this subsection shall be in addition to all other rights and remedies available to the AGENCY under law.

6-5 TERMINATION OF THE CONTRACT. The Board may terminate the Contract at its own discretion or when conditions encountered during the Work make it impossible or impracticable to proceed, or when the AGENCY is prevented from proceeding with the Contract by act of God, by law, o9r by official action of a public authority.

6-6 DELAYS AND EXTENSIONS OF TIME.

6-6.1 General. If delays are caused by unforeseen events beyond the control of the CONTRACTOR, such delays will entitle the CONTRACTOR to an extension of time as provided herein, but the CONTRACTOR will not be entitled to damages or additional payment due to such delays, except as provided in 6-6.3. Such unforeseen events may include: war, government regulations, labor disputes, strikes, fires, floods, adverse weather or elements necessitating cessation of work, inability to obtain materials, labor or equipment, required extra work, or other specific events as may be further described in the Specifications.

No extension of time will be granted for a delay caused by the CONTRACTOR's inability to obtain materials unless the CONTRACTOR furnishes to the Engineer documentary proof. The proof must be provided in a timely manner in accordance with the sequence of the CONTRACTOR's operations and the approved construction schedule.

If delays beyond the CONTRACTOR's control are caused by events other than those mentioned above, the Engineer may deem an extension of time to be in the best interests of the AGENCY. The CONTRACTOR will not be entitled to damages or additional payment due to such delays, except as provided in 6-6.3.

If delays beyond the CONTRACTOR's control are caused solely by action or inaction by the AGENCY, such delays will entitle the CONTRACTOR to an extension of time as provided in 6-6.2.

6-6.1.1 Notice of Delays. Whenever the CONTRACTOR foresees any delay in the prosecution of the work, and in any event immediately upon the occurrence of any delay which the CONTRACTOR regards as unavoidable, he/she shall notify the Engineer in writing of the probability of the occurrence of such delay and its cause so that the Engineer may take immediate steps to prevent, if possible, the occurrence or continuance of the delay, or, if prevention is not possible, may determine whether the delay is to be considered avoidable or unavoidable, how long it continues, and to what extent it will delay the prosecution and completion of the work. It will be concluded that any and all delays which have occurred in the prosecution and completion of the work have been avoidable delays, except such delays as shall have been called to the attention of the Engineer at the time of their occurrence and found by him/her to have been unavoidable. The CONTRACTOR shall make no claims for any delay not called to the attention of the Engineer at the time of its occurrence as an unavoidable delay.

6-6.1.2 Avoidable Delays. Avoidable delays in the prosecution or completion of the work shall include all delays which in the opinion of the Engineer would have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the CONTRACTOR of his/her subcontractors. The following shall be considered avoidable delays within the meaning of the contract: 1) Delays in the prosecution of parts of the work which may in themselves be unavoidable but do not necessarily prevent or delay the prosecution of other parts of the work or the completion of the whole work within the time herein specified; 2) Reasonable loss of time resulting from the necessity of submitting samples of materials and drawings to the Engineer for approval and from performing tests of materials, measurements, and inspections; 3) Reasonable interference of other CONTRACTORs employed by the AGENCY and/or other CONTRACTORs working in the area which do not necessarily prevent the completion of the whole work within the time agreed upon; 4) Delays resulting from inaccurate or incomplete shop drawing submittals; and 5) Interference of other CONTRACTORs performing concurrent work.

6-6.1.3 Extension of Time. In case the work is not completed in the time specified, including such extensions of time as may have been granted for unavoidable delays, the CONTRACTOR will be assessed damages for delay in accordance with Paragraph 6-9.1. The AGENCY, however, shall have the right to grant an extension of time for avoidable delay if it is deemed in his/her best interest to do so. During such extension of time, the

CONTRACTOR will be charged for engineering and inspection services and other costs as provided in Paragraph 6-6.2.1 but will not be assessed damages pursuant to Paragraph 6-9.

6-6.2 Extensions of Time. Extensions of time, when granted, will be based upon the effect of delays to the Work, They will not be granted for noncontrolling delays to minor portions of the Work unless it can be shown that such delays did or will delay the progress of the Work.

6-6.2.1 Compensation to AGENCY for Extension of Time. Compensation for extension of time for avoidable delay granted pursuant to Paragraph 6-6.1.3 shall be the actual cost to the AGENCY for engineering, inspection, general supervision, and overhead expenses which are directly chargeable to the work and which accrue during the period of such extension, except that the cost of final inspection and preparation of the final estimate shall not be included.

6-6.3 Payment for Delays to CONTRACTOR. The CONTRACTOR will be compensated for damages incurred due to delays for which the AGENCY is responsible. Such actual costs will be determined by the Engineer. The AGENCY will not be liable for damages which the CONTRACTOR could have avoided by any reasonable means, such as judicious handling of forces, equipment, or plant. The determination of what damages the CONTRACTOR could have avoided will be made by the Engineer.

Requests for an extension of time must be delivered to the AGENCY within ten (10) consecutive calendar days following the date of the occurrence that caused the delay. The request must be submitted in writing and must state the cause of the delay, the date of the occurrence causing the delay, and the amount of additional time requested. This shall be included as part of a revised construction schedule required in Section 6-1. Requests for extensions of time shall be supported by all evidence reasonably available or known to the CONTRACTOR, which would support the extension of time requested. Requests for extensions of time, which are not received within the time specified above, shall result in the forfeiture of the CONTRACTOR's right to receive any extension of time requested.

If the CONTRACTOR is requesting an extension of time because of weather, he/she shall supply daily written reports to the AGENCY's representative describing such weather, and the work that could not be performed that day because of such weather or conditions resulting therefrom and that he/she otherwise would have performed.

6-7 TIME OF COMPLETION

6-7.1 General. The CONTRACTOR shall complete the Work within the time set forth in the Contract. The CONTRACTOR shall complete each portion of the Work within such time as set forth in the Contract for such portion. Unless otherwise specified, the time of completion of the Contract shall be expressed in working days.

6-7.2 Working Day. A working day is any day within the period between the start of the Contract time as defined in 6-1 and the date provided for completion, or upon field acceptance by the Engineer for all work provided for in the Contract, whichever occurs first, other than:

1. Saturday,

2. Sunday,

3. any day designated as a holiday by the AGENCY,

4. any other day designated as a holiday in a Master Labor Agreement entered into by the CONTRACTOR or on behalf of the CONTRACTOR as an eligible member of a CONTRACTOR association,

5. any day the CONTRACTOR is prevented from working at the beginning of the workday for cause as defined in 6-6.1,

6. any day the CONTRACTOR is prevented from working during the first 5 hours with at least 60 percent of the normal work force for cause as defined in 6-6.1.

The CONTRACTOR's activities involving work which requires street closure, detours, and barricades shall be confined to the hours between 7:30 a.m. and 4:00 p.m. Monday through Friday. In addition, the CONTRACTOR shall not perform any Work on Saturday, Sunday, or on AGENCY-designated holidays. AGENCY-designated holidays are listed in **TABLE 1 – AGENCY-DESIGNATED HOLIDAYS** below. Deviation from these hours will be permitted upon approval of the Engineer, except in emergencies involving immediate hazard to persons or property.

Deviations from these hours will not be permitted without the prior consent of the Engineer, except in emergencies involving immediate hazard to persons or property. In the event of either a requested or emergency deviation, inspection service fees will be charged against the CONTRACTOR. Service fees will be calculated at overtime rates including benefits, overhead, and travel time; and will be deducted from the amounts due the CONTRACTOR.

Failure of the CONTRACTOR to adhere to working day requirements will result in damages being sustained by the City. Such damages are, and will continue to be, impracticable and extremely difficult to determine. For each OCCURRENCE of a working day or hours violation, as provided herein, the CONTRACTOR shall pay to the AGENCY, or have withheld from monies due to it, the sum of $1,000.00.

TABLE 1 – AGENCY-DESIGNATED HOLIDAYS

New Year's Day

Martin Luther King, Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Eve

Christmas Day

EXECUTION OF THE CONTRACT SHALL CONSTITUTE AGREEMENT BY THE AGENCY AND CONTRACTOR THAT $1,000 PER VIOLATION IS THE MINIMUM VALUE OF THE COST AND ACTUAL DAMAGED CAUSED BY FAILURE OF THE CONTRACTOR TO LIMIT PERFORMANCE OF THE WORK BETWEEN THE ALLOTTED TIMES, THAT SUCH SUM SHALL NOT BE CONSTRUED AS A PENALTY, AND THAT SUCH SUM MAY BE DEDUCTED FROM PAYMENTS DUE THE CONTRACTOR IF SUCH DELAY OCCURS.

6-7.2.1 Restrictions on closure of traffic lanes:

A. At least one (1) lane of traffic in both directions shall be open for public use on the days and at the times specified below, unless approved otherwise by the City Engineer:

1. Saturdays, Sundays and AGENCY designated holidays: from 12:01 a.m. to 11:59 p.m.
2. Fridays and any days preceding an AGENCY designated holiday: from 3:00 p.m. to 11:59 p.m.
3. All days not covered in 1 and 2 above: 4:30 p.m. – 7:30 a.m.
4. Non-construction hours: all hours when the CONTRACTOR's employees are not physically present at the construction site actively performing contract work.

B. On those days and hours when closure of traffic lanes is not prohibited under the provisions of the preceding subparagraph A, no more than one travel lane may be closed at any time during construction hours. During any lane closure, Type II flashing arrow boards shall be used in accordance with the 2012 California MUTCD.

C. Traffic signals shall not be placed in flash operation during the hours that traffic lanes must be kept open as defined in Paragraph A. Under no circumstances shall traffic signal be placed in flash operation without prior approval from the Project Engineer. Traffic signal will be only placed in flash operation by City personnel. CONTRACTOR shall contact the Project Engineer at least two (2) working days in advance to coordinate traffic signal service.

D. Please see the Caltrans' Encroachment Permit for additional lane closure restrictions within the State right-of-way.

6-7.3 Contract Time Accounting. The Engineer will make a daily determination of each working day to be charged against the Contract time. These determinations will be discussed and the CONTRACTOR will be furnished a periodic statement showing allowable number of working days of Contract time, as adjusted, at the beginning of the reporting period. The

statement will also indicate the number of working days charged during the reporting period and the number of working days of Contract time remaining. If the CONTRACTOR does not agree with the statement, he/she shall file a written protest within 15 days after receipt, setting forth the facts of the protest. Otherwise, the statement will be deemed to have been accepted.

6-8 COMPLETION, ACCEPTANCE, AND WARRANTY. The Work will be inspected by the Engineer for acceptance upon receipt of the CONTRACTOR's written assertion that the Work has been completed.

If, in the Engineer's judgment, the Work has been completed and is ready for acceptance, it will so certify to the Board, which may accept the completed Work. The Engineer will, in its certification to the Board, give the date when the Work was completed. This will be the date when the CONTRACTOR is relieved from responsibility to protect the Work.

All work shall be warranted by the CONTRACTOR against defective workmanship and materials for a period of 1 year from the date the Work was completed. The CONTRACTOR shall replace or repair any such defective work in a manner satisfactory to the Engineer, after notice to do so from the Engineer, and within the time specified in the notice. If the CONTRACTOR fails to make such replacement or repairs within the time specified in the notice, the AGENCY may perform this work and the CONTRACTOR's sureties shall be liable for the cost thereof.

6-8.1 General Guaranty. The CONTRACTOR shall remedy any defects in the Work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final acceptance of the Work unless a longer period is specified. The AGENCY will give notice of observed defects with reasonable promptness.

6-9 FORFEITURE DUE TO DELAY. The CONTRACTOR shall complete all or any designated portion of the Work called for under the Contract within the time set forth in Section C (Proposal) of these Specifications.

In accordance with Government Code 53069.85, and all other applicable law, the CONTRACTOR agrees to forfeit and pay the AGENCY the amount of Five Hundred Dollars ($500.00) per day for each and every day of unauthorized delay beyond the completion date, which shall be deducted from any monies due the CONTRACTOR. This payment shall be considered liquidated damages. CONTRACTOR agrees that such liquidated damages are reasonable under the circumstances existing at the time of execution of the contract, that such liquidated damages are to compensate AGENCY for losses that are difficult to measure and that such damages are not a penalty.

Failure of the CONTRACTOR to perform any covenant or condition contained in the Contract Documents within the time period specified shall constitute a material breach of this Contract entitling the AGENCY to terminate the Contract unless the CONTRACTOR applies for, and receives, an extension of time in accordance with the procedures set forth in Section 5-5.

Failure of the AGENCY to insist upon the performance of any covenant or conditions within the time period specified in the Contract Documents shall not constitute a waiver of the CONTRACTOR's duty to complete performance within the designated periods unless the AGENCY has executed a waiver in writing.

The AGENCY's agreement to waive a specific time provision or to extend the time for performance shall not constitute a waiver of any other time provision contained in the Contract Documents.

Failure of the CONTRACTOR to complete performance promptly within the additional time authorized in a waiver or extension of time agreement shall constitute a material breach of this Contract entitling the AGENCY to terminate this agreement.

The CONTRACTOR shall not be deemed in breach of this Contract and no forfeiture due to delay shall be made because of any delays in the completion of the Work due to unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR provided the CONTRACTOR requests an extension of time in accordance with the procedures set forth in Section 5-5. Unforeseeable causes of delay beyond the control of the CONTRACTOR shall include acts of God, acts of a public enemy, acts of the government, acts of the AGENCY, or acts of another CONTRACTOR in the performance of a contract with the AGENCY, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and weather, or delays of subcontractors due to such causes, or delays caused by failure of the owner of a utility to provide for removal or relocation of existing utility facilities. Delays caused by actions or neglect of CONTRACTOR or his/her agents, servants, employees, officers, subcontractors, directors, or of any party contracting to perform part of all of the Work or to supply any equipment or materials shall not be excusable delays. Excusable delays (those beyond the CONTRACTOR's control) shall not entitle the CONTRACTOR to any additional compensation. The sole recourse of the CONTRACTOR shall be to seek an extension of time.

6-10 USE OF IMPROVEMENT DURING CONSTRUCTION. The AGENCY reserves the right to take over and utilize all or part of any completed facility or appurtenance. The CONTRACTOR will be notified in writing in advance of such action. Such action by the AGENCY will relieve the CONTRACTOR of responsibility for injury or damage to said completed portions of the improvement resulting from use by public traffic or from the action of the elements or from any other cause, except CONTRACTOR operations or negligence. The CONTRACTOR will not be required to reclean such portions of the improvement before field acceptance, except for cleanup made necessary by its operations. Nothing in this section shall be construed as relieving the CONTRACTOR from full responsibility for correcting defective work or materials.

In the event the AGENCY exercises its right to place into service and utilize all or part of any completed facility or appurtenance, the AGENCY will assume the responsibility and liability for injury to persons or property resulting from the utilization of the facility or appurtenance so placed into service, except for any such injury to persons or property caused by any willful or negligent act or omission by the CONTRACTOR, Subcontractor, their officers, employees, or agents.

6-11 GUARANTEE. The CONTRACTOR shall warrant and guarantee the entire Work and all parts thereof, including that performed and constructed by subcontractors, and others employed directly or indirectly on the Work, against faulty or defective materials, equipment or workmanship for the maximum period provided by law. In addition thereto, for a period of one (1) year commencing on the date of acceptance of the Work, the CONTRACTOR shall, upon the receipt of notice in writing from the AGENCY, promptly make all repairs arising out of defective materials, workmanship or equipment and bear the cost thereof. The AGENCY is

hereby authorized to make such repairs and the CONTRACTOR and Surety shall bear the cost thereof if, ten (10) days after the giving of such notice to the CONTRACTOR, the CONTRACTOR has failed to make or undertake with due diligence the repairs; provided, however, that, in the case of an emergency where, in the opinion of the AGENCY, delay could cause serious loss or damage, repairs may be made without notice being sent to the CONTRACTOR or Surety, and all expense in connection therewith shall be charged to the CONTRACTOR and Surety.

For the purpose of this article "Acceptance of the Work" shall mean the acceptance of the Work by the AGENCY in accordance with Subsection 6-8 but not for the purpose of extinguishing any covenant or agreement or agreement on the part of the CONTRACTOR to be performed or fulfilled under this Contract, which has not in fact been performed or fulfilled at the time of such acceptance all of such covenants and agreements, shall continue to be binding on the CONTRACTOR until they have been fulfilled.

The effective date of Acceptance of the Work and commencement of the Guarantee shall be the date of acceptance of the Notice of Completion by the City Council.

6-12 DISPUTES AND CLAIMS

6-12.1 General. Any and all decisions made on appeal pursuant to this Subsection 6-12 shall be in writing. Any "decision" purportedly made pursuant to this Subsection 6-12 that is not in writing shall not be binding upon the AGENCY and should not be relied upon by the CONTRACTOR.

Nothing in this subsection shall be considered as relieving the CONTRACTOR from his/her duty to file the notice required under Subsection 6-13 or other duties required by the Contract Documents.

6-12.2 Administrative Review. Request for review made to the Construction Inspector or Project Engineer may be either oral or written. Request for review made to the City Engineer shall be made in writing with supporting evidence attached.

The CONTRACTOR shall submit each request for review within twenty-one (21) calendar days of receipt of the decision that he/she is requesting.

Prior to demand for arbitration, the CONTRACTOR shall exhaust his/her administrative remedies by attempting to resolve his/her dispute or claim with AGENCY`s staff in the following sequence:

1. Project Engineer
2. City Engineer

Should the Project Engineer fail to address the CONTRACTOR's request for review of a disputed decision within fourteen (14) calendar days after receiving such request, the CONTRACTOR may proceed directly to the City Engineer. At the option of the AGENCY, the person to whom the request for review is directed may elect to take such request to a higher level and the CONTRACTOR's request shall be deemed to be properly submitted to such higher level.

The City Engineer shall address disputes or claims within twenty eight (28) calendar days after receiving such request and all necessary supporting data. The City Engineer's decision on the dispute or claim shall be the AGENCY's final decision.

6-12.3 Arbitration. Claims and disputes arising under or related to the performance of the contract, except for claims that have been released by execution of the "Release on Contract" as provided in Subsection 9-4, shall be resolved in arbitration unless the AGENCY and the CONTRACTOR agree in writing, after the claim or dispute has arisen, to waive arbitration and to have the claim or dispute litigated in court of competent jurisdiction. Arbitration shall be conducted, to the extent feasible, pursuant to Chapter 3 (Sections 301-393, inclusive) of Division 2 of Title 1 of the California Code of Regulations except that references therein to the "State Contract Act" shall be construed to mean "applicable law" and "Public Agency", or "Department" shall be construed to mean "AGENCY" as defined in Subsection 1.2. The arbitration decision shall be decided under and in accordance with California law, supported by substantial evidence, and in writing, contain the basis for the decision, findings of fact, and conclusions of law.

Arbitration shall be initiated by a Demand for Arbitration. The CONTRACTOR shall request a Demand for Arbitration not later than ninety (90) calendar days after the date of the final written decision of the AGENCY on the claim or dispute.

All contracts valued at more than $15,000 between the CONTRACTOR and his/her Subcontractors and Suppliers shall include a provision that the Subcontractors and Suppliers shall be bound to the CONTRACTOR to the same extent that the CONTRACTOR is bound to the AGENCY by all terms and provisions of the Contract, including these arbitration provisions.

6-13 NOTICE OF POTENTIAL CLAIM. 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 Engineer, or the happening of any event, thing or occurrence, unless the CONTRACTOR shall have given the Engineer due notice in writing, of the potential claim as hereinafter specified, provided, however, that compliance with this Subsection 6-12 shall not be a prerequisite as to any claim that is based on differences in measurements or errors of computation as to the Contract quantities.

Additionally, this Subsection 6-13 shall not supersede the specific notice and protest requirements of Subsection 3-4 "Changed Conditions" and Subsection 6-7.3 "Contract Time Accounting" respectively.

A written notice of potential claim shall set forth the reasons 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. A notice as above required must have been given to the Engineer prior to the time that the CONTRACTOR shall have performed the Work giving rise to the potential claim for additional compensation, if based on an act or failure to act by the Engineer, or in all other cases within fifteen (15) days after the happening of the event, thing or occurrence giving rise to the potential claim.

It is the intention of this Subsection 6-13 that differences between the parties arising under and by the 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 he/she 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 filed.

SECTION 7 – RESPONSBILITIES OF THE CONTRACTOR

7-1 CONTRACTOR'S EQUIPMENT AND FACILITIES. The CONTRACTOR shall furnish and maintain in good condition all equipment and facilities as required for the proper execution and inspection of the Work. Such equipment and facilities shall meet all requirements of applicable ordinances and laws.

A noise level limit of 85 dba at a distance of fifty (50) feet shall apply to all construction equipment on or related to the job, whether owned by the CONTRACTOR or not. The use of excessively loud warning signals shall be avoided except in those cases where required for the protection of personnel.

The CONTRACTOR shall arrange and maintain a secure storage site for all equipment and materials. All equipment and unused materials shall be returned to this site at the end of each work day.

7-2 LABOR.

7-2.1 General. Only competent workers shall be employed on the Work. Any person employed who is found to be incompetent, intemperate, troublesome, disorderly, or otherwise objectionable, or who fails or refuses to perform work property and acceptably, shall be immediately removed from the Work by the CONTRACTOR and not be reemployed on the Work.

7-2.2 Laws. The CONTRACTOR, its agents and employees shall be bound by and comply with applicable provisions of the Labor Code and Federal, State and local laws related to labor.

The CONTRACTOR shall strictly adhere to the provisions of the Labor Code regarding minimum wages; the 8-hour day and 40-hour week; overtime; Saturday, Sunday, and holiday work; and nondiscrimination because of race, color, national origin, sex, or religion. Failure to file any report due under said orders will result in suspension of periodic progress payments.

In accordance with the Labor Code, the Board has on file and will publish a schedule of prevailing wage rates for the types of work to be done under the Contract. The CONTRACTOR shall not pay less than these rates.

Each worker shall be paid subsistence and travel as required by the collective bargaining agreements on file with the State of California Department of Industrial Relations.

The CONTRACTOR's attention is directed to Section 1776 of the Labor Code which imposes responsibility upon the CONTRACTOR for the maintenance, certification, and availability for inspection of such records for all persons employed by the CONTRACTOR of Subcontractor in connection with the project. The CONTRACTOR shall agree through the Contract to comply with this Section and the remaining provisions of the Labor Code.

The CONTRACTOR shall ensure unlimited access to the job site for all Equal Opportunity Compliance officers.

Every CONTRACTOR and Subcontractor shall keep an accurate record showing the name, occupation, and the actual per diem wages paid to each worker employed by him/her in connection with the public work. The record shall be kept open at all reasonable hours to the inspection of the body awarding the Contract and to the Division of Labor Law Enforcement.

7-2.2.1 Overtime and Shift Work. The CONTRACTOR may establish overtime and shift work as a regular procedure only with the written permission of the Engineer. Such permission may be revoked at any time. No work other than overtime and shift work established as a regular procedure shall be done outside the hours described in Section 6-7.2, nor on Saturdays, Sundays or legal holidays, except such work as is necessary for the proper care and protection of the work already performed or except in case of an emergency.

All costs for overtime inspection, except those occurring as a result of overtime and shift work established as a regular procedure, shall be paid by the CONTRACTOR. Overtime inspection shall include inspection required during holidays observed by the AGC and Trade Unions, Saturdays, Sundays, and any weekday outside the hours described in Section 6-7.2. Such costs will include but will not necessarily be limited to engineering, inspection, general supervision and other overhead expenses that are directly chargeable to the overtime work. The AGENCY shall deduct all such charges from payments due the CONTRACTOR.

7-3 LIABILITY INSURANCE.

7-3.1 General. CONTRACTOR and AGENCY agree that AGENCY, its employees, agents and officials should, to the extent permitted by law, be fully protected from any loss, injury, damage, claim, lawsuit, cost, expense, attorneys fees, litigation costs, defense costs, court costs or any other cost arising out of or in any way related to the performance of this Agreement. Accordingly, the provisions of this indemnity provision are intended by the parties to be interpreted and construed to provide the fullest protection possible under the law to the AGENCY. CONTRACTOR acknowledges that AGENCY would not have entered into this Agreement in the absence of the commitment of CONTRACTOR to indemnify and protect AGENCY as set forth here.

7-3.2 To the full extent permitted by law, CONTRACTOR shall defend, indemnify and hold harmless AGENCY, its employees, agents and officials, from any liability, claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, expenses or costs of any kind, whether actual, alleged, or threatened, actual attorneys fees incurred by AGENCY, court costs, interest, defense costs including expert witness fees and any other costs or expenses of any kind whatsoever without restriction or limitation incurred in relation to, as a consequence of, arising out of or in any way attributable actually, allegedly or impliedly, in whole or in part to the performance of this Agreement. All obligations under this provision are to be paid by CONTRACTOR as they are incurred by the AGENCY.

7-3.3 Without affecting the rights of AGENCY under any provision of this agreement or this section, CONTRACTOR shall not be required to indemnify and hold harmless AGENCY as

set forth above for liability attributable to the sole fault of AGENCY, provided such sole fault is determined by agreement between the parties or the findings of a court of competent jurisdiction.

This exception will apply only in instances where the AGENCY is shown to have been solely at fault and not in instances where CONTRACTOR is solely or partially at fault or in instances where AGENCY's fault accounts for only a percentage of the liability involved. In those instances, the obligation of CONTRACTOR will be all-inclusive and AGENCY will be indemnified for all liability incurred, even though a percentage of the liability is attributable to the conduct of the AGENCY.

7-3.4 CONTRACTOR acknowledges that its obligation pursuant to this section extends to liability attributable to AGENCY, if that liability is less than the sole fault of AGENCY. CONTRACTOR has no obligation under this Agreement for liability proven in a court of competent jurisdiction or by written agreement between the parties to be the sole fault of AGENCY.

7-3.5 The obligations of CONTRACTOR under this or any other provision of this Agreement will not be limited by the provisions of any workers compensation act or similar act. CONTRACTOR expressly waives its statutory immunity under such statutes or laws as to AGENCY, its employees, agents and officials.

7-3.6 CONTRACTOR agrees to obtain executed indemnity agreements with provisions identical to those as set forth here in this section from each and every subcontractor, sub-tier CONTRACTOR or any other person or entity involved by, for, with or on behalf of CONTRACTOR in the performance or subject matter of this Agreement. In the event CONTRACTOR fails to obtain such indemnity obligations from others as required here, CONTRACTOR agrees to be fully responsible according to the terms of this section.

7-3.7 Failure of AGENCY to monitor compliance with these requirements imposes no additional obligations on AGENCY and will in no way act as a waiver of any rights hereunder. This obligation to indemnify and defend AGENCY as set forth herein is binding on the successors, assigns or heirs of CONTRACTOR and shall survive the termination of this Agreement or this section.

7-3.8 CONTRACTOR agrees to provide insurance in accordance with the requirements as set forth here. If CONTRACTOR uses existing coverage to comply with these requirements and that coverage does not meet the requirements set forth herein, CONTRACTOR agrees to amend, supplement or endorse the existing coverage to do so. The following coverages will be provided by CONTRACTOR and maintained on behalf of AGENCY and in accordance with the requirements set forth herein.

7-3.9 Commercial General Liability/Umbrella Insurance. Primary insurance shall be provided on ISO-CGL form No. CG 00 01 11 85 or 88. Total limits shall be not less than two million dollars ($2,000,000.00) per occurrence for all coverages and two million dollars ($2,000,000.00) general aggregate. AGENCY and its officers, agents and employees shall be named as additional insureds using ISO additional insureds endorsement form CG 20 10 11 85 (in no event will AGENCY accept an endorsement form with an edition date later than 1990). Coverage shall apply on a primary non-contributing basis in relation to any other insurance or self-insurance, primary or excess, available to AGENCY or any employee or

agent of AGENCY. Coverage shall not be limited to the vicarious liability or supervisory role of any additional insured. Umbrella Liability Insurance (over primary) shall apply to bodily injury/property damage, personal injury/advertising injury, at a minimum, and shall include a "drop down" provision providing primary coverage above a maximum of $25,000.00 self-insured retention for liability not covered by primary policies but covered by the umbrella policy. Coverage shall be following form to any underlying coverage. Coverage shall be provided on a "pay on behalf" basis, with defense costs payable in addition to policy limits. There shall be no cross-liability exclusion. Policies shall have concurrent starting and ending dates.

Each policy of insurance shall contain a clause prohibiting cancellation, modification or lapse without thirty (30) days prior written notice having been given to the City. All insurance policies shall be subject to approval by the City Attorney and certificates evidencing such policies shall be provided to the City concurrently with the filing of all required bonds.

7-3.10 Business Auto/Umbrella Liability Insurance. Primary coverage shall be written on ISO Business Auto Coverage form CA 00 01 06 92 including symbol 1 (Any Auto). Limits shall be no less than two million dollars ($2,000,000.00) per accident. Starting and ending dates shall be concurrent. If CONTRACTOR owns no autos, a non-owned auto endorsement to the General Liability policy drafted above is acceptable.

7-4 WORKERS' COMPENSATION INSURANCE.

7-4.1 Workers' Compensation/Employers' Liability shall be written on a policy form providing workers' compensation statutory benefits as required by law. Employers' liability limits shall be no less than one million dollars per accident or disease. Employers' liability coverage shall be scheduled under any umbrella policy described above. Unless otherwise agreed, this policy shall be endorsed to waive any right of subrogation as respects the AGENCY, its officers, agents or employees.

7-4.2 CONTRACTOR and AGENCY further agree as follows:

7-4.2.1 This Section supersedes all other sections and provisions of this Agreement to the extent that any other section or provision conflicts with or impairs the provisions of this Section.

7-4.2.2 Nothing contained in this Section is to be construed as affecting or altering the legal status of the parties to this Agreement. The insurance requirements set forth in this Section are intended to be separate and distinct from any other provision in this Agreement and shall be interpreted as such.

7-4.2.3 All insurance coverage and limits provided pursuant to this Agreement shall apply to the full extent of the policies involved, available, or applicable. Nothing contained in this Agreement or any other agreement relating to the AGENCY or its operations limits the application of each insurance coverage.

7-4.2.4 Requirements of specific coverage features or limits contained in this Section are not intended as a limitation on coverage, limits or other requirements, or a waiver of any coverage normally provided by any insurance. Specific reference to a given coverage feature is for purposes of clarification only and is not intended by any party to be all-inclusive, or to the exclusion of other coverage, or a waiver of any type.

7-4.2.5 For purposes of insurance coverage only, this Agreement shall be deemed to have been executed immediately upon any party hereto taking any steps that can be deemed to be in furtherance of or towards performance of this Agreement.

7-4.2.6 All general or auto liability insurance coverage provided pursuant to this Agreement, or any other agreements pertaining to the performance of this Agreement, shall not prohibit CONTRACTOR, and CONTRACTOR's agents, officers or employees from waiving the right of subrogation prior to a loss. CONTRACTOR hereby waives all rights of subrogation against AGENCY.

7-4.2.7 Unless otherwise approved by AGENCY, CONTRACTOR's insurance shall be written by insurers authorized to do business in the State of California and with a minimum "Best's" Insurance Guide rating of "A:VII." Self-insurance will not be considered to comply with these insurance specifications.

7-4.2.8 In the event any policy of insurance required by this Agreement does not comply with these requirements or is canceled and not replaced, AGENCY has the right but not the duty to obtain the insurance it deems necessary and any premium paid by AGENCY will be promptly reimbursed by CONTRACTOR. Upon CONTRACTOR's failure to make such reimbursement within 30 days of written demand, AGENCY may deduct that sum from any monies due CONTRACTOR hereunder or otherwise.

7-4.2.9 CONTRACTOR agrees to provide evidence of the insurance required herein, satisfactory to AGENCY, consisting of certificate(s) of insurance evidencing all of the coverages required and an additional insured endorsement to CONTRACTOR's general liability and umbrella liability policy (if any) using ISO form CG 20 10 11 85. Certificate(s) are to reflect that the insurer will provide 30 days' notice of any cancellation of coverage. CONTRACTOR agrees to require its insurer to modify such certificates to delete any exculpatory wording stating that failure of insurer to mail written notice of cancellation imposes no obligation, and to delete the word "endeavor" with regard to any notice provisions. CONTRACTOR agrees to provide complete copies of policies to AGENCY upon request.

7-4.2.10 CONTRACTOR shall provide proof that policies of insurance required herein expiring during the term of this Agreement have been renewed or replaced with other policies providing at least the same coverage. Such proof shall be furnished within 72 hours of the expiration of the coverages.

7-4.2.11 Any actual or alleged failure on the part of AGENCY or any other additional insured under these requirements to obtain proof of insurance required under this Agreement in no way waives any right or remedy of AGENCY or any additional insured, in this or any other regard.

7-4.2.12 CONTRACTOR agrees to require all subcontractors or other parties hired for this project to provide general liability insurance naming as additional insureds all parties to this Agreement. CONTRACTOR agrees to obtain certificates evidencing such coverage and make reasonable efforts to ensure that such coverage is provided as required here. CONTRACTOR agrees to require that no contract used by any subcontractor, or contracts CONTRACTOR enters into on behalf of AGENCY, will reserve the right to charge back to AGENCY the cost of insurance required by this

Agreement. CONTRACTOR agrees that upon request, all agreements with subcontractors or others with whom CONTRACTOR contracts on behalf of AGENCY will be submitted to AGENCY for review. Failure of AGENCY to request copies of such agreement will not impose any liability on AGENCY, its officers, agents, or employees.

7-4.2.13 If CONTRACTOR is a Limited Liability Company, general liability coverage must be amended so that the Limited Liability Company and its Managers, Affiliates, employees, agents and other persons necessary or incidental to its operations are insureds.

7-4.2.14 CONTRACTOR agrees to provide immediate notice to AGENCY of any claim or loss against CONTRACTOR that includes AGENCY as a defendant. AGENCY assumes no obligation or liability by such notice, but has the right (but not the duty) to monitor the handling of any such claim or claims.

7-5 PERMITS. Prior to the start of any work, the CONTRACTOR shall apply for and receive any applicable City, County, State, and Federal permits. All costs are the Contractor's responsibility.

7-5.1 CALTRANS ENCROACHMENT PERMIT – Prior to start of work within the State of California's right-of-way or work affecting the State of California facilities, the contractor will be required to obtain an Encroachment Permit at the following State of California Transportation office:

CALTRANS, DISTRICT 7
PERMIT ENGINEER
100 South Main Street
Los Angeles, CA 90012

NOTE: The City has already obtained Caltrans Encroachment permit for LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT.
The CONTRACTOR shall apply for the contractor's inclusion to the City's encroachment permit prior to start of work of this contract. The CONTRACTOR shall pay all business taxes or license fees that are required for the work.

Application fee and site inspection costs, due at the time of application, are collected at the time of permit issuance by Caltrans District 7 (Ventura Office).

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

All costs associated with these permits are responsibility of CONTRACTOR. CONTRACTOR is required to obtain a no fee City Encroachment permit for this project and comply with all permit conditions.

7-6 THE CONTRACTOR'S REPRESENTATIVE. Before staring work, the CONTRACTOR shall designate in writing a representative who shall have complete authority to act for it. An alternative representative may be designated as well. The representative or alternate shall be present at the Work site whenever work is in progress or whenever actions of the elements necessitate its presence to take measures necessary to protect the Work, persons, or property. Any order or communication given to this representative shall be deemed delivered to the

CONTRACTOR. A joint venture shall designate only one representative and alternate. In the absence of the CONTRACTOR or its representative, instructions or directions may be given by the Engineer to the superintendent or person in charge of the specific work to which the order applies. Such order shall be complied with promptly and referred to the CONTRACTOR or its representative.

In order to communicate with the AGENCY, the CONTRACTOR's representative, superintendent, or person in charge of specific work shall be able to speak, read, and write the English language.

7-7 COOPERATION AND COLLATERAL WORK. The CONTRACTOR shall be responsible for ascertaining the nature and extent of any simultaneous, collateral, and essential work by others. The AGENCY, its workers and CONTRACTORs and others, shall have the right to operate within or adjacent to the Work site during the performance of such work.

The AGENCY, the CONTRACTOR, and each of such workers, CONTRACTORs and others, shall coordinate their operations and cooperate to minimize interference.

The CONTRACTOR shall include in its Bid all costs involved as a result of coordinating its work with others. The CONTRACTOR will not be entitled to additional compensation from the AGENCY for damages resulting from such simultaneous, collateral, and essential work. If necessary to avoid or minimize such damage or delay, the CONTRACTOR shall redeploy its work force to other parts of the Work.

Should the CONTRACTOR be delayed by the AGENCY, and such delay could not have been reasonably foreseen or prevented by the CONTRACTOR, the Engineer will determine the extent of the delay, the effect on this project, and any extension of time.

CONTRACTOR shall coordinate his/her work so as to minimize disruption to ongoing or scheduled private development projects in the project area.

7-8 PROJECT SITE MAINTENANCE.

7-8.1 Cleanup and Dust Control. Throughout all phases of construction, including suspension of work, and until the final acceptance, the CONTRACTOR shall keep the site clean and free from rubbish and debris. The CONTRACTOR shall also abate dust nuisance by cleaning, sweeping and sprinkling with water, or other means as necessary. The use of water resulting in mud on public streets will not be permitted as a substitute for sweeping or other methods.

When required by the Plans or Specifications, the CONTRACTOR shall furnish and operate a self-loading motor sweeper with spray nozzles at least once each working day for the purpose of keeping paved areas acceptably clean wherever construction, including restoration, is incomplete.

Materials and equipment shall be removed from the site as soon as they are no longer necessary. Before the final inspection, the site shall be cleared of equipment, unused materials, and rubbish so as to present a satisfactory clean and neat appearance. All cleanup costs shall be included in the CONTRACTOR's Bid.

Care shall be taken to prevent spillage on haul routes. Any such spillage shall be removed immediately and the area cleaned.

Excess excavated material from catch basics or similar structures shall be removed from the site immediately. Sufficient material may remain for use as backfill if permitted by the Specifications. Forms and form lumber shall be removed from the site as soon as practicable after stripping.

Failure of the CONTRACTOR to comply with the Engineer's cleanup orders may result in an order to suspend work until the condition is corrected. No additional compensation will be allowed as a result of such suspension.

7-8.1.2 Work Area Appearance

The CONTRACTOR shall maintain a neat appearance to the Work at all times.

All unsuitable construction materials and rubbish and debris shall be regularly removed from the job site, be transported to a suitable location, and be disposed of in a proper and legal manner. Materials which are to be disposed of shall not be stored at the project sites but shall be removed before the end of the each working day.

In any area visible to the public, the following shall apply:

1. Broken concrete and debris developed during clearing and grubbing shall be disposed of weekly.
2. The CONTRACTOR shall furnish trash bins for all debris from structure construction. All debris shall be placed in trash bins daily.
3. Forms or false work that are to be re-used shall be neatly stacked concurrent with their removal.
4. Forms and false work that are not to be re-used shall be disposed of with their removal.
5. Wash down from concrete trucks shall be at one location. Concrete from wash down procedures shall be removed from the site weekly.

7-8.2 Air Pollution Control. The CONTRACTOR shall not discharge smoke, dust, or any other air contaminants into the atmosphere in such quantity as will violate the regulations of any legally constituted authority.

7-8.3 Vermin Control. At the time of acceptance, structures entirely constructed under the Contract shall be free of rodents, insects, vermin, and pests. Necessary extermination work shall be arranged and paid for by the CONTRACTOR as part of the Work within the Contract time, and shall be performed by a licensed exterminator in accordance with requirements of governing authorities. The CONTRACTOR shall be liable for injury to persons or property and responsible for the elimination of offensive odors resulting from extermination operations.

7-8.4 Sanitation. The CONTRACTOR shall provide and maintain enclosed toilets for the use of employees engaged in the Work. These accommodations shall be maintained in a neat and sanitary condition. They shall also comply with all applicable laws, ordinances, and regulations pertaining to public health and sanitation of dwellings and camps.

Wastewater shall not be interrupted. Should the CONTRACTOR disrupt existing sewer facilities, sewage shall be conveyed in closed conduits and disposed of in a sanitary sewer system. Sewage shall not be permitted to flow in trenches or be covered by backfill.

7-8.5 Temporary Light, Power, and Water. 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.

7-8.6 Water Pollution Control. The CONTRACTOR shall exercise every reasonable precaution to protect channels, storm drains, and bodies of water from pollution. It shall conduct and schedule operations so as to minimize or avoid muddying and silting of said channels, drains, and waters. Water pollution control work shall consist of constructing those facilities which may be required to provide prevention, control, and abatement of water pollution.

7-8.6.1 General. This item shall consist of preparation, implementation and compliance with a storm water pollution prevention plan (SWPPP) for the project, if applicable.

7-8.6.2 Storm Water Pollution Prevention Plan (SWPPP) Preparation. CONTRACTOR shall submit to the engineer a completed and signed SWPPP at the preconstruction conference. The plan may utilize the practices recommended in the latest edition of the *California Storm Water Best Management Practices Handbook*, available from California Stormwater Quality Association (CSQA), and online at http://www.cabmphandbooks.net/ . The plan shall be consistent with the construction General Permit, issued by the State Water Resources, Control Board, through submittal of the Notice of Intent (NOI).

If construction will occur between October 1 and April 15 (considered as the rainy season per the City of Calabasas Municipal Code), a wet weather erosion control plan must be submitted. Additionally, Best Management Practices (BMPs) implemented during the AGENCY's rainy season shall include but not be limited to those appropriate for wet weather conditions.

7-8.6.3 Storm Water Pollution Prevention Measures. All storm water pollution prevention measures shall be in accordance with the submitted SWPPP. In the event circumstances during the course of construction require changes to the original SWPPP, a revised plan shall be promptly submitted to the AGENCY's representative in each instance. No responsibility shall accrue to the AGENCY as a result of the plan or as a result of knowledge of the plan. All work installed by the CONTRACTOR in connection with the SWPPP but not specified to become a permanent part of the project shall be removed and the site restored in so far as practical to its original condition prior to completion of construction or when directed by the AGENCY's representative.

7-8.6.4 Storm Water Pollution Prevention – Measurement and Payment. Unless otherwise indicated in the Special Provisions, measurement and payment for Storm Water Pollution Prevention Measures, as described herein, shall be included in the items of Work requiring storm water pollution prevention measures as indicated in the project Special Provisions. Such payment shall be considered full compensation for all labor,

materials, tools, and equipment for completion, and implementation and compliance with the SWPPP.

7-8.7 Drainage Control. The CONTRACTOR shall maintain drainage within and through the work areas. Earth dams will not be permitted in paved areas. Temporary dams of sandbags, asphaltic concrete, or other acceptable material will be permitted when necessary. Such dams shall be removed from the site as soon as their use is no longer necessary.

7-9 PROTECTION AND RESTORATION OF EXISTING IMPROVEMENTS. The CONTRACTOR shall be responsible for the protection of public and private property adjacent to the Work and shall exercise due caution to avoid damage to such property.

The CONTRACTOR shall relocate, repair, replace or reestablish all existing improvements within the project limits (e.g., curbs, sidewalks, catch basins, catch basin screens, driveways, fences, walls, sprinkler systems, signs, utility installations, pavements, structures, survey monuments, landscaping, etc.) that are damaged or removed as a result of the CONTRACTOR's operations or as required by the plans and specifications.

All existing improvements, either within the right-of-way or not, including irrigation lines that are damaged by actions of the CONTRACTOR, shall be restored by the CONTRACTOR to their original or better condition at the CONTRACTOR's expense.

The CONTRACTOR shall mark, as approved by the Engineer, all survey monuments, manholes, valves, substructures, or other items that are visible on the surface and will be covered by his operations. This shall be completed prior to the start of that operation and approved by the Engineer.

Existing traffic striping, pavement markings, and curb markings shall also be considered as existing improvements and the CONTRACTOR shall repaint or replace, at the CONTRACTOR's expense, such striping or markings (except for traffic striping and pavement markings within the limits of the Work) if damaged or if their reflectivity is reduced due to construction operations.

All restoration of existing improvements must occur within the construction completion date, unless directed otherwise by the City Engineer.

Maintenance of street and traffic signal systems that are damaged, temporarily removed or relocated shall be done in conformance with 307-1.5.

Trees, lawns, and shrubbery that are not to be removed shall be protected from damage or injury. If damaged or removed due to CONTRACTOR's operations, they shall be restored or replaced in as nearly the original condition and location as is reasonably possible. Lawns shall be reseeded and covered with suitable mulch.

The CONTRACTOR shall give reasonable notice to occupants or owners of adjacent property to permit them to salvage or relocate plants, trees, fences, sprinklers, and other improvements, within the right-of-way which are designated for removal and would be destroyed because of the Work.

All costs to the CONTRACTOR for protecting, removing, restoring, relocating, repairing, replacing, or reestablishing existing improvements shall be the responsibility of the CONTRACTOR.

7-10 PUBLIC CONVENIENCE AND SAFETY. One week prior to pre-construction meeting, the CONTRACTOR shall submit his/her complete construction schedule to the Engineer for approval. The CONTRACTOR shall submit requests for changes in the schedule to the Engineer for approval at least forty eight (48) hours prior to the scheduled Work.

7-10.1 Traffic and Access. The CONTRACTOR's operations shall cause no unnecessary inconvenience. The access rights of the public shall be considered at all times. Unless otherwise authorized, traffic shall be permitted to pass through the Work, or an approved detour shall be provided.

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

Safe and adequate pedestrian zones and public transportation stops, as well as pedestrian crossings of the Work at intervals not exceeding 90 m (300 fee), shall be maintained unless otherwise approved by the Engineer.

Vehicular access to residential driveways shall be maintained to the property lien except when necessary construction precludes such access for reasonable periods of time. If backfill has been completed to the extent that safe access may be provided, and the street is opened to local traffic, the CONTRACTOR shall immediately clear the street and driveways and provide and maintain access.

The CONTRACTOR shall cooperate with the various parties involved in the delivery of mail and the collection and removal of trash and garbage to maintain existing schedules for these services.

Grading operations, roadway excavation and fill construction shall be conducted by the CONTRACTOR in a manner to provide a reasonably satisfactory surface for traffic. When rough grading is completed, the roadbed surface shall be brought to a smooth, even condition satisfactory for traffic.

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

The CONTRACTOR will be required to maintain at least one lane of traffic in each direction through the project area at all times in a manner satisfactory to the Engineer in the form of an engineered traffic control plan. The engineered traffic control plans must be signed by a California registered civil and/or traffic engineer. The plan is a required submittal for review one week prior to the pre-construction meeting.

If traffic control on the project shall be implemented by a sub-contractor, such subcontractor must specialize in Traffic Control and be approved by the City Engineer.

The CONTRACTOR shall include in its Bid all costs for the above requirements.

7-10.1.1 General. One week prior to pre-construction meeting, the CONTRACTOR shall submit his/her complete construction schedule to the Engineer for approval. The

CONTRACTOR shall submit requests for changes in the schedule to the Engineer for approval at least forty eight (48) hours prior to the scheduled Work.

7-10.1.2 Notification to the Public. Affected properties will be determined by the Engineer and are, in general, those properties that fall within 500 feet of the limits of the work. CONTRACTOR shall remain aware of all adjacent property owners and take all steps necessary to minimize construction impacts and disturbances to all affected property owners. The CONTRACTOR is required to distribute the approved public notice to property owners one week prior to roadway construction. CONTRACTOR shall be responsible for all costs associated with these tasks and responsibilities in the various contract bid items.

The CONTRACTOR is required to notify the City by e-mail that public notices have been distributed. The e-mail shall be addressed to the City representative(s) designated during the pre-construction meeting. The e-mail shall be sent to the City no later than 8 a.m. on the day following distribution of the notices. The e-mail notification to the City shall contain a map showing the limits of distribution and the dates and times distributed. A separate e-mail shall be sent for each distribution. The City will use the information on the e-mails to verify that the distribution has been performed. If the distribution is not verified by the City, the City will e-mail to the CONTRACTOR's representative the locations which must be redistributed with the new information. The CONTRACTOR shall not perform work in the distribution area without e-mail notification of verification by the City of the distribution.

The CONTRACTOR shall submit a sample of a public notice for review and approval by the Engineer. The CONTRACTOR shall provide changes as directed by the City representative and submit final draft for approval.

The CONTRACTOR shall furnish and place "No Parking" signs, 12"x18" minimum size, approved by the Engineer, along the street in front of every residence and/or business affected by the work, two (2) working days in advance of any work. In rural areas, the signs shall be placed at a spacing not exceeding 400 feet. The signs shall include the day and time during which parking is prohibited. Parking restrictions shall be limited to the intervals between 8 a.m. to 5 p.m. to allow parking during the night. The CONTRACTOR shall remove these signs immediately when they are no longer needed.

If the work is delayed or rescheduled for any reason after placement of "No Parking" signs, the CONTRACTOR shall re-date the signs affected and re-notify the residents and businesses of the change via a new "door-knob" notice. If the work is delayed more than five days, the CONTRACTOR shall remove the signs and place re-dated signs two (2) days in advance of the work.

7-10.1.3 Notification to the Public Agencies. The CONTRACTOR shall notify the following Agencies 48 hours prior to working in the area within the City of Calabasas unless otherwise noted:

City of Calabasas	(818) 224-1600
Los Angeles County Sanitation District	(562) 699-7411
Los Angeles County Sheriff Department (Calabasas)	(818) 991-8003

Los Angeles County Fire Department	(323) 890-4132
U.S. Post Office, Calabasas	(818) 348-3226
CleanStreet Street Sweeping	(310) 329-3078

7-10.1.4 Parking Restrictions and Posting for Tow Away. No Parking signs, posted by the CONTRACTOR, shall be of heavy card stock and not less than 1.75 square feet of surface area on the face. Background color shall be white and letters shall be printed in red water resistant ink except day, date, and time of restriction may be printed in black water resistant ink. The signs shall be printed with the words "Tow Away" and "No Parking" with a character height of not less than 2.75 inches and a stroke width of not less than 0.5 inches. The day, dated, and time of the particular restriction shall be printed or attached below the above mentioned wording in characters of not less than 2.0 inches in height and 0.4 inches in stroke width. The day of the week shall be written out or properly abbreviated with three to four letters; date or dates or restriction shall be listed completely; the beginning and ending times shall be clearly listed on the sign.

Signs shall be mounted such that the wording "No Parking" is at an elevation at least three feet above the adjacent flowline. Signs may be tied with string to trees and power poles, taped to existing sign poles, or mounted to stakes or barricades as provided by the CONTRACTOR. The signs shall be placed as needed to control the parking of cars within the construction zone; signs shall be placed at intervals of 75 feet or less along each side of the roadway.

Signs shall be posted and maintained by the CONTRACTOR for a period of 72 hours prior to the restrictions becoming effective. The CONTRACTOR may only post parking restrictions that are effective for the duration of the Work. Upon completion of the Work, the CONTRACTOR shall promptly and completely remove and dispose all signs, stakes, and barricades. The CONTRACTOR shall promptly reset or replace all damaged or defective signs.

The CONTRACTOR shall be fully responsible for the adequate removal of all parked cars. The CONTRACTOR shall coordinate the removal of all vehicles with the Sheriff Department. The CONTRACTOR shall notify the Sheriff Communications Center upon posting of the parking restrictions for a particular street. For removal of parked vehicles, the CONTRACTOR shall notify the Sheriff Communications Center not less than two hours prior to the needed removal, stating the address nearest the parked vehicle, make, model, color and license number. The City shall not be responsible for any delay or additional costs associated with the removal of parked cars that obstruct the construction operation.

If a vehicle owner successfully contests a towing citation in court, and their citation is dismissed for causes related to the CONTRACTOR's failure to perform the requirements of this section, the CONTRACTOR shall reimburse the City for the cost of any claims associated with the towing citation.

DEVIATIONS FROM THE REQUIREMENTS OF THIS SUBSECTION WILL BE PERMITTED ONLY ON PRIOR CONSENT OF THE ENGINEER. FAILURE OF THE

CONTRACTOR TO ADHERE TO THE REQUIREMENTS OF THIS SUBSECTION, OR FAILURE OF THE CONTRACTOR TO COMPLETE HIS DAILY SCHEDULE ONCE "TEMPORARY NO PARKING" SIGNS HAVE BEEN POSTED, WILL RESULT IN DAMAGES BEING SUSTAINED BY THE CITY. SUCH DAMAGES ARE, AND WILL CONTINUE TO BE, IMPRACTICABLE AND EXTREMELY DIFFICULT TO DETERMINE. FOR EACH OCCURRENCE OF A VIOLATION, AS PROVIDED HEREIN, THE CONTRACTOR SHALL PAY TO THE AGENCY, OR HAVE WITHHELD FROM MONIES DUE TO IT, THE SUM OF $1,000.00.

EXECUTION OF THE CONTRACT SHALL CONSTITUTE AGREEMENT BY THE AGENCY AND CONTRACTOR THAT $1,000.00 PER VIOLATION IS THE MINIMUM VALUE OF THE COST AND ACTUAL DAMAGE CAUSED, THAT SUCH SUM SHALL NOT BE CONSTRUED AS A PENALTY, AND THAT SUCH SUM MAY BE DEDUCTED FROM PAYMENTS DUE THE CONTRACTOR.

7-10.2 Storage of Equipment and Materials in Public Streets. Construction materials shall not be stored in streets, roads, or highways for more than 5 days after unloading. All materials or equipment not installed or used in construction within 5 days after unloading shall be stored elsewhere by the CONTRACTOR at its expense unless authorized additional storage time.

Construction equipment shall not be stored at the Work site before its actual use on the Work nor for more than 5 days after it is no longer needed. Time necessary for repair or assembly of equipment may be authorized by the Engineer.

Excavated material, except that which is to be used as backfill in the adjacent trench, shall not be stored in public streets unless otherwise permitted. After placing backfill, all excess material shall be removed immediately from the site.

7-10.3 Street Closures, Detours, Barricades. The CONTRACTOR shall comply with all applicable State, County and City requirements for closure of streets. The CONTRACTOR shall provide barriers, guards, lights, signs, temporary bridges, flagpersons, and watchpersons. The CONTRACTOR shall be responsible for compliance with additional public safety requirements which may arise. The CONTRACTOR shall furnish and install signs and warning devices and promptly remove them upon completion of the Work.

At least 48 hours in advance of closing, partially closing or reopening, any street, alley, or other public thoroughfare, the CONTRACTOR shall notify the Police, Fire, Traffic and Engineering Departments, and comply with their requirements. Deviations must first be approved in writing by the Engineer.

The CONTRACTOR shall secure approval, in advance, from authorities concerned for the use of any bridges proposed by it for public use. Temporary bridges shall be clearly posted as to load limit, with signs and posting conforming to current requirements covering "signs" as set forth in the Traffic Manual published by the California Department of Transportation. This manual shall also apply to the street closures, barricades, detours, lights, and other safety devices required.

All traffic control barricades, signs and devices used by the CONTRACTOR shall, as a minimum, conform to the latest edition of the "California Manual on Uniform Traffic Controls Devices" ("MUTCD"). Channelization devices shall be spaced no greater than fifty

(50) feet apart. The CONTRACTOR shall take additional precautions as he/she may find necessary under the circumstances.

Should the CONTRACTOR fail to provide adequate traffic control or safety barricades, and in the event a responsible individual cannot be located or refuses to perform, the AGENCY will at its option place needed devices or engage a private firm to place and maintain said barricades, which will be charged to the CONTRACTOR directly.

Full street closures will not be allowed without City Council approval.

All costs involved shall be included in the Bid.

7-10.4 Safety.

7-10.4.1. Safety Orders. The CONTRACTOR shall have at the Work site, copies of suitable extracts of: Construction Safety Orders, Tunnel Safety Orders and General Industry Safety Orders issues by the State Division of Industrial Safety. The CONTRACTOR shall comply with provisions of these and all other applicable laws, ordinances, and regulations.

Before excavating any trench 1.5 m (5 feet) or more in depth, the CONTRACTOR shall submit a detailed plan to the AGENCY showing the design of shoring, bracing, sloping, or other provisions to be made for the workers' protection from the hazard of caving ground during the excavation of such trench. If the plan varies from the shoring system standards, the plan shall be prepared by a registered Civil Engineer. No excavation shall start until the Engineer has accepted the plan and the CONTRACTOR has obtained a permit from the State Division of Industrial Safety. A copy of the permit shall be submitted to the Engineer.

Payment for performing all work necessary to provide safety measures shall be included in the prices bid for other items of work except where separate bid items for excavation safety are provided, or required by law.

7-10.4.2 Use of Explosives. Explosive may be used only when authorized in writing by the Engineer, or as otherwise stated in the Specifications. Explosives shall be handled, used, and stored in accordance with all applicable regulations.

The Engineer's approval of the use of explosives shall not relieve the CONTRACTOR from liability for claims caused by blasting operations.

7-10.4.3 Special Hazardous Substances and Processes. Materials that contain hazardous substances or mixtures may be required on the Work. A Material Safety Data Sheet as described in Section 5194 of the California Code of Regulations shall be requested by the CONTRACTOR from the manufacturer of any hazardous products used.

Material usage shall be accomplished with strict adherence to California Division of Industrial Safety requirements and all manufacturer warnings and application instructions listed on the Material Safety Data Sheet and on the product container label.

The CONTRACTOR shall notify the Engineer if a specified product cannot be used under safe conditions.

7-10.4.4 Confined Spaces.

(a) Confined Space Entry Program. The CONTRACTOR shall be responsible for implementing, administering and maintaining a confined space entry program (CSEP) in accordance with Sections 5156, 5157 and 5158, Title 8, CCR.

Prior to starting the Work, the CONTRACTOR shall prepare and submit its comprehensive CSEP to the Engineer. The CSEP shall address all potential physical and environmental hazards and contain procedures for safe entry into confined spaces, including, but not limited to the following:

1. Training of personnel
2. Purging and cleaning of materials and residue
3. Potential isolation and control of energy and material inflow
4. Controlled access to the space.
5. Atmospheric testing of the space
6. Ventilation of the space
7. Special hazards consideration
8. Personal protective equipment
9. Rescue plan provisions

The CONTRACTOR's submittal shall include the names of its personnel, including subcontractor personnel, assigned to the project who will have CSEP responsibilities, their CSEP training, and their specific assignment and responsibility in carrying out the CSEP.

(b) Permit-Required Confined Spaces. Entry into permit-required confined spaces as defined in Section 5157, Title 8, CCR may be required as a part of the Work. All manholes, tanks, vaults, pipelines, excavations, or other enclosed or partially enclosed spaces shall be considered permit-required confined spaces until the pre-entry procedures demonstrate otherwise. The CONTRACTOR shall implement a permit space program prior to performing any work in a permit-required confined space. A copy of the permit shall be available at all times for review by CONTRACTOR and AGENCY personnel at the Work site.

(c) Payment. Payment for implementing, administering, and providing all equipment and personnel to perform the CSEP shall be included in the bid items for which the CSEP is required.

7-11 PATENT FEES OR ROYALTIES. The CONTRACTOR shall absorb in its Bid the patent fees or royalties on any patented article or process furnished or used in the Work. The CONTRACTOR shall indemnify and hold the AGENCY harmless from any legal action that may be brought for infringement of patents.

7-12 ADVERTISING. The names, addresses and specialties of CONTRACTORs, Subcontractors, architects, or engineers may be displayed on removable signs. The size and location shall be subject to the Engineer's approval.

Commercial advertising matter shall not be attached to or painted on the surfaces of buildings, fences, canopies, or barricades.

7-13 LAWS TO BE OBSERVED. The CONTRACTOR shall keep fully informed of State and National laws and County and Municipal ordinances and regulations which in any manner affect those employed in the Work or the materials used in the Work or in any way affect the conduct of the Work. The CONTRACTOR shall at all times observe and comply with such laws, ordinances, and regulations.

7-14 ANTITRUST CLAIMS. Section 7103.5 of the Public Contract Code provides:

> "In entering into a public works CONTRACTOR or a subcontract to supply goods, services, or materials pursuant to a public works contract, the CONTRACTOR or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec 15) or Cartwright Act (Chapter 2 [commencing with Section 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or subcontract. The assignment shall be made and become effective at the time the awarding body tenders final payment to the CONTRACTOR, without further acknowledgment by the parties."

7-15 DAILY REPORT. The CONTRACTOR shall complete a Daily Report indicating manpower, work performed, major equipment used and on standby (itemized separately), subcontractors, and similar items involved in the performance of the Work. The Daily Report shall be completed on forms prepared by the CONTRACTOR and acceptable to the Engineer, and shall be submitted to the City Inspector weekly.

The CONTRACTOR shall submit as requested Certified Payroll Statements for each employee involved with the Work including subcontractors. Submission of certified payroll does not relieve the CONTRACTOR of his responsibility to pay prevailing wage.

SECTION 8 – FACILITIES FOR AGENCY PERSONNEL

8-1 GENERAL. All facilities provided for AGENCY personal shall be at suitable locations approved by the Engineer. Such facilities must in a room, building, or trailer provided for this purposes with an acceptable means for locking.

A Class "A" Field Office in accordance with 8-2.1 shall be provided at any offsite plan facility furnishing pipe subject to AGENCY inspection during manufacture. A Field Laboratory in accordance with 8-3.1 shall be provided at any offsite or project site plant facility furnishing portland cement concrete or asphalt paving material. Any other facilities for AGENCY personnel shall be provided only when required by the Specifications.

Offices and laboratories at plants may be used concurrently by inspection personnel of other agencies provided such use does not seriously conflict with AGENCY use. When facilities are shared in this manner, at least one locker provided with a hasp for a padlock must be available

for the exclusive use of AGENCY inspectors. Otherwise any facilities furnished are for the exclusive use of AGENCY personnel.

All facilities shall conform to the applicable codes, ordinances, and regulations of the local jurisdiction and of the State of California, and shall conform to current practice. The interior shall be paneled or suitably lined to provide a facility of good appearance.

The CONTRACTOR shall provide janitorial and other maintenance services in all types of facilities provided. Such services shall include the supply of the appropriate paper products and dispensers. Trash receptacles shall be provided and emptied by the CONTRACTOR at weekly intervals or sooner as required. The trash shall be removed from the project site.

All costs to furnish, maintain, service, and remove the specified facilities at the project site shall be included in the price bid for such facilities. If no bid item is provided in the proposal, costs shall be included in other items for which bids are entered.

The first progress payment will not be approved until all facilities are in place and fully comply with the Specifications.

8-2 FIELD OFFICE FACILITIES.

8-2.1 Class "A" Field Office. This office shall have a minimum floor space of 16 m^2 (175 ft^2), at least one door, and window area of not less than 2 m^2 (22 ft^2). All doors and windows shall be provided with screens.

Furniture shall be provided as follows: one plan table, one standard 1.5 m (5 feet) long double-pedestal desk with a drawer suitable for holding files, two chairs, one drafting stool, and one plan rack.

Electric power shall be provided to include a minimum of four duplex convenience outlets. The office shall be illuminated at the tables and desk. An outdoor lighting fixture with a 300-watt bulb shall be installed.

Heating and air conditioning of sufficient capacity shall be provided at no expense to the AGENCY. The CONTRACTOR shall provide drinking water within the office and integral sanitary facilities directly adjoining. Sanitary facilities shall include a toilet and wash basin with hot and cold running water.

Extended area, non-coin-operated telephone service shall be provided within the office area. The installation shall include sufficient extension code to serve the plan table and desk.

8-2.2 Class "B" Field Office. This office shall be the same as class "A" except that integrated sanitary facilities and air conditioning are not required. A chemical toilet facility shall be provided adjacent to the office.

8-2.3 Class "C" Field Office. The office shall be of suitable proportions with 11 m^2 (120 ft^2) of floor area. It shall be equipped with one 0.9 by 1.5 m (3 by 5 foot) table, four chairs and one plan rack. It shall be adequately heated, ventilated, and lighted and two duplex convenience outlets shall be provided. Air conditioning, telephones, and sanitary facilities are not required.

8-3 FIELD LABORATORIES.

8-3.1 Offsite at Manufacturing Plant. Field laboratories shall conform to the requirements for a Class "C" Field Office specified in 8-2.3 except for the following:

1. Telephone service per 8-2.1.
2. Chair.
3. Work table, 1.2 by 3.0 m (4 by 10 feet), 0.9 m (3 feet) high.
4. Sieves per 203-6.
5. Scales and weights.
6. Burner plate for heating samples.
7. Thermometer, with 90 to 260° C (200 to 400° F) degree range (Asphalt Plants only).
8. Air meter for all concrete in accordance with ASTM C 231 of the type that indicates percentage of air directly (Precast Concrete Plants only)

All sampling and testing equipment shall be maintained in satisfactory operating condition by CONTRACTOR or plant owner. Laboratories shall be located immediately adjacent to and with full view of batching and loading operations.

8-3.2 At Project Site. Field laboratories shall be in accordance with 8-3.1, except that sieves, scales, weights, burner plates, sampling devices, pans, and thermometers will be furnished by the AGENCY at no expense to the CONTRACTOR. If air entraining agents are being used in the Concrete on the project, an air meter of the type described in 8-3.1 shall be furnished by the CONTRACTOR.

8-4 BATHHOUSE FACILITIES. When the Plans or Specifications require bathhouse facilities, the following shall be provided.

1. One lavatory with hot and cold water.
2. One toilet in a stall.
3. One 1 m (3 feet) trough-type urinal.
4. One enclosed shower at least 1 by 1 m (3 by 3 feet) with hot and cold water.
5. One bench, 2 m (6 feet) long.
6. Soap dispensers.
7. Toilet paper holders.
8. Paper towel cabinet.
9. Wastepaper receptacle.

These facilities shall be serviced and provided with necessary sanitary supplies.

These facilities shall be for the exclusive use of AGENCY personnel. However, a separate building need not be provided for this purpose if such facilities are located in a separate room in a building which includes other facilities.

8-5 REMOVAL OF FACILITIES. Field offices, laboratories, and bathhouse facilities at the project site shall be removed upon completion of the Work. Buildings and equipment furnished by the CONTRACTOR at the project site under the provisions of this section are the property of the CONTRACTOR.

8-6 BASIS OF PAYMENT. All costs incurred in furnishing, maintaining, servicing, and removing field officers, laboratories, or bathhouse facilities required at the project site shall be included in the bid item for furnishing such facilities. If such facilities are required by the Plans or Specifications and no bid item is provided in the proposal, the costs shall in included in other items for which bids are entered. Such costs incurred in connection with offices and laboratories at plants shall be borne by the plant owners.

SECTION 9 – MEASUREMENT AND PAYMENT

9-1 MEASUREMENT OF QUANTITIES FOR UNIT PRICE WORK.

9-1.1 General. Unless otherwise specified, quantities of work shall be determined from measurements or dimensions in horizontal planes. However, linear quantities of pipe, piling, fencing and timber shall be considered as being the true length measured along longitudinal axis.

Unless otherwise provided in Specifications, volumetric quantities shall be the product of the mean area of vertical or horizontal sections and the intervening horizontal or vertical dimension. The planimeter shall be considered an instrument of precision adapted to measurement of all areas.

9-1.2 Methods of Measurement. Materials and items of work which are to be paid for on basis of measurement shall be measured in accordance with methods stipulated in the particular sections involved.

9-1.3 Certified Weights. When payment is to be made on the basis of weight, the weighing shall be done on certified platform scales or, when approved by the Engineer, on a completely automated weighing and recording system. The CONTRACTOR shall furnish the Engineer with duplicate licensed weighmaster's certificates showing actual net weights. The AGENCY will accept the certificates as evidence of weights delivered.

9-1.4 Units of Measurement. Measurements shall be in accordance with 1-4.1 and 1-4.2. a metric ton or "tonne" is equal to 1000 kilograms and the unit of liquid measure is a Liter (in U.S. Standard Measures, a pound is an avoirdupois pound; a ton is 2000 pounds avoirdupois; and the unit of liquid measure is a gallon).

9-2 LUMP SUM WORK. Items for which quantities are indicated "Lump Sum", "L.S.", or "Job", shall be paid for at the price indicated in the Bid. Such payment shall be full compensation for the items of work and all work appurtenant thereto.

When required by the Specifications or requested by the Engineer, the CONTRACTOR shall submit to the Engineer within 15 days after award of Contract, a detailed schedule in triplicate, to be used only as a basis for determining progress payments on a lump sum contract or designated lump sum bid item. This schedule shall equal the lump sum bid and shall be such form and

sufficiently detailed as to satisfy the Engineer that it correctly represents a reasonable apportionment of the lump sum.

9-3 PAYMENT

9-3.1 General. The quantities listed in the Bid schedule will not govern final payment. Payment to the CONTRACTOR will be made only for actual quantities of Contract items constructed in accordance with the Plans and Specifications. Upon completion of construction, if the actual quantities show either an increase or decrease from the quantities given the Bid schedule, the Contract Unit Prices will prevail subject to the provisions of 3-2.2.1.

The unit and lump sum prices to be paid shall be full compensation for the items of work and all appurtenant work, including furnishing all materials, labor, equipment, tools, and incidentals.

Payment will not be made for materials wasted or disposed of in a manner not called for under the Contract. This includes rejected materials not unloaded from vehicles, material rejected after it has been place, and material placed outside of the Plan lines. No compensation will be allowed for disposing of rejected or excess material.

Payment for work performed or materials furnished under an Assessment Act Contract will be made as provided in particular proceedings or legislative act under which such contract was awarded.

Whenever any portion of the Work is performed by the AGENCY at the CONTRACTOR's request, the cost thereof shall be charged against the CONTRACTOR, and may be deducted from any amount due or becoming due from the AGENCY.

Whenever immediate action is required to prevent injury, death, or property damage, and precautions which are the CONTRACTOR's responsibility have not been taken and are not reasonably expected to be taken, the AGENCY may, after reasonable attempt to notify the CONTRACTOR, cause such precautions to be taken and shall charge the cost thereof against the CONTRACTOR, or may deduct such costs from any amount due or becoming due from the AGENCY. AGENCY action or inaction under such circumstances shall not be construed as relieving the CONTRACTOR or its Surety from liability.

Payment shall not relieve the CONTRACTOR from its obligations under the Contract; nor shall such payment be construed to be acceptance of any of the Work. Payment shall not be construed as the transfer of ownership of any equipment or materials to the AGENCY. Responsibility of ownership shall remain with the CONTRACTOR who shall be obligated to store any fully or partially completed work or structure for which payment has been made; or replace any materials or equipment required to be provided under the Contract which may be damaged, lost, stolen or otherwise degraded in any way prior to acceptance of the Work, except as provided in 6-10.

Warranty periods shall not be affected by any payment, but shall commence on the date equipment or material is placed into service at the direction of the AGENCY. In the event such items are not placed into service prior to partial or final acceptance of the project, warranty periods will commence on the date of such acceptance.

If, within the time fixed by law, a property executed notice to stop payment is filed with the AGENCY, due to the CONTRACTOR's failure to pay for labor or materials used in the Work, all money due for such labor or materials will be withheld from payment to the CONTRACTOR in accordance with applicable laws.

At the expiration of 35 calendar days from the date of acceptance of the Work by the board, or as prescribed by law, the amount deducted from the final estimate and retained by the AGENCY will be paid to the CONTRACTOR except such amounts as are required by law to be withheld by properly executed and filed notices to stop payment, or as may be authorized by the Contract to be further retained.

9-3.2 Partial and Final Payment. The Engineer will, after award of Contract, establish a closure date for the purposes of making monthly progress payments. The CONTRACTOR may request in writing that such monthly closure date be changed. The Engineer may approve such request when it is compatible with the AGENCY's payment procedure.

Each month, the Engineer will make an approximate measurement of the work performed to the closure date and as basis for making monthly payments, estimate its value based on Contract Unit Prices or as provided for in 9-2. When the Work has been satisfactorily completed, the Engineer will determine the quantity of work performed and prepare the final estimate.

From each progress estimate, 10 percent will be deducted and retained by the AGENCY, and the remainder less the amount of all previous payments will be paid. After 50 percent of the Work has been completed and if progress on the Work is satisfactory, the deduction to be made from remaining progress estimates and from the final estimate may be limited to $500 or 10 percent of the first half of total Contract amount, whichever is greater.

No progress payment made to the CONTRACTOR or its sureties will constitute a waiver of the liquidated damages under 6-9.

The closure date for period progress payments will be the twenty-fifth day of each month. Authorization to pay is commonly received on the second Wednesday of the following month. The AGENCY requires four to six weeks to review all progress payments, issue payment checks, present progress payment to Council for approval, and release payment to CONTRACTOR. However, payments will be withheld pending receipt of any outstanding reports required by the Contract Documents. In addition, the final progress payment will not be released until the CONTRACTOR returns the control set of plans and specifications showing the as-built conditions.

The full five (5) percent retention will be deducted from all payments. The final retention will be authorized for payment thirty five (35) days after the date of recordation of the Notice of Completion.

The CONTRACTOR may substitute securities for any monies withheld by the AGENCY to ensure performance under the Contract as provided in Public Contract Code Sections 10263 and 22300.

When provided for in the Specifications, and subject to the limitation and conditions therein, the cost of materials and equipment delivered but not incorporated into the Work will be included in the progress estimate.

9-3.3 Delivered Materials. Materials and equipment delivered but not incorporated into the Work shall not be submitted for payment and shall not be included in the estimate for progress payment

9-3.4 Mobilization. When a bid item is include in the Proposal form for mobilization and subject to the conditions and limitations in the Specifications, the costs of work in advance of construction operations and not directly attributable to any specific bid item will be included in the progress estimate. When no such bid item is provided, payment for such costs will be considered to be included in the other items of work.

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SECTION F – SPECIAL PROVISIONS

LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

700 - CONSTRUCTION REQUIREMENTS/ RESPONSIBILITIES OF CONTRACTOR

700-1 General

General responsibility and administrative requirements shall comply with the following standards:

1) Standard Specifications for Public Works Construction, the Latest Edition, and subsequent supplements (SSPWC);
2) Standard Specifications State of California, Department of Transportation, 2010 Edition (Caltrans)
3) Standard Plans State of California, Department of Transportation, 2010 Edition (Caltrans)
4) California Manual on Uniform Traffic Control Devices, 2012 Edition (CA MUTCD)
5) General Provision Modifications;
6) Contract Drawings, and;
7) Special Provisions.

700-2 LOCATION AND SCOPE OF WORK

The work to be performed under this contract includes, but is not limited to, new pavement installation, pavement mill and overlay, installation of a concrete curb median with hardscape and landscape, installation of a new traffic signal (all components), modifications to 2 (two) existing traffic signals, new signing installation and existing signing relocation/removals, striping modifications, construction of concrete sidewalks, ADA ramps, curb and gutter, driveways, catch basins, storm drain pipes, parkway drains, retaining walls, utility pole relocations, street light relocations, pavement markers, traffic control and cleanup of the project area at Las Virgenes Road between Lost Hills Road and Agoura Road.

700-3 TIME OF COMPLETION

Unless the City approves an extension, all work shall be completed within 120 working days from the date the Notice to Proceed is issued by the Engineer, exclusive of maintenance periods. Time stated for contract completion shall include final cleanup of the premises.

700-4 ORDER OF WORK/SCHEDULING

Work sequence shall be coordinated with construction schedule. A schedule and work plan prepared by the Contractor shall indicate sequence of activities throughout the project's life cycle.

The Work shall be executed in a timely manner to ensure that construction is completed by the completion dates outlined in these documents.

The Contractor must coordinate activities with Sub-Contractors to ensure the timely completion of the project.

The CONTRACTOR shall phase the Work according to the following:

Construction activities for the A.E. Wright Middle School driveway shall be scheduled for the month of July 2015.

Construction of soil-nail retaining wall south of the intersection with Meadow Creek Lane as well as work in the vicinity of LVUSD and A.E. Wright Middle School, with the exception of work described in the previous paragraph, shall be coordinated with relocation of power poles by the Southern California Edison.

700-5 EMERGENCY INFORMATION

The Contractor shall provide the following information in writing and submit it with the signed contract, contract bonds and certificates of insurance. Failure to comply may result in delays in the processing of the contract documents.

1. Name of authorized representative at the job site;
2. Address and telephone number where the above person can be reached 24 hours a day.
3. Address of the nearest office of the Contractor, if any, and telephone number of a person at the office who is familiar with the project.
4. Address and telephone number of the Contractor's main office and the name and telephone number of the person at the office familiar with the project.

700-6 STANDARD SPECIFICATION AND STANDARD DRAWINGS

The Standard Specifications (SSPWC) of the AGENCY are contained in the 2012 Edition, including all current supplements, of the Standard Specifications for Public Works Construction, as written and promulgated by the Joint Cooperative Committee of the Southern California Chapter of the American Public Works Association and the Southern California District of the Associated General Contractors of California, and these modifications thereto. Copies of these Standard Specifications are available from the publisher, Building News, Incorporated, 10801 National Blvd., Ste. 100, Los Angeles, California 90064, telephone (310) 474-7771. All traffic work, including but not limited to signing and striping, traffic controllers, modification of cabinets to accept new controllers, GPS units, and traffic loops shall also comply with the latest edition of SSS and SSP, and manufacturer.

The SSPWC set forth above will control the general provisions, construction materials, and construction methods for this contract, except as amended by the Plans, Special Provisions, or other contract documents. The following provisions are supplementary and in addition to the provisions of the SSPWC unless otherwise noted and the section numbers of these provisions coincide with those of the said SSPWC. Only those sections requiring elaboration, amendments, specifying of options or additions are called out.

700-7 NOTIFICATION OF CITY AND UTILITIES

The Contractor shall notify the City Engineer and the owners of all utilities and substructures not less than 48 hours prior to starting construction. The following list of names and telephone numbers is intended for the convenience of the Contractor and is not guaranteed to be complete or correct:

CITY OF CALABASAS Attention: Tatiana Holden, PE	(818) 224-1600
AT&T Maintenance Repair Attention: Mr. Mike R. Smith	(805) 583-6640
SOUTHERN CALIFORNIA GAS (Distribution)	(818) 700-3667
SOUTHERN CALIFORNIA GAS COMPANY (Transmission)	(805) 681-7928
SOUTHERN CALIFORNIA EDISON COMPANY Attention: Mr. Conrad Reynado Jr.	(805) 494-7065
LAS VIRGENES MUNICIPAL WATER DISTRICT Attention: Mr. Mike Hand	(818) 880-4110
TIME WARNER CABLE LA Regional Facilities Attention: Mr. Steve Waters	(888) 766-2521
WASTE MANAGEMENT GI INDUSTRIES	(818) 782-2474
LOS ANGELES COUNTY Sewer Maintenance Division	(626) 300-3308
LOS ANGELES COUNTY Signal Maintenance Division	(626) 458-1700
CRIMSON PIPELINE L.P. Attention: Cordelia Cisneros	(562) 285-4133
UNDERGROUND SERVICE ALERT	811

The Contractor shall coordinate construction with public utility relocation and adjustment activities. Contractor shall coordinate the construction schedule accordingly.

The Contractor shall cooperate fully with all utility forces of the City or forces of other public or private agencies engaged in the relocation, altering, or otherwise rearranging of any facilities which interfere with the progress of the Work, and shall schedule the Work so as to minimize interference with said relocation, altering, or other rearranging of facilities.

The existing subsurface utilities shown have been indicated, based on the best available record information. However, to avoid or resolve any interference problems between these exiting utilities and the proposed work, the Contractor shall field verify the vertical and horizontal locations of all utilities, such as water lines and water services, electronic conduits, telephone and television cable, storm drain facilities, and all other facilities and obstructions prior to beginning any excavations. If conflicts exist, revised grades and/or alignments may be established, if required. **Such field verification may require exposing these utilities prior to the start of construction.**

Special reference is hereby made to Section 5-2, "Protection" of the SSPWC with respect to the protection, repair and replacement of existing subsurface utilities.

The Contractor shall telephone Underground Service Alert (USA) at 811, a minimum of three (3) working days prior to the start of construction. No excavation shall commence unless the Contractor has obtained the USA Inquiry Identification Number. For best response, provide as much notice as possible, up to ten (10) working days.

The Contractor shall notify LA County Signal Maintenance 48 hour prior to starting any grinding work, which shall disable any traffic loops, and prior to starting work on installation of new traffic loops, traffic controllers and GPS units.

700-8 EMERGENCY INFORMATION

The names, addresses, and telephone numbers of the Contractor, subcontractors, or their representatives, shall be filed with the Engineer ***prior to the preconstruction meeting.***

The Contractor shall provide the following information in writing and submit it with the signed contract, contract bonds and certificates of insurance. Failure to comply may result in delays in the processing of the contract documents.

1. Name of authorized representative at the job site;
2. Address and telephone number where the above person can be reached 24 hours a day;
3. Address of the nearest office of the Contractor, if any, and the name and telephone number of a person at that office who is familiar with the project; and
4. Address and telephone number of the Contractor's main office and the name and telephone number of the person at that office familiar with the project.

700-9 CONSTRUCTION SURVEYING

The Contractor will provide all necessary construction surveying, staking or markings for locating the limits of construction and shall comply with the provisions of 2-9. The Contractor shall bear all costs for re-staking and marking.

Construction surveys shall be done only under the direction of the Engineer by a Registered (licensed) Land Surveyor or a Registered Civil Engineer authorized to practice land surveying within the state. The City will provide available record map information. The Contractor is

responsible for obtaining all necessary record maps, centerline ties and survey notes from Los Angeles County.

The Contractor and his surveyor shall provide the Engineer with a copy of the constructing staking field notes used to construct the improvements. In addition, the Contractor shall also prove a plot of the improvements to be constructed, based on the surveyor's construction staking and markings prior to the installation of the improvements. The plot shall be the same scale as the improvement plans.

700-10 SUBMITTALS

700-10.1 General

Whenever submittals are required hereunder, all such submittals by the Contractor shall be submitted to the Engineer. A Submittal is defined as any drawing, calculation, specification, product data, samples, manuals, requests for substitutes, spare parts, photographs, survey data, traffic control plans, record drawings, bonds or similar items required to be submitted to the City of the Engineer under the terms of the contract.

The Contractor shall submit two (2) copies of each submittal and allow at least three (3) working days for review by the City.

700-10.2 Submittals Prior to Preconstruction Meeting

The Contractor shall provide the following submittals one week prior to the preconstruction meeting:

1. Project Schedule, including confirmed plant dates with documentation from the asphalt hot mix plant; planned sequence of construction, staging plan, and when property and business owners will be affected by the proposed construction;
2. Traffic Control Plans;
3. Emergency Contact List;
4. List of Subcontractors;
5. AC Mix Designs, including binder mix formula and Materials Certifications;
6. Concrete Mix Designs;
7. Storm Water Pollution Prevention Plan (SWPPP)

700-10.3 Engineer's Review

The Engineer's review of Contractor submittals shall not relieve the Contractor of the entire responsibility for the accuracy of details, data and dimensions. The Contractor shall assume all responsibility and risk for any misfits due to any errors in Contractor submittals. The Contractor shall be responsible for the dimensions and the design of adequate connections and details.

700-11 PROJECT MEETINGS

700-11.1 Preconstruction Meeting.

A preconstruction conference will be held prior to the commencement of the construction at a place and time designated by the Engineer. The attendees shall include the Engineer, Contractor's representatives, including superintendent and its subcontractors, utility representatives, and other affected parties. Among the primary points of discussion at this meeting, will be the Contractor's proposed construction schedule, traffic control plan and public convenience and notice.

700-11.2 Progress Meetings

The Contractor shall schedule and hold regular onsite progress meetings at least bi-weekly and at other times, as requested by the Engineer or as required by the progress of the Work. The Contractor, Engineer, and all subcontractors active on the site shall be represented at each meeting. Contractor may, at its discretion, request attendance by representatives of its suppliers, manufacturer's, and other subcontractors.

700-11.3 Safety Meetings

The Contractor shall notify the Engineer of all proposed safety meetings. The Engineer will advise the Contractor about contract-related safety information, safety meetings, and safety-related issues.

700-12 COORDINATION

The Contractor shall be responsible for all Project coordination and the coordination of the work of all subcontractors, fabricators, and suppliers. Coordination, as referred to herein, shall include the establishment of on-site lines of authority and communication and the scheduling of and conducting of progress meetings between the Engineer and the Contractor and its subcontractors, fabricators, and suppliers. The Contractor's onsite supervisory person shall be present and shall represent the General Contractor whenever a meeting is held that involves any interface between the Engineer or the City and any subcontractors, fabricators, or suppliers.

The Contractor shall be responsible for coordination of the work of each of its subcontractors and suppliers. Special attention is directed to the following obligations of the Contractor:

1. Verify that subcontractors have obtained permits for inspections; Review all subcontractor shop drawings, product data, and sample submittals for compliance with Contract Documents prior to submittal to the Engineer for general review for compliance with design intent;
2. Maintain onsite documentation and keep current record drawing set at Project site; and
3. Verify that specified cleaning is done during progress of Work and at completion of each subcontract.

700-13 STORAGE OF EQUIPMENT AND MATERIALS

The Contractor shall make arrangement for storing his equipment and materials. The Contractor shall make its own arrangements for any necessary off-site storage or shop areas necessary for the proper execution of the Work. Public streets will not be used for such storage. Approved

areas within work site may be used for temporary storage, however, the Contractor shall be responsible for obtaining necessary permit from the City.

The Contractor shall deliver, handle, and store products in accordance with manufacturer's written recommendations and by methods and means that will prevent damage, deterioration, and loss including theft. Delivery schedules shall be controlled to minimize long-term storage of products at site and overcrowding of construction spaces. In particular, the Contractor shall provide delivery/installation coordination to ensure minimum holding or storage times for products recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other sources of loss.

Storage shall be arranged to provide access for inspection. The Contractor shall periodically inspect to assure products are undamaged and are maintained under required conditions.

700-14 REMOVAL OF MATERIALS

Materials which are to be disposed of shall not be stored at the project sites, but shall be removed before the end of the working day.

700-15 INVESTIGATION OF SITE CONDITIONS

Bidders are required to inspect the site of the work in order to satisfy themselves, by personal examination or by such other means as they may prefer, of the location of the proposed work, measurements and as to the actual conditions of and at the site of the work. If, during the course of his examination, a bidder finds facts or conditions which appear to him to conflict with the contract documents, he shall submit a letter to the Engineer requesting information and an explanation before submitting his bid. If the bidder chooses not to visit the site or conduct investigations, the bidder will, nevertheless, be charged with the knowledge of conditions, which reasonable inspection and investigation would have disclosed.

The submission of a proposal by the contractor shall constitute the acknowledgment that, if awarded the contract, he has relied and is relying on his own examination of (a) the site of the work, (b) the access to the site, (c) the slope an alignment of each street in the project area, and (d) all other data, matters, and things requisite to the fulfillment of the work and on his own knowledge of existing services and utilities on and in the vicinity of the site of the work to be constructed under the contract, and not on any representation or warranty of the Owner. No claim for additional compensation will be allowed which is based upon a lack of knowledge of the above items.

700-16 SUGGESTIONS TO CONTRACTOR

Any plan or method of work suggested by the City, Agent, or Engineer to the Contractor but not specified or required, if adopted or followed by the Contractor in whole or in part, shall be used at the risk and responsibility of the Contractor; and the City, Agent, and Engineer shall assume no responsibility therefore and in no way be held liable for any defects in the work which may result from or be caused by the use of such plan or method of work.

700-17 FINAL CLEAN-UP OF PROJECT LOCATIONS

The Contractor shall maintain the work sites in a neat and orderly manner throughout construction. During and upon completion of construction, the Contractor shall remove all equipment, debris and shall leave the site in a neat and clean condition to the satisfaction of the Engineer. All costs associated with work and clean-up required to complete the project shall be the sole responsibility of the Contractor.

700-19 PROJECT CLOSEOUT

The Contractor shall allow at least seven (7) working days' notice for final inspection. Such notices shall be submitted to the Engineer in writing.

The Contractor shall promptly remove from the vicinity of the completed Work, all rubbish, debris, unused materials, concrete forms, construction equipment, and temporary structures and facilities used during construction. Final acceptance of the Work by the City will be withheld until the Contractor has satisfactorily complied with the foregoing requirements for final cleanup of the project site.

700-20 MEASUREMENT AND PAYMENT

Unless otherwise specified, no separate payment will be made for compliance with the provisions of Section 700. All costs involved shall be absorbed in the CONTRACTOR's overall bid for the project.

701 - MOBILIZATION, BONDS, AND INSURANCE

701- 1 GENERAL

The Scope of Work shall consist of all preparatory activities and operations, including but not limited to, insurance, bonds, required permits and fees, shop drawings, storm water pollution prevention plan, moving onto the job (mobilization), moving off the job (demobilization), project phasing, supervision, coordination of concurrent work with other contractors, meetings, and clean-up of work indicated in the Contract Documents.

701-2 MEASUREMENT AND PAYMENT

Measurement and payment for mobilization shall be at the lump sum price bid. The lump sum price bid for mobilization shall not exceed 10% of the total contract amount.

Payments for mobilization will be made in accordance with the following table:

Percent of original contract amount earned	Percent of amount bid for mobilization to be paid

5%	40%
15%	20%
40%	30%
50%	10%

The lump sum price bid for mobilization shall include all labor, materials, tools, and incidentals required to complete mobilization in accordance with the contract documents.

Any other cost of work in advance of construction operations and not directly attributed to any specific bid item shall be included in the Mobilization, Bonds and Insurance Bid item.

702 - PROTECTION OF SURVEY MONUMENTS

702-1 GENERAL SCOPE OF WORK

The Contractor shall protect existing survey monuments and ties, within the work limits, during the entire project. Asphalt overlaying of existing survey monuments in the roadway will not be permitted. In the event a surveyed monument lies within an area to be cold planed, removed or reconstructed, the Contractor shall tie out, reset, and file corner records per the LA County Surveyor's office requirements for re-establishing survey monuments. The Contractor shall re-establish survey monuments at the Contractors' expenses.

702-2 MEASUREMENT AND PAYMENT

Measure and Payment for PROTECT SURVEY MONUMENTS will be made at the contract lump sum price named in the Bid Schedule and shall include full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals for doing all work involved with survey monuments.

With the exception of Survey Monuments, this section is a general requirement of the Contract and no separate payment will be made for complying with the requirements outlined in this section. Full compensation for adhering to the project schedule shall be considered in the price bid for the various items of work, and no additional compensation will be allowed therefore.

703 - NOTIFICATION OF PROPERTY OWNERS AND BUSINESSES

703-1 SCOPE

The Contractor's attention is directed to Section 7-10.1.2 of the Standard Specifications for additional information regarding this item.

703-2 MEASUREMENT AND PAYMENT

Payment for notification of property owners and businesses shall be included in the bid prices for other items of work and no additional payment will be made. Such payment shall be considered full compensation for furnishing and maintaining all materials, labor, equipment, and all incidentals necessary to complete the work in accordance with the Standard Specifications and these Special Provisions.

704 - TRAFFIC CONTROL

704-1 SCOPE

All work shall require maintenance and control of traffic during the construction period, which shall conform to the applicable provisions of the SSPWC and these modifications. All such work shall additionally conform to the latest version of California Manual of Uniform Traffic Control Devices (CA MUTCD), SSS and SSP.

Traffic Control shall be provided by a qualified traffic control company specializing in the installation, set-up and continuous maintenance of traffic control devices during the construction of the project.

All construction work and traffic control shall be scheduled and constructed to provide for a minimum of inconvenience and a maximum of safety to the public vehicular, bicycle and pedestrian traffic. The Contractor shall be responsible for the protection of vehicular, bicycle and pedestrian traffic until the work called for in the Plans, SSPWC and these Special Provisions and as directed by the Engineer is completed.

The Contractor shall notify the Engineer of intent to begin work at least five (5) working days before work is to begin. The Contractor shall cooperate with the Engineer relative to handling traffic through the work area and shall make all arrangements relative to keeping the work area clear of parked vehicles.

Contractor's equipment and personal vehicles of the Contractor's employees shall not be parked on the traveled way or on any section where traffic is restricted at any time. During any period when two-way traffic is not provided, the Contractor shall employ properly trained flaggers to control traffic through the construction zone. Trenches, if any, shall be covered at the end of each working day.

The Contractor shall notify the Engineer of any operation that will affect two way flow of traffic in excess of five minutes for every half hour of working time, at least two working days in advance of such operation.

Trenches shall be covered and traffic control signs removed at the end of each working day, unless otherwise shown on the traffic control plan.

Five (5) days prior to the start of construction operations, the Contractor shall notify the Sheriff's Department and Fire Department wherein the project lies, giving the expected starting date, completion date and the name and telephone number of a responsible person who may be

contacted at any hour in the event of a condition requesting immediate correction.

CONSTRUCTION SIGNING

Barricades and warning devices shall be provided by the Contractor to eliminate the edge of traversable road and shall conform to the latest edition of CA MUTCD. The CA MUTCD is published by Caltrans. Barricades shall be installed around all open traffic areas when no work is in progress.

Advance warning signs must be provided with orange warning flags in advance of temporary stop signs. Temporary stop signs are required any time a traffic signal is dark. Temporary stop signs shall be mounted at 7 feet height. The Contractor shall post standard "NO STOPPING" construction zone signs 48 hours prior to construction, not more than 50 feet apart within the work area, showing the date and time of construction.

Contractor shall provide adequate signage clearly delineating access to all commercial driveways and entrances during construction.

The Contractor shall provide advance construction notification sign(s) at each end of the project limits seven (7) calendar days prior to the start of construction at each site. Notification signs shall include the construction start and completion dates. Sign(s) shall also be posted at, but not limited to, the following locations:

704-2 ACCESS

Access to street intersections, public and private parking lots, commercial businesses, residences and other public and private properties must be maintained at all times. At least 72 hours in advance of starting any work that may affect the access to private properties, the Contractor shall provide written notice to such property owners. Vehicular access to and from commercial and residential driveways and parking lots shall be maintained at all times, except when performing items of work, which cannot be accomplished without access restriction. Such access restriction shall be duly noted in the Traffic Control Plans (see section 702-9) and shall be approved by the City Engineer.

704-3 RESTRICTIONS ON CLOSURE OF TRAFFIC LANES

The Contractor's attention is directed to Section 6-7.2.1 of the Standard Specifications for additional information regarding this item.

A. On those days and hours when closure of traffic lanes is not prohibited under the provisions of Section 6-7.2.1, no more than one lane may be closed at any time during construction hours. During any lane closures, type II flashing arrow boards shall be used in accordance with CA MUTCD.

B. Traffic signals shall not be placed in flash operation during the hours that traffic lanes must be kept open as defined in the preceding subparagraph A. Under no circumstances shall traffic signals be placed under flash operation without prior approval of the City. Contractor shall contact the Engineer at least 72 hours in advance to coordinate signal service.

704-4 TEMPORARY GUIDE MARKERS

Temporary guide markers shall be either portable delineators or fluorescent traffic cones and shall conform to these Special Provisions. Only one type of temporary guide markers shall be used at any one time. Temporary guide markers shall be placed at all locations shown on traffic control plans and at such locations as directed by the Engineer.

Temporary guide markers shall be left in place at their designated locations, maintained, repaired and replaced, if damaged, as required until their removal is approved by the Engineer. If the temporary guide markers are damaged, or are not in an upright position, for any reason, said markers shall immediately be replaced, or restored to their original locations in an upright position, by the Contractor, 24 hours per day, 7 days per week for as long as required by the City.

The Contractor shall supply and place temporary reflective lane delineation markings for lanes on arterial streets the same day after placement of asphalt.

704-5 PORTABLE DELINEATORS

Portable delineators shall conform to Section 12-3.04 of the SSS. The portable delineators shall be spaced as necessary for proper delineation; however, in no case shall the spacing between portable delineators exceed 25 feet on tangents or 10 feet on curves.

704-6 FLUORESCENT TRAFFIC CONES

Fluorescent traffic cones shall be new or reconditioned, and of good commercial quality flexible material suitable for the purpose intended. The outer section of the portion above the base of the cone shall be a highly pigmented fluorescent orange polyvinyl compound. The overall height of the cone shall be at least 28 inches. The base shall be of sufficient weight and size or shall be anchored in a manner such that the traffic cone will remain in an upright position.

The fluorescent traffic cones shall be spaced as necessary for proper delineation; however, in no case shall the spacing between fluorescent traffic cones exceed 25 feet on tangents and 10 feet on curves.

704-7 STRIPING

Temporary striping and marking for traffic control shall conform to Subsection 310-5.6.5 of the SSPWC, except that flexible, reflective Temporary Raised Pavement Markers (TRPM) may be used in lieu of paint or pavement tape. Any striping and marking which has no further use shall be removed by wet sandblasting, and all sand used in sandblasting shall be removed without delay as the sandblasting operation progresses. All sandblasted asphalt pavement shall be sealed with an asphalt emulsion.

704-8 EMERGENCY RESPONSE BY COUNTY FORCES

If the Contractor fails to maintain and control traffic at any time during the construction period such that the safety to public vehicular, bicycle and/or pedestrian traffic is compromised in any way in the opinion of the Engineer of the County Sheriff, the City will require the Contractor to

stop work and open all traffic lanes, or immediately modify the traffic control plan, subject to approval by the City, to ensure that the unsafe situation is corrected. If, due to the nature of the work, it is impossible to open all traffic lanes, or the Contractor is unable to immediately modify the traffic control plan to resolve safe and adequate traffic control, the City may mobilize emergency forces to re-establish adequate and safe traffic control. The emergency forces may include County Sheriff Department, or other personnel as required to re-establish adequate safe traffic control.

The Contractor shall pay for the full and complete time and material cost for any emergency response by the City directed forces as described herein. This payment shall be in addition to the liquidated damages provided for under these Special Provisions. Contractor agrees to pay such costs as provided for in this paragraph, and in case the same are not paid, Contractor agrees that City may deduct the amount of such costs from any money that is due or that may be due the Contractor under the contract. The Contractor shall not be entitled to any delay claims for work stopped by the City in order to correct an unsafe traffic condition, regardless of whether or not traffic control was set up in accordance with these Special Provisions.

704-9 TRAFFIC CONTROL PLANS

Prior to the preconstruction meeting, the Contractor shall submit a detailed Traffic Control Plan for approval by the City. The City will attempt to respond to any submittal within three (3) working days. The Contractor shall not commence work prior to receiving an approved Traffic Control Plan. Any delay in acquiring Traffic Control Plan approval will be at the Contractor's expense and no additional working days will be granted.

Traffic Control Plan(s) shall be prepared under the supervision of and signed and stamped by a registered Professional Civil Engineer or Traffic Engineer licensed to practice in the State of California. Traffic Control Plan(s) shall conform to the latest edition of CA MUTCD and shall cover signing, flagging, detour geometric, access restriction, delineation and channelization, barriers and barricades, separation of opposing traffic streams, and hours of flash operation at signalized intersection(s). The approved traffic control plan(s) shall be implemented by a qualified traffic control company with a C31 license. Prior to beginning of work or if there are changes to the proposed traffic control and after approval by the City, the qualified traffic control company staff shall complete field checks of the installed traffic control by driving through the work area at least two (2) times to ensure the adequacy of traffic control.

704-10 MEASUREMENT AND PAYMENT

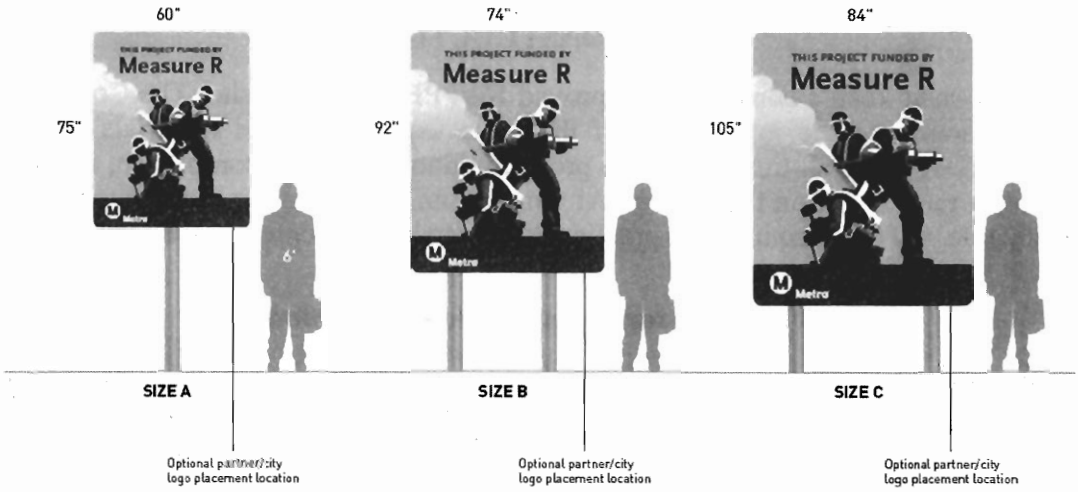
Measurement and payment for providing TRAFFIC CONTROL will be made at the lump sum price named in the Bid Schedule, which shall constitute full compensation for all labor, equipment, materials, tools and all incidentals required to complete the job as outlined in these Specifications and as directed by the Engineer. No additional compensation will be allowed.

705 – MEASURE R CONSTRUCTION SIGN

705-1 General

In addition to the traffic control construction signing, two Measure R project signs (Size A, with the City logo) shall be installed on both approaches to the construction site. Signage details are provided below:

Measure R Local Construction Project sign



705-2 Measurement and Payment

Measurement and payment for Measure R Construction sign, its manufacturing, installation and removal after completion of the project, as described herein, shall be included in the unit price for bid "Measure R Construction

706 - STORM WATER POLLUTION PREVENTION PROGRAM (SWPPP)

706-1 GENERAL

Note: Contractor's attention is also directed to SSPWC, the latest edition, for additional information regarding this item.

The Contractor shall provide a local Storm Water Pollution Prevention Plan (SWPPP), which describes in specific detail the Contractor's program to prevent contamination of the storm water collection system. The program shall address both common construction activities and extraordinary events. The SWPPP shall comply with the City of Calabasas Storm water Standards. A copy of the standards is available for review from the City of Calabasas Storm Water Coordinator; phone 818-224-1600.

The Contractor shall submit three (3) copies of SWPPP one week prior to the pre-construction meeting. Construction shall not begin until the SWPPP is approved. The SWPPP shall list Best Management Practices (BMPs) that will address practices for reducing the introduction of pollutants on the jobsite and the containment, collection, and disposal of pollutants that occur on the jobsite.

A suggested sample of SWPPP and BMPs can be obtained from the following source:

City of Calabasas' Storm Water Pollution Prevention Plan (SWPPP) template - http://www.cityofcalabasas.com/environmental/swppp.html

706-2 CONSTRUCTION

The Contractor shall keep a copy of the approved SWPPP on the job site. The Contractor shall provide continuously at the job site all of the tools, equipment, and materials necessary to implement the SWPPP at all times from the project initiation through completion, including any punchlist or warranty work on the project. At a minimum the following requirements should be met as applicable, the maximum extent practicable, at construction sites regardless of size.

706-2.1 Storm drain system protection

At the first order of work the Contractor shall protect the existing stormwater system from entrance of construction debris and pollutants. Such protection shall include implementing the BMPs as outlined in the SWPPP. Protection shall prohibit the discharge of untreated runoff from temporary or permanent street maintenance/landscape maintenance material and waste storage areas from entering the storm drain system. Sediment that is generated on the project site shall be retained using structural drainage controls. In addition, the protection system shall have a minimum of three features: 1) a particulate filter of geo-synthetic material securely fastened in place such that it cannot be bypassed without significant physical damage; 2) a prefilter for the particulate filter; and 3) on-hand materials to close off the inlet or opening in the case of a significant pollution spill.

706-2.2 Material management and storage

No construction-related materials, wastes, spills or residues shall be discharged from the project site to streets, drainage facilities or adjacent properties by wind or runoff. All materials and/or equipment storage areas where liquid construction materials are placed shall be protected by a physical barrier capable of containing the entire volume of stored liquid materials. During active construction activities, portions of the barrier may be removed for access. However, the barrier materials must be readily accessible for replacement by onsite construction personnel. The barrier must be in place at all times during the absence of Contractor personnel at the storage site.

706-2.3 Equipment and vehicle maintenance

Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the project site. The Contractor shall conform to the guidelines set forth in the City of Calabasas Mobile Car Washing Ordinance. The Contractor shall inspect vehicles and equipment on each day of use. Leaks shall be repaired off-site immediately or the problem

vehicle or equipment shall be removed from the project site. If necessary, drip pan should be placed under the paving equipment while not in use to catch and/or contain drips and leaks.

706-2.4 Soil erosion control

Erosion form slopes and channels will be eliminated by implementing BMPs, including but not limited to, limiting or grading scheduled during the wet season, inspecting graded areas during rain events, planting and maintenance of vegetation on slopes, and covering erosion susceptible slopes.

706-2.5 BMP Inspection

The Contractor shall inspect all pollution control BMPs regularly. The Contractor should also repair/replace any damaged or clogged element on a daily basis. During periods of precipitation where any runoff occurs, the system shall be checked twice a day, seven days a week, whether or not any work has been performed. The daily checks shall be between 6 and 9 a.m. and 4 and 8 p.m. The Contractor shall keep a monitoring inspection log of each inspection.

706-2.6 Spill prevention and cleanup plan

The Contractor shall have a spill prevention plan and spill cleanup materials readily available and addressed in the SWPPP Spills shall be cleaned up immediately using dry methods if possible. Spill cleanup material shall be properly disposed of. Refer to SC-11 Spill Prevention BMP form the California Storm water BMP Handbook for Municipal Activities. Contractor shall keep a record of any spills in the inspection log. In addition, at the end of the project, the Contractor must certify that all contaminated materials have been properly disposed in accordance with the SWPPP.

706-2.7 Asphalt and concrete activities

Asphalt and concrete activities shall be scheduled for dry weather. Contractor shall prohibit saw cutting during a storm event of .25 inches or greater.

706-2.8 Employee BMP Training

Contractor shall train employees and subcontractors on BMP implementation, general good housekeeping, and proper spill containment and cleanup.

706-3 MEASUREMENT AND PAYMENT

Measurement and payment for SWPPP and /or BMP, as described herein, will be made at the contract lump sum price stated in the proposal. Such payment will be considered full compensation for all labor, materials, tools, and equipment for completion, implementation and compliance with the SWPPP.

707 - CLEARING AND GRUBBING

707-1 SCOPE OF WORK

Clearing and Grubbing shall be done as shown on the Plans, in accordance with the provisions of Section 300-1 of the SSPWC, except as amended or modified herein, and as directed by the Engineer.

The area above the natural ground surface shall be cleared of all vegetation, such as trees, logs, upturned stumps, roots of down trees, brush, grass, weeds and other objectionable material including concrete or masonry.

Clearing and grubbing shall be performed in advance of grading operations and in accordance with the requirements specified in these specifications.

Materials removed shall become property of the contractor and shall be disposed at an approved disposal site at the Contractor's expense.

Existing highway improvements and facilities, adjacent property, irrigation lines, utility and trees and plants that are not to be removed, shall be protected from injury or damage resulting from the Contractor's operations. Any damaged improvements, utilities or landscape shall be replaced in kind at the contractor's expense.

The contractor shall not start any Clearing and Grubbing work until all tree protection measures are in place and temporary fences at perimeter of environmentally sensitive areas are installed.

707-2 MEASUREMENT AND PAYMENT

Measurement and payment for providing CLEARING AND GRUBBING will be made at the lump sum price named in the Bid Schedule, which shall constitute full compensation for all labor, equipment, materials, tools and all incidentals required to complete the job as outlined in these Specifications, as shown on the plans, and as directed by the Engineer.
The lump sum price paid for clearing and grubbing shall include the removal of all trees with trunk diameters of less than 6" measured 3' above existing ground.

708 - MISCELLANEOUS REMOVALS OR RELOCATIONS

708-1 SCOPE OF WORK

Removals shall be done in accordance with the provisions of Section 300-1 of the SSPWC, except as amended or modified herein.

Removal of all Trees, Concrete Sidewalk, Concrete Pavement, Concrete Curb and Concrete Curb and Gutter, AC Pavement and Base, AC Berm, Miscellaneous Concrete, Chain Link Fence, Guard Rail, will become property of the Contractor and shall be transported to an approved disposal site.

The Contractor shall obtain weight tickets from the disposal site or material plant and submit all the tickets to the City with the monthly progress payment request.

Brick rubble, broken asphalt pavement, and broken concrete originating from the miscellaneous removals described in this section may be incorporated in the fill in conformance with section 300-4.1 of the SSPWC. No separate measurement or payment shall be allowed for the processing, placing and compacting of miscellaneous removal in the fill areas shown on the plans.

The Contractor shall remove and replace only those improvements within the designated removal sections. Any areas removed by the Contractor not approved by the City shall be at the Contractor's expense. Any damaged improvements, utilities or landscape shall be replaced in kind at the contractor's expense.

708-2 TREE REMOVAL

Tree removal shall consist of removing tree, tree stump and roots where indicated on the plans and as directed by the engineer. After the tree removal is completed voids shall be backfilled with native material supplied by the Contractor.

708-3 REMOVAL OF CONCRETE PAVEMENT, DRIVEWAY, SIDEWALK, CURB AND CURB AND GUTTER

Removal of concrete pavement, sidewalks, curbs, gutters, access ramps and driveways shall be in conformance with the provisions in Section 300-1.3.2.(c) of the SSPWC and these Special Provisions.

The Removal of Curb Drains shall be included in the removal of Concrete Sidewalk, Curb and Curb and Gutter and no extra payment shall be allowed therefore.

Concrete sidewalk, curb ramps, curb, and gutters shall be removed to neatly-sawed edges with sawcuts made to a minimum depth of 1-1/2 inches and shall be neatly sawed in straight lines either parallel to the curb or at right angles to the alignment of the sidewalk. The slurry created by sawcutting shall be removed by vacuum during the sawcutting operation.

708-4 REMOVAL OF AC PAVEMENT AND BASE

Removal of AC Pavement and Base shall be in conformance with the provisions in Section 300-1.3.2.(a) of the SSPWC and these Special Provisions.

All asphalt concrete pavement to be removed shall be sawcut to a true line where new pavement is to join existing pavement. Pavement removal operations shall be performed without damage to any portion which is to remain in place. All damage to the existing pavement, which is to remain in place, shall be repaired to a condition equal to that which existed prior to the beginning of removal operations.

708-5 REMOVAL OF AC BERM

Removal of AC Pavement and Base shall be in conformance with the provisions in Section 300-1.3.2.(c) of the SSPWC and these Special Provisions.

All AC Berm to be removed shall be sawcut to a true line where new pavement is to join existing pavement.

708-6 REMOVAL OF MISCELLANEOUS CONCRETE

Removal of Concrete Pavement shall be in conformance with the provisions in Section 300-1.3.2.(b) of the SSPWC and these Special Provisions.

708-7 REMOVAL OF CHAIN LINK FENCE AND GUARD RAIL

Chain Link Fence and guard rail shall be removed where indicated on the plans and as directed by the engineer. It is the Contractors responsibility to erect temporary fences at all properties, providing the same level security as the existing fences, before removing the existing fences. The installation of temporary fences shall be included in the unit price for Remove Chain Link Fences and no separate payment will be allowed therefore.

708-7 RELOCATE UTILITY CABINET

For Relocation of Utility Cabinet contact Southern California Edison for coordination, information and procedure prior to any work done.

708-8 REMOVE STREET LIGHT

For Remove Street Light contact and coordinate with Southern California Edison for prior to removal.

708-9 MEASUREMENT AND PAYMENT

Measurement and payment for Miscellaneous Removals shall be at the unit prices named in the bid schedule for the various work items as follows:

Measurement and payment for TREE REMOVAL shall be at the price bid per each for Tree Removal. The removal of all trees with trunk diameters of less than 6" measured 3' above existing ground is included in the scope of work for Clearing and Grubbing and no separate payment will be made therefore.

Measurement and Payment for REMOVE CONCRETE SIDEWALK shall be at the price bid per square foot for Remove Concrete Sidewalk.

Pavement Measurement and Payment for REMOVE CONCRETE PAVEMENT shall be at the price bid per square foot for Remove Concrete Pavement.

Pavement Measurement and Payment for REMOVE EXISTING DRIVEWAY shall be at the price bid per square foot for Remove Existing Driveway.

Measurement and Payment for REMOVE CONCRETE CURB AND CONCRETE CURB AND GUTTER shall be at the price bid per linear foot for Remove Concrete Curb and Concrete Curb and Gutter.

Measurement and Payment for REMOVE AC PAVEMENT AND BASE for proposed landscaped areas shall be at the price bid per cubic yard for Remove AC Pavement and Base.

Measurement and Payment for REMOVE AC PAVEMENT AND BASE shall be at the price bid per square foot for Remove AC Pavement and Base.

Measurement and Payment for REMOVE AC BERM shall be at the price bid per linear foot for REMOVE AC BERM.

Measurement and Payment for REMOVE MISCELLANEOUS CONCRETE shall be at the price bid per cubic yard for Remove Miscellaneous Concrete.

Measurement and Payment for REMOVE CHAIN LINK FENCE shall be at the bid lump sum for Remove Chain Link Fence.

Measurement and Payment for REMOVE GUARD RAIL AND FENCE shall be at the bid lump sum for Remove Guard Rail and Fence.

Pavement Measurement and Payment for RELOCATE UTILITY CABINET shall be at the unit bid price for Relocate Utility Cabinet.

The above contract prices shall include full compensation for all labor, materials, equipment, tools, tax and all incidentals required to complete the job per plans, as outlined in these Specifications and as directed by the Engineer.

709 - EARTHWORK

709-1 SCOPE OF WORK

Earthwork shall be done as shown on the Plans, in accordance with the provisions of Section 300-2, 300-3, 300-4, 300-5, 300-6, and 300-7 of the SSPWC, except as amended or modified herein.

Unclassified Excavation shall consist of all excavation within the roadway prism, for debris basins, and excavation within all the cut areas, including the excavation for the Reinforced Retaining Walls up to the face of the walls, as shown on the plan. To the extent possible unclassified excavation material suitable for the use in the construction of fills shall be placed in the fill sections within the limits shown on the plans or as directed by the engineer. The legal disposure of excess material shall be the Contractors responsibility.

709-2 WATERING

The Contractor shall be responsible for developing a water supply for use in the work and dust control.

If the Contractor uses reclaimed waste water in the work, the sources and discharge of reclaimed waste water shall meet the California Department of Health Services water reclamation criteria and the Regional Water Quality Control Board requirements. The Contractor shall obtain either a waste water discharge permit or a waiver from the Regional Water Quality Control Board. Copies of permits or waivers from the Regional Water Quality Control Board shall be delivered to the Engineer before using reclaimed waste water in the work.

Water shall be applied in the amounts, at the locations, and for the purposes designated in the special provisions and these specifications, and as ordered by the Engineer. Water for compacting embankment material, subbase, base and surfacing material, and for laying dust control shall be applied by means of pressure-type distributors or pipe lines equipped with a spray system or hoses with nozzles that will ensure a uniform application of water.

Equipment used for the application of water shall be equipped with a positive means of shut-off. Unless otherwise permitted by the Engineer or unless all the water is applied by means of pipe lines, at least one mobile unit with a minimum capacity of 1,000 gallons shall be available for applying water on the project at all times.

Full compensation for applying water will be considered as included in the prices paid for the various contract items requiring water and no separate payment will be made therefore.

709-3 MEASUREMENT AND PAYMENT

Measurement and Payment for all EARTHWORK bid item will be made at the contract unit price per cubic yard named in the Bid Schedule, and shall include compensation for excavating, sloping, rounding tops and ends of excavation, loading, hauling, disposing of unsuitable and excess material, placing and compacting selected local borrow from the cut areas to the fill areas shown on the plan. No separate measurement or payment shall be allowed for the placing and compacting of selected local borrow in the fill areas shown on the plans.

710 - SUBGRADE PREP/PLACEMENT OF BASE MATERIAL

710-1 SCOPE OF WORK

Subgrade Preparation shall be done as shown on the Plans, in accordance with the provisions of Section 301-1 of the SSPWC, except as amended or modified herein.

Subgrade preparation shall be scarified at least six (6) inches below subbase elevation and compacted to at least 90 percent relative compaction. Aggregate Base shall be compacted at 95 percent relative compaction.

Crushed Aggregate Base shall be constructed as shown on the Plans, in accordance with the provisions of Section 301-2 of the SSPWC, and as modified in these Special Provisions.

710-2 MATERIAL REQUIREMENTS

Crushed Aggregate Base shall conform to the provisions of Section 200-2.2 of the SSPWC.

710-3 MEASUREMENT AND PAYMENT

Payment for preparing a subgrade will be considered as included in the item of work for which the subgrade is prepared and no separate payment will be allowed therefore.

Quantities of Measurement Crushed Aggregate Base will be measured per square foot of area compacted in place within the limits of the dimension shown in the plans.

Payment for CRUSHED AGGREGATE BASE will be considered as included in the item of work for which the subgrade is constructed and shall include full compensation for all material, transport, spreading, compacting, and all incidentals required to complete the work.

711 - ROADWAY SURFACES

711-1 SCOPE OF WORK

This work shall consist of all asphalt cold milling, tack coat, and asphalt concrete installation to be performed as shown on the plans. All work shall conform to Section 301-1, 301-2 and 302-5 of the SSPWC, except as amended or modified herein.

711-2 PAVEMENT CLEANING

Diesel fuel shall not be used for cleaning purposes within any of the streets within the project. Linseed oil shall be used.

711-3 ASPHALT TACK COAT

Tack coat material for Asphalt Concrete paving shall be SS-1h applied at a rate of 0.06 gallon per square yard (undiluted), from a distributor truck with a heating element capable of raising the temperature at least 3 degrees F per hour.

The tack coat shall be applied by distributor equipment at a uniform rate. In areas inaccessible to the spray bar on the applicator truck, SS-1h emulsion may be substituted and applied from a hand wand at a rate of 0.08 gallons per square yard.

In any case where emulsified material is used, the tack coat shall be allowed to completely break, that is turn completely black (not dark brown), prior to paving.

The area to which tack coat has been applied shall be closed to public traffic. Care shall be taken to avoid tracking binder material onto adjacent surfaces. If the area is left unattended, then appropriate "fresh oil" signs must be posted. The Contractor shall be responsible for resolving all claims related to asphalt materials splashed/tracked on vehicle, concrete, and private property.

The Contractor shall be responsible for protecting existing storm drain catch inlets and to ensure that no tack coat spoils are sprayed into storm drain inlets.

Tack coat material for Asphalt Concrete paving shall consist of a Bituminous Surface Pavement Tack Coat composed of a blend of elastic Polymer modified asphalts, thermoplastic resins and digested whole tire rubber. The Material is applied at 325 to 425 degrees F with a distributor truck at typical application rates of 0.08 to 0.15 gal/square yard. The exact application rate will be determined by surface conditions at time of application.

Tack coat for Asphalt Concrete overlay paving shall be Thermoplastic Polymer Modified No Track Tack. The Thermoplastic Polymer Modified No Track Tack shall meet the following criteria:

Test Method		Typical Properties	Specification
Digested whole tire rubber		2	1-3
Softening Point Degree F	D36	165	160 Min
Penetration @ 77 Deg. F 100g, 5 sec, Dmm	D-5	16	10 Min
Brookfield Viscosity @ 275 Deg. F cPs*	D4402	975	3000 Max
Brookfield Viscosity @ 350 Deg. F cPs*	D4402	185	300 Max

*BKF LV II, spdl #21 @ 20 RPM

The tack coat shall be applied to the existing pavement on the areas to receive the Asphalt Concrete overlay. The Engineer shall approve the exact rate and number of applications. Two heavy coats of SS 1h shall be applied to vertical joints for patching. All contact surfaces with new asphalt shall be painted tack coat immediately before the asphalt concrete is placed.

The tack coat shall be applied as specified in Subsection 302-5.4 of the SSPWC and these Special Provisions. Thermoplastic Polymer Modified No Track Tack shall be applied only when the existing surface is dry and the atmospheric temperature is 50 deg. F and rising. No material shall be applied when rain is imminent.

The Thermoplastic Polymer Modified No Track Tack shall be heated slowly to 325 425 degrees F. At no time shall the product be heated above 450 degrees F. The product shall be applied through a distributor truck equipped with a heating unit and shall maintain tack coat at or above 325 degrees F. It shall be equipped with a full circulating spreader bar and pumping system capable of applying the Thermoplastic Polymer Modified No Track Tack material within + 0.01 gallons per square yard tolerance of specified application rate and give uniform covering of the surface to be treated. The distributor shall also include a tachometer, pressure gauge, and volume measuring device and thermometer. The application rates shall be 0.15 gallons per square yard for all ARHM overlay or as otherwise directed by the Engineer. If the pavement

temperature reaches over 130 degrees F, the application rate will be reduced to minimum 0.08 gallons per square yard on overlay applications.

Paving asphalt shall not be applied until the preparation of the existing surface has been completed and thoroughly cleaned, and then only so far in advance of placing the asphalt concrete overlay as permitted by the Engineer. Slurry seal shall be applied on the same day as receiving tack coat. The Thermoplastic Polymer Modified No Track Tack shall not be left exposed overnight.

Existing concrete curb faces and all concrete not to be overlaid shall be protected against disfigurement from the asphalt tack coat. Residue of the material shall be removed from concrete surfaces to return the concrete to its original condition unless otherwise directed by the Engineer.

On all vertical joins of AC patching, apply SS-1H tack coat uniformly in two coats of 0.20 gallons per square yard each with full "break" in between, or 0.20 gallons per square yard AR-4000 uniformly in one coat. Tack coat shall not be applied when the temperature of the surface to be tacked is below 40°F in the shade. A tack coat shall be applied at the following:

1. Pavement joints;
2. Areas where new pavement meets existing pavements;
3. Areas where lift sections from pavement placed on different days meet;
4. Trenches;
5. Areas where existing striping has been sandblasted;
6. Raised valves and manhole covers; and
7. Crack fill for slurry seal prep as described in Section 708-1.C.

SECTION 711-4 – ASPHALT-RUBBER HOT MIX (ARHM)

711-4.1 General

Asphalt-rubber hot mix shall conform to the specifications for "Asphalt Rubber Hot Mix (ARHM)" of the SSPWC, latest edition, except as modified herein. Aggregate and binder for Asphalt-Rubber Hot Mix (ARHM) shall be proportioned by weight and volume by weighing and pulsing utilizing automatic batch mixing as required by Section "Automatic Proportioning", of the Caltrans Standard Specifications (SSS).

711-4.2 Automatic Proportioning

When automatic batch mixing is required by the special provisions or when the Contractor elects to use an automatic batching system, the proportioning devices shall be automatic to the extent that the only manual operation required for proportioning all materials for one batch shall be a single operation of a switch or starter.

711-4.3 Weight Proportioning

Automatic proportioning devices shall be of a type in which materials discharged from the several bins are controlled by gates or by mechanical conveyors. The batching devices shall be

so interlocked that no new batch may be started until all weighhoppers are empty, the scales are at zero, and the discharge gates are closed. The means of withdrawal from the bins and of discharge from the weigh box shall be interlocked so that not more than one bin can discharge onto any given scale at one time, and that the weigh box cannot be tripped until the required quantity from each of the bins has been deposited therein. In addition, automatic proportioning devices shall be interlocked so that the weighing cycle will be interrupted whenever the amount of material drawn from any storage varies from the preselected amount by more than the tolerances specified in Section 39-3.03A(1), "Manual Proportioning." Whenever the weighing cycle is interrupted, that specific batch shall not be used in the work unless it can be manually adjusted to meet the specified tolerances based on the total weight of the batch. When partial batches are batched automatically, the interlock tolerances, except the zero tolerance, shall apply to the total weight of the aggregate in the partial batch.

Automatic proportioning devices shall be operated so that all weight increments required for a batch are preset on the controls at the same time. Controls shall be designed so that these settings may be changed without delay, and the order of discharge from the several bins can be changed as directed by the Engineer.

Automatic proportioning controls shall be equipped with means for inspection of the interlock tolerance settings, and instructions for doing so shall be immediately available at the point of operation.

In order to check the accuracy of proportioning during plant operation, the Contractor shall provide means to check the weight of various proportioned amounts on a separate scale located at the plant.

711-4.4 Volumetric Proportioning

Asphalt binder shall be proportioned by an adjustable calibrated tank.

Automatic volumetric proportioning devices shall be of a type which will not allow the bins to discharge into the mixer unless the mixer is empty and the mixer discharge gate is closed and will not operate unless the aggregate bins and asphalt binder tank are full.

The automatic proportioning device shall operate in such a manner that the material in each aggregate bin and the asphalt binder tank is within 2 percent of the preselected weight.

In order to check the accuracy of proportioning during plant operation, the Contractor shall provide means to check the weight of various proportioned amounts on a separate scale located at the plant.

Use of Manual Proportioning and Pulsing will not be allowed.

711-4.5 Paving Asphalt

ARHM for overlays shall be gap graded Class C (ARHM-GG-C) per SSPWC, latest edition. Asphalt rubber binder shall be PG 64-16 and shall be modified with an asphalt modifier.

711-4.6 Testing

Subsection 203-11.6, paragraph one, Mix Designs and Certifications, of the SSPWC shall be deleted in its entirety and replaced with the following:

The optimum binder content shall be determined by plant inspection. The amount of each material in each batch shall be weighed by a State Certified calibrated scale and the percentage of binder shall be determined mathematically, verified and documented at the plant before the material is sent to the project site. If the material does not meet the requirements on Table 203-11.3(A) of the SSPWC, the material will be replaced at no cost to the City.

Compaction shall be in accordance with California Test Method 304 except for the following:

Mixing Temperatures:
Asphalt-rubber = 340-360 degrees (F)
Aggregate = 290-310 degrees (F)
Compaction Temperature = 290-300 degrees (F)

Compaction testing shall be performed in a randomized pattern in the travel lane and on longitudinal joints at a frequency to be determined by the Engineer.

711-4.7 Required Submittals

Submittals shall be in accordance with Subsection 2-5.3 of the Standard Specifications and supplied to the Engineer for approval at least 10 working days before construction is scheduled. In addition to these required submittals, the following is required:

Certificate of calibrated batch scales per California State Test 109 from the batch plant supplying the material.

Paving Asphalt

Source of paving asphalt and grade of asphalt cement.
Source and grade of additives used.
Percentage of asphalt cement and additives by total weight of the asphalt-rubber blend.

CRM

Source of CRM.
Identification or grade of CRM.
Percentage of CRM by total weight of the asphalt-rubber blend.

If CRM from more than one source is used, the above information will be required for each CRM used.

Minimum Brookfield viscosity using a Number 3 rotor.

Laboratory test results of the proposed blend per the test parameters for the type of asphalt-rubber selected including the minimum mixing reaction time.

At least two weeks prior to construction, the Contractor shall supply the Engineer with mix proportions, a formula for the production of asphalt rubber binder, and the individual raw components of the asphalt rubber binder in order that the City, at its option, can test them in combined form to verify conformance to the specifications for binder, modifier, natural rubber and tire crumb rubber.

711-4.8 Surface Preparation

Surface preparation for asphalt concrete includes trimming of interfering trees, shrubbery, and ground growth, removing trimmed vegetation, controlling nuisance water, repairing potholes and cleaning / sweeping existing surfaces. Tree trimming shall only be performed by City crews. Surface preparation shall also include the removal of striping and pavement markers for the purpose of paving. Temporary traffic control devices shall be installed to direct traffic. The Contractor shall contact the City Parks Division for trimming of interfering City trees at least five (5) working days in advance of operations that require the trimming of trees.

711-4.9 Surface Cleaning

Immediately prior to resurfacing work, existing asphalt concrete surfaces shall be cleaned of dust, dirt, oil surfaces and other foreign material. Resurfacing materials shall not be placed on existing surfaces that are not clean.

Vacuum or air generated type sweepers shall be used for surface cleaning. Mechanical type sweepers may be used provided that a vacuum or air generated cleaning procedure follows.

When paving over a new leveling course with ARHM, contractor shall first apply .05-.08 gal/s.y. trackless tack over the entire surface area of leveling course asphalt before overlaying with ARHM. The exact rate will be determined by surface conditions and directed by the City Engineer in the field. Tack shall be applied in accordance with Section 706 of these specifications.

711-4.10 Construction

ARHM shall be constructed as specified for asphalt concrete pavement in subsection "Asphalt Concrete Pavement" and "Asphalt Rubber Hot Mix (ARHM)" of the SSPWC, except as odified herein.

711-5 DISTRIBUTION AND SPREADING

The third paragraph of Subsection "Distribution and Spreading" of the SSPWC shall not apply to ARHM.

The temperature of the mixture directly behind the paving machine, before the breakdown roller, shall not be lower than 270 degrees (F) or higher than 320 degrees (F), the lower limit to be approached in warm weather and the higher in cold weather. The ARHM material must be used within 1.5 hours of mixing. Loads travelling long distances or batched for night work shall be covered with a tarp to preserve temperatures.

Contractor shall provide surface temperature readings with an infrared heat measurement device when requested by the Engineer.

In addition, the requirements in Subsection "Distribution and Spreading" of the SSPWC, the ARHM pavement shall be placed with spreading equipment equipped with fully automatic screed and grade sensing controls which shall control the longitudinal grade of the screed. Automatic controls shall conform to and be operated in accordance with the following provisions.

Heat the paving machine, especially the hopper and pavement area which will be paved immediately.

Unless approved otherwise, ski type devices, with a minimum length of 30 feet, shall be used to provide a reference for the grade sensor. Skis shall be constructed and installed in such a manner that a reference to the average elevation of the existing pavement, along the length of ski, is maintained at the sensor point. When placing surfacing adjacent to surfacing previously placed in conformance with these provisions, a joint matching shoe, of adequate size and type to properly sense the grade of the previously placed mat, may be used in lieu of the 30-foot ski.

The ski shall be mounted at a location that will provide an accurate reference for the surfacing being placed. This may require the ski to be mounted ahead of, and inside the outer limits of the screed. Automatic cross slope control may be accomplished by use of a ski and grade sensor on each side of the paving machine.

Automatic screed controls shall be installed in such a manner that the occasional manual adjustments necessary to maintain the attitude of the screed parallel to the underlying pavement are readily accomplished. Automatic screed controls shall be installed so that with little or no delay, use of the automatic controls can be discontinued and the screed controlled by manual methods.

Should the automatic screed controls fail to operate properly during and day's work, the Contractor may use manual control of the spreading equipment for the remainder of that day, provided the quality conforms to the requirements of the SSPWC, latest edition. Should the methods and equipment used for automatic control fail to result in the quality of work required by SSPWC, the paving operation will be temporarily discontinued and the Contractor shall make the necessary changes to the equipment, or furnish other equipment conforming to the requirements herein, before paving is resumed.

Where two overlays of different thickness abut at a longitudinal joint, the Contractor shall add to the thinner section to match the thicker lift and provide a smooth transition and uniform cross-fall. Cold milling of ridges or other rises in the new pavement surface may be required by the Engineer to correct irregularities.

The Contractor shall provide smooth transition at the beginning and end of the new overlay as shown on the plans.

Minor failures such as potholes, large cracks, etc., shall be repaired in advance of the paving operation in accordance with these specifications.

711-5.1 Intersections

Where construction of pavement occurs on a through street at an intersection with no concrete cross-gutter, the pavement on the cross street shall extend to the limits determined by the Engineer.

711-5.2 Longitudinal Joints

Longitudinal joints between parallel pavement runs shall occur within one foot of lane lines or the center of the line. Longitudinal joints on wheel tracks will not be permitted. The Engineer shall approve the placement of longitudinal joints prior to resurfacing. One longitudinal joint shall be constructed on streets (down the center of the street) where the pavement width is 40 feet or less.

711-5.4 Cold Joints

Cold joints shall be saw-cut prior to the placement of new material. Pavement shall be removed to clean, straight lines by saw-cutting in straight lines either parallel to the curb or at right angles to the alignment of the sidewalk.

711-5.5 Rolling

Initial rolling shall commence immediately following the placement of ARHM.

A vibratory roller shall be used for initial breakdown rolling. The initial breakdown rolling shall be completed before the ARHM temperature falls below 180 degrees (F) measured immediately in front of the roller. If Contractor is not rolling fast enough, the operation shall be stopped and the problem shall be corrected by having extra workers and/or breakdown rollers.

The Contractor shall provide a minimum of 2 (two) rollers. Additional rollers shall be on the job site and ready to be used as necessary and as directed by the Engineer.

711-5.6 Emulsion Seal Coat

An emulsion seal coat consisting of SS-1h emulsified asphalt shall be applied at the following location:

1) Pavement joints:
2) Areas where new pavement meets existing pavements;
3) Areas where lift sections from pavement placed on different days meet;
4) Trenches;
5) Areas where existing striping has been sandblasted;
6) Asphalt berms; and
7) Raised valves and manhole covers.

711-6 COMPACTION TESTING

Nuclear gage compaction test shall be taken every 200 feet to ensure the 95% compaction.

Core density/nuclear gauge shall be done per CTM 375, "Determining the In-Place Density and Relative Compaction of Asphalt Concrete Pavement".

If compaction fails by nuclear methods, then core density/nuclear gauge correlation and/or core densities shall be used to establish compaction.

When core density is used to determine compaction, cores that meet or exceed the minimum specified density of 95.0 percent shall be paid for by the City. Failing cores shall be paid for by

the Contractor. If the core density testing produces both passing and failing cores, the cost will be prorated between the City and Contractor.

Compaction failing to meet the above criteria shall be subject to the following payment reduction and the payment shall apply to each 500-ton lot:

Compaction Range	Payment Percentage
95.0% and above	100%
94.0% to 94.99%	95%
93.0% to 93.99%	90%
92.0% to 92.99%	85%
91.99% and below	Remove and Replace

The Contractor shall have hand-compaction equipment immediately available for compacting all areas inaccessible to rollers. Hand-compaction shall be performed concurrently with breakdown rolling. If for any reason hand-compaction falls behind breakdown rolling, further replacement of asphalt concrete shall be suspended until hand-compaction is caught up. Hand-compaction includes vibraplates and hand tampers. Hand torches shall be available for rework of areas which have cooled.

After compaction, the surface texture of all hand work areas shall match the surface texture of the machine placed mat. Any course of segregated areas shall be corrected immediately upon discovery. Failure to immediately address these areas shall cause suspension of asphalt concrete placement until the areas are satisfactory addressed, unless otherwise allowed by the Engineer.

711-7 COLD MILLING

Cold milling asphalt concrete pavement shall conform to Section 302-1 of the SSPWC, as modified below. Unless otherwise noted, all modifications shall be in addition to the provisions of that subsection.

The following is hereby added to Section 302-1.1 General:

Straight edge grade along the edge of the cold plane area shall not deviate more than 3/8-inch below nor 3/8-inch above the grade specified in the Plans or Specifications. Removal of undulations in the existing paved surface shall be included in this item of work.

Cold milling for streets to be overlaid shall not be performed more than 2-working days ahead of paving.

All cold milled streets must be accepted by the Engineer as clean after cold milling, at least the day before paving. Sweepers used for cold milling shall not enter on streets approved as clean after cold milling.

After cold milling, Contractor shall provide temporary AC ramping at all drive approaches. Temporary ramping at header end cuts shall be extended to 6 feet from end of cut line and at edges of bus pads, utility vaults, and cross gutters. Temporary pavement transitions shall be constructed on Kraft paper or other suitable bond breaker such that upon removal of the temporary pavement transition a clean notch remains.

Unless indicated otherwise on the Plans, any pavement repairs within designated cold milling areas shall be completed prior to cold milling operations. Paving or overlay shall begin within two (2) working days after completion of cold milling in each location and shall proceed without interruption from start to finish. Any painted crosswalk or stop bar obliterated, either partially or entirely, by resurfacing operations shall be immediately replaced with temporary tabs.

At streets which are cold milled and intercept other streets that are not scheduled for cold milling, and have no Portland Cement Concrete cross gutter, cold milling shall be as directed by the City's Project Representative and may include cold milling into the end of curb returns of the intersected streets not scheduled for overlay. The depth of the cold milling shall be the depth of the proposed new asphalt.

The cold milling of all streets shall include cleaning of existing asphalt concrete and slurry seal excess material over concrete gutters and cross gutters by means that will not deteriorate the concrete surfaces of the gutters and cross gutters. Price for removal of existing excess asphalt concrete and slurry seal covering gutters and cross gutters shall be included in the cost of cold milling and no additional compensation will be provided for this work.

Pavement Transitions: Structures and vertical joints in the cold-milled area which are transverse to through vehicular and bicycle traffic and greater than ½ inch in height, shall be ramped with temporary asphalt concrete pavement as specified in 306-1.5.1 of SSPWC, with the width of temporary asphalt transition revised to 5 feet per one inch of vertical cold milling depth at the drop off edge of cold milled area. All header cuts in arterial streets and longitudinal cuts that intersect signalized intersections shall be ramped the full width that was cold milled; other ramp dimensions and compaction shall be approved by the City's Project Representative. Ramps shall be constructed the same day as cold milled limits and removed the same day as permanent paving. The Contractor shall install "UNEVEN LANES" and "ROUGH ROAD" signs as directed by the City's Project Representative. Payment for construction, removal, and disposal of temporary asphalt concrete ramps will be included in the item for cold milling.

The grindings from the cold milling shall be reused for the temporary asphalt to ramp all existing manholes and utility covers, cross-street transitions, cross-gutters and along edges of bus pads when the roadway is open to traffic after cold milling and prior to final ARHM overlay.

Cold milling at the intersections shall be as shown in the construction drawings. The intent is to terminate at the ECR/BCR of intersecting streets where indicated.

IN NO CASE SHALL COLD MILLED AREAS BE LEFT OPEN TO TRAFFIC OVER A WEEKEND.

711-8 COLD MILLING EQUIPMENT

The following is hereby added to Section 302-1.2 Milling Machine:

The size of the asphalt concrete milling machine shall be of a size suitable for milling the asphalt concrete without causing damage to the surrounding structures. Concrete curbs, gutters or other structures should not be chipped, broken or damaged. Damage including chipping of the concrete curbs, gutters or surrounding structures shall be the responsibility of the Contractor for repairs, replacement and/or stopping work until repairs or corrections are completed. The Contractor shall be responsible for protecting existing storm drain inlets, swales, and culverts to ensure that no cold milled spoils are deposited into them.

711-9 MEASUREMENT AND PAYMENT

Measurement for payment for full-width or tapered asphalt concrete COLD MILL shall be based upon the number of square foot of such cold mill, irrespective of the number of passes required in accordance with Sections 302-1.11 and 302-1.12 of the SSPWC.

Measurement and payment for the construction of ASPHALT RUBERRIZED HOT MIX (ARHM) shall be made at the unit price per square foot, named in the Bid Schedule; and in accordance with Section 302-5.9 of the SSPWC, adjusted by the amount of any change ordered by the Engineer. It shall constitute full compensation for furnishing all labor, materials, tools, equipment, transportation and other incidentals for doing all work involved in constructing AC paving finishing, clean-up, protection of the asphalt concrete until it has set, and all appurtenant work as indicated in the contract documents; R & R performed outside those dimensions or not authorized by the Engineer will not be measured or paid for.

Payment for tapered and full-width asphalt concrete cold mill shall be the actual square foot of surface milled named in the Bid Schedule, which shall constitute full compensation for cold milling, removal and disposal of the pavement grindings, clean-up and all appurtenant work. No separate payment will be made for removal and cleaning of existing excess asphalt concrete material over concrete gutters and cross gutters and the cost therefore shall be included in the price for this Bid Items.

The above contract prices shall include full compensation for all labor, materials, equipment, tools, tax and all incidentals required to complete the job as outlined in these Specifications and as directed by the Engineer.

The unit price in square foot for asphalt hot mix shall include full compensation for furnishing and applying tack coat.

712 - MISCELLANEOUS CONCRETE

712-1 CURB AND GUTTER

Concrete curb & gutter, curb, cross gutter, sidewalk, driveway apron, curb ramp, truncated dome, and median Pavement shall be constructed in conformance with the provisions in Section 201-1, 201-3, 201-4, 201-5, 301-1, 302-6, 303-5 and 400-3 of the SSPWC and these Special Provisions.

The Contractor shall construct concrete Type A2 PCC curb and gutter and type A1 PCC curb at locations designated on the contract drawings. PCC Curb and PCC Curb and Curb and gutter shall conform to SPPWC 120-2.

Curb and gutter adjacent to curb ramps shall not be constructed monolithically. The Contractor shall complete the work in two separate concrete operations. The first item of work shall be constructing the curb and gutter section. After the curb and gutter has sufficient time to cure, the sidewalk access ramps shall be constructed.

712-2 CONCRETE V-GUTTER

This work shall consist of the construction of a concrete v-gutter as shown on the plans and per SPPWC.

712-3 PCC SIDEWALK

This work shall consist of the construction of 4" thick PCC on 12" compacted subgrade and 4" thick PCC on 6" compacted subgrade as noted on plans. Use SPPWC Std. Plan No. 134-2 for concrete pavement joint location and these Special Provisions for additional information.

712-4 CONCRETE

Portland Cement Concrete shall be Class 560-C-3250 with a maximum slump of 4-inches per Section 201-1 of the SSPWC. The Contractor shall submit a mix design to the Engineer or his representative for prior approval.

The certified tickets accompanying each batch of ready-mix concrete delivered to the job site shall clearly show the "class designation" of the specified concrete mix.

712-5 CURB DRAINS

The Contractor shall replace all existing curb drain outlets to a satisfactory working condition and install of new 3" curb drains where shown on the plans.

712-6 SAWCUTTING

The Contractor shall be required to sawcut all existing concrete prior to be joined, except as otherwise directed by the Engineer.

712-7 RELATIVE COMPACTION

Prior to placing new concrete on subgrade material, the subgrade shall be compacted to a relative compaction of 95 percent.

712-8 AC TRENCH

Areas of the subgrade that are removed in order to place concrete formwork can be filled with alternative materials, such as a 2-sack slurry mix, in place of conventional subgrade quantities, subject to approval by the Engineer.

712-9 CURB RAMPS

All curb ramps shall be constructed per SPPWC Std. Plan No. 111-5 (Case & Type per plan) as shown and as modified per the plans and per Federal ADA accessibility guidelines (ADAAG).

712-10 TRUNCATED DOMES DETECTABLE WARNING DEVICES

SURFACE APPLIED

This work will include the installation of truncated dome detectable warning devices on existing and new curb ramps as shown on the plans and as required by ADAAG and the Engineer. Installation shall be per the requirements of the approved manufacturers and as directed by the Engineer. Contractor shall submit a sample of the detectable warning surface to the Engineer for approval prior to construction.

A representative sample of the proposed tile to be furnished must be submitted along with the required certified test reports for approval.

Detectable warning tiles must comply with detectable warnings on walking surfaces section of the American with Disabilities Act (Title 49 CFR TRANSPORTATION, part 37.9 STANDARDS FOR ACCESSIBLE TRANSPORTATION FACILITIES, Appendix A, Section 4.29.2 DETECTABLE WARNINGS ON WALKING SURFACES.

Polymer concrete Detectable Warning tiles shall be manufactured using polymer concrete material. Polymer concrete material shall consist of calcareous and siliceous stone, glass fibers and thermo set polyester resin. The polymer concrete material shall be tested by an independent testing laboratory for chemical resistance and mechanical properties.

Chemical Resistance

Chemical Resistance	ASTM D-543
Simulated Sunlight	ASTM D-1501
Accelerated Service Test	ASTM D-756 Procedure "E"
Water Absorption	ASTM D-570

Material shall be determined to be acceptable if the following criteria are met. For chemical resistance, simulated sunlight, accelerated service test, and water absorption: retention of 75 percent of the control specimen values for load and deflection and no more than 2 percent change in weight. For flammability test, specimen should be self-extinguishing. For fungus resistance test the material should not allow any fungus growth. Smoke density shall be less than 0.5 at 1.5 minutes and less than 15 at 4 minutes. Surface flammability shall be less than 25.

Mechanical Properties

The mechanical properties of polymer concrete material shall be tested by an independent testing laboratory. Polymer concrete material shall have the following mechanical properties:

Mechanical Properties	Average Value	Test Method
Compressive Strength	11,430 PSI	ASTM C-170-99
Flexural Strength	3,330 PSI	ASTM C-580-02
Tensile Strength	1,710 PSI	ASTM C307-99
Shear Strength	11,670 PSI	ASTM D-372-02
Modulus of Elasticity	1,776,400 PSI	ASTM C-580

Construction

1. For consistency, detectable warning tiles shall be manufactured using matched die molds under heat and pressure for superior material compaction, controlled chemical curing and uniform dimensions.
2. Polymer concrete detectable warning tiles shall have ¼" thick material sectional thickness excluding truncated domes height or reinforcement ribs.
3. Polymer concrete detectable warning tiles shall have a 1/8" tapered edges on the outside of the finished detectable warning tile.
4. Slip Resistance of Polymer concrete detectable warning tile when tested by ASTM-C 1028 shall not to be less than 0.80.
5. Chemical Resistance of Tile when tested by ASTM-D 543 to withstand without any degradation or discoloration-1% hydrochloric acid, Acetic Acid, Sulfuric Acid, Sodium Chloride Sodium Hydroxide, Sodium Sulfate, Sodium Carbonate, Kerosene and Oil.
6. The material shall be abrasive resistant and shall be warranted for 5 years against excessive wear.
7. The polymer concrete material shall not sustain burning and be self-extinguishing when tested in accordance with ASTM D 635.
8. The polymer concrete material shall not promote fungus growth when tested in accordance with ASTM G21.
9. The polymer concrete material surface flammability shall be tested in accordance with ASTM E-162 and shall be less than 25.
10. Smoke density shall be tested in accordance with ASTM E-662-03 and shall be less than 0.5 at 1.5 minutes and less than 15 at 4 minutes.

Testing and Documentation Requirements

The Polymer concrete Detectable Warning Tiles specified is based on Armorcast Products Company (818-982-3600) or approved equal.

Certified test report must be submitted to demonstrate conformance to this specifications. Testing must be conducted by an independent testing laboratory.

Installation procedures must be submitted along with product drawings.

Recommended Adhesive

Sikadur AnchorFix-1- manufactured by Sika Corporation
Tube Size: Net 10.1 FL. OZ. (300 ml)

1. Read and follow manufacturer instructions on the adhesive container.
2. Sweep the desired location to remove loose dirt and debris.
3. Tape off the desired installation area so as the inside dimensions are equal to the desired size.
4. Remove tube top, pull cap, cut bag tips, apply nozzle and insert into caulking gun.
5. Dispense adhesive until a uniform mixture is achieved prior to applying adhesive to tile.
6. Apply a uniform bead of adhesive to the center of all grinded and marked areas. Use 2.5 OZ. per square foot.
7. Place the first detectable warning tile at one corner of the tape and apply pressure.
8. Repeat step 6 and 7 for additional tiles to achieve the desired tile size.
9. Use putty knife and push all squeezed out adhesive under the tiles.
10. Wait at least 30 minutes before removing the tape.
11. Protect the installed tiles from pedestrian traffic for 24 hours.
12. The above installation instructions are not meant to override applicable codes or local agency's requirements.

CAST-IN-PLACE

General Requirements

This specification states the requirements for wet cast detectable warning panels for installation in curb ramps and hazardous areas.

Sample and Certified Test Reports

A representative sample of the proposed panel to be furnished must be submitted along with the required certified test reports for approval.

Standards

Detectable warning surface panels must comply with detectable warnings on walking surfaces section of the American with Disabilities Act (Title 49 CFR TRANSPORTATION, part 37.9 STANDARDS FOR ACCESSIBLE TRANSPORTATION FACILITIES, Appendix A, Section 4.29.2 DETECTABLE WARNINGS ON WALKING SURFACES.

Materials Requirements

Polymer concrete cast-in-place Detectable Warning Panels shall be manufactured using polymer concrete material. Polymer concrete material shall consist of calcareous and siliceous stone, glass fibers and thermo set polyester resin. The polymer concrete material shall be tested by an independent testing laboratory for chemical resistance and mechanical properties.

Chemical Resistance

Chemical Resistance	ASTM D-543
Simulated Sunlight	ASTM D-1501
Accelerated Service Test	ASTM D-756 Procedure "E"
Water Absorption	ASTM D-570

Material shall be determined to be acceptable if the following criteria are met. For chemical resistance, simulated sunlight, accelerated service test, and water absorption: retention of 75 percent of the control specimen values for load and deflection and no more than 2 percent change in weight. For flammability test, specimen should be self-extinguishing. For fungus resistance test the material should not allow any fungus growth. Smoke density shall be less than 0.5 at 1.5 minutes and less than 15 at 4 minutes. Surface flammability shall be less than 25.

Mechanical Properties: The mechanical properties of polymer concrete material shall be tested by an independent testing laboratory. Polymer concrete material shall have the following mechanical properties:

Mechanical Properties	Average Value	Test Method
Compressive Strength	11,430 PSI	ASTM C-170-99
Flexural Strength	3,330 PSI	ASTM C-580-02
Tensile Strength	1,710 PSI	ASTM C307-99
Shear Strength	11,670 PSI	ASTM D-372-02
Modulus of Elasticity	1,776,400 PSI	ASTM C-580

Construction

1. For consistency, detectable warning panels shall be manufactured using matched die molds under heat and pressure for superior material compaction, controlled chemical curing and uniform dimensions.
2. Polymer concrete detectable warning panels shall be reinforced with fiberglass mats for superior strength.
3. Polymer concrete detectable warning panels shall have ½" thick material sectional thickness excluding truncated domes height or reinforcement ribs.
4. Polymer concrete detectable warning panels shall be fitted with Zinc alloy concrete anchors and stainless steel bolts.
5. Polymer concrete panel surface shall be coated to keep the panel surface clean during installation. The coating shall be easily removable immediately after installation.
6. Polymer concrete detectable warning panels shall be fitted with hot dipped galvanized angles to facilitate installation in wet concrete.
7. Polymer concrete detectable warning panels shall be field replaceable without the need of cutting the existing concrete or pouring new concrete.
8. Slip Resistance of Polymer concrete detectable warning panel when tested by ASTM-C 1028 shall not to be less than 0.80.
9. Chemical Resistance of Tile when tested by ASTM-D 543 to withstand without any degradation or discoloration-1% hydrochloric acid, Acetic Acid, Sulfuric Acid, Sodium Chloride Sodium Hydroxide, Sodium Sulfate, Sodium Carbonate, Kerosene and Oil.

10. The material shall be abrasive resistant and shall be warranted for 5 years against excessive wear.
11. The polymer concrete material shall not sustain burning and be self-extinguishing when tested in accordance with ASTM D 635.
12. The polymer concrete material shall not promote fungus growth when tested in accordance with ASTM G21.
13. The polymer concrete material surface flammability shall be tested in accordance with ASTM E-162 and shall be less than 25.
14. Smoke density shall be tested in accordance with ASTM E-662-03 and shall be less than 0.5 at 1.5 minutes and less than 15 at 4 minutes.

Testing and Documentation Requirements

The Polymer concrete Cast-In-Place Detectable Warning Panels specified is based on Armorcast Products Company (818-982-3600) or approved equal.

Certified test report must be submitted to demonstrate conformance to this specifications. Testing must be conducted by an independent testing laboratory.

Installation procedures must be submitted along with product drawings.

Installation

1. The concrete mix shall conform to all requirements as specified by the contract document.
2. The tools required for installation are typical of those used by concrete finishers.
3. Do not remove the galvanized steel angle, inserts or bolts before placement. The panel shall be placed in concrete with all the hardware attached.
4. Follow all safety requirements that include but not limited to, State, Federal Industry safety standards.
5. After the concrete is poured, the contractor shall establish finished grade using mason line or other appropriate methods. The polymer concrete panel shall be placed on top of the concrete and tamped in place using installer's weight or concrete vibrator to facilitate placement in a low slump concrete. Final panel elevation shall be verified.
6. Make sure that you have the proper slope as specified in the contract document.
7. Low slump concrete may require 25 to 50 pounds weights to weigh down panels after placement in concrete.
8. Steel edging trowel with a minimum of 1/8" radius shall be used to edge the finished concrete around the panel.
9. Once concrete is hardened, remove weights and panel protective cover.

712-11 FINISHING

All sidewalk areas shall be finished per details as shown on the plans. The Contractor shall be responsible to oversee the curing of all concrete improvements to prevent graffiti damage or other unauthorized markings in new concrete surfaces. Any concrete surface deemed unacceptable to the Engineer, shall be replaced by the Contractor at no cost to the city.

712-12 ADMIXTURES

Should the Contractor request and obtain permission to use admixtures for his own benefit, he shall furnish such admixtures and incorporate them in the concrete mixture at his expense, and no additional compensation will be allowed therefore.

712-13 MEDIAN CONCRETE PAVEMENT

Median Concrete Pavement be constructed as shown on the Plans in conformance with the provisions in Section 201-1, 201-3, 201-4, 201-5, 301-1, 301-2, 302-6, 303-5 and 400-3 of the SSPWC except as amended or modified herein.

Subgrade Preparation shall be done as shown on the Plans, in accordance with the provisions of Section 301-1 of the SSPWC, except as amended or modified herein.

Subgrade preparation shall be scarified at least six (6) inches below subbase elevation and compacted to at least 95 percent relative compaction.

Crushed Aggregate Base shall conform to the provisions of Section 200-2.2 of the SSPWC.

All pavement shall receive be finished per details as shown on the plans. The Contractor shall be responsible to oversee the curing of all concrete improvements to prevent graffiti damage or other unauthorized markings in new concrete surfaces. Any concrete surface deemed unacceptable to the Engineer, shall be replaced by the Contractor at no cost to the city.

712-14 LOGNITUDINAL GUTTER

Longitudinal Gutter shall be constructed as shown on plans in conformance with SSPWC.

712-15 REINFORCED CONCRETE PAVEMENT

Reinforced Concrete Pavement shall be constructed as shown on plans in conformance with SSPWC.

712-16 DRIVEWAY APRON

Driveway Apron shall be constructed as shown on plans in conformance with SSPWC.

712-17 MEASUREMENT AND PAYMENT

Measurement and Payment for Miscellaneous Concrete shall be at the unit prices bid for the various work items as follows:

Measurement and Payment for Construct CURB (Type A1-6), CURB & GUTTER (Types A2-6, A1-8, A2-8, A3-8) and MOUNTABLE CURB (Types B2-8 and B3-8) shall be at the price bid per linear foot for the respective bid item.

Measurement and Payment for Construct CONCRETE 4" PCC SIDEWALK shall be at the price bid per square foot for Construct Concrete 4" PCC Sidewalk.

Measurement and Payment for Construct 12" CONCRETE V-GUTTER and 24" CONCRETE V-GUTTER shall be at the price bid per linear foot for Construct Concrete Payment for Construct CONCRETE DRIVEWAY APRON shall be at the price bid per each for Construct Driveway Apron.

Measurement and Payment for Construct CURB RAMP shall be at the price bid per each for Construct Curb Ramp.

Measurement and Payment for Construct TRUNCATED DOME shall be at the price bid per each for Construct Truncated Dome.

Measurement and Payment for Construct MEDIAN CONCRETE PAVEMENT shall be at the price bid per square foot for Construct Median Concrete Pavement.

Measurement and Payment for Construct PCC LONGITUDINAL GUTTER shall be at the price bid per linear foot for Construct PCC Longitudinal Gutter.

Measurement and Payment for Construct REINFORCED CONCRETE PAVEMENT shall be at the price bid per square foot for Reinforced Concrete Pavement.

Measurement and Payment for Construct DRIVEWAY APRON shall be at the price bid per each for Driveway Apron.

The above contract prices shall include full compensation for all labor, materials, equipment, tools, tax and all incidentals required to complete the job, including sawcutting, as outlined in these Specifications and as directed by the Engineer.

713 - ADJUST UTILITY FRAMES/COVERS TO GRADE

713-1 GENERAL

The Contractor will be required to raise or adjust down storm drain, sewer and Communication manhole frames and covers, fire hydrants, street light facilities, traffic signal facilities, utility meters and valves and utility vaults to finished grade by the use of either grade rings, or in accordance with Section 302-5.8 and 301.1.6 of the SSPWC. The Contractor shall adjust manholes and covers to provide a smooth riding surface when driving across the cover at the posted speed limit. The Contractor shall perform all work to clean frames and covers. Contractor shall use DGAC to repair asphalt pavement.

The Contractor shall take care not to allow the emulsion to run onto the manhole frame and cover and into water valve stack covers. Immediately prior to placing paving asphalt, the Contractor shall cover all manhole covers and frames and cover valve stack covers with roofing paper. Diesel fuel application to the manhole frames and covers will not be allowed.

The Contractor shall protect all metal covers within the asphalt street work areas in order that the asphaltic materials will not adhere to the covers. The methods of protection shall be approved in advance by the City's Project Representative's Field Representative. These covers shall be cleaned no later than 24 hours or the following day after the asphalt placement work is completed.

The Contractor shall mark the location of all metal utility covers within the streets that are to be resurfaced by placing a reference mark on the adjacent curb. The metal covers shall also be marked by placing an "X" in the asphalt on the covers immediately after the asphalt is placed. This "X" can be placed by using a hand lute or shovel.

Except for water valve with adjustable sliding sleeves, all other utility covers shall have a minimum of 1-1/2" thick asphalt concrete placed around the cover when final grade is established.

Paving around covers shall be placed prior to each weekend. No open spaces around covers shall be allowed during weekends.

The Contractor shall provide a detailed report with the count of covers per street block and per utility. No payment for utility cover adjustment will be made until this report is provided to the City's Project Representative

It is the Contractor's responsibility to coordinate with other agencies to adjust to grade manholes and valve covers of any facility owned/maintained by each agency. Prior to beginning of the Work, the Contractor will submit to the Agency a copy of all correspondences with each utility company.

The contractor has to be qualified by Southern California Edison, AT&T and Time Warner to raise their facilities to grade, or use a qualified sub-contractor for working on Southern California Edison, AT&T and Time Warner facilities.

713-2 ADJUST MANHOLE FRAMES AND COVERS

Adjustment of manhole metal covers shall be per SPPWC, the latest edition, and per these Special Provisions herein. Any coordination work with the respective utility company shall be considered included in the unit price bid for Adjust Utility Manholes and Utility Covers to Grade bid items and no additional compensation allowed therefore.

713-3 ADJUST UTILITY VALVE COVERS

Water valve with adjustable sliding sleeves shall be raised during paving operation, all other utilities covers shall be adjusted to grade after the asphalt has had time to set for at least a 48 hour period, but no longer that 14 work days after the asphalt has been placed. Final adjusted height of metal covers shall be flush with new asphalt surface.

The Contractor shall coordinate with the Las Virgenes Municipal Water District for any replacement sleeves or covers. This work shall be considered included in the unit price bid for Adjust UTILITY VALVE COVERS and no additional compensation allowed therefore.

713-4 ADJUST UTILITY METERS

UTILITY METERS shall be adjusted to grade. The Contractor shall coordinate with the Las Virgenes Municipal Water District for any replacement sleeves or covers. This work shall be considered included in the unit price bid for Adjust Water Meters and no additional compensation allowed therefore.

713-5 ADJUST UTILITY VAULTS

Adjustment of UTILITY VAULTS shall be adjusted match their existing case. The Contractor shall coordinate with the respective utility for any required materials. This work shall be considered included in the unit price bid and no additional compensation allowed therefore.

713-6 ADJUST FIRE HYDRANT TO GRADE

The Contractor shall ADJUST FIRE HYDRANTS in accordance with City and Las Virgenes Municipal Water District Standard Plans. Coordinate and use appropriate materials approved by Las Virgenes Municipal Water District prior to adjusting.

713-7 ADJUST STREET LIGHT, TRAFFIC SIGNAL OR UTILITY POLE TO GRADE

The Contractor shall ADJUST STREET LIGHT, TRAFFIC SIGNAL OR UTILITY POLE TO GRADE in accordance with City and Southern California Edison Standard Plans. Coordinate and use appropriate materials approved by Southern California Edison prior to adjusting.

713-8 MEASUREMENT AND PAYMENT

Measurement for payment for the adjustment of manhole frames, covers and water valve covers, utility meters, utility vaults and fire hydrants to grade will be based on the actual number of each adjustment to finish grade.

Payment for ADJUST MANHOLE FRAMES AND COVERS TO GRADE, ADJUST UTILITY VALVE COVERS TO GRADE, RELOCATE/ADJUST UTILITY VAULTS and ADJUST FIRE HYDRANT TO GRADE will be made at the unit price named in the Bid Schedule, which shall constitute full compensation for all excavation, backfill, multiple removal and replacement of said manhole frame and cover, removal and/or addition of plates, filler rings, mortar, disposal of waste or excess materials, adjusting covers to grade, clean-up, protection and any other

appurtenant items of work for which separate payment is not otherwise specifically provided in the Bid Schedule.

Payment for ADJUST STREET LIGHT, TRAFFIC SIGNAL OR UTILITY POLE TO GRADE will be made at the lump sum named in the Bid Schedule, which shall constitute full compensation for all excavation, backfill, multiple removal and replacement of said street light, traffic signal or utility pole, removal and/or addition of plates, filler rings, mortar, disposal of waste or excess materials, adjusting poles to grade, clean-up, protection and any other appurtenant items of work for which separate payment is not otherwise specifically provided in the Bid Schedule.

714 - STORM DRAIN PIPE CONSTRUCTION

714-1 SCOPE OF WORK

Installation of reinforced concrete pipe storm drain shall be in accordance with Section 306 of the SSPWC and the following additions and revisions.

Bedding and 1-1/2 sack cement slurry backfill requirements shall be per Section 306-1.2.1 and 306-1.3 of the SSPWC. Joints shall be mortared on the inside of pipe and outside.

Contractor shall submit shoring plans prepared and stamped by a registered Civil Engineer for review to the Engineer five working days prior to excavation for trenching. No excavation is allowed prior to approval of such shoring plans.

Prior to start of construction the Contractor shall prepare a "Pipe Lay Diagram" or chart for to the Engineer. Contractor shall construct storm drain per said "Pipe Lay Diagram" and shall be responsible for any additional work caused by the failure to do so. Construction staking will coincide with the pipe lay diagram.

Excavation, pipe laying, backfill, compaction and base course paving on all trenches shall be done in a continuous sequence.

At all RCP crossings with existing gas, sewer, water lines, etc. the Contractor shall provide temporary support for said lines as necessary for their protection during the storm drain construction by methods approved in advance by the Owner. Once the storm drain improvements are constructed and the bedding and backfill are being placed, the special 1-1/2 sack cement slurry backfill at all sewer line crossings and special sand backfill (SE=30) at all water line crossings shall be placed.

The Contractor shall submit a detailed trench dewatering and desilting plan 10 days prior to beginning excavation.

The construction of PVC storm drain shall be in accordance with Section 207 and 306 of the SSPWC.

Bedding and 1-1/2 sack cement slurry backfill requirements shall be per Section 306-1.2.1 and 306-1.3 of the SSPWC. Joints shall be mortared on the inside of pipe and outside.

Contractor shall submit shoring plans prepared and stamped by a registered Civil Engineer for review to the Engineer five working days prior to excavation for trenching. No excavation is allowed prior to approval of such shoring plans.

Prior to start of construction the Contractor shall prepare a "Pipe Lay Diagram" or chart for to the Engineer. Contractor shall construct storm drain per said "Pipe Lay Diagram" and shall be responsible for any additional work caused by the failure to do so. Construction staking will coincide with the pipe lay diagram.

Excavation, pipe laying, backfill, compaction and base course paving on all trenches shall be done in a continuous sequence.

At all PVC crossings with existing gas, sewer, water lines, etc. the Contractor shall provide temporary support for said lines as necessary for their protection during the storm drain construction by methods approved in advance by the Owner. Once the storm drain improvements are constructed and the bedding and backfill are being placed, the special 1-1/2 sack cement slurry backfill at all sewer line crossings and special sand backfill (SE=30) at all water line crossings shall be placed.

The Contractor shall submit a detailed trench dewatering and desilting plan 10 days prior to beginning excavation.

714-2 MEASUREMENT AND PAYMENT

Measurement and payment for RCP pipe construction shall be made at the contract price per linear foot for CONSTRUCT 18" RCP and shall include all RCP, transition structure, pipe collars, backfill, excavation, saw cutting and removal interfering portions of asphalt concrete pavement, curb and gutter, sidewalks, driveways, testing requirements, shoring of storm drain trench, dewatering, all temporary utility crossing supports, slurry backfill at sewer crossings, sand backfill at water crossings, removal and replacement of existing surface improvements as detailed previously herein, shop drawings, record drawings, protection of all utilities encountered during construction, all tools, equipment and incidentals, and all work as required to complete the construction of all RCP complete in place as indicated on the plans and Specifications, and no additional compensation will be allowed.

Measurement and payment for PVC pipe construction shall be made at the contract price per linear foot for CONSTRUCT 4" PVC and CONSTRUCT 6" PVC and shall include all PVC, transition structure, pipe collars, backfill, excavation, saw cutting and removal interfering portions of asphalt concrete pavement, curb and gutter, sidewalks, driveways, testing requirements, shoring of storm drain trench, dewatering, all temporary utility crossing supports, slurry backfill at sewer crossings, sand backfill at water crossings, removal and replacement of existing surface improvements as detailed previously herein, shop drawings, record drawings, protection of all utilities encountered during construction, all tools, equipment and incidentals, and all work as required to complete the construction of all PVC complete in place as indicated on the plans and Specifications, and no additional compensation will be allowed.

715 - CATCH BASIN CONSTRUCTION

715-1 CONSTRUCTION MATERIALS AND METHODS

Curb Opening Catch Basin

The construction of a Curb Opening Catch Basin with Grating and Debris Skimmers per SPPWC Std Plan 301-3 shall be in accordance with Section 306 of the SSPWC and the following additions and revisions.

Bedding and 1-1/2 sack cement slurry backfill requirements shall be per Section 306-1.2.1 and 306-1.3 of the Specifications. Joints shall be mortared on the inside of pipe and outside.

All catch basins shall include the installation of catch basin inserts. Inserts shall be DrainPac curb inlet type catch basin inserts by United Storm Water, Inc., or approved equal in conformance with the following:

- The proposed Catch Basin Insert shall be submitted to, and approved by the Engineer prior to installation, along with a maintenance schedule for the unit.

- Inserts shall be designed for use in curb opening type inlets that are exposed to trash, oil and grease pollution, and sediment and debris. Trash will be retained in the outer screen and oil, grease, sediments, and other fine particulate will be trapped in the devices media filter.

- Metallic components such as frames, anchors, bolts, etc, shall be stainless steel Type 304 and shall be of gauge and/or size designed to support the unit. Non-metallic components such as housings, troughs, baskets, liners, etc, shall be non-reactive and contain UV inhibitors.

- Catch basin inserts shall have a treatment capacity not less than the minimum values shown for the referenced models included in Appendix A for corresponding length of opening.

- The size of the insert shall be selected according to the length and size of the catch basin. A list of the locations and sizes of the catch basins is contained Appendix A. Refer to Appendix B for maps of these locations.

Curb Cut Openings

The construction of Curb Cut Openings shall be Neenah Foundary or approved equal.

Parkway Drain

The construction of a Parkway Drain shall be in accordance with Section 306 of the SSPWC and the following additions and revisions.

Bedding and 1-1/2 sack cement slurry backfill requirements shall be per Section 306-1.2.1 and 306-1.3 of the Specifications. Joints shall be mortared on the inside of pipe and outside.

Area Drain/Wall Drain (6")

The construction of 6" area/wall drain shall be in accordance with the plans & SSPWC.

715-2 MEASUREMENT AND PAYMENT

Measurement and payment for CONSTRUCT CURB OPENING CATCH BASIN shall be made at the contract unit price for "Construct Curb Opening Catch Basin" and shall include backfill, local depression, excavation, testing requirements, shop drawings, record drawings, catch basin inserts, protection of all utilities encountered during construction, all tools, material, labor, equipment and incidentals, and all work as required to complete the construction of the catch basin complete in place as indicated on the plans and Specifications, and no additional compensation will be allowed.

Measurement and payment for CONSTRUCT CURB CUT OPENINGS shall be made at the contract unit price.

Measurement and payment for CONSTRUCT PARKWAY DRAIN construction shall be made at the contract unit price for "Construct Parkway Drain" and shall include backfill, excavation, testing requirements, shop drawings, record drawings, protection of all utilities encountered during construction, all tools, material, labor, equipment and incidentals, and all work as required to complete the construction of the Curb Drain complete in place as indicated on the plans and Specifications, and no additional compensation will be allowed.

Measurement and payment for CONSTRUCT CATCH BASIN shall be made at the contract unit price for "Construct Catch Basin" and shall include backfill, excavation, testing requirements, shop drawings, record drawings, catch basin inserts, protection of all utilities encountered during construction, all tools, material, labor, equipment and incidentals, and all work as required to complete the construction of the catch basin complete in place as indicated on the plans and Specifications, and no additional compensation will be allowed.

Measurement and payment for CONSTRUCT 6" AREA DRAIN/WALL DRAIN shall be made at the contract unit price for "Construct 6" area/wall drain".

716 - RETAINING WALLS

716-1 CALTRANS RETAINING WALL

This work will consist of construction of concrete retaining walls per Caltrans std. plan B3-3A, B3-7A, B3-7B as shown on Project Plans.

716-2 MATERIALS AND CONSTRUCTION METHODS

Portland Cement Concrete for reinforced concrete retaining walls shall be as specified in, and in conformance with, Section 201-1 of the SSPWC. The concrete class and maximum slump for the various types of construction shall be as specified in Table 201-1.2.2(a) of the SSPWC, unless otherwise noted on the Project Plans.

Reinforcement for Concrete for reinforced concrete retaining walls shall be as specified in, and in conformance with, Section 201-2 of the SSPWC.

Expansion Joint Fillers and Joint Sealants for reinforced concrete retaining walls shall be as specified in, and in conformance with, Section 201-3 of the SSPWC.

Concrete Curing Materials for reinforced concrete retaining walls shall be as specified in, and in conformance with, Section 201-4 of the SSPWC.

Structure Excavation and Backfill shall be in accordance with the provisions of Section 300-3 of the SSPWC, except as amended or modified herein.

Reinforced concrete retaining wall construction shall be in accordance with Sections 303-1, 303-5, and 303-7 of the SSPWC.

716-3 SOIL NAIL WALLS

This work shall consist of the construction of soil nail walls per the project plans. Soils report has been prepared and available upon request from the Project Manager.

716-4 MEASUREMENT AND PAYMENT

Measurement and payment for the construction of the CALTRANS RETAINING WALL and SOIL NAIL WALL shall be made at the contract price per linear foot named on the Bid Schedule, and shall include full compensation for furnishing all labor, materials including concrete, reinforcing steel, structure backfill, free draining wall drainage system, pipe penetrations, expansion joint filler, sealant and dowels, architectural treatments, tools, equipment, and incidentals, and for doing all the work involved in constructing the retaining wall with 6' high chain link fence, complete in place including structure excavation and backfill, as shown on the Project Plans, as specified in the SSPWC and these Special Provisions, and as directed by the Engineer.

717 - SAWCUT

717-1 GENERAL

In addition to the provisions of Subsection 300-1 of the SSPWC, where Asphalt Concrete and Portland Cement Concrete are shown on the plans to be sawcut, the existing surface shall be sawcut to a neat line with a power driven concrete saw. The depth of cut shall be at least one-half of the depth of the Asphalt Concrete or Portland Cement Concrete to be cut and of sufficient

depth that no damage to the existing surface which is to remain in place occurs during excavation operations.

The Contractor shall conduct operations so as not to damage the integrity of the edge of the saw-cut surface. Any damage to the sawcut edge shall be corrected by the Contractor, as directed by the Engineer, by additional sawcutting around the damaged area prior to the start of paving operations. Any additional sawcutting required to correct the damaged edge shall be at the Contractor's expense.

717-2 MEASUREMENT AND PAYMENT

The contract price for saw cutting is paid per linear foot and shall include full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals for constructing, no additional compensation will be allowed therefore.

718 - TRAFFIC SIGNALS AND ELECTRICAL SYSTEM

718-1 GENERAL

All equipment, materials, and components for traffic signal and lighting systems, and the installation thereof, shall conform to the Caltrans Standard Plans and Standard Specifications, Section 86, "Electrical Systems," dated 2010, except as noted in the Special Provisions and on the Plans. These Plans and Specifications are hereinafter referred to as State Standard Plans and State Standard Specifications. Copies of these documents are available from the Caltrans, District 7 office at 120 South Spring Street, Los Angeles, California 90012 or from Caltrans, 6002 Folsom Boulevard, Sacramento, California 95819 (916) 445-3520 or at http://www.dot.ca.gov/hq/esc/oe/standards.php.

Wherein Section 86 reference is made to other sections of the State Standard Specifications, these sections are hereby included unless otherwise specified.

The following special provisions are supplementary and in addition to the provisions of the State Standard Specifications, and are only called out if elaborations, amendments, specifying of options, or additions are required.

718-1.1 COST BREAK-DOWN

The cost break-down shall be submitted to the Engineer in conjunction with equipment list and drawings.

718-1.2 EQUIPMENT LIST AND DRAWINGS

The equipment list shall be submitted to the Engineer within ten (10) working days after the date of the Notice of Contract Approval.

Materials lists, manufacturer's data, brochures, technical data, etc., shall be labeled and identified, and shall be submitted in bound booklet form.

The Contractor shall retain one copy of all approved material lists and samples at the job site, readily accessible for inspection by the Engineer. Said materials lists and samples shall be the basis for approval or rejection of work.

718-1.3 WARRANTIES, GAURANTEES AND INSTRUCTION SHEETS

The Contractor shall guarantee the entire work constructed by him under this contract and will fully meet all requirements as to quality of workmanship and materials furnished by him. The Contractor shall make, at his own expense, any repairs or replacements made necessary by defects in workmanship or materials furnished by him that becomes evident within six (6) months after acceptance of work by the Agency and to restore to full compliance with the requirements of these specifications, any part of the work which during the six (6) month period is found to be deficient with respect to any provision of the plans and specifications. The Contractor shall make all repairs and replacements promptly upon receipt of written orders from the Engineer. If the Contractor fails to make the repairs and replacements promptly, the City may do the work and the Contractor and his surety shall be liable to the City for the cost.

Whenever any work or equipment is to be guaranteed or maintained by a manufacturer, supplier, or subcontractor, said obligation shall be that of the Contractor.

All guarantees shall be in writing and delivered to the Engineer by the Contractor prior to final acceptance of the work.

718-1.4 MAINTAINING EXISTING AND TEMPORARY ELECTRICAL SYSTEMS

Maintenance of existing and temporary electrical systems shall be in accordance with Subsection 86-1.06 of the Caltrans Standard Specifications, dated July 2010 and Section 3-3 of the Standard Specifications for Public Works Construction and its supplements and these special provisions.

Where the Contractor reinstalled facilities are damaged prior to final acceptance by the Engineer, the Contractor shall repair or replace such facilities at his/her own expense.

All work, materials and equipment required to keep the existing traffic signal and street lighting systems operational shall be considered as included in lump sum bid price for various items of work involved and no additional compensation shall be allowed therefor. When signal shutdown is required, the Contractor shall receive approval to shut down any traffic signal system 24 hours in advance from the Engineer. If flagging is required, Contractor shall provide a minimum of two flag men trained in traffic control during any traffic signal shutdowns. Full compensation for furnishing flag men shall be considered as included in the contract prices paid for the signal items involved and no additional compensation will be allowed therefor.

The Contractor shall place "FLAGGER AHEAD" signs to direct vehicle and pedestrian traffic through the intersection during traffic signal system shutdown.

One "FLAGGER AHEAD" sign shall be placed for each direction of traffic. Location of the signs shall be as directed by the Engineer.

Full compensation for furnishing, installing, maintaining and removing temporary "FLAGGER AHEAD" sign shall be considered as included in the contract lump sum price paid for the signal item involved and no additional compensation will be allowed therefor.

Where the Contractor-installed facilities are damaged prior to final acceptance by the Engineer, the Contractor shall repair or replace such facilities at his own expense.

718-1.5 SCHEDULING OF WORK

No materials or equipment shall be stored at the job sites until receipt of the Notice to Proceed with construction by the Engineer. The job sites shall be maintained in neat and orderly condition at all times.

All striping, pavement markings, and signing shall be in place prior to signal turn-on.

Turn-on of the traffic signal system shall not be made on a Friday or the day preceding a legal holidays, and will be permitted between the hours of 9:00 a.m. and 2:00 p.m., only. The City of Calabasas/Public Works Department . shall be notified at least 48 hours prior to the intended turn-on and the City's traffic signal maintenance personnel must be present.

718-2 MATERIALS AND INSTALLATION

718-2.1 Standards, Steel Pedestals, and Posts

Traffic signal pole shall be constructed in accordance with Subsection 86-2.04 "Standards, Poles, Steel Pedestals, and Posts" of the Caltrans Standard Specifications, dated July 2010;

Where the State Standard Plans refer to the side tenon detail at the end of the signal mast arm, the applicable tip tenon detail may be substituted.

718-2.2 Conduit

Conduit shall be Type 1 in accordance with Subsection 86-2.05 "Conduit". All conduit ends shall be sealed with an approved compound after conductors and required bonding bushings have been installed.

718-2.3 Splicing

Splices shall be Type C insulated by Method B, as shown on State Standard Plan ES13A.

Subparagraph 5 of the first paragraph of Section 86-2.09(D), "Splicing," of the State Standard Specifications is deleted.

Splices of individual conductors and drain wires for safety lighting shall be done in the pull box only.

718-2.4 Service

Electrical service equipment installation and conduit run details shall be as specified by the serving utility company, and written proof of their approval by the utility shall be submitted to the Engineer prior to installation. The Contractor shall be responsible for all service details, expenses, and scheduling far in advance of need. The Contractor is encouraged to work on service cabinets and their associated conduits and pull boxes prior to receiving signal equipment. Service equipment shall be 120V/240V, type as shown on the plans. Circuit breakers shall be rated 50 amps for the traffic signal and 30 amps for the highway safety lighting. The Contractor shall pay all service connection fees.

The Contractor shall pay all service connection fees.

718-2.5 Testing

Materials and equipment furnished by the Contractor shall be tested at an independent testing facility designated by the City. Contractor shall conduct field and functional testing in accordance with Sections 86-2.14B and 86-2.14C.

Cost for testing and delivery to and from the test site shall be considered as included in the lump-sum price bid for traffic signal installation, and no additional compensation will be allowed therefore.

718-3 CONTROLLER ASSEMBLIES

718-3.1 General

The Contractor shall pay cost for delivery to and from the testing site.
Model 170 ATC Coldfire controller assemblies consists of a Model 170 ATC Coldfire controller unit, a wired cabinet, and all auxiliary equipment required to control the system, conforming to the Caltrans Standard Specification 2010, section 86-3 "Controller Assemblies", except as noted below.

718-3.2 Model 170 ATC Coldfire Controller Assemblies

New controller unit shall be Type 170 ATC Coldfire in a Model 332L cabinet, conforming to the Caltrans Standard Specification 2010, section 86-3 "Controller Assemblies". Bi-Tran system signal program module 750. Construct cabinet foundation per Std. ES-3C.

The Contractor shall arrange to have a representative of the Engineer and a signal technician present at the time the controller assembly is turned on. The technician shall be fully qualified to work on the controller assembly, and shall be employed by the controller manufacturer or his authorized representative. The Engineer's representative shall be notified at least 48 hours prior to the turn on.

718-3.3 Controller Cabinets

Model 332L cabinets shall be constructed of aluminum.

Cabinets shall be equipped with standard police door locks and construction lock cores. The cabinet shall also have the following –

- Additional shelf that can be mounted on a 19-inch EIA rack. Exact mounting location in the cabinet to be determined by Field Engineer.
- A DIN Rail to be installed at the back of the cabinet. Exact mounting location to be determined by Field Engineer.
- A horizontal 19" rackmount six-outlet power strip in each cabinet shall be installed. The power strip shall be 120 volt, UL listed, and shall contain a resettable 15 Amp circuit breaker.

A Model 2010 ECLip conflict monitor unit shall be used. It is the responsibility of the contracted vendor to ensure that all equipment provided has been thoroughly tested prior to shipment, and that each shipment conforms to these specifications. The minimum warranty for any equipment and materials shall be for a period of two (2) years from the date of test acceptance. The warranty shall cover all manufacturers' defects, parts, labor, and shipping costs. The warranty for each unit of equipment that requires repair shall be extended by the length of time that the unit is out of service for repair.

718-3.4 Controller Assembly Testing

New controller units, auxiliary equipment, photoelectric cells, and cabinets, including wiring diagrams and manuals, shall be delivered for testing to:

SIEMENS INDUSTRY, INC.
1266 N La Loma Cir
Anaheim, CA 92806

718-4 TRAFFIC SIGNAL FACING AND FITTINGS

718-4.1 Vehicular Signal Faces

Vehicular indications shall be 12 inches as indicated on Traffic Signal plan with visors and backplates.

All signal heads shall be aluminum alloy. Plastic housings, visors, and backplates will not be permitted.

718-4.2 Light Emitting Diode Signal Module

All new indications (Red, Green, and Amber) shall be LED typeThe LED module must be on listed on the Authorized Material List for LED traffic signals.

Top openings of signal heads shall be sealed with neoprene gaskets.

718-4.3 Pedestrian Signals Faces

Pedestrian signal faces shall be LED type countdown pedestrian heads equipped with z-crate screens The unit must be on the Caltrans' Authorized Material List.

718-5 DETECTORS

718-5.1 Vehicle Detectors

Vehicle detectors shall be of the inductive loop Type B, C, D or modified E as per plan.

Loop wire shall by Type 2.

Loop detector lead-in cable shall be Type B.

Perform preliminary striping layout prior to positioning loop detectors layout. Engineer shall approve detector loop locations in the field prior to installation.

Elastometric sealant shall be used. Loops shall be installed on the same day in which the loop slots are cut. This shall include placement of the loop conductors and sealant fill.

PVC conduit per Caltrans Standard Plan ES-5E, Curb Termination Detail Type B, shall be installed wherever a loop wire sawcut crosses a pavement type change or where vertical pavement fracture may occur as determined by the Engineer.

The sides of the slot shall be vertical and the minimum radius of the slot entering and leaving the circular part of the loop shall be 37mm (1-1/2"). Slot width shall be a maximum of 19mm (3/4").

718-5.2 Bicycle Detectors

Bicycle detectors for the Class II bike lane shall follow LADOT Standard Drawing No. S-70.1D and shall be of the inductive loop modified Type E, Case I.

Loop wire shall by Type 2. Loop detector lead-in cable shall be Type B.

718-5.3 Pedestrian Push Buttons

Pedestrian Push Button Assemblies shall be in accordance with Section 86-5.02, "Pedestrian Push Button Assemblies", of the Caltrans Standard Specifications, except as modified or supplemented herein.

Pedestrian push buttons shall be Type "B".

Pedestrian push button actuator shall be the Polara Engineering's "Bulldog-Momentary", Model BDLM-G or City approved equal.

Pedestrian push button signs shall conform to the details shown on the plans. The message and

symbol shall conform to California Sign Specification Sheet R10-3e

The cost of furnishing and installing pedestrian push buttons and all incidentals shall be considered included in the Contract bid price for Furnish and Install or Modify Traffic Signal Equipment.

718-6 SAFETY LIGHTING

718-6.1 General

Street lighting must comply with Caltrans Standard Specifications for LED Luminaires. It must also comply with Sections 209, 307-10 and 307-16 of SSPWC and these special provisions.

718-6.2 LED Luminaries

Each luminaire shall consist of an assembly that utilizes LEDs as the light source. In addition, a complete luminaire shall consist of a housing, LED array, and electronic driver (power supply). The luminaire shall be rated for a minimum operational life of 63,000 hours and will operate at an average operating time of 11.5 hours per night. The operating temperature range shall be -40°F to +130°F. The power consumption allowed for the luminaire shall be 165 Watts.

Operation Voltage
The luminaire shall operate from a 60 HZ ±3 HZ AC power source. The fluctuations of line voltage shall have no visible effect on the luminous output. The operating voltage may range from 120 VAC to 480 VAC. The luminaire shall operate over a minimum voltage range of 95 VAC to 277 VAC. The typical operating voltages for this option are 120 VAC.

THD and Surge Suppression
Total harmonic distortion (current and voltage) induced into an AC power line by a luminaire shall not exceed 20 percent. The luminaire on-board circuitry shall include surge protection devices (SPD) to withstand high repetition noise transients as a result of utility line switching, nearby lightning strikes, and other interference. The SPD shall protect the luminaire from damage and failure for transient voltages and currents as defined in ANSI/IEEE C64.41.2 (Tables 1 and 4).

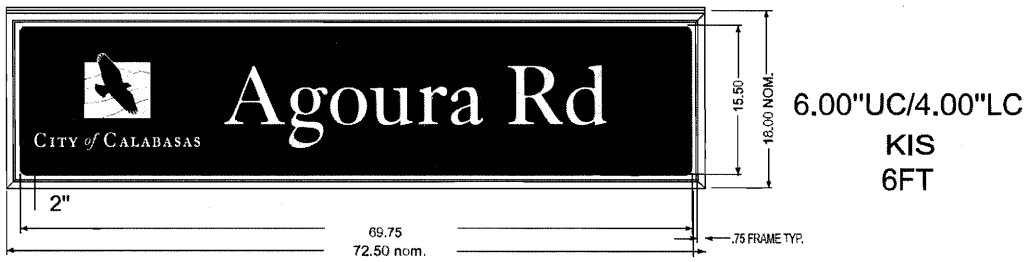
Physical and Mechanical Requirements
The luminaire shall be a single, self-contained device, not requiring on-site assembly for installation. The power supply for the luminaire shall be integral to the unit. The housing shall be of a color specified by the Field Engineer. It is typically a light to medium gray color within the Federal Standard 595B ranges of 26250 to 26500 for semi-gloss sheen, or 36250 to 36500 for flat sheen. Each housing shall be provided with a slip-fitter capable of mounting on a 2 inch pipe tenon. This slip-fitter shall fit on mast-arms from 1-5/8 to 2-3/8 in (O.D.). The slip-fitter shall be capable of being adjusted a minimum of ±5 degrees from the axis of the tenon in a minimum of five steps (+5, +2.5, 0, -2.5, -5). The assembly and manufacturing process for the LED luminaire shall be designed to assure all internal components are adequately supported to withstand mechanical shock and vibration from high winds and other sources. Luminaries shall be equipped with photoelectric controls and wiring to a Type III service enclosure for testing.

718-6.3 Street Name Signs

Details of color, style, borders, and spacing of the new street name signs shall conform to the Caltrans Standard Specifications 2010, section 86-6.09 "Internally illuminated street name signs", except as noted below.

Internally illuminated street name signs shall be type a font: KIS, height: 6" UC/4" LC, with the city logo, 18" x 6' or 8' (dependent on street name length) and 1" white border on green background. "Periods" shall not be used on abbreviations. **A scaled layout for each sign legend shall be submitted to the Engineer for approval prior to fabrication**. Signs shall include standard City of Calabasas logo/insignia.

The contractor shall use the following sample for design purposes:



18 X 72 TYPE A PANEL LEGEND SUBMITTAL				
	FONT:	SIZE:	PANEL	
MAIN LEGEND:	KIS	6"UC/4"LC	BACKGROUND COLOR:	3M 3630-126 EMERALD GREEN FILM
BLK #'S:	N/A	N/A	PANEL MTRL:	.093 WHITE POLY
SUFFIX:	N/A	N/A	ILLUM. SOURCE:	N/A
LOWER LEGEND:	KIS	1 1/2 UC/1 UC	MAST ARM MNTG:	N/A
DIRECTIONAL:	N/A	N/A	FRAME FINISH:	

718-6.4 Photoelectric Controls

Photoelectric control shall be Type IV (on fixtures) for all intersection lighting shall be used.

718-7 CONDUCTOR AND CABLE

718-7.1 General

Specific cable uses are included in the signal plans. If no instructions are included first the existing wiring schedule will be used, if no existing wiring schedule is included a 12-conductor schedule shall be used.

All wires terminated in pull boxes, terminal compartments, or cabinet enclosures shall be individually taped if not landed to a location or wire.

Signal cable shall be used in all conduit runs to all vehicle and pedestrian signal indications and for spares. Caltrans Standard Specifications 86-2.08D applies, except as identified in these Technical Provisions or as otherwise approved by the Engineer. All Cable and wire shall conform to Caltrans Standard Specifications (2010). Cable shall be skinned using only approved devices. The cables shall not be stripped using knives. Where cable outer coating is removed for splicing of conductors, the end of the outer coating shall not be covered.

Signal cable shall not be spliced, except for the 28-conductor cable when it is shown on the plans to be spliced. Vehicle and pedestrian signals shall be connected to the 28-conductor cable with 5-conductor cable at pull box closest to the primary pole on each corner. All utilized conductors shall then be terminated on a terminal bus. A single 5-conductor cable shall be used for each signal phase. The cable shall be installed from each signal or pedestrian signal to the pull box. Each pedestrian push button shall be wired with a 3-conductor cable. These cables shall be similarly installed.

Unless specifically noted, interconnect shall be fiber optic. When used, wire interconnect cable shall be as indicated on the plans. Interconnect cable shall only be spliced at the junction of interconnect cables in the traffic signal controller cabinets. No "mid-block" splices will be allowed. The Contractor shall provide a minimum of 5 feet of slack cable in each controller cabinet and 100 feet of slack cable when the interconnect cable terminates in a pull box. The interconnect wires and shielding cable shall be ground meggered and recorded at each traffic signal controller cabinet (or terminus pull box). The recordings shall be submitted to the Engineer.

Where new conductors are to be added to existing conduit, any existing conductors with THWN or conductors shall be replaced with THHN with insulation as specified in the Standard Specifications. Existing single conductors with types of insulation other than THHN shall be replaced with THWN.

Provide cable routing and management in a neat and professional manner. Group and neatly tie cables to the sides of racks where applicable. Slack or excess cables should be neatly coiled, tied, and stowed.

718-7.2 3-Conductors, 5-Conductors, 9-Conductors and 12-Conductors

Where 3-conductor, 5-conductor, 9-conductor and 12-conductor cable method is specified, use the following.

Pedestrian 3-conductor shall be used were specified in the plans

All signal and pedestrian circuit conductors shall run continuously without splices from the terminal block located in the cabinet, compartment, pole standard, or signal head, to a similarly located terminal block.

The conductor schedule shows the number and type of conductor cable required in each conduit. The 12-conductor cable shall enter and be terminated at the vehicle head terminal compartment on the pole. Each 12-conductor cable shall be labeled relative to the pole served. Land

applicable wires to be used on the vehicle head terminal compartment on the pole. Color designations shall be per Caltrans Standard Specifications (2010), except as noted for overlap phases. All two color overlaps shall use black/white stripe for yellow indication and solid black for green indication. From the vehicle head terminal compartment, use a 5-conductor cable to each vehicle and pedestrian indication. All cables shall be identified in each pull box and the signal controller cabinet.

A 9-conductor or 5-conductor cable shall be used where specified by the plans. Each cable shall be run with the associated 12-conductor and labeled to specify pole served. Color designations shall be per Caltrans Standard Specifications (2010), except as noted for overlap phases. All cables shall be identified in each pull box and the signal controller cabinet.

A 3-conductor cable shall be used to each pole location that uses a pedestrian push button assembly.

718-7.3 28-Conductors

Where 28-conductor cable is specified, use the following.

There shall be 2-28-conductor cables installed from the controller cabinet to the pull box serving the primary pole on the same corner. From this point, there shall be 2 continuous 28-conductor cables to the pull box serving the primary pole on each successive corner. The primary pole on a corner is the largest mast arm pole on the corner. Continuous 28-conductor cable shall be used from the controller cabinet to the primary pole at the farthest location. All other primary pole locations shall remove a section of the outer sleeve from the 28-conductor cable and only wires needing to be spliced shall be cut.

Each 28-conductor cable shall be labeled in each pull box, "C1" (one ring of tape) or "C2" (two rings of tape). The cable identified as C1 shall be used for signal Phases 1,2,3,4. The cable identified as "C2" shall be used for signal Phases 5,6,7,8. All conductors, #10 AWG or smaller, shall be solid. All solid wires shall be landed to terminals using an eyelet at the end of the wire or if a terminal connection is made it shall be soldered to the wire using a method approved in the Caltrans Standard Specifications (2010).

At the controller cabinet, all cables shall be marked per pole as shown on the conductor schedule (A or 1, B or 2, C or 3, D or 4, etc). In addition, identify conductors by number. Use one of the following methods:

1. Clear, heat-shrinkable tubing sealed over adhesive-backed paper or cloth wrap-around markers
2. Pre-printed, white, heat-shrinkable tubing

Multiple conductors for all traffic signal phases terminating in the controller cabinet output file shall be terminated in crimp style terminated lug. If more than 2 conductors need to be terminated at the same location, the screw type-clamping lug shall be used for that terminal.

718-8 PULL BOXES

718-8.1 General

Pull Boxes shall be constructed in accordance with Subsection 86-2.06 of the "Pull Boxes", of the Caltrans Standard Specifications, latest edition (unless otherwise noted below).

Pull boxes and covers shall be high density reinforced concrete., unless otherwise noted on the plans. Traffic rated pull boxes and metal covers shall be provided when the pull box is located in drivable areas or unimproved areas. All pull boxes shall be No. 6, except the Pull box at the controller cabinet, unless otherwise noted on the plans. The pull box located at the controller cabinet shall be a Christy Concrete Products N-48 box. All pull boxes shall be located behind the curb, at the locations shown on the plans, or as directed by the Engineer. If sidewalk is to be constructed, pull boxes shall be installed in the sidewalk. No pull box shall be located within the traveled way, driveway apron, within drainage ditches, or within one foot of a curb ramp without prior approval of the Engineer.

Recesses for suspension of ballasts will not be required, unless otherwise indicated on the plans.

Within the pull box, the conduit shall be placed in a manner that the lowest portion of the termination shall be a minimum of two inches above the bottom of the pull box. The conduit termination shall not be closer than 4 inches from the bottom of the pull box cover. The conduit shall also be placed in a manner to allow the cable/wire to be pulled in a straight line and clear the side of the pull box by a minimum of two inches.

The cover marking for each pull box shall read "TRAFFIC SIGNAL". The cover marking for each pull box for interconnect conduit or multiduct shall read "COMMUNICATION".

All boxes and splice vaults for fiber optic cables shall be double boxes (with 12" extensions).

718-8.2 Material

Contractor shall submit pull-box specifications to City Engineer for approval prior to installation. Contractor shall follow all guidelines in order to receive proper warranty and/or certifications and deliver to City.

718-9 FIBER OPTIC

718-9.1 Installation of Fiber Optic Conduit in a Trench

All fiber optic conduit to be installed underground shall be Type 3 (Schedule 80 PVC) Long radius conduit elbows (sweeps) shall be used at all locations that Type 3 conduit makes a bend, such as into pull boxes and foundations. If the conduit ends are field-bent instead of using factory-bent elbows, the field bends shall be of the same radius (or longer radius) as long radius factory bent elbows. Minimum conduit bend radius shall be 10 times the trade diameter.

Direct coupling of fiber optic conduit will be permitted at underground locations by means of an industry standard rigid non-metallic conduit coupling. The coupling shall be the type for joining threaded conduit to solvent welded conduit.

Contractor shall obtain copy of latest manufacturers specifications for this bid item, forward a copy of the specifications to the Traffic Engineer for review and approval prior to purchasing and installation. Contractor shall follow all guidelines in order to receive proper warranty and/or certifications and deliver to City.

Contractor shall also refer to Public Work (PW) Policy & Procedure No. 104 (street plate requirement).

718-10 INSTALLATION OF FIBER OPTIC CONDUIT BY HORIZONTAL DIRECTIONAL BORING

718-10.1 General

Straight runs for conduit (from pull box to pull box) are required. Contractor shall avoid bends of conduit runs. In case of any complications in field, where straight runs for conductor's cables are not possible, contractor shall coordinate the alignment with the City Engineer prior to installation.

718-10.2 Submittals

Horizontal directional drilling experience required to meet the requirements of this section.

Prior to construction, submit to the Engineer a Work Plan detailing the procedure and schedule to execute the project. The work plan will be comprehensive, realistic, and based on actual working conditions for this particular project. The work plan documents the planning required to successfully complete the project. The work plan includes complete descriptions of proposed plans, procedures, equipment, personnel, and if applicable, supporting material.

The Contractor shall also submit the type and capacity of the drilling rig to be used on the project, include manufacturer, pullback and push torque. Contractor to verify that allowable pipe stresses of the pipe will not be exceeded by the drilling rig. Submit information on the type of locating and guidance/tracking system. In addition, submit type and capacity of mud mixing system. Include proposed composition of drilling fluid, viscosity, and density.

Prior to construction, submit information on the method of slurry containment, method of recycling drilling fluids and spoils (if applicable), or method of containing drilling fluids or spoils and transporting drilling fluids and spoils off-site (including anticipated volume), and identify method and disposal site for drilling fluids and spoils. All material must be disposed in accordance with local, state, and federal regulations.

Prior to construction, submit plan for cleanup and disposal of spills and fracouts (drilling fluids, hydraulic fluids) including measures to contain and clean the affected area. Include details for cleanup of surface seepage of drilling fluids and spoils. All material must be disposed in accordance with local, state, and federal regulations.

718-10.3 Quality Assurance

The horizontal directional drilling shall be performed by the drilling company who is experienced in the installation of conduits utilizing the horizontal directional drilling method.

718-10.4 Directional Boring System

Contractor to provide a pneumatically or hydraulically operated, fluid assisted remote guided boring system capable of installing the pipe by trenchless methods per the Drawings without damage. The equipment shall be designed to provide accurate control of both the line and the grade of the boring head.

1. Contractor to provide pumps, compressors, tools and all equipment certified as suitable by the system manufacturer to install the new pipe without stressing or damaging the pipe.
2. Contractor to provide a circulatory and recovery system that will recover the bentonite or other drilling fluids.
3. Contractor to provide supply of water for mixing drilling fluid.

718-10.5 Protection

1. The Contractor shall field verify the location and depth of all existing utilities, including service connections, to be paralleled or crossed prior to the start of directional drilling operations. The Contractor shall modify alignment, depth or grade as necessary to avoid utilities and minimize the number of peaks and valleys along the alignment.

2. The Contractor shall expose all utilities that they will be crossing with horizontal directional drilling. All major utilities (high pressure gas, fiber optic, high voltage electric, major pipe lines, water and sewer lines, etc.) should be exposed as needed to ensure utility location, if parallel within 5 feet of excavation area to verify depth and location of the utility. If the location is not accurate, the utility owner should be contacted immediately.

718-10.6 General Pipe Installation

1. Install pipe by the directional drilling methods unless conditions require open trench installation.
2. Install pipe by continuously pulling the pipe into place from insertion point to exit point without causing damage to the pipe being inserted. Provide lubricants as required by the pipe manufacturer to avoid stressing the pipe past its elastic limit. Contractor to provide rollers or alternative apparatus to prevent damage to the pipe.
3. Provide installation and receiving pits as necessary for complete installation of the pipe. The excavation of the installation and receiving pits shall be incidental to the work.
4. The Contractor shall not start the pullback unless it can be completed without interruptions. Contractor shall coordinate scheduling with the Engineer.
5. The pilot hole shall establish the horizontal plane of the pipeline. A plot of length versus elevation versus left/right variance will dictate the actual as-built plan and profile of the pipeline. Data feedback and electronic guidance systems shall be used to provide confirmation of position.

6. Reaming shall consist of using an appropriate tool to open the pilot hole to a slightly larger diameter than the carrier pipeline. The percentage oversize shall depend on soil types, soil stability, depth, drilling fluid hydrostatic pressures, etc. Normal oversizing shall be from 120 to 150 percent of the product pipe diameter. Drilling fluid shall be forced down the hole to stabilize the hole and to remove soil cuttings. The Contractor shall carefully monitor the reaming operations to prevent damage to adjacent utilities.
7. The pipe shall be installed by continuously pulling and/or pushing the pipe into place through the drilling fluid along the reamed whole pathway from insertion point to exit point without causing damage to the pipe and pipe joints being inserted. The pullback speed shall be within the pipe manufacturer's recommendations. Drilling fluid/lubricants shall be provided as required by the pipe manufacturer's recommendations and specifications to avoid stressing the pipe and joints past the materials elastic limits. Proper pipe handling, cradling, bending minimization, and consistent insertion velocity shall be recorded.
8. Any bits, drills, reamers, or other tools lost or stuck in the hole shall be removed at the Contractor's expense. If tools cannot readily be removed, Contractor may at Contractor's option abandon the hole. The Contractor will seal the borehole and redrill the crossing. No payment shall be made for any lost equipment, material, or work on abandoned holes.
9. Drilling fluid to be used to facilitate the installation of the pipe shall be adjusted within acceptable limits such that ground heaving and subsurface cavity formation through erosion are prevented.
10. The alignment shown on the Drawings shall be adhered to unless existing physical obstructions prevent otherwise. The number of setups and the length of pipe installation per set up as shown on the Drawings is merely a suggested layout to achieve the alignment shown on the Drawings. The Contractor shall be ultimately responsible for determining the number of set ups required to install the pipe to the alignment shown on the Drawings. The number of setups shall be incidental to the work.
11. The Contractor shall be responsible for cleanup and restoration, due to hydrofractures from excessive pressure in the drilling fluid. Contractor shall prevent drilling fluids from entering streams or other water bodies and municipal storm or sanitary sewer lines (unless prior approval is obtained from the Owner). No additional payment shall be made for cleanup costs required by Owner, Engineer, or regulatory agencies due to loss of drilling fluid.
12. Pits excavated to permit connection of bored pipe shall be backfilled, and disturbed areas shall be restored to their original state or better. Sections of sidewalks, curbs, and gutters or other permanent improvements damaged during horizontal directional drilling operations shall be repaired or replaces at the Contractor's expense. The backfilling of the boring and receiving pits shall be incidental to the work.

718-11 FIBER OPTIC TRENCH IN SHOULDER

718-11.1 General

As directed by the City Engineer, when fiber optic conduit is placed in a trench, that is not in a pavement area, the trench shall be backfilled with commercial quality colored concrete containing not less than 420 lbs of Portland cement per cubic yard, to the dimensions shown on the plans. The trench shall be wide enough for a minimum of 1 inch of concrete between the wall of the trench and the side of the conduit. Concrete used to backfill trenches shall have a 24-hour curing period. The trenches shall have barricades with "Open Trench" signs posted at the beginning of the trench and every 200 feet thereafter.

The concrete backfill for the installation of fiber optic conduits shall be a medium to dark, red or orange color to clearly distinguish the concrete backfill from other concrete and soil. The concrete shall be pigmented by the addition of commercial quality cement pigment to the concrete mix. The red or orange concrete pigment shall be LM Scofield Company; Orange Chromix Colorant; Davis Colors; or equal. For trenches in pavement areas, only the top 4 inches of concrete backfill will be required to be pigmented concrete. At the option of the Contractor, the full depth may have the pigment.

718-12 FIBER OPTIC TRENCH IN PAVED AREA

718-12.1 General

Work shall consist of all asphalt saw-cutting, excavation, sub-grade preparation, base preparation, tack coat, and asphalt or rubberized asphalt concrete installation (per City Engineer and/or PW Inspector's direction) to be performed at the locations indicated by the City Engineer and according to the contract specifications and plans. All work shall conform to Section 301 and 302 of the Standard Specifications, except as amended or modified herein. Contractor shall also refer to Public Work (PW) Policy & Procedure No. 106 (Trench Backfill) – see Attachment A.

Sub-grade preparation shall be scarified at least (6) inches below sub-base elevation and re-compacted to at least 90 percent relative compaction or as directed by the City Engineer/inspector.

Asphalt concrete shall be placed on compacted base or on the Engineer's approved equal (95% minimum compaction). Minimum thickness requirement of the newly laid asphalt concrete must match existing or as directed by the Engineer. Asphalt concrete shall be placed to provide a smooth transition with existing pavement as indicated on the plans. Additional base shall be placed and compacted as needed to achieve required elevations and pavement thicknesses.

Conduit trenches in or adjacent to paved shoulder shall be backfilled within 3 calendar days. Conduit trenches in and across traffic lanes shall be backfilled during the same work period the trench is excavated except that the top 12 inches of asphalt shall be placed within 3 calendar days. Trench plates shall be placed over trenches not completed or completely backfilled. Refer to City Public Works policy regarding encroachment permits, trenching & plating.

Straight segments of conduit shall be nominal 20 feet lengths with a minimum 5 inch slip joint. Joints shall be keyed to mate the enclosed inner-ducts and shall lock together or be provided with a seating mark to verify proper assembly. The joint shall be solvent welded or sealed with a gasket as recommended by the manufacturer. Factory manufactured end sections shall be provided.

Materials Base material used shall be fine or coarse graded in accordance with Section 200-2.5 of the Standard Specifications. Select sub-base material shall be fine or coarse graded in accordance with Section 200-2.6 of the Standard Specifications.

Asphalt Asphalt concrete shall be type PG 64-10 and shall comply with Section 203-6 of the Standard Specifications or as directed by the City Engineer

Compaction The words "relative compaction" or "relative density" shall mean the ration of the field density to the laboratory maximum density expressed in percent.

Contractor is also directed to City encroachment permit requirements and guidelines.

718-13 SINGLE MODE FIBER OPTIC CABLE

This section is intended to provide an overview of the fiber optic cable to be installed as part of this project. The plans and all other sections of the specifications shall take precedence over this overview in the event of any conflicts.

This project involves the installation of single mode fiber optics cable in new communications/traffic signal conduit. In general, the existing conduit may also contain multi-conductor twisted pair cable of various pairs. The project plans specify the exact fiber to be installed per conduit.

For the purposes of testing, all fiber strands terminated at the control center splice vault shall be spliced into pig-tails terminated with SC connectors. These pig-tails shall be a minimum of 25 feet in length. These pig-tail connections shall be utilized to test the fiber optic cable plant to be installed as part of this project. In addition, all video receivers and other fiber optic electronics shall be tested at this point prior to connection to the control center by others.

718-13.1 General

All fiber optic cable on this project shall be from the same manufacturer, who is regularly engaged in the production of this material. The glass used shall be manufactured by Corning Altos Outdoor Cable or approved equivalent. The contractor shall submit to the Engineer for approval a certification that the manufacturer has been engaged in the production of this material for a minimum of three (3) years.

Each fiber optic cable for this project shall be all dielectric, gel free, duct type, loose tube and contain single mode (SM) dual window (1310nm and 1550 nm) fibers as shown on the plans and shall conform to these special provisions.

The cables shall comply with all the requirements of the American National Standards Institute (ANSI) and Insulated Cable Engineers Association (ICEA) S87-640.

Each optical fiber shall be glass and consist of a doped silica core surrounded by concentric silica cladding. All fibers in the buffer tubes shall be factory tested and usable fibers, and shall be sufficiently free of surface imperfections and inclusions to meet the optical, mechanical and environmental requirements of these special provisions.

Fiber coating shall be layered, UV cured acrylate. The coating shall be mechanically or chemically stripped without damaging the fiber. The required fiber grade shall reflect the maximum individual fiber attenuation to guarantee the required performance of each and every fiber in the cable.

The optical fibers shall be contained within loose buffer tubes. The loose buffer tubes shall be stranded around an all dielectric central member. Aramid yarn shall be used as a primary strength member, and a polyethylene outside jacket shall provide for overall protection.

718-13.2 Fiber Characteristics

Each optical fiber shall be glass and consist of a doped silica core surrounded by concentric silica cladding. All fibers in the buffer tube shall be useable fibers which meet attenuation requirements and shall be sufficiently free of surface imperfections and inclusions to meet the optical, mechanical, and environmental requirements of these specifications.

The coating shall be a dual layered, UV cured acrylate. The coating shall be able to be stripped mechanically or chemically without damaging the fiber.

The cable shall comply with the optical and mechanical requirements over an operating temperature range of -40°C. to +70°C.

The required fiber grade shall reflect the maximum individual fiber attenuation, to guarantee the required performance of each and every fiber in the cable.

For all fibers, the attenuation specification shall be a maximum attenuation for each fiber over the entire operating temperature range of the cable.

Single mode fibers within the finished cable shall meet the requirements in the following table:

Fiber Characteristics Table

Cable Design
Central Element - Dielectric
Fiber Coloring - Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Fibers per Tube - 12
Number of Tube Positions - 6
Buffer Tube Diameter - 2.5 mm (0.1 in)
Number of Filling Elements - 4
Tape Water-swellable
Number of Ripcords 1
Outer Jacket Material - Polyethylene (PE)
Outer Jacket Color - Black
Maximum Fibers per Tube - 12
Temperature Range
Storage -40 °C to 70 °C (-40 °F to 158 °F)
Installation -30 °C to 70 °C (-22 °F to 158 °F)
Operation -40 °C to 70 °C (-40 °F to 158 °F)
Mechanical Characteristics Cable
Max. Tensile Strength, Short-Term 2700 N (600 lbf)
Max. Tensile Strength, Long-Term 890 N (200 lbf)
Weight 73 kg/km (49 lb/1000 ft)
Nominal Outer Diameter 10.5 mm (0.41 in)
Min. Bend Radius Installation 158 mm (6.2 in)

Min. Bend Radius Operation 105 mm (4.1 in)

Chemical Characteristics

RoHS Free of hazardous substances according to RoHS 2002/95/EG

Optical Characteristics (cabled)

Fiber Name SMF-28e+® fiber

Fiber Category G.652.D

Fiber Code E

Performance Option Code 01

Wavelengths 1310 nm / 1383 nm / 1550 nm

Maximum Attenuation 0.4 dB/km / 0.4 dB/km / 0.3 dB/km

Typical attenuation 0.33 dB/km / 0.33 dB/km / 0.19 dB/km

718-13.3 Color Coding

In buffer tubes containing multiple fibers, each fiber shall be distinguishable from others in the same tube by means of color coding according to the following:

1.	Blue (BL)	7.	Red (RD)
2.	Orange (OR)	8.	Black (BK)
3.	Green (GR)	9.	Yellow (YL)
4.	Brown (BR)	10.	Violet (VL)
5.	Slate (SL)	11.	Rose (RS)
6.	White (WT)	12.	Aqua (AQ)

The color formulation shall be compatible with the fiber coating and the buffer tube filling compound, and be heat stable. The colors shall not fade or smear or be susceptible to migration and it shall not affect the transmission characteristics of the optical fibers and shall not cause fibers to stick together.

718-13.4 Cable Construction

The fiber optic cable shall consist of but not be limited to the following components:

A. PE jacket
B. Ripcord
C. Water Swellable Tape
D. Buffer Tube
E. Water Swellable Yarn
F. Central Member
G. Optical Fiber
H. Fillers

The required fiber grade shall reflect the maximum individual fiber attenuation, to guarantee the required performance of each and every fiber in the cable.

For all fibers, the attenuation specification shall be a maximum attenuation for each fiber over the entire operating temperature range of the cable.

718-13.5 General Cable Performance Specifications

The cable performance specifications shall comply with all the requirements of the ANSI/ICEA S-87-640.

718-13.6 Quality Assurance Provisions

Documentation of factory test results shall be provided to the Engineer for approval prior to shipping.

All optical fibers shall be 100 percent attenuation tested by the Manufacturer. The attenuation of each fiber shall be provided with each cable reel.

Attention is directed to "Fiber Optic Testing", elsewhere in these special provisions.

The Contractor shall furnish a Manufacturer's certification that the fiber optic cable materials proposed for use on this project will meet all applicable TIA/EIA standards and project special provisions.

The material shall not be installed in the field prior to the Engineer's approval.

718-13.7 Packaging and Shipping Requirements

The completed cable shall be packaged for shipment on reels. The cable and reel shall be wrapped in a water resistant covering. Each end of the cable shall be securely fastened to the reel to prevent the cable from coming loose during transit. Six feet of cable length on each end of the cable shall be accessible for testing. Both ends of the cable shall be sealed to prevent the ingress of moisture.

Each cable reel shall have a durable weatherproof label or tag showing the Manufacturer's name, the cable type, the actual length of cable on the reel, the Contractor's name, the contract number, and the reel number. A shipping record shall also be included in a weatherproof envelope showing the above information and also include the date of manufacture, cable characteristics (size, attenuation, bandwidth, etc.), cable identification number and any other pertinent information.

The minimum hub diameter of the reel shall be at least thirty times the diameter of the cable. The fiber optic cable shall be in one continuous length per reel with no factory splices in the fiber. Each reel shall be marked to indicate the direction the reel should be rolled to prevent loosening of the cable.

Installation procedures and technical support information shall be furnished to the Engineer for approval at the time of delivery.

Handle materials so as to prevent damage to fiber optic cable.

Protect materials against damage by construction traffic.

718-13.8 Fiber Optic Cable Installation

Installation procedures shall be in conformance with the procedures specified by the cable Manufacturer for the specific cable being installed. Pulling tension shall never exceed 80% of the maximum force specified by the cable Manufacturer.

During cable installation, the bend radius shall not be less than 15 times the outside diameter of the cable.

The fiber optic cable shall be installed with a minimum number of splices. Splice closures shall be required at every junction point and at every device being serviced by the fiber optic cable as indicated on the fiber optic conductor schedules. At each splice closure, all useable fibers in the cable shall be continuously spliced as indicated on the plans. A minimum of 30 feet of slack shall be maintained on either side of any splice enclosure. In addition, a minimum of 20 feet of slack shall be maintained at all other pull box locations. All fiber optic cables must be clearly labeled in compliance with the ANSI/TIA-606-B label standard.

Detectable Mule Tape

Detectable mule tape must be provided and placed in communication conduits containing fiber optic cable. A minimum of 3 ft of slack must be extended into each communication pull box, splice vault and fiber optic vault from each direction. The mule tape must form a mechanically and electrically continuous line throughout the length of the conduit. Mule tape may be spliced at intervals of not less than 500 feet and in pull boxes

718-13.9 Splicing

All permanent fiber optic cable splices shall be the fusion type and shall not exceed 0.1 dB loss per splice.

The field splices shall connect the fibers of two or more fiber optic cable lengths together as indicated on the conductor schedules. These splices shall be placed in a splice tray and these splice tray(s) shall then be placed in the splice closure.

The termination splices shall connect the fiber optic cable span ends with pigtails. The termination splices shall be placed in a splice tray. The individual fibers shall be looped one full turn within the splice tray to avoid micro bending. The minimum bend radius during installation and after final assembly in the optical fiber splice tray shall be not less than 4 inches. Each bare fiber shall be individually restrained in a splice tray. The optic fibers in buffer tubes and the placement of the bare optical fibers in the splice tray shall be such that there is no discernable tensile force on the optical fiber.

718-13.10 Passive Cable Assemblies and Components

The fiber optic assemblies and components shall be compatible components, designed for the purpose intended, and factory manufactured by a company regularly engaged in the production of material for the fiber optic industry. All components or assemblies shall be first class non-corroding, with a design life of at least 20 years. All components or assemblies of the same type shall be from the same Manufacturer.

718-13.11 Warning Tape

Warning tape shall be provided and placed in the trench over conduits containing fiber optic cable as shown on the plans. The warning tape shall be 4 inches wide with bold printed black letters of approximately 3/4 inch on bright orange color background, and contain the printed warning "CAUTION BURIED FIBER OPTIC CABLE" repeated at approximately 30 inch intervals.

The printed warning shall be non-erasable and shall be rated to last with the tape for a minimum of 40 years.

The construction of the warning tape shall be such that it will not delaminate when it is wet. It shall be resistant to insects, acid, alkaline and other corrosive elements in the soil. It shall have a minimum of 120 lbs. tensile strength per 4 inch wide strip and shall have a minimum of 700 percent elongation before breakage.

The warning tape shall be the detectable type with a contiguous conductor in the form of a copper wire or aluminized foil, encased in a protective plastic jacket. The aluminized foil shall be approximately 0.35 mil thick. Separate rolls of the warning tape shall be electrically connected by corrosion resistant clips or soldering. The ends of warning tape shall extend into pull boxes and splice vaults a minimum of 24 inches for future connection to a warning signal device. The continuity and detectability of the warning tape, for the entire conduit run, shall be demonstrated prior to, and again after backfilling each trench, to the satisfaction of the Engineer. Warning tape shall be Condux International, Inc.; Allen System, Inc.; Reff Industries, Inc.; or equal.

Full compensation for furnishing and installing the warning tape shall be considered as included in the price or prices paid for the conduit involved and no separate payment will be made therefore.

718-13.12 Cable Slack

Coil 25 feet of fiber optic cable slack into each proposed # 6 pull box.

718-13.13 Connectors

The fiber optic connectors shall be the ceramic ferrule SC type for single mode applications. All fiber optic connectors shall be the 2.5 mm SC connector ferrule type with Zirconia Ceramic material with a PC (Physical Contact) pre-radiused tip.

The SC connector operating temperature range shall be .40°C to +80°C. Insertion loss shall not exceed 0.15 dB and the return reflection loss on single mode connectors shall be at least 40 dB. All terminations shall provide a minimum 50 lb. pull out strength. Factory test results shall be documented and submitted to the Engineer prior to installing any of the connectors. Single mode connectors shall have a yellow color on the body and/or boot.

Field terminations shall be limited to splicing of adjoining trunk cable ends and pigtail breakouts. The pigtails shall utilize factory installed SC connectors.

718-14 FIBER OPTIC TESTING

718-14.1 General

Testing shall include the tests on elements of the passive fiber optic components: (1) at the factory, (2) after delivery to the project site but prior to installation, (3) after installation but prior to connection to any other portion of the system, and (4) during the final system testing. The active components shall be tested after installation. The Contractor shall provide all personnel, equipment, instrumentation and materials necessary to perform all testing. The Engineer shall be notified in writing a minimum of two working days prior to all field tests. The notification shall include the exact location corporation of the system to be tested.

Documentation of all test results shall be provided to the Engineer for approval within two working days after the test involved. The Contractors attention is directed to "As-Builts" elsewhere in these special provisions, regarding the requirements for recording test results.

Attenuation tests shall be performed with an OTDR capable of recording and displaying anomalies of 0.1 dB as a minimum. Singlemode fibers (SM) shall be tested at 1310 nm and 1550 nm. The OTDR shall have a printer capable of producing a verifying test trace with fiber identification as shown in the sample "Link Loss Budget Work sheet", numerical loss values, the date and the operator's name. The test results shall be submitted in one set of hard copies on 8.5 inch x 11 inch paper properly bounded in a binder and in an electronic copy stored in an USB flash drive.

Prior to arrival of the cable, the Contractor shall provide detailed test procedures for all field testing to the Engineer. The procedures shall include the tests involved and how the tests are to be conducted. These tests plans shall be subject to the approval of the Engineer.

718-14.2 Factory Testing

Verification of the fiber specifications as listed in the Fiber Characteristics Table shall be supplied by the Manufacturer with the appropriate documentation. After cabling, before shipment but while on the shipping reel, 100 percent of all fibers shall be tested for attenuation. Copies of the results shall be (1) maintained on file at the Contractor's, Manufacturer's and Owner's place of business with a file identification number for a minimum of 10 years, (2) attached to the cable reel in a waterproof pouch, and (3) submitted to the Contractor and to the Engineer prior to the delivery of the cable to the jobsite.

718-14.3 Arrival on Site

The cable and reel shall be physically inspected by the Contractor on delivery and 100 percent of the fibers shall be tested with the OTDR for attenuation in dual wavelength in one direction only to confirm that the cable meets requirements. Test results shall be recorded, dated, compared and filed with the copy results shall be recorded, dated, compared and filed with the copy accompanying the shipping reel in a weather proof envelope. Attenuation deviations from the shipping records greater than 5 percent shall be brought to the attention of the Engineer in writing. The cable shall not be installed until completion of this test sequence and written approval by the Engineer is received. Copies of traces and test results shall be submitted to the Engineer. Copies of traces and test results shall be submitted to the Engineer. If the OTDR test

results are unsatisfactory, the reel of fiber optic cable shall be considered unacceptable and all records corresponding to that reel of cable shall be marked accordingly. The unsatisfactory reels of cable shall be replaced with new reels of cable at the Contractor's expense. The new reels of cable shall then be tested to demonstrate acceptability. Copies of the test results shall be submitted to the Engineer for approval.

718-14.4 After Cable Installation

After the fiber optic cable has been pulled but before breakout and termination, 100 percent of all the fibers shall be tested with the OTDR for attenuation. Test results shall be recorded, dated, compared and filed with the previous copies of these tests. Copies of traces and test results shall be submitted to the Engineer for approval. If the OTDR test results are unsatisfactory, the fiber optic cable segment will be unacceptable. The unsatisfactory segment of cable shall be replaced with a new segment, without additional splices, at the Contractor's expense. The new segment of cable shall then be tested to demonstrate acceptability. Copies of the test results shall be submitted to the Engineer for approval.

718-14.5 System Verification at Completion

Outdoor Splices

At the conclusion of all outdoor splices at one location, and before they are enclosed and sealed, all splices shall be tested with the OTDR, in dual wavelength for both directions. Splice segments shall be tested at 1310 nm and at 1550 nm. Individual fusion splice losses shall not exceed 0.1 dB. Measurement results shall be recorded, dated, validated by the OTDR trace printout and filed with the records of the respective cable runs. Copies of traces and test results shall be submitted to the Engineer. If the OTDR test results are unsatisfactory, the splice shall be unacceptable. The unsatisfactory splice shall be replaced at the Contractor's expense. The new splice shall then be tested to demonstrate acceptability. Copies of the test results shall be submitted to the Engineer for approval.

Entire Fiber Link

Once the passive cabling system has been installed and is ready for activation, 100 percent of the fiber links shall be tested with the OTDR for attenuation. Test results shall be recorded, dated, compared and filed with previous copies. Copies of traces and test results shall be submitted to the Engineer for approval. If the OTDR test results are unsatisfactory the link shall be replaced at the Contractor's expense. The new link shall then be tested to demonstrate acceptability. Copies of the test results shall be submitted to the Engineer for approval.

Installed System Link Loss Budget

The Link Loss Budget Worksheet shall be completed for each service point, as defined in the conductor schedules, using the data gathered throughout the installation process. The completed worksheets shall be included as part of the system documentation and in the As-Built Plans. Refer to "As-Built Plans" in this specification for additional requirements.

The total connector losses shall be calculated by the Contractor by summing the individual attenuation values for each connector pair in the path, excluding the transmitter and receiver connectors.

The total splice losses shall be calculated by the Contractor by summing the individual attenuation values for each splice in the link.

The total of other losses shall be calculated by summing the individual attenuation values for each component in the link not previously addressed. These items may include, but are not limited to, couplers, splitters, routers and switches.

The Total System Loss shall be recorded on the Link Loss Budget Worksheet.

Test Failures

If during any of these system verification tests, the results prove to be unsatisfactory, the fiber optic cable and or defective splice enclosures will not be accepted. The unsatisfactory components shall be replaced at the Contractor's expense. The new segment of cable shall undergo the same testing procedure to determine acceptability. Copies of the test results shall be submitted to the Engineer for approval. The removal and replacement of a segment of cable shall be interpreted as the removal and replacement of a single contiguous length of cable connecting two splices, two connectors, or a splice and a connector. The removal of only the small section containing the failure and therefore introducing new unplanned splices will not be allowed. Contractor shall follow all guidelines in order to receive proper warranty and/or certifications and deliver to City

718-15 FIBER BREAKOUT CABLES

718-15.1 General

Contractor shall be responsible for obtaining all manufacturer specifications relating to fiber breakout cables and adhere to all requirements for proper installation and submit a copy of the latest manufacturer's specifications to the City Traffic Engineer for review and approval prior to installation. Contractor shall also follow all guidelines in order to receive proper warranty and/or certifications for product and deliver to City.

718-16 FIBER CONNECTION AT CONTROLLERS

718-16.1 General

The fiber breakout cables are connected to the fiber optic trunk line on one end, and on the other end are terminated in a rack mounted fiber optic patch panel mounted in the controller cabinet that allows connection to the fiber optic equipment in the controller cabinet to the fiber optic system. The closet connector splice housing shall be made by Corning (CCS-01U), rack-mounted inside the 332 cabinet. A maximum of two panels per housing with "S" category splice trays. The closet connector housing panels shall be CCH-CP12-59.

Contractor shall be responsible for obtaining all manufacturer specifications and adhere to all requirements for proper installation and submit a copy of the latest manufacturer's specifications to the City Traffic Engineer for review and approval prior to installation. Contractor shall also follow all guidelines in order to receive proper warranty and/or certifications for product and deliver to City.

718-17 FIBER OPTIC SPLICE CLOSURE

718-17.1 General

The fiber optic splice closures shall be installed in the underground splice pull boxes as shown on the plans. If existing splice enclosures cannot be reused, then install new splice enclosure. The splice enclosure shall be Corning SCF-6C22-02. The splice trays inside the SCF closures shall be SCF-ST-048.

The fiber optic cable splices shall be fusion type and shall not exceed 0.1 dB loss per splice. The field splices shall connect the fibers of two fiber optic cable lengths together. The termination splice shall connect the fiber optic cable span ends with pigtails. The field splices shall be placed in a splice tray, then splice tray shall be placed in the splice closure. All splices shall be protected with a thermal shrink sleeve.

Splice closures shall be waterproof, rodent proof, and re-enterable, and shall accommodate all the fibers in a single cable. Splice closures shall be complete with splice organizer tray, brackets, plugs, clips, cable ties, seals, and sealants, and a dry encapsulate.

Contractor shall be responsible for obtaining all manufacturer specifications and adhere to all requirements for proper installation and submit a copy of the latest manufacturer's specifications to the City Traffic Engineer for review and approval prior to installation. Contractor shall also follow all guidelines in order to receive proper warranty and/or certifications for product and deliver to City.

718-18 MID-SPAN SPLICE AT CONTROLLERS

718-18.1 General

Using a mid-span splicing method, a drop cable shall be joined to the fibers in the fiber optic cable span. The termination splices shall be placed in a splice tray and the splice tray(s) shall then be placed in a water tight fiber splice closure.

Contractor shall be responsible for obtaining all manufacturer specifications and adhere to all requirements for proper installation and submit a copy of the latest manufacturer's specifications to the City Traffic Engineer for review and approval prior to installation. Contractor shall also follow all guidelines in order to receive proper warranty and/or certifications for product and deliver to City.

718-19 ETHERNET SWITCH AT INTERSECTIONS

718-20.1 General

1.Description. This Item governs the furnishing of Hardened Ethernet Switches (HES)

2. Materials.

A. **General Requirements.** Provide all HES of the same manufacturer. Provide all new equipment in strict accordance with the details shown on the plans and in the

specifications. Provide a high-performance and hardened Ethernet switch supporting standard OSI Layer 2 and 3 functionality. Provide a HES that supports direct connectivity to existing networks configured in ring and mesh fault tolerant topologies enabling applications to operate reliably, and with low latency. Include all equipment licenses, where required, for any software or hardware in the system.

B. Adherence to Standards. Comply with the following standards for all HES furnished, assembled, fabricated, or installed under this item:

1. IEEE 802.1d: Spanning Tree Protocol
2. RSTP (802.1w) and Enhanced Rapid Spanning Tree (eRSTP™) network fault recovery (<5ms)
3. IEEE 802.1p: Class of Services
4. IEEE 802.1q: VLAN Tagging
5. IEEE 802.1w: Rapid Spanning Tree Protocol
6. IEEE 802.3: 10BASE-T
7. IEEE 802.3d: MAC Bridges
8. IEEE 802.3u: 100BASE-TX, 100BASE-FX.
9. IEEE 802.3x: Flow Control
10. RFC768: UDP
11. RFC783: TFTP
12. RFC791: IP
13. RFC792: ICMP
14. RFC793: TCP
15. RFC826: ARP
16. RFC854: Telnet
17. RFC894: IP over Ethernet:
18. RFC1112: IGMP v1
19. RFC1493: Bridge MIB
20. RFC1519: CIDR
21. RFC1541: DHCP (client)
22. RFC1907: SNMP v2 MIB
23. RFC2012: TCP MIB
24. RFC2013: UDP MIB
25. RFC2030: SNTP
26. RFC2068: HTTP
27. RFC2236: IGMP v2
28. RFC2578: SNMP v2 SMI
29. RFC2579: SNMP v2 TC
30. RFC2819: RMON MIB
31. RFC2863: IF MIB
32. UL, cUL, FCC and CE.

3. Equipment.

A. Functional Requirements.

1. **Physical Design Requirements.** Supply all HES with a physical design that conforms to the following requirements:

a. Provide a minimum of two built-in 100 MB full-duplex switched single-mode fiber ports as indicated on the plans.

b. Provide a minimum of six switched 10/100 MB copper (RJ 45) ports

c. Be configurable in point-to-point, daisy-chain, ring and mesh topologies for connectivity into new and existing fiber optic and copper based Ethernet networks.

d. Designed with an operating system that allows individual ports to be configured for port mirroring, speed, duplex, auto-negotiation, and flow control. Design the operating system to provide for broadcast storm frame filtering with user defined thresholds.

e. Designed with an operating system allows for the collection of statistics on per port basis and provides for full support of RMON statistics, history, alarms, and event groups.

f. Designed with an operating system that provides port security to prevent unknown devices from gaining access to the network. In case of unauthorized attempts to access the network shutdown the port for a period of time along with SNMP trap and generate an alarm.

g. Have high-strength 20-gauge galvanized steel enclosure to seal out insects, dirt, smoke, and other contaminants.

h. Clearly identify all modules and assemblies with name, model number, serial number, or any other pertinent information required to facilitate equipment maintenance.

2. Electrical and Mechanical Requirements. Provide the following functionality and features:

a. Ports Performance.

(1) Provide Single-mode Fiber ports that operate at 100 Mbps with a Tx power of -15.5 dBm and a Rx sensitivity of -32 dBm yielding a typical link loss budget of 16.5.

(2) Provide RJ-45 ports that auto-negotiate operation at 10 Mbps and 100Mbps.

b. Packet-Processing:

(1) Filtering and forwarding rate from 100 Mbps ports: 148,800 pps max.

(2) Filtering and forwarding rate from 10 Mbps ports: 14,880 pps max.

(3) Processing type: store and forward.

(4) Auto-learning: 8192 MAC address.

(5) Frame buffer memory: 160 packet buffers, 1536 bytes each.

(6) Switching Latency: < 5 microsecond (100Mbps).

(7) Priority queues: 2.

(8) VLANs: 1000

(9) IGMP multicast groups: 256.

(10) Switching bandwidth: 1.6Gbps

(11) Ring sizes: Up to 80 switches

(12) Fault recovery time: < 5ms per switch

3. Network Connectors.

a. Six RJ-45 connector, full/half duplex and 10/100 Mbps ports, independently auto-negotiating.

b. Two dual SC connector, single-mode fiber, 100Mbps

4. Mean Time Between Failure. > 10 years.

5. LED Indicators. One LED for power, three LEDs per port for link, Tx, and Rx

activity.

6. **Power Supply**.
   - **a.** AC power connector: Terminal block at rear of power supply chassis.
   - **b.** Input Voltage: 85 to 264 VAC (auto-ranging).
   - **c.** Input Frequency: 47 to 63 Hz (auto-ranging).
   - **d.** Power Consumption: 20 watts (max).
   - **e.** CSA/UL 60950 safety approved to +85°C.
   - **f.** Fast Transient Protection: Compliant with IEEE C37.90.1
   - **g.** The power supply shall be internal to the switch.
7. **Mechanical.**
   - **a.** Enclosure: Rugged 20-gauge high-strength galvanized steel case with metal mounting plate included. Suitable for stand-alone, shelf, pedestal or wall mounting. Permanently and clearly identify the enclosure with name, model number, serial number, and any other pertinent information required to facilitate equipment maintenance.
   - **b.** Dimensions: 3" H x 8"W x 10"D max.
   - **c.** Weight: 5 lb.

B. Power Requirements. Meet all of its specified requirements when the input power is 115 VAC ± 10%, 60 ± 3 Hz, for any Hardened Ethernet Switch furnished, assembled, fabricated, or installed under this Item. Do not allow the equipment operations to be affected by the transient voltages, surges and sags normally experienced on commercial power lines..

C. Wiring. Meet all requirements of the National Electric Code for all wiring external to the HES switch. Cut all wires to proper length before assembly. Do not double back any wire take up slack. Neatly lace wires into cable with nylon lacing or plastic straps. Secure cables with clamps. Provide service loops at all connections.

D. Transient Suppression. Provide diodes or other protective devices across the coils of all DC relays, solenoids and holding coils for transient suppression.

E. Power Service Protection. Provide readily accessible, manually resettable or replaceable circuit protection devices (such as circuit breakers or fuses) for equipment and power source protection. Provide circuit breakers or fuses that are sized such that no wire, component, connector, PC board or assembly is subjected to sustained current in excess of their respective design limits upon the failure of any single circuit element of wiring.

F. Fail Safe Provision. Design the equipment such that the failures of the equipment shall not cause the failure of any other unit of equipment.

G. Environmental Requirements. Meet all specified requirements during uncontrolled environmental operations characterized by an operating temperature range of -40°C (-40°F) to +85°C (185°F) and a humidity range of 10% to 95% (non-condensing).

3. Construction.

A. General. Utilize the latest available techniques with a minimum number of parts, subassemblies, circuits, cards, and modules to maximize standardization and commonality in the equipment design. Design the equipment shall be designed for ease of maintenance, with all component parts being readily accessible for inspection and maintenance. Provide test points for checking essential voltages and waveforms.

B. Mechanical Components. Ensure that all external screws, nuts and locking washers are stainless steel. Make all parts out of corrosion resistant material, such as plastic,

stainless steel, anodized aluminum or brass. Protect all materials used in construction from fungus growth and moisture deterioration. Separate dissimilar metals by an inert dielectric material.

4. Warranty. Provide a written warranty of no less than 5 years.

Contractor shall be responsible for obtaining all manufacturer specifications and adhere to all requirements for proper installation and submit a copy of the latest manufacturer's specifications to the City Traffic Engineer for review and approval prior to installation. Contractor shall also follow all guidelines in order to receive proper warranty and/or certifications for product and deliver to City.

718-20 SYSTEM TESTING, CONFIGURATION AND DOCUMENTATION

718-20.1 General

Complete System Testing, Configuration and Documentation shall be included in this bid item. All required testing (including necessary multiple testings) for all associated bid items in these specifications and the contract documents that are required by the City and/or manufacturer's recommendations and specifications shall be delivered. Configuration and integration of the communications devices between new and existing to establish communication between local controller in the field and the TMC shall be included in this bid item. Any certifications, training or warranty goals must also be included and met. Contractor shall provide final reports and documentation showing complete and final testings, approved and passed.

Prior to project approval, the contractor shall also provide confirmation that the traffic signal controller and any other ancillary devices (CCTVs etc) are communicating with the traffic management center at the City Hall.

718-21 BATTERY BACK-UP SYSTEM

718-21.1 General

The Battery Back-Up system (BBS) shall provide uninterruptible reliable emergency power to a traffic intersection in the event of a power failure or interruption. The uninterruptible power supply (UPS) shall provide battery power to traffic intersections for a period of time as specified. The transfer from utility power to battery power will not interfere with the normal operations of the traffic controller, conflict monitor or any other peripheral devices within the traffic control system. The battery back system shall be Dimensions Model 24M-11WBE as manufactured by Sensata Technologies or approved equal as listed in the Caltrans Qualified Product List (2/6/2015). The BBS / UPS system shall be comprised as noted below and shall include, but not be limited to: inverter/charger (UPS), power transfer relay/switch (PTS), batteries, a separate manually operated non-electronic bypass switch, an external BBS cabinet, all necessary hardware and interconnect wiring.

The system shall be capable of providing power for full run-time operation, flashing mode operation, and a combination of both full and flash mode operation of an intersection. The

operation of the flash mode shall be field programmable to activate at various times, battery capacities, or alarm conditions locally using the touch pad or remotely using a standard PC's RS-232 interface.

Field programmability via touch pad or RS232 interface must be in ASCII formats and must not require any external or proprietary software. The DB-9 connector for the RS232 interface must be installed on the front panel of the UPS.

The system shall be designed for outdoor applications and meet the environmental requirements as stated in the Caltrans specifications for the BBS unit.

System Capacity and Runtimes. The BBS shall be configured such that it provides a MINIMUM of two (2) hours of full run-time operation for an intersection using LED traffic and pedestrian signals. The UPS shall be Sensata Technologies Dimensions Model No. 24M11-WBE (2000 VA / 1500 Watts) or approved equal with 80% minimum inverter efficiency. The batteries shall be four (4) AGM 79Ah. The BBS shall have an integral charger. The charger shall be a 4-step utilizing zero volt start, bulk, accept and float charging techniques, appropriate for the battery type. The charger must prevent destructive discharge and overcharge

Relay Contacts. The UPS shall provide the user with 6 sets of N/O N/C panel-mounted, potential free, and fully programmable relay contacts rated 1 Amp, 120 VAC and labeled C1 through C6. Each relay's setting shall be programmable to activate under any number of conditions locally using the touch pad or remotely using the RS-232 interface. There shall be six relay contacts. Relay contacts C1 through C6 can be independently configured to activate under any of the conditions and configurations. The six relay contacts are - ON BATTERY, LOW BATERY, TIMER, ALARM, FAULT and OFF.

Serial and Network Communications Interface. The BBS shall have Serial and Ethernet communications interfaces for user configuration and management. The user serial port shall be an EIA-232 (DB9-Female) connector. The Ethernet Port shall be an RJ45, EIA 568B Pin Out connector. The BBS shall support and provide TCP and UDP over IP protocol communications and support the following applications layer protocols FTP, Telnet, and HTTP. The BBS shall be SNMP compliant. The BBS shall be provided with Web-Based-Interface (WBI). The WBI shall allow the user to set Network Configuration Parameters and all system configurations using a Web Browser.

Product Compatibility. BBS shall be compatible with all of the following for full phase, flash operation mode or a combination of both full and flash mode operation:

- Type 332 cabinets,
- Type 170 controllers,
- Type 2070 controllers,
- Electrical Service Pedestals

The BBS System shall fit inside an external BBS cabinet attached to the controller cabinet. The cabinet shall be Model E-BBS as approved by Caltrans on its "Qualified Products List".

Mounting/Configuration. The system shall be complete including Rack mount bypass assembly, RS-232 Serial Port, Power Transfer Switch (PTS) and manual relay switch. . The battery backup system is installed in exterior cabinet (Model E-BBS) attached to the 332 controller cabinet.

All necessary hardware for mounting (shelf angles, rack, shelving, harness, etc.) shall be included in the bid price of the BBS. If swing-trays are used, a minimum of 6 bolts/fasteners shall be used to secure it to the 19" cabinet rack. When the external cabinets are used, they shall meet all adequate environmental and physical requirements. In addition exterior cabinets shall be painted with color to match the existing cabinets at the intersection.

Battery System. Individual batteries shall be 12V type and shall be easily replaced and commercially available off the shelf. The battery system used in the BBS shall consist of 4 batteries. Batteries shall be provided with quick disconnect terminals and a keyed battery cable for easy field installation. Battery sizing will be determined by the load and runtime requirements for any given intersection. Batteries shall be extreme temperature, deep cycle, sealed prismatic lead-calcium based AGM/VRLA (Absorbed Glass Mat/ Valve Regulated Lead Acid) batteries. Batteries shall be certified to operate over a temperature range –13°F to +165°F. The batteries shall be provided with appropriate interconnect wiring and a corrosion-resistant stationary or swing-out mounting tray and/or brackets appropriate for the cabinet into which they will be installed.

Batteries shall indicate maximum recharge data and recharging cycles. The external battery cabinet shall be vented through the use of louvered vents, filter, and one thermostatically controlled fan operated from the UPS. The Fan will automatically turn ON at the temperature programmed into the UPS.

General Specifications
Output Power (Watts continuous) - 1,100 @ 25°C, 850 @ 74°C
Output Voltage (Pure Sine) - 120 VAC regulated
Output Frequency - 60 Hz ± 0.05%
Output Current (Amps AC) - Up to 9.2
Peak Output (Amps AC) - 67
Input Voltage (Volts DC) - 21 to 32
Input Current (Amps DC) - Up to 55
Efficiency (Inverter) - Up to 86%
Operating Temperature - -40°F to 165°F
Transfer Time (milliseconds) - 30 typical
Battery Charger Specifications
Output Voltage (Volts DC) - Regulated and temp. compensated
Output Current (Amps DC) - Up to 20
Input Current (Amps AC) - Up to 5
Charge Time - Less than 10 hours to 80% or greater

Service and Warranty Manufacturer shall provide a two (2) year factory-repair warranty for parts and labor on the BBS. Manufacturer shall provide 24 hour trouble shooting via "800" number. Manufacturer shall make field maintenance available via 24 hour customer service "800" number.

718-22 TRAFFIC SIGNAL MODIFICATION

718-22.1 General

Work under this section shall be according to Section 86 "Electrical Systems," of the Caltrans Standard Specifications and these Special Provisions. Whenever reference is made in Section 86 to other sections of the State Standard Specifications, these sections are hereby included unless work involved in traffic signal equipment installation otherwise specified. When Section 86 reference is made to Section 4-1.03D, it shall mean Section 3-3 of the SSPWC and its supplements and these Special Provisions.

718-22.2 SCOPE OF WORK

The work to be done consists of furnishing all materials, equipment, tools, labor, and incidentals as required by the Plans, Specifications, and contract documents. The general items of work include, but not limited to, furnish, install, replace and maintain the following - traffic signal system consisting of traffic signal controller, cabinet, communication devices and battery-back up units; signal pole relocation and reconfiguration; new signal poles and mast arms; safety lighting; pedestrian push button assembly modification and removal; inductive loop detectors installation; temporary traffic signal operation; and, other items and materials not mentioned that are necessary to complete a functional and operational signal system.

718-23 MEASUREMENT AND PAYMENT

Measurement and payment for TRAFFIC SIGNALS AND ELECTRICAL shall be made at the contract lump sum price named in the Bid Schedule per New or Modified Traffic Signal, and shall include all labor, materials, tools, equipment and incidentals, and for doing all the work involved in this section, including but not limited to installation, removal, and relocation of standards, conduit, wiring, pull boxes, testing, fiber optics and service cabinets. No additional compensation will be allowed.

719 – METAL HAND RAIL

719-1 SCOPE

This work shall consist of furnishing and erecting a steel hand rail in accordance with these specifications, Standard Plan 606-4 of the SPPWC, and details shown on the plan.

The construction of the hand rail shall include the assembly and erection of all necessary component parts and materials as required by the manufacturer and standard drawings at the location shown on the plans or as directed by the Engineer.

719-2 MEASUREMENT AND PAYMENT

Measurement and payment for METAL HAND RAIL shall be made at the contract price per linear foot as specified in the Bid Schedule, and shall include all labor, materials, tools,

equipment and incidentals necessary for the guardrail installation. No additional compensation will be allowed therefore.

720 - STREET LIGHTING

720-1 MATERIALS AND CONSTRUCTION METHODS

Street lighting materials shall be as shown in the plans and in accordance with Sections 209, 210, 306 and 307 of the SSPWC and as directed by the City Engineer.

All street light poles will be furnished and installed by the Contractor at the locations as shown on the plans. New street light poles, mast arms, luminaries, ballast foundations, and appurtenant equipment shall be installed per Southern California Edison (SCE) Requirements and per SCE's "Utility Undergrounding Final Design No. 1488452". All conduit and electrical wiring will be done as part of the SCE project. Face of poles shall be a minimum of 18" from curb face.

Street light pull boxes shall be Type 3-1/2 or equivalent. The bottom of the pull box shall rest firmly on a 12 inch thick bed of one-inch crushed rock extending six inches beyond the outside edges of the pull box. Pull boxes shall not be installed in any part of a driveway or other travel way unless approved by the Engineer. Concrete pull box covers shall be inscribed with "ST LIGHTING".

Street lighting materials owned by Southern California Edison (SCE) shall be removed and/or relocated per SCE specifications.

Contractor shall coordinate with SCE to energize the street lights.

720-2 MEASUREMENT AND PAYMENT

Measurement and payment for STREET LIGHTING IMPROVEMENTS shall be made at the contract lump sum price named in the Bid Schedule, and shall include all labor, materials, tools, equipment and incidentals, and for doing all the work involved in this section, including but not limited to installation, removal, and relocation of lights, conduit, wiring, pull boxes, and service cabinets. No additional compensation will be allowed.

721 - SIGNING, STRIPING, PAVEMENT MARKINGS/ MARKERS

721-1 SCOPE OF WORK

Signing and Striping shall be in conformance with the provisions in Sections 214, 310 and 314 of the SSPWC and these Special Provisions. Paint shall be applied in two coats. Reflective materials shall be applied as specified in Sections 214 and 314 in the SSPWC. Contractor shall furnish the necessary control points for all striping and markings, and shall be responsible for the completeness and accuracy thereof to the satisfaction of the Engineer. Spotting shall be

completed prior to the removal of any existing stripes. Contractor shall reference crosswalk and limit lines for replacement prior to removal. The new installation or removal and relocation of signs shall include the post, foundation and any other appurtenances associated with the work, and shall be located as shown on the Plans and as directed by the Engineer.

721-2 PLACEMENT

The following is to be added to Section 312-1 of the Standard Specifications: Temporary lane markings shall be provided by the Contractor. Temporary lane marking shall consist of, but is not limited to, 4" wide Type Y (Amber) or Type W (White) reflectorized temporary overlay markers shall be applied to pavement the same day of construction every 40-feet on centerline and only between intersections. Placement of raised pavement markers shall comply with Caltrans Specification Subsection 85-1.01. Application of epoxy shall comply with Caltrans Specifications Subsection 95-1.04.

721-3 PAINT

Where painting is allowed as specified in these Special Provisions, painting of pavement markings and striping shall be in accordance with Section 84-1 "General" and 84-3 "Painted Traffic Stripes and Pavement Markings" of the SSS, except that all traffic markings and striping constructed with Rapid Dry Paint shall be made in two (2) applications, three (3) days minimum between each application, each at the specified application rate. The first application shall be applied within five calendar days after completion of paving and the final application shall be applied no later than twelve calendar days after completion of paving. No thermoplastic shall be used for traffic striping.

721-4 EXISTING STRIPING AND MARKINGS

The Contractor shall remove all existing traffic striping and markings at locations where said markings are to be replaced and/or realigned as required by the plans or as directed by the Engineer. Existing striping shall be removed by wet blast cleaning methods in accordance with Sub-section 310-5.6 of the Standard Specifications.

The Contractor shall replace all striping which has been damaged or obliterated by or during the work. This shall include striping replacement completely across the street even in the event that the Contractor's work may not extend that far. Both lines of each crosswalk shall be completely repainted even if only a portion of a line has been obliterated.

When the Contractor's work removes or reduces the visual appearance of a lane or center line, the Contractor shall replace all striping between the adjacent intersections in both directions. Where a median exists, this work will be required only in the roadway where the work has occurred, unless a detour which altered the pavement markings occurred in the other roadway. In such cases, the striping will be replaced in both directions.

Repair, replacement or touch-up of existing and/or adjacent striping/markings will be at the direction of the City Engineer.

721-5 LAYOUT FOR TEMPORARY AND PERMANENT STRIPING

The alignment and layout of traffic stripes shall conform to Sub-section 84-1.03 "Construction" of the Caltrans Standard Specifications., dated July 2010.

The Contractor shall be responsible for preparing a sketch of all existing markings including signal loops prior to the performance of any work. The Contractor shall physically tie down the locations of the beginning and ending of each paint marking type on the adjacent curb top. The marking location shall not exceed fifty square inches each. Any locations exceeding this limit shall be removed by the Contractor prior to acceptance of the work. The Contractor shall provide documentation including sketches of all tie down information to the City Inspector prior to performing any work at a location.

721-6 PAVEMENT MARKERS

Pavement markers shall meet the requirements of Section 85 of the SSS and shall be constructed no later seven calendar days after completion of paving.

721-7 PAVEMENT STENCILS

The Contractor shall use stencils which conform to Caltrans Standard Plans and Details.

721-8 SIGNS

Relocated signs shall be installed using existing posts at new locations and shall be set at a minimum 30-inch depth and at a minimum 12-inch square Portland cement concrete (PCC). The post depth of the concrete footing shall be sufficient to extend at least 6-inches below the bottom of the posts. ¼-inch expansion paper shall be placed between the sign foundation and sidewalk.

New signs shall be installed using metal posts set at a minimum of 30-inch depth in a minimum 12-inch square PCC, except as specified otherwise, the metal post shall be Schedule 40, galvanized steel pipe with a 2¾-inch outside diameter and a 2½-inch inside diameter. The length of the metal post shall be sufficient to extend from the top of the sign to 30-inches below the top of the concrete footing and provide a 7-foot clearance between the finished grade and the bottom of the sign. The depth of the concrete footings shall be sufficient to extend at least 6-inches below the bottom of the posts. ¼-inch expansion paper shall be placed between the sign foundation and sidewalk.

721-9 MEASUREMENT AND PAYMENT

Measurement and payment for SIGNING, STRIPING, PAVEMENT MARKINGS & MARKERS shall be at the contract lump sum price named in the Bid Schedule, and shall include full compensation for all labor, materials, tools, equipment and all incidentals, and for doing the work involved in street signing and temporary and permanent traffic striping, refreshing in kind beyond project limits, removal of all raised markers, installing raised pavement markers, and curb and median nose painting with labels, as shown on the Plans and in accordance with these Specifications and to the satisfaction of the Engineer.

722 – RELOCATE FIRE HYDRANTS

722-1 SCOPE OF WORK

The Contractor shall RELOCATE FIRE HYDRANTS as shown on the plans in accordance with City and Las Virgenes Municipal Water District Standard Plans.

722-2 MEASUREMENT AND PAYMENT

Measurement and payment for FIRE HYDRANT RELOCATION shall be at the price bid per each relocation.

723 - LANDSCAPING

723-1 SCOPE OF WORK

The work under this Section shall include all labor, materials, and equipment required to complete all landscape work as indicated on the drawings and as specified herein. It is the intent of this specification that all materials herein specified and shown on the drawings shall be of the highest quality available and meeting the requirements specified. Work includes, but is not limited to, the following:

A. Traffic control during all phases of the work

B. Soil import, placement and compaction.

C. Laboratory soil testing for landscape suitability and engineering quality

D. Fine grading of all planting areas

E. Soil preparation and fertilization of all new planting areas.

F. Furnishing and installing trees

G. Furnishing and installing shrubs, ground cover and seasonal color plantings.

H. Furnishing and installing turf.

I. Staking or guying of trees.

J. Protection, maintenance and guarantee as specified.

K. All work of every description mentioned in the specifications and/or amendments thereto, and all other work to satisfactory completion of the work as determined by the City including cleanup of the site.

L. Landscape Contractor shall coordinate with the General Contractor, and other sub-contractors as required to properly complete the work.

M. Preparation and submittal of construction schedules and plant material delivery schedules authored by other participating contractors as presented to City of Calabasas.

723-2 RELATED WORK IN OTHER SECTIONS

Examine all components related to work of this Section with Section 716 – Irrigation.

723-3 QUALITY ASSURANCE

A. Testing Laboratory:

Included in the work the Landscape Contractor shall employ a soil laboratory, as approved by the City, to perform the following:

1. A soils analysis of import soil is required prior to backfill and shall be performed by a qualified soils lab, as approved by the City and the results given to the City and Landscape Architect for approval. The cost of soil tests that fail shall be borne by the Landscape Contractor.

2. Samples of materials shall be submitted for review to the Landscape Architect. Delivery may begin upon approval of samples. Material samples shall include but not be limited to fertilizers and soil amendments, plant material and any other materials indicated herein. At the option of the Landscape Architect, photos of plants at the source may satisfy approval prior to purchase.

3. Certificates: The Landscape Contractor shall furnish a certificate of delivery slip with each delivery of material in containers or in bulk. Certificate shall state source, quantity, or weight, type and analysis and date of delivery. Deliver all certificates to the City and Landscape Architect.

4. No substitutions will be permitted without the approval of the City or Landscape Architect. Rejected materials shall be removed from the site by the Landscape Contractor at his/her expense.

723-4 JOB CONDITIONS

A. Protection:

1. Protect the property from injury or loss. Any damage to existing property or planting (trees, shrubs, lawn or ground cover) caused by the Landscape Contractor during his operation or as a result of malfunction of installed work during the guarantee period shall be repaired at Landscape Contractor's expense.

2. Cause minimum interference with workmen, materials, or other equipment of other trades on the project.

B. Landscape work shall not begin until all construction adjacent to the planting areas has been completed unless otherwise directed by City or Landscape Architect.

723-5 FILL SOIL

A. The on-site earth materials present may be considered suitable for re-use as fill as approved by the testing laboratory. Additional earth material required to complete the work shall be provided by the Contractor at his expense.
B. Backfill for bio-swale per the detail shall be with sandy loam, 18" depth, with a minimum infiltration rate of 4" per hour. This precise soil texture is not open to change and may differ from the texture of imported soil. Soil must be prepared per section 2:03 below.
C. Fill soils imported from off-site areas shall have low to very low expansion potential. Imported soils shall be approved by the testing laboratory prior to delivery to the site. At least two working a one day's notice shall be allowed for approval. If laboratory testing is necessary to obtain approval of the import source, and additional 1 to 2 days shall be allowed.

D. All earth material brought to the site shall meet or exceed United States Environmental Protection Agency (US EPA) of California regulations for clean fill. Proof of compliance is the responsibility of the Contractor.

E. All imported material shall be approved by the testing laboratory prior to delivery to the site.

F. All imported earth shall be relatively non-expansive with an expansion index of less than 35, be clean and free from rubbish and debris and rock larger than 1 inch in maximum dimensions, not have sulfate content greater than 1,000 parts per million, and subject to the approval of the testing laboratory.

G. Backfill material for the bio-swale shall be a "Sandy Loam" that allows a percolation rate of at least 6" per hour.

723-6 SOIL PREPARATION MATERIALS

A. Redwood sawdust shall be standard quality impregnated with 1-% nitrogen.

1. Particle Size, Dry Weight Basis:
   Percent Passing Sieve Size

   95 - 100 .....6.35 MM (1/4 in.)
   80 - 100 .....2.38 MM (No. 8, 8 Mesh)
   0 - 30 .....500 Micron (No. 35, 32 Mesh)

2. Organic Content as Determined by Ash Analysis: Minimum 94% based on dry weight.

3. Chemistry:

   a. Minimum 0.8% nitrogen based on dry weight.

   b. Minimum 0.8% dilutes acid soluble iron based on dry weight.

   c. Salinity shall not exceed 2.5 milliohms per centimeter as measured in the saturation extract.

4. Samples of the sawdust shall be submitted to the soils laboratory for analysis and results given to Landscape Architect prior to backfilling.

B. Commercial fertilizers shall be complete fertilizers 16-6-8, 17-13-5 or other breakdowns as required.

C. Fertilizer planting tablets shall be Gro-Life 7-gram tablets for trees, and shrubs.

D. Gro-Power, GroLife and Gro-Power Plus as manufactured by Gro-Power (909) 393-3744.

723-7 PLANT MATERIAL

A. Plant material including shrubs and ground covers shall be furnished by the Landscape Contractor in the quantities and/or spacing as shown or noted for each location, and shall be of the species, kinds, sizes, etc., as symbolized and/or described in the "Plant Material Legend" and as indicated on the drawings. The Landscape Contractor shall be responsible to verify all sizes and quantities directly from the plans.

D. Trees, as called for on the Planting Plan shall be purchased and supplied by the Landscape Contractor including preapproval by the Landscape Architect and delivery from the suppliers to the site.

C. All plant material shall be healthy, vigorous, with a viable root system, and shall be free from pests or disease... Plant material shall have been reviewed and released by the County Agricultural Inspector prior to delivery to the job.

D. Plant material shall be reviewed on-site and approved by Landscape Architect prior to their placement for planting. Materials not up to specifications will be rejected.

F. Container stock shall have grown in containers for at least 6 months, but not longer than 3 years. Samples shall be shown to prove that no root bound conditions prevail. No container plants that have cracked or broken balls of earth when taken from containers shall be planted except on special approval of the Landscape Architect.

H. It shall be the Landscape Contractor's responsibility to maintain plant material after it has been delivered to the site.

J. All shrubs as called for on the Planting Plan shall be provided by the Landscape Contractor. All shrubs shall be healthy, vigorous, with a viable root system and shall be free from pests or diseases. The plant material and nurseries shall be subject to the review and approval of the City and Landscape Architect.

723-8 MISC. LANDSCAPE MATERIALS

Tree Staking and Guying Materials:

A. Wooden tree stakes shall be rough construction heart redwood or waterproof lodge pole pine, at least 2" x 2" redwood, or 2" diameter lodge pole, actual dimension and not less than 8' long, free from loose knots, splits or bends, pointed at one end. Lodge pole pine tree stakes are to be full length dip-treated with copper naphthanate in accordance with federal specification TT-W-572, Type I, Composition B.

B. Guy wires for guying trees shall be 12-gauge galvanized, annealed wire. Cover for wire shall be reinforced green rubber garden hose, ½" diameter. Stakes for anchoring guy wires shall be redwood 2" x 2" x 18" or steel core deadman stakes available from J.C.T. Company, Inc. (661) 269-4463.

C. Straps for use in tree staking shall be "Treestraps" No. 1018 available from GCS, Inc. (800) 360-3584. Straps for use in tree guying shall be "Treestraps" No. 2024 available from GCS, Inc. (800) 360-3584.

D. Aluminum Header: Aluminum edging shall be 4" x 3/16" mill finish as manufactured by Permaloc (800) 356-9660 (or approved equivalent). Install edging per manufacturer's details and specifications and as detailed on the plans.

E. Planting Area Top Dressing: Top dressing (planter mulch) shall be "superior mix" (or approved equivalent) available from Artesia Sawdust Products, Inc. (800) 266-0969. Landscape contractor shall submit sample to Landscape Architect for review and approval.

723-9 FILLING

Fill material shall be placed in horizontal lifts not to exceed 12-inches in depth. Fill material shall be free of rocks larger the 1 inch in maximum dimension. Each lift shall be brought to within two percent (2%) of optimum moisture content and, while still moist, shall be compacted by rolling and tamping. The rolling and/or tamping of each layer shall continue until proper density is achieved.

723-10 GRADING

A. The area within the limits of grading, as indicated on the Drawings, shall be constructed to meet the curbs and cross sections and other controls indicated on the drawings. When the grading has been completed, the areas shall be brought to final grade. Should any low spots develop during the filling operation, such spots shall be filled and re-rolled smooth.

B. It shall be the Contractor's full responsibility to take all measures necessary during grading to; protect adjacent properties from damage resulting from the contract grading, and to maintain surface areas resulting from the grading until final acceptance of the work.

C. Construct the bioswale as shown within the included cross section detail.

D. The Landscape Contractor will receive the areas for fill, including the bioswale, after removal of previously compacted road base. That work will be previously performed by other trades. The Landscape Contractor is to fill voided areas to a depth of 24" (+-) as shown on the details. The graded surfaces at subgrade shall be scarified by the Landscape Contractor to a depth of 6" before introducing fill to blend the new with the old. Upon acceptance of the subgrade the fill operation can be completed as detailed.

723-11 COMPACTION

A. All soil fills within planting areas shall be firmly compacted to 75%. Acceptable soil density has been met when a reasonable resistance to a hand-held steel probe is achieved to the satisfaction of the City Inspector.

B. Compaction by flooding is expressly prohibited.

723-12 DUST CONTROL

During grading operations, water shall be applied to the surface in the working area at frequent intervals and in sufficient quantities to abate the dust and for proper compaction. No other method will be permitted.

723-13 SOIL PREPARATION OF PLANTING AREAS

A. All planting areas, including areas with imported, soil shall receive the following per 1,000 square feet of area:

1. Nitrogen fortified organic amendment - 3 cubic yards.
2. Gro Power Plus – 150 lbs.

B. Broadcast uniformly and rototill into upper 6" of soil surface.

C. Upon receipt of soils analysis report, a bulletin to these specifications will be issued if revision to the soil treatment is necessary.

D. Turf areas: After soil preparation has been completed but prior to installation of turf; apply GroLife to all turf areas at the rate of 20 lbs. per 1,000 square feet. Incorporate GroLife into the top 4" of soil.

723-14 PREPARED BACKFILL MIX

A. Backfill mix for tree and shrub planting pits shall be of the following material per ten cubic yards:

Ratio of materials:

On-Site Soil ..... 7 cubic yards
Nitrogen fortified organic amendment ..... 3 cubic yards
Gro-Power Plus ..... 10 lbs.

B. The above material should be uniformly blended prior to use. Incorporate as specified under "tree and shrub planting" herein.

C. On receipt of soils analysis report, a bulletin to these specifications will be issued if revision to the soil treatment is necessary.

723-15 FINE GRADING

A. Remove and dispose of any soil in the sub-grade of planting areas that contain any deleterious substances, such as oil, plaster, concrete, gasoline, paint, solvents, etc., removing the soil to a minimum depth of 6" or to the level of dryness in the affected areas. Contractor shall be responsible for any damage to installed plants caused by such substances.

B. If an area to be landscaped is not acceptable to the Contractor, he shall notify in writing both the City and Landscape Architect.

C. Loosen sub-grade soil in planting areas that have been compacted by grading operations or operations of other contractors to a depth of 6" by approved method of scarification and grade to remove ridges and depressions. Grade planting areas to finish grade, filling as needed or removing surplus dirt and floating areas to a smooth, uniform grade as indicated on plans. All surface areas shall slope to drain. Finish grade in shrub areas to 1 1/2" below top of adjacent walks, curbs, and headers.

D. Where no grades are shown, areas shall have a smooth and continuous grade between existing or fixed controls such as walks, curbs, catch basins, elevations at steps or buildings, and elevations shown on plans. Roll, scarify, rake, and level necessary to obtain true, even surfaces.

E. If, for any reason, the moisture content of the soil should reach such a level that working it would destroy soil structure, spreading and grading operations shall be suspended until, in the opinion of the Owner's representative, moisture content is reduced to acceptable levels.

723-16 GENERAL PLANTING

A. Finish Grade shall be as specified above.

B. The Landscape Architect shall approve all planting areas prior to the installation of any materials. Placement of plant materials shall be approved before holes are dug. Stake plant

locations and secure approval from Landscape Architect before excavating pits, making necessary adjustments as directed.

C. Trees shall be located prior to installation of irrigation system as directed by Landscape Architect.

D. All plant pits for trees 24" box size and larger shall be excavated to a minimum of 2'-0" larger than the side of the container or root ball and 1'-0" deeper than the height of the container or rootball to permit handling. Excavate pits with vertical sides for all plants and roughen the surface of the sides. Plant pits for 1 gallon to 15-gallon plant material shall be a minimum of 6" larger than the diameter and 6" deeper than the height of the container. Plants shall not be planted in dry soil. Soil shall be moist at least eighteen inches deep. The Landscape Contractor shall be responsible to dispose of the soil from all planting pits. Backfill shall be made as specified under SECTION 3.06 "Prepared Backfill Mix".

E. Percolation Test: Prior to planting of trees the Landscape Contractor shall perform a soil percolation test to determine if there are any drainage problems. The Landscape Contractor shall dig test pit planting holes at one location per 1,000 s.f. of planting area where new plants occur, at various locations around the site. The holes shall be equal in size to the largest tree-planting pit required for each particular planting area. Additional locations will be required if it is determined by the City that there is a major difference in soil type around the site. The Landscape Contractor shall verify percolation test pit locations, quantity, and sizes with Landscape Architect prior to executing the tests. Fill each hole with water and monitor how much water is remaining in the hole after 24 hours. Make a written report to the City. If it is determined that soil drainage is a problem a resolution will be worked out by the City and Landscape Architect if necessary a change order will be initiated.

F. All plants shall be planted immediately after they are removed from containers and containers shall be regularly removed from the area of work and disposed of so as not to present a hazard to those persons using the areas.

G. Set plants in center of pits, in a vertical position so that the crown of the plant will bear the same relationship to the finish grades that it did to soil surface in place of growth, allowing for watering and settling of soil.

H. Backfill with specified soil mix. Install fertilizer-planting tablets in planting pit as shown in planting details. Quantity of tablets shall be per manufacturer's specifications. No soil in a muddy condition shall be used for backfill. No filling shall be permitted around the trunk of the plants.

I. Plants shall be watered as they are planted and basins shall be built around each plant to retain water. Remove basins prior to top dressing.

J. Grade areas around plants to finish grades and dispose of excess soil.

K. Any plant material damaged in planting operation as determined by the Landscape Architect shall be replaced at once.

L. Prune plants according to standard horticultural practice as directed by Landscape Architect.

M. Upon completion of all planting operations and again as a requirement just prior to final construction review, all soil between plants shall be lightly cultivated, weeded, and neatly raked.

723-17 PLANTING TREES

A. Each tree location shall be staked in the field per the plans by the Landscape Contractor using minimum stakes. Treestake locations shall be approved by the Landscape Architect prior to excavation of planting pits. LOCATION STAKES SHALL BE PLACED IN THE FIELD BY THE LANDSCAPE CONTRACTOR FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO ARRIVAL OF LANDSCAPE ARCHITECT AT THE SITE.

B. Prepare planting pits as specified, unless otherwise noted in details.

C. Place the tree and backfill with prepared backfill mix as specified.

D. Stake trees as detailed on the drawings.

E. Keep guy wires out of general pedestrian traffic areas whenever possible.

723-18 PLANTING SHRUBS

A. Prepare shrub pits as specified under "General Planting".

B. Planting procedures and practices shall be the same as those indicated under "Planting Trees".

722-19 GROUND COVER TURF AND ANNUAL COLOR PLANTING

A. Grade ground cover/annual color areas to finish grades as specified herein. Finish grades shall meet approval of Landscape Architect prior to soil preparation.

B. Prepare ground cover/annual color areas as specified under "Soil Preparation" SECTION 3.05.

C. Ground cover/annual color areas shall be mulched in conformance with specifications and watered with a light spray.

D. Smooth soil about plants and leave areas in neat and clean condition. Do not pile soil or mulch around crown of any plants.

E. Install turf (sod) per sod grower's specifications.

723-20 FERTILIZING AFTER PLANTING

A. All planting areas shall receive an application of Gro-Power at the rate of twenty-five lbs. per 1,000 square feet thirty days after planting.

B. Fertilizer application shall be repeated at thirty-day intervals until the end of maintenance period.

C. Shrubs/ground cover/annual color - Apply supplemental fertilizer to provide a healthy color in all shrubs/ground/cover/annual color. Supplemental fertilizer should be inorganic and granular in form with micronutrients.

D. All seasonal color beds/areas shall be fertilized immediately after planting. Apply "Flower'n'Bloom" (as manufactured by Gro-Power) at the rate of 20 lbs. Per 1,000 S.F.

723-21 MULCHING

All shrub planting areas shall receive a layer of prepared top dressing spread evenly over the surface to a minimum depth of two inch (2").

723-22 MAINTENANCE PERIOD

A. Continuously maintain all areas included under this section and "Irrigation System", Section 02810, during the progress of the work, the maintenance period, and until final acceptance of this work. Maintenance shall continue for ninety (90) days or until final acceptance of the work.

B. If plantings are not acceptable as determined by the City or Landscape Architect at the completion of this work, due to defective maintenance, maintenance shall be continued until all work meets specifications and can be approved.

C. Maintenance shall include continuous operations of watering, weeding, mowing, rolling, trimming, edging, cultivation, fertilizing, spraying for insect and pest control, reseeding, replacement and/or any other operations necessary to assure good normal growth. Apply lawn moth control sprays or other materials, as often as may be required to protect lawns and turf until final acceptance of this work.

D. All planted areas shall be kept free of debris and shall be cultivated and weeded at no more than ten-day intervals.

E. Watering - Since water requirements for plants vary according to the season and a particular year, extremely close attention shall be paid to the demands of the plants as influenced by their exposure to sun, wind, shade, and location in the individual planters. The variation in the size of plants installed, as well as the varieties, shall be taken into consideration. All landscaped and turf areas shall be irrigated as required to maintain adequate growth and appearance with a schedule most conducive to plant growth. The delivery of adequate moisture to the landscaped areas shall include, but not be limited to, hand watering, proper utilization of automatic controllers, and the bleeding of valves. Contractor shall physically

check for adequate soil moisture one time per week with a soil probe. Check soil moisture at a minimum of one location per irrigation valve system and supplement water as required.

F. During installation period and during maintenance period, the Landscape Contractor shall be responsible for maintaining adequate protection of all areas. Any damaged plantings shall be repaired at the Landscape Contractor's expense.

G. At the completion of landscape installation, all plant materials shall be live, healthy, undamaged and free of infestations as determined by the Landscape Architect. Inferior planting shall be replaced and brought to a satisfactory condition before final acceptance of work will be made. All areas shall be neatly raked and free of weeds.

H. Replacements: Immediately replace any and all plant materials and grass that die or are damaged. Replacements shall be made to same specifications as required for original plant.

I. Two (2) construction reviews shall be made that affect the Maintenance period. The first after all planting has been completely installed in order to approve the beginning of the Maintenance period of not less than ninety (90) calendar days and the second at the end of the ninety-day maintenance period. If plantings are not acceptable at the end of the ninety-day period, due to defective maintenance, then maintenance shall be continued by the Landscape Contractor until all work meets with the specifications and can be approved. Written notice, requesting the first review shall be submitted by the Landscape Contractor at least seven (7) calendar days before the anticipated date of review.

723-23 CONSTRUCTION REVIEWS

All reviews herein specified shall be made by the Landscape Architect. The Landscape Contractor shall request the review at least 48 hours in advance of the time the review is desired. Reviews are required as follows:

A. Contractor Orientation/Preconstruction Meeting: This meeting shall be conducted to discuss the plans and specifications, possible discrepancies, site conditions and other aspects of the project landscape work such as schedule and requirements for starting work. Prior to meeting, the Landscape Contractor shall thoroughly acquaint himself with site conditions and the plans, details and specifications.

   The meeting shall be attended by, as a minimum, the Project Manager and Field Foreman for this project from the Landscape Contractor. The Landscape Architect and the City will attend this meeting.

B. When tree have been staked as required.

C. When plant material (shrubs, and seasonal color) have been spotted for planting but before planting pits are excavated.

D. The Landscape Contractor shall be required to have a complete review and approval of all landscape construction items at the end of the landscape construction period, to

establish the time for beginning of the maintenance period. Notify Landscape Architect at least seven (7) days in advance of review.

E. At the completion of the maintenance period, a review shall be required by the Landscape Contractor to obtain final approval. Notify the Landscape Architect at least 24 hours in advance of review.

F. In the event the Landscape Contractor calls for a review without completing previously noted corrections, or without preparing the work for review, he shall be responsible for reimbursing the City for the Landscape Architects normal office hourly rate per hour portal to portal (plus transportation costs) for the inconvenience. No further reviews will be scheduled until this charge has been paid.

723-24 GUARANTEE AND REPLACEMENT

Submit a written guarantee in an approved form in compliance with the related requirements of General Conditions guaranteeing the work of the section against any defective materials and workmanship in compliance with the following terms, agreeing to replace any defective materials and/or workmanship at no additional cost to the Owner.

A. Trees shall be guaranteed for a period of two years and shrubs, and ground cover for a period of six months after final approval and acceptance. (Final approval and acceptance shall be the same as the end of the maintenance period).

B. Any plant material which dies or which is not healthy or vigorous when it has received normal care and maintenance as determined by the Landscape Architect shall be replaced within or at the end of the guarantee period with plants equal in size to the original.

C. Any trees or other plant materials that die-back and lose the form and size as originally specified as determined by the Landscape Architect shall be replaced even though they have taken root and are growing after the die-back.

D. The Landscape Contractor, when notified by the Owner shall remove and replace all guaranteed plant materials, which for any reason fail to meet the requirements of the guarantee. Replacement of material and plants shall be made to same specifications as required for original planting, and all replacements shall be guaranteed as specified for original materials.

E. The guarantee for any plant material supplied by the Landscape Contractor or the Owner shall be that the Landscape Contractor will supply the new plant material including delivery to the site and all labor and equipment required to install the replacement plant material at no cost to The Owner.

723-25 CLEAN UP

Upon completion of landscape construction and before final acceptance, remove rubbish, trash and debris resulting from landscape construction operation. The site shall be left in a neat and acceptable condition such as to meet approval of the Landscape Architect.

723-26 MEASUREMENTS AND PAYMENT

Measurement and payment for LANDSCAPING shall be made at the contract lump sum price named in the Bid Schedule and shall be full compensation for furnishing all labor, equipment, tools and materials, and any incidental items necessary to install and complete all landscaping items as required by the Contract Documents.

724 - IRRIGATION

724-1 DESCRIPTION

The Contractor shall provide all services, labor, materials, transportation, supervision, and equipment necessary to perform the irrigation work specified herein to include: All areas as defined by the Landscape Irrigation Plans. The Contractor shall provide a complete and fully operable landscape irrigation system that provides head to head full (100%) coverage to all planted areas. Irrigation areas shall include all non-paved areas scheduled for planting with trees, shrubs, groundcover, and turf. Documents affecting work of this Section include, but are not necessarily limited to, Section 719 Landscaping. Coordinate all work within this section with all other trades. All products shall be as specified on the Drawings. Any required products not listed by manufacturer and model number shall comply with the recommendations of the product manufacturer which this product connects to in the installation.

The irrigation work shall include;

A. Traffic control as required and approved by the Public Works Department of the City of Calabasas.

B. Connection to an existing 2" water meter. Begin irrigation mainline and installation of a line sized gate valve at the location shown on the plans as P.O.C.

C. Trenching and backfilling, installation testing and inspection, clean-up and maintenance of the irrigation system.

D. New irrigation system components include, but are not necessarily limited to: flow sensors, master valves, gate valves, remote control valves, quick couplers, piping, underground sleeves , fittings, spray heads, emitters, bubblers, automatic controller, controller enclosure, wiring and final adjustments as determined by the Landscape Architect and or Irrigation Consultant to ensure efficient and uniform water distribution.

E. Installation of a reclaimed water system within the area of work, as shown on the plans including:

   1. All piping to be colored purple (Pantone No. 512) properly identified as reclaimed water.

   2. Compliant signage identifying the system within a limited area as "Reclaimed water-do not drink" in locations as required by A.W.W.A and as delineated in codes and restrictions by governing authority.

3. All irrigation pipe, and recycled, shall include the installation of Warning/Identification Tape.

724-2 RELATED WORK

Documents affecting work of this Section include, but are not necessarily limited to, the following:

SECTION: 02905
DESCRIPTION: Landscape Planning

Applicable sections of General Requirements and all portions of Job Conditions Section are mandatory except as modified by the Owner

Diagrammatic Drawings: Due to the scale of the Drawings, it is not possible to indicate all offsets, fittings, etc. that may be required. Also, for clarity and legibility, equipment cannot be drawn to scale, but is shown in its approximate location, unless otherwise stated. Irrigation lines are likewise, often shown under paving or through structures and it must be remembered that these Drawings are generally diagrammatic and indicative of the work to be installed, but must not be interpreted literally. The Contractor shall proceed so that conflicts between the irrigation system, planting, and architectural features will be avoided.

Irrigation System:
1. Reclaimed service - See Drawings for system design

724-3 SUBMITTALS

A. Submit manufacturer's data and specifications for all products and materials to be installed under this Section. Where manufacturer's data is not available, affidavits and certificates of compliance which state that all products and materials comply with these Specifications will be acceptable.

B. As-Built recordation;
Critical information regarding installation of work; daily records are to be kept by the installing contractor. See Section 3.13 below for description of the As-Built recordation and submittal.

C. Manufacturers installation instructions shall be included with product and material submittals.

D. Any element covered up before being observed by the Landscape Architect will be subjected to being immediately pot holed for observation at no additional cost to the City.

724-4 PRODUCTS

Materials: All products shall be as specified on the Drawings. Any required products not listed by manufacturer and model number shall comply with the recommendations of the product manufacturer which this product connects to in the installation and per Section 1.05.

724-5 PREPARATION

A. A pre-construction meeting with the General Contractor's Representative and Landscape Architect and the City is required for discussion and clarification of the following:

1. Site and job conditions
2. Safety
3. Scope of work including special instruction for installation of Reclaimed Water.
4. Instruction of signage regarding Reclaimed Water.
5. Trenching and backfill operations
6. Pipe laying, inspection, and testing requirements;
7. Certification, submittals and acceptance requirements;
8. Protection of existing improvements and utilities;
9. Repair of existing improvements not scheduled for removal;
10. Disposal of surplus earth materials to approved disposal site(s);
11. Coordination with water main Contractor;
12. Coordination of temporary interruption of utility service;
13. As-Built print requirements.

B. Protection of Existing Utilities: Protect all existing utilities not scheduled to be removed. The Contractor shall determine the exact location and size of all existing utilities before commencing work. The Contractor agrees to be fully responsible for any and all damages which might be occasioned by the Contractor's failure to exactly locate and preserve any and all of the indicated underground utilities which are shown on the Grading and Utility plans herein.

724-6 EXCAVATION

A. The Contractor shall do all necessary excavation for the proper installation of this work.

B. Trenches for pipes shall be straight with uniform bottom, and of sufficient width and depth to allow installation of fittings, and equipment as specified by the manufacturer.

C. Uncovered boulders and other debris shall be entirely removed or cut out to the width and depth of the trench. No rocks, pebbles or finds larger than 1/4" in diameter shall be allowed.

D. Trenching at hardscape elements: Use caution where trenches and piping cross existing roadways, sidewalks, hardscape, paths, or curbs.

E. To install mainline passing beneath sidewalks it will be necessary to drill the earth without damage to the sidewalk improvement. Depth of mainline shall be 18" beneath adjacent grade.

724-7 PIPE AND FITTINGS

A. Main line:

1. Appropriately colored - Schedule 40 PVC conforming to ASTM D 1785 FOR 1-1/4", Class 315 PVC conforming to ASTM D 1785 for 1-1/2" larger. See plan for notes regarding sleeved crossings.

B. Water Supply:

1. Reclaimed Water Supply - Schedule 40 PVC conforming to ASTM D 1785 **FOR** 1-1/4", Class 315 PVC conforming to ASTM D 1785 for 1-1/2" larger. A Certificate by polyvinyl chloride pipe manufacturer that all pipe furnished meets the requirements of A.W.W.A. C-900; PVC pipe shall be purple in color or as specified herein shall be required.

2. Identification markings shall be continuous on two sides of the pipe. Markings shall include the nominal pipe size, PVC type, ASTM or AWWA designation, pressure rating and the words "CAUTION-RECYCLED WATER".

C. Laterals:

1. Reclaimed- Color purple (Pantone No, 512).- properly labeled. Schedule 40 PVC conforming to ASTM D 1785 for ½", Class 200 PVC conforming to ASTM D 1785 for sizes 3/4" and over.

D. Threaded Pipe: Schedule 80 PVC conforming to ASTM D 1785.

E. Fittings: Schedule 40 conforming to ASTM D 2466.

F. Pipe shall be installed per manufacturers written installation instructions.

1. Piping shall be laid accurately to the line and grade required, with full bearing on the trench bottom.
2. No pipe shall be laid on soft fill or other unstable material.
3. The interior of the pipes shall be clear of foreign matter before installation and shall be kept clean by means of plugged or capped ends after lowering into the trench.
4. For solvent welded joints use only cements and primers recommended for specific plastic being installed
5. Identification markings shall be continuous on two sides of the pipe. Markings shall include the nominal pipe size, PVC type, ASTM or AWWA designation, pressure rating and the words "CAUTION-RECYCLED WATER".

G. Quick-coupling valves:

Quick-coupling valve3sshall be acme thread type for operation with a special coupler key. They shall be constructed of brass with a solid purple-colored locking rubber or vinyl cover. The locking cover shall have the warning "NON-POTABLE-DO NOT DRINK" in English and Spanish, and the International "DO NOT DRINK" symbol. The warnings shall be permanently molded into the cover.

H. Sprinklers, rotor heads and other types of dispersion heads shall have the exposed surface colored purple. The exposed surface shall be colored through the use of integrally molded purple plastic or permanently attached purple plastic ring or disc.

I. Valve boxes shall be per industry standards with solid purple-colored lids as a minimum. The entire box may be molded from purple-colored PVC. The lids shall have the warning

"NON-POTABLE- DO NOT DRINK" in English and Spanish and the International "DO NOT Drink" symbol. The warnings shall be permanently molded into the lid.

J. Valves shall have their exterior surface painted purple and be tagged with identification tags. The purple paint shall be as listed on the Approved Materials List. Identification tags shall be 75mm x 100mm (3" x 4") weatherproof purple plastic. The plastic tags shall be imprinted in black permanent markings with the words "Caution: Recycled Water- Do Not Drink" on one side and "Peligro: Agua Impura- No Beber" on the opposite side.

K. Warning labels and signs shall be required and installed per the approved signage plans. Labels and signs shall be submitted to the District Engineer for approval prior to installation. The labels and signs shall notify that the system contains recycled water that is unsafe to drink. They shall be in English and Spanish with the international "Do Not Drink" symbol. As a minimum, signs shall be installed at impoundments, ingress and egress points, and on the exterior front panel of irrigation controllers.

724-8 CONTROL WIRES

A. All station control wiring shall be direct burial, solid copper U.F. type, of size as specified by the valve manufacturer for each run. Minimum size is 14 gauges.

B. Common wiring shall be white. Control wiring shall be red, yellow, green, blue, orange, and black, and shall alternate between stations.

C. A minimum loop of eighteen (18) inches shall be provided at each valve, change of direction, every five hundred (500) feet on straight runs and at each controller.

D. Splices shall only be allowed at valve connections and shall be watertight and leak-proof.

E. Multiple wires in the trenches shall be taped together at ten (10) foot intervals. Where occurring in common trench with pipes, wires shall be taped to the pipe. Wires under pavement shall be placed in a PVC sleeve. Do not tape sleeved wires together or to piping.

724-9 IRRIGATION EQUIPMENT

A. All equipment shall be installed as recommended by the manufacturer if not noted on the Drawings.

B. Sprinklers shall not be spaced greater than that recommended by the manufacturer.

C. Following installation, all heads shall be properly adjusted for correct discharge and direction of throw.

D Valve Boxes: Provide concrete valve boxes with locking cast iron lids for all gate valves within paving. Master valves, electrical control valves, gate valves, flow sensors, and quick coupler valves in landscaped areas shall be placed in plastic valve boxes as directed in details. The controller and station number shall be embossed into the lids of all remote

control valve boxes. Remote control valves shall be tagged with their controller designation and station number.

E. Contractor shall install the point of connection: 1 master valve, 1 flow sensor and master valve. Locate all master valves between the flow sensor and back flow preventer. Locate all flow sensors on the down-stream side of the back flow preventer.

F. Irrigation Controller shall consist of a pedestal mounted, weather tight, vandal resistant, and stainless steel enclosure. Included with the assembly shall be a key operated GFI switch, high flow shut-off device, radio receiver board, rain sensor and high wind shut-off sensor input.

724-10 FLUSHING

Following installation of pressure supply line, a full head of water shall be used to flush out the system.

724-11 PRESSURE TESTING

With valves in place and main line capped, the system shall be brought to site pressure plus 10% and gauged at its highest point for twenty-four 24 hours. If any pressure losses occur, the leaks shall be repaired and the pressure test repeated until no leaks occur. The pressure test shall be begun with the Landscape Architect or his representative present. The Landscape Architect or his representative shall be present after the 24 hour period to validate this and subsequent tests.

724-12 BACKFILLING

A. As soon as the work has been installed, recorded for As-Built, and approved, all excavations shall be filled with fine earth materials, free from clods, rocks and large organic matter.

B. Any settling shall be corrected so that the excavated areas remain at the same grade as adjacent areas.

C. All disturbed areas, whether planting or paving, shall be returned to their original condition or as directed by the Landscape Architect.

724-13 COVERAGE AND OPERATION TESTS

A. Following completion of all work, the contractor shall adjust all sprinkler heads for proper coverage. After this adjustment has been completed, a coverage test shall be conducted, with the Landscape Architect or his representative present, checking all areas for complete and proper coverage. Corrections, as needed, shall be accomplished as part of this work.

B. Each station shall be operated through a test cycle by use of the controller.

724-14 OPERATING INSTRUCTIONS AND CHART

A. An operation and instruction manual shall be furnished for each type of automatic controller and any other power equipment.

B. The Contractor shall fill in the sequence chart at each controller, or provide one if it is not normally part of the unit.

C. Provide two sets of controller drawings for each controller installed on the project. The controller drawings shall be an actual blueprint reduction of the area covered by the controller and shall be able to fit inside the controller door panel without folding. Color each controller drawing with colored pencils using a different color to represent each separate zone.

Each controller drawing shall be hermetically sealed between two (2) pieces of plastic, each piece being a minimum of 20 mils thick and submitted to the Landscape Architect for review. Controller drawings shall be submitted with the As-Built drawings

724-15 GUARANTEE

A. The entire irrigation system shall be guaranteed by the Contractor as to material and workmanship, including settling of excavations for a period of one (1) year from the date of final acceptance of work.

B. Any warrantees, either implied or written, by the manufacturer, do not relieve the Contractor of his/her responsibility for the guarantee period.

724-16 AS-BUILT DRAWINGS

AS-BUILT DRAWINGS

A. Daily As-Built recordation:

1. Critical information regarding; Daily records regarding the description and precise location of all hidden (non-visible) elements of the system including but not limited to the buried sleeves, the P.O.C, mainline including depth, valves including size, changes of direction of mainline, offsets, station wiring and other miscellanea.

2. Written dimensions are required to be kept up to date on a daily basis from fixed elements prints for weekly review of City Inspector and/or the Landscape Architect.

B. Final Submittal:
The Contractor shall be responsible for making a set of blueline prints and recording all work accomplished for that day on the blueline prints in red ink. Prior to completion of the entire project, a final set of as-built drawings on diazo Mylar shall be completed and provided to the Contracting Officer. These drawings shall indicate the following:

1. Dimension from two (2) permanent points of reference (fixed hardscape corners, road intersections, and permanent existing utilities) the location of the following items:
   a. Connection to Existing Water Line
   b. Routing of Pressure Supply Lines at 100 ft. intervals or closer as necessary
   c. Quick Coupler Valves
   d. Control Wire Routing (if separate from main lines)
   e. Back flow Prevention Devices
   f. Controllers
   g. Flow Sensors
   h. Rain Gauge
   i. Other Equipment (as directed by the Landscape Architect)

2. Final As-Built plans will be submitted to the Landscape Architect before final acceptance of the work and before beginning of the maintenance period

C. Manufacturer's installation instructions shall be included with product and material submittals.

D. Any element covered up before being observed by the Landscape Architect will be subjected to being immediately pot holed for observation at no additional cost to the City.

724-17 MAINTENANCE PERIOD

The Maintenance Period for Irrigation shall coincide with the maintenance period for landscaping, and shall begin only upon written notification from the Landscape Architect. The Contractor shall warrant materials against defects and guarantee workmanship for the Maintenance Period as specified and for coordinating warranty items with the manufacturer/distributor and Owner. Settling of trenches, which may occur during the maintenance period, shall be repaired by the Contractor at no cost to the Owner.

A. Maintenance Walk-Through: Prior to a release of responsibility at the end of the maintenance period, the Contractor shall schedule a walk-through with the Owner and Landscape Architect. Contractor shall provide the following items to the Owner prior to scheduling a walk-through:

B. Four (4) separate watering schedules, one (1) per season.

C. Two (2) 4 feet valve keys for operation of gate valves.

D. Two (2) keys for each controller: keys to be originals.

724-18 QUALITY CONTROL

A. Verify materials conformance with Landscape Architect.

B. Provide instruction manuals and sequence charts to Owner.

C. Verify location of equipment with Landscape Architect.

D. Verify satisfactory completion of work with Landscape Architect, including proper operation of equipment, system coverage, and job clean-up.

E. Verify satisfactory completion of As-Built Drawings.

724-19 MEASUREMENT AND PAYMENT

Measurement and payment for installing IRRIGATION SYSTEM shall be made at the contract lump sum price named in the Bid Schedule, and shall include full compensation for furnishing all labor, materials including sleeves, pipes, fittings, valves, controllers, spray heads, bubblers, quick couplers, meters, backflow prevention devices, flow meters, moisture sensors, tools, equipment, and incidentals, and for doing all the work involved in installing the irrigation system complete in place, as shown on the Project Plans, as specified in the SSPWC Standard Specifications and these Special Provisions, and as directed by the Engineer.

725 - DECOMPOSED GRANITE

725-1 SCOPE OF WORK

Decomposed Granite shall have a maximum particle size of 4.75 mm (No. 4 sieve) stabilized decomposed granite shall be as produced by Gail Materials Inc., Tel. 951- 667-6106 or approved equal. The decomposed granite shall be derived from the crushing and screening of naturally friable granite. Granite shall be screened to include stone particles 3/8" or ¼" minus down to the fine particles. The particles that pass the 200 screen mesh as determined by ASTM methodology shall not exceed 15%. The sand equivalent of the material shall be in the 30 to 50 range. Stabilizer or organic binder shall be incorporated at the rate of 14 pounds per ton.

The stabilizer decomposed granite shall be placed to a minimum of 4 – inch compact.
Color: to be determined by the City prior to ordering the material.

Subgrade shall be firm and smooth, 4 inches below finish grade, and free of rocks and vegetation.

For each 2-inch lift, spread evenly and uniformly the material over the designated areas. Grade and smooth as required. Thoroughly water entire area so that the total depth of the material is moist. Roll and compact the decomposed granite area with minimum 3-ton roller to a firm, smooth surface. Allow the finished surface to dry prior to use.

The stabilizer organic binder shall be incorporated with granite fines by use of a pug mill that includes a weight belt feeder to ensure proper ration of stabilizer to granite to granite fines. The blending with the use of a bucket loader or similar is not acceptable.

The final result shall be a minimum 4 inch (75mm) layer with a smooth surface blended into the site.

725-2 MEASUREMENT AND PAYMENT

Measurement and payment for DECOMPOSED GRANITE shall be made at the contract price per square foot as specified in the Bid Schedule, and shall include all labor, materials, tools, equipment and incidentals, and for doing all work involved in placement of decomposed granite. No additional compensation will be allowed therefore.

726 - RIVER ROCK

726-1 SCOPE OF WORK

Stones for "River Rock" shall be naturally rounded granite stones, of four inch to eight inch maximum dimension. Color shall be mixed white and black "salt and pepper" with addition of the earth colors. The contractor shall submit samples to the City's Landscape Maintenance Division for approval prior to ordering and installation.

In addition to the provisions of Section 202-3.2 of SSPWC grout for River Rock shall be a site-mixed fine grout of one part Portland Cement to three parts sand, without any hydrated lime.

River Rock installation shall consist of furnishing, grouting and placing of stone product as shown on the plans and as directed by the Engineer.

726-2 MEASUREMENT AND PAYMENT

Measurement and payment for RIVER ROCK shall be made at the contract price per square foot as specified in the Bid Schedule, and shall include all labor, materials, tools, equipment and incidentals, and for doing all the work involved in installation of stone material. No additional compensation will be allowed therefore.

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APPENDIX 1 – PROJECT PLANS

LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

CIP PROJECT PLANS:

CIP Plans	
Sheets 1 - 28	Las Virgenes Rd. Street Improvement Plans
Sheet 1	Las Virgenes Road and A.E. Wright M.S. Dwy. Intersection
Sheets 1 - 2	Private Driveway at 4647 Las Virgenes Road
Sheets 1 - 3	Sidewalk Between Las Virgenes Rd. and LVUSD District Offices
Sheets 1 - 3	Las Virgenes Rd. Bulb-Out at A.E. Wright
Sheets 1 - 2	A.E. Wright MS Driveway Modification at 4029 Las Virgenes Road
Sheets 1 - 5	Permanent Soil Nail Walls
Sheets 1 - 17	Landscaping Plans
Sheets 1 - 18	Irrigation Plans

Add-On Plans for 4240 Las Virgenes Road Tract No. 060488 (Private Development)	
Sheets 1 - 10	**Street Improvement, Traffic Signal & Striping Plans (Public) 4240 Las Virgenes Road Tract No. 060488**
Sheets 1 - 5	**Public Drain No. 2353**
Sheet 1	**Reclaimed Water Distribution System West Feeder Unit I**
Sheets 1 - 2	**Public Drain No. 1904**
Sheets 1 - 3	**Las Virgenes Municipal Water District Offsite Plans**

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APPENDIX 2 – SAMPLE PUBLIC NOTICE

LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
SPECIFICATION NO. 14-15-08
IN THE CITY OF CALABASAS, CALIFORNIA

CITY *of* CALABASAS

LAS VIRGENES ROAD SCENIC CORRIDOR COMPLETION PROJECT
PUBLIC NOTICE

As scheduled by the City's Pavement Management System, the City of Calabasas is planning to asphalt overlay your street.

This program will consist of several days of construction work, including repair and reconstruction (patch repairs), milling and, asphalt rubberized overlay. Some areas require the installation of a hybrid paving mat. The process will take several days, but it is intended to prolong the life of your street, while making the best use of the Gas Tax funds. The added environmental bonus of this process is that we recycle approximately thirty tires for every ten (10) feet of road lanes we pave.

It will be necessary to limit access to your street on the days the work is done. Work will commence on your street the 2nd working day after the temporary "No Parking" signs are posted, starting at 7 a.m. each morning, weather conditions permitting. Your cooperation is requested in arranging to park your automobile in a location where it will not be necessary for you to drive on the street during the specified temporary "No Parking" period. In case of inclement weather, it may be necessary to reschedule the CONTRACTOR's operation. The CONTRACTOR will attempt to open the streets as soon as it is safe and possible to do so.

THE FOLLOWING SUGGESTIONS WILL BENEFIT BOTH YOU AND THE CITY:

1. Keep children away from the street.

2. Do not run water onto the street the night before or during the application period.

Your cooperation will be appreciated during the time this necessary work is being performed. Your patience will be rewarded by a renewed longer serviceable road surface that mitigates traffic noise on your street.

REMEMBER:

...driving access will be limited during the days of construction;

...you will have access to your property as soon as it is safe and possible to do so.

THANK YOU FOR YOUR COOPERATION. IF THERE ARE ANY QUESTIONS OR COMMENTS, PLEASE DIRECT THEM TO:

CONTRACTOR:

_____
Phone: _____

City of Calabasas

Project Engineer _____
Phone: (818) 224-1600