



**City of Cypress
Public Works Department**

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“BROWN BOOK”

CITY OF CYPRESS SUPPLEMENT

TO

“GREENBOOK 2015”

**STANDARD SPECIFICATIONS FOR
PUBLIC WORKS CONSTRUCTION**

Version 3.0

Updated: October 26, 2015

**ADDITIONS AND AMENDMENTS TO THE 2015
EDITION OF THE STANDARD SPECIFICATIONS FOR
PUBLIC WORKS CONSTRUCTION**



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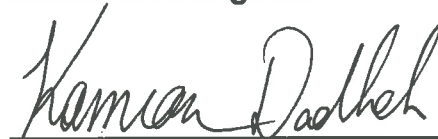
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**CITY OF CYPRESS
PART 1 – GENERAL PROVISIONS**

The General Provisions which shall apply to this Contract shall be those set forth in the Standard Specifications for Public Works Construction, Latest Edition, except as amended herein, published by Building News, Inc., 3055 Overland Avenue, Los Angeles, California 90034, hereinafter referred to as "Standard Specifications." The Standard Specifications are referred to and by this reference made a part hereof as though set forth at length. The Contractor shall comply with the Standard Specifications in addition to the general conditions set forth in these General and Special Provisions and the General Provisions of the Contract Documents.

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

1-2 TERMS AND DEFINITIONS.

DELETE the DEFINITION of "Agency" and **REPLACE** with the following: "**Agency** - City of Cypress, California."

DELETE the DEFINITION of "Board" and **REPLACE** with the following: "**Board** – City Council, City of Cypress."

DELETE the DEFINITION of "Engineer" and **REPLACE** with the following: "**Engineer** – The City Engineer, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them."

ADD the following DEFINITION: "**Owner** - City of Cypress, California."

ADD the following DEFINITION: "**Notice to Contractors** – Notice Inviting Bids."

ADD the following DEFINITION: "**Laboratory** – The laboratory to be designated by the Engineer to test materials and work involved in the Contract."

ADD the following DEFINITION: "**Project Plans** – The location of the work, its general nature, extent, form and detail of the various features are shown on the appendices accompanying and made a part of these specifications."

SECTION 2 – SCOPE AND CONTROL OF THE WORK

ADD the following: "The scope of work shall conform to the provisions of Section 2 of the Standard Specifications and the following additions:

The intent of this project is to construct all items of work complete in place in accordance with the project plans, specifications and as directed by the Engineer. The unit prices shall include the cost of equipment, tools, materials and labor that are delivered to the work site that are necessary for this purpose, to complete the project within the contract time required.

When unforeseen difficulties or a conflict is encountered, including toxic and hazardous materials, the Contractor shall notify the engineer in writing immediately upon discovery and before the existing conditions are disturbed. The Contractor shall also allow the engineer minimum of twenty-four (24) working hours to investigate the conditions and make determinations concerning these conditions. The Contractor and his work force shall assist the Engineer in such investigations. If the Engineer determines that additional time is needed for evaluation after investigation; the Contractor shall reschedule, reassign, transfer or move any labor, materials, tools, equipment and alter the sequence of construction activities as necessary to carry out the intent of this project at no cost to the CITY.

The Contractor cannot withdraw from the project site any labor, materials, tools and equipment without prior written approval by the engineer or his authorized representative. Therefore, the Contractor shall have no claim against the CITY for delay, standby time of tools, equipment and labor, damages, liability and loss of profit, when it is necessary for the engineer to exercise this requirement.

Full compensation for conforming to the requirements of this section shall be considered as included in the Contract bid prices for the various items of work. No separate payment will be allowed."

2-1 AWARD AND EXECUTION OF THE CONTRACT.

2-1.1 DECISION AS TO WHICH CONTRACTOR IS THE LOWEST RESPONSIVE AND RESPONSIBLE BIDDER.

ADD the following SUBSECTION: "**2-1.1 DECISION AS TO WHICH CONTRACTOR IS THE LOWEST RESPONSIVE AND RESPONSIBLE BIDDER.** All bidders must submit with their proposals a complete set of all documents required to be submitted as set forth in the Contract Documents. Failure to submit a complete set of all documents required to be submitted as set forth in the Contract Documents may result in the bid of any bidder being rejected as non-responsive. The City Council/City may also reject the bid of any bidder who is determined to not be a "responsible bidder" as the term is defined in Public Contracts Code Section 1103. In making its determination, the City Council will consider whether the bidder has demonstrated the attributes of trustworthiness, as well as quality, fitness, capacity and experience to satisfactorily perform the work. The decision of the City Council as to which bidder is considered the "lowest responsive and responsible bidder" will be based not only on the actual amount of the bid but also on the relative competence and experience of the bidders, with particular regard to the quality performance of any work done by them for the City in the past, and such decision shall be final and binding upon all parties."

2-1.2 REGISTRATION OF CONTRACTORS.

ADD the following SUBSECTION: "**2-1.2 REGISTRATION OF CONTRACTORS.** Only a contractor licensed in accordance with the provisions of Chapter 9, Division 3, of the Business and Professions Code, AND registered with the Department of Industrial Relations (DIR) to bid on public works contracts, shall be permitted to submit a bid for and subsequently enter into a contract with the City for any public improvement.

A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, or engage in the performance of any public works contract with the City unless currently registered and qualified to perform work pursuant to Section 1725.5 of the Labor Code."

2-1.3 EXECUTION OF THE CONTRACT.

ADD the following SUBSECTION: "**2-1.3 EXECUTION OF THE CONTRACT.** The Contract, in the form set forth in the bid documents, shall be executed by the successful bidder in accordance with the Instructions for Execution of Documents, returned to the City for execution by the City, and shall be accompanied by bonds as described in SECTION 2-4 CONTRACT BONDS and the evidence of insurance required by SECTION 7-3 INSURANCE AND SECTION 7-3.3 WORKERS' COMPENSATION INSURANCE, all within fifteen (15) calendar days from the date the written Notice of Award is mailed to bidder. No bidder's proposal shall be considered binding upon the City until such time as it has been executed by the City."

2-1.4 REJECTION OF BIDS.

ADD the following SUBSECTION: "**2-1.4 REJECTION OF BIDS.** Proposals may be rejected by the City Council/City where, upon evidence of a prior performance of the bidder, the City Council has made a finding that the bidder is not a responsible Contractor because of unsatisfactory performance within the past three (3) years with the City or with other public entities."

2-1.5 CONFLICT OF TERMS.

ADD the following SUBSECTION: "**2-1.5 CONFLICT OF TERMS.** The notice to bidders, proposal, plans, specifications and General Provisions are essential parts of the contract for a given project. These documents, together with the necessary bonds and bidder's guarantee, constitute the contract as defined

herein; and a requirement included in one document shall be as binding as though included in all, as they are intended to be cooperative and to provide a description of the work to be done. Should there be any conflict or discrepancy between terms used, then the specifications shall govern over plans, change orders and supplemental agreements shall govern over any other contract documents."

2-1.6 INTERPRETATION OF PLANS AND SPECIFICATIONS.

ADD the following SUBSECTION: "**2-1.6 INTERPRETATION OF PLANS AND SPECIFICATIONS.** Should it appear that the work to be done, or any matter relative thereto, is not sufficiently detailed or explained on the plans or in the specifications, the Contractor shall request the City Engineer for such further explanation as may be necessary, and shall conform to such explanation or interpretation as part of the contract, so far as may be consistent with the intent of the original specifications."

2-3 SUBCONTRACTS.

2-3.4 SUBLETTING AND ASSIGNMENT.

ADD the following SUBSECTION: "**2-3.4 SUBLETTING AND ASSIGNMENT.** The Contractor shall not assign, transfer or sublet any part of the work without the written consent of the City by the City Engineer and of the surety of the Contractor's bond; and such consent of Surety, together with a copy of the subcontract, shall be filed with the City Engineer. No assignment, transfer or subletting, even though consented to, shall relieve the Contractor of his liabilities under the contract. Subcontractors shall not be recognized as such, and all persons engaged in the project will be considered as employees of the Contractor, their work being subject to the provisions of the contract and specifications.

Should any subcontractor fail to perform the work undertaken by him to the satisfaction of the City Engineer, said subcontractor shall be removed immediately from the project upon request by the City Engineer and shall not again be employed on the work, and the Contractor shall be held liable for the deficient work."

2-3.5 REGISTRATION OF SUBCONTRACTORS.

ADD the following SUBSECTION: "**2-3.5 REGISTRATION OF SUBCONTRACTORS.** Only subcontractors registered with the DIR to bid on public works contracts in California shall be permitted to perform work or labor or render service under subcontract to the Contractor for any contract with the City for any public improvement."

2-4 CONTRACT BONDS.

REPLACE the THIRD and FOURTH PARAGRAPHS with the following: "The successful bidder shall furnish to the City at his own expense two surety bonds. One bond shall be in the amount of One Hundred Percent (100%) of the contract price in the form set forth in the bid documents to guarantee faithful performance of the contract work. The other bond, in an amount not less than One Hundred Percent (100%) of the contract price in the form set forth in the bid documents, shall be furnished to secure payment of those supplying labor and materials as required by the California Civil Code. Each bond shall be executed in accordance with the instructions set forth in the bid documents, and each bond shall be executed by a corporate surety acceptable to and approved by the City Attorney."

2-4.1 SUFFICIENCY OF INSURER OR SURETY FOR PAYMENT BOND.

ADD the following SUBSECTION: "**2-4.1 SUFFICIENCY OF INSURER OR SURETY FOR PAYMENT BOND.** Contractor shall deliver, concurrently with the execution of this Contract and delivery of said payment bond, to City the following documents:

1. A certified copy of the Certificate of Authority of the Insurer or Surety issued by the Insurance Commissioner, which authorizes the Insurer or Surety to transact insurance in the State of California;
2. A certificate from the Clerk of the County of Orange that the Certificate of Authority of the Insurer or Surety has not been surrendered, revoked, canceled, annulled, or suspended; or, in the event the Certificate of Authority of the Insurer or Surety has been suspended, that renewed authority has

been granted; and

3. True and correct copies of the Insurer's or Surety's most recent annual statement and quarterly statement filed with the Department of Insurance.

Failure of Contractor to deliver these documents by the time of execution of this Contract shall require City to refrain from entering the Contract, as Contractor will be deemed to have failed to ensure the sufficiency of the Insurer or Surety to the satisfaction of City, as required by the provisions of the Bond and Undertaking Law, Code of Civil Procedure § 995.660."

2-5 PLANS AND SPECIFICATIONS.

2-5.1 GENERAL

2-5.1.1 REQUIREMENTS.

ADD the following SUBSECTION: "**2-5.1.1 REQUIREMENTS.** It is the intent of these Plans, General Provisions, Special Provisions, the standard plans referred to herein and other documents comprising the contract, to provide for and include all labor, materials, equipment, plant, tools, transportation, insurance, bonds, sales taxes, permits, temporary protection, traffic control, watchmen, superintendence and other work necessary to construct and complete all work specified herein, in all addenda and change orders.

All work embraced herein shall be accomplished in accordance with the applicable portions of the Standard Specifications for Public Works Construction (Greenbook), Latest Edition, unless otherwise specified.

All work embraced herein shall be accomplished in accordance with the "Brown Book", General Provisions, the Special Provisions, Standard Drawings, the project plans and applicable permits.

In addition to the above, the Contractor shall comply with the requirements of the following:

1. Notice Inviting Sealed Bids
2. Instructions to Bidders
3. Proposal
4. Bid Bond
5. Information Required of Bidders
6. Agreement
7. Faithful Performance Bond
8. Labor and Material Bond."

2-5.1.2 ESTIMATED QUANTITIES.

ADD the following SUBSECTION: "**2-5.1.2 ESTIMATED QUANTITIES.** The quantities given in the plans and specifications are approximated only, being given as a basis for comparison of bids; therefore, the City does not, expressly or by implication, guarantee that the actual amount of the proposed work will correspond therewith."

2-5.2 PRECEDENCE OF THE CONTRACT DOCUMENTS.

REPLACE the following SUBSECTION: "**2-5.2 PRECEDENCE OF THE CONTRACT DOCUMENTS.** "If there is a conflict between any of the Contract Documents, the document highest in the order of precedence shall control. The order of precedence, from highest to lowest, shall be as follows:

- a) Permits issued by jurisdictional regulatory agencies
- b) Change Orders and Supplemental Agreements; whichever occurs last
- c) Contract/Agreement
- d) Addenda
- e) Bid/Proposal
- f) Special Provisions

- g) City of Cypress Public Works Permit Standard Conditions of Approval
- h) Plans
- i) Standard Plans
- j) Standard Specifications (Brownbook)
- k) Standard Specifications (Greenbook)
- l) Reference Specifications

Detail drawings shall take precedence over general drawings. The precedence of the notice inviting bids and instructions to bidders shall be as specified in the Special Provisions."

2-5.3 SUBMITTALS.

2-5.3.3 SHOP DRAWINGS. ADD the following: "The Contractor shall submit for approval by the Engineer such material, samples, product specifications/brochures, certified mix designs, warranties material certifications, operations and maintenance manuals and equipment as may be required, whether mentioned specifically herein or not. The Contractor will not be permitted to mobilize until the Shop Drawing Schedule is submitted

The Contractor shall allow a minimum of twenty (20) working days for submittal review. Should revisions be required, the Contractor shall allow a minimum of Twenty (20) additional working days for re-submittal review.

Submittals will be reviewed by the engineer twice (1 initial review and one revision review). All subsequent reviews will be charged to the Contractor at \$500.00 for each additional review. Such charges shall be deducted from payment due to Contractor for the billing period when such additional review services have been provided.

A. Materials

Unless otherwise indicated on the drawings or specified, only new materials and equipment shall be incorporated in the work. All materials and equipment furnished by the Contractor to be incorporated in the work shall be subject to the inspection and approval of the City. No material shall be processed for, fabricated, or delivered to the work site without prior approval by the City.

As requested, the Contractor shall also submit data relating to the materials and equipment they propose to incorporate into the work. This data shall be submitted with sufficient detail to enable the City to identify the particular product in question, and to form an opinion as to its conformity to the contract requirements. Such data shall be submitted in a manner similar to that specified for shop drawings.

No material shall be purchased or fabricated, and no work shall begin until the required shop drawings have been submitted, reviewed, and approved as conforming to the contract requirements. All materials and work involved in the construction shall then be as represented by said drawings

B. Samples

1. If the City so requires, either prior to beginning or during the progress of the work, the Contractor shall submit samples of materials for such special tests as may be necessary to demonstrate that they conform to the Specifications.
2. All samples shall be packed so as to reach their destination in good condition, and shall be labeled to indicate the material represented, the name of the building or work and location for which the material is intended, and the name of the Contractor submitting the sample.

3. To ensure consideration of samples, the Contractor shall notify the City in writing that the samples have been shipped and shall properly describe the samples in the letter. In no case shall the letter of notification be enclosed with the samples.
4. The Contractor shall submit data and samples, or place his orders, sufficiently early to permit consideration, inspection, testing, and approval before the materials and equipment are needed for incorporation in the work. Delay resulting from his failure to do so shall not be used as the basis of a claim against the City.
5. In order to demonstrate the proficiency of workmen, or to facilitate the choice among several textures, types, finishes, surfaces, etc., the Contractor shall, at their own expense, provide such samples of workmanship on wall, floor, finish, etc., as may be required.
6. When required, the Contractor shall furnish to the City triplicate sworn copies of manufacturer's shop or mill tests (or reports from independent testing laboratories) relative to materials, equipment performance ratings, and concrete data.

C. Shop Drawings

1. Shop drawings are drawings, illustrations, schedules, performance charts, brochures, and other data which are prepared by the Contractor or any subcontractor, manufacturer, supplier, or distributor and which illustrates some portion of the work. Submit shop drawings where indicated in these Special Provisions.
2. The Contractor shall be responsible for the prompt submission of all shop drawings in accordance with the shop drawing schedule so that there shall be no delay to the work due to the absence of such drawings.
3. Submit five (5) copies of shop drawings of equipment and materials to be used on this contract. The Engineer will keep one and return four copies. Clearly indicate the name of the project, specification section and drawing number to which each shop drawing is referenced. A table of contents shall be supplied at the front of the submittal.
4. Shop drawings shall show the principal dimensions, weight, structural and operating features, performance characteristics and wiring diagrams, space required, clearances, type and/or brand of finish or shop coat, grease fittings, etc., depending on the subject of the drawings. When it is customary to do so, and when the dimensions are of particular importance, or when so specified, the drawings shall be certified by the manufacturer or fabricator as correct for this contract.
5. When so specified or if considered by the City to be acceptable in writing, manufacturer's specifications, catalog data, descriptive matter, illustrations, etc. may be submitted for approval in place of a shop drawing. In such cases, the requirements shall be as specified for shop drawings, insofar as applicable.
6. The shop drawings shall be reviewed first by the Contractor and then by the Engineer. Each copy of the shop drawings to be submitted shall be marked with an approval stamp, signed and dated by both the Contractor and the Engineer
7. Shop drawings shall be complete in all respects. If the shop drawings show any deviations from the requirements of the Drawings and Standard Specifications because of standard shop practices or other reasons, the deviations and the reasons therefore shall be set forth in the letter of transmittal. By submitting shop drawings, the Contractor represents that material, equipment, and other work shown thereon conforms to the Drawings and Standard Specifications, except for any deviations set forth in the letter of transmittal.
8. If so noted by the Engineer, the Contractor shall correct the shop drawings and resubmit them in the same manner as specified for the original submittal. The Contractor in the letter of

transmittal accompanying resubmitted shop drawings shall direct specific attention to revisions other than the corrections requested by the Engineer on previous submittals.

9. The review by the Engineer is only of general conformance with the design concept of the project and general compliance with the Drawings and Standard Specifications and shall not be construed as relieving the Contractor of the full responsibility for: providing materials, equipment, and work required by the project; the proper fitting and construction of the work; the accuracy and completeness of the shop drawings; selecting fabrication processes and techniques of construction; and performing the work in a safe manner.
10. No portion of the work requiring a shop drawing submittal shall commence until the submittal has been reviewed by the Engineer and returned with a notation indicating that re-submittal is not required. The Contractor shall submit five (5) copies of submittals called for in the Technical Specifications in a timely manner to the City's representative during the construction period. The Contractor's attention is directed to the Special Provisions which contain further submittal instructions and requirements.
11. Only shop drawings which have been checked and corrected by the fabricator shall be submitted to the Contractor by his subcontractors and vendors. Prior to submitting shop drawings to the City, the Contractor shall check thoroughly all such drawings to satisfy themselves that the subject matter conforms to the drawings and specifications in all respects. Shop drawings which are correct shall be marked with the date, checker's name and signature, and indication of the Contractor's approval, and then shall be submitted to the City. Drawings failing to meet these requirements shall be returned for correction. The Contractor's stamp of approval on shop drawings and samples shall constitute a representation to the City that the Contractor has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers and similar data, or he takes full responsibility for doing so, and that he has reviewed or coordinated each shop drawing and sample with the requirements of the contract documents. **Shop drawings submitted without CONTRACTOR's signed and dated stamp of approval will be rejected.**
12. The City's review of shop drawings will be only for conformance with the design concept and functional result of the project and compliance with the information given in the Contract Documents. The Contractor shall be responsible for dimensions to be confirmed and correlated at the job site; for information that pertains solely to the fabrication processes or to techniques of construction; and for coordination of the work of all trades.
13. The Contractor shall make any corrections required by the City and shall return five (5) corrected copies of shop drawings or resubmit new samples for review until no further exceptions are noted.
14. At the time of each submission or resubmission, the Contractor shall direct specific attention, in writing, to deviations that the shop drawings or samples may have from the requirements of the contract documents or corrections required by the City on previous submissions.
15. The reviewing City Engineer's marking of "no exceptions noted" on shop drawings and samples shall not relieve the Contractor from their responsibility for any deviations from the requirements of the contract documents, nor shall any such review by the City's representative relieve the Contractor from responsibility for errors and omissions in shop drawings. Any changes or deviations from the requirements of the contract documents shall be permitted only by authorized change orders.

D. Record Drawings

1. The Contractor shall maintain one record copy of all specifications, drawings, addenda, change orders and shop drawings, updated on a weekly basis, at the project site. The documents shall be kept in good order and annotated to show all changes made during the construction

process. Progress Payments will not be made to the Contractor until the record drawings are verified to be correct and up to date.

2. The Contractor shall submit to the City, within ten (10) working days after the completion of contract, one set of red-lined prints of the Contract Drawings which have been marked "RECORD PRINTS" and shall contain all changes, additions or deviations from the original set of drawings that have been incorporated into the work.

E. Product Substitution

1. The contract, if awarded, will be on the basis of materials and equipment described in the contract documents without the consideration of possible substitute or "or equal" items. Whenever it is indicated in the contract documents that a substitute or "or equal" item of material or equipment may be furnished or used by the Contractor if acceptable to the Engineer, application for such acceptance will not be considered by the Engineer until after the execution of the contract.
2. The use of approved substitutes or "or equals" shall in no way relieve the Contractor from compliance with the contract documents. The Contractor shall bear all extra cost resulting from providing or using approved substitutes.
3. The listing of any manufacturer or supplier in the contract documents does not, and is not intended to; grant any right, title or interest in the contract for the benefit of the named manufacturer or supplier.
4. Where a material or equipment item is specified by two or more manufacturer or supplier names, the Contractor may provide either one of the materials or equipment so specified, providing that all requirements of the contract documents are met. Only one brand, kind or make of material or equipment shall be used or installed throughout the work, notwithstanding that material or equipment from two or more manufacturers may be specified for the same purpose.
5. For convenience in designation in the specifications, equipment or materials to be incorporated in the work may be designated under a trade name or the name of a manufacturer and his catalog information. The use of alternative equipment or material which is of equal quality and of the required characteristics for the purpose intended will be permitted, subject to the following:
 - A. The burden of proof as to the comparative quality and suitability of alternative equipment or materials shall be upon the Contractor and he shall furnish, at his own expense, three copies of complete description, information, and performance data, showing the equality of the material or equipment offered to those specified, and such other necessary or related information as may be required by the Engineer. Where appropriate, at Contractor's expense, independent testing or evaluation at qualified test facilities, including destructive testing, may be required as a condition of acceptance.
 - B. The Engineer will be sole judge as to the comparative quality and suitability of the alternative equipment or materials, and his decision shall be final.
6. The Contractor's application of the substitution request shall contain the following statements and/or information which shall be considered by the Engineer in evaluating the proposed substitution:
 - A. The evaluation and acceptance of the proposed substitute will not prejudice the Contractor's achievement of substantial completion on time.
 - B. Whether or not acceptance of the substitute for use in the work will require a change in any of the contract documents to adopt the design to the proposed substitute.

- C. All variations of the proposed substitute from that specified will be identified.
- D. Available maintenance, repair, and replacement service will be indicated.
- E. Itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including cost of redesign and claims of other contractors affected by the resulting change.
- F. The Contractor will be responsible for the cost of any engineering and design services required to make changes and adjustments in material and work of all trades directly or indirectly affected by the substitute item. Additionally, the Contractor shall bear all risk associated with any unforeseen conflicts arising from the use of the substitute product.
- G. The City may require the Contractor to furnish a special performance guarantee or other surety with respect to any substitute.
- H. The Contractor shall have 30 calendar days after the date of receipt of the Notice to Proceed for submission of any and all "or equal" items.
- I. If substitute materials or equipment are installed without the Engineer's approval, remove the unauthorized materials and equipment and replace with items required by the contract documents at no additional cost to the City.

F. Submittals

Shop drawings shall be submitted for review and approval by the City. A total of five (5) copies shall be submitted. At a minimum, the following shop drawings, if applicable, shall be provided:

1. Concrete Mix Design
2. Various Pipes for the Project
3. Manhole Frames and Covers
4. Dewatering System
5. Shoring Plans and Design Calculations
6. Flow By-pass System
7. Asphalt Mix Design
8. Sewer Manhole Coating (if apply)
9. Crushed Aggregate Base

G. Payment

Payment for shop drawings, samples, project data, and as-built drawings shall be included in the contract bid items to which they are appurtenant, and no additional compensation shall be allowed."

2-9 SURVEYING.

2-9.1 PERMANENT SURVEY MARKERS. ADD the following: "The Contractor shall be responsible for protecting all existing horizontal and vertical survey controls, monuments, ties and benchmarks located within the limits of the project. If any of the above requires removal; relocation or resetting, the Contractor shall, prior to any construction work and under the supervision of a California-licensed Land Surveyor or Civil Engineer, establish sufficient temporary ties and benchmarks to enable the points to be reset after completion of construction.

Any ties, monuments and bench marks disturbed during construction shall be reset by the Contractor in accordance with the Orange County Environmental Management Agency, Standard Plan 1405 after construction and the centerline tie notes shall be submitted to the City on 8 1/2" X 11" loose leaf paper.

The Contractor and his sureties shall be liable for, at his expense, any resurvey required due to his negligence in protecting existing ties, monuments, benchmarks or any such horizontal and vertical controls.

Payment for preservation or reestablishment of permanent survey monuments and markers including centerline ties shall be included in the various items of work. Said payment shall include full compensation for furnishing all labor, materials, tools, equipment, and doing all the work involved in preserving or reestablishing the survey monuments including centerline ties, all excavation, backfill and replacement of pavement section, and conforming to the requirements of this section herein. No separate payment will be allowed."

2-9.2 SURVEY SERVICE. DELETE the SUBSECTION in its ENTIRETY and **REPLACE** with the following: "The Contractor shall perform and be responsible for the accuracy of surveying adequate for construction. The Contractor shall preserve construction survey stakes and marks for the duration of their usefulness. Unless otherwise specified or indicated, stakes shall be set and stationed by the Contractor for curbs, headers, sewers, storm drains, structures, paving, rough grade, etc. A corresponding cut or fill to finished grade (or flow line) shall be indicated on a grade sheet submitted to the Engineer for approval. Payment for Survey Service shall be included in various items of work, and no additional allowance will be made."

2-9.5 DIMENSIONAL TIES.

ADD the following SUBSECTION: "**2-9.5 DIMENSIONAL TIES.** Prior to any street work, all public utilities (i.e. sewer manholes, water valves, etc.) shall be located with a minimum of two (2) dimensional ties to the nearest curb."

2-11 INSPECTION.

ADD the following: "The Contractor is responsible for ensuring that all Work complies with the Contract Documents. Upon discovery, all defective or noncompliant Work must be immediately repaired or replaced by the Contractor. Failure by the Inspector or Engineer to condemn or reject nonconforming Work shall not constitute acceptance or implied acceptance of such Work. Unless directed by the Inspector, the City will perform one inspection and one re-inspection of underground conduit and appurtenant structures. Should subsequent re-inspections be required due to the work not being in conformance with the Plans and Specifications, the City will deduct from monies due the Contractor the amount of \$210.00 per hour for each hour or portion thereof required for the time necessary to perform the third and subsequent re-inspections."

SECTION 3 – CHANGES IN WORK

3-2 CHANGES INITIATED BY THE AGENCY.

3-2.2 CONTRACT UNIT PRICES.

3-2.2.3 DECREASES OF MORE THAN 25 PERCENT. ADD the following: "Unless specified otherwise, the unit price stipulated in the Bid shall be applied to the first 25 percent of the actual quantity of work performed and the new mutually determined Contract Unit Price shall be applied to the quantity between 25 and 75 percent of the original quantity."

3-2.4 AGREED PRICES. ADD the following: "Agreed Prices are prices for new, unforeseen, and/or deduct work, or adjustments in Contract Unit Prices per 3-2.2, established by mutual agreement between the Contractor and the Agency. Agreed prices shall be negotiated before commencement of the Work."

3-3 EXTRA WORK.

3-3.2.2 BASIS FOR ESTABLISHING COSTS.

3-3.2.2.3 TOOL AND EQUIPMENTAL RENTAL. DELETE the SECOND PARAGRAPH and **REPLACE** with the following: "For any extra work performed and/or proposed by the Contractor, the actual costs for

such work shall be calculated in accordance with the State of California, Department of Transportation *Labor Surcharge and Equipment Rental Rate Book*, latest edition, and shall be calculated based on the actual time and day the work is performed. For the basis of establishing cost for any case where the specific type of actual equipment used and/or proposed is not referenced within the *Labor Surcharge and Equipment Rental Rate Book*, a comparable alternative within the subject rate book shall be used via mutual agreement between the City and the Contractor."

3-3.2.3 MARKUP. DELETE the SUBSECTION in its ENTIRETY and **REPLACE** with the following: "For extra work performed by Contractor, ten (10%) percent may be added to the Contractor's actual costs and shall constitute the markup for all overhead and profit. To the above sum of costs and markups, one (1%) percent may be added as compensation for bonding. For work performed by Subcontractors, the above ten (10%) percent markup shall apply to the Subcontractor's actual costs of performing the work. Contractor's markup for work performed by Subcontractor may be five (5%) percent. The City Engineer reserves the right to negotiate a waiver of the above markups for certain extra work.

Contractor shall submit proposals for extra work on forms that clearly itemize the actual costs for labor, material, equipment, etc., and markups for both Contractor and Subcontractor work. Contractor shall attach all invoices for labor, material, equipment, and other items, and all invoices from subcontractors, to his extra work proposal."

3-3.3 DAILY REPORTS. ADD the following: "The Contractor shall complete consecutively numbered daily reports indicating manpower and narrative description of work performed, serviceable major equipment in use, serviceable major equipment idled, serviceable major equipment down for repairs, sub-contractors working at site, weather conditions, and date. The daily report shall be completed on forms prepared by the Contractor and acceptable to the Public Works Department, and shall be submitted at the conclusion of each work day. The forms will be discussed at the pre-construction conference. The City will provide a sample format for the daily report at the pre-construction conference. The Contractor shall distribute copies to the Construction Observers and the Director of Public Works or his authorized representative at either the conclusion of each work day or prior to the start of work the next day. The daily reports shall note any additional work or delay of work. No progress payments will be processed or made to the Contractor unless all daily reports are completed to the date of submittal of application for payment."

SECTION 4 – CONTROL OF MATERIALS

4-1 MATERIALS AND WORKMANSHIP.

4-1.1 GENERAL.

4-1.1.1 SUPERVISION

ADD the following SUBSECTION: "**4-1.1.1 SUPERVISION.** All manufactured products, materials and appliances used and installed, and all details of the work done shall at all times be subject to the supervision, test and approval of the City Engineer or his authorized representatives. The City Engineer or his authorized representatives shall have access to the work at all times during construction, and shall be furnished with every reasonable facility for securing full knowledge with regard to the progress, workmanship and character of the materials used or employed in the work.

Whenever the Contractor varies the period during which work is carried on each day, he shall give adequate notice to the City Engineer so that proper inspection may be provided. Any work done in the absence of the Engineer or the Engineer's agent will be subject to rejection. The inspection of the work shall not relieve the Contractor of any of his obligations to fulfill the contract as prescribed. Defective work shall be made good, and unsuitable materials may be rejected, notwithstanding the fact that such defective work and unsuitable materials have previously been accepted or estimated for payment. The Contractor shall perform no outside or private work utilizing materials from the City's Contract."

4-1.1.2 QUALITY OF MATERIAL

ADD the following SUBSECTION: "**4-1.1.2 QUALITY OF MATERIAL.** Materials shall be new and of specified kind and quality, and fully equal to samples when samples are required. When the quality, kind of material or articles shown required under the contract are not particularly specified, the Contractor shall estimate that the City will require articles and materials representing the best of their class or kind, or at least equal to the class or quality of similar articles or materials when specified. Materials shall be furnished in such quantities and kinds and at such times as to ensure uninterrupted progress for the work. They shall be stored properly and protected as required. The Contractor shall be entirely responsible for damage or loss by weather or any other cause."

4-1.3 INSPECTION REQUIREMENTS.

4-1.3.1 GENERAL. ADD the following: "The Contractor shall notify the City Engineer a minimum of two (2) working days prior to start of any work. Failure to give such notice shall be cause for rejection of such work. No work in this regard will be allowed outside of normal working hours, on weekends, or scheduled City holidays, without prior approval from the City Engineer. The Contractor shall be responsible for the cost of inspection and supervision by the City for overtime work, work on weekends, scheduled City holidays, and any work occurring outside of normal working hours."

4-1.3.2 INSPECTION BY THE AGENCY. ADD the following: "The Contractor shall render all necessary assistance to the personnel of said laboratory to facilitate the inspection of testing and materials. Request for inspection and/or testing shall be made at least two (2) working days in advance. All testing shall be performed by a licensed testing laboratory."

4-1.4 TEST OF MATERIALS. REPLACE the THIRD and FOURTH sentence of the FIRST paragraph with the following: "Unless otherwise provided, all testing shall be performed under the direction of the Engineer and the CONTRACTOR shall bear the cost of testing material and/or workmanship which do not meet or exceed the requirements indicated in the Standard Specifications and the Special Provisions."

SECTION 5 – UTILITIES

5-2 PROTECTION.

5-2.1 EXISTING UTILITIES.

ADD the following SUBSECTION: "**5-2.1 EXISTING UTILITIES.** The existence and location of any underground utility pipes or structures or conduits shown on the plans or in the specifications are obtained by a search of the available records. The contractor is required to take the precautionary measures to protect the utility lines shown and any other lines not of record or not shown. The contractor shall notify Underground Service Alert (USA) at 1-800-422-4133 a minimum of forty-eight (48) hours prior to excavation. It shall be the contractor's responsibility to cause notification to the owners of utilities or structures concerned before starting work. Contractor further assumes all liability and responsibility for the underground utility pipes, conduits or structures shown or not shown."

5-2.2 PROCEDURE IN CASE OF DAMAGE TO PUBLIC PROPERTY.

ADD the following SUBSECTION: "**5-2.2 PROCEDURE IN CASE OF DAMAGE TO PUBLIC PROPERTY.** Any portions of curb, gutter, sidewalk or any other City improvement damaged by the Contractor during the course of construction shall be replaced by the Contractor at his own cost, free of all charges to the City. The cost of additional replacement of curb, gutter or sidewalk, or any other improvement in excess of the estimated quantities shown in the proposal form and specifications and found necessary, as determined by the City Engineer, during the process of construction (but not due to damage resulting from carelessness on the part of the Contractor during his operations), shall be paid to the Contractor in accordance with SECTION 3-3 EXTRA WORK."

5-4 RELOCATION.

5-4.1 PUBLIC UTILITIES.

ADD the following SUBSECTION: "**5-4.1 PUBLIC UTILITIES.** In case it should be necessary to remove the property of a public utility or franchise, such owner will, upon proper application by the Contractor, be notified by the City Engineer to move such property within a reasonable time, and the Contractor shall not interfere with said property until after the expiration of the time specified. The right is reserved to the owners of public utilities or franchises to enter upon the streets for the purpose of making repairs or changes in their property, which may be necessary as a result of the work. Employees of the City shall likewise have the privilege of entering upon the street for the purpose of making any necessary repairs or replacements.

The Contractor shall employ and use only qualified persons, as hereinafter defined, to work in proximity to Southern California Edison's secondary, primary and transition facilities. The term "qualified person" shall mean one, who by reason of experience or instruction, is familiar with the operation to be formed and the hazards involved, as more specifically defined in Section 2700 of Title 8 of the California Administrative Code. The Contractor shall take such steps as are necessary to assure compliance by any subcontractors."

5-6 COOPERATION.

ADD the following: "The Contractor shall coordinate with the following agency and/or utility representatives for an update of the status of the utility work, for more details regarding their respective schedules and requirements, and arrange for their attendance at the pre-construction meeting:

COMPANY NUMBER	UTILITY	PHONE
City of Cypress	Public Works	(714) 229-6740
AT&T / SBC	Telephone	(714) 666-5692
Verizon Telephone Company	Telephone	(714) 375-6760
Chevron	Oil	(562) 944-6111
Golden State Water	Water	(714) 746-3095
Metropolitan Water District	Water	(323) 276-7623
Southern California Edison Co.	Electrical	(714) 870-3219
Southern California Gas Co.	Gas	(714) 634-3034
Time Warner Cable	Cable	(714) 903-8336

Although there can be no guarantee that difficulties will not be encountered, the cooperation of the CONTRACTOR is expected. The CITY has endeavored to provide a complete project plan and specifications. In the event of any conflict during the course of construction, CONTRACTOR shall allow reasonable time and provide equipment and manpower for the engineer to field-check and make determination to resolve the conflict.

CONTRACTOR shall provide equipment and manpower to dig all holes necessary for testing and other test requirements.

CONTRACTOR shall have a representative on the job site at all times during working hours. The representative shall have the authority to make decisions regarding work that can commit CONTRACTOR time, materials, equipment, labor, and resources.

Full compensation for conforming to the requirements of this section shall be considered as included in the contract bid prices for the various items of work. No separate payment will be allowed."

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

6-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF THE WORK.

ADD the following: "Unless otherwise provided, the Contract time shall commence upon the date of issuance of a notice to proceed. The Work shall start within ten (10) days thereafter, and be diligently prosecuted to completion within the time provided in the specifications."

6-1.1 CONSTRUCTION SCHEDULE.

REPLACE the following SUBSECTION: "Within 10 (ten) calendar days after notification of the award of the contract, the Contractor shall prepare and submit to the City Engineer, in printed and electronic formats, using Microsoft Project or Oracle Primavera software, a work schedule for accomplishing the work. Said schedule must show:

- A. The critical path; and
- B. The dates of the expected start and completion of the various items of the contract work; and
- C. The dates of all submittals/shop drawing transmittals and deliveries. The review time indicated shall be no less than the allowable amount per project specifications; and
- D. The time required to obtain all required permits and any necessary inspections, or other constrained requirements mandated by the permits; and
- E. The cost loaded tasks correlating to the bid items and equaling the total contract value; and
- F. Resources loaded by task as a function of manpower; and
- G. Available float (considered a jointly owned commodity, available until its expiration);

All revisions thereto following the baseline CPM Schedule shall indicate the Total Project Float. Additionally, the contractor shall provide a sheet indicating:

- A. All predecessor and successor activities; and
- B. Each activity and its remaining duration; and
- C. Early, actual, and latest start dates; and
- D. Early, actual, and latest finish dates; and
- E. Percent complete for each activities as a percentage of working days; and
- F. Any added constraints.

During a scheduling conference between the Contractor and the City Engineer, the work schedule will be discussed and modified, if necessary. Should it become necessary for the City to delay temporarily the work schedule agreed upon during the scheduling conference, every effort will be made to permit a new work schedule at the time most convenient to the Contractor, thus permitting the project to proceed with the shortest intramural movement of the equipment. The Contractor shall notify the City Engineer in all such cases in order to arrive at a satisfactory schedule."

6-1.2 COMMENCEMENT OF THE WORK.

6-1.2.1 PRECONSTRUCTION CONFERENCE.

ADD the following SUBSECTION: "**6-1.2.1 PRECONSTRUCTION CONFERENCE.** A minimum of seven (7) days prior to the commencement of work at the site, a preconstruction conference will be held at the City and shall be attended by the Contractors' Project Manager and its "On-Site" Field Superintendent and Subcontractors as the Contractor deems appropriate.

Unless previously submitted to the Engineer, the CONTRACTOR shall bring to the preconstruction conference copies of each of the following:

- 1. Project Schedule.
- 2. Project phasing map with color coordinated map and streets schedule.
- 3. Procurement schedule of major equipment and materials and items requiring long lead time.
- 4. Shop Drawing/Sample submittal schedule.
- 5. Preliminary schedule of values (lump sum price breakdown) for progress payment purposes.
- 6. Written designation of the "On-site" Field Superintendent and the Project Manager. Both day time Phone Numbers and emergency Phone Numbers shall be included in the written designation.
- 7. Location of laydown / storage area.
- 8. Video of all existing striping and markings in DVD format.
- 9. Photos of existing site conditions.

The purpose of the conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The complete agenda will be furnished to the Contractor prior to the meeting date. The Contractor shall be prepared to discuss all of the items listed below.

1. Contractor's tentative schedule.
2. Preconstruction Video.
3. Notification of local residents prior to starting any work and keeping them informed through-out the project.
4. Procedures for transmittal, review, and distribution of CONTRACTOR's submittals.
5. Processing applications for payment
6. Maintaining record documents
7. Critical work sequencing
8. NPDES requirements and BMPs Self Certification Form (See Appendix B).
9. Compliance with the Orange County Stormwater Program, including the September 2004 "Construction Runoff Guidance Manual".
10. Field decisions and Change Orders.
11. Use of project site, office, and storage areas, security, housekeeping, and City needs.
12. Major equipment deliveries and priorities.
13. Traffic control and access

The City will preside at the preconstruction conference and will arrange for keeping and distributing the minutes to all persons in attendance. Attendance by the Contractor and its subcontractors is mandatory."

6-1.3 WEEKLY PROGRESS MEETINGS.

ADD the following SUBSECTION: "**6-1.3 WEEKLY PROGRESS MEETINGS.** Weekly progress meetings shall be as follows:

1. Progress Meetings will be held each week during the course of the project.
2. The Contractor shall provide a 2-week "Look Ahead" schedule for each meeting.
3. The Construction Inspector and/or the Engineer will preside at these meetings and will prepare the meeting agenda, meeting minutes and will distribute minutes to all persons in attendance.
4. The meeting location, day of the week and time of day will be mutually agreed to by the City, the Construction Inspector, and the Contractor.
5. As the work progresses, if it is determined by mutual agreement of the attendees, that weekly meetings are not necessary, the weekly progress meetings may be changed to Bi-Weekly."

6-3 SUSPENSION OF THE WORK.

6-3.1 GENERAL. DELETE the SUBSECTION in its ENTIRETY and **REPLACE** with the following: "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 SECTION 6-6.3 PAYMENT FOR DELAYS. The Contractor shall immediately comply with such an order from the City Engineer and shall not resume operations until so ordered in writing.

Thereupon, the Contractor shall discontinue such work or such part thereof as the City may designate, and the City may thereupon, by contract or otherwise, as it may determine, complete the work or any part thereof; and for such completion, the City itself or its Contractors may take possession of and use, or cause to be used in the completion of the work or any part thereof, any such materials, implements and tools of every description as may be found at the place of such work. All expense charged under this PARAGRAPH shall be deducted and paid for by the City out of any monies then due or to become due the Contractor under the contract, or any part thereof; and in such accounting, the City shall not be held to obtain the lowest figure for the work for completing the contract, or any part thereof, or for insuring its proper completion, but all sums paid therefore shall be charged to the Contractor. In case the expenses so charged are less than a sum which would have been payable under the contract, if the same had been completed by the Contractor, the Contractor shall be entitled to receive the difference; and in case such expense shall exceed the amount payable under the contract, then the Contractor shall pay the amount of the excess to the City upon completion of the work without further demand being made therefore. In the determination of the question as

to whether or not there has been any such noncompliance with the contract as to warrant the suspension or annulment thereof, the decision of the City Council shall be binding on all parties to the contract."

6-4 TERMINATION OF THE CONTRACT FOR DEFAULT.

6.4.1 GENERAL.

6-4.1.1 RISK OF LOSS.

ADD the following SUBSECTION: "**6-4.1.1 RISK OF LOSS.** Until by the formal acceptance by the City of the work of the Contractor hereunder, the Contractor shall have the charge and care thereof, and shall bear the risk of injury or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work.

Contractor shall rebuild, repair, restore, replace and make good all injuries or damages to any portion of that which he is obligated to improve, provide or complete hereunder occasioned by any of the above causes before completion and acceptance, and shall bear the expense thereof, except for such injuries or damages as are occasioned by acts of the federal government and the public enemy, and only to the extent of five percent (5%) of the contract amount where such injuries or damages are proximately caused by an act of God within the meaning of California Government Code Sections 4150 - 4152. In case of suspension of work from any cause whatsoever, the Contractor shall be responsible for all equipment and/or materials then upon the property of City and shall properly store them, if necessary, and shall erect temporary structures where necessary in so doing. Nothing in this Contract shall be considered as vesting in the Contractor any right of property in materials used after they have been attached or affixed to the work or the soil upon City real property; but all such materials shall, upon being so attached or so affixed, become the property of the City."

6-7 TIME OF COMPLETION.

ADD the following SUBSECTION: "**6-7.4 COMPLETION TIME.** Upon award of this contract and signing the Contract Documents, including bond submittals, the City shall issue the Contractor a Notice to Proceed. The Notice to Proceed (NTP) will only be issued once it has been determined that the Contractor has secured a construction yard. Beginning from the effective date of the Notice to Proceed the Contractor shall complete all work in accordance with the contract duration specified within the bid documentation. Working days are Monday through Friday, excluding City observed holidays.

Hours of work for this project shall be between **7:30 a.m. AND 4:30 p.m.**, Monday through Friday for **residential streets**. Work on **arterial highways** shall be limited to the hours of **8:30 a.m. AND 4:00 p.m.** For any streets adjacent to a school, work shall not commence until after **8:30 a.m.** Work on Saturdays, Sundays, Election Day, and regularly scheduled City holidays, shall not be allowed, unless approved by the City Engineer.

A holiday work moratorium will also be in effect for the week of Thanksgiving and the Christmas holiday (generally the week of Christmas until the day after New Year's Day), or as directed by the City Engineer.

In the event that the Engineer shall be of the opinion that the work is being inadequately or improperly executed in any respect, he/she may demand that the Contractor improve or change the execution of the work in such manner as to assure proper and timely completion."

6-8 COMPLETION, ACCEPTANCE, AND WARRANTY.

6-8.1 COMPLETION. **ADD** the following: "The project is considered certifiable for completion; when all liens and/or claims for labor, materials, tools and equipment has been paid for and all liens and/or claims releases are received by the CITY, when all contract items of work have been completed, including changes to the plan in an acceptable workmanship; when all repairs to damages of existing utilities, appurtenances and improvements has been completed and accepted by the respective owners; when all survey monuments and other survey markers has been re-set and copy of center line ties been submitted; when the project site and all ground occupied by the Contractor left in a neat and presentable

condition. The street must be swept, and shall not be washed with water. The Contractor prior to acceptance by the Engineer must complete all corrections noted in the "punch list".

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

6-8.1.1 MAINTENANCE AND GUARANTEE.

ADD the following SUBSECTION: "**6-8.1.1 MAINTENANCE AND GUARANTEE.**

1. The Contractor shall execute and deliver, before final payment, a written guarantee substantially in the form as set forth in Appendix A, attached hereto and incorporated herein by this reference, that labor and materials furnished and work performed are in accordance with the Contract Plans and Specifications. The Contractor also agrees to indemnify, protect, defend and hold the City, its officers, employees and agents harmless from claims of any kind arising from damage due to said defects. The Contractor shall make all repairs and replacements promptly upon receipt of written orders for same from the Engineer. If the Contractor fails to make the repairs and replacements within a week after being notified in writing, the City is hereby authorized to do the work and the Contractor and his/her surety shall be liable to the City for the cost thereof.
2. The guarantees and agreements set forth in SECTION 6-8 COMPLETION, ACCEPTANCE, AND WARRANTY shall be secured by a surety bond which shall be delivered by the Contractor to the City before the Notice of Completion and acceptance of the work by the City Engineer. Said bond shall be in the form approved by the City Attorney and executed by a surety company or companies satisfactory to the City in the amount of One Hundred Percent (100%) of the Contract. Said bond shall remain in force for a period of one (1) year after the date of Notice of Completion and acceptance. Alternatively, the Contractor may provide for the Faithful Performance Bond furnished under the Contract to remain in force and effect for said amount until the expiration of said one-year period."

6-8.2 ACCEPTANCE. **ADD** the following: "The Engineer makes the final decision on questions regarding the Contract, including:

- Work quality and acceptability
- Manner of performance of the work
- Drawing and specification interpretation
- Contract fulfillment
- Time and progress rate
- Measurement and payment

The Engineer has the authority to enforce or fulfill an order that the Contractor fails to fulfill promptly. Failure to enforce a Contract part does not waive enforcement of any Contract provision."

6-9 LIQUIDATED DAMAGES.

DELETE the SECTION in its ENTIRETY and **REPLACE** with the following: "Failure of the Contractor to complete the Work within the time allowed will result in damages being sustained by the Agency. Liquidated damages shall accrue starting on the 1st day after expiration of the working days through the day of Contract acceptance. The City of Cypress shall specify the amount for liquidated damages, as allowed per Public Contracts Code §10226. For each consecutive calendar day in excess of the time specified for the completion of Work, as adjusted in accordance with SECTION 6-6 DELAYS AND EXTENSIONS OF TIME, the Contractor shall pay to the Agency, or have withheld from monies due it, the amount specified in Table 6-9 (A), unless otherwise provided in the Specifications.

Execution of the Contract shall constitute agreement by the Agency and Contractor that the amount specified in Table 6-9 (A) is the minimum value of the costs and actual damage caused by the failure of Contractor to complete the Work within the allotted time. Such sum is liquidated damages and shall not be construed as a

penalty, and may be deducted from payments due the Contractor if such delay occurs. The Department may withhold liquidated damages before the accrual date if the anticipated liquidated damages may exceed the value of the remaining work.

Liquidated damages for all work except plant establishment are as shown in the following table:

TABLE 6-9 (A)

TOTAL BID		Liquidated Damages per day
FROM	TO	
\$0	\$50,000	\$ 1,200
\$50,001	\$120,000	\$ 1,500
\$120,001	\$1,000,000	\$ 1,900
\$1,000,001	\$5,000,000	\$ 3,000
\$5,000,001	\$10,000,000	\$ 5,400
\$10,000,001	\$30,000,000	\$ 8,300

In accordance with Government Code Section 4215, the Contractor shall not be assessed liquidated damages for any delay in completion of the project if such delay is caused by failure of the City to provide for removal or relocation of existing utility facilities. Contractor shall further not be assessed any liquidated damages during any delay in the completion of the work caused by acts of God or of the public enemy, acts of the state, fire not due to acts of the Contractor or subcontractors, floods, epidemics, quarantine, restrictions, strikes, freight embargo or unusually severe weather or delays of subcontractors due to such causes, provided that the Contractor shall within ten (10) days from the beginning of such delay notify the City, in writing, of the cause of the delay. The City will ascertain the facts and the extent of the delay, and its finding thereon shall be final and conclusive.”

6-9.1 FAILURE TO COMPLETE WORK PARTS WITHIN SPECIFIED TIMES.

ADD the following SUBSECTION: **“6-9.1 FAILURE TO COMPLETE WORK PARTS WITHIN SPECIFIED TIMES:** The Department may deduct specified damages from payments for each day in completing a work part beyond the time specified for completing the work part.

Damages for untimely completion of work parts may not be equal to the daily amount specified as liquidated damages for the project as a whole, but the Department does not simultaneously assess damages for untimely completion of work parts and for the whole work.

Damages accrue starting the 1st day after a work part exceeds the specified time through the day the specified work part is complete.”

6-9.2 FAILURE TO COMPLETE WORK PARTS BY SPECIFIED DATES.

ADD the following SUBSECTION: **“6-9.2 FAILURE TO COMPLETE WORK PARTS BY SPECIFIED DATES:** The Department may deduct specified damages from payments for each day in completing a work part beyond the specified completion date for the work part.

Damages for untimely work part completion may not be equal to the daily amount specified as liquidated damages for the project as a whole, but the Department does not simultaneously assess damages for untimely work part completion and the whole work.

Damages accrue starting the 1st day after an unmet completion date through the day the work part is complete.”

6-9.3 DIRECTOR DAYS.

ADD the following SUBSECTION: **“6-9.3 DIRECTOR DAYS:** If the work is not completed within the working days, the Director may grant Director Days if it serves the City’s best interest.

By granting Director Days, the Director adds working days to the Contract. The Director may either grant enough days to eliminate the liquidated damages or fewer. In the latter case, the Department deducts liquidated damages for the remaining overrun in Contract time. The Director may deduct the Department's engineering, inspection, and overhead costs incurred during the period of extension granted as Director Days."

6-9.4 LIQUIDATED DAMAGES FOR CONSTRUCTION DEFICIENCIES.

ADD the following SUBSECTION: "**LIQUIDATED DAMAGES FOR CONSTRUCTION DEFICIENCIES:** Failure of the Contractor to construct the Work in accordance with the Contract Documents and/or constructing the Work with defects that cannot feasibly be repaired and/or reconstructed to meet the requirements of the Contract Documents, will result in damages being sustained by the Agency. For defects that result in increased maintenance costs, the Contractor shall pay to the Agency, or have withheld from monies due it, the sum of the increased maintenance, material, equipment, and labor costs over the design life of the defective item, which shall include a 2.0% annual increase to account for future inflation. The minimum design life for underground infrastructure and buildings and facilities is fifty (50) years, unless otherwise specified. All other items shall have a minimum design life of ten (10) years or per the manufacturers specifications, whichever is longer. The minimum amount to be assessed for each unfeasibly, irreparable defect shall be \$10,000 per occurrence.

For sewer projects, each individual offset joint counts as one occurrence and damages shall be assessed at a rate of \$10,000 per occurrence.

Execution of the Contract shall constitute agreement by the Agency and Contractor that the amount specified hereinbefore is the minimum value of the costs and actual damage caused by the failure of Contractor to complete the Work in accordance with the Contract Documents. Such sum is liquidated damages and shall not be construed as a penalty, and may be deducted from payments due the Contractor if such defect occurs."

SECTION 7 – RESPONSIBILITIES OF THE CONTRACTOR

7-1 THE CONTRACTOR'S EQUIPMENT AND FACILITIES.

7-1.1 GENERAL.

7-1.1.1 ADVANCE NOTIFICATION.

ADD the following SUBSECTION: "**7-1.1.1 ADVANCE NOTIFICATION.** It shall be the Contractor's responsibility to determine and notify those agencies requiring advance notification, for inspection or other purposes, before beginning construction in any area of concern to said agency. A minimum of forty-eight (48) hours advance notice shall be given to the various agencies before beginning construction in the area, unless specific advance times and requirements are stated in these detailed specifications or required by the Agency.

The following entities shall be notified at least seventy-two (72) hours in advance of any street closure or restriction to access by the Contractor. Coordination of established service schedules will be available to the Contractor at the pre-construction meeting.

- | | |
|---------------------------------------|----------------|
| 1. Cypress Engineering Division | (714) 229-6740 |
| 2. Fire Department | (714) 744-0400 |
| 3. Police Department | (714) 229-6600 |
| 4. Disposal Company | (714) 527-4221 |
| 5. Post Office | (714) 828-2274 |
| 6. Cypress School District | (714) 220-6900 |
| 7. Ambulance Services (Medix) | (714) 634-2671 |
| 8. Anaheim Union High School District | (714) 999-3555 |
| 9. OCTA Detour Coordinator | (714) 265-4330 |

And, any others that are determined by the City Engineer, as necessary to be notified."

7-1.2 TEMPORARY UTILITY SERVICES.

7-1.2.1 UNDERGROUND SERVICE ALERT NOTIFICATION.

ADD the following SUBSECTION: "**7-1.2.1 UNDERGROUND SERVICE ALERT NOTIFICATION.** Except in an emergency, Contractor shall contact Underground Service Alert at least two (2) working days, but not more than fourteen (14) calendar days prior to commencing any excavation if the excavation will be conducted in an area which is known, or reasonably should be known, to contain subsurface installations, including underground facilities, and obtain an inquiry identification number from that notification center. Do not commence excavation without a current inquiry identification number assigned to the Contractor or any subcontractor and until the Engineer has been given the number by the Contractor. Comply with all applicable laws and regulations in locating subsurface installations and in excavating.

An emergency is defined as a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. An emergency includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage.

Subsurface installation means any underground pipeline, conduit, duct, wire or other structure."

7-2 LABOR.

7-2.2 PREVAILING WAGES. ADD the following: "Prevailing wage rates shall apply to all public contracts unless otherwise stated in the project's bid documents and project specifications.

In accordance with the provisions of Section 1770, et.seq., of the Labor Code, the Director of the Department of Industrial Relations of the State of California has ascertained the general prevailing rate of wages applicable to the work to be done under contract for public improvement. The Contractor will be required to pay to all those employed on the project sums not less than the sums set forth in the documents entitled, General Prevailing Wage Determination, made by the Director of Industrial Relations pursuant to California Labor Code, Part 7, Chapter 1, Article 2, Sections 1770, 1773 and 1773.1.

A copy of said documents is on file and may be inspected in the office of the City Engineer. The Contractor shall post a copy of the prevailing wage rates at each job site."

7-2.3 PAYROLL RECORDS. ADD the following: "The Contractor and subcontractors shall maintain all certified payroll records in accordance with the requirements of Labor Code Section 1776."

7-2.5 SOCIAL SECURITY REQUIREMENTS.

ADD the following SUBSECTION: "**7-2.5 SOCIAL SECURITY REQUIREMENTS.** The Contractor shall furnish to the City satisfactory evidence that he and all subcontractors working for him are complying with all requirements of the Federal and State Social Security legislation. The Contractor, at any time on request, shall satisfy the City that the Social Security and Withholding Tax are being properly reported and paid."

7-2.6 PENALTIES.

ADD the following SUBSECTION: "**7-2.6 PENALTIES.** The Contractor shall comply with Labor Code Section 1775 and he shall forfeit, as a penalty to the City, the sum of Twenty-Five Dollars (\$25) for each calendar day or portion thereof during which the Contractor or any subcontractor under him has paid to any workman employed in the project an amount less than that required by the provisions of SECTION 7-2.2 PREVAILING WAGES."

7-2.7 WORKING HOURS.

ADD the following SUBSECTION: "**7-2.7 WORKING HOURS.** The Contractor shall forfeit, as penalty to the City, the sum of Twenty-Five Dollars (\$25) for each workman employed in the execution of the contract by him or by any subcontractor under him for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week, in violation of the provisions of Article 3, Chapter 1, Part 7, Division 2 of the Labor Code (Section 1810, et. seq.)."

7-2.8 APPRENTICES.

ADD the following SUBSECTION: "**7-2.8 APPRENTICES.** Attention is directed to the provisions of Sections 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under him. The Contractor and any subcontractor under him shall comply with the requirements of said sections in the employment of apprentices.

Information relative to apprenticeship standards and administration of the apprenticeship program may be obtained from the Department of Industrial Relations, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices."

7-2.9 COMPLIANCE MONITORING AND ENFORCEMENT.

ADD the following SUBSECTION: "**7-2.9 COMPLIANCE MONITORING AND ENFORCEMENT.** Any contract with the City for any public improvement shall be subject to compliance monitoring and enforcement by the DIR in accordance with Section 1174.4 of the Labor Code."

7-3 INSURANCE.

7-3.5 ADDITIONAL INSURANCE REQUIREMENTS.

ADD the following SUBSECTION: "**7-3.5 ADDITIONAL INSURANCE REQUIREMENTS.** The Contractor shall not commence any work under this contract until he has secured all insurance required by this section, nor shall he allow any subcontractor to commence work on any subcontract until all similar insurance required of the subcontractor has been obtained.

In accordance with Section 3700 of the California Labor Code, the Contractor shall (i) maintain adequate Worker's Compensation insurance under the laws of the State of California for all labor employed by him or any subcontractor under him, or (ii) secure from the Director of Industrial Relations a certificate to self insure such labor, when such labor comes within the protection of such Worker's Compensation insurance laws.

Contractor shall, at his sole expense, maintain in effect at all times during the performance of the contract work at least the following insurance coverage:

- 1. Workers' Compensation:** A program of Workers' Compensation insurance or state-approved Self-Insurance Program in an amount, form and as broad as to meet all applicable requirements of the Labor Code of the State of California, including Employer's Liability with a minimum limit of one million dollars (\$1,000,000) per occurrence and two million dollars (\$2,000,000) aggregate, covering all persons providing services on behalf of the Contractor and all risks to such persons under this agreement. Should the contractor be self employed, he must certify under section 3800 of the California Labor Code, the performance of the work for which this Contract is issued is without employing any person in any manner so as to become subject to the Workers' Compensation Laws of California.
- 2. Commercial General and Automobile Liability:** This coverage shall include contractual coverage and automobile liability coverage for any, owned, hired, and non-owned vehicles. The policy shall have limits for bodily injury, and property damage of not less than one million dollars (\$1,000,000) per occurrence and two million dollars (\$2,000,000) aggregate. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the work or services performed under this Contract, or the general aggregate limit shall be twice the required occurrence limit. Said insurance coverage shall be at least as broad as

Insurance Services Office Commercial General Liability coverage ("Occurrence" Form CG 0001 1188) and/or Insurance Services Office form number GL 0002 (Ed. 1/73) covering Comprehensive General Liability and Insurance Services Office form number 0404 covering Broad Form Comprehensive General Liability; Insurance Services Office Business Auto Coverage form number CA 0001 0187 covering Automobile Liability, code 1 "any auto" and endorsement CA 0029 1288 Changes in Business Auto and Truckers Coverage forms - Insured Contract.

3. **Acceptability of Insurers:** Insurance is to be placed with insurers with a Best's rating of no less than A+VII.
4. **Deductibles and Self Insured Retentions:** Any deductibles or self insured retentions must be declared to and approved by the City. At the option of the City, either: the insurer shall reduce or eliminate such deductibles or self insured retentions as respects the City, its officers, officials, employees and volunteers or the contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.
5. **City as Named Insureds:** All policies, except for the Workers' Compensation coverage shall contain additional endorsements covering City and its officer's agents, employees, and volunteers, as named insureds under the policies with respect to liabilities arising out of the performance of services hereunder.
6. **Subcontractors:** Contractor shall include all subcontractors as insured under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for the subcontractors shall be subject to all of the requirements stated herein.
7. **Waiver of Subrogation Rights:** Contractor shall require the carriers of the above-required coverage to waive all rights of subrogation against City, its officers, employees, volunteers, agents, contractors, and subcontractors.
8. **Policies Primary and Non-contributory:** All insurance policies required above are to be primary and non-contributory with any insurance or self-insurance programs carried or administered by City.
9. **Reporting Provisions:** Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the City, its officers, officials, employees, or volunteers.
10. **Application of Contractor's Insurance:** The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought except with respect to the limits of the insurer's liability.
11. **Verification of Coverage:** Contractor shall immediately furnish certificates of insurance to City evidencing the insurance coverage above required prior to the commencement of performance of services hereunder. All certificates and endorsements should list the City's proper name as follows: City of Cypress/Cypress Recreation and Parks District. These certificates shall provide that such insurance shall not be terminated or expire without 30 days written notice to the City. The Contractor agrees that if Contractor commences work under this contract without first providing City copies of the required insurance certificates, that Contractor does so at his own and sole risk. In the event Contractor's insurance certificates are not provided, City shall have no obligations to compensate Contractor for such work unless Contractor possesses a Notice to Proceed from City for this work. The City may request certified copies of the policies and endorsements within sixty (60) days of the commencement of this Contract. Failure to submit such policies shall constitute a material breach of this Contract entitling City to any and all remedies at law or in equity, including summary termination of this Contract.
12. **Insurance Review:** The above insurance requirements shall be subject to periodic review by City. City is authorized, but not required, to reduce or waive any of the above insurance requirements whenever City determines that any of the above insurance is not available, is unreasonably priced, or

is not needed to protect the interests of the City. In addition, if the City determines that heretofore unreasonably priced or unavailable types of insurance coverage or coverage limits become reasonably priced or available, City is authorized, but not required to change the above insurance requirements to require additional types of insurance coverage or higher coverage limits, provided that any such change is reasonable in light of past claims against City, inflation, or any other item reasonably related to City's risk.

Any such reduction or waiver for the entire term of the Contract and any change requiring additional types of insurance coverage or higher coverage limits must be made by amendment to this Contract. Contractor agrees to execute any such amendment within thirty (30) days of receipt of Notice from the City.

All policies shall contain the following: (i) a provision or endorsement naming the City, including the City's officers, agents, consultants, employees, and engineer as additionally-named insureds with respect to liabilities arising out of acts or omissions caused by the sole negligence of the Contractor or those working under him in the performance of the contract work, (ii) a provision or endorsement holding the City, including the City's officers, agents, consultants, employees and engineer harmless from any claims or damages arising from such acts or omissions and stating that the City, including the City's officers, agents, consultants, employees and engineer, will be defended from any such claims; (iii) a provision or endorsement that such insurance is primary insurance of said additionally-named insureds with respect to such liabilities, and that with respect to such liabilities, any other insurance maintained by said additional insureds is excess and not contributing insurance with respect to the insurance required hereunder; (iv) a provision or endorsement limiting any exclusion regarding loss or damage to property caused by explosion or resulting from collapse of buildings or structures or damage to property underground, commonly referred to as "XCU" hazards; (v) a provision or endorsement stating that such insurance shall be maintained in full force and effect until acceptance of the contract work; and (vi) a provision or endorsement providing that such insurance shall not be terminated, canceled, reduced or allowed to expire except upon thirty (30) days prior written notice to City.

Promptly upon execution of the contract and prior to commencement of any work, Contractor shall furnish the City certificates of insurance covering all policies providing the insurance required hereunder. Such certificates shall be on the form provided by City and signed on behalf of the insurer by an authorized representative thereof, with his signature being notarized.

Contractor agrees, upon written request, to furnish City with copies of all required policies, certified by an authorized representative of the insurer. All insurance issued under the provisions of this section shall be issued in the form of and by insurance organizations approved by the City, prior to commencement of the work hereunder."

7-5 PERMITS.

ADD the following SUBSECTION: "The Contractor and all subcontractors shall obtain and maintain a valid City business license. The Contractor shall also obtain a no-fee "Public Right-of-Way Construction and Encroachment Permit" from the City's Public Works Department. Both the permit and the license shall be valid for the entire construction period and shall be kept at the job site at all times. Any costs incurred due to compliance with the permit or in obtaining a City business license or any other required permit or license shall be included in the contract cost for the work item involved and no additional payment will be made. Failure to comply with these specific licensing and permit requirements will result in withholding of the Notice to Proceed and/or any progress payment(s) to the Contractor."

7-5.1 NPDES PERMIT.

ADD the following SUBSECTION: "**7-5.1 NPDES PERMIT.** In order to control pollution discharge from the project, this project shall incorporate measures as specified in the City of Cypress National Pollution Discharge Elimination System (NPDES) Local Implementation Plan and County of Orange Drainage Area Management Plan (DAMP) July 2003, and all subsequent revisions. This may include preparation of a Water Quality Management Plan and Stormwater Pollution Prevention Plan for this project. Examples of Best Management Practices (BMPs) and control measures are included in the County of Orange

Drainage Area Management Plan and in the California Storm Water Best Management Practice Handbook Construction/Industrial/ Commercial.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES WATER QUALITY ORDER NO. 2009-0009-DWQ.

On September 2, 2009, the State Water Resources Control Board adopted Order No. 2009-0009-DWQ (Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activities and Land Disturbance Activities). Effective July 1, 2010, all discharges (construction sites where calculated soil disturbance totals 1 acre or more) are required to obtain coverage and comply with this Construction General Permit (CGP).

A copy of this permit and related documents/attachments may be found on the internet at:

http://www.swrcb.ca.gov/water_issues/programs/stormwater/constpermits.shtml

The CONTRACTOR is hereby directed to read and understand all the requirements of this Permit as they related to this project.

Prior to commencing work, the CONTRACTOR shall electronically submit the required PRDs (Permit Registration Documents) to the ENGINEER. If any of the required items are missing, the PRD submittal is considered incomplete and will be rejected. Upon receipt and acceptance of a complete PRD submittal, the ENGINEER will electronically submit these documents through the Stormwater Multi-Application, Reporting and Tracking System (SMARTS) to the State Water Resources Control Board (SWRCB) to obtain coverage under the CGP. The CONTRACTOR is also responsible for payment of initial and annual fees required for coverage under the CGP.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP).

The CONTRACTOR will need to submit a site-specific SWPPP, prepared by a Qualified SWPPP Developer (QSD) as defined by the CGP, which must include the information needed to demonstrate compliance with all the requirements of the CGP, for review, approval, and certification by the City of Cypress prior to submittal of the PRDs (the SWPPP is a required component of the PRD electronic submittal package).

NO CONSTRUCTION ACTIVITY CAN BE ALLOWED UNTIL THE CITY OF CYPRESS HAS RECEIVED A WDID NUMBER FROM THE SWRCB (Note: CIP projects in the Santa Ana Region will receive a tracking number, not a WDID number)

The SWPPP shall be developed and updated using Section 2 and Appendix B of the California Stormwater Quality Association (CASQA) Stormwater Best Management Practice Handbook Web Portal for Construction (requires subscription to access). The CASQA Construction BMP Web Portal required a subscription to be purchased from CASQA and can be accessed at the following link:

<https://www.casqa.org/LeftNavigation/BMPHandbooksPortal/tabid/200/Default.aspx>

The CONTRACTOR must amend the SWPPP as needed during the course of work to reflect actual construction progress and construction practices. The CONTRACTOR shall designate a Qualified SWPPP Practitioner (QSP), as defined by the CGP, who will be responsible for compliance with CGP requirements on the project at all times.

The SWPPP shall not be construed to be a waiver of the CONTRACTOR's obligation to review and understand the CGP before submitting a bid. By submitting a bid, the CONTRACTOR acknowledges that he has read and understands the requirements of the CGP.

REPORTING.

The CONTRACTOR shall be responsible for providing all reports required by the CGP (monitoring, inspection, Rain Event Action Plans, annual reports, etc.) to the City of Cypress for review. Time sensitive reports involving monitoring data shall be provided as soon as the information is available. All other reports shall be provided to the City of Cypress a minimum of two weeks prior to their deadline for submittal to the SWRCB through SMARTS."

7-5.2 STORM WATER POLLUTION PREVENTION PLAN (SWPPP).

ADD the following SUBSECTION: "**7-5.2 STORM WATER POLLUTION PREVENTION PLAN (SWPPP).** The CONTRACTOR shall develop a Storm Water Pollution Prevention Plan (SWPPP) as required by the Construction General Permit (CGP) described within Section D "Permits". The SWPPP shall be developed, amended, and certified by a Qualified SWPPP Developer. A Qualified SWPPP Developer shall have one of the registrations or certifications listed in Section VII.B.1 of the CGP, and effective September 2, 2011, must have attended a State Water Board-sponsored or approved Qualified SWPPP Developer training Course and passed the exam.

The SWPPP shall be developed and updated using Section 2 and Appendix B of the California Stormwater Quality Association (CASQA) Stormwater Best Management Practice Handbook Web Portal for Construction (requires subscription to access). The CASQA Construction BMP Web Portal requires a subscription to be purchased from CASQA and can be accessed at the following link:

<http://www.casqa.org/LeftNavigation/BMPHandbooksPortal/tabid/200/Default.aspx>

The CONTRACTOR shall implement, maintain, and amend the SWPPP as needed during the course of work to reflect actual construction progress and construction practices. The CONTRACTOR shall designate a Qualified SWPPP Practitioner (QSP), as defined by the CGP, who will be responsible for compliance with CGP requirements for the PROJECT at all times.

The CONTRACTOR shall be responsible for and shall submit to the ENGINEER copies of all CONTRACTOR generated SWPPP documents, including all sampling test results, inspection reports, Rain Event Action Plans (REAP), annual reports, and other time sensitive documents involving monitoring data. Such documentation shall be provided as soon as the information is made available and shall be provided within twenty-four (24) hours when requested by the ENGINEER. The CONTRACTOR shall be required to produce such data and documentation at the PROJECT site on demand if so requested by Santa Ana Regional Water Quality Control Board Staff during a site inspection.

Full compensation for conforming to the requirements of CONSTRUCTION GENERAL PERMIT (CGP) shall include, but not be limited to, the following:

1. Submit Permit Registration Documents (PRDs) per Attachment B of the CGP to the ENGINEER.
2. Develop a SWPPP to conform to a Risk Level One and the CONTRACTOR's actual construction practices;
3. Administer, implement, maintain, and ensure adequate functioning of the various water quality control measures identified within the SWPPP during construction including all Numeric Action Level (NAL) and Numeric Effluent Limitation (NEL) sampling, monitoring and reporting requirements statutorily required for the determined Risk Level of the PROJECT site. These tasks must be performed by Qualified SWPPP Practitioner (QSP). Effective on September 2, 2011, a QSP shall meet the requirements listed in the CGP.
4. Pay all annual permit and registration fees;
5. Provide and maintain all documentation (at the jobsite) and administration for the entire CONTRACT period;
6. Perform all work required for compliance with the requirements of the CGP including preparation of all Rain Event Action Plans (REAPs), construction of effective treatment control BMPs, i.e: contingency basins, chemical treatments, etc.;

7. Provide all labor, tools, equipments, and materials for any additional BMPs which may be required to comply with the requirements of the CGP.

And shall be considered as included in the AGREEMENT LUMP SUM price paid for SWPPP and no additional compensation will be allowed therefor.

NPDES SPECIAL PROVISION FOR DRAINAGE INLET PROTECTION

1. Contractor shall place sandbags with filter fabric at all catch basins within the project site during construction. Contractor will be responsible for the ongoing monitoring and implement necessary measures to prevent flooding in the event of predicted rainfall. Contractor shall also be responsible for removal of sandbags and filters at the conclusion of the work week and replacement once the new work week begins.

Failure to update, implement and maintain the SWPPP will result in withholding of any progress payment(s) to the Contractor. Contractor will also be responsible for any enforcement actions and penalties enacted on the City by the State Water Resources Control Board, Regional Water Quality Control Board, and/or any other agency due to Contractor's non-compliance with applicable water pollution regulations. Progress payments and/or final payments may be withheld to cover enforcement liabilities which include, but are not limited to, maximum financial penalties, legal costs, staff costs, and economic savings from violations and/or costs associated with corrective actions as required by enforcing agency.

Payment for complying with the requirements of this section shall be included in the appurtenant bid items of the proposal. No additional payment shall be allowed, thereto, under any circumstance, unless otherwise authorized by the City."

7-5.3 TRENCHING OPERATIONS REQUIREMENTS.

ADD the following SUBSECTION: "**7-5.3 TRENCHING OPERATIONS REQUIREMENTS.** Title 8, Code of California Regulations," Chapter 3.2, Section 341, Article 2 requires a permit for trenches five feet (5') or more in depth. The CITY will not issue a permit for trenching operations under this Contract. The Contractor, prior to beginning construction, shall obtain from CAL-OSHA a permit authorizing said construction.

The original permits and the City business license shall be valid for the entire construction period and shall be kept at the job site at all times. All provisions of these permits shall apply and shall have authority over any conditions contained herein these Special Provisions. Any costs incurred due to compliance with these permits or in obtaining a city business license or any other required permit or license shall be included in the contract cost for the work item involved and no additional payment will be made. Failure to comply with these specific licensing and permit requirements will result in withholding of any progress payment(s) to the Contractor."

7-6 THE CONTRACTOR'S REPRESENTATIVE.

ADD the following: "Contractor shall notify in writing any changes in superintendent, foreman, and/or project manager to the City prior to change taking place a minimum of 72 hours in advance.

Contractor shall have a foreman on site at all times during construction. No work shall take place without a foreman present at the job site."

7-6.1 CHARACTER OF WORKMAN.

ADD the following SUBSECTION: "**7-6.1 CHARACTER OF WORKMAN.** The Contractor shall employ none but competent foreman, laborers, and mechanics. Any overseer, superintendent, laborer, or other person employed on the work by the Contractor who is intemperate, incompetent, troublesome, or

otherwise undesirable, or who fails, or refuses to perform the work in the manner specified herein, shall be discharged immediately, and such person shall not again be employed on the work."

7-6.2 AGENTS OR FOREMAN.

ADD the following SUBSECTION: "**7-6.2 AGENTS OR FOREMAN.** In the absence of the Contractor from the site of the project, even if such is only of a temporary duration, he must provide and leave at the site a competent and reliable English-speaking agent or foreman in charge. All notices, communications, order or instructions given, sent to or served upon such agent or foreman by the City Engineer shall be considered as having been served upon the Contractor."

7-6.3 NIGHTS AND WEEKENDS.

ADD the following SUBSECTION: "**7-6.3 NIGHTS AND WEEKENDS.** The Contractor shall keep the City informed of the names and telephone numbers of the responsible persons in the employ of the Contractor who may be contacted at nights and on weekends by the City when problems related to construction occur, and such designated person shall have full authority to act as the agent of the Contractor and make any decisions that may be demanded by the situation."

7-8 WORK SITE MAINTENANCE.

ADD the following: "The Contractor shall maintain a neat appearance to the work site. Neat appearance shall include clean up of all debris that may be generated from trucks and equipment using the approved Haul Route. Asphalt concrete, aggregate base, broken PC concrete, native soil, and debris developed during construction shall be disposed of concurrently within its removal. If stockpiling is necessary, the material shall be removed or disposed of weekly.

The Contractor shall maintain the job site in a clean and safe condition. The Contractor will remove any broken concrete, debris or other deleterious material from the job site at the end of each workday.

Dust caused by the passage of public traffic through the work shall be considered as resulting from the Contractor's performance of work. The Contractor is responsible for abating dust caused by his operation in accordance with Sections 7-8.1 & 7-8.2.

Payment for complying with the requirements of this section shall be included in the appurtenant bid items of the proposal. No additional payment shall be allowed, thereto, under any circumstance, unless otherwise authorized by the City."

7-8.2 AIR POLLUTION CONTROL. **ADD** the following: "Contractor shall comply with all air pollution control rules, regulations, ordinances and statutes. All containers of paint, thinner, curing compound, solvent or liquid asphalt shall be labeled to indicate the contents fully comply with the applicable material requirements."

7-8.5 SANITARY SEWERS.

7-8.5.2 SEWER BYPASS AND PUMPING PLAN. **ADD** the following: "The flow of sewage shall not be interrupted. The Contractor is required to maintain sewer flows during the construction of the sewer lines. All the Contractor's work shall be done in compliance with the CITY OF CYPRESS NPDES Storm Water Permit Local Implementation Plan. Contractor shall submit the following items for each phase or operation within 15 days after receiving the Notice to Proceed:

- Sewage bypass pipe material and fittings.
- Plans showing details of proposed method of temporary handling of sewage flow, routing and protection of bypass lines, containment areas, equipment location, schematic of pump set-up and discharge, and proposed sequencing.
- Pump characteristic curves, electrical, controls, and instrumentation.
- Spill Prevention, Control, and Countermeasure plan

The Contractor shall prepare and submit a spill prevention, control and countermeasure plan that is consistent with and meets the objectives of the Local Implementation Plan and the CITY's EMERGENCY OVERFLOW RESPONSE PLAN and incorporates the following, for each phase of the work:

Specifics shall include as applicable, but are not limited to:

- 1) Pipe patch kits**
- 2) Sand bags**
- 3) Rubber matting**
- 4) Bypass pipes, pumps, and other relevant equipment**
- 5) Extra pumps**
- 6) Secondary containment in trench or other surrounding land relief**

The spill prevention, control and countermeasure plan shall be approved by the Engineer before excavation for the sewer construction will be permitted to start. The Contractor is responsible for the implementation of said plan.

The Contractor shall have adequate standby equipment available and ready for immediate operation and use in the event of an emergency or breakdown.

It is essential to the operation of the existing system being bypassed that no interruptions in the flow occur throughout the duration of the project.

The installation and operation of the temporary pumping system shall be the Contractor's responsibility. The bypass system shall meet the requirements of all codes and regulatory agencies having jurisdiction. The Contractor shall divert the flow around the work area in manner that will not cause damage to, or surcharging of customers system and will protect public and private property from damage and flooding. Contractor shall inspect bypass pumping system on a continuous basis to ensure the system is working correctly.

In the event the Contractor elects to use engine driven pumps, the engines shall be muffled in such a manner that the maximum noise level will not exceed 80 dBA at a distance of five feet from the engine. Standby pumping equipment shall be onsite continuously during pumping to provide 100 percent standby pumping capacity.

Contractor shall provide a responsible tendor to monitor the bypass system. The Contractor shall ensure the temporary pumping system is properly maintained and a responsible operator shall be on hand on a 24-hour basis.. One backup pump for each size pump utilized shall be installed at the mainline flow bypassing locations, ready for use and able to handle up to 125 percent pumping capacity in the event of primary pump failure. Redundant piping will not be required.

Temporary plugs shall be a heavy-duty inflatable type with a steel rod through plug centerline, a retaining plate and an eye-lift on both ends. Plugs shall be new, made of natural rubber and shall show no cracks or signs of damage. The plugs shall have a flexible sealing design to compensate for any irregular interior surface of the pipe.

Under no circumstances shall sewage be deposited onto the ground surface, streets, or into gutters, ditches, catch basins or storm drains or natural drainage ways. Sewage shall be handled in accordance with the approved Spill Prevention, Control and Countermeasure Plan and in a manner so as not to create a public nuisance, health hazard, or odor complaint

The Contractor shall be responsible for continuity of sanitary sewer service to each facility connected to the sewers during the execution of the work to be performed under this Contract. In the event that sewage backup or odors occur and enters dwellings, other structures, or affect the public, the Contractor shall be responsible for cleanup, repair, property damage costs, fines

imposed by jurisdictional authorities, and all claims arising therefore. All spills shall be contained and cleaned up in accordance with the approved Spill Prevention, Control and Countermeasure Plan, and the Emergency Overflow Response Plan.

Water Service Interruption

Although it is not specifically anticipated, in the event that a water mainline or service lateral is affected by the Contractor's work, the Contractor shall coordinate with Golden State Water Company in advance of the need for a water service shut down. The Contractor shall then notify all of the affected residents and business owners both two working days prior to the disruption and two hours prior to the disruption of any water service.

Payment for complying with the requirements of this section shall be included in the appurtenant bid items of the proposal. No additional payment shall be allowed, thereto, under any circumstance, unless otherwise authorized by the City."

7-8.6 WATER POLLUTION CONTROL. ADD the following: "The Contractor shall use all care possible to prevent siltation and other pollution of waters during and after construction. Prohibited practices include, but are not limited to:

1. Dumping of spoil material into storm drain systems.
2. Operating of equipment in streams.
3. Pumping of silt-laden water from trenches or other excavations into storm drains.
4. Disposing of trees, brush and other debris into storm drains.
5. Altering of stream and drainage flow lines.

The Contractor shall take sufficient precautions and institute best management practices as necessary to minimize runoff due to construction in order to prevent the discharge of polluting substances such as silts, clays, fuels, oils, bitumens, calcium chloride, or any other substance or material that is harmful to humans, fish or any other life, into the water supplies or surface waters of the State of California.

Surface runoff water, including all water used during sawcutting operations, containing mud, silt or other deleterious material due to the construction of this project shall be treated by filtration or retention in settling basin(s) sufficient to prevent such material from migrating into any catch basin. The Contractor shall also comply with the *Construction Runoff Guidance Manual* which is available for review at the Public Works Department or can be found on the City's website at:

<http://www.ci.cypress.ca.us>, or at

<https://cms.ocgov.com/gov/pw/watersheds/documents/bmp/constructionactivities.asp>

The Contractor shall comply with the requirements of the latest edition of Orange County Stormwater Program Construction Runoff Guidance Manual. The Contractor, prior to beginning construction, must have all Best Management Practices (BMP) required in place, and maintain them, and shall comply with the NPDES permits throughout the duration of construction."

7-8.6.2 BEST MANAGEMENT PRACTICES (BMPs).

7-8.6.2.1 BEST MANAGEMENT PRACTICES AND MONITORING PROGRAM.

ADD the following SUBSECTION: "**7-8.6.2.1 BEST MANAGEMENT PRACTICES AND MONITORING PROGRAM.** The Contractor shall comply with the requirements as specified in Section 8, Construction, of the County of Orange Drainage Area Management Plan (DAMP) at all times during construction of said project.

The Contractor shall not allow and shall prevent any non-stormwater discharges into the storm drain system. At a minimum, the Contractor shall implement the following best management practices as well as review those that may also be applicable to the Contractor's work. The Contractor shall either

purchase California Stormwater BMP Handbook available at <https://www.casqa.org/resources/bmp-handbooks/construction>. and/or download the applicable BMPs from:
<https://cms.ocgov.com/gov/pw/watersheds/documents/bmp/constructionactivities.asp>

The Contractor shall obtain a copy of this manual and have access to it all times and reference it whenever necessary during all phases of construction.

The Contractor shall keep a copy on site at all times. Failure to do so may result in issuance of fines and/or stoppage of work for failure to follow the appropriate BMPs. The Contractor shall also provide a copy of the BMPs at the Pre-Construction meeting for review and propose or delete BMPs that they think are either applicable or not applicable.

The following Best Management Practices as specified in Section 8 Construction of the County of Orange Drainage Area Management Plan (DAMP) shall be implemented by the Contractor during all phases of construction to prevent the occurrence of any non-stormwater discharge.

The Contractor shall be responsible for identifying those BMP's that are applicable to the project by checking off the designated BMP's in the list below. **The Contractor shall complete the BMP Checklist and BMP Self Certification Statement included in Appendix "B" herein and shall submit the subject documents to the City at the preconstruction meeting.** The Contractor will not be issued a Notice to Proceed until the BMP's are approved by the Public Works Department.

Payment for complying with the requirements of this section shall be included in the appurtenant bid items of the proposal. No additional payment shall be allowed, thereto, under any circumstance, unless otherwise authorized by the City."

7-8.6.2.2 TEMPORARY DRAINAGE MEASURES.

ADD the following SUBSECTION: **"7-8.6.2.2 TEMPORARY DRAINAGE MEASURES.** "The Contractor shall provide temporary drainage measures and erosion control for the duration of construction. The City may require that the Contractor's plans for the temporary drainage measures and erosion control be reviewed by a licensed civil engineer and also take into consideration any necessary mitigation measures for inclement weather and seasonal changes. Plans for temporary drainage measures shall be submitted to the City Engineer for approval at the pre-construction conference. Full compensation for meeting any of the requirements of this section and construction of any needed temporary drainage measures shall be considered as included in the prices for the various contract items of work and no additional compensation will be allowed therefore."

7-8.6.4 DEWATERING.

ADD the following: "It is anticipated that storm, surface, or ground water or other water may be encountered at various locations during the work and require dewatering. The Contractor, by submitting a bid, acknowledges that he has investigated the risks arising from surface, ground or other waters, and acknowledges that his bid was prepared assuming that water is present and the dewatering work will be conducted accordingly.

The Contractor, by submitting a bid, assumes all of the said risk, and payment for dewatering shall be considered as included in the various contract items of work for which dewatering is being done. No separate payment will be allowed, unless otherwise specified.

Contractor is required to obtain a Deminimus Permit from the Santa Ana – RWQCB. Contractor must provide proof of coverage to the CITY prior to the start of dewatering. The Contractor shall provide and maintain dewatering during construction in accordance with the requirements of the California Regional Water Quality Control Board (Santa Ana Region). The Contractor shall review and implement all BMPs that may be applicable to the Contractor's dewatering work, including the use of a Baker Tank, if necessary. See section 7-8.6, "Water Pollution Control" of these Special Provisions for additional requirements.

The Contractor shall provide and maintain ample means and devices with which to promptly remove and properly dispose of water entering the excavations or other parts of the work at all times during construction. Dewatering shall be accomplished by methods, which will ensure a dry excavation and preservation of the final lines and grades of the bottoms of excavations. The chosen method is subject to final approval by the Engineer, may include sump pumps, deep wells, well points, temporary pipelines and other means.

The Contractor shall dispose of the water from the work in accordance with the Water Pollution Control Act without damaging or soiling adjacent City or private property.

Water shall be disposed of in such a manner as not to be a menace to the public health and such disposal shall be performed in accordance with Environmental Protection Agency and State Water Quality Control Board Standards (NPDES permit). Any testing and reports required under the NPDES permit shall be performed by the Contractor and submitted to the appropriate agency and the Engineer for approval at no additional cost to the CITY.

Conveyance of the water shall not interfere with traffic flow or sewer treatment facilities operations. No water shall be drained into the work under construction without prior consent of the Engineer

The CONTRACTOR shall conduct his operation such that storm or other waters may proceed uninterrupted along their existing street or drainage courses. Diversion of water for short reaches to protect construction in progress will be permitted if in the opinion of the Engineer, public or private properties are not subject to damage. The Contractor shall obtain and submit to the CITY written permission from the applicable public agency or property owner before the Engineer will permit any diversion of water outside the right-of-way.

It shall be the Contractor's responsibility to control the surface water entering the work area at no additional cost to the CITY. The Contractor shall correct damage to the work area as the result of surface water at no cost to the CITY."

7-8.6.4.1 GENERAL.

ADD the following SUBSECTION: "**7-8.6.4.1 GENERAL.** Dewatering shall include, not limited to, flow monitoring, flow meters, well points, sump pumps, temporary pipelines for water disposal, pretreatment system, desilting tank, filters, and rock or gravel placement, and other means including standby pumping equipment maintained on the jobsite continuously.

WORK OF THIS SECTION

- Except as otherwise indicated in herein of the Specifications, the Contractor shall comply with the Standard Specifications for Public Works Construction, latest edition.
- The Contractor shall also obtain and comply with the provisions of NPDES Order No. R8-2009-0003 for dewatering operations required by the Regional Water Quality Control Board. The actual order and permit application has been included in the appendix of these specifications. The Contractor shall comply with all provisions of this permit including the effluent testing and reporting requirements.
- Storm, surface, or ground water or other water can be encountered at various locations during the work and require dewatering. By submitting a bid, the Contractor acknowledges that he has investigated the risks arising from surface, ground or other waters, and acknowledges that his bid was prepared that groundwater shall be present at all depths up to the ground surface and the dewatering work will be conducted accordingly.
- The Work of this Section includes site dewatering necessary to lower and control groundwater levels and hydrostatic pressures to permit excavation and construction to be performed properly under dry conditions. Groundwater may be encountered in all construction excavations for this project and shall be anticipated by the Contractor.

- Dewatering operations shall be adequate to assure the integrity of the finished project. The responsibility for conducting the dewatering operation in a manner which will protect adjacent structures and facilities rests solely with the Contractor. The cost of repairing any damage to adjacent structures and restoration of facilities shall be the responsibility of the Contractor.
- Effluent discharged from dewatering operations to the storm drain system shall comply with Order R8-2009-003 issued by the Santa Ana Regional Water Quality Control Board.
- The Contractor may not discharge effluent from dewatering operations to the sewer system without first verifying available sewer system capacity, and obtaining a discharge permit from the Orange County Sanitation District (OCSD). Contractor is responsible for obtaining this permit and paid the required fee. During the construction, Contractor shall record/monitor the amount of water discharging to the OCSD sewer system and the dewatering operation shall be in accordance with the OCSD special permit requirements.
- Water disposed from the work shall be in accordance with the Water Pollution Control Act without damaging or soiling adjacent City or private property.
- Water shall be disposed of in such a manner as not to be a menace to the public health and such disposal shall be performed in accordance with Environmental Protection Agency and State Water Quality Control Board Standards (NPDES permit). Any testing and reports required under the NPDES permit shall be performed by the CONTRACTOR and submitted to the appropriate agency and the Engineer for approval at no additional cost to the CITY.

SCHEDULE AND PLAN

The following shall be submitted in compliance with Section 2-5.3 of the SSPWC:

- Prior to commencement of excavation, a detailed plan and schedule, with description, for dewatering of excavations.
- Demonstration of proposed system and verification that adequate personnel, materials and equipment are readily available.
- Detailed plan and location of reference points and observation/monitoring wells to be constructed.
- Dewatering Plan shall be prepared and sealed by a California registered geotechnical professional engineer.
- Dewatering Plan submittal shall include a statement verifying that the dewatering plan designer has reviewed the shoring plans, considered the specified shoring design in preparation of the dewatering plan, and included its requirements in his plans.

CONTROL AND OPERATION

- Adequate control shall be maintained to ensure that the stability of excavated and constructed slopes are not adversely affected by water, that erosion is controlled and that flooding of excavation or damage to structures does not occur.
- Prepare and submit a monitoring program for all areas to be dewatered in accordance with the geotechnical investigation.

PERMITS

Discharges to the Storm Drain System

Dewatering operations are to be conducted in accordance with the Regional Water Quality Control Board (RWQCB), Santa Ana Region, Order No. R8-2009-0003, which has been included in the order. A copy of the order is included in the appendix of these specifications. The Contractor is responsible for obtaining a permit for this order and paying all associated fees. Supplemental information which may be required

(such as a geotechnical study) shall also be the responsibility of the Contractor, including all costs. The Contractor is responsible for complying with all provisions contained in this permit.

To be authorized to discharge under this order, the Contractor must submit a Notice-of-Intent (NOI), as described under Item II, Part A of the Order (pages 5 and 6). The Notice-of-Intent form to be submitted to the RWQCB is also contained in the appendix of these specifications. The NOI requires water quality data be submitted, along with the form. The Contractor is responsible for obtaining representative groundwater samples to be discharged, and having the samples analyzed for the pollutants of concern. The list of pollutants which are to be measured is included in the Order. The Contractor is responsible for obtaining the samples, and paying all costs associated with the required laboratory analysis.

The permit also requires regular monitoring and reporting to the RWQCB during dewatering operations. The Contractor is responsible for preparing and submitting these reports as well as performing laboratory analysis of samples at the intervals required by the permit. The Contractor is responsible for paying all costs associated with complying with the permit provisions, including laboratory costs. Constituents to be monitored and reported are listed in Order No. R8-2009-0003, included in the appendix of these specifications.

The RWQCB requires a minimum of 60 days to process a NOI application. The Contractor must account for this time when developing their schedule for the project. Further, the RWQCB charges fee for issuing the NPDES permit. The Contractor is responsible for verifying the required fee and paying the fee.

Discharges to the Sewer System

As an option, the Contractor may pursue obtaining a permit from OCSD for discharging the dewatering effluent to the sewer. The Contractor is responsible for determining if adequate sewer capacity is available for the discharge, and securing all necessary permits and approvals. The Contractor is responsible for paying all fees and providing all information required to obtain the permit and compliance with all of its provisions."

7-8.6.4.2 EXECUTION.

ADD the following SUBSECTION: "7-8.6.4.2 EXECUTION.

EXECUTION

- Dewatering shall be performed in compliance with Subsection 306-5 of SSPWC and as specified herein.
- Conveyance of the water shall not interfere with traffic flow or sewer treatment facilities operations. No water shall be drained into the work under construction without prior consent of the Engineer.
- The Contractor shall provide and maintain ample means and devices with which to promptly remove and properly dispose of water entering the excavations or other parts of the work at all times during construction. Dewatering shall be accomplished by methods, which will ensure a dry excavation and preservation of the final lines and grades of the bottoms of excavations. The chosen method is subject to final approval by the Engineer, may include sump pumps, deep wells, well points, temporary pipelines and other means.
- An adequate system shall be maintained to lower and control the ground water to permit excavation, construction of structures and placement of fill materials to be performed under dry conditions.
- Sufficient dewatering equipment shall be installed to pre-drain the water-bearing strata below the bottom of foundations, drains, sewers and other excavations.
- The hydrostatic head in water-bearing strata below foundations, drains, sewers and other excavations shall be reduced to ensure that the water level is 1.5 to 2 feet below the excavation surface at all times, but no more than 2 feet.

- The system shall be placed into operation prior to excavation below ground water level to lower the ground water level and shall be operated continuously 24 hours a day, 7 days a week until drains, sewers and structures have been constructed and fill materials have been placed and dewatering is no longer required.
- The site shall be graded to facilitate drainage. Surface runoff shall be diverted from excavations. Water entering the excavation from surface runoff shall be collected in shallow ditches around the perimeter of the excavation, drained to sumps, and be pumped or drained by gravity away from the excavation.
- Dewatering shall at all times be conducted in such a manner as to preserve the undisturbed bearing capacity of the subgrade soils at proposed bottom of excavation.
- If foundation soils are disturbed or loosened by the upward seepage of water or an uncontrolled flow of water, the affected areas shall be excavated and replaced with drain rock at no additional cost to the City.
- Flotation of structures and facilities shall be prevented by maintaining a positive and continuous removal of water.
- If well points or wells are used, they shall be adequately spaced to provide the necessary dewatering and shall be sandpacked and/or other means used to prevent pumping of fine sands or silts from the subsurface. A continual check shall be maintained to ensure that the subsurface soil is not being removed by the dewatering operation.
- Water and debris shall be disposed of in a suitable manner in compliance with Subsection 306-5 of SSPWC and without damage to adjacent property. No water shall be drained into work built or under construction as required by the waste discharge permit contained in the Appendix. Water shall be filtered to remove sand and fine-sized soil particles and further treated before disposal into any drainage system.
- The release of groundwater to its original level shall be performed in such a manner as not to disturb natural foundation soils, prevent disturbance of compacted backfill and prevent flotation or movement of structures, pipelines and sewers.
- Effluent generated from dewatering activities may not be discharged to the local sewer system.
- Stormwater or other waters shall proceed uninterrupted along their existing street or drainage courses. Diversion of water for short reaches to protect construction in progress will be permitted if in the opinion of the Engineer, public or private properties are not subject to damage. The Contractor shall obtain and submit to the CITY written permission from the applicable public agency or property owner before the Engineer will permit any diversion of water outside the right-of-way.
- Contractor is responsible to control the surface water entering the work area and shall correct any damage to the work area as the result of surface water at no cost to the CITY.

GROUNDWATER MONITORING WELLS

- Location of groundwater monitoring wells shall be identified in the approved Dewatering Plan, unless otherwise specified. Groundwater monitoring wells shall be installed prior to commencing dewatering operations.
- Groundwater levels shall be monitored by the Contractor daily at a minimum, and four (4) times per day during dewatering activities.
- Contractor shall submit groundwater monitoring data daily to the City for review.
- Groundwater levels shall be maintained 2 feet below the proposed trench or structure excavation (below unstable soil that has to be removed and replaced). Groundwater levels observed lower than 2 feet below the trench or structure excavation will result in a stoppage of work. The Contractor shall then employ the services of a professional geotechnical firm to establish corrective measures. Work shall not be allowed to continue until the plan for corrective action has been reviewed and accepted by the City.

- After completion of the Work, the Contractor shall be responsible for destroying all groundwater monitoring wells, in accordance with the local requirements and the following:
 - 1) Over-drill the entire well, removing the well casing, filter, pack, annular seal, and well box.
 - 2) The borehole shall then be filled with sand cement grout sealing materials.

SETTLEMENT MONITORING

A settlement monitoring system shall be developed and maintained by a professional geotechnical firm, with experience in establishing such systems. It shall be capable of identifying vertical ground movement which may occur during the course of construction. At a minimum, it shall include the following:

- Prior to beginning dewatering or excavation, the Contractor shall install ground survey settlement points on the north and south sides of the proposed excavation.
- Survey settlement points daily during excavation and dewatering activities. Submit results to City each day.
- Settlement at points shall be maintained at ¼-inch maximum. Settlement in excess of this limitation will result in a stoppage of work. The Contractor shall then employ the services of a professional geotechnical firm to establish corrective measures to prevent damage to adjacent structures and further settlement. The Contractor shall not be allowed to continue work until the proposed plan for corrective action is reviewed and accepted by the City.
- The Contractor shall certify in writing that the proposed monitoring program is sufficient for its intended purpose.
- The Contractor shall submit for review and approval in conformance with Section 2-5.3 of the SSPWC its proposed monitoring program.
- All surveys of monitoring points shall be performed by a licensed surveyor in the State of California and the results shall be submitted to the City daily. The cost for the survey work is the responsibility of the Contractor.
- No claim for delay shall be allowed for stoppages of work resulting from the interpretation of monitoring data described above."

7-8.6.4.3 CONTROL OF WATER.

ADD the following SUBSECTION: "**7-8.6.4.3 CONTROL OF WATER.** Prior to the Contractor performing any excavation, a proposed site specific dewatering plan shall be submitted to the City for review. The submittal shall include method, installation, and details of the proposed dewatering system. Contractor is required to obtain a Deminimus Permit from the Santa Ana – RWQCB. Contractor must provide proof of coverage to Orange County Flood Control District (OCFCD) PRIOR to the start of the dewatering operation along with the site specific dewatering/diversion plan to the assigned OCFCD inspector for approval.

Materials and equipment required for control of water shall be furnished and maintained as required to perform the construction.

The necessary machinery, appliances and equipment shall be provided and operated to keep excavations free from water during construction, and to dispose of the water so as not to cause injury to public or private property or to cause a nuisance or a menace to the public. Sufficient pumping equipment and machinery in good working condition shall be provided for all emergencies including power outage, and sufficient workmen shall be available at all times for the operation of the pumping equipment. The dewatering systems shall not be shut down between shifts, on holidays or weekends, or during work stoppages without written permission from the Engineer.

The control of groundwater shall be such that softening of the bottom of excavations, or formation of "quick" conditions or "boils" during excavation, shall be prevented. Dewatering systems shall be designed and operated as to prevent removal of the natural soils. Natural or compacted soils softened by

saturation with groundwater or standing surface water shall be removed and replaced as instructed by the Engineer at no additional expense to the City.

During excavation, construction or structures, installation of pipelines, placing of structure and trench backfill and the placing and setting of concrete, excavations shall be kept free of water except as specified. Surface runoff shall be controlled so as to prevent entry or collection of water in excavations. The static water level shall be drawn a minimum of 1 foot below the bottom of the excavation, except 2 feet below the bottom of excavations for structures, so as to maintain the undisturbed state of backfill to the required density. The dewatering system shall be installed and operated so that the groundwater level outside the excavation is not reduced to the extent that would damage or endanger adjacent structures or property.

Open and cased sumps shall not be used as primary dewatering for excavation deeper than 3 feet below the static water table. Location of open or cased sumps shall be outside of trench excavation or limits of structural excavation.

The release of groundwater to its static level shall be performed in such a manner as to maintain the undisturbed state of the natural foundation soils, prevent disturbance of compacted backfill and prevent flotation or movement of structures, pipelines and sewers. Underdrain systems and hydrostatic relief valves shall be operational prior to release of surface water.

The Contractor shall not obstruct the gutter of streets and roads but shall use proper measures to provide for the free passage of surface water.

Provision shall be made to take care of surplus water, mud, silt, slickings, or other runoff pumped from excavations and trenches or resulting from sluicing or other operations. Siltation of completed or partially completed structures and pipelines by surface water or by disposal of water from dewatering operations shall be cleaned up at the Contractor's expense.

The maximum daily concentration limit for total suspended solids shall not exceed 75 mg/L, sulfides 0.4 mg/L, oil and grease 15mg/L, total petroleum hydrocarbons 0.1 mg/L.

Contractor has the option to apply for a Special discharge permit through Orange County Sanitation District in lieu of a Deminimus Permit. It is the Contractor's responsibility to demonstrate that alternative methods of disposal are either not available or are economically and/or technically not feasible. Contractor's attention is directed to the website:

<http://www.ocsd.com/businesses/source-control-industrial-wastewater-permits/special-discharge-permit>
Payment for preparation and implementation of the Dewatering plan, including any permit processing and incidentals, shall be considered as included in the contract unit price bid for the applicable items of work requiring dewatering, and no additional compensation will be allowed therefore."

7-8.6.4.4 PAYMENT.

ADD the following SUBSECTION: "**7-8.6.4.4 PAYMENT.** Payment for dewatering shall be included in the various contract items of work; Including monitoring well and settlement monitoring in the bid proposal and shall include full compensation for furnishing all labor, materials, equipment, rental of necessary equipment, materials and storage sites for storage purpose, and incidentals necessary to conduct the dewatering in accordance with Section 7-8.6.4 and Section 306-5."

7-8.7 CLEANUP AND DUST CONTROL.

ADD the following SUBSECTION: "**7-8.7 CLEANUP AND DUST CONTROL.** Any open holes remaining at the end of the workday shall be temporarily backfilled or covered with steel plate, and protected by barricades and delineators, and signed appropriately.

Dust control shall consist of applying water in conformance with Section 7-8.2 of the Specifications, with the following modification:

The Contractor shall furnish and operate a water truck and self-loading motor sweeper with spray nozzles applied at least twice each calendar day (including holidays and weekends), first during construction to keep paved areas reasonably clean, and second at the end of day. The Contractor shall never leave the construction premises dirty or dusty.

All spillage and any excessive dirt or debris resulting from hauling operations, moving of equipment along or across any private or public property or public traveled way, shall be removed immediately at the Contractor's expense.

Contractor shall maintain the cleanliness of all streets to the satisfaction of the City Engineer/Project Inspector during the progress of work. Further, at the end of each working day, if the site is not satisfactorily clean, the Contractor shall furnish a street sweeper immediately to reestablish the street to a clean and neat appearance. If the Contractor is unable to furnish a street sweeper, the City shall send its own sweeper at the cost of the Contractor.

No separate payment will be made for any work performed or material used to control dust resulting from the Contractor's performance of the work, or by public traffic, either inside or outside the right-of-way. Full compensation for such dust control will be considered as included in the price paid for the various contract items of work involved. No separate payment will be allowed.

Before acceptance of the work and final payment therefore, the Contractor shall, unless otherwise directed in writing by the Owner's representative, tear down and remove all temporary buildings and structures built by him; shall remove all temporary works, tools and machinery or other construction equipment furnished by him; shall remove, acceptably disinfect, and cover all organic matter and material containing organic matter in, under and around privies, houses and other buildings used by him; shall remove all rubbish from any grounds which he has occupied; and shall leave the roads and all parts of the premises and adjacent property affected by his operations in a neat and satisfactory condition. The Owner shall inspect the work site after the completion of the final cleaning prior to the Contractor being relinquished of his responsibilities to clean up the site.

The Contractor shall restore or replace, subject to the approval of the Owner, any property damaged by his work, equipment or employees, to a condition at least equal to that existing immediately prior to the beginning of operations with the work being performed in compliance with current standards as applicable. Suitable materials, equipment and methods shall be used for such restoration as approved by the Owner, or as required elsewhere in these specifications.

The Engineer will not make the final inspection until the work provided for in, and contemplated by, the Contract has been completed and the final cleanup and restoration performed."

7-8.8 SOUND AND VIBRATION CONTROL REQUIREMENTS.

ADD the following SUBSECTION: "**7-8.8 SOUND AND VIBRATION CONTROL REQUIREMENTS.** The Contractor shall comply with all local sound control and noise level rules, regulations and ordinances. No internal combustion engine shall be operated on the project without a muffler of the type recommended by the manufacturer. Should any muffler or other control device sustain damage, the Contractor shall promptly remove the equipment and shall not return said equipment to the job until the device is repaired or replaced. Said noise and vibration level requirements shall apply to all equipment on the job or related to the job, including but not limited to, trucks, transit mixers or transit equipment that may or may not be owned by the Contractor.

The noise level from the Contractor's operations shall not exceed 86 DBA at a distance of fifty feet (50'). This requirement in no way relieves the Contractor from responsibility for complying with local ordinances regulating noise level. Noise source associated with construction, including mobilization, maintenance, etc., shall not take place between the hours of **5:00 p.m. and 7:00 a.m.** on weekdays, **8:00 p.m. and 9:00 a.m.**

on Saturday, or anytime on Sunday, unless approved in advance by the City Engineer, per Cypress Municipal Code Section 13-68.

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

7-8.9 FINAL CLEAN UP.

ADD the following SUBSECTION: "**7-8.9 FINAL CLEAN UP.** Upon completion of the project and before making application to the City Engineer for acceptance of the work, the Contractor shall clean all the streets and grounds occupied by him in connection with the project, of all rubbish, debris, excess material, temporary structures and equipment, leaving the entire site of the work in a neat and presentable condition. Contractor shall also remove any and all markings made prior to and during construction, including markings made by the Underground Service Alert call process. Such marking removal shall comply with all current NPDES and City water quality requirements including implementation of appropriate best management practices. Fines and other byproducts resulting from concrete sawcutting operations shall also be removed by pressure washing or other methods approved by the City Engineer. Shall the Contractor fail to adequately restore the project site to the satisfaction of the City Engineer, City forces will accomplish said task at the cost of the Contractor."

7-8.10 CONSTRUCTION WATER.

ADD the following SUBSECTION: "**7-8.10 CONSTRUCTION WATER.** The Contractor shall make his own provisions for water necessary for construction, backfill consolidation, and cleanup.

NOTE: THE CONTRACTOR SHALL NOT USE ANY PRIVATE PROPERTY WATER PAID FOR BY THE PROPERTY OWNER

Construction water may be taken only at locations approved by the Golden State Water Company, Water Services Division. The water company will install the required equipments at these locations at the Contractor's expense. The valves shall be operated while taking construction water, and with the fire hydrant remaining open during the day. Contractor will be charged for construction water as requested by the water company.

The Contractor shall make provisions for water necessary for construction, backfill consolidation, and cleanup, and shall make application to Golden State Water Company for installation of a fire hydrant water meter for his construction water and shall make appropriate meter deposits to cover cost of relocation or damage to the meter.

Payment for applying water, including all labor, tools, equipment, and incidentals required for the application of water shall be considered as included in the various contract items of work involving the use of water, and no additional compensation will be allowed.

For a permit contact:

Golden State Water Company
10852 Cherry Street
Los Alamitos, CA 90720
(714) 527-2118."

7-8.11 CONSTRUCTION YARD.

ADD the following SUBSECTION: "**7-8.11 CONSTRUCTION YARD.** It shall be the Contractor's responsibility to locate any storage sites for materials and equipment needed and such sites must be approved in advance by the City Engineer. The Notice to Proceed (NTP) will only be issued once it has been determined that the Contractor has secured a construction yard.

When storage sites are located on private properties, the Contractor shall be required to submit to the City Engineer written approval from the record property owner authorizing the use of his property by the Contractor. A Temporary Use Permit shall be obtained from the Cypress Community Development Department for a fee of \$50. The Temporary Use Permit application form can be obtained at City Hall or online at:

http://www.ci.cypress.ca.us/online_forms/community_develpmnt_forms/tup_app_10_06.pdf.

Contractor shall comply with all air pollution control, water pollution control, best management practices, and community development requirements for storage sites on private properties.

Contractor shall at his expense install 6-foot high chain link fence with privacy screen as a requirement around the yard site for securing the site for storing materials, supplies, and equipment. A conscious effort on his part is required, that due regard to the rights of the public must be observed at all times. Possible obstruction and inconvenience shall be kept to the minimum.

Construction materials shall not be stored in streets, roads or highways for more than three (3) working days after unloading. All materials or equipment not installed or used in the construction within three (3) working days after unloading shall be stored at the construction yard.

Construction equipment shall not be stored at the work site before its actual use on the work nor for more than three (3) working days after it is no longer needed on the work. All repairs or assembly of equipment that will take two (2) or more working days shall be done at the construction yard. All equipment and materials shall be stored at the yard during weekends, unless otherwise authorized by the Engineer.

Excavated materials shall not be stored in public streets, roads or highways. Excavated materials that may be suitable for backfill shall be stored at a site of Contractor 's choice. The Engineer shall have a safe access to the site for purposes of inspection and testing at all times.

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

7-8.12 IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

ADD the following SUBSECTION: **"7-8.12 IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT.** "By submission of this bid, or the execution of this contract or subcontract, as appropriate, the bidder, Contractor, or subcontractor, as appropriate, will be deemed to have stipulated the following:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et. seq., as amended by Pub. L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et. seq., as amended by Pub. L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR Part 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.
2. That the Contractor agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed hereunder.
3. That the Contractor shall promptly notify the OSHA of the receipt of any communication from the Director, Office of Federal Activities, and EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.
4. That the Contractor agrees to include or cause to be included the requirements of Items 1 through 3 of this Section in every nonexempt subcontract, and further agrees to take such

action as the government may direct as a means of enforcing such requirements (FHWA 1273 Rev. 8/89, 12-4-89).

Full compensation for conforming to the requirements of the Clean Air Act and Federal Water Pollution Control Act shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefore."

7-9 PROTECTION AND RESTORATION OF EXISTING IMPROVEMENTS.

ADD the following: "The Contractor shall protect all the existing public and private facility/utility and the associated appurtenances in place; including personal or private properties. In the event of damage the facility/utility, the Contractor shall be responsible for coordinating with the facility/utility owners or individuals, perform emergency and final repairs, and bearing all costs and delays associated with the property damage.

Payment for protection of existing facility/utility in place, and for complying with all requirements under this section herein shall be included in the various bid prices paid, and shall include full compensation for furnishing all labor, tools, equipment, and materials and doing all work involved, and no additional compensation will be allowed.

In the event of damage to the facility/utility, the Contractor agrees to indemnify, protect, defend and hold the City, its officers, employees and agents harmless from claims of any kind arising from damage due to said defects. The Contractor shall make all repairs and replacements promptly upon the request of the facility/utility owners or individuals. If the Contractor fails to promptly make the repairs and replacements as being requested, the facility/utility owners or individuals is hereby authorized to complete the work and the Contractor and his/her surety shall be liable to the City and the facility/utility owners or individuals for the cost thereof.

The Contractor shall take precautions to prevent damage to all pavement and other surfaces outside the limits of necessary excavation, whether on public streets, rights-of-way, or private property and roads. All damaged pavement or surfaces on public streets, rights-of-way, or private property shall be replaced or repaired in accordance with accepted standards of the jurisdictional agency. Where the foregoing standards are silent, replace pavement to the existing thickness plus one inch. For the purposes of this section, the terms "pavement" and "surfaces" shall be deemed to include base materials."

7-9.1 PROTECTION AND RESTORATION OF EXISTING UTILITIES/FACILITIES.

ADD the following SUBSECTION: "**7-9.1 PROTECTION AND RESTORATION OF EXISTING UTILITIES/FACILITIES.**

Miscellaneous Utilities / Facilities on City Streets

Care shall be taken in all work performed in the removal of traffic signs, devices, barricades, posts, barriers, and guard railings. Such devices shall be carefully removed by the Contractor as shown on the plans or as directed by the Engineer. All adhering materials shall be stockpiled within project limits for reuse.

All utilities including, not limited to water, gas, oil, telephone, electrical, cable TV, fiber optic systems, traffic signals, sewer mains and services, storm drains, and street light conduit and wires shall be protected in place, except as noted on the project plans.

Abandoned facilities are likely to be encountered on this project. Many abandoned facilities are not available through the public records nor will they be located by Underground Service Alert (USA). However, if they are encountered, the abandoned facilities shall be saw cut and removed to accommodate the proposed construction. The facilities shall be capped or slurry backfilled as deemed appropriate by the Engineer. **The Contractor will not be entitled to damages or additional payment for delays due to such abandoned facilities.** The City will pay for the transportation and disposal of such abandoned facilities and capping of such facilities on a time and materials basis in accordance with Standard Specifications for Public Works Construction latest Edition (Greenbook).

The City does not guarantee the accuracy of depth, size, type, material and location of all utilities shown on the plans or marked in the field by utility companies. Data was provided to the City based upon available records. It is to be used for information purposes only.

In order to provide lead time to resolve unforeseen utility conflicts, Contractor shall pot hole and ascertain the true location and depth of all underground utilities and services as shown or located within the lines of excavation and/or as marked by their respective owners in the field. **Utilities marked in the field and not shown in the project plans shall be treated the same as if shown on the project plans.** Contractor shall attempt to expose utilities by excavating an area three (3) feet in all directions around the location shown on the plans or marked in the field. Should the Contractor fail to locate the utility, Contractor shall immediately notify the utility purveyor and Engineer and the Contractor shall proceed on schedule. **Contractor shall not be entitled to delays, damages or cost for failure to locate a utility by potholing.** After exposing the utilities and if in the opinion of the Contractor a utility is in conflict with the proposed improvements, Contractor shall immediately notify the Engineer and allow utilities reasonable time to relocate, realign or remove their facilities at no additional cost to the CITY.

Contractor shall exercise extreme care in exposing, locating, supporting, protecting and working in the vicinity of existing utilities. **Contractor shall hand dig within three feet (3') on all sides of these utilities;** main lines, service lines and other utility appurtenances. Contractor shall arrange a compatible work schedule with all utility companies involved. Contractor's attention is also directed to overhead and above ground utilities and poles that exist within the project site that may not be shown on the project plans, but are visible in the field. All utilities above and underground must be protected in place, unless otherwise specified in the project plan.

The Contractor will not be entitled to damages or additional payment for delays attributable to utility relocations or alterations if utilities are correctly located and shown on the plan. The Contractor, however, will be given an extension of time for unforeseen delays due to interferences by utilities. This work includes searching within three (3') feet on both sides of a marked utility in the field (not shown in the plans) that is not found or never existed.

Contractor shall pothole the crossings of existing sewer/storm drain/water main, sewer lateral and other utilities along the City proposed alignments as the first order of work. The Contractor shall submit a copy of the potholing report and support plan as described in Section 7-9 to the Engineer with the actual field elevations of the utilities shown prior to starting project construction.

All costs incurred for potholing, hand digging, exposing, locating, supporting, protecting, maintaining and providing reasonable time to relocate or resolve conflict of underground and above ground utilities, shall be included either in a lump sum price bid for Potholing Report or various bid paid items and Plans and no additional compensation will be allowed. The first progress pay will be withheld until the potholing is complete for the entire project and the report and plan is submitted to, and approved by, the Engineer.

The Contractor, prior to submitting his/her bid, shall first inquire from the utility owners listed regarding type of facility, line locations, size, material, manhole locations if any, specifications and requirements concerning the protection and support of their respective main, trunk lines, services lines and other appurtenances.

The Contractor is hereby notified that some waterlines in the City of Cypress are steel encased. These encased waterlines are to be treated as asbestos cement (AC) lines. If they are not supported they will collapse and all resulting damages and delays will be the sole responsibility of the Contractor and no additional compensation or time will be allowed. The costs of obtaining any required permits, protecting and supporting of all utility lines, including service and lateral lines shall be included in the various paid items of work and no additional compensation will be allowed. **No utility line shall be removed from service without written permission from the Engineer. If permitted, then it is the Contractor's responsibility to install temporary services as needed in the field and as approved by the Engineer at no cost to the City.**

Contractor shall notify the Underground Service Alert (USA) giving at least 48 hours notice - (800) 422-4133. The following is a list of utility companies and purveyors who may have underground utilities within the project right-of-way:

SBC / AT&T	(714) 666-5692
AT&T (Local Services)	(213) 787-9996
Orange County Transportation Agency	(714) 265-4330 / 265-4332
Golden State Water Company	(714) 527-2118
Southern California Edison Company (Emergency)	(800) 611-1911
Southern California Edison Company	(714) 870-3219
Southern California Gas Company	(714) 634-5016
Time Warner Communications	(714) 903-8336
Verizon	(714)375-6760
Level (3) Communication	(720)888-6149
Eller Media Company	(323)734-5111 x 301
Questar	(801) 324-3724
XO Communications	(949) 417-7841

Some of the above utilities and purveyors are not Underground Service Alert (USA) members. It shall be the Contractor's responsibility to call, notify and make certain that utilities have responded to his/her notification. Damage to utilities, caused by failure to notify, is the Contractor's sole responsibility.

The Contractor shall arrange and coordinate his/her work to permit utilities to make any necessary adjustments required by the construction of the various items in this contract.

Contractor shall also protect facilities in place as shown on the plans or as marked in the field, and "To be relocated by others", in both original and relocated positions and any damage to such facilities shall be immediately repaired at no cost to the City.

When damage occurs to existing utilities, Contractor shall notify the City immediately and have it repaired to the satisfaction of the City and the utility owners. In the case of damage to water, gas, telephone, cable, traffic, electrical, storm drain, and sewer lines, the Contractor shall repair these facilities to the requirements of the utility owners, within a maximum of four hours or sooner as required by the Engineer. Contractor shall have necessary tools, equipment and materials available at all times for immediate repairs. Any expenditures incidental to maintaining water service to customers shall be borne by the Contractor.

The Contractor is notified therefore, that he is responsible and liable for all costs in rectifying damages to any utilities caused as a result of his operations. At the request of the City, costs in rectifying such damages can be withheld or deducted from the final progress payment due to Contractor at the discretion of the Engineer.

The Contractor is responsible for protecting water service connections, sewer laterals, telephone conduits, cable TV conduits, electrical conduits, traffic signal conduits and all other utility service connections whose location can be determined or inferred by buildings and other above-ground visible facilities such as valve boxes, manholes, vaults, pull boxes and the like in spite of the fact that they are not shown on the plans or marked in the field. Therefore, the Contractor shall establish the location of such utilities in the field and determine the cost of protecting or relocating those facilities in order to perform the work indicated in the contract documents and include that cost in his bid. The Contractor shall accept the fact that every parcel, including a vacant parcel, is served by a service connection for each type of utility.

All existing improvements, including utilities, shall be protected in place unless otherwise shown on the contract plans or approved by the Engineer. All existing improvements damaged by the Contractor in the performance of his work shall be replaced in its original or better condition. This includes, but is not limited to landscaping, trees, irrigation lines, sprinklers, planters, foundations, walls, driveways, sidewalks, mailboxes, parking curbs, and utilities whether they are located on private property or within the public right-of-way.

The Contractor shall be responsible for any damages including, but no limited to, flooding and death of surrounding landscaping. Any removal of trees; shrubs; and lawn; etc. shall be approved by the City, and the removed items shall be replaced in kind per City's approval.

Payment for protecting or removing and replacing all facilities, or coordinating utility adjustments, except for those items of work specifically included as separate bid items in the Bid Proposal shall be considered as paid for in the various contract bid items and no additional compensation will be allowed.

Private mailboxes, planters, and other facilities, etc. as shown on plans or within construction areas in the field shall be relocated by the Contractor. Payment for relocations shall be included in the various items of work and no additional compensation will be allowed.

Payment for all labor, materials, tools, and equipment used in removing, cleaning, transporting, relocating, and doing all the work involved shall be included by the Contractor in various bid items, and no additional compensation will be allowed.

Damaged Portland Cement Concrete Removal and Replacement

Curbs, sidewalks, specialty bricks, decorative parkways, walls, trees, lawns, shrubbery, and irrigation lines not marked for removal shall not be removed and shall be protected from damage or injury. If damaged or removed due to the Contractor's operation, they shall be restored or replaced in as nearly the original condition and location as it is reasonably possible. Lawns shall be reseeded and covered with suitable mulch to match the existing lawn. Damaged sprinkler systems shall be repaired at the end of each working day in which they were damaged.

In the event that the parkway is to be removed, the property owner shall have the first right of refusal for any pavers, bricks, stones, ornamental decorations, or other objects in the parkway that is removed. Any pavers, bricks, stones, ornamental decorations, or other objects in the parkway, shall be salvaged and given to the homeowner if he/she desires. In the event that the property owner does not wish to salvage any material, the contractor shall be required to remove and dispose of all material.

Portland Cement Concrete (PCC) damaged by the Contractor's operation shall be removed and replaced in kind. Work shall include all PCC curbs, gutters, cross gutters, spandrels, driveways, driveway approaches, slabs, sidewalks, decorative crosswalks, and all other miscellaneous PCC construction. Concrete shall be removed to neatly sawed edges with saw cuts made to a minimum depth of 1 inch. Concrete sidewalk or driveway to be removed shall be neatly sawed in straight-line parallel either to the curb or at right angles to the alignment of the sidewalk. No section to be replaced shall be smaller than forty-eight inches (48") in either length or width. If the saw cut in sidewalk or driveway would fall within forty-eight inches (48") of a construction joint, expansion joint, or edge, the concrete shall be removed to the joint or edge, except that where the saw cut would fall within twelve inches (12") of a score mark, the saw cut shall be made in and along the score mark. Curb and gutter shall be sawed to a depth of 1 (one) inch on a neat line at right angles to the curb face. PCC and all other material unsuitable for use as fill, as determined by the Engineer, shall be removed from the right-of-way and disposed of by the Contractor at a site of his own choice and he shall pay all costs incidental to the disposal. Sharp edges left on concrete after saw cutting shall be ground in a manner acceptable to the Engineer.

All damaged private improvements shall be repaired in-kind to the satisfaction of the City Inspector within forty-eight (48) hours from the time of notice. In the event the contractor does not repair the subject damaged private improvements within the time specified, the contractor will be assessed a **\$25 penalty per day per occurrence**, of which will be deducted from the outstanding monies due to the contractor.

All damaged irrigation lines shall be repaired at the end of each working day in which they were damaged. In the event the contractor does not repair the subject damaged irrigation lines within the time specified, the contractor will be assessed a **\$25 penalty per day per occurrence**, of which will be deducted from the outstanding monies due to the contractor. If the contractor fails to make the appropriate repairs within **six (6) business days**, the City shall be authorized to complete the work and the contractor will be liable for all expenses incurred.

Concrete work which shall include, but is not limited, sidewalk, curb, gutter, driveway, and curb ramps, shall be completed within five (5) business days following any tree removals. In the event the contractor does not complete the subject concrete work within the time specified, the contractor will be assessed a **\$25 penalty per day per occurrence**, of which will be deducted from the outstanding monies due to the contractor.

Payment for Portland cement concrete removal and replacement shall be included in the unit prices paid for the various items of work, that necessitated the PCC removal and no additional compensation will be allowed. Said payment shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals and performing all the work involved in excavating, removing, replacing, breaking, crushing, saw cutting, backfilling, loading, hauling and disposing of all material, and performing all the work involved. All PCC replacement shall conform to City of Cypress standards and be in kind.

Remove and Restore Traffic Striping, Signing, Legends, Pavement Markings and Pavement Markers

Existing pavement markers shall be removed and disposed of when no longer required for traffic lane delineation due to construction.

Existing striping and pavement markings shall be removed by grinding at City specified locations. Existing pavement markers shall be removed prior to installation of AC overlay or slurry seal. Sandblasting will not be allowed.

Grinding shall be used for the removal of painted and thermoplastic traffic stripes and pavement markings and for removal of objectionable material. If such removal operation is being performed within ten feet (10') of a lane occupied by public traffic, the residue including dust shall be removed immediately. Such removal shall be by a vacuum with water attachment operating concurrently with the grinding operation.

Nothing in these special provisions shall relieve the Contractor from his responsibilities as provided in Section 7-10, "**SAFETY.**" of the Standard Specifications.

Any depressions or voids left in the roadway as a result of removing the existing raised pavement markers will be filled with hot bituminous adhesive or as directed by the Engineer.

Contractor shall provide cat tracks for review prior to final application of striping. The City of Cypress shall have 24 hours (one (1) working day) review time to provide corrections to, or approval of, the cat tracks. All existing striping shall be restriped to satisfaction of the Engineer.

Full compensation for removing, disposing and restoring traffic stripes and pavement markings - including filling voids or depressions created by removing pavement markers and as mentioned in this section shall be considered as included in the lump sum price paid at various contract items of work and no additional compensation will be allowed.

Damaged Asphalt Concrete Pavement Removal and Replacement

Asphalt concrete ("A.C.") pavement shall be cut initially by saw cutting to a minimum depth of five (5) inches (or full depth) at the limits of the removal prior to removal of A.C. Asphalt Concrete damaged by the construction operation shall be removed and replaced as described in this provision at no cost to the City. After backfilling the excavation, the existing A.C. pavement shall be saw-cut again to a depth of five (5) inches at a point not less than twelve (12) inches outside the limits of removal or as directed by the

City Engineer. If the width of existing pavement between proposed A.C. saw cut and edge of adjacent P.C.C. curb and gutter is less than sixty (60) inches, this area shall be removed and new pavement shall be extended to the P.C.C. curb and gutter. All saw cuts shall be along straight lines either parallel or perpendicular to line of removal. The use of pavement breaking equipment (stompers) is absolutely not allowed.

Payment for replacement of pavement section shall be included in the unit prices paid for the various items of work, which caused such pavement section removal and no additional compensation will be allowed. Said payment shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals and performing all the work involved in replacing AC/ AB, street areas and areas damaged by construction, and repainting of striping in and around the easement areas and no additional compensation will be allowed."

7-9.2 REMOVAL AND DISPOSAL OF NONFRIABLE ASBESTOS MATERIALS.

ADD the following SUBSECTION: "**7-9.2 REMOVAL AND DISPOSAL OF NONFRIABLE ASBESTOS MATERIALS.** This section covers safety procedures and requirements for the demolition and removal of nonfriable material containing asbestos. The Contractor shall pay extremely attention of working on the work since the nonfriable material contains asbestos and may become friable material if improperly handled during removal, storing, transporting or disposal operations.

The known sources of asbestos cement pipe under this contract include the following: The Golden State Water Company is the ownership of all waterlines serving within the City of Cypress. Majority of the water mains were constructed in 1950's and 1960's using the products of asbestos cement pipes. The water line crossing at other utility/facility shall be protected in place as indicated in Section 7-9 hereon. In case of damaging any of the water line, the Contractor shall inform the City and the Water Company immediately to conduct the repair work. Any removal and disposal of nonfriable asbestos materials shall follow the requirements as described herein this section.

Description of Work – The work covered by this section includes the proper handling of non-friable materials containing asbestos which are encountered during excavation, removal and demolition operations and the incidental procedures and equipment required to protect workers, the public and occupants of the area, from contact with airborne asbestos fibers. The work also includes the, containment, temporary storage, transportation and disposal of the removed asbestos-containing materials.

Handling and Disposal of Asbestos containing Materials – Methods and procedures for properly handling, containing, temporary storage, transporting and disposal resulting from this demolition work shall be the responsibility of the Contractor and shall conform to Federal, State, regional and local requirement.

Permits – The Contractor shall secure and pay for all required permits, including a hazardous waste generator permit, in conjunction with asbestos removal, temporary storage, transporting, and disposal and shall provide required reports and timely notifications as required by Federal, State, regional, and local authorities.

Safety and Health Compliance – In addition to detailed requirements of this specification, the Contractor shall comply with laws, ordinances, rules, and regulations of Federal, State, regional, and local authorities regarding handling, storing, transporting, and disposal of asbestos waste materials. The Contractor shall comply with the applicable requirements of the current issue of 29 CFR 1926.58 and 40 CFR 61-SUBPART M. and requirements of the State of California Construction Safety Orders (Cal-OSHA).

Submittal of Asbestos Removal Work Plan – The Contractor shall prepare and submit a detailed, job-specific, plan for the work procedures to be used in the removal and disposal of all materials containing asbestos. A copy of this plan shall be submitted to the City's Representative (for record purposes only) prior to the starting of demolition or removal of any asbestos materials. This specification shall not be considered an asbestos removal work plan.

Site Inspection – While performing asbestos removal work, the Contractor shall be subject to on-site inspection by the City's Representative, who may be assisted by safety or health personnel. If the work is found to be in violation of specification requirements, the City's Representative will issue a stop work order to be in effect immediately and continue until the violation is resolved. Standby time and expenses required to resolve the violation shall be at the Contractor's expense.

Payment – Full compensation for conforming to the requirements of this section shall be considered as included in the various items of work and no additional compensation will be allowed."

7-10 SAFETY.

7-10.1 TRAFFIC AND ACCESS.

7-10.1.1 ACCESS.

ADD the following SUBSECTION: "**7-10.1.1. ACCESS.** The Contractor shall conduct his work in a manner which minimizes interference with the public, personal activities of residents, private business, public business and travel. The Contractor shall take all necessary measures to maintain adequate traffic flow to prevent of accidents and protect the site of the work. During construction, the Contractor shall, to the maximum extent practicable, keep the project in a very clean condition free of rubbish and debris. When working around schools, libraries, places of worship, and businesses, the Contractor shall make every possible effort to coordinate with said property for methods of egress and ingress into the area.

Wherever necessary or required, and at his own expense, the Contractor shall provide, place and maintain lighted precautionary traffic and construction signs, traffic cones, barricades, signage, delineators, yellow safety ribbon, and/or flagmen in sufficient number to adequately control vehicular and pedestrian traffic in the construction area. The Contractor shall also erect and maintain such additional warning and directional signs such as changeable message signs as may be required and deemed necessary by the City.

Contractor shall use portable changeable message sign units on arterial highways, which shall consist of a controller unit, a power supply, and a structural support system, all mounted on a trailer. The unit shall be assembled to form a complete self-contained portable changeable message sign which can be delivered to the site of the work and placed in immediate operation. The trailer shall be equipped so that it can be leveled, plumbed, and immobilized. Message signs shall be placed at least one week in advance of construction, and maintained throughout construction, to inform motorists of work ahead and to use alternate route.

Traffic control shall conform to the requirements of the Manual of Traffic Controls for Construction and Maintenance Work Zones (MUTCD), latest edition, published by the State of California, Department of Transportation (Caltrans) and/or the Work Area Traffic Control Handbook (WATCH) Manual, latest edition.

Prior to the commencement of construction operations, if requested, contractor shall submit three (3) copies of traffic controls plans prepared and signed by a California licensed traffic engineer to the City's Traffic Engineer for approval. Traffic control plans shall also include traffic control required by the project including, but not limited to, signs, cones, barricades, flashing arrow sign, K-rail, temporary striping, and flag persons. The Contractor shall reserve a minimum of five (5) working days for review of traffic control plans by the City's Traffic Engineer.

On local streets, two-way traffic shall be maintained at all times, unless approved otherwise in advance by the Engineer.

The closure of two (2) travel lanes will only be allowed for grinding and paving operations and no other activity unless prior approval from the City Engineer. Full width closures require authorization from the City Engineer and will only be approved for the minimum length of time necessary. After said permission is granted, the Contractor shall make arrangements to:

1. Provide temporary crossings
2. Detour traffic as necessary
3. Provide and maintain barriers, guards, directional signs, watchmen and lights
4. Implement any traffic controls necessary to ensure the safety of the public.

In the event that the Contractor's traffic control system is inadequate for the proposed construction activities, the Contractor will be notified and will be required to provide sufficient traffic control measures within one (1) hour. Should the Contractor fail to furnish sufficient precautionary traffic control devices within one (1) hour after notification by the City, the City shall place the necessary items or personnel and the Contractor shall be billed for said items or personnel.

In addition to the above schedule, in the event that services of City forces are required for the correction of traffic control conditions during hours other than the normal working hours of the City, an additional charge of Fifty Dollars (\$50) per person per hour shall be levied for each occurrence thereof.

If any component in the traffic control system is displaced or ceases to operate or function as specified from any cause during the progress of the work, the Contractor shall immediately repair said component to its original condition or replace said component and shall restore the component to its original location.

When lane closures are made for work periods only, at the end of each work period, all components of the traffic control system (except portable delineators placed along open trenches or excavation adjacent to the traveled way) shall be removed from the traveled way and shoulder. If the Contractor so elects, said components may be stored at selected central locations, approved by the Engineer, within the limits of the right of way.

AT LEAST FIVE (5) WORKING DAYS PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL SUBMIT HIS TWO-WEEK LOOKAHEAD SCHEDULE TO THE CITY FOR APPROVAL. Based upon the schedule, the Contractor shall distribute to each residence and business a door hanger a minimum of forty-eight (48) hours prior to commencing any construction that will affect access or restrict on street parking adjacent to that property. Door hangers shall state the dates of the grinding and paving operation. A sample door hanger will be given at the preconstruction meeting. Paving shall follow the grinding operation within three (3) business days. The Contractor shall provide the door hangers and a notification schedule at no cost to the City. The Contractor shall also distribute a City Project Newsletter to all affected residences and businesses at least 10 working days prior to commencement of work. The City Project Newsletter will be provided by the City.

Paving shall follow the grinding operation within **three (3) business days**. In the event that the Contractor is unable to pave the street within **three (3) business days** following the grinding operation, the Contractor shall pay to the City, or have monies withheld, the amount of **\$500 per each day** in which the paving is delayed.

Requests for changes in the schedule shall be submitted by the Contractor to the City for approval at least forty-eight (48) hours prior to the scheduled construction on streets affected.

The Contractor shall be responsible for furnishing, posting, and removing temporary "No Parking" signs along all routes. Signs shall be posted a minimum of forty-eight (48) hours, but no more than seventy-two (72) at all intersections, at end of cul-de-sac streets, and on each side of the street a maximum of 150 feet between signs. Signs shall show the approximate days and times of the work and shall be removed immediately upon completion of the subject work. No signs shall be left for more than one (1) day of construction inactivity and in no event shall signs be left after completion of the subject work. Signs may be attached to existing poles,

street light standards, tied to parkway trees, or whatever exists in the public right of way. If requested, contractor shall use yellow safety ribbon in addition to signs to designate areas of restricted parking. When necessary, the Contractor shall furnish posts. **Nailing to trees will not be allowed.**

For any tree removal, the contractor shall be required to post and maintain a "Notice of Tree Removal" sign on the subject tree no later than 10 working days prior to removal of the tree, but no earlier than 15 working days prior to removal. A sample "Notice of Tree Removal" sign will be provided by the City."

7-10.1.2 ACCESS TO DRIVEWAYS.

ADD the following SUBSECTION: "**7-10.1.2 ACCESS TO DRIVEWAYS.** The Contractor is responsible for posting "temporary no parking" signs at least forty-eight (48) hours before using the parking lane for construction purposes. In the case of work requiring excavation of the roadway which may interfere with the use by residents or businesses of their driveways, suitable provisions shall be made by the Contractor at such time as the conditions of construction may demand a temporary blocking of said driveways. Efforts shall be made by the Contractor to minimize the duration of said blocking and to notify the residents of this need well in advance. Further, the Contractor shall provide access to each residential or commercial establishment each evening.

To minimize access restrictions to driveways, either backfill, compact and provide temporary pavement or provide steel plates or bridging sufficient to support vehicular traffic across the trench in front of the driveway during nonworking hours. Single access driveways may be closed only during construction activity within the driveway area. The cost to provide temporary access to driveways will be considered as included in the various related items of work and no additional compensation will be allowed therefore.

The Contractor is to maintain reasonable access from public and private streets to all adjacent properties at all times during construction. Prior to restricting normal access from public or private streets to adjacent properties, the Contractor shall notify each property Owner or responsible person, informing him of the nature of the access restriction, the approximate duration of the restriction, and the alternate access available for that particular property. All restrictions of normal access shall be approved by the Owner prior to implementing the restriction."

7-10.1.3 STORAGE OF EQUIPMENT AND MATERIALS IN PUBLIC STREETS.

ADD the following SUBSECTION: "**7-10.1.3 STORAGE OF EQUIPMENT AND MATERIALS IN PUBLIC STREETS.** The Contractor will not be allowed to store any equipment or materials within the public right-of-way without permission from the City Engineer. Stockpiling of asphalt shall not be allowed on public right-of-way without prior permission from the City Engineer and proper BMPs."

7-10.2 WORK AREA TRAFFIC CONTROL

7-10.2.1 GENERAL. **ADD** the following: "The Contractor shall furnish such flagmen as are necessary to give adequate warning to traffic or to the public of any dangerous conditions to be encountered. Flagmen shall perform their duties and shall be provided with the necessary equipment in accordance with the current Caltrans "Instructions to Flagmen" and shall give warning to the public of any dangerous conditions to be encountered. The equipment shall be furnished and kept clean and in good repair by the Contractor at his expense. Contractor shall cover conflicting traffic signal indicators, and cover or remove and salvage all conflicting signs. The cost to provide various traffic control measures shall be considered as included in the various related items of work and no additional compensation will be allowed therefore."

7-10.3 HAUL ROUTES

7-10.3.1 TRANSPORTATION OF CONSTRUCTION EQUIPMENT

ADD the following SUBSECTION: "**7-10.3.1 TRANSPORTATION OF CONSTRUCTION EQUIPMENT.** No construction equipment shall be driven on City streets when the travel distance is greater than one mile. In the event that the distance exceeds one mile, the Contractor shall load and transport all construction equipment on trailers."

7-10.4 SAFETY

7-10.4.2.2 SHORING PLAN. ADD the following: "All trenches and other excavation, shall be adequately shored, sheeted, or braced to furnish safe working conditions and ample protection of the work and adjacent utilities, structures, and traffic. Shoring is also required to provide for the temporary traffic lanes shown on the plans or indicated herein. The Contractor shall also furnish and place at his own expense, additional sheeting, shoring and bracing not shown on the plans, but required to protect newly-built work and all adjacent utilities and neighboring structures from damage and to comply with all rules, orders, and regulations of the Division of Industrial Safety Department of Industrial Relations of the State of California.

Where conditions permit, and only as approved by the Engineer, a sliding shield may be used in lieu of the specified sheeting in areas where sheeting is not required for traffic safety. However, the design of a sliding shield shall be approved by Division of Industrial Safety Department of Industrial Relations of the State of California prior to use.

Bracing shall be arranged so as not to place a strain on portions of completed work until the construction has proceeded far enough, in the opinion of the Engineer, to provide ample strength. Sheeting and bracing may be withdrawn and removed at the time of backfilling, but the Contractor shall be responsible for all damage to newly built work, and adjacent structures. Any damage to new or existing utilities or structures, whatsoever, occurring due to failure, lack of or improper sheeting or bracing shall be repaired by the Contractor at his own expense.

In addition, the Contractor shall submit to the City a copy of the CAL OSHA permit along with a detailed plan showing the design of shoring, bracing, sloping or other provision to be made for worker protection in accordance with Section 6422 of the Labor Code. If such plan varies from the shoring system standards established by the State of California Construction Safety Orders, a registered Civil or Structural Engineer shall prepare, wet stamp and sign the plans. The safety of the shoring, bracing, or protection installed or provided is the responsibility of the Contractor. The Contractor and his Engineer shall in no way be relieved of their legal or professional responsibilities by City's acceptance of shoring plans for safety of excavations.

The Contractor shall take special precautions near water main and appurtenances, sanitary sewer, sewer manholes, and curb and gutter because of the sandy soil that may be encountered and the proximity to the storm drain or sewer trench. If the water main, sewer line, manholes, curb and gutter that closely parallel the trench slough into the trench, all repairs will be at the Contractor's expense.

Full compensation for sheeting, shoring and bracing and for complying with all requirements of this section shall be included in the lump sum bid price for Sheeting, Shoring, and Bracing and shall include full compensation for furnishing all labor, tools, equipment, materials, incidentals, and doing all work involved and no additional compensation will be allowed."

7-10.4.5 CONFINED SPACES. ADD the following: "Work area for which entry is expected to be in accordance with Section 5157(c) (5), Non-Permit required Confined spaces;

Work areas in which hazardous or potentially hazardous atmospheric conditions exist or may exist shall be in accordance with Section 5157 (d), (e) and (f) (Permit-Required Confined Space):
(All manholes and sewer pipes)

It is the Contractor's obligation to satisfy all requirements of Title 8, CCF 5157.

Attention is also directed to "Sewer System Entry", Appendix E to CCF 5157.

Compensation for confined space entry procedures and safety provisions as described herein shall be included in the unit price paid for the various items of work in the bid proposal, and no additional compensation will be allowed."

7-10.4.6 SAFETY AND PROTECTION.

ADD the following SUBSECTION: **"7-10.4.6 SAFETY AND PROTECTION.** Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. He shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. All employees on the work and other persons who may be affected thereby.
2. All the work and all materials or equipment to be incorporated therein, whether in storage on or off the site.
3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

The Contractor shall not load or permit any part of any structure to be loaded with a weight that would endanger its safety. The Contractor shall provide protection of the work from undesirable weather conditions and from other elements which would be harmful to it. The Contractor shall furnish protective shelters or temporary buildings as required for the prosecution and protection of the work.

The Contractor shall take all necessary precautions for the safety of employees on the work, and shall comply with all applicable provisions of Federal, State and local safety laws and building codes to prevent accidents or injury to persons on, about or adjacent to the premises where the work is being performed. He shall erect and properly maintain at all times, as required by the conditions and progress of the work and as directed by the City, all necessary safeguards and barricades for the protection of employees on the work and the safety of others employed near the work including the public. The Contractor shall post danger signs and warning lights warning against the hazards created by such features of the construction as protruding nails, hoists, excavations, elevator hatchways, scaffoldings, window openings, stairways and falling materials.

The Contractor shall designate a responsible member of its organization on the work, whose duty shall be the prevention of accidents. The name and position of the person so designated shall be reported in writing to the Owner's representative.

In addition to reporting injuries and damage to the proper agencies, the Contractor is responsible to report to the Owner's representative, in writing, all serious accidents resulting from the execution of the work. A serious accident is an accident which causes death, serious personal injury or substantial property damage on or adjacent to the site. Furthermore, if death or serious injury or substantial property damage is caused, the accident shall be reported immediately by telephone or messenger to the Owner's representative. If a claim is made or suit is filed by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the Owner's representative, giving full details on the claim.

The Contractor shall assume all risks of loss or damage of any kind to any vehicles, machinery, equipment, materials or supplies which it shall provide in doing the work.

The Contractor shall take all precautions to prevent damage to work by the elements, storms or by water entering the site of the work directly or through the ground. In case of damage by the elements, storm or water, the Contractor shall make such repairs or replacements or rebuild such parts of the work as the Owner may require in order that the work may be completed as required by the Contract Documents. If the Contractor believes that additional work was necessary to remedy damage caused by events beyond the Contractor's control, the Contractor is entitled to make a claim to the Owner. If the events, in the opinion of the Contractor, caused an increase in the contract time, a claim must be made in writing to the Owner within ten days of the incident in question. If claims are filed after the ten day period, the Owner has the power to waive any right of the Contractor to submit a claim.

The Contractor shall post warning and danger signs so as to apprise all persons against any hazards created by the work being done under his contract."

7-10.4.7 PROTECTION OF THE PUBLIC.

ADD the following SUBSECTION: "**7-10.4.7 PROTECTION OF THE PUBLIC.** Wherever necessary or required, and at his own expense, the Contractor shall maintain fences, furnish full-time or part-time watchmen, guards, flagmen and like protective personnel, maintain lights, and take any additional precautions as may be necessary to protect life and property. Contractor shall provide protection for pedestrians and motorists in accordance with the Work Area Traffic Control Handbook (WATCH), and the requirements of the City of Cypress. Public notification through the use of signs shall be given prior to the demolition of pedestrian access ramps, as well as notifying the City in writing of the proposed schedule of activities pertaining to the construction of the pedestrian ramps.

The Contractor shall have its designated representative visit and observe the job site prior to, during, and following inclement weather to ensure all necessary precautions are in place and operational for the protection of the public and the safety of the personnel on the job."

7-13 LAWS TO BE OBSERVED. **ADD** the following: "The Contractor shall particularly observe all ordinances of the City in relation to the obstruction of streets or conduct of the work, keeping open passageways and protecting the same where they are exposed or dangerous to traffic."

7-15 INDEMNITY.

ADD the following SECTION: "**7-15 INDEMNITY.** The Contractor agrees to defend, indemnify and save harmless the City and each of its officers, agents and employees from and against any and all liabilities, demands, claims, damages, losses, costs and expenses of whatsoever kind or nature, including but not limited to, any and all direct and indirect costs of defense, made against, or incurred or suffered by, any such indemnitee as a direct or indirect consequence of entering into this contract or of injury, sickness or disease, including death, to persons or injury to or destruction of property, including but not limited to, the loss of use of property resulting directly or indirectly from or in any manner connected with or pertaining to any and all operations; and any and all activities, omissions and conditions in any manner connected therewith or pertaining thereto of the Contractor under the contract, subject to any limitations imposed by Civil Code Section 2782."

7-16 CONTRACTOR NOTICE.

ADD the following SECTION: "**7-16 CONTRACTOR NOTICE.** The address given in the Contractor's proposal is the place to which all notices to the Contractor shall be mailed or delivered. The mailing to or delivering at the above-named place of any notice shall be deemed sufficient service thereof upon the Contractor, and the date of that service shall be the date of such mailing or delivery. Such address may be changed at any time by written notice signed by the Contractor and delivered to the City Engineer."

7-17 CONTRACTOR'S RESPONSIBILITY FOR WORK.

ADD the following SECTION: "**7-17 CONTRACTOR'S RESPONSIBILITY FOR WORK.** Until the final acceptance of the work by the City by written action of the City Engineer, the Contractor shall have the charge and care thereof and shall bear the risk of injury or damage to any part of the work by the action of the elements or any other cause. The Contractor shall rebuild, repair, restore and make good all injuries or damages to any portion of the work occasioned by any cause before its completion and acceptance and shall bear the expense thereof, except for such injuries or damages arising from the sole negligence of willful misconduct of the City, its officers, agents or employees. Damage to City property shall be repaired immediately at sole cost to the Contractor. In the case of suspension of work from any cause whatever, the Contractor shall be responsible for all materials and the protection of work already completed and shall properly store and protect them, if necessary, and shall provide suitable drainage and erect temporary structures where necessary."

7-18 NO DISCRIMINATION.

ADD the following SECTION: "**7-18 NO DISCRIMINATION.** Contractor shall not discriminate in the employment of persons upon the Contract work because of the race, creed, color, national origin, ancestry, non-disqualifying disability, medical condition, marital status, or sex of such persons, except as provided by California Labor Code Section 1420. Contractor shall cause an identical clause to be included in every subcontract for the contract work."

7-19 EXAMINATION AND AUDIT.

ADD the following SECTION: "**7-19 EXAMINATION AND AUDIT.** In accordance with Public Contract Code Section 8546.7, this contract is subject to examination and audit by the State of California Adjuster for a period of three (3) years after final payment under the contract."

7-20 SEX OFFENDER ORDINANCE.

ADD the following SECTION: "**7-20 SEX OFFENDER ORDINANCE.** Contractor hereby acknowledges that it has received, reviewed, and understands Cypress Municipal Code Chapter 17-74, the "Registered Sex Offender Restrictions" ordinance. By executing and/or obtaining this Contract, Contractor acknowledges and agrees that it will comply with the requirements and restrictions of this ordinance, and further certifies that it is solely responsible for ensuring that all of its employees, agents, and volunteers are in compliance with the same.

On April 12, 2012, Cypress Municipal Code Chapter 17-74, entitled "Registered Sex Offender Restrictions", went into effect in the City of Cypress. A copy of this ordinance, which is designed to enhance the already existing state-law provisions which protect the City's children from registered sex offenders, is attached to this email for your careful review. A copy of this ordinance can also be found on the City's website at.

http://www.ci.cypress.ca.us/whats_news/ordinance_sex_offenders.pdf

This new ordinance imposes a series of restrictions upon all registered sex offenders that live in or enter the boundaries of the City of Cypress. Important among these is a *proximity restriction* which limits registered sex offenders from being in close proximity with children or areas frequented by children by prohibiting these offenders from: (i) coming within five hundred (500) feet of any public or private school, park, or child care center; and (ii) loitering within the established boundaries of designated "child safety zones" without a legitimate purpose. Generally, "child safety zones" are areas where, by design, purpose, or choice, children congregate. (See, CMC §§ 17-74.2; 17-74.4; 17-74.5.)

Because you are a Contractor and/or Subcontractor of the City, you may be performing work, rendering services, or engaging in other permitted activities, either in whole or in part, in an area that is now subject to the proximity restrictions imposed by this ordinance. As such, you, your business or company, and its officers, agents, employees and/or sub-contractors are solely responsible for ensuring compliance with these new provisions of law.

Specifically, it is now your responsibility to notice that neither you, nor your officers, agents, employees or sub-contractors are registered sex offenders doing work, performing services, or engaging in permitted activities within 500 feet of a public or private school, park or child care center in the City of Cypress. In order to comply with your obligations under this law, you may wish to consider taking some or all of the following steps:

- Provide a copy of the City's Ordinance (CMC Chapter 17-74) to your officers, agents, employees and/or sub-contractors.
- Create and distribute a form to your officers, agents, employees and/or sub-contractors which includes the following language: "I acknowledge and agree that I have received, reviewed and understand Cypress Municipal Code Chapter 17-74, the "Registered Sex Offender Restrictions" ordinance, will comply with the requirements and restrictions of this ordinance, and further certify that I am solely responsible for ensuring that all of my employees, agents and sub-contractors are

in compliance with the same." You may wish to require that each person then sign this form below the above-stated language.

- Use the "Megan's Law" website (described below) to check on the status of your officers, agents, employees and/or sub-contractors *or* require them to conduct these checks.

Megan's Law Website – Pursuant to Section 290.46 of the California Penal Code, information about specified registered sex offenders is made available to the public via an Internet Web site maintained by the Department of Justice at www.meganslaw.ca.gov. The names of all registered sex offenders in the state of California are contained on this website. In addition, depending on an offender's criminal history, this website will also include either the offender's address or the community of residence and ZIP code in which he or she resides. This website can be utilized, either by you or your officers, agents, employees and/or sub-contractors to check on the status of all persons working for or with your business or company in order to ensure compliance with the City's new ordinance."

7-21 ARCHAEOLOGICAL AND PALEONTOLOGICAL DISCOVERIES.

ADD the following SECTION: "**7-21 ARCHAEOLOGICAL AND PALEONTOLOGICAL DISCOVERIES.** If discovery is made of items of archaeological or paleontological interest, the Contractor shall cease excavation of the area of discovery and shall not continue until such time as approved by the Engineer. The Engineer shall then direct excavation operations within the area of discovery.

Discoveries include but are not limited to, dwelling sites, stone or other artifacts, animal bones, human bones and fossils.

The Contractor shall be entitled to an extension of time in accordance with the provisions of Subsection 6-3 of the Standard Specifications. Should the Contractor's operations be affected materially, additional work will be paid for as extra work as provided in Section 3-3, "**EXTRA WORK.**" of the Standard Specifications for Public Works."

7-22 GEOTECHNICAL INVESTIGATION.

ADD the following SECTION: "**7-22 GEOTECHNICAL INVESTIGATION.** By submitting a bid, the Contractor acknowledges that he has satisfied himself as to the nature of the work, including but not restricted to the conditions affecting handling and storage of materials, disposal of excess material, level and amount of groundwater, and ascertaining existing conditions that affect labor, materials and equipment costs.

Contractor shall acknowledge that groundwater is encountered at all depths up to the ground surface and shall provide and maintain dewatering during construction in accordance with the Standard Specifications and the requirements of the City's NPDES Order No. 2009-004 issued by the California Regional Water Quality Control Board (Santa Ana Region).

All costs for dewatering shall be included in the contract bid price as described in **Section 7-8.6.4 Dewatering** and no separate payment will be allowed, unless otherwise specified.

All costs for geotechnical testing other than compaction testing shall be considered as included in the price paid for the various contract items of work involved and no additional compensation will be allowed therefore.

A geotechnical investigation was conducted by the City (or Consultant), and the geotechnical report is made available for general information. Neither the CITY nor its Consulting Design Engineers guarantee the accuracy of the contained geotechnical information. High groundwater does exist throughout the City, and will be encountered during the construction. It should be noted that the borings for the Geotechnical Exploration were drilled following an extended dry period. Therefore, the Contractor must anticipate that the groundwater shall be encountered at all levels up to the ground surface during his operation, and will encounter groundwater in the excavations. Further, it shall be the Contractor's responsibility to satisfy himself of the kind and type of soils and the level of the water table to be encountered during the

construction. The Contractor must include in their bid proposal provisions for dewatering in accordance with the contract specifications. No additional payment shall be allowed for such adjustments.

Each prospective bidder shall be responsible for determining the adequate level of the geotechnical information that he/she needs to prepare for his/her bid. Each prospective bidder shall be responsible for the cost of obtaining any additional geotechnical information for his/her bid."

SECTION 9 – MEASUREMENT AND PAYMENT

9-3 PAYMENT.

9-3.1 GENERAL. DELETE the SECOND PARAGRAPH and **ADD** the following: "The quantities given in the proposal and specifications are approximated only, being given as a basis for comparison of bids; therefore, the City does not, expressly or by implication, guarantee that the actual amount of the proposed work will correspond therewith. The unit and lump sum prices bid for each item of work shown on the proposal shall include full compensation for furnishing the labor, materials, tools, and equipment and doing all the work, including restoring all existing improvements, to complete the item of work in place and no other compensation will be allowed thereafter. Payment for incidental items of work not separately listed shall be included in the prices shown for the various related items of work."

9-3.2 PARTIAL AND FINAL PAYMENT. REPLACE the FIRST PARAGRAPH with the following: "The Contractor shall submit a Progress Payment Package to the City Engineer before the tenth day of each following month for verification and payment consideration. 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.

The Progress Payment Package shall consist of:

1. City of Cypress "Monthly Pay Estimate Summary Form"
2. City of Cypress "Monthly Pay Estimate Form"
3. City of Cypress "Monthly Material Estimate Form"
4. City of Cypress "Weekly Statement of Working Days"
5. Updated Project Schedule
6. Certified Payrolls
7. Copies of Material Tickets, Certifications, Etc.
8. DBE and/or Caltrans Forms/Documents (as required)

ALL documents shall be signed and dated by a person designated as the Contractor's authorized representative. Failure to submit accurate and fully executed documents will result in rejection of the Progress Payment Package. The Contractor shall allow a minimum of five (5) business days for review of the Progress Payment Package. Upon approval of the Progress Payment Package, payments will be mailed on the next available Warrant Date per the City of Cypress Finance Department Accounts Payable Schedule."

9-3.2.1 PAYMENT OF FINAL INVOICE.

ADD the following SUBSECTION: "**9-3.2.1 PAYMENT OF FINAL INVOICE.** When in the opinion of the City Engineer the Contractor has completely performed the contract on his part, the City Engineer shall notify the City Clerk that the contract has been completed in its entirety. The Engineer shall request that the City accept the work and that the City Clerk be authorized to file on behalf of the City in the office of the Orange County Recorder, a Notice of Completion of the work herein agreed to be done by the Contractor. The Contractor shall then submit to the Engineer for approval a written statement of the final quantities of contract items for inclusion in the final invoice. Upon receipt of such statement, the City Engineer shall check the quantities included therein and shall authorize the Contractor to submit an invoice which, in the Engineer's opinion, shall be just and fair, covering the amount and value of the total amount of work done by the Contractor, less ten percent (10%) of the total work done.

On the expiration of thirty-five (35) days after the date of recording the Notice of Completion, the City shall pay to the Contractor the amount remaining after deducting from the amount or value stated in the invoice all prior payments to the Contractor plus all amounts to be kept and retained under the provisions of the Contract, and shall release the Faithful Performance Bond and Labor and Material Bond."

9-3.4 MOBILIZATION. DELETE the SECTION in its ENTIRETY and REPLACE with the following: "Mobilization shall conform to the provisions in Section 11 "Mobilization" of the Caltrans Standard Specifications. Mobilization shall include the obtaining of all bonds, insurance, and permits, moving onto the site of all equipment; all as required for the proper performance and completion of the Work. Mobilization shall include but not be limited to the following items:

1. Obtaining and paying for all required bonds, insurance, financing, and permits.
2. Moving all of the Contractors' plant and equipment required for the first week's operation onsite.
3. Submittal of detailed Preliminary Construction Schedule.
4. Submittal of Initial Construction Schedule, embodying all corrections required by the Engineer. No payment for mobilization can be made until the Engineer has approved the schedule in writing.
5. Submittal of a video of all existing striping and markings in DVD format at the pre-construction meeting.
6. Providing and maintaining a field office for the Contractor.
7. Arranging for location and/or the erection of Contractor's storage area.
8. Arranging for location and/or the erection of Contractor's staging area.
9. Submittal and City approval of any required Contractor notices, door hangers, forms etc...
10. Posting all OSHA, CDBG and all other required notices as determine by the Engineer.
11. Compliance with all Federal, State and Local requirements. Including but not limited to NPDES and submitting a Stormwater Pollution Prevention Plan.
12. Maintaining the site in a clean, safe, and orderly condition.
13. Video and photographic documentation of the site and access conditions prior to the start of construction activities.
14. Having proper BMP's in place prior to start of construction activities.
15. Notification of residents and/or property owners located adjacent to the construction areas. City review and approval is required for all notifications prior to distribution.
16. Necessary sanitary facilities for the use of workman on the job shall be provided and maintained in an approved manner by the Contractor, properly secluded from public observation and in compliance with health ordinances and laws, and their use shall be strictly enforced by the Contractor.
17. Installing project information sign prior to commencement of work. Location of sign shall be at the direction of the City Engineer.

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

1. Removal of all construction equipment, material, and debris from the site. Final projects site clean-up.
2. Restoring any damaged private property and obtaining concurrence that the property owners are satisfied with the way their property was left at the completion of the project.
3. Submitting acceptable "AS BUILT" red line drawings to the City.
4. Submitting acceptable post construction video inspection DVD's to the City.
5. Attending final inspection walk-through with the City staff, Design Engineer and Project Inspection staff.
6. Completion of all items on final "Punch List".
7. Resolving any outstanding claims and agreeing with final pay quantities for project close out."

9-4 UNPAID CLAIMS.

ADD the following SECTION: "**9-4 UNPAID CLAIMS.** If upon or before the completion of the work herein agreed to be performed or at any time prior to the expiration of the period within which claims of lien may be filed for record as prescribed by the Code of Civil Procedure of the State of California, any person or persons claiming to have performed any labor or furnished any materials, supplies or services towards the performance of completion of this Contract, or if they have agreed to do so, shall file with the City a verified

statement of such claim; or if any person shall bring against the City or any of its agents any action to enforce such claim, the City shall, until the discharge thereof, withhold from the monies that are under its control as much as shall be sufficient to satisfy and discharge the amount in such notice or under such action claimed to be due, together with the cost thereof; provided, that if the City shall, in its discretion, permit the Contractor to file such additional bond as is authorized by the Code of Civil Procedure in a penal sum equal to one and one-quarter times the amount of said claim, said money shall not thereafter be withheld on account of such claim."

9-5 ACCEPTANCE.

ADD the following SECTION: "**9-5 ACCEPTANCE.** The parties agree that no certificate given, with the exception of the certificate of final payment, shall be conclusive evidence of the faithful performance of the Contract, either in whole or in part, and that no payment shall be construed to be in acceptance of any defective work or improper materials. Further, the certificate of final payment shall not terminate the Contractor's obligations under his warranty hereinabove. The Contractor agrees that payment of the amount due under the Contract and the adjustments and payments due for any work done in accordance with any alterations of the same shall release the City, the City Council and its officers and employees from any and all claims or liability on account of work performed under the Contract or any alteration thereof."

9-6 COST ACCOUNTING RECORDS.

ADD the following SECTION: "**9-6 COST ACCOUNTING RECORDS.** Contractor shall maintain, and submit with each progress payment, cost accounting records for the project distinguishing between the following work cost categories:

1. Work performed based on bid item prices
2. Change order work other than extra work. Distinguish this work by:
 - a. Bid item prices
 - b. Force account
 - c. Agreed price
3. Extra Work. Distinguish extra work by:
 - a. Bid item prices
 - b. Force account
 - c. Agreed price
4. Work performed under potential claim records
5. Overhead
6. Subcontractors, suppliers, owner-operators, and professional services.

Cost accounting records must include:

1. Itemization of the materials used and corresponding vendor's invoice copies
2. Direct Cost of labor
3. Equipment size and type
4. Rental charge
5. Hours operated."

**CITY OF CYPRESS
 PART 2 – CONSTRUCTION MATERIALS**

SECTION 201 – CONCRETE, MORTAR, AND RELATED MATERIALS

201-1 PORTLAND CEMENT CONCRETE.

201-1.1.2 CONCRETE SPECIFIED BY CLASS AND ALTERNATE CLASS. ADD the following: "All Portland Cement concrete for construction in the public right of way shall be Class 560-C-3250, Type II or V."

201-3 EXPANSION JOINT FILLER AND JOINT SEALANTS.

201-3.1 GENERAL. ADD the following: "Crack sealant material shall be CRAFCO Polyflex Type 3, Road Works 306, Crack Filler Manufacturing Corporation No. 180, Crack Filler Manufacturing Corporation No. 200, Deery American Corporation Premium Sealant, or an approved equal. Sealant shall be prepared and applied to the pavement cracks in conformance with all manufacturers' instructions except where noted otherwise in project specifications. Contractor shall provide crack sealant material for submittal to the Engineer prior to beginning of work for approval and shall notify the Project Inspector prior to weed spray application with dye for inspection."

SECTION 203 – BITUMINOUS MATERIALS

SECTION 203-3.4.4 RUBBER POLYMER MODIFIED SLURRY

ADD the following SUBSECTION: "**203-4.1 General.** This work shall consist of mixing asphaltic emulsions, aggregate, set-control additives, specially produced and graded crumb rubber, and water and spreading the mixture on a surfacing of pavement where shown on plans, as specified in these special provisions, and as directed by the Engineer.

203-4.2 Composition. The materials for Rubberized Slurry Seal immediately prior to the mixing shall confirm to the following requirements:

203-4.2.1 Asphaltic Emulsion. Asphaltic Emulsion shall be quick-setting Type CQS-1H grade conforming to the requirements of these special provisions. Quick Setting CQS-1H Asphaltic Emulsions shall conform to the following requirements when tested in accordance with the specified test method:

<u>Emulsion</u>		
<u>Quality Tests</u>	<u>Test</u>	<u>Requirements</u>
AASHTO T59 ASTM D244	Residue after Distillation	60% min.
AASHTO T49 ASTM 2397	<u>Residue</u> Penetration at 77F (25C)	40-90

In addition, quick setting Type CQS-1H Asphaltic Emulsion shall test Positive for Particle Charge when tested in accordance with ASTM Designation: If the Particle Charge Test result is inconclusive the Asphaltic Emulsion shall meet a pH requirement of 6.7 maximum.

203-4.2.2 Aggregate. The mineral aggregate used shall be the type and grade specified for the particular use of the Rubberized Slurry surfacing. The aggregate shall be manufactured crushed stone such as granite, slang, limestone, chat, or other high quality aggregate, or combination thereof. Aggregate shall consist of rock dust except that 100 percent of any aggregate of combination of aggregates, larger than the No. 50 sieve size, used in the mix shall be obtained by crushing rock. The

material shall be free from vegetable matter and other deleterious substances. All aggregate shall be free of caked lumps and oversized particles.

203-4.2.2.1 Quality Tests. The percentage composition by weight of the aggregate shall conform to the following gradation when determined by California Test 202, modified by California Test 105 when there is a difference in specific gravity of 0.2 or more between blends of different aggregates.

TYPE I SLURRY SEAL GRADATION

Sieve Size	Percentage Passing	Stockpile Tolerance
No.4	100	+/-5%
No.8	90-100	+/-5%
No.16	65-90	+/-5%
No.30	40-60	+/-5%
No.50	25-42	+/-4%
No.200	10-20	+/-2%

TYPE II SLURRY SEAL GRADATION

Sieve Size	Percentage Passing	Stockpile Tolerance
No.3/8	100	5%
No.4	90-100	5%
No.8	65-90	5%
No.16	45-70	5%
No.30	30-50	5%
No.50	18-36	4%
No.100	10-24	3%
No.200	5-15	2%

The job mix (target) gradation shall be within the gradation band for the desired type. After the target gradation has been submitted, then the percent passing each sieve shall not vary be more than the stockpile tolerance.

The aggregate shall also conform to the following requirements:

Test	California Test	Requirements
Sand Equivalent	217	45 min.
Durability Index	229	55 min.

The aggregate will be accepted at the job location or stockpile. The stockpile shall be accepted based on five gradation tests according to California Test 202, modified by California Test 105 when there is a difference in specific gravity of 0.2 or more between blends of different aggregates. If the average of the five tests is within the gradation tolerances, then the material will be accepted. If the test show the material to be out, the contractor will be given the choice to either remove the material or blend other aggregates with the stockpile material to bring it into specifications. Materials used in blending must meet the quality test before blending and must be blended in a manner to produce a consistent gradation.

When the results of either the Aggregate Grading or the Sand Equivalent test do not conform to the requirements specified, the aggregate shall be removed. However, if the requested in writing by the Contractor and approved by the Engineer, the aggregate may be used and the Contractor shall pay to the agency \$1.75 per ton for such aggregate left in place. No single aggregate grading or sand equivalent tests shall represent more than 300 tons or one day's production, whichever is smaller.

203-4.2.3 Water. Water shall be of such quality that the asphalt will not separate from the emulsion before the slurry seal is in place in the work. If necessary for workability, a set-control agent that will not

adversely affect the Rubberized Slurry Surfacing material may be used. Pre-wetting of streets will not be required unless streets are subject to high temperatures and/or dust.

203-4.2.4 Crumb Rubber. The crumb rubber shall be ambient granulated or ground from whole passenger and/or truck tires only. Uncuring or devulcanized rubber is not acceptable and may not be used. Rubber tire buffing from either recapping or manufacturing processes may not be used as a supplement to the crumb rubber mixture.

In order to remove steel and fabric, an initial separation stage which subjects the rubber to freezing temperatures may be used. The crumb rubber shall not be elongated or hair-like in shape and individual particles shall not be greater than 1/20 of an inch in length. The crumb rubber shall be free of contaminants including: fiber, metal and mineral matter, to the following tolerances:

- A. The fiber content shall be less than 0.30% by weight.
- B. The crumb rubber shall be free of metal particles. Metal imbedded in rubber particles will not be allowed. The amount of mineral contaminants allowed shall not exceed 0.10% by weight.
- C. The crumb rubber shall be dry with a moisture content of less than 0.75%.

CRUMB RUBBER CHEMICAL PRPERTIES SPECIFICATION

Property	Specification Limits
Specific Gravity	1.15+/-0.05
Percent of Carbon Black	35.0 Maximum
Percent of Rubber Hydrocarbon	55.0 Maximum
Percent Ash	6.0 Maximum
Percent of Acetone Extract	10.0 Maximum
Percent of Chloroform Extract	3.0 Maximum
Percent Natural Rubber	40 Minimum

The crumb rubber shall conform with the following gradation and chemical properties:

CRUMB RUBBER GRADATION REQUIREMENTS

Sieve Size	Percent Passing
No.30	100
No.40	90-100
No.50	75-85
No.100	25-35
No.200	0-10

TESTING METHODS FOR CRUMB RUBBER ANALYSIS

Property	Test Method
Specific Gravity	ASTM D-1817
Carbon Black	ASTM D-297
Ash	ASTM D-297
Chloroform Extract	ASTM D-297
Natural/Synthetic Rubber	ASTM D-297
Sieve Analysis	ASTM D-1511 or ASTM DC-136

203-4.2.5 Polymer. The Polymer additive shall be SBR Latex or approved equal, which is added at a minimum of 2.0 percent by weight of the asphaltic emulsion.

203-4.2.6 Carbon Black. The carbon black solution shall be non-ionic in charge and liquid in form. The carbon black must be compatible with the emulsion system, polymers and additives being used.

Specification	Tolerances
Total Solids	40-44
% Black by Weight	35-37
Type Black	Medium Furnace Color
Type Dispersing	Non-ionic

203-4.2.7 Mineral Filler. Portland Cement, hydrated lime, limestone dust, fly ash or other approved filler meeting the requirements of ASTM D-242 shall be used if required by the mix design and may be used to facilitate set times as needed. Any cement used shall be considered as part of the dry aggregate weight for mix design purposes.

203-4.2.8 Additive. Additives may be used to accelerate or retard the break-set of the Rubberized Slurry Surfacing. The use of additives shall be in quantities specified in the mix design.

203-4.3 Laboratory Evaluation.

203-4.3.1 Before work begins, the contractor shall submit a mix design covering the specific materials to be used on the project. The design will be performed by a laboratory that has experience in designing Rubberized Asphalt Slurry Surfacing. After the mix design has been approved, no substitution will be permitted unless approved by the Engineer.

203-4.3.2 Mix Design. The proposed Rubberized Asphalt Slurry Surfacing mix design shall verify compatibility of the aggregate, emulsion, mineral filler, set-control additive and rubber blend. Recommended tests and values are as follows:

Test	Description	Specification
ISSA T-106	Slurry Seal Consistency	Pass
ISSA TB-109	Excess Asphalt	50 grams/square foot max.
ISSA TB-100 (Type I)	Wet Track Abrasion	50 grams/square foot max.
(Type II)	Wet Track Abrasion	60 grams/ square foot max.
ISSA TB-113	Mixing Time	Controllable to 150 seconds min.
ISSA TB-114	Wet Stripping	Pass

The Mixing Time test should be done at the highest temperatures expected during construction. The original lab report shall be signed by the laboratory that performed the mix design and shall show the results of tests on individual materials. The report shall clearly show the proportions of aggregate, mineral filler (min. and max.), water (min. and max.), additive (s) (usage), asphalt emulsion and asphalt rubber blend based on the dry weight of the aggregate.

All of the component materials used in the mix design shall be representative of the materials proposed by the contractor to be used on the project. The percentage of each individual material required shall be shown in the laboratory report. Adjustments may be required during the construction, based on field conditions.

The component materials shall be within the following limits:

- Residual Asphalt Type I 10%-16% Based on dry weight of aggregate.
- Residual Asphalt Type II 7.5%-13.5% Based on dry weight of aggregate.
- Crumb Rubber The crumb rubber will be added to the Rubberized Slurry mix a rate of 5% by volume to the asphalt cement.

Polymer	Polymer Additive shall be added at 2% of finished emulsion.
Carbon Black	Carbon Black shall be added at 1.3 to 2% of the finished emulsion.
Mineral Filler	0.5%-2.0% (if required by mix design) Based on dry weight of aggregate.
Additives	As needed.
Water	As needed to achieve proper mix consistency. (Total mix liquids, should not exceed the loose aggregate voids)

203-4.4 Proportioning. Note: Proportioning equipment of equal capacity to that described herein will be considered by the City prior to time of award.

Aggregates, asphaltic emulsion, water, polymers, additives, including set-control agent, if used, and crumb rubber shall be proportioned by volume utilizing the mix design approved by the Engineer. If more than one kind of aggregate is used, the correct amount of each kind of aggregate to produce the required grading shall be proportioned separately, prior to the other materials of the mixture, in a manner that will result in a uniform and homogenous blend.

The complete mixture, after addition of water and any set-control agent used, shall be such that the mixture has proper workability and (a) will permit a traffic flow, without pilot-car-assisted traffic on the slurry seal within one hour after placement (at 78 degrees F.) without the occurrence of bleeding separation or other distress, and (b) will prevent development of bleeding, excessive raveling, separation or other distress within 7 days after placing the rubberized asphalt surfacing.

Spread rates shall be as follows:

The **Type I RPMS** shall be placed at **2,000** square feet per Extra Long Ton (ELT), based on dry aggregate weight.

The **Type II RPMS** shall be placed at **1,350** square feet per Extra Long Ton (ELT), based on dry aggregate weight.

Asphaltic emulsion shall be added at a rate within the following ranges of percent by weight of the dry aggregate. The exact weight will be determined by the mix design and the asphalt solids content of the asphaltic emulsion furnished.

Type of Aggregate	Range
Type I	17-20%
Type II	14-17%

Pneumatic rolling is required on all streets. Rolling will commence as soon as the RPMS has set sufficiently to prevent any material from adhering to the tires. The RPMS surface shall be rolled by two to five coverages, or as directed by the engineer. Pneumatic rollers shall be operated at a minimum tire pressure of 60 psi.

The Aggregate shall be proportioned by a belt feeder operated with an adjustable cutoff gate. The height of the gate opening shall be readily determinable. The emulsion shall be introduced into the mixer by a positive displacement pump. Water shall be introduced into the mixer through and adjustable multi-spray pugmill bar, water volume shall be displayed by an electric digital meter registering in gallons delivered.

The bitumen ratio (pounds of asphalt per 100 pounds of dry aggregates) shall not vary more than 1.5-pound of asphalt above or 0.6-pound asphalt below the amount designated by the mix design and approved by the Engineer.

The aggregate belt feeder shall deliver aggregate to the pugmill mixed with such volumetric consistency that the deviation for any individual aggregate delivery rate check-run shall be within 2.0 percent of the mathematical average of 3 runs of at least 300 gallons each in duration.

Each Rubberized Slurry surfacing unit shall be equipped with a unit designed to store and deliver the various required materials to a twin-shafted, multi-paddle pugmill in the following manner:

Each Rubberized Slurry surfacing unit shall be equipped with a computer controlled automatic sequencing system that initiates each material delivery at the precise moment necessary to insure proper proportioning.

Each Rubberized Slurry surfacing unit shall be equipped with independent storage capabilities for the aggregate, emulsion, crumb rubber, polymer, set-control additives and the carbon black.

The polymer additive and the carbon black shall be delivered to the mixer in the relative proportions required by means of a common shaft, dual pump system. The polymer additive and the carbon black flow rates shall be independently adjustable by means of diaphragm valves and shall be sequenced through the computer controlled auto-sequencing system. The polymer additive and the carbon black shall be blended and mixed prior to their introduction into the pugmill. Introduction into the twin-shafted pugmill shall be done through an injection system, which delivers the blended material to the apex of each mixing shaft immediately prior to the introduction of the asphalt emulsion. The polymer additive and the carbon black delivery system shall each be equipped with digital electronic flow metering devices that can read in gallons per minute.

The crumb rubber delivery system shall be equipped with an air suspension unit designed to prevent clumping or bridging of the rubber material. The air discharges shall be sequenced to avoid over-suspension of the rubber. The rubber shall be delivered to the pugmill by a hydraulically driven auger and shall be initiated through the computer controlled auto-sequencing system.

The rubberized asphalt slurry surfacing shall be mixed in a continuous, twin shaft, multi-paddle pugmixer. The pugmill shall be equipped with a hydraulically controlled steel pugmill gate for positive discharge operations. No dripping slurry will be allowed.

The emulsion shall be introduced into the mixer by a positive displacement pump. The emulsion storage shall be equipped with a device which will automatically shut down the power to the emulsion pump and aggregate belt feeder when the level of stored emulsion is lowered to within two inches of the suction line.

A temperature-indicating device shall be installed in the emulsion storage tank at the pump suction level.

The aggregate shall be proportioned using a belt feeder operated with an adjustable cutoff gate. The height of the gate opening shall be readily determinable.

The aggregate feeder shall be directly connected to the drive on the emulsion pump. The drive shaft of the aggregate feeder shall be equipped with an electronic digital belt. The belt delivering the aggregate to the pugmill shall be equipped with a device to monitor the depth of the aggregate being delivered to the pugmill. The device for monitoring depth of aggregate shall automatically shut down the power to the aggregate belt feeder whenever the depth of aggregate is less than 70 percent of the target depth of flow. An additional device shall monitor movement of the aggregate belt by detecting revolutions of the belt feeder. The devices for monitoring no flow or belt movement, as the case may be, shall automatically shut down the power to the aggregate belt when the aggregate belt movement is interrupted. To avoid shutdown caused by normal fluctuations in delivery rates, a delay of three seconds between sensing less than desirable storage levels of aggregate or emulsion shall be permitted.

Water delivery shall be adjusted through a diaphragm valve. Water flow rate shall be electronically displayed through a digital meter.

Set control additive flow rate shall be electronically displayed through a digital meter.

The mixer unit shall not be operated unless all electronic display and revolution counters are in good working condition and functioning and all metal guards are in place. All indicators required by these specifications shall be operational at all times.

The rubberized Asphalt Slurry mixture shall be spread by means of a controlled spreader box. The spreader box shall be capable of spreading traffic lane width and shall have strips of flexible rubber belting or similar material on each side of the spreader box and in contact with the pavement to positively prevent loss of slurry from the ends of the box. All spreader boxes shall be equipped with reversible motor-driven augers when placing Rubberized Asphalt Slurry. Rear flexible strike-off blades shall make close contact with the pavement, and shall be capable of being adjusted to the various crown shapes so as to apply a uniform surfacing coat. Flexible drags, to be attached to the rear of the spreader box, shall be provided as directed by the Engineer. All drags and strike-off blades (rubbers) shall be cleaned daily if problems with cleanliness and longitudinal scouring occur. The spreader box shall be clean, free of all slurry and emulsion, at the start of each work shift."

203-5 SLURRY SEAL

203-5.1 GENERAL. ADD the following: "Slurry seal shall consist of a mixture of emulsified asphalt (which shall have an additive of 2.5 percent rubber latex added at the asphalt plant), mineral aggregate and water, properly proportioned, mixed and spread evenly on pavement surfaces, as specified herein and as directed by the Engineer. The cured slurry shall have a uniform appearance, fill all cracks adhere firmly to the surface and have a skid-resistant surface.

Emulsified asphalt shall be either cationic type, Grade CSS-1h or anionic type, Grade SS-1h conforming to the requirements of Subsections 203-1.3 Test Reports and Certification, 203-3.4 Physical Properties, and 203-3.5 Certification of Compliance. Rubber latex shall be added to the emulsified asphalt at the plant at the rate of 2.5 parts latex to 100 parts emulsified asphalt by volume.

Prior to the time of delivery of each shipment of asphalt emulsion, the Contractor shall deliver to the City certified copies of the test report for that emulsion. The test report shall indicate the name of the vendor, type and grade of asphalt emulsion delivered, date and point of delivery, quantity delivered, delivery ticket number, purchase order number, and results of specified tests. The test report shall be signed by an authorized representative of the vendor, who shall certify that the product delivered conforms to the Standard Specifications and is compatible with the proposed aggregate. At the request of the Engineer, samples of the emulsion at the stockpile site will be tested to determine compliance with the above requirements. Testing shall be accomplished by an accredited material-testing laboratory approved by the Engineer. Records of the test results shall be provided to the Engineer and the testing required in connection with those results and all additional testing shall be provided by the Contractor at no cost to the City. No material from that shipment of asphalt emulsion shall be utilized or employed in performance of the work until the certified test reports and samples of the material have been furnished to, checked by, and approved by the Engineer to determine their conformity with the prescribed requirements. Delays by the Contractor in furnishing the required test reports will not be grounds for any extension of contract time.

Within 60 minutes after application, the slurry (emulsion, aggregate, water and additives) shall support uncontrolled vehicular traffic so that slurry will not adhere to and/or be picked up by the tires of vehicles, bleed, ravel, separate or show other distress. The type and amount of retardant for quick-settling emulsion shall be such that it does not adversely affect either the seal or its compliance with the above requirement for supporting uncontrolled traffic within 60 minutes after application.

Water shall be compatible with the other ingredients of the slurry. Water (excluding that water in the emulsified asphalt), shall be added at a rate of 5 to 10 percent by weight of dry aggregate to ensure proper dispersion of the emulsified asphalt and proper work ability while (1) avoiding excess water which would allow separation and settlement of the aggregate, (2) avoiding insufficient water which would result in balling and coagulation in the mixer (3) permitting uncontrolled vehicular traffic as specified herein.

Aggregate shall be rock dust or other mineral aggregates approved by the Engineer and shall conform to the requirements of Section 200 of Standard Specifications. The aggregate shall have a minimum sand equivalent of 45 (Calif. Test 217). Care should be exercised to prevent segregation of aggregate in storage and handling.

Contractor shall schedule and coordinate the delivery of aggregate to the stockpile (s) such that (1) deliveries originate at the plant and arrive at the stockpile site within normal work hours on the same calendar day, (2) delivery site and project name are explicitly stated on each delivery ticket, (3) successive deliveries on the same calendar day show the cumulative total for that day, (4) copies of all delivery tickets are delivered to the Engineer before the end of the working day, whereas any delivery ticket not so delivered may be rejected by the Engineer. Any deviation from this process must have the prior approval of the Engineer."

203-11 ASPHALT RUBBER HOT MIX (ARHM).

203-11.2 MATERIALS. ADD the following: "Asphalt Rubber Hot Mix shall be **ARHM-2 (manufactured with Type II binder).**"

203-11.2.3 CRUMB RUBBER MODIFIER (CRM). ADD the following: "Scrap Tire CRM used on this project shall be one hundred percent (100%) California waste tires. ARHM shall use a minimum of 20 pounds of scrap rubber per ton of mix. Rubberized Asphalt Concrete (RAC) material must meet American Society for Testing and Materials (ASTM) D 6114-97 "Standard Specification for Asphalt-Rubber Binder."

203-11.4.1 HAND HELD VISCOMETER TEST

ADD the following SUBSECTION: "**203-11.4.1 HAND HELD VISCOMETER TEST.** Contractor shall have available a Haake Viscometer. Contractor shall take viscosity readings at least every hour at the point where asphalt-rubber enters the feed to the ARHM plant. Temperature of readings shall be constant at 375 degrees Fahrenheit. Contractor shall log results including time and temperature, and shall notify the Engineer at the plant 15 minutes prior to each test. Samples shall be taken at a point where the material has not been exposed to material that is not fully isolated from the feed to the ARHM plant during times of production.

Contractor shall prepare a log of weights of asphalt, asphalt modifier, natural rubber, and tire rubber used in each tank of asphalt-rubber produced. The log of weights shall be made available to the Engineer on request."

203-11.9.1 MISCELLANEOUS REQUIREMENTS.

ADD the following SUBSECTION: "**203-11.9.1 MISCELLANEOUS REQUIREMENTS.** Contractor shall have a minimum of **one** motorized power broom/street sweeper with water attachment and vacuum system on site during **ALL** periods of removal, distribution, and spreading to provide for cleanup of haul routes and work areas. Power broom shall provide miscellaneous cleanup of construction debris, dirt, concrete, and ARHM spoils as directed by the Engineer. Should the Contractor fail to furnish a power broom, the City shall send its own at the expense of the Contractor.

Contractor shall maintain a functioning infrared heat measurement device in close proximity to each paving machine at all times. Contractor shall provide a pavement temperature reading, with an infrared heat measurement instrument, when requested by the Engineer. (Inaccessibility of a heat measurement shall be cause for termination of paving operations)."

SECTION 207 – GRAVITY PIPE

207-8 VITRIFIED CLAY PIPE (VCP).

ADD the following: "All VCP and clay fittings shall be designated extra strength and shall be in conformance with ASTM C700.

All VCP and fittings shall have integral bell and spigot joints in conformance with ASTM C425 (Compression Joints), unless otherwise shown on the Contract Drawings. Rubber-Sleeve type couplings

shall only be allowed for (transitional couplings) joining existing or other types of outside diameters of pipe.

All pipe and fittings shall be clearly marked with the class, size, strength, and the manufacturer's name or trademark.

VCP extra strength pipe shall be laid to the line and grade shown on the plans and per Section 306 of "GREENBOOK," with an overall maximum allowable tolerance of 0.125 inch at the invert. The Contractor shall continuously check the grade of the pipe being installed through the use of laser line. **For saturated soil the Bedding Materials shall be "30-inch in depth wrapped with Geotextile of 3/4-inch Crushed Rock"**.

Contractor shall pothole the crossings of existing sewer/storm drain/water main, sewer lateral and other utilities along the City proposed alignments as the first order of work. The Contractor shall submit a copy of the potholing report and support plan as described in Section 7-9 to the Engineer with the actual field elevations of the utilities shown on the sewer profile prior to starting project construction. The first progress payment will be withheld until the potholing is complete for the entire project and the report and plan is submitted to, and approved by, the Engineer. Payment for potholing of existing utilities shall be paid at the contract price per linear foot for VCP Extra Strength pipeline, unless otherwise included in a lump sum contract bid price, and no additional compensation will be allowed.

It is the Contractor's responsibility to perform Closed Circuit Television inspection (CCTV) per the National Association of Sewer Services Companies (NASSCO) standards from manhole to manhole for VCP alignment, grade and damaged or defective pipe in place; after the pipe has been installed, backfilled and compacted to grade, tested for leakage, manholes raised to grade, but prior to final resurfacing. CCTV inspection shall be recorded on DVD, and recording procedures shall conform to the requirements of SSPWC, Section 500-1.1.5, Television Inspection, except that the maximum speed shall be 15 feet per minute, and the production shall be a minimum 460 lines per inch resolution or minimum resolution of 480 x 320 pixels and an interlaced frame rate at a minimum bitrate of 1500. The CCTV inspection shall stop at every joint and provide a clear video of the pipe connections. The recording shall continuously display the following on-screen data; contract number, project name, date, time, distance (in feet) from the insertion manhole, and manhole identification codes.

All CCTV operators shall be NASSCO certified by passing the three-day Pipeline Assessment and Certification Program (PACP). The methodology of evaluation, data collection, and reporting criteria used for the NASSCO certification shall be practiced for all CCTV evaluations in this work. The Contractor's (or Subcontractor's) supervisors performing the work must be qualified to perform the work, and have a minimum of five (5) years of experience in video recording sewer line inspections.

Contractor shall perform CCTV recording immediately following clean water flowing in the pipe to clearly indicate vertical misalignments, sags, or other defects. In addition, Contractor shall also perform an additional CCTV recording during peak flow conditions, during hours approved by the City Engineer. Two copies of the recordings shall be submitted to and approved by the Engineer prior to final acceptance of the project. Submittals will be reviewed by the Engineer twice (one initial review and one revision review). All additional costs incurred for subsequent reviews will be charged to the Contractor. Such charges will be deducted from payment due to Contractor for the billing period when such additional review services have been provided. Should CCTV inspection indicate any faulty installation of the pipe, repairs or replacement shall be made at the Contractor's expense by a method approved by the Engineer. Repaired and/or replaced pipe and/or segments shall be retested and reinspected through CCTV at no additional cost to the City, until final acceptance is granted. Any sag greater than one of 0.25 inch in 100 feet of pipe reach shall be considered excessive, and the pipe shall be removed and reinstalled to proper grade.

The following imperfections in a pipe or special fitting shall be considered injurious and shall be cause for rejection without consideration of any tests results:

1. A single crack in the pipe barrel.
2. If a pipe or a fitting has surface imperfections, such as lumps, blisters, pits or flakes, on the interior surfaces.
3. If the diameter of the bore, socket or spigot of a pipe or a fitting varies from a true circle by more than 3% of its nominal diameter.
4. If a pipe or a fitting is designated to be straight and it deviates from a straight line more than 1/16-inch per lineal foot. Deviation shall be measured from a straight edge at a point midway between the ends of the pipe or fitting.
5. If a pipe or a fitting has a broken piece on either the socket or spigot.
6. If a pipe or a fitting has tramp clays, grog or other foreign matter permanently flushed to the exterior or interior surface of the pipe or fitting.

Payment for VCP extra strength sewer pipe shall be paid at the contract price per linear foot for VCP Extra Strength Sewer Line. Damaged driveways, sidewalks, street surface, curb and gutter shall be reconstructed at the contractor's cost and at no cost to the City.

Said payment shall include all labor, materials, tools, equipment, excavation and removals, subgrade preparation, removing interfering portions of abandoned utilities, and laying of pipes at grade, bedding, aggregate base, asphalt concrete, concrete street curb and gutter (or cross and longitudinal gutter), maintenance and protecting in place of all utilities and storm drain facilities, disposal of excavated materials and excess materials, backfill, compaction, CCTV inspection, documenting the inspection on DVD and in written reports, submitting two copies of the recording to the City, and all other labor, required testing, equipment, and materials required for the construction of VCP extra strength sewer pipe complete-in-place, and no additional compensation will be allowed."

207-8.4.1 TRANSITION COUPLINGS.

ADD the following SUBSECTION: "**207-8.4.1 TRANSITION COUPLINGS.** Transition couplings shall be elastomeric plastic or synthetic rubber resistant to sewage and grease, chemicals and sewer gases normally found in sanitary sewers. Couplings shall be designed to slip over the outside of the pipes being connected with a snug fit. Couplings shall be held in place and sealed with stainless steel band clamps on each end of the coupling. Couplings shall include an approved shear ring to minimize differential displacement between pipes. Shear ring may be either internal or external to the coupling and shall comply with the applicable portions of ASTM C425. Couplings shall be specifically manufactured for making the transition between various types of pipe with different outside diameters."

207-8.4.2 MANHOLE COUPLINGS.

ADD the following SUBSECTION: "**207-8.4.2 MANHOLE COUPLINGS.** All inlets and outlets of sewer manholes shall have stubs with a flexible coupling within twelve (12) inches of the manhole base. Stubs shall be placed prior to casting manhole bases. Each stub shall have an elastomeric plastic or synthetic rubber joint seal placed around the pipe stub and cast into the manhole base to ensure a watertight connection at each manhole connection.

The unit bid price for pipeline replacement shall include payment of all tools, equipment, materials, labor, and services and shall be considered as included in the appurtenant bid items of the proposal, and no additional compensation will be allowed therefore.

Additionally, the unit bid price for spot repair shall also include payment of all tools, equipment, materials, fittings, wyes, tees, couplings, labor and services for the connection of existing sewer laterals and shall be considered as included in the appurtenant bid items of the proposal, and no additional compensation will be allowed therefore."

SECTION 216 – PRECAST REINFORCED CONCRETE BOX

216-1 GENERAL.

ADD the following: "The precast reinforced concrete box shall be in accordance with AASHTO "Standard Specifications for Highway Bridges, Latest Edition", and ASTM C 1433-08 "Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers".

The general criteria for constructing the box shall conform to the following requirements:

- Design live load is AASHTO HS20-44 Truck Loading.
- Portland cement shall conform to ASTM C-150, Type V, and aggregate shall conform to ASTM C-33.
- All structural concrete shall develop a minimum compressive strength of 5,000 psi at 28 days.
- All reinforcement steel shall be ASTM designation A615, Grade 60.
- All welded wire fabric shall be ASTM A185 $f_y = 65,000$ psi.
- External sealing band shall conform to the requirements of ASTM C-877.
- Grout shall develop a minimum compressive strength of 7,500 psi at 28 days and shall conform to the requirements of ASTM C-1107.
- Fly ash is not allowed in the concrete mix."

ADD SECTION 218 – CATCH BASIN SCREEN FILTER.

SECTION 218 – CATCH BASIN SCREEN FILTER

218-1 GENERAL.

ADD the following SECTION: "**218-1 GENERAL.** Catch Basin Screen shall be by "American Storm Water" as manufactured by **Ecology Control Industries, Inc.**, 20846 Normandie Avenue, Torrance, CA 90502, Phone: (310) 354-9999 www.americanstormwater.com or approved equal, and shall consist of namely automatic retractable screen type ("**Surf-Gate**"), or approved equal. The Contractor shall submit in advance to the Engineer for approval the manufacturer's drawings prior to placing any catch basin screen.

Said catch basin screen shall remove sediment, debris, and trash from water flowing into the drainage inlet during low flows (first flush) without impeding the inlet's maximum design flow. Hydraulic bypass calculations shall be made available upon request by the manufacturer."

218-2 INSTALLATION.

ADD the following SECTION: "**218-2 INSTALLATION.** The installation of the catch basin screen device shall not require modification to the drainage inlet and shall be performed by a manufacturer-approved installation Contractor. The installation Contractor shall be licensed and insured in accordance with City requirements and listed as a sub-Contractor in the appropriate section of the project Contract Documents.

It is the City's intent that the specified catch basin screen device will be completely compatible with the various proposed storm drain inlets and that they will function exactly as specified herein and per the manufacturer's intent. However, it shall be the Contractor's ultimate responsibility to confirm the exact compatibility and intents detailed herein and on the plans are met at the time of order of the catch basin screen from the manufacturer. If the Contractor or installation sub-contractor notes any discrepancy between these specifications and the manufacturer's, the Contractor shall notify the City immediately so that said discrepancy can be resolved without delay or extra compensation due to the Contractor.

The installation contractor shall supply the City with an installation record, denoting the date of installation, drainage inlet location, type of drainage inlet and type and size screen device, for the City's use in developing a future maintenance schedule."

218-3 PAYMENT.

ADD the following SUBSECTION: "**218-3 PAYMENT.** Payment for the installation of the various catch basin screen systems shall be per the contract unit price bid per each unit, complete and installed in

place, as specified herein, per the manufacturer's specifications and per the details shown on the plans. Said price shall include all related materials, labor and appurtenances and no additional compensation will be allowed."

**CITY OF CYPRESS
PART 3 – CONSTRUCTION METHODS**

SECTION 300 – EARTHWORK

300-1 CLEARING AND GRUBBING.

300-1.3 REMOVAL AND DISPOSAL OF MATERIALS.

300-1.3.1 GENERAL. ADD the following: "The work shall be done in accordance with Section 300-1.3.2 of the Standard Specifications except as modified and supplemented herein.

Clearing and grubbing shall include, but not be limited to the following:

1. Project mobilization/demobilization.
2. Removal and disposal of trees and shrubs, all natural and artificial objectionable materials such as logs, upturned stumps, roots of downed trees, brush, grass, plants, weeds and all other surface materials within the limits of construction area.
3. Tree branches, which may interfere with normal construction, shall be trimmed or removed. If tree branch is to be removed, it shall be cut off to the boles in a workmanlike manner. The Contractor shall remove additional tree branches under the direction of the Engineer, in such a manner that the tree will present a balanced appearance. Scars resulting from the removal of branches shall be treated with a heavy coat of tree sealant approved by the Engineer.
4. Saw cut and removal of existing concrete structures including, but not limited to curb and gutter, median curb, cross gutter, spandrel, sidewalks, drainage channel, the removal of K-markers and relocation of traffic signs.
5. Grading, fill material, and compaction of fill material in the parkway areas, drainage channel and areas behind sidewalk.
6. Saw cutting and removal of existing asphalt concrete, aggregate base, native soil, PCC and reinforced PCC pavement as required to complete the project.

Joins to existing pavement lines shall be full depth sawcuts. Final removal between the sawcut lines may be accomplished by the use of jackhammers or sledgehammers. Pavement breakers or stompers will not be permitted on the job. The Engineer must approve final removal accomplished by other means.

Tree and stump removal shall including grinding out the stump and all roots, including surface roots, to a minimum depth of 600 mm (24 inches) below existing ground level. Stump holes shall be backfilled with Topsoil per 800-1.1. Topsoil used for backfill shall be subject to the approval of the Engineer. All chips and debris from stump removal shall be removed from the Project site by the end of the work day that such chips and debris were generated. No stump removal chips or debris shall be left on the parkway overnight or used as backfill material. The Project site shall be raked and left broom-clean at the end of each working day. Clearing, grubbing, miscellaneous removals, and relocations shall be paid for various contract items of work and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all the work involved in clearing, grubbing, removing, relocating and disposing of all the resulting materials. It also includes the removal of cross gutters, spandrel, curb and gutter, side walk, drive approach, PCC, as shown on the Plans, as required in the field, as specified in these Specifications and Special Provisions, and as directed by the Engineer. No additional compensation will be allowed."

300-2 UNCLASSIFIED EXCAVATION.

300-2.1 GENERAL. ADD the following: "Unclassified excavation shall consist of all excavation, including roadway, bituminous pavement, concrete pavement, curb and gutters, ADA curb ramps, and cross gutters and spandrels Concrete shall be removed to neatly sawed edges with saw cuts made to a minimum depth of 1½ inches. Concrete pavement shall be removed to neatly sawed straight lines either parallel to the curb or at right angles to the curb face. If the saw cut in concrete pavement or sidewalk falls within 3 feet of a construction joint, expansion joint, or edge, the concrete shall be removed to the joint or edge. Curb and gutter shall be sawed to a depth of 1½ inches on a neat line at right angles to the curb face.

The Contractor's attention is directed to the soil condition that will be encountered beneath the existing pavement structural section. The soil type for these streets is typical silty, clay-sand, which is susceptible to pumping if heavy vehicles and/or equipment are repeatedly driven on the base section once the asphalt concrete pavement is removed. The Contractor shall exercise caution as to eliminate any pumping of the sub-grade. The cost of repairing any damaged pavement or adjacent structures shall be the responsibility of the Contractor.

Prior to the importing of soil to the final destination, certification for movement of soil from or within the red imported fire ant quarantined area must be obtained from the cooperative red imported fire ant project. A certification inspection can be arranged by contacting the cooperative red imported fire ant project at (714) 708-1910.

All soil excavated during construction must undergo testing prior to disposal into any local landfill operated by the County of Orange Integrated Waste Management Department. Soil will be tested wither at the landfill location or at the construction site based on the quantity designated for disposal. This soil testing must be performed in accordance with the regulations established by the Orange County Integrated Waste Management Department. The Contractor is encouraged to contact the Orange County Waste Management Department at (714) 834-4000 with any questions regarding the disposal and acceptance of the soil, as soon as possible to avoid any delays."

300-2.2 UNSUITABLE MATERIAL.

300-2.2.2 WET MATERIAL. ADD the following: "Rain, surface or subsurface water, or other fluid shall not be allowed to accumulate in excavations. Should such condition develop or be encountered, the water shall be kept constantly controlled and disposed of by the Contractor by temporary pumps, piping, ditches, dams, or other suitable methods approved by the Engineer. The Contractor in such a manner shall dispose of all water encountered on the construction as will not damage public and/or private property or create a nuisance or health hazard. NO water from dewatering shall be disposed of into existing lakes or over golf courses. The cost for dewatering shall include payment of all tools, equipment, materials, labor, and services and shall be considered as included in various contract bid items and no additional compensation will be allowed therefore."

300-3 STRUCTURE EXCAVATION AND BACKFILL.

300-3.5 STRUCTURE BACKFILL.

300-3.5.1 REQUIREMENTS. ADD the following: "Structural backfill shall be completed per contract drawings; unless specified, and shall add the following:

- Compaction equipment or methods which may cause excessive displacement or may damage structures shall not be used.
- Structure fill shall have minimum sand equivalent of 35 or two (2) sack cement slurry backfill.
- All excavations shall be backfilled as soon as permitted under the specifications so that when the job is closed for the day the open excavation will be kept at a minimum and adjacent utilities will receive a maximum backfill support.

Payment for Structure Backfill and compaction, protection and barricading, and for complying with all requirements of this section shall be included in the unit price paid for the specified items of construction requiring structure backfill, and shall include full compensation for furnishing all labor, tools, equipment, and materials and doing all work involved, and no additional compensation will be allowed."

SECTION 302 – ROADWAY SURFACING

302-1 COLD MILLING OF EXISTING PAVEMENT

302-1.1 GENERAL. ADD the following: "The Contractor shall cut a tapered wedge in the existing asphalt, at all gutter edges, joint lines, and as otherwise directed so that the overlay will have an acceptable joint and design depth over the existing pavement. Grind width shall be as shown on the plans.

Cold milling of alleys, service roads, and frontage roads shall be done from edge of pavement to edge of pavement. Contractor shall exercise caution as to not damage any existing walls, bricks, driveways, fences, or gates. Any damage caused by the cold milling operation shall be repaired by the Contractor at its expense by methods acceptable to the City Engineer.

The contractor will be required to remove the failed asphalt concrete pavement as determined by the City. The edges of bituminous pavement adjoining the excavated area shall be trimmed to neat, straight (vertical) lines to ensure that all areas are accessible to rollers used to compact subgrade."

302-1.2 MILLING MACHINE. ADD the following: "Cold milling shall not be performed more than 3 days ahead of paving. The planning machine shall be Barber Green RX40 or CMI PR450 or approved equivalent; self-propelled and be especially designed and built for grinding flexible pavements. The machine shall consist of a 60" minimum width cutting drum with carbide tip teeth. Drum lacing pattern shall result in a grooved surface finish and the drum shall be totally enclosed in a shroud to prevent discharge of any loosened material into adjacent work areas. The machine shall be adjustable as to slope and depth. A dust suppression system with a 700 gallon minimum water storage tank and two high pressure spray bars with spiral nozzles shall be standard equipment. The equipment shall be demonstrated to have been operated successfully on similar work completed prior to the award of this contract. The equipment shall meet or be lower than standards set by the Air Quality Act of 1969 and amendments thereto for noise and air pollution."

302-5 ASPHALT CONCRETE PAVEMENT.

302-5.1 GENERAL. ADD the following: "Asphalt concrete paving shall be 3/4" B-PG64-10, per 203-6, for base course, and ARHM-GG-C (ARHM-2 with Type II binder), per 203-11, for surface course, unless otherwise specified. Trenching and backfill shall be per City of Cypress Standard Plan 109. Replace AC pavement 1" thicker than existing section, except the minimum replacement thickness shall be 6" AC on Local Streets and 8" AC on Arterial Highways.

Trenching backfill shall be 3/4" max. Crushed Aggregate Base (CAB), Crushed Miscellaneous Base (CMB) conforming to Cal Trans 2 specifications for aggregate, or one sack cement/sand slurry with prior approval of the City Engineer, or unless otherwise specified. If steel plates are set over trenches, Contractor shall grind the existing AC pavement adjacent to the trench, in order to place the top of the steel plates flush with the existing roadway surface. Payment for complying with the requirements of this section shall be included in the appurtenant bid items of this proposal. No additional payment shall be allowed, thereto, under any circumstances unless otherwise authorized by the City."

302-5.4 TACK COAT. ADD the following: "Prior to placing the asphalt concrete patches, a tack coat of Type SS-1h asphaltic emulsion at a rate not to exceed one –tenth (1/10) of a gallon per square yard shall

be uniformly applied to existing A.C. and P.C.C. surfaces and edges against which asphalt concrete is to be placed."

302-5.8 MANHOLES (AND OTHER STRUCTURES). ADD the following: "Manhole covers shall be double adjusted to finish grade per City of Cypress Standard Plan 99, AC Note No. 8, and Cypress Standard Plan No. 314. Concrete to be used once manholes have been raised and adjusted shall be black in color. Manholes shall be lowered and covered with a steel plate and AC patch prior to cold milling and adjusted to grade after paving is complete. For non-City owned facilities, the contractor is responsible for coordinating directly with, and arranging direct payment from, each responsible utility agency for adjustment of facility, procurement of any materials and/or equipment, and payment. Adjustment of non-City owned facilities (i.e. telecommunication, sewer manholes, water valves, electrical, fiber-optic cables, etc.) will not be paid for as part of this contract and is the contractor's responsibility to coordinate with the respective agencies for payment."

ADD the following **SECTION 302-14 CRACK SEALANT.**

302-14 CRACK SEALANT.

ADD the following: "Cracks to be sealed shall be 1/8-inch or larger. Contractor shall seal only transverse, longitudinal, block or reflective cracks.

All cracks to be sealed shall be completely clean, dry and free of all loose material, vegetation and any other item which may prevent the sealant from adhering to the crack wall.

Cracks shall be cleaned using a hot compressed air lance (HCL). The Contractor shall clean and dry all cracks with the HCL immediately before sealing. The air exiting the lance shall be heated to a temperature which shall remove the oxidized surface from the crack walls. The HCL shall meet the following specifications:

- Compressed air capacity:
40 to 100 CFM, 75 to 150 PSI
- Heated air temperatures:
600 to 2200 degrees Fahrenheit
- Exit heated air:
2000 ft./sec.
- Propane:
to 20 PSI

Prior to beginning work, the Contractor shall submit documentation certifying that each HCL to be used on this project meets the above specifications.

The sealing operation shall follow the cleaning operation by no more than 25 feet. Sealant shall be applied from the bottom of the crack up to the surface in a manner which does not result in sealant bridging or entrapped air pockets. The sealant shall be applied to a slightly overfilled condition and then leveled with a squeegee. The overband shall not exceed one and one half (1 1/2) -inches on either side of the crack.

Cracks not cleaned or sealed to the satisfaction of the City Engineer or his designated representative shall be rejected and all costs incurred for removal and replacement of the rejected areas shall be borne exclusively by the Contractor.

The Contractor shall be responsible for any and all damage or claims resulting from his operations. This shall include sealant adhering to vehicle paint and tracking of sealant into residences."

SECTION 303 – CONCRETE AND MASONRY CONSTRUCTION

303-1 CONCRETE STRUCTURES.

303-1.1 GENERAL. ADD the following: "Reinforcing steel shall be grade 60. Concrete to be used for all structures can be a high early strength (7 sack mix), attaining a 7-day compressive strength of 3,250 psi. Cement shall be Type V, maximum slump shall be 4 inches, water cement ratio shall be 0.45 or less, and calcium chloride shall not be allowed. The Contractor shall submit a copy of the certified concrete mix design to the Engineer for approval. No concrete shall be placed prior to the Engineer's written approval of the mix design. The Contractor must bear all the cost of curing test results to demonstrate the 7-day compressive strength.

The Contractor can make reasonable effort to construct these structures as expeditiously as possible. Additional cement can be added to the concrete, not exceeding 700 lb./cy to obtain high early strength, attaining a 7-day compressive strength of 3,250 psi. Temporary bracing shall be placed within the structure to permit backfilling after concrete has set up."

303-1.1.1 CONCRETE WORK.

ADD the following SUBSECTION: "**303-1.1.1 CONCRETE WORK.** Catch basin inlet structures with outlet connection, local depression, junction structures, pipe to box and other transition structures, reinforced concrete box structures, junction structure with manhole, sewer manholes, storm drain manholes, concrete encasement and concrete collars shall be classified as minor structures and shall conform to Sections 201 and 303 of the Standard Specifications with the following modifications:

- The sizes and placement of all reinforcement shall be as shown on the standard plans or plan details and no substitution shall be allowed unless otherwise directed by the Engineer.
- Curing of the minor structures shall be by any method allowed in Section 303-1.10 of the Standard Specifications. Full compensation for curing concrete shall be considered to be included in the contract price per each specific structure and no additional compensation will be allowed.
- Payment for required metal frame and cover used in the minor concrete structures shall be considered to be paid for in the contract price per each specific structure and no additional compensation will be allowed.
- Precast items set on base constructed of cast-in-place concrete shall have either the lower course of precast units set in the concrete base prior to the time of the initial set of the base concrete and shall be worked so that the precast items are firmly embedded in the upper surface of the base concrete, or the precast items shall be set on a full bed of cement mortar. Each precast concrete manhole unit shall be set on a full bed of cement mortar unless specifically indicated otherwise. After approval by submitting the 3-day compressive strength test results, the Contractor can place the precast unit on top of cast-in-place concrete base after 72-hour curing time. The Contractor shall bear all the lab cost of curing test.
- Precast units shall be subject to inspection both at the time they are delivered at the job site and again after they have been installed in the work. Any units showing evidence of cracking, chips, exposed reinforced steel, or other imperfections which would impair the usefulness or structural integrity of the items to be constructed will be rejected and shall be removed from the job site by the Contractor and replaced with acceptable units, all at the expense of the Contractor.
- Manhole frames and covers shall be adjusted to the ultimate finish surface grade upon completion of work. In the event finish surface is higher than the interim pavement surface the Contractor shall taper the pavement surface to provide a smooth riding surface until ultimate finish surface is placed. The concrete around manhole cover shall be black in color, and no exceptions. Compensation for manhole frame and covers adjustment shall be included in the contract bid prices at various items, and no additional compensation shall be allowed.

Payment for minor concrete structures shall be made per each specific structure or as specified. Said payment shall include full compensation for furnishing all labor, materials (including concrete, reinforcing steel, metal frame and cover, form work, dowels, and any other miscellaneous iron work or steel required), excavation, backfill, backfill compaction, tools, equipment, removal and replacement in kind of existing sidewalks and curbs, incidentals, shoring and for performing all work shown on the plans, and no additional compensation will be allowed."

303-1.2.1 GRAVEL BASE MATERIAL.

ADD the following SUBSECTION: **"303-1.2.1 GRAVEL BASE MATERIAL.** In case needed, gravel base material shall be placed as directed by the Engineer. This gravel base material shall not be mixed with the crushed rock bedding material which is constructed for the bedding of pipes and other structures.

Gravel Base Material shall conform to Subsection 303-1.2, "Subgrade for Concrete Structures", of the SSPWC and to the following gradation limits:

<u>Sieve Size</u>	<u>Percent Passing</u>
1 1/2"	100
1"	95-100
3/4"	90-100
3/8"	65-100
No. 4	5-55
No. 8	0-10
No. 16	0-5

Full compensation for conforming to the requirements of Gravel Base Material, including furnishing all labor, tools, equipment, and materials necessary for doing the work shall be considered as included in the various contract items of work. No additional compensation shall be allowed therefore."

303-5 CONCRETE CURBS, WALKS, GUTTERS, CROSS GUTTERS, ALLEY INTERSECTIONS, ACCESS RAMPS AND DRIVEWAYS.

303-5.1 REQUIREMENTS.

303-5.1.1 GENERAL. **ADD** the following: "The Contractor is responsible for clearing and grubbing, pruning, and removing tree roots that interfere with the work. Tree stump and all roots within the construction area shall be removed to the satisfaction of the Project Inspector prior for construction of any sidewalk, curb and gutter, ADA curb ramp, driveway, or cross gutter and spandrel. All work done in this manner shall be considered as included in the unit bid price for each bid item.

Driveway approaches shall be reconstructed and open for use within three (3) workdays after the commencement of driveway approach removal. Driveway approaches shall be constructed one half at a time so that garage access is continuously maintained, **unless prior signed agreement with the property owner is obtained.**

Curb access ramps, sidewalk, curb and gutter shall be reconstructed and open for use within two (2) calendar workdays after the commencement of their removal.

Reconstructed sidewalk and curb access ramps shall be opened to public use on the day following concrete placement and once it has cured to a minimum strength of 2,500 psi. PCC work subjected to vehicle loads such as driveways and gutters shall not be opened to traffic until the concrete has cured to a minimum strength of 3,250 psi. The Contractor shall detour traffic around such work until the work is ready for public use.

Curb access ramp limits shall be understood to be contained within a radial line from the BCR (beginning of curb return) to a radial line at the ECR (end of curb return), and to be a minimum width as existing adjacent sidewalk width. In the event that a sidewalk joint be located three (3) feet or less to either radial

line of the curb return, then the sidewalk panel from the radial line to that joint shall be replaced as well. All sidewalk, curb and gutter, and incidental items of work contained within this radial line shall be considered as included in the contract unit price paid per each Remove and Replace ADA Curb Ramps and no additional compensation will be allowed therefore.

All curb and gutter shall be constructed on top of 10 inches of 95 percent relative compacted subgrade for arterial highways, and 95 percent relative compaction for local streets. All forms shall be removed and backfill or patch-back shall be placed within forty-eight (48) hours following concrete placement. All stakes shall be removed at the end of each work day. No stakes shall remain at the project site overnight.

PCC curb and gutter shall be completed in accordance with SPPWC Standard Plan 120-1. 4-Inch thick PCC Sidewalk shall be completed in accordance with Cypress Standard Plan 112-1-CYP. 8-inch thick PCC cross gutter and spandrel shall be completed in accordance with Cypress Standard Plan 122-1. PCC Curb Access Ramp shall be completed in accordance with Caltrans Standard Plan A88.

Concrete work which shall include, but is not limited, sidewalk, curb, gutter, driveway, and curb ramps, shall be completed for an entire street segment prior to scheduling of said street segment for slurry sealing or paving within the Contractor's two-week look ahead schedule."

303-5.5 FINISHING.

303-5.5.1 GENERAL. ADD the following: "If damaged, the Contractor shall patch back A.C., P.C.C. and brick within private property in a manner that matches the adjoining existing private property in structural section, texture and color."

303-5.5.2 CURB. ADD the following: "The Contractor shall install or replace curb markings that indicate sewer lateral or water valve location on the face of the curb. The Contractor shall mark the curb with a chiseled "S" or "W" for sewer or water lateral and a chiseled "V-X" for water valve locations. "X" shall indicate the number of feet from the curb face to the valve. To determine the location of sewer laterals and water services, the Contractor must contact the appropriate utility."

303-5.5.5 ALLEY INTERSECTIONS, ACCESS RAMPS, AND DRIVEWAYS.

303-5.5.5.1 DETECTABLE WARNING SURFACES.

ADD the following SUBSECTION: "**303-5.5.5.1 DETECTABLE WARNING SURFACES.** Detectable Warning Surface shall comply with the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and shall be surface applied and not cast in place. Minimum 3' deep by ramp width located so that the edge nearest curb line is 6 inches minimum and 8 inches maximum from the curb line face. Dome size shall have a base diameter of 0.9 inch minimum to 1.4 inches maximum, top diameter of 50% of the base minimum to 65% of the base diameter maximum, and a height of 0.2 inch. Dome spacing shall have a center-to-center spacing of 1.6 inches minimum and 2.4 inches maximum, and a base-to-base spacing of 0.65 inches minimum, measured between the most adjacent domes on a square grid. Detectable warning surface shall be one solid uniform panel measuring 3'x4'. Acceptable manufacturer shall be Armor-Tile by Engineered Plastics (800-682-2525), or Composite Tile by ADA Solutions (800-372-0519), or approved equal. **Color shall be black. Any color deemed unacceptable by the Project Inspector, including gray and dark gray, shall be rejected by the Project Inspector, including gray and dark gray, shall be rejected.**"

SECTION 306 – OPEN TRENCH CONDUIT CONSTRUCTION

306-3 TRENCH EXCAVATION.

306-3.1 GENERAL. ADD the following: "The Contractor shall excavate exploratory holes (potholes) to verify the actual location, depth and type of material for all points of connection to the existing system(s). If the Contractor finds any discrepancy with elevations, alignment or type of material encountered, the Contractor shall notify the Engineer before continuing with the trenching operation. The Engineer shall, without delay, inspect the field condition and advise the Contractor directions for proceeding with the trenching operation. If required, Contractor shall provide, at no cost to the City, an appropriate shoring plan which shall meet the requirements set forth in SECTION 306-4 SHORING AND BRACING.

Abandoned facilities are likely to be encountered on this project. Many abandoned facilities are not available through the public records nor will they be located by Underground Service Alert (USA). However, if they are encountered, the abandoned facilities shall be saw cut and removed to accommodate the proposed construction. The facilities shall be capped or slurry backfilled as deemed appropriate by the Engineer. The Contractor will not be entitled to damages or additional payment for delays due to such abandoned facilities. The CITY will pay for the transportation and disposal of such abandoned facilities and capping of such facilities on a time and materials basis in accordance with Standard Specifications for Public Works Construction 2015 Edition (Greenbook).

The Contractor will not be entitled to damages or additional payment for delays attributable to utility relocations or alterations if utilities are correctly located and shown on the plan or marked in the field. The Contractor may be given an extension of time for unforeseen delays due to interferences by utilities.

Payment for complying with the requirements of this section shall be included in the appurtenant bid items of this proposal. No additional payment shall be allowed, thereto, under any circumstances unless otherwise authorized by the City."

306-7 PREFABRICATED GRAVITY PIPE.

306-7.8 GRAVITY PIPELINE TESTING.

306-7.8.2.1 GENERAL. ADD the following: "Any sewer line constructed from manhole to manhole (excluded the spot repair reaches) shall be tested for exfiltration and/or infiltration and deflection. All leakage tests shall be in conformance with Standard Specifications Section 306-7.8.2 for water exfiltration test, water infiltration test, and air pressure test. Contractor shall provide the required air test equipment to perform the test. All testing shall be performed in the presence of the CITY Inspector.

The Contractor's attention is directed to the requirement for checking the grade of the pipe continuously as it is installed and the final grade of the pipe; as well as CCTV inspection requirements.

Full compensation for conforming to the requirements of this section is included in the price bid per linear foot of VCP extra strength pipeline, and no additional compensation will be allowed."

306-13 TRENCH RESURFACING.

306-13.1 TEMPORARY RESURFACING. ADD the following: "Temporary resurfacing shall be placed over all backfill in streets or other areas where excavation was made through existing paving and in areas where the Contractor's operations have resulted in the removal of existing paving. The work shall be in conformance with Section 306-13.1 with the following modification.

Temporary resurfacing shall be placed as soon as the backfill is densified to the required relative density or immediately when so directed by the Engineer. Prior to placing the temporary resurfacing, the foundation material (occupying space of permanent surfacing and base material therefore) for the temporary resurfacing shall be densified to produce a firm and unyielding surface, as determined by the Engineer. This shall be accomplished by blading and rolling with an 8-ton tandem roller if the trench is wide enough to accommodate the roller width, or rear wheels of a loaded 5-ton truck, heavy road grader

or by other equivalent means acceptable to the Engineer, to a depth of three inches (3") below the grade of the existing pavement.

The subgrade shall be uniformly watered sufficiently to eliminate all dust, but not to such extent as to form mud or pools of water. The street and surrounding area shall be cleared of rubbish and debris. The street shall be swept and the surrounding area shall be cleaned thoroughly.

The temporary resurfacing shall then be spread over the prepared foundation material and rolled with an 8-ton tandem roller in such a manner that after rolling the temporary resurfacing shall present a smooth surface for traffic and shall not be less than three inches (3") in compacted thickness and shall be maintained free from bumps and depressions until permanent resurfacing is placed. The finished surface of said temporary resurfacing shall be flush with the adjoining pavement grade. Temporary resurfacing at major intersections and other critical locations may be greater than three inches (3") as directed by the Engineer.

Upon completion of all the above temporary resurfacing, the surface shall be immediately swept clean of all dust and debris created by this operation. Sweeping shall be done at all times in such a manner as to prevent creation of dust clouds and avoid accumulation of unreasonable amounts of dust on adjacent properties. After the temporary resurfacing has been placed, the Contractor shall furnish and operate a self-loading motor sweeper with spray nozzles and pick-up broom to clean the streets in the construction area daily.

The Contractor shall stockpile enough temporary resurfacing material on the job to insure a ready supply at all times for necessary repairs to the temporary resurfacing already placed.

The temporary resurfacing shall be left in place not more than thirty (30) calendar days unless otherwise permitted by the Engineer, and the permanent resurfacing including wearing surface shall be placed immediately following the removal of the temporary pavement.

Payment for temporary resurfacing conforming to the requirements of this section shall be included in the bid prices paid for the various contract items of bid, which necessitated installation of temporary resurfacing for their construction under these specifications. No other compensation will be allowed."

SECTION 310 – PAINTING

310-5 PAINTING VARIOUS SURFACES.

310-5.6 PAINTING TRAFFIC STRIPING, PAVEMENT MARKINGS, AND CURB MARKINGS.

ADD the following SUBSECTIONS: **"310-5.6 PAINTING TRAFFIC STRIPING, PAVEMENT MARKINGS, AND CURB MARKINGS.**

310-5.6.1 GENERAL. All equipment, materials, and components for signing and striping, and the installation thereof, shall conform to the latest editions of Caltrans Standard Plans and Standard Specifications, Section 84 "Traffic Stripes and Pavement Markings" and Section 85 "Pavement Markers", 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."

PART 7 – STREET LIGHTING AND TRAFFIC SIGNAL SYSTEMS

SECTION 701 – CONSTRUCTION

701-11 PULL BOXES.

ADD the following: "Traffic Signal Pull Boxes shall conform to the provisions in Section 86-2.06, "Pull Boxes," of CALTRANS STANDARD SPECIFICATIONS, and these Special Provisions.

Contractor shall remove and replace any traffic signal pull boxes damaged during construction of ADA curb ramps. For pull boxes located within ADA curb ramps, pull boxes shall be installed and adjusted to grade with no vertical displacement within the ADA curb ramp. All traffic pull box and conduit adjustments shall be considered as included in the appurtenant bid items of the proposal and no additional compensation will be allowed therefore.

Where the sump of an existing pull box is disturbed by the Contractor's operations, the sump shall be reconstructed and, if the sump was grouted, the old grout shall be removed and new grout placed.

No new pull boxes shall be installed in or within one foot of any curb ramp. Caltrans Standard Plan ES-8, Pull Box Details, Note 4-a.5 and b.10, shall not apply to this project."

701-17 TRAFFIC SIGNAL CONSTRUCTION.

ADD the following: "Loop Detectors shall conform to the provisions in Section 86-5, "Detectors," of CALTRANS STANDARD SPECIFICATIONS, and these Special Provisions.

Loop detector lead-in cables shall be Type B. Lead-in cable shall be insulated so as to prevent moisture from entering the cable jacket.

Loop detector conductors shall be Type 2. The ends of the type 2 loop detector conductors shall be insulated so as to prevent moisture from entering the plastic tubing.

The CONTRACTOR shall notify the ENGINEER when inductive loops will be removed from services forty-eight (48) hours prior to removal to ensure coordination with the City's Traffic Engineering Section for any necessary adjustments to signal operation for the intersection involved.

All loops shall be replaced no later than five (5) calendar days following the final paving operation on the subject street. The location of each loop detector shall be approved by the ENGINEER prior to construction. In order to locate loop detectors the CONTRACTOR shall provide a preliminary striping layout, if different from existing, prior to locating loop detector.

Inductive Type E loop detectors shall be used. Loop detectors shall be installed on the same day in which the loop slots are cut. This shall include placement of the loop conductors and sealant.

Residue resulting from slot cutting operations shall not be permitted to flow across shoulders or lanes occupied by public traffic and shall be removed from the pavement surface.

The SECOND SENTENCE in the FOURTH PARAGRAPH in Section 86-5.01A (5), "Installation Details," of the CALTRANS STANDARD SPECIFICATIONS, is amended to read:

The sealant shall be at least 7/8-inch thick above the top conductor in the slot and shall be flush with the pavement surface."

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS

RIGHT OF WAY AND TRAFFIC CONTROL FACILITIES SECTION 84: TRAFFIC STRIPES AND PAVEMENT MARKINGS

84-1 GENERAL.

84-1.01 DESCRIPTION. **ADD** the following: "Traffic stripes and pavement markings shall be thermoplastic unless otherwise specified. Bike Lane legends shall be conventional paint suitable for use on asphalt concrete. It is the Contractor's responsibility to take inventory of all pavement markings and

striping before removal. At the pre-construction conference, the Contractor shall submit to the City a detailed inventory of existing striping and pavement markings. Upon approval of the inventory, the Contractor shall reinstall striping and pavement markings in accordance with the approved plan. If an inventory is not taken, then the Director of Public Works shall advise the placement of markings. The Contractor shall also submit a video of all existing striping and markings in DVD format at the pre-construction meeting.

In the event that any arterial cross-walk is to be restriped due to construction work, the Contractor shall restripe ALL adjoining crosswalks in the intersection. The cost to restripe all crosswalks in the affected intersection shall be included in the lump sum bid price for thermoplastic pavement striping and no additional compensation will be allowed therefore."

84-1.02 CONTROL OF ALIGNMENT AND LAYOUT. ADD the following: "The 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.

Immediately following grinding and/or resurfacing operations and no later than final working hour of the day on which said operations have taken place, the Contractor shall install temporary reflective tabs. For streets that have been ground, the Contractor shall have the streets swept and cleaned prior to the installation of the temporary reflective tabs.

Subsequently, within twenty-four (24) hours of grinding and/or resurfacing operations, the Contractor shall remove the previously placed temporary reflective tabs, paint 2" wide temporary traffic striping, and re-install new temporary reflective tabs which directly correspond with the newly installed temporary traffic striping. The Contractor shall be responsible for maintaining the temporary reflective tabs and temporary striping until the installation of the final striping and markings to the satisfaction of the City Traffic Engineer and Project Inspector.

In the event that subject temporary reflective tab and temporary striping installation work is not executed within the times specified hereinbefore and/or if temporary reflective tabs are found to conflict with the temporary striping, the City will remove said tabs using City forces and will deduct the cost of removal from the Contractor's retention amount.

Within ten (10) calendar days after the resurfacing operation, and no later than fourteen (14) days, the Contractor shall install all final thermoplastic striping, markings, and signage. All thermoplastic lane lines and centerlines shall be placed using a long-liner or other methods as approved by the City Engineer. If the Contractor fails to apply markings within the specified time frames, the City Engineer at his discretion may use other forces to perform the work at the contractor's expense.

The contractor shall provide an experienced technician to supervise the location, alignment, layout, dimensions, and application of the thermoplastic striping and markings."

84-1.04 PROTECTION FROM DAMAGE. ADD the following: "The Contractor shall take every precaution to protect the newly placed traffic stripes and pavement markings from damage by the public traffic or other causes until the paint is thoroughly dry or the thermoplastic has sufficiently hardened. Any drips, overspray, improper markings, or paint and thermoplastic material tracked by traffic shall be immediately removed from the pavement surface by methods approved by the City Engineer. All this removal work shall be at the Contractor's expense."

84-3 PAINTED TRAFFIC STRIPES AND PAVEMENT MARKINGS.

84-3.01 DESCRIPTION. ADD the following: "Paint for curb marking shall be ready-mixed rapid dry type. Ready-mixed paints shall be suitable for use on either asphalt concrete or Portland concrete cement. Curb address painting color scheme shall be black numbers on white background. The top of the numbers shall be one (1) inch below the top of curb. Numbers shall be placed within three (3) feet of the

driveway, on the side of the driveway closest to the front door of the house. If there are existing numbers, the new numbers shall be painted over them. In the event that there is an existing decorative curb number, contractor shall contact the homeowner to see if they would like to have their decorative curb number replaced. Contractor shall compile a log of all responses and submit to the City at the conclusion of the project. If there is no driveway, the numbers shall be painted on the curb face in front of the main entrance. All work shall be subject to inspection by the Project Inspector for accuracy, completeness, and workmanship. Any deficiencies, including misalignment/inconsistent spacing (varying by more than 1/4"), and poor workmanship, shall be subject to rejection and promptly corrected by the Contractor. Incorrect addresses shall be corrected within **24-hours** upon notification. Should the contractor fail to correct incorrect addresses within the time specified, the City shall correct the addresses using City personnel and the contractor shall be billed for said personnel."