PUBLIC WORKS DEPARTMENT

SPECIAL PROVISIONS
FOR

SAFE ROUTES TO SCHOOLS PRIORITY SAFETY PROJECT

CITY PROJECT WT18009

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SAFE ROUTES TO SCHOOLS PRIORITY SAFETY PROJECT

CITY PROJECT WT18009

The special provisions contained herein have been prepared by, or under the direct supervision of, the following Registered Engineer:

CIVIL ENGINEERING

Prepared by:

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Project Manager
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Date: 12/14/2021

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DIVISION I – GENERAL PROVISIONS

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SECTION 1 – GENERAL

1-1.01 TERMS AND DEFINITIONS

Wherever in the Standard Specifications, Special Provisions, Notice to Contractors, Proposal, Contract, or other contract documents the following terms are used; the intent and meaning shall be interpreted as follows:

City or Owner -	City of Stockton
Director -	Director of Public Works, City of Stockton
Standard Specifications -	City of Stockton, Standard Plans and Specifications, and any amendments or revisions thereto (Revised 9/27/16)
Caltrans Specifications -	State of California, Department of Transportation, 2018 Standard Plans and Specifications and any amendments or revisions thereto.
Laboratory -	City of Stockton's Department of Public Works or consultant laboratory
Department -	Department of Public Works, City of Stockton
Engineer -	City Engineer, City of Stockton, acting either directly or through properly authorized Engineer agents and consultants
MUTCD -	Latest edition of California Manual on Uniform Traffic Control Devices (MUTCD), and any amendments and revisions thereto

1-1.02 SPECIFICATIONS

The work described herein shall be done in accordance with the current City of Stockton, Department of Public Works Standard Specifications and Plans, and the latest Editions of the State of California, Department of Transportation Standard Specifications and Standard Plans, California MUTCD, as referenced therein, and in accordance with the following Special Provisions. To the extent the California Department of Transportation Standard Specifications implement the STATE CONTRACT ACT, they shall not be applicable since the City of Stockton is not subject to said ACT.

In case of conflict or discrepancy between any of the Contract Documents, the order of documents listed below shall be the order of precedence, with the first item listed having the highest precedence.

a. Contract Change Order
b. Contract
c. Project Special Provisions
d. Project Plans
e. City's Standard Specifications
f. City's Standard Drawings
g. Revised Caltrans Standard Specifications
h. Caltrans Standard Specifications

i. Revised Caltrans Standard Plans
j. Caltrans Standard Plans
k. Supplemental Project Information

With regards to discrepancies or conflicts between written dimensions given on drawings and the scaled measurements, the written dimensions shall govern.

With regards to discrepancies or conflicts between large-scale drawings and small-scale drawings, the larger scale shall govern.

With regards to discrepancies or conflicts between detailed drawings and referenced standard drawings or plans, the detailed drawings shall govern.

In the event where provisions of codes, safety orders, contract documents, referenced manufacturer's specifications or industry standards are in conflict, the more restrictive and higher quality shall govern.

Should it appear that the work to be done or any of the matters relative thereto are not sufficiently detailed or explained in these specifications, the special provisions, or the plans, the Contractor shall apply to the Engineer in writing for such further explanations as may be necessary and shall conform to them as part of the contract. All responses from the Engineer shall be in writing. In the event of any doubt or question arising respecting the true meaning of these specifications, the special provisions or the plans, reference shall be made to the Engineer, whose decision thereon shall be final.

The Contractor shall examine carefully the site of the work and the plans and specifications therefore. He/She shall investigate and satisfy himself/herself as to conditions to be encountered, the character, quality and quantity of surface, subsurface materials or obstacles to be encountered, the work to be performed, materials to be furnished, and as to the requirements of the bid, plans and specifications of the contract.

1-1.03 PLANS

The bidder's attention is directed to the provisions in Section 1-1.03, "Definitions" of the Standard Specifications and Section 1-1.07 of the Caltrans Specifications.

See Instructions to Bidders for complete instructions and documentation forms.

SECTION 2 – BIDDING

2-1.01 GENERAL

The bidder's attention is directed to the "Notice to Contractors" for the date, time and location of the mandatory pre-bid meeting, if applicable. Refer to the City of Stockton's Bid Flash webpage: http://www.stocktongov.com/services/business/bidflash/default.html

The bidder's attention is directed to the provisions in Section 2, "Bidding," of the Standard Specifications and these special provisions for the requirements and conditions which the bidder must observe in the preparation for the submission of the bid.

The Bidder's Bond form mentioned in the last paragraph in Section 2-1.34, "Bidder's Security," of the Standard Specifications will be found following the signature page of the Proposal.

In conformance with Public Contract Code Section 7106, a Non-collusion Affidavit is included in the Proposal. Signing the Proposal shall also constitute signature of the Non-collusion Affidavit.

The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of Title 49 CFR (Code of Federal Regulations) part 26 in the award and administration of US DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate. Each subcontract signed by the bidder must include this assurance.

2-1.02 BID PROTEST

In case of Bid protests, attention is directed to the provisions in Section 2-1.51, "Bid Protests" of the Standard Specifications. The party filing the protest must have submitted a bid for the work. A subcontractor of a bidder may not submit a bid protest.

A copy of bid protests is to be sent to the following address:

Attention: Ray Deyto
City of Stockton
Public Works Department
22 E. Weber Avenue, Room 301
Stockton, CA 95202

SECTION 3 – CONTRACT AWARD AND EXECUTION

3-1.01 CONTRACT AWARD

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

Bid protests are to be delivered to the following address: Department of Public Works, 22 E. Weber Avenue, Room 301, Stockton, CA 95202, Attn: Ray Deyto. The award of the contract, if it be awarded, will be to the lowest responsible bidder whose proposal complies with all the requirements prescribed.

3-1.02 CONTRACT EXECUTION

The contract shall be executed by the successful bidder and shall be returned, together with the contract bonds, to the Agency so that it is received within 10 days, not including Saturdays, Sundays and legal holidays, after the bidder has received the contract for execution. Failure to do so shall be just cause for forfeiture of the proposal guaranty. The executed contract documents shall be delivered to:

City of Stockton
Public Works Department
Attn: Ray Deyto
22 E. Weber Avenue, Room 301
Stockton, CA 95202

3-1.03 CONTRACT BONDS

Contract Bonds shall conform to the requirements set forth in Section 3-1.05, "Contract Bonds", of the Standard Specifications, except for the second paragraph which shall be replaced with the following:

> "The Faithful Performance bond will be retained by the City of Stockton for twelve (12) months following recordation of the Notice of Completion (or partial completion) to guarantee correction of failure attributed to workmanship and materials. Upon recordation of the Notice of Completion (or partial completion), the amount of the Faithful Performance bond may be reduced to **ten percent (10%)** of the actual cost of the constructed improvements".

SECTION 4 – SCOPE OF WORK

4-1.01 DIFFERING SITE CONDITIONS

Attention is directed to the provisions in Section 4-1.06, "Differing Site Conditions," of the Caltrans Specifications and the Standard Specifications. Contractor shall notify the Engineer if he/she finds physical conditions differing materially from contract documents.

4-1.01 EXTRA WORK

Section 4-1.05, “Changes and Extra Work” of the Caltrans Specifications is amended by adding the following between the second and third paragraphs:

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

4-1.02 CLEANUP

The Contractor’s attention is directed to Sections 4-1.13, “Cleanup,” of the Caltrans Specifications.

The Contractor shall conduct and cause all working forces at the site to maintain the site in a neat orderly manner throughout the construction operations. The work shall be conducted in a manner that will control the dust. When ordered to provide dust control, the Contractor shall use water to reduce the dusty conditions all to the satisfaction of the Engineer. During construction, the Contractor shall remove all rubbish and debris as it is generated. Upon completion of the work, the Contractor shall remove all equipment, debris, and shall leave the site in a neat, clean condition all to the satisfaction of the Engineer.

SECTION 5 – CONTROL OF WORK

5-1.01 PERMITS

The Contractor's attention is directed to Sections 5-1.20B, "Permits, Licenses, Agreements, and Certifications," of the Caltrans Specifications.

The following is not an all-inclusive list of the required permits and/or licenses, if applicable:

- Contractor's License. A valid California Class A Contractor License.
- Business License. Contractor shall possess prior to the execution of the contract and maintain throughout the duration of the contract, a valid City of Stockton business license.
- City of Stockton Encroachment Permit (no fee)
- San Joaquin County Encroachment Permit – Contractor will be responsible to obtain permit from the County when working in their right-of-way. Contractor shall begin work in City right-of-way while awaiting encroachment permit from San Joaquin County.
- State's Water Resources Control Board Stormwater Construction General Permit (contractor pays) – Notice of Intent (NOI) and Notice of Termination (NOT)
- Construction Notification, dust control – The Contractor is responsible for the preparation and submittal of the San Joaquin Valley Air Pollution Control District Construction Notification Form. More information can be found at the following web site: http://www.valleyair.org.
- Construction Water – The Contractor is responsible for obtaining a permit for water from California Water Service or City of Stockton, as applicable, for construction water obtained from a City hydrant. This permit shall be approved by the City of Stockton Fire Department.
- Caltrans Encroachment Permit – Contractor shall obtain a copy of the Caltrans Encroachment Permit issued to the City of Stockton and shall comply with all provisions of said permit. Contractor shall apply and secure a separate Encroachment Permit (referred to as a Double Permit) as required by Caltrans. Contractor shall apply for the Caltrans Construction Encroachment Permit within twenty (20) days after the Notice of Award and Contractor shall secure permit prior to starting work.

Caltrans Encroachment Permit, for work occurring at Eighth Street and I-5 intersection.

The Contractor obtained Caltrans Construction Encroachment Permit (Double Permit) will require, but is not limited to the following:

1) Application and fee as required by Caltrans. Contact Caltrans for additional details.
2) Traffic Control Plan – Six (6) copies of stamped and signed plans.
3) Other conditions as stipulated in the Caltrans Encroachment Permit.

The Contractor shall comply the requirements of the Caltrans Encroachment Permit obtained by City. All work shall comply with Caltrans "Encroachment Permit General Provisions" and the following special provisions:

1) When approved, traffic control under this permit shall comply with 2018 Caltrans Standard Plans T9 through T14 (available at https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications).
2) When operations are conducted, the permittee shall furnish, place, and maintain signs and safety equipment per Part 6, Temporary Traffic Control, of the "California Manual on

Uniform Traffic Control Devices" (CAMUTCD, available at http://www.dot.ca.gov/trafficops/camutcd/camutcd2014revI.html).
3) No lane closure on Caltrans right of way is authorized under this permit.
4) Shoulder/parking may be closed between 9:00 AM to 3:00 P.M., Monday through Friday, holiday excluded.
5) Upon completion of work, the permittee must submit three sets of "As-Built" plans to the State Representative (see item 22 of the attached "Encroachment Permit General Provisions" (TR-0045) for further information, available at http://www.dot.ca.gov/hg/traffops/developserv/permitsL).
6) Permittee shall provide pedestrian detour signs when sidewalk is closed.
7) The permittee's workers shall wear appropriate and approved personal protective equipment per Chapter 12 of Caltrans "Safety Manual" (available at http://www.dot.ca.gov/hg/opo/safety/safetymanual/Chap 12-Sept2012.pdf), including hard hats and bright colored safety vests, shirts, or jackets with retro-reflective material, when placing and picking up cones along the edge line.
8) Notwithstanding General Provision 4, construction must not begin until the contractor performing the work applies for and obtains a separate encroachment permit (referred to as a Double Permit) for the work authorized herein. An initial fee/deposit is required at the time of application for permit processing and inspection. Additional inspection hours will be charged at the current State hourly rate. Contractor is required to obtain the latest initial fee/deposit and State hourly rate by contacting Caltrans. The Contractor may assume an initial fee/deposit amount of no more than $700.
9) Immediately following completion of the work permitted herein, the permittee shall fill out and mail the notice of completion attached to this permit.
10) The contractor for the permittee shall submit stamped and signed traffic control plans with the contractor's permit application for Caltrans' review and approval.
11) Comply with Caltrans Storm Water Special Provisions for Minimal or No Impact (TR-0400)

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

5-1.02 SUBMITTALS

The following is a list of anticipated submittals for the project. The list is provided to aid the Contractor in determining the scope of work, but is not intended to be all inclusive and additional submittals may be required:

- List of submittals
- DAS-140
- Shop Drawings
- Material Submittals
- Product submittals
- Emergency Contacts/Authorized Representatives
- Manufacturer’s Instructions/Field Reports
- Traffic Control Plan
- Lead Compliance Plan
- Storm water pollution prevention plan
- Contractor safety plan
- Project Schedule (Critical Path Method)

- City of Stockton Construction and Demolition Debris Recycling Report
- City of Stockton Encroachment Permit (if applicable)
- Caltrans Encroachment Permit (if applicable)
- Staging Agreements with Private Property Owner (if applicable)
- Project information sign layout
- Pre-construction survey
- Changeable message board schedule (locations and messages)
- List of submittals, per specific section requirement, including:
    - Shop Drawings
    - Material Submittals
    - Product Submittals
    - Manufacturer's Instructions/Field Reports
- Job Mix Formulas (JMF)
    - Hot Mix Asphalt / Asphalt Concrete
    - Slurry Seal
- Aggregate base (for concrete construction)
- Aggregate base (for asphalt base)
- HMA binder certificate of compliance
- Paint binder (tack coat) certificate of compliance
- Crack sealant
- Detectable Warning Surface
- Stamped concrete color and pattern
- Thermoplastic traffic striping and marking certificates of compliance
- Reflective pavement markers certificate of compliance
- Rectangular Rapid Flashing Beacons (RRFB) Product:
    - Rectangular Rapid Flashing Beacons
    - Pole and foundation
    - Pedestrian signage
    - Accessible Pedestrian Signal Assembly
    - RRFB solar panel, controller, and enclosure
- Record drawings (required prior to release of contingency final payment)

The Contractor shall transmit each submittal to the Engineer for review and approval. Submittals shall be sequentially numbered on the submittal list form. Resubmittals shall be identified with the original number and a sequential resubmittal suffix letter. The original submittal shall be numbered X. The first resubmittal shall be numbered X-a and so on. Identify on the form the date of the submittal, and Contractor, Subcontractor or supplier. Any incomplete submittals will be returned for resubmittal.

Schedule submittals to expedite the Project, and deliver to Engineer at the Engineer's office, see Section 10-1.01, "Order of Work," of these Special Provisions.

For each submittal for review, allow 15 calendar days excluding delivery time to and from the Contractor.

When revised for resubmission, identify all changes made since previous submission.

Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.

Within 10 calendar days after Notice of Award submit a complete list of all submittals to be submitted and the dates when they will be submitted. **All submittals shall be submitted within 30 calendar days from the date the Notice of Award; otherwise project working days will commence, with or without issuance of the Notice to Proceed**.

Wherever called for in the Contract Documents, or where required by the Engineer, the Contractor shall furnish to the Engineer for review, 1 set, plus one reproducible copy, of each shop drawing submittal. The term "Shop Drawings" as used herein shall be understood to include detail design calculations, shop drawings, fabrication and installation drawings, erection drawings, list, graphs, catalog sheets, data sheets, and similar items. Whenever the Contractor is required to submit design calculations as part of a submittal, such calculations shall bear the signature and seal of an engineer registered in the appropriate branch and in the state of California, unless otherwise directed.

Normally, a separate submittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of a submittal of various items using a single form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of the group or package as a whole. A multi-page submittal shall be collated into sets, and each set shall be stapled or bound, as appropriate, prior to transmittal to the Engineer.

Except as may otherwise be indicated herein, the Engineer will return prints of each submittal to the Contractor with their comments noted on the submittal. The Contractor shall make complete and acceptable submittals to the Engineer by the second submission of a submittal item. The City reserves the right to withhold monies due to the Contractor to cover additional costs of the Engineer's review beyond the second submittal.

If a submittal is returned to the Contractor marked "NO EXCEPTIONS TAKEN", formal revision and resubmission of said submittal will not be required.

If a submittal is returned to the Contractor marked "MAKE CORRECTIONS NOTED", formal revision and resubmission of said submittal will not be required.

5-1.03 RECORDS

The Contractor's attention is directed to Sections 5-1.27, "Records," of the Caltrans Specifications.

The cost accounting records for the contract shall be maintained separately from other contracts, during the life of the contract, and for a period of not less than 3 years after the date of acceptance of the contract. If the Contractor intends to file claims against the City, the Contractor shall keep the cost accounting records specified above until complete resolution of all claims has been reached.

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

5-1.04 JOB SITE APPERANCE

The Contractor shall maintain a neat appearance to the work.

Debris developed during construction shall be disposed of concurrently with its generation. The Contractor shall pay to the City of Stockton the sum of Two Hundred Fifty Dollars ($250) for every calendar day where debris has remained on the job site overnight.

Full compensation for conforming to the provisions in 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 therefore.

5-1.05 PROPERTY PRESERVATION/EXISTING FACILITIES

The Contractor's attention is directed to Sections 5-1.36, "Property and Facility Preservation," and Section 15, "Existing Facilities," of the Caltrans Specifications.

The Contractor's attention is directed to the existence of certain underground facilities that may require special precautions be taken by the Contractor to protect the health, safety, and welfare of workers and of the public. Facilities requiring special precautions include, but are not limited to, conductors of petroleum products, oxygen, chlorine, and toxic or flammable gases, natural gas in pipelines six (6) inches or greater in diameter, or pipelines operating at pressures greater than60 psi (gage); underground electric supply system conductors or cables with potential to ground of more than 300 V, either directly buried or in duct or conduit, which do not have concentric grounded or other effectively grounded metal shields or sheaths.

The Contractor shall notify the Engineer and the appropriate regional notification center for operators of subsurface installations at least two (2) working days, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire, or other structure. Regional notification centers include, but are not limited to, the following:

Notification Center	Telephone Number
Underground Service Alert – Northern California (USA)	811
	(800) 227-2600

Immediately upon encountering unknown existing facilities, the Contractor shall notify the Engineer in writing of the situation, request coverage of the work as extra work, and aid the Engineer in determining due diligence. Failure to do so may result in forfeiture of any rights to receive extra work compensation under Section 8-1.07, "Delays," of the Caltrans Specifications. Should the Contractor stop work, no compensation will be made for any "down time" prior to written notifications being received by the Engineer or his representative.

Delays due to encountering unexpected facilities shall be determined and compensated in accordance with the provisions of Section 8-1.07, "Delays," of the Caltrans Specifications, and as herein modified. Delays due to encountering unexpected facilities shall be compensated as additional contract working days to the contractor. Contractor shall submit a written request to the Engineer requesting time extension due to the delay. No other compensation is allowed.

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

5-1.06 PRE-CONSTRUCTION SURVEY

The Contractor shall perform pre-construction and post-construction survey of all existing structures, pavements and other above ground facilities within the project limits prior to beginning any work, noting their condition by means of dated photographs and video.

Color photographs shall be taken with a digital camera at locations (property sites) that are appropriate to show pre-existing conditions and after constructed conditions. Each photograph shall show the date and time the photograph was taken and clearly be labeled showing the location, viewing direction, and any special features noted. Digital copies of photographs and video shall be submitted to the City prior to approval of project.

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

5-1.07 PRESERVING AND PERPETUATING SURVEY MONUMENTS

Action by:	Action:
Contractor's Land Surveyor	1. Identifies existing survey monuments. 2. Lists all existing survey monuments. 3. Ties out / performs construction staking of survey monuments. 4. Indicates survey monuments on construction plans.
	5. Files all pre-construction Corner Records or Records of Survey with San Joaquin County. The Corner Records or Record of Survey will show monuments within the area of construction reasonably subject to removal or disturbance not shown on a recent record document (recent record document is a filed survey map or corner record document completed with acceptable modern survey methods that includes survey ties from monuments within the construction area to monuments outside of the construction area). 6. Submits copies of pre-construction Corner Records or Records of Survey filed with San Joaquin County to City Engineer/Project Manager
Contractor	7. Preserves/perpetuates all survey monumentation during construction, including, but not limited to, those listed. 8. Restores survey monuments disturbed by construction.
Contractor's Land Surveyor,	9. Files all post-construction Corner Records and Records of Survey with San Joaquin County for all monuments disturbed during construction 10. Submits copies of Corner Records or Records of Survey filed with San Joaquin County to City Engineer/Project Manager.

Monuments set shall be sufficient in number and durability and efficiently placed so as not to be readily disturbed, to assure, together with monuments already existing, the perpetuation or facile reestablishment of any point or line of the survey.

When monuments exist that control the location of subdivisions, tracts, boundaries, roads, streets, or highways, or provide horizontal or vertical survey control, the monuments shall be located and referenced by or under the direction of a licensed land surveyor or registered civil engineer prior to the time when any streets, highways, other rights-of-way, or easements are improved, constructed, reconstructed, maintained, resurfaced, or relocated, and a corner record or record of survey of the references shall be filed with the county surveyor. They shall be reset in the surface of the new construction, a suitable monument box placed thereon, or permanent witness monuments set to perpetuate their location if any monument could be destroyed, damaged, covered, or otherwise obliterated, and a corner record or record of survey filed with the county

surveyor prior to the recording of a certificate of completion for the project. Sufficient controlling monuments shall be retained or replaced in their original positions to enable property, right-of-way and easement lines, property corners, and subdivision and tract boundaries to be reestablished without devious surveys necessarily originating on monuments differing from those that currently control the area. It shall be the responsibility of the governmental agency or others performing construction work to provide for the monumentation required by this section. It shall be the duty of every land surveyor or civil engineer to cooperate with the governmental agency in matters of maps, field notes, and other pertinent records. Monuments set to mark the limiting lines of highways, roads, streets or right-of-way or easement lines shall not be deemed adequate for this purpose unless specifically noted on the corner record or record of survey of the improvement works with direct ties in bearing or azimuth and distance between these and other monuments of record.

The decision to file either the required corner record or a record of survey pursuant to subdivision shall be at the election of the licensed land surveyor or registered civil engineer submitting the document.

The Contractor's licensed land surveyor shall fill out and sign the Acknowledge of Monument Preservation form in Appendix A prior to start of construction.

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

5-1.08 CONSTRUCTION SURVEY

Section 5-1.26, "Construction Surveys", of the Standard Specifications is deleted, and replaced with the following:

1. The Contractor shall be responsible for all construction survey stakes necessary to construct the project in accordance to the lines, grades, sections, stage construction/traffic handling, and traffic signalization, pavement delineation plan described in the plans and specifications.

2. Contractor shall be responsible referencing all existing monumentation within the limits of the project prior to removal of any existing monuments. Monument referencing shall be reviewed and approved by the engineer prior to commencing of the work.

3. The Contractor shall employ a Land Surveyor registered in the State of California or an appropriately registered Civil Engineer to perform such survey work. All stakes and marks set by the Contractor's Land Surveyor or Civil Engineer shall be carefully preserved by the Contractor. In case such stakes and marks are destroyed or damaged, they will be promptly replaced, at the direction of the Engineer at no additional cost to the City. Copies of all field notes and cut sheets shall be provided to the City at no additional cost to the City.

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

5-1.09 REQUEST FOR INFORMATION

The Contractor's attention is directed to Sections 5-1.42, "Request for Information" of the Caltrans Specifications.

Contractor shall submit a request for information upon recognition of any event or question of fact arising under the contract. The Engineer shall respond to the request for information within 5 working days.

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

5-1.10 NOTICE OF POTENTIAL CLAIM

The Contractor shall not be entitled to the payment of any additional compensation for any cause, or for the happening of any event, thing or occurrence, including any act or failure to act, by the Engineer, unless he has given the Engineer due written notice of potential claim as herein specified, provided, however, that compliance with this section shall not be a prerequisite for matters within the scope of the protest provisions under "Changes and Extra Work", "Time of Completion" or within the notice provisions in "Liquidated Damages" not to any claim which is based on differences in measurements of errors of computation as to Contract quantities. The written notice of potential claim shall set forth the items and reasons which the Contractor believes to be eligible for additional compensation, the description of work, the nature of the additional costs and the total amount of the potential claim. If based on an act or failure to act by the Engineer, written notice for potential claim must be given to the Engineer prior to the Contractor commencing work; in all other cases, written notice for potential claims must be given to the Engineer within 15 days after the happening of the event, thing or occurrence giving rise to the potential claim.

It is the intention of this Section that potential differences between the parties of this Contract be brought to the attention of the Engineer at the earliest possible time appropriate action may be taken and settlement may be reached. The Contractor hereby agrees that he shall have no right to additional compensation for any claim that may be based on any act or failure by the Engineer or any event, thing or occurrence for which no written notice of potential claim was filed.

5-1.11 INSPECTIONS

All work under this contract shall be under the control and inspection of the City Engineer or his/her appointed representative. The Contractor shall notify the City of Stockton Public Works Department forty-eight (48) hours in advance of any construction. Contractor shall pay for overtime for inspection during City holidays, weekends and non-business hours.

5-1.12 AS-BUILT/RECORD DRAWINGS

The Contractor shall maintain a complete set of drawings on site for the purpose of keeping up to date all field modifications. This plan set shall be available for review by the project Inspector or the Engineer. These plans shall be provided to the Inspector after the completion of construction at the Post Construction Meeting and prior to the final payment. All revision, modifications and/or changes shall be marked clearly. Notes and dimensions shall be in red and be clear and legible. These plans will be used by the Design Engineer to mark up the original plan sheets with the revisions made during construction.

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

5-1.13 SURFACE RESTORATION

Surface restoration shall consist of restoring all areas within the limits of work to their original existing condition prior to construction.

The Contractor shall restore all paved areas, such as driveways, curb and gutter, roadway surfaces, ditches, landscaped areas, etc., and all other improvements disturbed or damaged by his operations.

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

5-1.14 RIGHTS IN LAND

The following is added to Section 5-1.32, “Areas for Use" of the Caltrans Specifications:

> "All work, equipment parking, or any other activity associated with the project shall be confined to the project limits within the street rights-of-way. The Contractor's use of any other property exclusively in connection with this project shall be by a written agreement between the property owner and the Contractor. A certified copy of any such agreement shall be furnished to the Engineer prior to the use of such property by the Contractor."

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

5-1.15 STAGING AREA

Attention is directed to the requirements specified in Section 5-1.32, ”Areas for Use” of the Caltrans Specifications and these Special Provisions.

The street right-of-way shall be used only for activities that are necessary to perform the required work. The Contractor shall not occupy the right-of-way or allow others to occupy the right-of-way for material storage or other purposes that are not necessary to perform the required work.

The Contractor shall secure at his own expense any area required for plant sites, storage of equipment or materials, or for other purposes.

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

SECTION 6 – CONTROL OF MATERIALS

Attention is directed to the provisions in Section 6, "Control of Materials," of the Standard Specifications, and these Special Provisions.

6-1.01 CITY-FURNISHED MATERIALS

There are no City-furnished materials for this project.

6-1.02 STATE-FURNISHED MATERIALS

The are no State-furnished materials for this project.

6-1.03 BUY AMERICA REQUIREMENTS

Attention is directed to the "Buy America" requirements of the Surface Transportation Assistance Act of 1982 (Section 165) and the regulations adopted pursuant thereto. Furnish steel and iron materials to be incorporated into the work with certificates of compliance. Steel and iron materials must be produced in the U.S. except:

1. Foreign pig iron and processed, pelletized, and reduced iron ore may be used in the domestic production of the steel and iron materials [60 Fed Reg 15478 (03/24/1995)];

2. If the total combined cost of the materials does not exceed the greater of 0.1 percent of the total bid or $2,500, materials produced outside the U.S. may be used.

Production includes:

1. Processing steel and iron materials, including smelting or other processes that alter the physical form or shape (such as rolling, extruding, machining, bending, grinding, and drilling) or chemical composition;

2. Coating application, including epoxy coating, galvanizing, and painting, that protects or enhances the value of steel and iron materials.

6-1.04 QUALITY ASSURANCE PROGRAM

Refer to Instruction to Bidders document.

6-1.05 TESTING

Testing of materials and work shall conform to the provisions in Section 6, "Control of Materials" of the Caltrans Specifications and these special provisions. Whenever the provisions of Section 6 of the Caltrans Standard Specifications refer to tests or testing, it shall mean tests to assure the quality and to determine the acceptability of the materials and work. Contractor's attention is directed to the City's Quality Assurance Program in Instructions to Bidder Package.

Contractor shall hire a certified, independent from contractor's company, laboratory to conduct compaction and material testing. Testing includes and not limited to compaction testing and material testing. A relative compaction of 95% is expected on AC overlay, roadway sub grade and sidewalk areas.

Compaction testing will be required for subsoil, AB, and hot mix asphalt. For AB, sieve analysis, cleanness value, and R value may be provided by the vendor if the source is consistent.

For Asphalt Concrete, certificate of compliance, one sieve analysis, and one oil content test per day is required from supplier.

For concrete, certificate of compliance for Curb Gutter/Sidewalk, driveway, and ADA ramp or ASTM C39 compaction test, 4 cylinders per day, with a required 28 day strength of 3,000 psi is required.

Full compensation for performing the work in these specifications shall be included in the prices paid for the various contract items of work, and no additional compensation will be allowed therefore.

6-1.06 PRE-QUALIFIED AND TESTED SIGNING AND DELINEATION MATERIAL

The California Department of Transportation maintains the list of Prequalified and Tested signing and delineation materials and products. Approval of pre-qualified and tested products and materials shall not preclude the Engineer from sampling and testing any of the signing and delineation materials or products at any time.

None of the listed signing and delineation materials and products shall be used in the work unless such material or product is listed on the California Department of Transportation's List of Approved Traffic Products. A Certificate of Compliance shall be furnished as specified in Section 6, "Control of Materials", of the Caltrans Specifications for signing and delineation materials and products. Said certificate shall also certify that the signing and delineation material or product conforms to the pre-qualified testing and approval of the California Department of Transportation, Division of Traffic Operations, and was manufactured in accordance with the approved quality control program.

For those categories of materials included on the list of Prequalified and Tested Signing and Delineation Materials, only those products shown within the listing may be used in the work. Other categories of products, not included on the list of Prequalified and Tested Signing and Delineation Materials, may be used in the work provided they conform to the requirements of the Standard Specifications.

Materials and products will be considered for addition to said approved pre-qualified and tested list if the manufacturer of the material or product submits to the Division of Traffic Operations of the California Department of Transportation a sample of the material or product. The sample shall be sufficient to permit performance of all required tests. Approval of such materials or products will be dependent upon a determination as to compliance with the Specifications and any test the California Department of Transportation may elect to perform. The list of approved pre-qualified and tested signing and delineation materials and products can be found at the California Department of Transportation Web Site:
http://www.dot.ca.gov/hq/esc/approved_products_list/pdf/signing_and_delineation_materials.pdf

SECTION 7 – LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

7-1.01 PUBLIC CONVENIENCE

Contractor's attention is directed to Section 12-1.02, "Maintaining Traffic" of these Special Provisions.

The Contractor shall notify San Joaquin Regional Transit District (SJRTD) (dispatcher (209) 948-0642) a minimum of five (5) working days prior beginning Work. Contractor shall coordinate with SJRTD if any bus stops and bus routes are affected.

The Contractor shall inform the City Fire Department, City Police Department, City Traffic Department, Municipal Utilities Department (MUD), Stockton Unified School District, and all affected utilities no later than seventy-two (72) hours before work is to begin. The Contractor shall provide the City with the name and telephone number (business, home, and mobile) of three (3) representatives available at all times during the duration of the contract. Said names and telephone numbers shall be provided to the City of Stockton Public Works, Fire and Police Departments.

The Contractor shall circulate printed form letters, approved by the Engineer, explaining the project to be constructed and the length of time inconvenience will be caused by the project and deliver same to the residents and businesses to be affected at least seventy-two (72) hours before work is to commence. In addition, the Contractor shall provide temporary "No Parking" signs posted seventy-two (72) hours in advance of the work. Such signs shall be placed no further than fifty (50) feet apart. The additional "No-Parking" signs shall be removed on completion of the work and the opening of the street to traffic. The Contractor is responsible for the removal of any vehicles obstructing his operations.

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

7-1.02 PUBLIC SAFETY

The Contractor's attention is directed to Section 12-1.02, "Maintaining Traffic" of these Special Provisions. Nothing in the specifications voids the Contractor's public safety responsibilities.

All safety devices, their maintenance, and use shall conform to the latest requirements of OSHA and shall conform to the applicable provisions of Part 6 "Temporary Traffic Control", latest MUTCD California Supplement, the current edition of the "Manual on Uniform Traffic Control Devices (MUTCD)" and the latest "Work Area Traffic Control Handbook (WATCH)". It shall be the complete responsibility of the Contractor to protect persons from injury and to avoid property damage.' Adequate barricades, construction signs, flashers, and other such safety devices, as required, shall be placed and maintained during the progress of the construction work, until the project is completed. Whenever required, flagmen shall be provided to control traffic.

The Contractor shall provide for the proper routing of vehicles, bicyclists, and pedestrians in a manner that will hold congestion and delay of such traffic to practicable minimum by furnishing, installing, and maintaining all necessary temporary signs, barricades, and other devices and

facilities, as approved by the City Traffic Engineer. As the work progresses, the Contractor shall relocate, subject to the City Traffic Engineer's approval, such devices and facilities as necessary to maintain proper routing. The Contractor shall maintain Americans with Disabilities Act (ADA) compliance through the work site (or approved alternate route) at all times during all phases of construction. The Contractor shall notify the City Traffic Engineer via the inspector a minimum of three (3) working days prior to the relocation of any traffic control devices.

Full compensation for furnishing, installing, moving, and removing of all necessary traffic control devices including, but not limited to, signing, striping, barricades, arrow boards, CMS, and flagging shall be included in the contract prices for “Traffic Control” and no additional compensation will be allowed therefore. Section 12-1.04, "Payment,” of the Caltrans Specifications is deleted.

7-1.03 LEAD COMPLIANCE PLAN

Attention is directed to Section 7-1.02K(6)(j)(ii) “Lead Compliance Plan, of the Caltrans Specifications.

A lead compliance plan for worker health and safety must be prepared by a Certified Industrial Hygienist (CIH) and must be submitted and implemented prior to the start of construction activities. This plan is needed in order to comply with California Occupational Safety and Health Administration (Cal OSHA) regulations addressing aerially deposited lead for projects involving soil disturbance, and to minimize worker exposure to lead chromate or lead while handling paint and thermoplastic residue.

Allow 7 days for the Engineer’s review. Obtain authorization for the plan before starting any activity that presents the potential for lead exposure.

The plan shall include items listed in 8 CA of Regs § 1532.1(e)(2)(B). Obtain authorization for the plan before starting any activity that presents the potential for lead exposure. Contractor shall provide a safety training program to employees who have no prior training, including City employees. The safety training program shall comply with 8 CA Code of Regs § 1532.1 and the provided lead compliance plan. Contractor shall submit copies of air monitoring or job site inspection reports made by or under the direction of the CIH under 8 CA Code of Regs § 1532.1 within 10 days after the date of monitoring or inspection.

Supply personal protective equipment, training, and washing facilities required by your lead compliance plan for five City employees.

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

SECTION 8 – PROSECUTION AND PROGRESS

8-1.01 SCHEDULE

Attention is directed to Section 8-1.02, “Schedule” of the Caltrans Specifications. The Contractor shall submit a schedule of construction to the City Engineer within five (5) working days following the Notice to Proceed.

The Contractor's construction schedule must be approved before any construction may commence.

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

8-1.02 PRE-CONSTRUCTION CONFERENCE

The City of Stockton Public Works Department will schedule a pre-construction meeting with the Contractor following award of the contract and prior to commencing work (*project managers name and number*). This meeting will be held in the City of Stockton, Public Works Department.

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

8-1.03 POST CONSTRUCTION CONFERENCE

The Contractor shall attend a post-construction meeting that will be arranged by the Public Works Department (*project managers name and number*) after completion of work and prior to acceptance and final payment. The project engineer and the project Inspector will also attend this meeting. The purpose of the meeting will be to discuss the project and any related issues that can help improve future Public Works construction projects. This meeting will be held in the City of Stockton, Public Works Department.

At this meeting the Contractor will also submit a marked-up set of record drawings/as-built plans at no additional cost to the City.

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

8-1.04 TIME OF COMPLETION

Attention is directed to the provisions in Section 8-1.05, “Time,” of the Caltrans Specifications and these Special Provisions.

The contract for the performance of the work and the furnishing of materials shall commence within ten (10) days from the Notice to Proceed date and shall be diligently prosecuted to completion before the expiration of the working days specified in this section from the date of said commencement.

The Contractor shall diligently prosecute the contract work to completion within Eighty (80) working days. The days to finish the punch list, provided by the City, are included in the Original Working Days.

Should the Contractor choose to work on a Saturday, Sunday, or on a City Holiday recognized by the labor unions, the Contractor shall reimburse the City of Stockton the actual cost of engineering, inspection, testing, superintendent, and/or other overhead expenses, which are directly chargeable to the contract. The approximate cost is $100 per hour. Should such work be undertaken at the request of the City, reimbursement will not be required.

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

8-1.05 LIQUIDATED DAMAGES

Attention is directed to the provisions in Section 8-1.10, “Liquidated Damages,” of the Caltrans Specifications and these Special Provisions.

The Contractor shall pay liquidated damages to the City of Stockton in the amount of **$4,000** per day for each and every calendar day that the work, with the exception of the plant establishment and maintenance period, remains incomplete after expiration of the contract working days specified in these Special Provisions.

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

SECTION 9 – PAYMENT

9-1.01 GENERAL

Attention is directed to Section 9 of the Standard Specifications, Section 9, “Payment,” of the Caltrans Specifications, and these Special Provisions. All measurements and payments for this work shall conform to all applicable provisions on Section 9 of the Caltrans Specifications.

All materials designated to be removed shall become the property of the Contractor, unless otherwise noted, and shall be disposed in accordance with local, state, and federal laws and ordinances.

Full compensation for performing the work in these specifications shall be included in the prices paid for the various contract items of work and no additional compensation will be allowed therefore.

9-1.02 PAYMENTS

Attention is directed to Sections 9-1.16, "Progress Payments,” and 9-1.17, "Payment After Contract Acceptance,” of the Caltrans Specifications, and Sections 9-1.16A, "Progress Payments - General,” and 9-1.17D, "Final Payment and Claims,” of the Standard Specifications. No partial payment will be made for any materials that are furnished on hand, but not yet installed or incorporated in the work.

Full compensation for all labor, equipment, tools, materials, services, travel, and incidentals and for doing all the work and all other items required to complete the work in conformity with the Contract Documents will be included in the prices paid for the various contract items of work and no additional work compensation will be allowed therefore. No other compensation will be made except for the items listed in the Bid Proposal. Work for which no separate payment has been provided will be considered as a subsidiary obligation of the Contract.

Schedule of Measurement and Payment:

Bid Item #1 – Mobilization

Measurement

Bid item #1 shall be on a lump sum basis based on the percentage of work completed as determined by the Engineer at the time the progress payment is prepared.

Payment

Bid item #1 shall include full compensation for performing the work specified in Section 9-1.04, “Mobilization”, of these special provisions, and include full compensation for furnishing all labor, materials, equipment and incidentals for doing all the work associated with this item, including, but not limited to: mobilize and demobilize the necessary forces to complete the project within the time specified in these specifications; prepare and maintain project records and documents, including “as-built” plans; obtaining all required permits, licenses, and paying all fees; developing construction schedules; moving any equipment required for the operations; performing preparatory work, coordination and cooperation, and attending project meetings; developing construction water supply; developing a construction staging area; providing on-site sanitary facilities and offices if necessary; submitting subcontractor insurance and bonds and Contractor

insurance and bonds, complete-in-place, as shown on the plans, as specified in these specifications, and as directed by the Engineer, and no additional compensation will be allowed therefore.

Mobilization shall not exceed 8% of contract amount for base bid.

Bid Item #2 – Traffic Control

Measurement

Bid item #2 bid item shall be on a lump sum basis based on the percentage of work completed as determined by the Engineer at the time the progress payment is prepared.

Payment

Bid item #2 bid item shall include full compensation for performing the work specified in Section 12, "Temporary Traffic Control", of these special provisions, and include full compensation for furnishing all labor, materials, equipment and incidentals for doing all the work associated with this item, including, but not limited to: signs, portable changeable message signs, flashing arrow signs, placing, removing, storing, maintaining, moving to new locations, replacing and disposing of the components of the traffic control system, temporary construction area signs, temporary pavement delineation, temporary pedestrian access routes, and flagging, complete-in-place, as shown on the plans, as specified in these specifications, and as directed by the Engineer, and no additional compensation will be allowed therefore.

Minimum of two (2) Changeable Message Sign (CMS) will be required at each location prior to construction.

Provide minimum of one (1) project information sign at each location prior to construction under the direction of the Engineer. Minimum of six (6) signs total are required for the project.

Bid Item #3 – "Water Pollution Control"

Measurement

Bid item #3 bid item shall be on a lump sum basis based on the percentage of work completed as determined by the Engineer at the time the progress payment is prepared.

Payment

Bid item #3 bid item shall include full compensation for performing the work specified in Section 13, "Water Pollution Control", of these special provisions, and include full compensation for furnishing all labor, materials, equipment and incidentals for doing all the work associated with this item, including, but not limited to: inlet protection, installing fiber roll and silt fence along the perimeter of the limits of work, installing stabilized construction entrance and exits, removal of non-hazardous material and waste management, hazardous material / waste management, spill prevention, vehicle / equipment inspection and cleaning, concrete truck / equipment wash out, paint cleanup, street sweeping, recycling, controlling dust resulting from the Contractor's operations, public traffic, wind, or other conditions at all times including Saturdays, Sundays, holidays, complete-in-place, as shown on the plans, as specified in these specifications, and as directed by the Engineer, and no additional compensation will be allowed therefore.

Bid Item #4 – Construction Survey

Measurement

Bid item #4 bid item shall be paid by lump sum basis based on the percentage of work completed as determined by the Engineer at the time the progress payment is prepared.

Payment

Bid item #4 bid item shall include full compensation for performing the work specified in Section 5-1.08, “Construction Survey”, of these special provisions, and include full compensation for furnishing all labor, materials, equipment and incidentals for doing all the work associated with this item, including, but not limited to performing vertical and horizontal survey work, staking and layout, verification and necessary adjustments as it relates to existing field conditions, verification and location of existing utilities in a horizontal and vertical plan, providing cut sheets for City review, other detailed survey work, complete-in-place, as shown on the plans, as specified in these specifications, and as directed by the Engineer, and no additional compensation will be allowed therefore.

Bid Item #5 – Remove Concrete

Measurement

Bid item #5 shall be paid on a square foot basis based on the actual area measured from the finished work.

Payment

Bid item #5 shall include full compensation for performing the work specified in Section 15, “Concrete Curb Ramps, Sidewalk, Curb and Gutter”, of these special provisions, and include full compensation for furnishing all labor, materials, equipment and incidentals for doing all the work associated with this item, including, but not limited to: saw cut, excavation, demolition, removal and disposal of existing concrete, aggregate base, and/or sub-grade materials, complete-in-place, as shown on the plans, as specified in these specifications, and as directed by the Engineer, and no additional compensation will be allowed therefore.

Bid Item #6 – Concrete Curb Ramp

Measurement

Bid item #6 shall be paid on a per each unit basis based on the actual count from the finished work, regardless the type of curb ramp.

Payment

Bid item #6 shall include full compensation for performing the work specified in Section 15, “Concrete Curb Ramps, Sidewalks, Driveways, Curb and Gutters”, of these special provisions, and include full compensation for furnishing all labor, materials, equipment and incidentals for doing all the work associated with this item, including, but not limited to: saw cut, excavation, demolition, removal and disposal of existing concrete, aggregate base, and/or sub-grade materials, placing and compacting aggregate base, supplying concrete to the site, forming, grading, reinforcing, placing concrete, removing forms, removing and disposing waste materials from the site, placing expansion joint, dowels, rebar, epoxy, curing compound, scoring concrete, retaining curb, detectable warning surfaces, checking grades and dimensions, compliant with

ADA requirements, replacing engraved curb markings, restoration of surrounding improvements, re-grade lawn and adjust irrigation (if needed), complete-in-place, as shown on the plans, as specified in these specifications, and as directed by the Engineer, and no additional compensation will be allowed therefore.

Detectable warning surface and retaining curb required by the type of curb ramp shall be considered as included in the contract unit price paid and no separate payment will be made.

Bid Item #7 – Concrete Vertical Curb & Gutter

Bid Item #8 – Concrete Median Curb Type A3

Bid Item #9 – Concrete Vertical Curb Type B

Bid Item #10 – Concrete Sidewalk

Bid Item #11 – Stamp Concrete

Measurement

Bid items #7 to #9 shall be paid on a per linear foot basis based on the actual length measured from the finished work.

Bid items #10 and #11 shall be paid on a per square foot basis based on the actual area measured from the finished work.

Payment

Bid items #7 to #11 shall include full compensation for performing the work specified in Section 15, “Concrete Curb Ramps, Sidewalks, Curb and Gutters”, of these special provisions, and include full compensation for furnishing all labor, materials, equipment and incidentals for doing all the work associated with this item, including, but not limited to: placing and compacting aggregate base, supplying concrete to the site, forming, grading, reinforcing, placing colored and sealing concrete, removing forms, removing and disposing waste materials from the site, placing expansion joint, dowels, rebar, epoxy, curing compound, scoring concrete, checking grades and dimensions, compliant with ADA requirements, restoration of surrounding improvements, dowelling into existing sidewalk, curb and gutter, re-grade lawn and adjust irrigation (if needed), complete-in-place, as shown on the plans, as specified in these specifications, and as directed by the Engineer, and no additional compensation will be allowed therefore.

Bid Item #12 – Crack Sealing

Measurement

Bid item #12 shall be paid on a per square yard basis based on the actual area measured from the finished work.

Payment

Bid item #12 shall include full compensation for performing the work specified in Section 17, “Crack Sealing”, of these special provisions, and include full compensation for furnishing all labor, materials, equipment and incidentals for doing all the work associated with this item,

including, but not limited to: surface preparaton, routing, pressure cleaning, herbicide application, sealing, sanding, sweeping, and clean-up, complete-in-place, as shown on the plans, as specified in these specifications, and as directed by the Engineer, and no additional compensation will be allowed therefore.

Bid Item #13 – Slurry Seal Type II

Measurement

Bid item #13 shall be paid on a per square yard basis based on the actual area measured from the finished work.

Payment

Bid item #13 shall include full compensation for performing the work specified in Section 18, “Slurry Sealing”, of these special provisions, and include full compensation for furnishing all labor, materials, equipment and incidentals for doing all the work associated with this item, including, but not limited to: surface preparation, removal of pavement markings and markers, covering surface facility covers and lids, prevent spill on to gutter, test strips, mixing and spreading micro-surfacing at rates approved by the Engineer, protecting the treatment until it has set, repair of early distress, sanding, sweeping, and cleanup, complete-in-place, as shown on the plans, as specified in these specifications, and as directed by the Engineer, and no additional compensation will be allowed therefore.

Bid Item #14 – Remove AC Pavement 12” to 15” Deep

Bid Item #15 – Remove and Replace 6-inch HMA Digout

Bid Item #16 – Remove and Replace 12-inch HMA

Bid Item #17 – Remove and Replace Speed Bump

Measurement

Bid items #14 to #17 shall be paid on a per square foot basis based on the actual area measured from the finished work.

Payment

Bid items #14 to #17 shall include full compensation for performing the work specified in Section 19, “Replace Asphalt Concrete Surface”, of these special provisions, and include full compensation for furnishing all labor, materials, equipment and incidentals for doing all the work associated with this item, including, but not limited to: surface preparation, saw cutting or grinding, excavation, removal and disposal of asphalt concrete and/or sub-grade material, disposal of materials with non-recyclable paving fabric (if needed), re-grading, compacting, and scarifying of sub-grade, place asphalt concrete in multiple lifts, apply tact coat and/or prime coat (if needed), complete-in-place, as shown on the plans, as specified in these specifications, and as directed by the Engineer, and no additional compensation will be allowed therefore.

Additional excavation and backfill depth for asphalt failure as ordered by the Engineer due to unsuitable sub-grade condition shall be paid by prorating from the bid item. Any removal and replacement done outside of the areas marked by the City or to depths greater than the maximum depth specified will be at the expense of the Contractor.

Bid Item #18 – Adjust Water Valve Box to Grade

Bid Item #19 – Adjust Pull Box to Grade

Measurement

Bid items #18 and #19 shall be paid on a per each unit basis based on the actual count from the finished work.

Payment

Bid items #18 and #19 shall include full compensation for performing the work specified in Section 16, “Adjust Surface Facilities” of these special provisions, and include full compensation for furnishing all labor, materials, equipment and incidentals for doing all the work associated with this item, including, but not limited to: excavating and backfilling, removal and disposal of concrete, providing new pull box and extension (if required), conform to final grade, coordinating and obtaining approval from utility owners, complete-in-place, as shown on the plans, as specified in these specifications, and as directed by the Engineer, and no additional compensation will be allowed therefore.

No compensation will be allowed for any adjustments performed by the owners of the facilities.

Replacement units furnished by the Contractor for unserviceable pull box and cover will be considered extra work for materials only. Full compensation for handling replacement units is considered as included in the contract unit price paid and no separate payment will be made.

Bid Item #20 – Remove Traffic Stripes, Markings & Pavement Markers

Bid Item #21 – Thermoplastic Markings

Bid Item #22 – Thermoplastic Stripes, Varies Details

Bid Item #23 – Painted Markings

Bid Item #24 – Painted Stripes, Varies Details

Bid Item #25 – Painted Curb

Bid Item #26 – Two-way Reflective Blue Pavement Marker

Measurement

Bid Item #20 bid item shall be on a lump sum basis based on the percentage of work completed as determined by the Engineer at the time the progress payment is prepared.

Bid items #21 and #23 shall be paid on a per square foot basis based on the actual area measured from the finished work.

Bid items #22, #24 and #25 shall be paid on a per linear foot basis based on the actual length measured from the finished work.

Bid item #26 shall be paid on a per each unit basis based on the actual count from the finished work.

Payment

Bid items #20 to #26 shall include full compensation for performing the work specified in Section 20, “Traffic Stripes, Pavement Markings, Pavement Markers and Roadside Signs”,” of these special provisions, and include full compensation for furnishing all labor, materials, equipment and incidentals for doing all the work associated with this item, including, but not limited to: removal and disposal of existing stripes, markings, pavement markers, surface preparation, establishing alignment and cat tracking, installing white or yellow thermoplastic or painted traffic stripes, pavement markings, such as crosswalk, limit line, yield line, pavement legends and symbols, painted curb, locating, applying epoxy and install pavement marker, repair of poor workmanship or damage, sweeping and cleanup, complete-in-place, as shown on the plans, as specified in these specifications, and as directed by the Engineer, and no additional compensation will be allowed therefore.

Bid Item #27 – Remove Sign and Post

Bid Item #28 – Reset or Relocate Sign and Post

Bid Item #29 – Roadside Sign

Bid Item #30 – Break-Away Post and Foundation

Bid Item #31 – R4-7 & Type K Sign Post

Measurement

Bid items #27 to #31 shall be paid on a per each unit basis based on the actual count from the finished work.

Payment

Bid items #27 to #31 shall include full compensation for performing the work specified in Section 20, “Traffic Stripes, Markings, Pavement Markers and Roadside Signs”, of these special provisions, and include full compensation for furnishing all labor, materials, equipment and incidentals for doing all the work associated with this item, including, but not limited to: surface preparation, excavating and backfilling, removal and disposal of existing foundation, relocating existing sign and post, install new sign and post, foundation, providing all mounting hardware, and restore adjacent improvements, complete-in-place, as shown on the plans, as specified in these specifications, and as directed by the Engineer, and no additional compensation will be allowed therefore.

Bid Item #32 – Remove Existing In-Pavement Warning Light

Bid Item #33 – Solar-Powered Rectangular Rapid Flashing Beacon

Measurement

Bid Item #32 bid item shall be on a lump sum basis based on the percentage of work completed as determined by the Engineer at the time the progress payment is prepared.

Bid item #33 shall be paid on a per each unit basis based on the actual count from the finished work.

Payment

Bid items #32 and #33 shall include full compensation for performing the work specified in Section 21, “Rectangular Rapid Flashing Beacon”,” of these special provisions, and include full compensation for furnishing all labor, materials, equipment and incidentals for doing all the work associated with this item, including, but not limited to: surface preparation, excavating and backfilling, removal and disposal, potholing and utility investigation, coordination with manufacturer, remove existing in-pavement warning light, installing pole, foundation, solar panel, controller, flash lights, batteries, signages, APS pedestrian push button, pull boxes, conduits, wiring, cables, grounding, testing, activation, and making all necessary connections for a complete RRFB system, complete-in-place, as shown on the plans, as specified in these specifications, and as directed by the Engineer, and no additional compensation will be allowed therefore.

9-1.03 INCREASE OR DECREASE QUANTITIES

The City reserves the right to make such alterations, deviations, additions to, or omissions from the plans and specifications, including the right to increase or decrease the quantity of any item or portion of the work or to omit any item or portion of the work, as may be deemed by the Engineer to be necessary or advisable and to require such extra work as may be determined by the Engineer to be required for the proper completion or construction of the whole work contemplated, without adjustment in the unit price as bid. Section 9-1.06B and Section 9-1.06C of the Caltrans Specifications shall not apply.

Any such changes will be set forth in a contract change order, which will specify, in addition to the work to be done in connection with the change made, adjustment of contract time, if any, and the basis of compensation for such work. A contract change order will not become effective until approved by the Public Works Director. City Manager and/or City Council approval may be necessary depending on the amount of the change order.

9-1.04 MOBILIZATION

Mobilization shall conform to the provisions in Section 9-1.16D, "Mobilization," of the Caltrans Standard Specifications and these Special Provisions.

Full compensation for any costs required to comply with the provisions in this section shall be considered to be included in the “Mobilization” price paid for on the contract items of work and no additional compensation will be allowed therefore.

9-1.05 STOP NOTICE

Section 9-1.16E(4), “Stop Notice Withholds,” of the Caltrans Specifications is amended to read as follows:

At its option, the Department of Public Works may at any time retain from the amounts due to the Contractor sufficient amount to cover claims which are filed pursuant to *Section 3179 et seq of the Code of Civil Procedures*.

9-1.06 QUANTITIES

The following estimate of the quantities of work to be done and materials to be furnished are **approximate only**, and are intended as a basis for the comparison of bids. The City does not expressly or by implications agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work without increase or decrease in the unit price bid or to omit portions of the work that may be deemed necessary or expedient by the Engineer.

ITEM NO.	ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	ITEM TOTAL
1	Mobilization	LS	1	$	$
2	Traffic Control	LS	1	$	$
3	Water Pollution Control	LS	1	$	$
4	Construction Survey	LS	1	$	$
5	Remove Concrete	SF	5,982	$	$
6	Concrete Curb Ramp	EA	27	$	$
7	Concrete Vertical Curb & Gutter	LF	655	$	$
8	Concrete Median Curb Type A3	LF	1,235	$	$
9	Concrete Vertical Curb Type B	LF	42	$	$
10	Concrete Sidewalk	SF	2,608	$	$
11	Stamped Concrete	SF	2,016	$	$
12	Crack Sealing	SY	28,991	$	$
13	Slurry Seal Type II	SY	49,724	$	$
14	Remove AC Pavement 12" to 15" Deep	SF	318	$	$
15	Remove & Replace 6-inch HMA Digout	SF	22,376	$	$
16	Remove & Replace 12-inch HMA	SF	3,332	$	$
17	Remove & Replace Speed Bump	SF	1,080	$	$
18	Adjust Water Valve Box to Grade	EA	3	$	$
19	Adjust Pull Box to Grade	EA	2	$	$

ITEM NO.	ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	ITEM TOTAL
20	Remove Traffic Stripes, Markings & Pavement Markers	LS	1	$	$
21	Thermoplastic Markings	SF	9,586	$	$
22	Thermoplastic Stripes, Varies Details	LF	41,466	$	$
23	Painted Markings	SF	775	$	$
24	Painted Stripes, Varies Details	LF	2,511	$	$
25	Painted Curb	LF	108	$	$
26	Two-Way Reflective Blue Pavement Marker	EA	14	$	$
27	Remove Sign and Post	EA	8	$	$
28	Reset or Relocating Sign and Post	EA	9	$	$
29	Roadside Sign	EA	165	$	$
30	Break-Away Post and Foundation	EA	78	$	$
31	Type K Object Marker	EA	14	$	$
32	Remove Existing In-Pavement Warning Light	LS	1	$	$
33	Solar-Powered Rectangular Rapid Flashing Beacon	EA	6	$	$
		TOTAL BID PRICE			$

Total Bid Price: _____

(in Words)

Each bidder shall bid each item on the Base Bid Schedule. Failure to bid an item shall be just cause for considering the bid as non-responsive. The City reserves the right to include or delete any Schedule or portion thereof, or to reject all bids.

Official bid documents, including plans and specifications, are available on the City of Stockton website at: http://www.stocktongov.com/services/business/bidflash/default.html

All bids submitted for this project must conform to the requirements of the official bid documents, including plans and specifications.

DIVISION II – GENERAL CONSTRUCTION

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SECTION 10 – GENERAL

10-1.01 ORDER OF WORK

The order of work shall conform to the Contractor's approved project schedule described in Section 8-1.01, "Schedule" of these Special Provisions.

First order of work shall be completed all work involved in Location 2 on W 8th Street from I-5 to El Dorado St before starting any work on another location, unless otherwise approved by the Engineer.

Order of work at each location shall be as follows:

1) Purchase of Rectangular Rapid Flashing Beacon (RRFB)
2) Concrete Improvement
3) Digout Repair
4) Slurry Seal
5) Signing and Striping

Contractor's attention is directed to the Public Safety, Public Convenience, and Maintaining Traffic sections of these Special Provisions. Nothing in this section shall be construed as to relieve the Contractor of the responsibility to stage the work in a manner that complies with the requirements of these sections.

All permits and approvals as may be required for this project shall be secured or ordered immediately after award of the contract or their acquisition timing determined, such that the same is not a cause for delay. The cost of the permits shall be included in the total bid costs.

Minor deviations from these requirements may be allowed by the Engineer, if in the opinion of the Engineer, the prosecution of the contract will be better served and the work expedited. Any Contractor request for such deviations shall not be adopted without the Engineer's prior written approval.

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

10-1.02 MONUMENTS

The Contractor shall preserve and perpetuate existing monuments, property pins, chiseled cross, etc. affected by the work included in this project in accordance with the most current edition of the Professional Land Surveyors Act (Business and Professions Code §§ 8700-8805), Sections 8771.

The Contractor shall perform a survey to preserve any existing survey monuments such as chiseled cross, survey iron pipe, etc. that may be present on the pavement, round corners, and concrete flat work to be improved by this project. Monument preservation shall be done by or under the supervision of a Licensed Land Surveyor.

The Contractor shall notify the Engineer immediately if any monument is disturbed. The Contractor shall be responsible for hiring a Licensed Land Surveyor to reset any survey

monument disturbed by his/her operations. A new record of survey shall be filed with the San Joaquin County Surveyor's office, which copies shall be submitted to the Engineer.

The Contractor's licensed land surveyor shall fill out and sign the Acknowledge of Monument Preservation form in Appendix A prior to start of construction.

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

SECTION 11 – BLANK

SECTION 12 – TEMPORARY TRAFFIC CONTROL

12-1.01 MAINTAINING TRAFFIC

Attention is directed to Sections 7-1.03, "Public Convenience," 7-1.04, "Public Safety," and 12, "Temporary Traffic Control," of the Caltrans Specifications, 10.01, "Order of Work," of these Special Provisions. Nothing in these Special Provisions shall be construed as relieving the Contractor from the responsibilities specified in these sections.

The Contractor shall furnish, and maintain in good working order, all barricades, arrow boards, CMS, and flashers, and provide flaggers as necessary to protect pedestrians and vehicular traffic.

The Contractor shall furnish and maintain all barricades, arrow boards, CMS, flashers, and any detour signs twenty-four (24) hours a day, including covering or removing signs during non-construction hours.

The Contractor shall provide adequate and continuous ingress and egress for all adjacent properties, except for the limited period of time it is necessary to perform work at a specific property. The Contractor shall diligently prosecute all work directly impacting businesses to completion. The Contractor shall coordinate limited closures with tenants or owners, as required by these Special Provisions, and as directed by the Engineer.

The Contractor shall submit to the City Engineer a detailed "Temporary Traffic Control Plan" for review and approval. The "Temporary Traffic Control Plan" shall be submitted no later than five (5) working days following the Notice to Proceed date and prior to commencing any work which requires implementation of any component of the "Traffic Control Plan." The plan shall be approved by the Engineer prior to its implementation by the Contractor.

The "Traffic Control Plan" shall conform to the typical traffic control details included in the requirements of Section 12-1.02, "Traffic Control System for Lane and Road Closure," of these Special Provisions. The Temporary Traffic Control Plan shall include, but not be limited to, detailed requirements for the following:

- Traffic control devices, including signs and markings.
- Construction detour routes, phasing and/or staging of both the roadway and sidewalk areas.
- Employee, Customer, and Business/Delivery access to adjacent property.
- Emergency vehicles access.
- Bus, refuse collection, and mail delivery access.
- Any parking zones to be removed on a temporary basis.
- Any temporary "No Parking" zones.
- Pedestrian and bicyclist access.

The “Temporary Traffic Control Plan” shall consider the impacts of changes in traffic volumes and capacities related to the construction activities, and their impact on vehicular and bicycle traffic and pedestrian operations, on roadway pavements, including provisions to restore construction-damaged pavements.

Traffic Lane and Sidewalk Closures

Lanes and sidewalks may be closed only as indicated in this section, "Maintaining Traffic," of these Special Provisions. Except for work required under Sections 7-1.03, “Public Convenience” and 7-1.04, “Public Safety” of Caltrans Specifications, work that interferes with public traffic shall be performed only as indicated. Traffic lane and sidewalk closures shall conform to the following requirements:

Lane closure, a maximum of one lane in each direction of travel and not more than twelve (12) feet wide, shall be permitted only between the hours of 9 a.m. and 3:30 p.m. Any other lane closure shall be approved by the Engineer.

Standard working hours shall be 8 a.m. to 4 p.m. Any extended working hours require the approval of the Engineer.

Personal vehicles of the Contractor's employees shall not be parked on the traveled way or shoulders, including any section closed to public traffic.

Adequate ingress and egress shall be maintained throughout the project limits for fire, police, and other emergency vehicles. The Contractor shall provide adequate ingress and egress for residences, property owners, and abutting business owners to their respective properties except when performing work at their specific locations.

Also, the Contractor shall provide adequate signing, barricades and flashers or portable flashing beacons, flaggers, and other equipment and personnel necessary to adequately control and direct traffic in a safe manner. The Contractor shall maintain all barricades, flashers and detour signs twenty-four (24) hours a day, including covering signs during non-construction hours. The Contractor shall also provide the City with the names and telephone numbers of three (3) representatives available at all times.

Whenever Contractor's vehicles or equipment are parked within six (6) feet of a traffic lane, the area shall be closed with fluorescent traffic cones or portable delineators placed on a taper in advance of the parked vehicles or equipment and along the edge of the traffic lane at twenty-five (25) foot intervals to a point not less than twenty-five (25) feet past the last vehicle or piece of equipment. A minimum of nine (9) cones or portable delineators shall be used for the taper. A W20-1 (Road Work Ahead) sign shall be mounted on a portable sign stand with flags. The sign shall be placed where directed by the Engineer.

Except as otherwise allowed by the Engineer, ”long term” and temporary closures shall be removed and the full width of the traveled way shall be open for use by public traffic when construction operations are not actively in progress during the working period or successive working periods.

The Contractor shall provide for pedestrian and wheelchair access to at least one (1) intersection corner within each block and the abutting sidewalk facilities along each block, at all times. Simultaneous closure of both intersection corners to pedestrian traffic within the same block is not allowed.

The Contractor shall maintain at least one (1) north/south crosswalk and one (1) east/west crosswalk open to pedestrian and wheelchair access, where it exists, at each intersection at all times.

Attention is directed to Part 6 of the California MUTCD. Nothing in these Special Provisions shall be construed as relieving the Contractor from his responsibility as provided in Part 6 of California MUTCD.

Full compensation for furnishing, installing, moving, removing, and all the necessary traffic control devices including, but not limited to, the necessary signs, striping, barricades, and flagging shall be included in the contract prices paid for the various items of work of the bid schedule, and no additional compensation will be allowed therefore.

Maintaining Pedestrian Access

Means of passage of pedestrian traffic around and through the work area shall be provided at all times. Path of travel shall comply with Americans with Disabilities Act (ADA) regulations.

The Contractor shall cause the least possible disruption to the affected properties and restore suitable pedestrian access immediately following completion of the active work in progress.

At least one (1) continuous ADA accessible walkway along one (1) side of the street shall be available at all times. At locations where work is actively in progress, the pedestrian walkway within a single block may temporarily be closed at one (1) end of the block along one (1) side of the street. Pedestrians shall be rerouted to the walkway on the opposite side of the street.

Minor deviations from the requirements of this section, which do not significantly change the cost of the work, may be permitted upon the written request of the Contractor if, in the opinion of the Engineer, public traffic will be better served and the work expedited. These deviations shall not be adopted by the Contractor until the Engineer has approved them in writing. All other modifications will be made by contract change order.

Full compensation for furnishing a temporary traffic control plan, furnishing, installing, maintaining, and removing all components of the required traffic control system, traffic lane and sidewalk closures, temporary pavement delineation, maintaining driveway and pedestrian traffic, and for maintaining traffic as specified in the plans and these Special Provisions, and as directed by the Engineer, shall be included in the contract prices for “Traffic Control” and no additional compensation will be allowed therefore.

12-1.02 TRAFFIC CONTROL SYSTEM FOR LANE AND ROAD CLOSURE

A traffic control system shall consist of closing traffic lanes and ramps in accordance with the provisions of Section 12, "Temporary Traffic Control,” of the Caltrans Specifications, the provisions under "Public Safety,” "Maintaining Traffic,” and "Construction Area Signs" elsewhere in these Special Provisions.

The provisions in this section will not relieve the Contractor from the responsibility to provide additional devices or take the measures that may be necessary to comply with the provisions in Section 7-1.04, "Public Safety,” of the Caltrans Specifications and these Special Provisions.

Traffic shall be controlled with stationary type lane closures. The Contractor's attention is directed to the provisions in section 81-3, "Pavement Markers,” of the Caltrans Specifications. 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 the component to its original condition or replace the 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, the components may be stored at selected central locations, approved by the Engineer, within the limits of the highway right-of-way.

Each vehicle used to place, maintain, and remove components of a traffic control system shall be equipped with a Type II flashing arrow sign, which shall be in operation when the vehicle is being used for placing, maintaining, or removing the components. Vehicles equipped with Type II flashing arrow signs not involved in placing, maintaining, or removing the components when operated within a stationary type lane closure shall only display the caution display mode. The sign shall be controllable by the operator of the vehicle while the vehicle is in motion. The flashing arrow sign shown on the plans shall not be used on the vehicles which are doing the placing, maintaining, and removing of components of a traffic control system, and shall be in place before a lane closure requiring its use is completed.

Section 12-1.04, ”Payment” of the Caltrans Specifications is amended as follows: "The Contractor shall pay fully the cost of furnishing all flaggers, including transporting flaggers, to provide for passage of public traffic."

Attention is directed to Part 6, “Temporary Traffic Control,” of the California MUTCD.

Nothing in these Special Provisions shall be construed as relieving the Contractor from his responsibility as provided in Part 6 of California MUTCD.

Full compensation for furnishing all labor (including flagging costs), materials, signs, arrow boards, CMS, tools, equipment, and incidentals, and for doing all the work involved in lane closures, including placing, removing, storing, maintaining, moving to new locations, replacing, and disposing of the components of the traffic control system as specified in the Caltrans Specifications and these Special Provisions and as directed by the Engineer, shall be included in the contract “Traffic Control”, and no additional compensation will be allowed therefore.

The adjustment provisions in Section 4-1.05A, "Changes and Extra Work - General,” of the Standard Specifications shall not apply to the item of traffic control system. Adjustments in compensation for traffic control system will be made only for an increased or decreased traffic control system required by changes ordered by the Engineer and will be made on the basis of the cost of the increased or decreased traffic control necessary. The adjustment will be made on a force account basis as provided in Section 9-1.04, "Force Account,” of the Caltrans Specifications for increased work and estimated on the same basis in the case of decreased work.

Traffic control system required by work which is classed as extra work, as provided in Section 4-1.05,”Changes and Extra Work,” of the Caltrans Specifications, will be paid for as a part of the extra work.

SECTION 13 – WATER POLLUTION CONTROL

13-1.01 WATER POLLUTION CONTROL

Water pollution control shall conform to the requirements in Section 13, “Water Pollution Control,” of the Caltrans Specifications, these Special Provisions, and as directed by the Engineer.

The Contractor shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP), which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting storm water and with the intent of keeping all products of erosion from moving off site into receiving waters. The Contractor shall inspect and maintain all BMPs.

Full compensation for furnishing, installing, maintaining, and removing all components of the required water pollution control devices as specified in the plans and these Special Provisions, and as directed by the Engineer, shall be included in the contract prices for “Water Pollution Control” and no additional compensation will be allowed therefore.

SECTION 14 – ENVIRONMENTAL STEWARDSHIP

14-1.01 HAZARDOUS WASTE AND CONTAINMENT

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

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

If delay of work in the area delays the current controlling operation, the delay will be considered a right of way delay and the Contractor will be compensated for the delay in conformance with the provisions in Section 8-1.07, “Delays,” of the Caltrans Specifications.

14-1.02 DUST CONTROL

Dust control shall conform to any requirements set forth in the San Joaquin Valley Air Pollution Control District Construction Notification Form, the provisions in Section 10-5, “Dust Control” of the Caltrans Specifications and these Special Provisions. Section 10-5 of the Caltrans Specifications shall be amended to include the following sentences:

"Use of water except for recycled, reclaimed, or other non-potable water for the purpose of dust control or other construction uses unless for health or safety purposes is prohibited. All dust control operations shall be performed by the Contractor at the time, location and in the amount ordered by the Engineer. The application of either water or dust palliative shall be under the control of the Engineer at all times."

Watering shall conform to the provisions of Section 10-6, “Watering,” of the Caltrans Specifications and these Special Provisions.

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

14-1.03 NOISE CONTROL REQUIREMENTS

Noise control shall conform to the provisions in Section 14-8-02, “Noise Control," of the Caltrans Specifications and these Special Provisions. Nothing in the Caltrans Specifications or these Special Provisions voids the Contractor’s public safety responsibilities or relieves the Contractor from the responsibility to comply with other ordinances regulating noise level.

The Contractor shall comply with all local sound control and noise level rules, regulations and ordinances which apply to any work performed pursuant to the contract.

The noise level requirement shall apply to the equipment on the job or related to the job, including, but not limited to, trucks, transit mixers, or transient equipment that may or may not be owned by

the Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

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

14-1.04 PRE-CONSTRUCTION MIGRATORY BIRD SURVEY

February 15 through September 1 is considered the nesting season. All construction activities are prohibited within 100 feet of an active nest without a written authorization from the Engineer. Prior to beginning work disturbing the ground or vegetation, the City will provide a qualified biologist to conduct a pre-construction survey for nesting birds before and during construction. If active nests are observed, buffers will need to be established in coordination with California Department of Fish and Wildlife (CDFW). The pre-construction survey shall be conducted no more than 14 days prior to the initiation of construction activities. The engineer will approve the beginning of work disturbing the ground or vegetation between February 15 and September 1.

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

DIVISION III - TECHNICAL SPECIFICATIONS

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SECTION 15 – CONCRETE CURB RAMPS, SIDEWALKS, CURBS AND GUTTERS

15-1 GENERAL

This section includes general specifications for constructing concrete curbs, sidewalks and their appurtenances, such as gutter depressions and curb ramps.

15-2 MATERIALS

Concrete

Concrete for curbs, sidewalks, and their appurtenances must be minor concrete containing at least 505 pounds of cementitious material per cubic yard, comply with Section 90, “Concrete”, of the City Standard Specifications.

Expansion Joint Filler

Preformed expansion joint filler must comply with ASTM D1751. Mortar must comply with section 51-1.02F.

Form oil must:

1) Be commercial quality or an equivalent coating
2) Allow the ready release of forms
3) Not discolor the concrete

Detectable Warning Surfaces

A detectable warning surface shall be yellow color no. 33538 of FED-STD-595.

Submit a 5-year manufacturer's replacement warranty against defects in a prefabricated detectable warning surface. The 5-year manufacturer's replacement warranty for a prefabricated detectable warning surface must cover defects in dome shape, color fastness, sound-on-cane acoustic quality, resilience, and attachment. The 5-year warranty period starts at Contract acceptance.

Stamped Concrete

Apply “Tile Red" color hardener from Scofield, (916) 715-2717, or Brickform, (800) 483-9628, or approved equal. Seal with two coats of sealer per manufacturer’s recommendation. Apply “Terra Cotta" antiquing release agent from Scofield or Brickform, or approved equal. Use “Running Bond New Brick" pattern from Scofield, or approved equal.

15-3 CONSTRUCTION

Removing Concrete

Comply with Section 15, “Existing Facilities”, of the State Standard Specification.

Where concrete is described to be removed, remove the concrete to a depth of at least 12" below finished grade.

Concrete removal includes removal of any steel embedded in the concrete.

Before removing a portion of a monolithic concrete element, make a 1-inch-deep saw cut to a true line along the limits of removal on faces of the element that will be visible in the completed work.

Protect existing reinforcement to be incorporated into the new work from damage.

Where new concrete is to join existing concrete, remove enough concrete to allow splicing of new reinforcement.

Thoroughly remove all material adhering to the existing reinforcement before embedding it in new concrete.

Landscape and Irrigation Removal

Tree roots may need to be cut as part of curb and gutter, planter surfacing, sidewalk, and removal work. An arborist employed by the City will be present during excavation of these areas to ensure tree roots will not be damaged to the extent of jeopardizing tree health. Contractor shall notify City five (5) days prior to removal operations for furnishing of an arborist. Contractor shall allow seven (7) days after spray of weeds within or at edges of pavement to ensure successful eradication prior pavement and concrete improvement operations. If unsuccessful, Contractor shall respray.

The methods for removal of subsurface irrigation and utility lines will depend on the depth and location of the line in relation to planned improvement. Unless otherwise specified, remove the pipe, and compact the soil in the trench according to the applicable portions of these Special Provisions.

Existing Curbs and Sidewalks

If you repair any part of a curb, sidewalk, curb ramp, or gutter depression, remove and replace the entire section between contraction or expansion joints. At contraction joints, saw cut a true line at least 1-1/2 inches deep before concrete removal.

Subgrade Preparation

Remove soft or spongy basement material to a depth of 6 inches below the subgrade elevation for curbs, gutter depressions, island paving, and 3 inches below the subgrade elevation for sidewalks and curb ramps. Backfill the subgrade with earth, sand, or gravel to produce a stable foundation.

Apply water to the subgrade and thoroughly compact it before placing concrete.

Prepare subgrade to required grade and cross section. Verify that the finished surface of the subgrade does not project into the concrete cross section at any point.

Sidewalks, Curb and Gutter Depressions, and Curb Ramps

Construct expansion joints at:

1) All returns and opposite expansion joints in the adjacent curb
2) 60-foot intervals where there is no adjacent curb

Construct contraction joints to create rectangular patterns in the surface of sidewalks.

Install a prefabricated detectable warning surface under the manufacturer's instructions.

Broom finish the surface of sidewalks, curb and gutter depressions, curb ramps. Make the broom finish perpendicular to the path of travel on surfaces used by pedestrians. You may apply water to the surface immediately before brooming.

The finished surface must not vary more than 0.02 foot from a 10-foot straightedge except at grade changes.

Leave forms in place for at least 12 hours after surface finishing.

Clean any discolored concrete by abrasive blast cleaning or other authorized method.

Stamped Concrete

A sealer compound shall be placed in two stages; Stage 1, immediately after the water has evaporated and the concrete is colored and Stage 2, 30 days after the placement of concrete.

Contractor shall install stamped concrete over existing asphalt pavement in all areas as shown in contract drawings. Stamped concrete in median island shall match existing centerline crown. Contractor shall maintain positive slope (2%) from center line of the median island to top of curb on each side. Contractor shall place 1/2" weekend plane joints at 20' o.c. and a longitudinal weekend plane joint along the centerline of the medial island.

At the discretion of the Contractor, asphalt concrete grindings generated from the base failure areas on the project may be used as backfill material in median islands if material is considered suitable. If AC grindings is deemed to be unsuitable, Contractor shall dispose it at his own cost and use Class II aggregate base compacted to 95% relative compaction. Contractor shall credit the contract back the cost of Class II aggregate base if asphalt grindings are used in the construction of stamped concrete.

15-4 MEASUREMENT AND PAYMENT

Included in Section 9-1.02, "Payments", of these special provisions.

SECTION 16 – ADJUST SURFACE FACILITIES

16-1 GENERAL

This section consists of adjusting to grade surface facilities, such as valve boxes, manholes, cleanouts, pull boxes, and other surface facilities.

Comply with Section 15, “Existing Facilities”, of the State Standard Specifications.

City-owned facilities consist of:
1) Storm Drain Manholes
2) Sanitary Sewer Manholes and Cleanouts
3) Water Valve Boxes
4) Traffic Pull Boxes

Private-owned facilities consist of:
1) Gas Valve Boxes (PG&E)
2) Electric Pull Boxes (PG&E)

The PG&E facilities should be raised to grade by PG&E prior to the start of work.

16-2 MATERIALS

Portland cement concrete used for adjusting covers and smooth grouting of internal manhole wall shall comply with Section 51-7, “Minor Structures”, of the State Standard Specifications.

Contractor shall submit certificates from suppliers stating compliance of materials with the requirement of this section.

Manhole adjustment ring shall be Ladech® HDPE, manufactured by Weco Industries (120 Corporate Place, Suite D, Vallejo, CA 94590 @ 800-677-6661), or approved equal.

Valve Box and Cover shall be Christy Model G-5, or approved equal.

16-3 CONSTRUCTION

Underground Service Alert

The Contractor shall notify and coordinate the work of identifying and marking utility facilities with the respective utility companies. The Contractor is required to call Underground Service Alert (USA) at (800) 227-2600 forty-eight (48) hours in advance of any excavation activity so all existing underground facilities can be located and marked. The Contractor shall supply the Engineer with copies of all USA confirmation numbers including associated documentation.

Referencing and Marking Existing Facilities

The Contractor shall reference and set points for all affected utilities. The Contractor shall submit a plan to the Engineer at least forty-eight (48) hours in advance of cold planing or excavation operations, showing all reference points and offset distance set for each affected facility.

All reference points made by the Contractor shall be protected and remain undisturbed until project completion. The Contractor shall cooperate with all utility companies and shall coordinate the paving schedule with the affected utility agencies.

Contractor shall be responsible for noting and field referencing (as needed) all existing monuments. These consist of City monuments in monument wells, but may also include unprotected iron pipes and railroad spikes. Contractor shall walk each street thoroughly, and catalog each existing monument of record, of whatever character and submit his records to the Engineer.

Adjust Manhole Frame and Cover to Grade

Manholes shall be raised to the new grade after completion of the resurfacing operations. Covers and boxes shall be within 1/8 inch of the adjacent finished grade and shall support H-20 traffic loading. Adjustment to final grade shall not be made until the top layer of paving has been completed immediately surrounding it.

For streets receiving mill and fill treatment, manhole frames and covers shall be lowered before cold planing and raised after paving to match finished grade following paving operations.

Existing manhole grade rings, frames and covers shall become the property of the Contractor. If undamaged, as determined by the Engineer, and thoroughly cleaned, they may be reused in the work. If not reused, they shall be disposed at the Contractor's expense and new grade rings or frames and covers shall be furnished by the Contractor and installed in accordance with City Standards. Replacement manhole covers shall be stamped (casted) "Sewer" or "Storm" as appropriate.

Furnish and install precast concrete grade rings for manhole structures. The city will not provide grade rings. Do not use adjustable extension rings. The inside joints of any reused concrete manhole grade ring shall be plastered smooth with cement mortar.

This work shall also include placement of temporary asphalt around the manhole if the permanent asphalt concrete patching cannot be placed the same day the facility is adjusted to finished grade.

All covers shall be left free of any asphaltic material and shall be completely cleaned not more than five (5) working days after paving has been completed.

Adjust Valve Box to Grade

This work includes removing the existing valve boxes before asphalt milling and replacing with new valve box after paving. The valve boxes consist of water valve box and detector handhole box.

It is assumed that all existing utility boxes will be damaged during removal and will need to be replaced as part of the work. The Contactor may salvage undamaged valve boxes; however, because they may be from an older and obsolete standard, they may not be reused unless approved by the Engineer.

Adjusting Private-Owned Facilities

The Contractor shall cooperate with and coordinate all adjustments with the private-owned facilities.

The City reserves the right to delete portions or all of the aforementioned bid items after the contract is awarded to the Contractor, depending on the utility agencies' acceptance and/or rejection of the unit prices provided by the Contractor. Therefore, no price negotiation shall be made for the deletion of a portion of, or the entirety of, each bid item.

Contractor shall provide written notice to the appropriate utility agencies at least two (2) weeks in advance of start of work. Notification shall include all relevant project information including locations, size, scope and schedule of affected facilities. Contractor shall provide written notice at least two (2) working days in advance of changes in schedules.

If Contractor fails to provide notice to the appropriate utility agencies pursuant to these procedures prior to conducting work, the Contractor buries, lowers, fills-in, paves over, or otherwise damages will bill Contractor for the cost of repairing its facilities.

Upon completion of utility adjustments done by the Contractor, the Contractor shall provide written documentation from utility agencies regarding each utility's acceptance of the facility work.

Unknown Utility Facilities

Any unknown utility facilities for adjustment shall be adjusted to final grade. The Contractor shall coordinate with the Engineer and determine if the unknown facility is abandoned or active. Contractor shall assume the unknown facility is "active", and adjust as necessary. The work shall include install a new concrete collar, provide a new frame and cover, and adjust to final grade, as directed by the Engineer.

16-4 MEASUREMENT AND PAYMENT

Included in Section 9-1.02, "Payments", of these special provisions.

SECTION 17 – CRACK SEALING

17-1 GENERAL

This section includes specifications for treating cracks in asphalt concrete pavement.

Work covered by this section includes cleaning out and sealing of cracks in existing asphalt concrete pavement not subject to milling or digouts.

Crack sealing on all streets as a standalone treatment or receiving a Microsurfacing treatment.

Comply with Section 37-5, “CRACK TREATMENT”, of the State Standard Specification, unless noted otherwise.

Submittals

Submit a certificate of compliance including:

1) Manufacturer's name
2) Production location
3) Brand or trade name
4) Designation
5) Batch or lot number
6) Crack treatment material type
7) Contractor or subcontractor name
8) Contract number
9) Lot size
10) Shipment date
11) Manufacturer's signature

Submit a sample and test results from each batch or lot 20 days before use. Testing must be performed by an authorized laboratory and test results must show compliance with the specifications. Test reports must include the information specified for the certificate of compliance submittal. Each hot-applied crack treatment material sample must be a minimum of 3 lb and submitted in a silicone release container. Each cold-applied crack treatment material sample must be a minimum of 2 quarts and submitted in a plastic container.

At least 10 days before the start of work, submit sand gradation test results under California Test 202. Submit the following with each delivery of crack treatment material to the job site:

1) Manufacturer's heating and application instructions
2) Manufacturer's SDS
3) Name of the manufacturer's recommended detackifying agent

Quality Assurance

Hot-applied crack treatment material must be sampled at least once per project in the Engineer's presence. Collect two 3-pounds-minimum samples of crack treatment material from the dispensing wand into silicone release boxes.

Cold-applied crack treatment material must be sampled at least once per project in the Engineer's presence. Collect 2 samples of crack treatment material from the dispensing wand into 1-quart containers.

Acceptance

Crack treatment acceptance is based on:

1) Visual inspection for uniform filling of cracks throughout the work limits including:
   a. Crack treatment is not more than a 1/4 inch below the specified level
   b. Sealant failures
   c. Crack re-opening
   d. Crack overbanding is less than 3 inches wide

17-2 MATERIALS

Crack Treatment Material

Crack treatment shall be Type 2 or approved equal.

A crack treatment material must comply with the requirements shown in the following table:

Crack Treatment Material

Quality characteristic[a]	Test method[b]	Requirement				
		Type 1	Type 2	Type 3	Type 4	Type 5
Softening point (min, °C)	ASTM D36	102	96	90	84	84
Cone penetration at 77 °F (max)	ASTM D5329	35	40	50	70	90
Resilience at 77 °F, unaged (%)	ASTM D5329	20–60	25–65	30–70	35–75	40–80
Flexibility (°C)[c]	ASTM D3111	0	0	0	-11	-28
Tensile adhesion (min, %)	ASTM D5329	300	400	400	500	500
Specific gravity (max)	ASTM D70	1.25	1.25	1.25	1.25	1.25
Asphalt compatibility	ASTM D5329	Pass	Pass	Pass	Pass	Pass
Sieve test (% passing)	See note d	100	100	100	100	100

[a]Cold-applied crack treatment material residue collected under ASTM D6943, Method B and sampled under ASTM D140 must comply with the grade specifications.
[b]Except for viscosity, cure each specimen at a temperature of 23 ± 2 °C and a relative humidity of 50 ± 10 percent for 24 ± 2 hours before testing.
[c]For the flexibility test, the specimen size must be 6.4 ± 0.2 mm thick by 25 ± 0.2 mm wide by 150 ± 0.5 mm long. The test mandrel diameter must be 6.4 ± 0.2 mm. The bend arc must be 180 degrees. The bend rate must be 2 ± 1 seconds. At least 4 of 5 test specimens must pass at the specified test temperature without fracture, crazing, or cracking.
[d]For hot-applied crack treatment, dilute with toluene and sieve through a no. 8 sieve. For cold-applied crack treatment, sieve the material as-received through a no. 8 sieve. If the manufacturer provides a statement that added components passed the no. 16 sieve before blending, this requirement is void.

A crack treatment material must be delivered to the job site with the information listed below. If crack treatment material is delivered to the job site in containers, each container must be marked with the following information.

1) Manufacturer's name

2) Production location
3) Brand or trade name
4) Designation
5) Crack treatment trade name
6) Batch or lot number
7) Maximum heating temperature
8) Expiration date for cold application only

Hot-applied crack treatment must be delivered to the job site premixed in cardboard containers with meltable inclusion liners or in a fully meltable package.

Cold-applied crack treatment must have a minimum shelf life of 3 months from the date of manufacture.

Sand

Sand applied to tacky crack treatment material must be clean, free of clay, and comply with the gradation shown in the following table:

Sand Gradation

Quality characteristic	Test method	Requirement
Gradation (% passing by weight) Sieve size:	California Test 202	
No. 4		100
No. 50		0–30
No. 200		0–5

Contact Herbicide

Roundup or approved equal. Contractor shall add coloring to the herbicide for application verification by the City Inspector.

17-3 CONSTRUCTION

General

Treat cracks from 1/4 to 1 inch in width for the entire length of the crack. Fill or repair cracks wider than 1 inch as ordered.

If treating cracks on a traffic lane adjacent to a shoulder, treat the cracks on the shoulder. For hot-applied crack treatment material, rout cracks or saw cut to form a reservoir.

Cracks must be clean and dry before treating. Before treating, blast cracks with oil-free compressed air at a pressure of at least 90 psi.

If the pavement temperature is below 40 degrees F or if there is evidence of moisture in the crack, use a hot air lance immediately before applying crack treatment. The hot air lance must not apply flame directly on the pavement.

Heat and apply hot-applied crack treatment material under with the manufacturer's instructions.

Apply crack treatment with a nozzle inserted into the crack. Fill the crack flush. If after 2 days the crack treatment is more than 1/4 inch below the specified level, the sealant fails, or the crack re-opens, re-treat the crack.

Immediately remove crack treatment material that is spilled or deposited on the pavement surface.

Before opening to traffic, apply sand or the manufacturer's recommended detackifying agent to tacky crack treatment material on the traveled way.

Sweep up excess sand before opening to traffic.

All crack seal shall be done a minimum of 72 hours prior to seal treatment.

Traffic shall not be allowed on the material until it has cured or until it has been sanded to prevent tracking.

Cracks shall be routed prior to applying crack sealant unless otherwise noted. Width of routing shall be 1/4” wider than the crack width. The depth of routing shall be equal to the width of the routing plus 1/4”.

Applying Herbicide

An approved herbicide shall be sprayed in all cracks at least 10 calendar days prior to the application of sealant. Application shall be subject to applicable State laws.

17-4 MEASUREMENT AND PAYMENT

Included in Section 9-1.02, “Payments”, of these special provisions.

SECTION 18 – SLURRY SEALS

18-1 GENERAL

This section includes general specifications for applying slurry seals.

Applying a slurry seal consists of spreading a mixture of asphaltic emulsion or polymer modified asphaltic emulsion, aggregate, additives, and water on a surface or pavement.

Submittals

Immediately after sampling, submit two 1-quart wide mouth plastic containers of asphaltic emulsion or polymer modified asphaltic emulsion taken in the presence of the Engineer. Samples must be submitted in insulated shipping containers.

Quality Control

Take samples of asphaltic emulsion and polymer modified asphaltic emulsion from the tank truck at mid load or from a sampling tap or thief. Before taking samples, draw and dispose of 1 gallon. In the presence of the Engineer take two 1-quart samples in wide mouth plastic containers with lined, sealed lids for acceptance testing.

Asphaltic Emulsion

For asphaltic emulsions, the authorized laboratory must perform quality control sampling and testing at the specified frequency and location for the following quality characteristics:

Asphaltic Emulsion

Quality characteristic	Test method	Minimum sampling and testing frequency	Sampling location
Saybolt Furol Viscosity, at 25 °C (Saybolt Furol seconds)	AASHTO T 59	Minimum 1 per day per delivery truck	Delivery truck
Sieve Test (%)			
Storage stability, 1 day (%)			
Residue by distillation (%)			
Particle charge[a]			
Tests on Residue from Distillation Test:			
Penetration, 25 °C	AASHTO T 49	Minimum 1 per day per delivery truck	Delivery truck
Ductility	AASHTO T 51		
Solubility in tricloroethylene	AASHTO T 44		

[a]If the result of the particle charge is inconclusive, the asphaltic emulsion must be tested for pH under ASTM E70. Grade QS1h asphaltic emulsion must have a minimum pH of 7.3. Grade CQS1h asphaltic emulsion must have a maximum pH of 6.7.

Polymer Modified Asphaltic Emulsion

For polymer modified asphaltic emulsions, the authorized laboratory must perform quality control sampling and testing at the specified frequency and location for the following quality characteristics:

Polymer Modified Asphaltic Emulsion

Quality characteristic	Test method	Minimum sampling and testing frequency	Sampling Location
Tests on emulsion:			
Saybolt Furol Viscosity at 25 °C (Saybolt Furol seconds)	AASHTO T 59	Minimum 1 per day per delivery truck	Delivery truck
Sieve test (%)	AASHTO T 59		
Storage stability after 1 day (%)	AASHTO T 59		
Residue by evaporation (min, %)	California Test 331		
Particle charge	AASHTO T 59		
Tests on residue by evaporation:			
Penetration at 25 °C	AASHTO T 49	Minimum 1 per day per delivery truck	Delivery truck
Ductility at 25 °C (min, mm)	AASHTO T 51		
Torsional recovery (min, %) Or Polymer content based on residual asphalt (min, %)	California Test 332 California Test 401		

Acceptance

Aggregate acceptance is based on the sampling and testing for compliance with the requirements shown in the following table:

Aggregate Acceptance Criteria

Quality characteristic	Test method	Requirement
Los Angeles Rattler loss (max, %) At 500 revolutions	California Test 211[a]	35
Percent of crushed particles (min, %)	California Test 205	95
Durability (min)	California Test 229	55
Sand equivalent (min) Type I Type II Type III	California Test 217	 45 55 60

[a]California Test 211 must be performed on the source aggregate before crushing.

A sand equivalent test represents 300 tons or 1 day's production, whichever is less.

If test results for sand equivalent do not comply with the specifications, you may remove the slurry seal represented by the test results or request it remain in place with a payment deduction approved by the City.

18-2 MATERIALS

Slurry Seal shall be Type II.

Additional water must not cause separation of the asphaltic emulsion, polymer modified asphaltic emulsion emulsion from the aggregate before placement.

You may use an additive that does not adversely affect the slurry seal.

Asphaltic Emulsions

An asphaltic emulsion must comply with the requirements in Section 94. The asphaltic emulsion must be Grade CQS1h.

Polymer Modified Asphaltic Emulsions

A polymer modified asphaltic emulsion must:

1) Consist of an elastomeric polymer mixed with an asphaltic material uniformly emulsified with water and an emulsifying or stabilization agent.
2) Use either neoprene polymer or butadiene and styrene copolymer. The polymer must be homogeneous and milled into the asphaltic emulsion at the colloid mill.
3) Be Grade PMCQS1h and must comply with the requirements shown in the following table:

Polymer Modified Asphaltic Emulsion Requirements

Quality characteristic	Test method	Requirement
Tests on emulsion:		
Saybolt Furol Viscosity at 25 °C (Saybolt Furol seconds)	AASHTO T 59	15–90
Sieve test (%)	AASHTO T 59	0–0.3
Storage stability after 1 day (%)	AASHTO T 59	0–1
Residue by evaporation (min, %)	California Test 331	60
Particle charge	AASHTO T 59	Positive
Tests on residue by evaporation:		
Penetration at 25 °C	AASHTO T 49	40–90
Ductility at 25 °C (min, mm)	AASHTO T 51	400
Torsional recovery (min, %) Or Polymer content based on residual asphalt (min, %)	California Test 332 California Test 401	18 2.5

Aggregate

Aggregate must be rock dust. Aggregate must be free from vegetable matter, deleterious substances, caked or clay lumps, and oversized particles.

Aggregate for a slurry seal must comply with the gradations shown in the following table:

Aggregate Gradation

Quality characteristic	Test method	Requirements		
Gradation (% passing by weight) Sieve size:	California Test 202	Type I	Type II	Type III
3/8"		--	100	100
No. 4		100	94–100	70–90
No. 8		90–100	65–90	45–70
No. 16		60–90	40–70	28–50
No. 30		40–65	25–50	19–34
No. 200		10–20	5–15	5–15

Aggregate must comply with the quality characteristic requirements shown in the following table:

Aggregate Requirements

Quality characteristic	Test method	Requirement
Los Angeles Rattler loss (max, %) At 500 revolutions	California Test 211[a]	35
Percent of crushed particles (min, %)	California Test 205	95
Durability (min)	California Test 229	55
Sand equivalent (min) Type I Type II Type III	California Test 217	 45 55 60

[a]California Test 211 must be performed on the source aggregate before crushing. The aggregate supplier must certify that the crushed aggregate being used on the project is manufactured from the source aggregate complying with the LA rattler requirements.

Slurry Seal Mix Design

The slurry seal mix design, using project source aggregate, an asphaltic emulsion, and set-control agents if any, must comply with the requirements shown in the following table:

Slurry Seal Mix Design Requirements

Quality characteristic	Test method[a]	Requirement
Consistency (max, mm)	Technical Bulletin 106	30
Wet stripping	Technical Bulletin 114	Pass
Compatibility	Technical Bulletin 115	Pass[b]
Cohesion test, within 1 hour (min, kg-mm)	Technical Bulletin 139	200
Wet track abrasion (max, g/m^2)	Technical Bulletin 100	810

[a]Test methods are by the International Slurry Surfacing Association.
[b]Mixing test must pass at the maximum expected air temperature at the job site during placement.

The mix design must have the percent of asphaltic residue, based on percentage by weight of the dry aggregate, within the ranges shown in the following table:

Slurry seal type	Residue range
Type I	10–16
Type II	7.5–13.5
Type III	6.5–12.0

Determine the exact percentage based on the design asphalt binder content and the asphalt residual content of the asphaltic emulsion furnished.

18-3 CONSTRUCTION

Before applying slurry seals, cover manholes, valve and monument covers, grates, and other exposed facilities located within the area of application using plastic or oil resistant construction paper secured by tape or adhesive to the facility being covered. Reference the covered facilities with enough control points to relocate the facilities after application of the slurry seals.

Proportioning

After proportioning, slurry seal mixtures must be workable.

Mixing and Spreading Equipment

Mixing and spreading equipment for slurry seals must proportion the asphaltic emulsions, water, aggregate, and any additives by volume and mix them in continuous pug mill mixers. Introduce emulsions into the mixer with a positive displacement pump. If you use a variable-rate pump, the adjusting unit must be sealed in its calibrated position.

Introduce water into the mixer through a meter that measures gallons.

Choose a truck mounted mixer-spreader or continuous self-loading mixer spreader.

Truck Mounted Mixer Spreaders

Truck mounted mixer spreaders must comply with:

1) Rotating and reciprocating equipment must be covered with metal guards.
2) Proportion aggregate using a belt feeder with an adjustable cutoff gate. The Engineer verifies the height of the gate opening.
3) Belt feeder must have a depth monitor device. The depth monitor device must automatically shut down power to the belt feeder when the aggregate depth is less than 70 percent of the target depth.
4) Separate monitor device must detect the revolutions of the belt feeder. This device must automatically shut down power to the belt feeder if it detects no revolutions. If the belt feeder is an integral part of the equipment's drive chain, the monitor device is not required.
5) Aggregate belt feeder must be connected directly to the drive on the emulsion pump. The aggregate feeder drive shaft must have a revolution counter reading the nearest 1 revolution for slurry seal.
6) Emulsion storage must be equipped with a device that automatically shuts down power to the emulsion pump and aggregate belt feeder when the level of stored emulsion is lowered. To allow for normal fluctuations, there may be a delay of 3 seconds between detection of low emulsion storage levels or low aggregate depths and automatic power shut down.
7) Emulsion storage must be located immediately before the emulsion pump.
8) Emulsion storage tank must have a temperature indicator at the pump suction level. The indicator must be accurate to ±5 degrees F.
9) No-flow and revolution warning devices must be in working condition. Low-flow indicators must be visible while walking alongside the equipment.

Continuous Self-Loading Mixer Spreaders

Continuous self-loading mixer spreaders must be automatically sequenced and self-propelled. The mixing machine must deliver each material to a double shafted mixer and discharge the mixed material on a continuous flow basis. The mixing machines must have sufficient storage capacity to maintain a continuous supply of material to the proportioning controls. The mixing machine operators must have full control of forward and reverse speeds during placement.

Spreader Boxes

The spreader boxes used to spread slurry seals must be:

1) Capable of spreading the slurry seal a minimum of 12 feet wide and preventing the loss of slurry seal.
2) Equipped with flexible rubber belting on each side. The belting must contact the pavement to prevent the loss of slurry seal from the box.
3) Equipped to uniformly apply the slurry seal on superelevated sections and shoulder slopes.
4) Equipped with a series of strike-off devices at its rear.
    a. The leading strike off device must be:
        i. Fabricated of a suitable material such as steel or stiff rubber
        ii. Designed to maintain close contact with the pavement during spreading
        iii. Capable of obtaining the specified thickness
        iv. Capable of being adjusted to the various pavement cross sections
    b. The final strike-off device must be:
        i. Fabricated of flexible material that produces a uniform texture in the finished surface
        ii. Cleaned daily and changed if longitudinal scouring occurs in the slurry seal
5) Clean and free of slurry seal at the start of each work shift.

Shoulder Equipment

Spread the slurry seal on shoulders with a device such as an edge box that forms clean and straight joints and edges.

Equipment Calibration

Equipment calibration must comply with the MPQP. Notify the Engineer at least 5 business days before calibrating.

If the Department authorizes a truck or continuous mixer spreader, its calibration is valid for 6 months provided you:

1) Use the same truck or continuous mixer spreader verified with a unique identifying number
2) Use the same materials in compliance with the authorized mix design
3) Do not perform any repair or alteration to the proportioning systems

Calibrate the adjustable cut-off gate settings of each truck or continuous mixer spreader on the project to achieve the correct delivery rate of aggregate and emulsion per revolution of the aggregate feeder under the MPQP.

Checks must be performed for each aggregate source using an authorized vehicle scale. Individual checks of the aggregate belt feeder's delivery rate to the pug mill mixer must not vary more than 2 percent from the average of 3 runs of at least 3 tons each.

Before using a variable-rate emulsion pump, the pump must be calibrated and sealed in the calibrated condition under the MPQP.

Individual checks of the emulsion pump's delivery rate to the pug mill mixer must not vary more

than 2 percent from the average of 3 runs of at least 500 gal each.

Surface Preparation

Immediately before applying slurry seals, clean the surface to receive slurry by removing any extraneous material affecting adhesion of the slurry seal with the existing surface. Use self-propelled power brooms or other methods such as flushing to clean the existing pavement.

Placement

The slurry seal spread rates must be within the ranges shown in the following table:

Slurry Seal Spread Rates

Slurry seal type	Application range (lb of dry aggregate/sq yd)
Type I	8–12
Type II	10–18
Type III	20–25

Within 4 hours after placement, slurry seals must be set enough to allow traffic without pilot cars. Protect slurry seals from damage until it has set and will not adhere or be picked up by vehicle tires. Slurry seals must not exhibit distress from traffic such as bleeding, raveling, separation or other distresses.

General

If truck-mounted mixer-spreaders are used, keep at least 2 operational spreaders at the job site during placement.

Spread slurry seals uniformly and do not spot, rehandle, or shift the mixture. However in areas inaccessible to spreading equipment, spread the slurry seal mixtures with hand tools or other authorized methods. If placing with hand tools, lightly dampen the area first.

You may fog the roadway surface with water ahead of the spreader box. The fog spray must be adjusted for pavement:

4) Temperature
5) Surface texture
6) Dryness

You determine the application rates for slurry seals and the Engineer authorizes the application rates. Spread within 10 percent of authorized rate.

The mixtures must be uniform and homogeneous after spreading, and there must not be separation of the emulsion and aggregate after setting.

Weather Conditions

Only place slurry seals if both the pavement and air temperatures are at least 50 degrees F and rising. The expected high temperature must be at least 65 degrees F within 24 hours after placement.

Do not place slurry seals if rain is imminent or the air temperature is expected to be below 36 degrees F within 24 hours after placement.

Joints

Transverse and longitudinal joints must be:
1) Uniform
2) Straight
3) Neat in appearance
4) Without material buildup
5) Without uncovered areas

Transverse joints must be butt-type joints.

Prevent double placement at transverse joints over previously placed slurry seals. Place longitudinal joints:
1) On centerlines, lane lines, edge lines, or shoulder lines
2) With overlaps not more than 4 inches

You may request other longitudinal joint patterns if they do not adversely affect the slurry seals.

The maximum difference between the pavement surface and the bottom edge of a 12-foot straightedge placed perpendicular to the longitudinal joint must be 0.04 foot.

Finished Surfaces

Finished slurry seals must be smooth and free of irregularities such as scratch or tear marks. You may leave up to 4 marks that are up to 1 inch wide and 6 inches long per 75 linear feet of slurry seal placed. Do not leave any marks that are over 1 inch wide or 6 inches long.

Maintenance Sweeping

Sweep the slurry seals 24 hours after placement without damaging the slurry seals. For 4 days afterwards, sweep the slurry seals daily unless determined otherwise by the Engineer.

Repair of Early Distress

The slurry seals must not show bleeding, raveling, separation, or other distresses for 15 days after placing. If bleeding, raveling, delaminating, rutting, or wash-boarding occurs after placing the slurry seals, make repairs using an authorized method.

18-4 MEASUREMENT AND PAYMENT

Included in Section 9-1.02, “Payments”, of these special provisions.

SECTION 19 – REPLACE ASPHALT CONCRETE SURFACE

19-1 GENERAL

This section includes specifications for replacing asphalt concrete surfacing due to pavement failures.

Comply with Section 15, “Existing Facilities”, of the State Standard Specifications.

Comply with Section 19, “Earthwork”, of the State Standard Specifications.

Comply with Section 39, “Asphalt Concrete”, of the State Standard Specifications.

19-2 MATERIALS

HMA shall be Type A HMA with 1/2-inch maximum aggregate size as specified in Section 39-2.02B(4)(b), “Aggregate Gradations” of the State Standard Specifications.

The grade of asphalt binder must be PG 64-10 or PG 64-16. Tack coat must comply with section 39-2.01B(10), “Tack Coat”, of the State Standard Specifications.

19-3 CONSTRUCTION

Where replace asphalt concrete surfacing is shown, remove the full depth of the existing asphalt concrete surfacing and replace with HMA. The Engineer determines the exact limits of asphalt concrete surfacing to be replaced.

Replace asphalt concrete in a lane before the lane is specified to be opened to traffic.

Before removing asphalt concrete, outline the replacement area and cut neat lines with a saw or grind to full depth of the existing asphalt concrete. Do not damage asphalt concrete and base remaining in place.

If you excavate the base beyond the specified plane, replace it with HMA.

Do not use a material transfer vehicle for replacing asphalt concrete surfacing. Before placing HMA, apply a tack coat as specified in section 39-2.01C(3)(f). Place HMA using method compaction as specified in section 39-2.01C(2)(c).

Pavement repair work shall not commence unless the ambient temperature is above 55 degrees F and has not been below 35 degrees F during the previous twenty four 924) hours. Tack coats shall not be applied when the surface to be coated is wet or contains an excess of moisture. The temperature of asphalt concrete shall not be less than 250 degrees F during initial spreading.

Each Lift of new HMA shall not exceed 2.5” or as directed by the Engineer.

The finished surface of asphalt concrete shall have a slightly crown of approximately 1/8-inch to 1/4-inch.

Unsuitable Material

It is possible that upon removal of the existing pavement it may be discovered that the subgrade is excessively soft or pumping. Should such a determination be made by the Engineer, the Engineer may order removal of an additional subgrade, and backfill of the additional excavation with asphalt concrete per the requirements of this section.

The moisture content of material to be compacted to at least 95 percent relative compaction, for a minimum depth of 6 inches (0.5 foot) below the grading plane for the full width of the section, must be such that the specified relative compaction is attained and it is in a firm and stable condition.

Do not compact material that contains excessive moisture until the material is dry enough.

Maintaining Access

Maintain access to driveways at all times, unless authorized by the Engineer. At locations which have more than one driveway, break up the deep lift sections so as to provide access to at least one driveway at all times. At location with one driveway, schedule deep lift work in such a manner that only half of the driveway is blocked at all times.

Once the pavement is removed, diligently prosecute the work so that the deep lift is in place within the same working day. There must not be a drop off greater than 0.1' (one-tenth of a foot) in the pavement overnight.

Because of the danger to and damage of vehicles using the public streets and the inconvenience to the public caused by deep lift work, the deep lift sections must be ramped with asphalt concrete along the traffic direction to provide smooth transition from the original pavement elevation down to the deep lift level. No unnecessary delays will be tolerated. By way of ascertaining and fixing the amount of damages, and not by way of penalty, the City will deduct from moneys due or that may become due to the Contractor under the contract the sum of One Thousand Dollars ($1,000) per calendar day, for each excavated area that remains overnight with a drop off greater than 0.1’. The use of "transfer trucks" and bottom dump trucks to transport asphalt concrete for overlay or deep lift operations is prohibited.

19-4 MEASUREMENT AND PAYMENT

Included in Section 9-1.02, “Payments”, of these special provisions.

SECTION 20 – TRAFFIC STRIPES, MARKINGS, PAVEMENT MARKERS AND ROADSIDE SIGNS

20-1 GENERAL

This section includes general specifications for applying and constructing traffic stripes, pavement markings, pavement markers, and roadside signs.

Traffic Stripes, pavement marking, pavement markers and roadside signs must comply with the California MUTCD, California Sign Specifications, and the FHWA publication Standard Highway Signs and Markings.

Comply with Section 15, “Existing Facilities”, of the State Standard Specification.

Pavement markers shall comply with Section 81-3, “Pavement Markers”, of the State Standard Specification.

Roadside sign shall comply with Section 82, “Signs and Markers”, of the State Standard Specification.

Traffic stripes and pavement markings shall comply with Section 84, “Marking”, of the State Standard Specification.

Definitions

Pavement marking: Transverse marking such as (1) a limit line, (2) a stop line, or (3) a word, symbol, shoulder, parking stall, or railroad-grade-crossing marking.

Traffic stripe: Longitudinal centerline or lane line used for separating traffic lanes in the same direction of travel or in the opposing direction of travel or a longitudinal edge line marking the edge of the traveled way or the edge of a lane at a gore area separating traffic at an exit or entrance ramp. A traffic stripe is shown as a traffic line.

20-2 MATERIALS

Pavement Markers

Comply with Section 81-3.02, “Materials”, of the State Standard Specification.

Roadside Signs

Comply with Section 82-2.02, “Materials”, of the State Standard Specification.

Sign panels shall be constructed of aluminum, unless otherwise specified on plans.

Sign post shall be 2-inch by 2-inch 14 galvanize square break-away post.

Traffic Stripes and Pavement Markings

Comply with Section 84-2.02, “Materials”, of the State Standard Specification.

Traffic stripes and pavement markings shall be thermoplastic.

Traffic stripes and pavement legends, including crosswalks, shall be placed as shown on the plans, must comply with the California MUTCD, as modified herein, and as directed by the Engineer. All pavement **traffic stripes**, legends, arrows and crosswalks shall be installed with hot applied thermoplastic pavement material. The width and patterns of striping lines shall conform to the striping details shown in Figures 3A-101 (CA) through 3A-113 (CA) in the California MUTCD.

The thermoplastic material shall be free of lead and chromium and conform to State Specification PTH-02ALKYD (for markings) and PTH-02SPRAY (for stripes). Thermoplastic material shall be applied to the pavement at a minimum thickness of 0.060 inches for long lines (4 inches stripes and 8 inches stripes in width) and 0.100 inches for all legends and arrows. The crosswalk lines and limit lines shall be installed at a minimum thickness of 0.125 inches.

A double extruded thermoplastic traffic stripe consisting of two 4-inch wide yellow stripes is measured as 2 traffic stripes.

A double sprayable thermoplastic traffic stripe consisting of two 4-inch wide yellow stripes is measured as 1 traffic stripe.

If the contractor chooses to install stripes by using a cart (extruded) rather than a striping vehicle, all striping shall be applied to the pavement at a minimum thickness of 0.090 inches. Glass beads shall conform to State Specification in Sections 84-2.02D, 84-2.02E, and 84-2-03C(2)e. Thermoplastic pavement markings and stripes shall be free of runs, bubbles, craters, drag marks, stretch marks, and debris.

20-3 CONSTRUCTION

Remove Existing Pavement Markers

Remove pavement markers and the underlying adhesive by methods that cause the least possible damage to the pavement or surfacing.

When removing ceramic-type pavement markers, use screens or other protective devices to contain
fragments.

Remove fragments from the removal work before opening the lanes to traffic.

Remove Existing Traffic Stripes and Pavement Markings

Remove traffic stripes before making any change to the traffic pattern.

Completely remove traffic stripes and pavement markings, including any paint in the gaps, by methods that do not remove pavement to a depth of more than 1/8 inch.

Submit your proposed method for removing traffic stripes and pavement markings at least 7 days before starting the removal work. Allow 2 business days for the review.

Remove pavement marking such that the old message cannot be identified. Make any area removed by grinding rectangular. Water must not puddle in the ground areas.

Sweep up or vacuum any residue before it can (1) be blown by traffic or wind, (2) migrate across lanes or shoulders, or (3) enter a drainage facility.

Remove Existing Roadside Signs

Remove roadside signs only when replacement signs are installed or when the existing signs are no longer required for traffic. Reset or relocate each roadside sign the same day it is removed.

Single sheet aluminum signs to be salvaged must be banded on a pallet with a total weight of not more than 500 lb/pallet.

Reset or relocate roadside signs using existing posts.

If an existing post is deteriorated or broken, notify the Engineer. If ordered, use a new post.

Any new post and its installation, ordered for reasons other than damage you cause is change order work.

Pavement Markers

On one-way streets and median-divided streets, the side of the retroreflective raised pavement markers that is visible to traffic proceeding in the wrong direction shall be red. The other retroreflective side shall be white or yellow as per the detail. This section is applicable to Details 9, 10, 12, 13, 25, 25A, 26 and 27 in the California MUTCD.

Blue Raised Pavement Markers shall be installed after any surface treatment (overlay, micro-surfacing, chip-seal, cape-seal, etc.) solely for aiding in locating fire hydrants. Typical marker locations are shown on Figure 3B-102 (CA) of the California MUTCD.

1) *Two-Way Streets*—Markers should be placed 6 inches from the edge of painted centerline on the side nearest the fire hydrant. If the street has no centerline, the marker should be placed 6 inches from the approximate center of the roadway on the side nearest the hydrant.

2) *Streets with Left Turn Lane at Intersection*—Markers should be placed 6 inches from the edge of painted white channelizing line on the side nearest the hydrant.

3) *Streets with Continuous Two-Way Turn Lane*—Markers should be placed 6 inches from the edge of the painted yellow barrier line on the side nearest the fire
4) hydrant.

5) *One-way streets and median-divided streets*—Markers should be placed 6 inches from the edge of lane line on the side nearest the fire hydrant (at least 12' from curb or edge of traveled way).

The noise level created by the combined grinding activities must not exceed 86 dBA when measured at a distance of 50 feet at right angles to the direction of travel.

Epoxy Adhesive

If using epoxy adhesive, place pavement markers on asphalt concrete or a new seal coat (1) after the surface or seal coat has been open to public traffic for at least 14 days and (2) at the pavement and ambient air temperatures complying with the epoxy adhesive manufacturer's instructions.

Use automatic mixing equipment for the epoxy adhesive. The equipment must:
1) Have positive displacement pumps.
2) Properly meter the 2 components of the epoxy adhesive in the specified ratio of ±5 percent by volume of either component.

The voids in an undisturbed sample of cured, mixed epoxy adhesive obtained from the extrusion nozzle of the mixing equipment must not exceed 4 percent.

At the start of each day, check the ratio of the 2 components in the presence of the Engineer by (1) disconnecting the mixing heads or (2) using suitable bypass valves and filling 2 suitable containers with the unmixed components. The mixing head must properly mix the 2 components until black or white streaks are not visible in the mixed material.

Apply epoxy adhesive and place pavement markers before the epoxy starts to thicken. Apply enough epoxy such that it flows and protrudes around the marker's edges when a slight pressure is applied to the marker.

Roadside Sign

Sign panels shall be of the type, size, shape, and pattern designated or called for on the plans and detail drawings. Where sign sizes are not specified in the plans, the designated Standard size sign in accordance with the California MUTCD shall be used.

Mounting hardware for traffic signs shall conform to the details shown or called for on the plans. Mounting hardware for signal or electrolier standards or metal posts shall conform to the applicable requirements and specifications shown and noted on Plan RS4 of the State Standard Plans and Section 82-3.02E "Sign Panel Fastening and Mounting Hardware" of the State Standard Specifications.

Concrete foundation for sign posts shall be minor concrete and of the shape and dimensions shown or called for on the plans and detail drawings and comply with the requirements of Section 90-2 "Minor Concrete" of the State Standard Specifications.

If sign post is relocated, remove existing sign post and foundation completely and backfill hole with materials matching existing. Cutting post on existing concrete is not allowed.

Traffic Stripes and Pavement Markings

Use appropriate installation procedures according to manufacturer. If pavement markings are applied to existing surface over existing painted legends (arrows and crosswalks), existing pavement legends (arrows and sidewalks) shall be removed before thermoplastic material is applied. For either material, pavement shall be preheated to remove all residual moisture prior to installation.

At intersections where existing pavement is removed and replaced, Contractor shall install new crosswalk control points for the City to review and approve.

Configuration of traffic stripes, pavement markings, and crosswalks shall conform to the detail and methods as set forth in the latest issue of the California MUTCD and Caltrans Specifications, unless specifically modified on the plans.

All existing traffic stripes and pavement markings shall be removed where shown on the plans, where the existing striping conflicts with proposed striping, and as designated by the Engineer.

Existing pavement markers, including underlying adhesive, when no longer required for traffic lane delineation, as directed by the Engineer, shall be removed and disposed of.

Removal of traffic stripes and pavement markings, or the removal of objectionable material, shall be performed using methods approved in advance by the Engineer. All resulting residue and dust shall be removed immediately from the surface being treated. Such removal shall be by a vacuum attachment operating concurrently with the blast cleaning operation. **The removal of yellow paint and thermoplastic material shall include testing for lead prior to disposal of the material. Disposal of materials containing lead shall conform to state approved practices**. The removal of yellow paint and thermoplastic material shall also conform to the provisions in Section 14-1.01 “Construction Site Waste Materials Management” of these special provisions.

The Contractor shall place control points for the Engineer to review and approve. No additional "cat tracks" shall be placed until control points are approved by the Engineer. The Contractor shall obtain approval from the Engineer on all striping cat tracks prior to final application and striping and markers.

The Contractor shall place and remove any temporary striping required for routing traffic through the project area.

All thermoplastic shall be provided by the Contractor. Manufacturer and specifications shall be submitted for approval and shall conform to the specifications contained herein. All thermoplastic supplied shall conform to the local air pollution regulations. Traffic line markings shall be reflectorized conforming to the Caltrans Specifications, Section 84-2,”Traffic Stripes and Pavement Markings”.

Existing surface which is to receive the thermoplastic material shall be mechanically wire brushed to remove all dirt and contaminants. Thermoplastic material shall be applied only to the dry pavement surfaces and only when the pavement surface temperature is above fifty (50°F)

degrees Fahrenheit. Thermoplastic shall be applied only on a thoroughly dry surface and during periods of favorable weather.

The Contractor shall make all necessary conform striping as required. The completed stripes and markings shall be sharp and clear with clean, well-defined edges.

Any damage by the elements to the newly stripe or marking due to the failure of any Contractor to protect his work shall be repaired by him at no additional cost. Any over-spray or tracking of fresh thermoplastic material onto unpainted surfacing shall be removed by any methods to the satisfaction of the Engineer.

20-4 MEASUREMENT AND PAYMENT

Included in Section 9-1.02, “Payments”, of these special provisions.

SECTION 21 – RECTANGULAR RAPID FLASHING BEACON

21-1 GENERAL

This section includes specifications for constructing a solar-powered rectangular rapid flashing beacon system.

Each unit shall consist of a self-contained solar engine that houses the energy management system, on-board user interface, wireless communications, batteries and solar panel. Each unit shall include bi-directional lightbars with optional side emitting pedestrian confirmation light(s). The system shall conform to all provisions of the MUTCD, Interim Approval IA-11. The system shall include the roadside signage at the crosswalk shown on the plans. ADA Pedestrian push buttons shall be included as part of the system at the locations shown on the plans to activate the flashing lightbars.

Comply with Section 86 and 87, “Electrical Systems”, of the Caltrans Standard Specifications.

Submittals
The Contractor must submit, as one package, RRFB product data and manufacturer’s instructions including:

1) Pole and Foundation
2) Accessible Pedestrian Signal (APS)
3) Solar and Battery System
4) Solar Power Report
5) Light bars
6) Signages
7) Warranty Information

21-2 MATERIALS

Solar-Powered Rectangular Rapid Flashing Beacon shall be model SC315-G or R920-F, manufactured by carmanah, or approved equal.

Pole shall be 13’ Type 1-B Standard comply with Caltrans Standard Plan ES-7B.

Accessible Pedestrian Signal (APS)

APS shall be an 8-wire pushbutton type system and shall conform to the latest applicable provisions of the California MUTCD, and these Special Provisions. The APS shall be from the same manufacturer of RRFB and shall be furnish and installed as one package.

A. The housing for the unit shall be 9”x12” and made of 356 Aluminum heat-treated to meet Spec. T-6. It shall be of a telescoping, vandal-proof design. The color shall be yellow. Adaptors may be required to install pushbutton housing and the sign plate. The PPB shall be installed right side up.

B. Each APS shall connect to a control unit located inside its associated RRFB housing. The Push Button Stations (PBS) shall provide information and cues upon pedestrian actuation via an audible message saying; “CROSS STREET WITH CAUTION, VEHICLES MAY NOT STOP,” and cease operation at a predetermined time, after the

pedestrian clears the crosswalk. All sounds shall emanate from the back of the unit. The weather-proof speaker shall be protected by a vandal resistant screen. A sunlight visible red LED latches “ON” to confirm the button has been pushed. PBS shall include frame, sign, ADA compliant push button and mounting hardware.

By interfacing with the Control Unit that is installed in the unit control box, the PBS shall provide the following standard features.

- Confirmation of button push via latching LED, and sound.
- Standard voice messaging in English.
- Button with arrow.
- Standard City of Stockton locating tone.
- All sounds automatically adjust to ambient over 60dB range.
- All sounds shall be synchronized/
- Extended button push shall turn on and/or boost volumes.

C. The button shall be located within five (5) feet of the crosswalk line, and mounted at a height of 42” above the finished grade.

D. The pedestrian instruction sign shall be R10-25 and installed with security screws. The security screws shall be stainless steel, button head socket cap screws #8 diameter, 3/8 inch in length and 32 threads per inch. The socket shall be 3/32 inch Allen. The sign shall be integral with each pedestrian pushbutton.

E. The duration of a predetermined period of operation of the RRFB following each actuation should be based on the MUTCD procedure for timing of pedestrian clearance times for pedestrian signals.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and installing APS shall be considered as included in the contract lump sum prices paid for RRFB system and no additional compensation will allowed therefor.

Mechanical Specifications

The solar engine shall be constructed from aluminum and shall be no greater in size than 13.6” L x 3.6” D x 17.8” H (34.5 cm x 9.1 cm x 45.2 cm). The Solar panel shall be integrated to the solar engine. All batteries and electronics shall be mounted in the solar engine, with no external control cabinet or battery cabinet required. A hinged lid shall provide access to the interior of the engine. The solar engine shall be vented to provide cooling of the battery and electronic system.

The overall weight of the solar engine assembly shall not exceed 20 lbs (9.1 kg).

The solar engine shall be supplied with a fixed tilt angle of 60 degrees and shall be able to be oriented south with no additional mounting hardware.

The lightbar housing shall be constructed from aluminum and shall have the approximate dimensions: 24” L x 1.5” D x 4.5” H (61.0 cm L x 3.8 cm D x 11.4 cm H).

The lightbar shall be mounted to the pole using a separate bracket assembly to facilitate mounting two lightbars back-to-back (bi-directional) and to allow the lightbar to pivot. The lightbar shall be able to pivot by approximately 40 degrees in order to aim the lightbar independent of the wire hole location on the pole.

The lightbar bracket shall be constructed from 3/16" galvanized steel and shall have both banding and bolting mounting options and shall be able to be mounted to all specified pole types.

The lightbar assembly shall open for access to and wiring connections to the LED indicators. LED indicators shall be IP67 rated enclosures.

Mounting

4" – 4.5" Diameter Round Post Mount

The solar engine and lightbar assemblies shall be furnished with mounting hardware for mounting to standard 4" to 4 ½" Diameter Round Poles.

Configuration

The solar engine shall house an on-board user interface that provides on-site configuration adjustment, system status and fault notification, and system activation information.

The flash duration shall be adjustable in-the-field to one second increments.

The system shall provide configurable nighttime intensity settings and shall be able to enable and disable low ambient light dimming.

Flash duration and other in-the-field adjustable settings shall be automatically broadcast to all units in the system, except channel selection which shall be configured on each unit.

Solar / Battery System

The solar engine shall include one 30-watt minimum solar panel no larger than the footprint of the housing and shall have a hinged top to provide access to the on-board user interface and batteries. The solar engine shall house two 7 Ah sealed valve regulated lead acid batteries. Batteries shall be readily available from multiple suppliers and non-proprietary. Solar panel and battery system shall be 12 Volt DC.

Operational Specifications

The intensity of the yellow indications shall meet the minimum specifications of the Society of Automotive Engineers (SAE) standard J595 Class I dated January 2005.

The color of the yellow indications shall meet the specifications of SAE standard J578 (Color Specification) dated December 2006.

The solar engine shall have the capacity to operate 300, 20 second activations per day year-round with a minimum solar insolation of .94 sun hours per day.

The solar engine shall have the capability to activate other solar engines by wireless communications within 500 feet (152m). The solar engine shall have unique channels that can be configured on-site to avoid activation of nearby systems.

The system shall be dimmable during low ambient light conditions using a light sensor.

Qualifications

The product shall be FCC certified to comply with all 47 CFR FCC Part 15 Subpart B Emission requirements. The product shall be Buy American compliant.

Manufacturer shall provide a minimum of 3 Year Limited Warranty.

Manufacturer must be ISO 9001 certified.

21-3 CONSTRUCTION

Remove Existing In-Pavement Warning Light

Remove and salvage existing In-Pavement Warning Light (IPWL), including the lights embedded in the existing pavement. After removal, the existing holes shall be patched with hot mix asphalt. Existing pole foundation shall be removed completely, unless otherwise approved by the Engineer..

RRFB

Install RRFB per manufacturer instructions and as shown on the plans.

Location of pole placement shall be field reviewed and confirmed by the Engineer prior to installation. The contractor should perform potholing and confirm the location of the RRFB with the Engineer. Contractor is required to perform additional potholing and surface restoration due to utility conflicts and no additional cost to the City.

21-4 MEASUREMENT AND PAYMENT

Included in Section 9-1.02, “Payments”, of these special provisions.

APPENDIX A

ACKNOWLEDGEMENT OF MONUMENT PRESERVATION

CITY OF STOCKTON

COMMUNITY DEVELOPMENT DEPARTMENT
Permit Center • 345 N. El Dorado Street • Stockton, CA 95202-1997 • 209 / 937-8266 • Fax 209 / 937-8893
www.stocktongov.com/cdd

Acknowledgement of Monument Preservation
Monument Preservation prior to construction activity

I, _____, duly licensed Land Surveyor or Professional
(Please Print)

Engineer authorized to perform Land Surveying in the State of California, Registration No. _____, hereby acknowledge and accept all responsibility for the monument preservation as required per Section 8771 (a-f) of the Business and Professional Code within the bounds of the construction activity permitted by the City of Stockton Permit No./ Plan No. _____ .

I further acknowledge that I am hereby responsible for the Acknowledgement of Monument Responsibility prior to final acceptance of construction activity permitted by the City of Stockton Permit No./ Plan No. _____

_____
Signature

_____
Date

Seal