



PUBLIC WORKS DEPARTMENT

**SPECIAL PROVISIONS
FOR**

**LOCAL STREET RESURFACING
PROGRAM FY 2022-23 SB1 – MICRO-
SURFACING PROJECT NO. WD23003D**

BID OPENING: Thursday, June 01, 2023 @ 2:00 p.m.

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DIVISION I – GENERAL PROVISIONS

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 -	Current and latest State of California, Department of Transportation, 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
Working Day -	Defined as any eight (8) hour day, except as follows: Saturdays, Sundays, City-observed holidays, and days on which the Contractor is prevented by inclement weather or conditions resulting immediately therefrom adverse to the current controlling operation or operations, as determined by the Engineer, from proceeding with at least 75 percent of the normal labor and equipment force engaged on that operation or operations for at least 60 percent of the total daily time being currently spend on the controlling operation or operations.

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 implements 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 Standard Specifications
- f. City 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. Contractor 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.

See following page

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 a 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: *Thinh Phan*
City of Stockton
Public Works Department
1465 South Lincoln Street
Stockton, CA 95206

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 the contract.

Bid protests are to be delivered to the following address: Department of Public Works, 1465 South Lincoln Street, Stockton, CA 95206, Attn: *Thinh Phan*. 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: *Thinh Phan*
1465 South Lincoln Street
Stockton, CA 95206

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 the 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 and these Special Provisions.

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. The 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 – The Contractor is responsible for obtaining a permit and pay fees.
- 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 and pay fees for the water meter 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.

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:

- DAS-140 & DAS-142
- Local Hire Employment Ordinance – Good Faith Effort
- Monthly Local Employment Ordinance Compliance Report
- Water Pollution Control Program (WPCP) by a QSD, Best Management Practices
- Emergency Contacts/Authorized Representatives
- Traffic Control Plan
- Project Schedule (Critical Path Method)
- City of Stockton Construction and Demolition Debris Recycling Report
- City of Stockton Encroachment Permit
- City of Stockton Business License
- Public Notifications (Flyer, News Release letter, etc)
- Staging Agreements with Private Property Owner (if applicable)
- Micro-surfacing Mix Design (Type II)
- Test Results of Initial Test Samples
- Calibration Sheets (Within 6 months of start of Construction using Type II Micro-surfacing)

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 the 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 the 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, lists, graphs, catalog sheets, datasheets, 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 submittal of various items using a single form will be permitted only when the items are 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.

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.

5-1.03 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 the 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 APPEARANCE

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 (If Applicable)

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 to 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 than 60 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 "downtime" 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 a 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 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.

5-1.07 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.

5-1.08 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.

5-1.09 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.

5-1.10 STAGING AREA (If Applicable)

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 – BLANK

SECTION 7 – LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

7-1.01 PUBLIC CONVENIENCE

Contractor's attention is directed to Section 12-1.01, "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 PUBLIC NOTIFICATION

The Contractor shall circulate printed form letters/door hangers, approved by the Engineer, explaining the project to be done and the length of time inconvenience will be caused by the project and deliver same to the residents and/or businesses to be affected no earlier than 72 hours, nor later than 48 hours, before work is to commence. The Contractor shall install "Road Closed," arrows, detour signs, and barricades as necessary.

In addition, the Contractor shall provide temporary "Tow-away, No Parking" signs posted in advance of the work which signs shall be removed upon completion of the work and the opening of the street to traffic. The signs shall not be less than 12"x18" size, "Tow-away, No Parking" words shall be in white letters on red background, and must have Stockton Municipal Code 10-011.6, California Vehicle Code 22651(l)(n), Stockton Police Department telephone number 937-8354, and date and time of parking restriction clearly indicated on it. Such signs shall be placed no farther than fifty (50) feet apart. It shall be the Contractor's responsibility to arrange for the removal of any vehicles obstructing his/her operations.

The Contractor shall notify all residents and businesses affected by the construction, Utilities, School Districts, Sunrise Sanitation, Stockton Scavenger, and San Joaquin Regional Transit District at least 48 -72 hours prior to starting the work. Any changes to the original schedule/notification would prompt the re-notification by the Contractor. A list of agencies with the contact information is available below.

The Contractor shall inform the City Fire Comm, (209) 464-4648, no later than twenty-four (24) hours before work is to begin. Any changes in the Contractor's original schedule/notification shall be promptly reported to the City Fire Comm, so that they are fully informed at all times of the locations of street closures/construction.

<u>Agency</u>	<u>Phone</u>	<u>Fax</u>	<u>email address</u>
Lodi Unified School District (Transportation) 1305 E. Vine Street, Lodi, CA.	953-8170	331-7821	

Lincoln Unified School District (Transportation) 6749 Harrisburg Place, Stockton, CA	953-8596	957-3626	
Stockton Unified School District (Transportation) 2963 Sanguinetti Lane, Stockton, CA	933-7145	943-0079	
Waste Management 1240 Navy Drive, Stockton, CA	(530) 356-3756	948-4013	sjager@wm.com
Republic Services 1145 W. Charter Way, Stockton, CA	483-2934	466-2371	donald.gomez@awin.com
Stockton Police Dispatch	937-8377	937-8845	
Towed Vehicle Information	937-8354		
Stockton Fire Dispatch	464-4648	937-8013	
San Joaquin Regional Transit District (Bus Dispatch)	948-5566 ext. 652	948-8516	jram@sj-smart.com

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 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 (*Thin Phan and 209-937-8885*). 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 (*Thin Phan 209-937-8885*) 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.

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 twenty-five (25) 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 **\$4,000.00 (four thousand)** 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.

In addition, the Contractor shall pay the following sums for the associated liquidated damages:

Failure to provide and/or non-compliance to or violation of accepted construction scheduling, per Section 5-1.08 and 5- 1.13	\$250.00	per each calendar day
Failure to provide and/or non-compliance with accepted Traffic Control Plans per Section 5-1.08	\$250.00	per each calendar day
Failure to provide adequate Project Site Maintenance 24/7, per Sections 5-1.08, and 5-1.17	\$250.00	per each calendar day
Failure to provide appropriate driveway access and pedestrian access, per Section 5-1.09, and 5-1.10	\$250.00	per each half-hour delay
Failure to follow proper procedure for storage of equipment and/or materials in public streets, per Section 5-1.27	\$250.00	per each calendar day/incident
Failure to provide adequate advance notices to RTD, Fire Com, Police, Schools for sidewalks and lane closures	\$250.00	per each day/incident

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.

8-1.06 CITY OF STOCKTON HOLIDAY SCHEDULE FOR 2022

- Monday, January 16, 2023.....Martin Luther King, Jr.'s Birthday
- Monday, February 13, 2023.....Lincoln's Birthday Observance
- Monday, February 20, 2023.....Washington's Birthday
- Monday, May 29, 2023.....Memorial Day
- Tuesday, July 04, 2023.....Independence Day
- Monday, September 04, 2023Labor Day
- Monday, October 09, 2023.....Indigenous People Day
- Friday, November 10, 2023Veteran's Day
- Thursday and Friday, November 23 and 24, 2023.....Thanksgiving Holidays
- Monday, December 25, 2023.....Christmas Day
- Monday, January 01, 2024.....New Year's Day

Similar holidays are scheduled in year 2024.

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:

1. Mobilization: paid by lump sum, shall include but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site.
2. Traffic Control: paid by lump sum, shall include all preparatory work and operations, including, but not limited to, designing, furnishing, installing and maintaining traffic control and pedestrian access. Also, includes materials (including signs, cones, flashing arrows, and barricades and all other items shown on the traffic handling plans), tools, equipment, and incidentals (including overhead lighting, cellular phones and radios), and all incidentals for doing all work involved in traffic control, complete in place as specified in these Special Provisions and as directed by the Engineer.
3. Water Pollution Control: paid by lump sum, shall include preparing the WPCP, implementation of erosion control BMPs identified in WPCP, providing all labor, materials, tools equipment, and incidentals as described in Section 13 of the Caltrans Standard Specifications and these Special Provisions.

4. Removing Existing Pavement Striping, Marking and Legends: paid by lump sum, shall include removing and disposing of yellow thermoplastic traffic stripes, lead compliance, removing white thermoplastic traffic stripes, pavement markings and pavement markers and all preparatory work and operations, including, but not limited to installing and maintaining temporary striping.
5. Install Striping (Bid Item Nos. 5-10): Measurement and payment for the various striping item shall be as indicated below. Striping shall include installing thermoplastic traffic stripes, pavement markings, and markers as specified in the Caltrans Specification, the plans and these Special Provisions.
 - Striping, consisting of new Thermoplastic stripes with or without reflectors as necessary shall be measured and paid for on a linear foot basis.
 - Striping, consisting of applying Pavement Legends shall be measured and paid on a square foot basis.
 - Striping, consisting of applying pavement bump legends shall be measured and paid on each basis.
11. Micro-surfacing: paid by the square yard, shall include all work associated with furnishing, placing, protecting and cleaning up, complete in place.

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.	DESCRIPTION	UNIT	ESTIMATED QUANTITY
1	Mobilization	LS	1
2	Traffic Control	LS	1
3	Water Pollution Control	LS	1
4	Remove Existing Pavement Striping, Marking and Legends	LS	1
5	Install Detail 22 Striping	LF	3,100
6	Install Detail 29 Striping	LF	300
7	Install Detail 38 Striping	LF	1,200
8	Install Speed Bump Legend	EA	70
9	Install White Thermoplastic (All Pavement Legends)	SF	6,500
10	Install Yellow Thermoplastic (All Pavement Legends)	SF	500
11	Micro-surfacing (Type II)	SY	298,000

Each bidder shall bid each item on the 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

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.

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 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 videos 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.

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 8:30 a.m. and 4:30 p.m. Any extended working hours require the approval of the Engineer. The Engineer may restrict or alter the hours of work on a street due to high traffic or other considerations.

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, maybe 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.

SECTION 37 – MICRO-SURFACING

37-1.01 GENERAL

Work covered by this section includes preparation and applying micro-surfacing to existing asphalt concrete pavement areas.

37-1.02 DESCRIPTION

Micro-surfacing herein shall consist of cleaning existing asphalt concrete pavement; mixing a polymer modified cationic micro-surfacing emulsion (MSE), water and additives, mineral filler, and aggregate and spreading the mixture on a pavement surface as shown on the plans, as specified in these Special Provision, and as directed by the Engineer. The Micro-surfacing shall be applied as a homogeneous mat, adhere firmly to the prepared surface, and have a skid-resistant texture throughout its service life.

37-1.02 PRE-MICRO-SURFACING PREPARATION

The Contractor shall be responsible for removing all pavement striping, markers, oils, vegetation, and any elements that might impact the Micro-surfacing application from adhering to the roadway. The Contractor shall remove and dispose of all pavement markers prior to resurfacing the roadway.

All thermoplastic and painted limit lines, crosswalks and legends applied to the road surface shall be scarified. Scarification shall be performed using a grinder and shall be performed such that 80% of the underlying pavement is exposed.

Prior to resurfacing the roadway, the Contractor shall clean and sweep the roadway surface using a vacuum sweeper.

37-1.03 SUBMITTALS

The testing laboratory must sign the original laboratory report and mix design.

If the mix design consists of the same materials covered by a previous laboratory report, you may submit the previous laboratory report, which must include material testing data performed within the previous 12 months for authorization.

If requesting substitute materials, submit a new laboratory report and mix design at least 7 days before starting placement.

Submit a laboratory report of test results and a proposed mix design ten (10) days before starting placement of Micro-surfacing. The report and mix design must include the specific materials to be used.

The laboratory report must include:

1. Test results used in the mix design
2. Proportion of the following material based on the aggregate's dry weight:
 - 2.1. Aggregate
 - 2.2. Water, minimum and maximum
 - 2.3. Additives
 - 2.4. Mineral filler, minimum and maximum
 - 2.5. Micro-surfacing emulsion residual asphalt content, minimum and maximum
3. Recommended changes to the following proportions based on heating the mixture to 100 degrees F and mixing for 60 seconds.
 - 3.1. Water
 - 3.2. Additives
 - 3.3. Mineral filler
4. Comparison of each individual material's test results to its specified values
5. Quantitative moisture effects on the aggregate's unit weight determined under ASTM C29M

The recommended changes in item 3 in the list above do not apply to nighttime applications or if atmospheric temperatures below 90 degrees F are forecast for daytime applications.

Submit a certificate of compliance with each shipment of micro-surfacing emulsion as specified for asphaltic emulsion.

37-1.04 QUALITY CONTROL AND ASSURANCE

The Contractor shall hire a 3rd party an AASHTO licensed laboratory accredited for pavement preservation (including Micro Surfacing) test methods and to perform all required testing in accordance to the latest State Standard Specifications & International Slurry Surfacing Association tests.

Calibrate each truck mounted mixer-spreader used in the presence of the Engineer. Calibration must comply with California Test 109. Contractor shall provide the Engineer with all equipment calibration sheets prior to start of any Micro-surfacing activities.

Calibrate the adjustable cut-off gate settings of each mixer-spreader truck on the project to achieve the correct delivery rate of aggregate and emulsion per revolution of the aggregate feeder in compliance with California Test 109. Application rate must be verified prior to start of any Micro-surfacing activities.

Before using a variable-rate emulsion pump, the pump must be calibrated and sealed in the calibrated condition under the Department’s Material Plan Quality Program.

For the aggregate belt feeder, the delivery rate for any individual check run must not deviate more than two (2) percent from the average of the rates of three (3) runs of at least three (3) tons each.

For the emulsion pump, the delivery rate for any individual check run must not deviate more than two (2) percent from the average of the rate of three (3) runs of at least 300 gal each.

37-1.04 MIX DESIGN

In addition to the requirements of Section 37-3.02B (1) of the Standard Specifications, delete the chart shown in the Section and insert the following chart. The Micro-surfacing mix design must comply with the requirements shown in the following table:

Micro-surfacing Mix Design Requirements

Properties	International Slurry Association test method	Specification
Excess Asphalt, g/m ² . max	Technical Bulletin 109	540
Wet stripping	Technical Bulletin 114	Pass (90% min.)
Displacement Lateral (max, %)	Technical Bulletin 147A	5
Displ. Spec Gravity after 1000 cycles of 57 KG (max)	Technical Bulletin 147A	2.10
Cohesion test ^b , kg-cm within 1 hour	Technical Bulletin 139	20
Cohesion test ^b , kg-cm within 30 min	Technical Bulletin 139	12
Wet track abrasion, g/ m ² . max	Technical Bulletin 100	810
Mix Time @ 77 F, controllable sec min.	Technical Bulletin 113	120 sec min.

General

Aggregate must have the following gradation as determined under California Test 202:

Aggregate Gradation

	Percentage passing by aggregate type
Sieve sizes	Type II
3/8" (9.5mm)	100
No.4 (4.75mm)	90–100
No.8 (2.36mm)	65–90
No.16 (1.18mm)	45–70
No.30 (600um)	30–50
No.50 (300um)	18-30
No.100 (150um)	10-21
No. 200 (75 um)	5–15

The aggregate used for Type II micro-surfacing shall meet the State Standard Specifications for aggregates. The aggregate shall be 100% crushed with no rounded particles. The material shall be free from vegetable matter, deleterious substances, caked or clay lumps, and oversized particles. The Contractor shall specify in the bid proposal the name and location of the aggregate quarry. Prior to start of Construction, Contractor shall submit samples and test results of the aggregate to the Engineer for review and approval.

Aggregate Type II

If you blend aggregate from different sources, the aggregate from each source aggregate must comply with the aggregate specifications except gradation.

Aggregate for Micro-surfacing must have the quality characteristics as specified in the following table:

Aggregate Quality

Quality characteristic	Test method	Specification by aggregate type		
			II	
Sand equivalent, min	California Test 217		70	
Durability index, min	California Test 229		75	
Percentage of Crushed Particles (min) ¹	California Test 205		100%	
Los Angeles Rattler Loss at 500 Rev. (max) ²	California Test 211		35%	

Micro-surfacing Emulsion

Micro-surfacing emulsion must be homogeneous mixture of asphalt, polymer, and emulsifier solution. Add polymer modifier to asphalt or emulsifier solution before emulsification. Polymer solids must be a minimum three (3) percent by weight of the micro-surfacing emulsion’s residual asphalt. Micro-surfacing emulsion must comply with the requirement shown in the following table:

Micro-surfacing Emulsion (MSE)

Property	Test method	Value	
		Min	Max
Tests on emulsion:			
Saybolt Furol Viscosity @ 25 °C, SFS ^a	AASHTO T 59	15	90
Sieve test, %	AASHTO T 59	--	0.30
Storage stability, 1 day, %	AASHTO T 59	--	1
Residue by evaporation, %	California Test 331	64	--
Particle charge	AASHTO T 59	Positive	
Tests on residue by evaporation test			
Penetration, 25 °C	AASHTO T 49	40	90
G* at 20 °C (10 rad/sec, MPa)	AASHTO T 315	--	--
Softening point (min, °C)	AASHTO T 53	57	--
Phase angle at 50 °C (10 rad/sec)	AASHTO T 315	--	--
Stiffness at -12 °C (MPa, and M-value)	California Test 401	--	--

Mineral Filler

If required, mineral fillers shall be any recognized brand of non-air entrained Portland cement or hydrated lime that is free from lumps. It may be accepted upon visual inspection. The type and amount of mineral filler needed shall be determined by the laboratory mix design and will be considered as part of the mineral gradation requirement. An increase or decrease of less than one percent may be permitted when the micro-surfacing is being placed if it is found to be necessary for better consistency or set times.

37-1.05 CONSTRUCTION

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

application of the seal coat. Contractor is responsible for cleaning any oil that gets on utility covers.

In areas inaccessible to spreading equipment, spread the micro-surfacing mixture with hand tools or other authorized methods. If placing with hand tools, first lightly dampen the area. Do not handle or shift the material.

Proportioning

The Engineer determines the asphalt distribution under California Test 310. The bitumen ratio, in kilograms of asphalt per 100 kg of dry aggregate, must not vary more than ± 0.5 kg of asphalt from the determined amount.

Proportion Micro-surfacing ingredients in compliance with the authorized mix design. Proportion and blend different aggregate types before adding other ingredients. The percentages of each individual material required shall be shown in the laboratory report. Adjustments may be required during construction based on field conditions. The Engineer shall give final approval for all such adjustments.

The component materials shall be within the following limits:

Micro-surfacing Residual Asphalt	8.5% to 13.5% by weight of dry aggregate
Mineral Filler	0% to 3% by weight of dry aggregate
Additive	As needed
Water	As required to produce proper mix consistency

Mixing and Spreading Equipment

Mixing and spreading equipment for Micro-surfacing must proportion asphaltic emulsion, water, aggregate, and any set-control additives by volume and mix them in continuous pugmill mixers. Continuous pugmill mixers must be of adequate size and power for the type of materials to be mixed.

Truck Mounted Mixer Spreaders

Truck mounted mixer spreaders must comply with the following:

1. Rotating and reciprocating equipment must be covered with metal guards.
2. Proportion aggregate using a belt feeder with an adjustable cutoff gate. The height of the gate opening must be determinable.
3. The belt feeder must have a depth monitor device. The depth monitor device must automatically shut down power to the belt feeder whenever the aggregate depth is less than 70 percent of the target depth.
4. A 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. The 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 Micro-surfacing.
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. The 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 and comply with California Test 109. Low-flow indicators must be visible while walking alongside the equipment.

Continuous Self-Loading Mixing Machine

Continuous self-loading mixing machines must be automatically sequenced and self-propelled. The mixing machine must deliver the materials to a double shafted mixer and discharge the mixed product on a continuous flow basis. The mixing machine must have sufficient storage capacity to maintain a continuous supply of materials to the proportioning controls. The mixing machine must be self-loading without interrupting placement. The mixing machine operator must have full control of forward and reverse speeds during placement.

Micro-surfacing Equipment

Choose a continuous self-loading mixing machine or truck mounted mixer-spreader. Proportion micro-surfacing emulsion using a positive displacement pump. Identifying numbers for equipment must be at least three (3) inches high and located on the front and rear of the vehicle.

Spreader Box

Spread the micro-surfacing mixture with a spreader box that complies with the following:

1. Capable of spreading a lane width
2. Equipped with material such as flexible rubber belting on each side and in contact with the pavement to prevent loss of micro-surfacing from the box
3. If wider than 8 feet, a spreader box equipped with a means, such as baffles or reversible motor-driven augers, to uniformly apply Micro-surfacing on super elevated sections and shoulder slopes
4. Equipped with rear flexible strike-off blades making close contact with the pavement and adjustable to various crown shapes in order to apply a uniform Micro-surfacing

5. Equipped with flexible drags attached to the rear and cleaned daily and changed if longitudinal scouring occurs
6. Clean and free of Micro-surfacing or emulsion at the start of each work shift. Cleanliness of the spreader box is crucial to the success of micro-surfacing application.

Placing

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

In areas inaccessible to spreading equipment, spread the micro-surfacing mixture with hand tools. If placing with hand tools, first lightly dampen the area. Do not handle or shift the mixture.

Surface Preparation

Prior to applying the micro-surfacing, loose material, oil spots, vegetation, and other objectionable material shall be removed. Any standard cleaning method will be acceptable. If water is used, cracks shall be allowed to dry thoroughly before micro-surfacing. Manholes, valve boxes, drop inlets and other service entrances shall be protected from the micro-surfacing by a suitable method.

Remove loose particles of extraneous materials, including paving and dirt. Use any nondestructive method, such as flushing or sweeping. Contractors shall also remove all vegetation from the surface of and cracks in existing paved surface and along the edge of pavement or gutter lips prior to place micro-surfacing. pavement impregnated with grease, oil, or fuel shall be thoroughly scrubbed with water and an approved detergent and then flushed and swept clean. Contractor shall vacuum all flushed water.

The micro-surfacing shall not be applied until an inspection of the surface has been made by the Engineer, and the Engineer has determined that the surface is suitable for micro-surfacing application. Contractor shall notify the Engineer of any surface that is considered ready for micro-surfacing.

If micro-surfacing operations affect access to public parking, residential property, or commercial property, notify residents, businesses, and local agencies at least 48-72 hours before starting activities. The notice must:

1. Describe the work to be performed
2. Detail streets and limits of activities
3. Indicate work hours
4. Contractor's phone number

Before starting micro-surfacing activities, post signs at 100-foot intervals on the affected streets. Signs must display "No Parking – Tow Away." Signs must state the day of the week and hours parking or access will be restricted. Contractor must follow City of Stockton No Parking sign format and place them on type I barricades.

Application

A test strip shall be placed in conditions similar to those expected to be encountered during the project.

The surface may be wetted with water ahead of the spreader box. The rate of application of the water spray shall be adjusted during the day to suit temperature, surface texture, humidity, and dryness of the pavement. Pooling or standing water shall be avoided.

The micro-surfacing shall be of the desired consistency upon exiting the mixer. A sufficient amount of material shall be carried in all parts of the spreader box at all times so that complete coverage is achieved. Overloading of the spreader shall be avoided.

No lumping, balling, or unmixed aggregate shall be permitted.

Sufficient streaks, such as those caused by oversized aggregate or broken mix, shall not be left in the finished surface. If excessive streaking occurs, the job will be stopped until the cause of the problem has been corrected. Some situations may require screening the aggregate prior to loading it into the units going from the stockpile area to the jobsite.

Joints

Longitudinal and transverse joints must be:

1. Uniform
2. Straight
3. Neat in appearance
4. Butt-type joints
5. Without material buildup
6. Without uncovered areas
7. No drip lines

Placement of longitudinal joints:

1. On centerlines, lane lines, edge lines, or shoulder lines
2. A maximum of 6" shall be allowed for overlap of longitudinal joints
3. Longitudinal joints shall not be placed in a wheel path
4. Less than full box width passes will be used only as required.
5. If less than full box width passes are used, they shall not be the last pass of any paved area.

Set the leading edge of roofing felt on transverse joints to create a straight butt joint with the next application when the roofing felt is removed.

Rate of Application

The micro-surfacing mixture shall be of the proper consistency at all times so as to provide the application rate required by the surface condition. The application rate of micro-surfacing shall be spread at a rate of sixteen (16) pounds of dry aggregate per square yard. The completed spread shall be within ten (10%) percent of the specified rate. The micro-surfacing spread rates must be within the ranges shown in the following table:

Micro-surfacing Spread Rates

Type of aggregate	Range (lb of dry aggregate/sq yd)
II	14-18

Spread micro-surfacing uniformly within the specified rate. Do not spot, re-handle, or shift the mixture.

Longitudinal joints must correspond with lane lines. You may request other longitudinal joint patterns if they do not adversely affect the Micro-surfacing. Longitudinal joints must be straight and true.

Spread micro-surfacing in full lane widths. Do not overlap micro-surfacing between adjacent lanes more than 3 inches.

Use a material, such as building paper at transverse joints and over previously placed micro-surfacing to prevent double placement. Remove the material after use. Use hand tools to remove spillage.

The finished surface must be smooth and have uniform texture.

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

A pneumatic tire roller shall be utilized on all road surfaces receiving a Type II micro-surfacing.

Protect the Micro-surfacing from damage until it has cured and will not adhere or be picked up by vehicle tires.

Test Strip

The Contractor shall construct a test strip for evaluation by the Engineer. The test strip shall be 300 feet to 500 feet long and shall consist of the application courses specified. The test strip shall be constructed at the same time of day or night that the full production of micro-surfacing will be placed and may be constructed in 2 days or nights when multiple course applications are specified.

The Engineer will evaluate the completed test strip after 12 hours of traffic on the completed test strip to determine if the mix design and placement procedure are acceptable. If the mix design or the placement procedure is determined by the Engineer to be unacceptable, the test strip will be rejected, the Contractor shall make modifications, and a new test strip shall be constructed and evaluated by the Engineer. The cost of materials and placement of the test strips, which have been rejected, shall be borne by the Contractor and will not be considered as part of the contract

work. If ordered by the Engineer, rejected test strips shall be removed at the Contractor's expense. If approved by the Engineer, the Contractor may continue with production work after placement of the test strip at his own risk. If the test strip is rejected, all production work shall be stopped and evaluated by the Engineer. The production work will be evaluated in the same manner as the placement of the test strip and shall conform to the same requirements for the test strip material.

Mixture

The micro-surfacing shall possess sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during and following mixing and spreading. It shall be free of excess liquids which create segregation of the aggregate. Spraying of additional water into the spreader box will not be permitted.

Handwork

Areas which cannot be accessed by the mixing machine shall be surfaced using hand squeegees to provide complete and uniform coverage. If necessary, the area to be hand worked shall be lightly dampened prior to mix placement. Handwork shall exhibit the same finish as that applied by the spreader box and shall be completed prior to final surfacing.

Lines

Care shall be taken to apply straight lines along curbs, shoulders, and intersections. No run-off on these areas will be permitted. Roofing felt or heavy plastic may be used to begin or end a pull cleanly. This also provides for easy removal of excess micro-surfacing.

Clean Up

All utility access areas, gutters and intersections, shall have the micro-surfacing removed as specified by the B.A.R. The Contractor shall remove any debris associated with the performance of the work on a daily basis. Removal of debris shall not damage the quality of the micro-surfacing placed.

Upon completion of the each working day, the Contractor shall remove all equipment, debris and must leave the site in a clean and safe condition to the satisfaction of the Engineer. Any damage to any existing facility or pavement marking/stripping due to micro-surfacing operations shall be corrected to the satisfaction of the Engineer. All curb, gutter, sidewalk shall be cleaned by blowing off and sweeping all debris. If a catch basin is found without protective cover, the Contractor shall vacuum clean it. All construction signs, cones, barricades, and conflicting markings shall be removed. A punch list will be provided to the Contractor within one (1) week from the date of request to the engineer. A final Notice of Completion will be issued once the Contractor completes the punch list items to the satisfaction of the Engineer.

Repair of Early Distress

If bleeding, raveling, delamination, flushing, rutting, or wash boarding occurs within sixty (60) days and during the one-year performance period after placing the micro-surfacing, the Contractor shall make repairs by any method approved by the Engineer. The Contractor shall not

be relieved from maintenance, and final contract payment will not be made, until repairs have been completed.

Weather Limitations

Only place micro-surfacing if both the pavement and air temperatures are at least 50 degrees F and rising. Do not applied micro-surfacing if either the pavement or air temperature is below 50 degrees F and falling. The expected high temperature must be at least 65 degrees F within 24 hours after placement.

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

Unsuitable Day

The Engineer may notify you of unsuitable conditions before 4:00 p.m. on the day before your 1st intended working day to place micro-surfacing. After you have started micro-surfacing placement activities, the Engineer has until 4:00 p.m. on the day before the next working day to give contractor an unsuitable day notice. If the Engineer gives contractor an unsuitable day notice (1) do not place micro-surfacing on the next working day and (2) the City does not pay for return, storage or disposal of materials delivered to the job site and the time of workers. If maintenance of previously applied micro-surfacing can be performed, continue to perform maintenance.

In the absence of an unsuitable day notice or if the Engineer gives notice after 4:00 p.m. of the previous day:

1. Comply with specifications restricting micro-surfacing application.
2. Return, store, or dispose of any Micro-surfacing materials you deliver to the job site when conditions are unsuitable.
3. The Department adjusts payment for the return, storage or disposal of materials delivered to the job site.
4. The Department adjusts payment for the show-up time of workers who would have applied micro-surfacing.
5. Payment of materials and labor will be determined under section 9-1.04, except markups are not added.

It is a nonworking day if the micro-surfacing is the controlling operation and (1) the Engineer provides you timely notice of an anticipated unsuitable day or (2) there is untimely or no notice and conditions are unsuitable for placing Micro-surfacing.

If Contractor fail to submit the name of a person authorized to communicate with the Engineer about unsuitable day notices, the specifications for payment do not apply.

37-1.06 TRAFFIC OVER TREATED AREAS

If the micro-surfacing is not capable of supporting unrestricted traffic at the expiration of the lane closure hours, the Contractor shall pay to the City the sum of two hundred fifty (\$250) dollars per half hour for each and every half-hour delay, or portion thereof, until such time as the micro-

surfacing is capable of supporting unrestricted traffic. Placement of the micro-surfacing shall cease a minimum of two (2) hour before the expiration of the times allowed for closure of lanes as specified in "Maintaining Traffic" of these Special Provisions, unless the Contractor proves to the satisfaction of the Engineer that the surface will be ready for unrestricted traffic at the expiration of the lane closure hours. The City may deduct these amounts from any progress payments or final payment due to the Contractor.

The micro-surfacing shall be swept approximately twenty-four (24) hours after placement to remove loosened or shed aggregate particles. Thereafter, the Contractor shall sweep all streets seven (7) days after the application of micro-surfacing with a power sweeper. Sweeping shall be performed in such a manner that the micro-surfacing will not be damaged. Contractor shall maintain all gutter pans, driveways & sidewalk free of any loose aggregate and oil.

37-1.07 CALIBRATION AND MEASUREMENT

Each mixing unit to be used in performance of the work shall be calibrated in the presence of the B.A.R. prior to the start of the project. Previous calibration documentation covering the exact materials to be used may be acceptable, provided the calibration was performed within 6 months of start of construction on the project. Contractor shall provide the Engineer with calibration sheets of a recent project done with exact material used on this project. The documentation shall include an individual calibration of each material at various settings, which can be related to the machine's metering devices. Contractor shall provide contact information of outside agencies that have done a similar project using same exact material for the verification of equipment calibration. Any equipment replacement affecting material proportioning requires that the machine be recalibrated. No machine will be allowed to work on the project until the calibration has been accepted.

The Contractor shall supply the Engineer with licensed Weight master's certificates of weight for all aggregates delivered to the job during the course of each day. Aggregate certified as being delivered to the project shall be used only in the Micro-surfacing. All delivery trucks shall use tarp-wrap. Excessively moist aggregate shall not be brought to stockpile. No outside work shall be allowed utilizing materials from the tanks or stockpiles stored for the City's contract.

The Contractor shall furnish, prior to commencing work, a calibrated stick to measure the emulsion in the trailer storage tanks in ten (10) gallon increments. The Inspector shall check the emulsion in each load and in the tanks at the beginning and end of each day to determine the amount of emulsion being used. The Contractor shall also provide certified Weight master's tickets of any asphalt emulsion left in the tank at the end of the day (weight-back).

All mixer/spreader trucks are to be calibrated in accordance with California Test 109 before starting work on the project. The trucks shall be calibrated for rock, emulsion, and cement used. Equipment calibrations must be verified that it was done for same exact material within 6 months of the start of construction date of the project. Contractor shall provide Calibration sheets to the Engineer prior to start of application of Micro-surfacing.

If the material source is changed, the trucks must be calibrated for the new source. If questions arise during construction concerning material calibration, the Engineer may require new calibrations to be done. More frequent and surprise calibrations will be conducted as per

Engineer’s discretion. The Contractor shall notify the Engineer at least forth-eight (48) hours before the calibration is performed on these machines. A representative from the City may be present during calibration.

For all material calibrated three consecutive runs per gate setting shall be completed and these three test runs must not deviate from their combined mathematical average by more than 2.0%.

37-1.08 ACCEPTANCE AND DEDUCTION

The Engineer accepts aggregate for Micro-surfacing based on compliance with the aggregate gradation, sand equivalent, application rate and durability index requirements.

If the results of the aggregate grading do not meet the specified gradation, the micro-surfacing represented by the test shall be removed within five (5) working days of the Engineer’s written notice. However, if requested in writing by the Contractor and approved by the Engineer, the micro-surfacing represented by the tests containing a percentage passing range value +/- 1 in any of the Sieves sizes, but not greater than +/- 4, may remain in place. The Contractor shall pay to the City the following amount for the screenings represented by the test and left in place:

Sieve Sizes	Percentage Passing	Allowable Tolerances	Allowable Tolerances	Allowable Tolerances	Allowable Tolerances
3/8"	100	PP -1	PP -2	PP +/- 3	PP +/- 4
No. 4	94-100	PP +/- 1	PP +/- 2	PP +/- 3	PP +/- 4
No. 8	65-90	PP +/- 1	PP +/- 2	PP +/- 3	PP +/- 4
No. 16	40-70	PP +/- 1	PP +/- 2	PP +/- 3	PP +/- 4
No. 30	25-50	PP +/- 1	PP +/- 1	PP +/- 1	PP +/- 1
No. 200	5-15	PP +/- 1	PP +/- 1	PP +/- 1	PP +/- 1
PAYMENT TO CITY		\$ 5.00 per ton	\$ 7.50 per ton	\$ 10.00 per ton	\$ 15.00 per ton

If the results of the Sand Equivalent test for aggregate do not meet the specified requirements, the micro-surfacing represented by the test shall be removed within five (5) working days of the Engineer’s written notice. However, if requested in writing by the Contractor and approved by the Engineer, the micro-surfacing represented by the tests containing a sand equivalent value below 70, but not less than 65, may remain in place. The Contractor shall pay to the City the following amount for the screenings represented by the test and left in place:

Sand Equivalent	Payment to City
70 or over	None
68-69	\$ 5.00 per ton
66-67	\$ 7.50 per ton
65	\$ 10.00 per ton

If the results of the Sand Equivalent test for aggregate do not meet the specified requirements, the Micro-surfacing represented by the test shall be removed within five (5) working days of the Engineer’s written notice. However, if requested in writing by the Contractor and approved by the Engineer, the Micro-surfacing represented by the tests containing a durability index value below 75, but not less than 70, may remain in place. The Contractor shall pay to the City the following amount for the screening represented by the test and left in place:

Durability Index	Payment to City
75 or over	None
73-74	\$ 2.50 per ton
71-72	\$ 5.00 per ton
70	\$ 7.50 per ton

37-1.09 MEASUREMENT AND PAYMENT

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid by the square yard, and no additional compensation will be allowed, therefore.

SECTION 84 – PAVEMENT STRIPING

84-1.01 TEMPORARY PAVEMENT STRIPING AND MARKING

The Contractor shall furnish, place, maintain and remove temporary marking (tape) in accordance with the provisions in Section 12-3.01, “General,” of the Caltrans Standard Specification and these Special Provisions. Nothing in these Special Provisions shall be construed as to reduce the minimum standards specified in the California MUTCD for streets and highways. Temporary pavement delineation shall not be applied over existing markings, and shall be maintained until replaced with permanent one. Any temporary pavement marking conflicting with new traffic pattern shall be promptly removed, or removed as directed by the Engineer.

Full compensation for furnishing, placing, maintaining and removing the temporary pavement markings shall be included in the contract price for various bid items, and no extra payments will be paid therefore.

84-1.02 THERMOPLASTIC STRIPING AND MARKINGS

The work herein provided for consists in general of installing thermoplastic striping and all associated work. The workflow is anticipated as follows:

1. The City marks the limits to be striped.
2. The Paving Contractor installs temporary pavement markers on the pavement.
3. The Contractor establishes the pre-marking as per the existing striping layout and pavement markings, per as-built plans, engineering plans, aerial photos, or photographs and videos, and as directed by the Engineer.

4. The Contractor installs cat-tracking within 72 hours of pavement completion.
5. The Engineer approves the cat-tracking.
6. The Contractor installs longitudinal thermoplastic striping (by ribbon gun or extruded shoe attachment) of minimum thickness of 0.09”.
7. The Contractor installs the retro-reflective pavement markers.
8. The Contractor installs pavement markers, crosswalk, parking Ts, arrows, STOP/YIELD, and other transverse marking and legends.
9. The Contractor removes the temporary pavement markers.

Contractor’s responsibility

The Contractor shall use striping plans, aerial photography, video, photographs, or any other methods to establish **pre-marking** on the pavement as per existing striping. The Contractor shall install **cat-tracking** using these pre-marks and get approval of the Engineer before commencing permanent striping in thermoplastic. It is expected that some changes may occur compared to existing striping.

Within 10 working days of approval of the Engineer or his designee, the Contractor shall install all longitudinal thermoplastic striping, reflectors, pavement markers and other transverse markings and legends and provide all labor, materials, equipment and traffic control as per California Manual of Uniform Traffic Control Devices.

The supplied equipment shall be in good working condition at all times. The Engineer shall provide a notice to the Contractor at least 24 hours in advance. No premium shall be paid for night, weekend or holiday work. In general, it is expected that most of the work will be performed during weeknights (Sunday-Thursday) between 9:00 p.m. and 5:00 a.m. However, the working hours can be changed at any time with a 24-hour notice (via telephone, voicemail, fax, e-mail, or mail) to the Contractor. It shall be the Contractor’s responsibility to keep all modes of communication in working conditions at all times.

The Contractor shall follow proper traffic control per Caltrans Standard Plans or current MUTCD Standard during work.

Equipment and processes for installation of long-line thermoplastic traffic striping should include or be capable of:

1. Working in conjunction (including truck-to-truck communication) with support vehicles for installation and protection of newly applied thermoplastic traffic striping within accepted operational guidelines for mobile construction operations during daytime or night time hours.
2. Installing thermoplastic material, with concurrent application of additional retro-reflective glass beads, to install, superimpose, or re-trace existing lines on tangents or curves in the width and dimensions specified.
3. Capability of installing solid and broken lines through the use of a calibrated skip-timer device.

4. The equipment should be able to carry a pre-melter of minimum capacity of 4,000 LB per color, and glass bead capacity of 3,000 LB to ensure continuous operation without interruption.
5. Maintain and prepare thermoplastic material in sufficient quantity and acceptable temperatures for efficient, high production application of thermoplastic material within a vehicle application speed range of 5 to 8 MPH.
6. Operating in conjunction, or concurrently with equipment designed to apply any manufacturer's recommended primer material required for proper bonding of the thermoplastic material to the road surface or existing traffic marking.

Traffic stripes and pavement marking shall conform to the dimensions and details shown on California MUTCD. Any discrepancies on measurement of completed stripes to their respective California MUTCD details will be a pay deduct of their respective line item unit price. If the discrepancies are substantial, the traffic stripes must be removed and replaced.

The completed traffic stripes must have clean and well-defined edges without running or deformation, must be uniform, must be straight on tangent alignment and must be a true arc on curved alignment. The completed pavement markings must have clean and well-defined edges without running or deformation and must conform to the dimensions shown on the MUTCD standard. Minor variation maybe accepted at the Engineer's discretion.

The Contractor shall provide a qualified individual in-charge of quality-control during application operations who is not an active member of the installation crew. This requirement may be waived by the Engineer, if work results are satisfactory to the Engineer.

Thermoplastic traffic stripes and pavement markings shall conform to the provisions in Section 84-1, "General", and Section 84-2, "Thermoplastic Traffic Stripes and Pavement Markings," of the State Standard Specifications, and to these Special Provisions.

Material

Thermoplastic traffic stripes and pavement markings, where applicable, shall conform to the most current approved pre-qualified and tested signing and delineation materials and products list maintained by the California Department of Transportation. For this project, white and lead-free yellow Alkyd Resin Binder specification number **PTH-02ALKYD** (dated February 2009, or update) shall be used. The Contractor shall supply all material and provide the manifest of the material, which includes the manufacturing and/or shipping date.

Primer

If the striping is installed on asphalt-concrete surfaces, which have been paved more than two weeks, a primer specified by the manufacturer of thermoplastic material is to be used, and shall be applied as per the direction.

Striping

For pavement striping, use either **ribbon gun** or **extrusion dies** to install lines at a minimum thickness of 0.09 inches on the pavement surface in a melted state at a temperature of 400-440 °F.

The pavement surface to which thermoplastic material is applied shall be completely coated by the material and the voids of the pavement surface shall be filled.

Apply additional glass beads by drop-on or pressure spray methods at a uniform minimum rate of 0.72-0.92 lbs/square yard of markings. The Caltrans Specification Number for glass beads in Section 84-2, "Materials," of the Standard specifications is amended to read "8010-21C-22 (Type II)."

The bead shall be embedded approximately 60 percent for optimal retro-reflection and retention at a maximum striping truck speed of 8 mph. The Contractor shall adjust the striping truck speed so that the bead embedment is maintained at approximately 60 percent. The beads will likely pop out very quickly at less than 60 percent embedment and the light cannot enter the bead or return at 75-100 percent embedment.

84-1.03 REMOVAL OF EXISTING PAVEMENT STRIPING, MARKERS, AND MARKINGS

Legends, striping, markers, and markings that are to be removed by this contract shall conform to Section 15-2.02C, "Remove Traffic Stripes and Pavement Markings", of the Caltrans Standard Specifications and shall be removed by grinding or other City-approved method. All removed traffic stripes and pavement markings and excess material shall become the property of the Contractor and shall be disposed of in a legal and proper manner. Payment described in Section 15-2.02C(3) is not applicable to this contract.

Removal and disposal of existing traffic markings and excess material shall conform to Section 15, "Existing Highway Facilities," of the Caltrans Standard Specifications and as specified herein. Storm drain inlets adjacent to areas to be ground shall be protected from grindings, or any material or runoff entering the storm drain system.

84-1.04 PAVEMENT STRIPING AND MARKINGS

Thermoplastic traffic stripe (traffic lines) and pavement markings shall be applied in conformance with the provisions in Section 84, "Traffic Stripes and Pavement Markings," of the Caltrans Specifications and these Special Provisions.

Thermoplastic material shall be free of lead and chromium, and shall conform to the requirements in State Specification PTH-02ALKYD.

Retroreflectivity of the thermoplastic pavement markings shall conform to the requirements in ASTM Designation: D 6359-99. White thermoplastic pavement markings shall have a minimum initial retroreflectivity of 250 mcd·m⁻²·1x-1. Yellow thermoplastic pavement markings shall have a minimum initial retroreflectivity of 150 mcd·m⁻²·1x-1.

Thermoplastic pavement markings shall be applied at the minimum thickness and application rate as specified below. The minimum application rate is based on a solid stripe 4 inches in width.

Minimum Marking*	Minimum Application
Thickness (inches)	Rate (lb/ft)
0.098	0.34 lb/ft

*Minimum thickness for cross walk markings is 0.12 inches

Thermoplastic pavement markings shall be free of runs, bubbles, craters, drag marks, stretch marks, and debris.

Full compensation for furnishing all labor, materials, tools equipment, and incidentals as required and doing all work involved in installing various thermoplastic pavement striping and marking, complete in place, will be considered as included in the contract square foot price paid for in placing each type of thermoplastic pavement marking, and no additional compensation shall be allowed therefore.

Thermoplastic Traffic Stripe (Sprayable)

Sprayable thermoplastic traffic stripes (traffic lines) shall be applied in conformance with the provisions in Section 84, "Traffic Stripes and Pavement Markings," of the Standard Specifications and these special provisions.

Sprayable thermoplastic material shall be free of lead and chromium, and shall conform to the requirements in State Specification NO. PTH-02SPRAY.

Retroreflectivity of the sprayable traffic stripes shall conform to the requirements in ASTM Designation: D 6359-99. White sprayable thermoplastic traffic stripes shall have a minimum initial retroreflectivity of $250 \text{ mcd}\cdot\text{m}^{-2}\cdot\text{lx}^{-1}$. Yellow sprayable thermoplastic traffic stripes shall have a minimum initial retroreflectivity of $150 \text{ mcd}\cdot\text{m}^{-2}\cdot\text{lx}^{-1}$.

At the option of the Contractor, permanent traffic striping and pavement marking tape conforming to the provisions in "Prequalified and Tested Signing and Delineation Materials" of these special provisions may be placed instead of the sprayable thermoplastic traffic stripes. Permanent tape, if used, shall be installed in conformance with the manufacturer's specifications.

Where striping joins existing striping, as shown on the plans, the Contractor shall begin and end the transition from the existing striping pattern into or from the new striping pattern a sufficient distance to ensure continuity of the striping pattern.

Sprayable thermoplastic material shall be applied to the pavement at a minimum thickness of 0.098 inches and a minimum rate of 0.34 lb/ft. The minimum application rate is based on a solid stripe of 4 inches in width.

Full compensation for furnishing all labor, materials, tools equipment, and incidentals as required and doing all work involved in installing various thermoplastic pavement striping, complete in place, will be considered as included in the contract lineal foot price paid for placing each type of thermoplastic pavement striping, and no additional compensation shall be allowed therefore.

84-1.05 PAVEMENT MARKERS

Pavement markers shall be placed in conformance with the provisions in Section 85, "Pavement Markers," of the Caltrans Specifications and these Special Provisions.

The Contractor shall furnish the Engineer certificates of compliance.

Retroreflective pavement markers shall be marked as abrasion resistant on the body of the markers.

Retroreflective pavement markers placed in pavement recesses shall be cemented with a flexible, polymer-modified, hot-melt asphaltic adhesive conforming to the following requirements:

Specification	ASTM Designation	Requirement
Penetration, mm, 100 g, 5 seconds, 25°C	D 5	3.0 Maximum
Softening Point, °C	D 36	93 Minimum
Brookfield Thermosel Viscosity, Pa s, No. 27 Spindle, 20 RPM, 191°C	D 4402	2.5 - 6
Ductility, cm, 5 cm/min, 25°C	D 113	15 Minimum
Ductility, cm, 1 cm/min, 4°C	D 113	5 Minimum
Flexibility	D 3111 ^{1, 2, 3, 4}	No breaks or cracks
Notes:		
Modify ASTM Designation: D 3111, Paragraph 6, to "The test apparatus consists of a mandrel one inch in diameter by 3 inch to 6 inch in length, supported at each end."		
Modify ASTM Designation: D 3111, Paragraph 7, to "The test specimen dimensions are one inch wide, 6 inch long, and 1/8 inch thick."		
Modify ASTM Designation: D 3111, Paragraph 8, to "Condition the test specimens and apparatus for 4 hours at 19° F before testing."		
Modify ASTM Designation: D 3111, Paragraph 10.5, to "Bend the test specimens 90° over the mandrel at a uniform rate in 10 seconds while maintaining intimate contact with the mandrel."		

Testing of adhesive bond strength will be performed on sandblasted concrete brick surface in conformance with the requirements in California Test 669 and these special provisions. The concrete brick surface will be sandblasted in conformance with the requirements in California Test 423. The test plugs of 2-inch diameter will be conditioned at 221° F for a minimum of 2 hours before bonding to the sandblasted concrete surface. The adhesive sample will be heated to the application temperature as recommended by the manufacturer and a sample of 3 inch diameter in area will be poured onto the sandblasted concrete surface. The heated plug will immediately be pressed onto the puddle of hot adhesive to squeeze out excess adhesive. The excess adhesive extruding from under the plug will be removed. The assembly will be allowed to cure for 24 hours at 73°F ±3.6°F and then be tested to bond failure at a crosshead speed of 2 inches per minute. The reported peak load and the bond strength value will be the average of 3 tests, respectively. The same bond strength test will be performed on retroreflective pavement markers. Instead of placing the heated adhesive sample on the sandblasted concrete surface, it will be placed on the bottom of the pavement markers.

Pavement markers shall not be placed on new asphalt concrete surfacing or seal coat until the surfacing or seal coat has been opened to public traffic for a period of not less than 7 days when hot melt bituminous adhesive is used. Existing pavement markers, when no longer required for traffic lane delineation, shall be removed and disposed of as directed by the Engineer.

Pavement markings shall conform to the provisions in Sections 84-1.01, "General," and 84-3, "Painted Traffic Stripes and Pavement Markings," of the Caltrans Specifications and these Special Provisions.

Any necessary cat tracks, dribble lines, and layout work as shown on the Plans, as specified in these Specifications and the Special Provisions, as directed by the Engineer shall be considered as included in the price paid for the various items of work, and no separate payment will be made for this work.

Payment for pavement markers shall be considered as included in the price paid for the various pavement striping items of work, and no additional compensation will be allowed therefore.

Contractor shall install blue raised reflective pavement markers to mark fire hydrant locations. The blue reflective pavement markers should be placed 2 feet from the centerline stripe or approximately center of the pavement where there is no centerline stripe on the side nearest the fire hydrant. Full compensation for furnishing and placing of the blue raised reflective pavement markers shall be considered as included in the prices paid for the various striping items of work and no separate payment will be made.