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Public Works Department – Engineering Division

May 1, 2024

ADDENDUM NO. 2

PROJECT 2040, 2023/24 PAVEMENT MANAGEMENT

NOTICE TO BIDDERS:

The following clarifications, amendments, additions and/or deletions as set forth herein shall apply to the above project contract documents and shall be made a part thereof and shall be subject to all the requirements thereof as though originally specified and/or shown. Submitters shall assure themselves that all addendum changes have been incorporated into their proposal.

A. ADDITIONS/DELETIONS

1. **Additions** to Specification 32 12 17
   The additions were made to the resurfacing specification section 32 12 17 – 19 and 32 12 17 – 20. See attachment A for revised specification 32 12 17.

2. **Additions** to Specification 01 31 10
   Section 1.2 (B) was adjusted in response to question 1 below. The new noise range was increased to meet the needs of this project. See attachment B for revised specification 01 31 10.

B. CLARIFICATIONS/QUESTIONS

Please be advised of the following clarifications to the contract documents:

1. Question: “Spec section 01 31 10 – Sound control is specified not to exceed 60dBA during hours of 7am-10pm. 60 dBA is equivalent to “normal conversation”. All equipment will exceed this spec even with additional mufflers. Please clarify this spec.”

   Answer: *The Specification language setting a maximum at 60 dBA has been adjusted to meet the needs of the project.*

2. Question: “Bid Item #10 Base Repair is quantified on per SF basis. However, plan sheet CD-2 detail 8 indicates base repair to consist of additional ‘1.0”+/- & VARIES’. There is no way to quantify the volume of additional off-haul and subsequent tonnage of ¾” HMA to pave back for this item based on the detail as shown. Please provide a specific thickness that we should use for the digout depth to ensure equal basis of bids.”

Answer: *The contractor is to assume the approximate asphalt thickness for base repair is 3 inches total. The 1/2-in aggregate AC layer is 2 inches thick, and the 3/4-in aggregate AC layer is 1 inch thick.*

BIDDERS MUST SIGN AND ATTACH one (1) copy of this addendum document to the proposal as acknowledgment of receipt of these instructions and that said addendum was properly evaluated in the proposal.

ANY PROPOSAL NOT IN COMPLIANCE WITH THIS ADDENDUM MAY BE REJECTED.

Issued: 05/01/24

Dayne Johnson, P.E.
Assistant City Engineer

ADDENDUM NO. 2, PROJECT 2040, 2023/24 PAVEMENT MANAGEMENT is hereby acknowledged and was considered in this Project Proposal.

Bidder's Signature _____ Date _____

Firm Name _____

Mailing Address _____

City/State/Zip+4 _____

Attachment A

SECTION 32 12 17 - ASPHALT PAVEMENT REHABILITATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Asphalt materials.
2. Aggregate materials.
3. Type A HMA Asphalt paving
4. Tack coat
5. Cold Planing
6. Geosynthetic pavement interlayer
7. Crack treatment
8. Adjusting iron castings to grade
9. Surface slurry.
10. Micro-surfacing

B. Related Requirement:
1. Section 32 11 23 - Aggregate Base Courses: Compacted subbase for paving.
2. Section 33 05 13 - Manholes and Structures

1.2 PRICE AND PAYMENT PROCEDURES

A. Section 01 29 00 - Payment Procedures Contract Sum/Price

1.3 REFERENCE STANDARDS

A. American Association of State Highway and Transportation Officials:

1. AASHTO M17 - Standard Specification for Mineral Filler for Bituminous Paving Mixtures.
2. AASHTO M29 - Standard Specification for Fine Aggregate for Bituminous Paving Mixtures.
3. AASHTO M140 - Standard Specification for Emulsified Asphalt.
4. AASHTO M208 - Standard Specification for Cationic Emulsified Asphalt.
5. AASHTO M288 - Standard Specification for Geotextile Specification for Highway Applications.
6. AASHTO M320 - Standard Specification for Performance-Graded Asphalt Binder.

7. AASHTO M324 - Standard Specification for Joint and Crack Sealant s, Hot Applied, for Concrete and Asphalt Pavements.
8. AASHTO MP1a - Standard Specification for Performance-Graded Asphalt Binder.
9. AASHTO T283-14 – Standard Method of Test for Resistance of Compacted Asphalt Mixtures to Moisture-Induced Damage.
10. AASHTO T324 (Modified) -Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA).

B. Asphalt Institute:

1. AI MS-2 - Mix Design Methods for Asphalt Concrete and Other Hot- Mix Types.
2. AI MS-19 - Basic Asphalt Emulsion Manual.
3. AI SP-2 - Superpave Mix Design.

C. State Standard Specification:
1. Section 39 Asphalt Concrete.
2. Section 92 Asphalt Binders.
3. Section 94 Asphaltic Emulsions
4. Section 96 Geosynthetics

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Job Mix Formula (JMF): Except for the Hot Mix Asphalt (HMA) to be used in miscellaneous areas (median island areas not including inside shoulders, island areas, sidewalk, gutters, ditches, over side drains and aprons at end of drainage structures) and dikes, submit the proposed JMF for Type A HMA.

C. The JMF must be submitted on the Contractor Job Mix Formula Proposal form along with:
1. Mix design documentation on Contractor’s Hot Mix Asphalt Design data form dated with 12 months of submittal.
2. Safety Data Sheets (SDS) for the following:
   a. Asphalt Binder
   b. Supplemental fine aggregate except fines from dust collectors
   c. Antistrip additives.

D. The Contractor’s Hot Mix Asphalt Design Data form must show documentation on aggregate quality.

E. Submit QC test results for Reclaimed Asphalt Pavement (RAP) gradation with the combined aggregate gradation within 2 business days of taking RAP samples during Type A HMA production.

F. Contractor shall submit a new JMF if there are changes to any of the following:
   1. Target asphalt binder percentage greater than ±0.2 percent.
   2. Asphalt binder supplier
   3. Combined aggregate gradation
   4. Aggregate sources
   5. Liquid antistrip producer or dosage
   6. Average binder content in a new processed RAP stockpile by more than ±2.0 percent from the average RAP binder content reported on Contractor Hot Mix Asphalt Design Data form.
   7. Average maximum specific gravity in a new processed RAP stockpile by more than ±0.060 percent from the average maximum specific gravity value reported on Contractor's Hot Mix Asphalt Design Data form.
   8. Any material in the JMF.

G. Submit a current asphalt concrete mix design from two separate sources (primary source and backup source) for asphalt concrete proposed to be used.

H. For Capital Improvement Projects (CIP) projects, the Contractor shall provide delivery tickets to the City at the time of delivery of each load of product, including asphalt concrete, tack coat, sealant, and paving reinforcement fabric. Each delivery ticket shall include or be accompanied by appropriate batch information produced by the batching plant or factory of origin and information stating the mix or model number, total yield in tons, gallons, or square feet, and time, date, and location of delivery.

I. Any asphalt concrete rejected by the Project Manager shall be deducted from the total quantity of asphalt concrete tonnage.

J. Reference Plan: Contractor shall have a walk through with Engineer for all installed underground boxes and/or iron elements, ten (10) working days prior to any pavement repair. Contractor shall submit a reference plan (RP) for utility facilities adjustment prior to covering or lowering any utility facilities three (3) working days prior to any pavement repair.

K. Submit a laboratory report of test results and a proposed mix design 10 days before starting placement of slurry seal. 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. Proportions of the following materials based on the aggregate's dry weight:
      a. Aggregate
      b. Filler determined from tests, minimum and maximum
      c. Water, minimum and maximum
      d. Asphalt solid content
      e. Set control agent
   3. Comparison of slurry seal test results to the specified values

L. Submit a laboratory report of test results and a proposed mix design 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. Proportions of the following materials based on the aggregate's dry weight:
      a. Aggregate
      b. Water, minimum and maximum
      c. Additives
      d. Mineral filler, minimum and maximum
      e. Micro-surfacing emulsion residual asphalt content, minimum and maximum
   3. Recommend changes to the following proportions based on heating the mixture to 100-degree F and mixing for 60 seconds:
      a. Water
      b. Additives
      c. 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 C29.

1.5 QUALITY CONTROL PLAN

A. The Contractor shall submit a Quality Control (QC) plan for HMA.

B. The QC plan shall describe the organization and procedures for:

   1. Controlling HMA quality characteristics
   2. Taking samples, including sampling locations.
   3. Establishing, implementing, and maintaining QC
   4. Determining when corrective actions are needed.
   5. Implementing corrective actions.
   6. Using methods and materials for backfilling core locations.

C. The QC plan must address the elements affecting HMA Quality, including

   1. Aggregates
   2. Asphalt binder
   3. Additives
   4. Productions
   5. Paving

D. For CIP projects, the Contractor shall permit the City's certified testing laboratory to take samples of the aggregate and asphalt emulsion used in the project at the City's discretion. Gradation and sand equivalent tests may be run on the aggregate and residual asphalt tests on the emulsion. City will compare the test

results with this Section and notify the Contractor if any test fails to meet specifications.

E. The Contractor shall furnish all tools and equipment and employ sufficient trained personnel to operate all equipment and perform all handwork efficiently and skillfully.

1.6 AGGREGATES TESTING:

A. Contractor shall test the quality of aggregates under the test methods and frequencies shown in Section 32 12 16 – Asphalt Paving.

1.7 AMBIENT CONDITIONS

A. Refer to Section 32 12 16 – Asphalt Paving for ambient air and surface temperatures for spreading HMA.

PART 2 - PRODUCTS

2.1 ASPHALT PAVING

A. Asphalt Concrete shall conform to Section 39, “Asphalt Concrete”, of the State Standard Specifications and the City Standard Specifications.

B. Asphalt Concrete for surfacing shall be Hot Mix Asphalt (HMA) Type A.

C. Asphalt Materials:

1. Asphalt Binder: Asphalt Binder must comply with Section 92, “Asphalt Binders”, of the State Standard Specifications.
   a. For a leveling course, the grade of the asphalt binder for the Hot mix asphalt (HMA) must be PG 64-10 or PG 64-16.
   b. For Miscellaneous areas, and asphalt dikes the grade of the asphalt binder for the Hot mix asphalt (HMA) must be PG 70-10. Minimum asphalt binder content must be 6.40 percent for 3/8” maximum size aggregate.
2. Tack Coat: Diluted cationic emulsified asphalt per Section 94, “Asphaltic Emulsion”, of the State Standard Specification. Asphaltic emulsion shall be Grade CSS1h setting type.
3. Reclaimed Asphalt Pavement (RAP): Processed material obtained by milling or full depth removal of existing asphalt paving.
4. Oil

D. Reclaimed Asphalt Pavement (RAP) aggregate may be substituted for a part of virgin aggregate in a quantity not to exceed fifteen percent (15%) by weight of the aggregate blend.
   1. RAP shall conform to Section 39-2.02A(3)(c), "Reclaimed Asphalt Pavement", of the State Standard Specifications.
   2. During Type A HMA production, sample RAP twice daily and perform QC testing for:
      a. Aggregate gradation at least once a day under California Test 384.
      b. Moisture content at least twice a day.
   3. If RAP is used, RAP quality requirements must be as shown in the following table.

Reclaimed Asphalt Pavement Quality

Quality Characteristic	Test method	Requirement
Binder Content (% within the average value reported)	AASHTO T 164	± 2.00
Specific Gravity (within the average value reported)	AASHTO T 209	± 0.06

E. Aggregate Materials: All aggregate materials shall conform to the aggregate material specifications specified in Section 32 12 16 – Asphalt Paving.

2.2 TYPE A HMA PRODUCTION

A. Contractor shall test the quality characteristics of Type A HMA under the test methods and frequencies shown in Section 32 12 16 – Asphalt Paving.

2.3 TYPE A HMA ACCEPTANCE

A. For Type A HMA quality requirements, see Type A HMA acceptance specified in Section 32 12 16 – Asphalt Paving.

2.4 GEOSYNTHETIC PAVEMENT INTERLAYER:

A. Geosynthetic pavement interlayer shall conform to Geosynthetic pavement interlayer specified in Section 32 12 16 – Asphalt Paving.

2.5 CRACK TREATMENT:

A. Crack sealant must comply with Section 37-6, "Crack Treatments", of the State Standard Specifications.

B. The pavement crack treatment material must comply with the requirements for Type 1 or Type 2 crack treatment material shown in the following table:

Crack Treatment Material

		Requirements	
Quality characteristic[a]	**Test method[b]**	**Type 1**	**Type 2**
Softening Point (min, °C)	ASTM D36/D36M	102	96
Cone Penetration at 77-degrees F (max)	ASTM D5329	35	40
Resilience at 77-degre F, unaged (%, min)	ASTM D5329	20-60	25-65
Flexibility[c] (°C)	ASTM D3111	0	0
Tensile adhesion (min, %)	ASTM D5329	300	400
Specific Gravity (max.)	ASTM D70	1.25	1.25
Asphalt Compatibility	ASTM D5329	Pass	Pass
Sieve test (% passing)	See note d	100	100

[a]Cold-applied crack treatment material residue collected under ASTM D6943, Method B and sampled under ASTM D140 must comply with the grade specifications.

[b]Except for viscosity, cure each specimen at a temperature of 23 ± 2 °C and a relative humidity of 50 ± 10 percent for 24 ± 2 hours before testing.

[c]For the flexibility test, the specimen size must be 6.4 ± 0.2 mm thick by 25 ± 0.2 mm wide by 150 ± 0.5 mm long. The test mandrel diameter must be 6.4 ± 0.2 mm. The bend arc must be 180 degrees. The bend rate must be 2 ± 1 seconds. At least 4 of 5 test specimens must pass at the specified test temperature without fracture, crazing, or cracking.
[d]For hot-applied crack treatment, dilute with toluene and sieve through a no. 8 sieve. For cold-applied crack treatment, sieve the material as-received through a no. 8 sieve. If the manufacturer provides a statement that added components passed the no. 16 sieve before blending, this requirement is void.

C. The material shall be capable of being melted and applied to cracks and joints at temperatures below 400-degrees F. When heated, it shall readily penetrate cracks 1/4-inch wide or wider.

D. Crack treatment material must be delivered to the job site with manufacturer's name, production location, brand or trade name, designation, crack treatment

trade name, batch number, maximum heat temperature and expiration date for cold application only.

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

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

Sand Gradation

Sieve Size	Percent passing
No. 4	100
No. 50	0-30
No. 200	0-5

2.6 SLURRY SEAL

A. Slurry Seal shall be in conformance with Section 37-3 – Slurry Seal and Micro-Surfacing of the State Standard Specifications.

B. Applying slurry seal consists of spreading a mixture of asphaltic emulsion, aggregate, set-control additives, and water on a surface or pavement.

C. Applying Crack Seal to the roadway is required before applying slurry seal. Crack Seal work is incidental to Slurry Seal.

D. Aggregates for slurry seal and micro-surfacing must comply with the gradation requirements shown in the following table:

Sand Gradation

Sieve Size	Percent passing (Class II)
3/8”	100
No. 4	94-100
No. 8	65-90
No. 16	40-70
No. 30	25-50
No. 200	5-15

E. Aggregate must be rock dust or sand such as plaster sand. Aggregate larger than No. 50 sieve must be 100 percent crushed rock. Aggregate must be free from vegetable matter, deleterious substances, caked or clay clamps, and oversized particles.

F. The mix design must have the percent of asphaltic emulsion, based on percentage by weight of the dry aggregate, within the range of 12%-18% for Class II aggregate type.

G. Minimum sand equivalent per California Test 217 and minimum durability index and California Test 229 shall be 55 for Class II Aggregate.

2.7 MICRO-SURFACING

A. Micro-surfacing shall be in conformance with Section 37-3, “Slurry Seal and Micro-surfacings”, of the State Standard Specifications.

B. Applying Micro-surfacing consists of spreading a mixture of micro-surfacing emulsion, water, additives, mineral filler and aggregate on the pavement.

C. Applying Crack Seal to the roadway is required before micro-surfacing. Crack Seal work is incidental to Micro-surfacing.

D. Micro-surfacing mix design must have the material proportion limits shown in the following table:

Micro-surfacing Mix Design Proportion Limits

Material	Proportion Limits
Micro-surfacing emulsion residual asphalt	5.5%-9.5% of aggregate by weight
Water and additives	No Limit
Mineral Filler	0%-3% aggregate dry weight

E. Aggregate for micro-surfacing shall be Type II. The aggregate shall be 100% crushed with no rounded particles, volcanic in origin and black in color (Black Rock Only). The use of gray or light-colored aggregate shall not be allowed. The Contractor shall specify in the bid proposal the name and location of the black rock aggregate quarry and shall provide certification at the preconstruction conference that the rock was crushed a minimum of 90 days prior. The Contractor shall submit samples of the black rock aggregate to the Engineer for review and acceptance. Aggregate, prior to the addition of micro-surfacing emulsion, shall conform to the provisions and these Technical Specifications.

F. Aggregate for micro-surfacing except mineral filler must comply with the requirements shown in the following table:

Micro-surfacing aggregate

Quality Characteristic	Test Method	Requirement
Sand equivalent (min.)	California Test 217	65
Durability index (min.)	California Test 229	65
Percentage of crushed particles (min., %)[a]	California Test 205	95

Los Angeles Rattler Loss at 500 revolutions (max, %)[b]	California Test 211	35
[a]Crushed particles must have at least 1 fractured face [b]California Test 211 must be performed on the aggregate before crushing.		

G. Micro-surfacing emulsion must be a homogeneous mixture of asphalt, polymer, and emulsifier solution and shall conform to Section 37-3.03A(4)(b)(ii), “Micro-surfacing Emulsion”, of the State Standard Specifications.

H. If Portland cement is used as mineral filler, it must be any combination of Type I, Type II or Type II cement.

2.8 SOURCE QUALITY CONTROL

A. Section 01 45 00 - Quality Control: Testing, inspection and analysis requirements.

B. Test samples in accordance with AI MS-2.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 70 00 - Execution and Section 01 77 00 - Closeout Requirements: Requirements for installation examination.

B. Verify utilities indicated under paving are installed with excavations and trenches backfilled and compacted.

C. Verify compacted aggregate base is dry and ready to support paving and imposed loads as specified in the project Geotechnical Report or as directed by the Project Manager.

1. Proof roll subbase with minimum two perpendicular passes to identify soft spots.
2. Remove soft subbase and replace with compacted fill.

D. Verify with a licensed land surveyor that the gradients and elevations of base are correct.

E. Verify drainage grates and frames, and manhole frames are installed in correct position and elevation.

3.2 DEMOLITION

A. Saw cut and notch existing paving as indicted on Drawings. Before removing any portion of an asphalt concrete facility, make a sawcut full depth to a true line along the limits of the removal area.

B. Clean existing paving to remove foreign material, excess joint sealant and crack filler from paving surface.

C. Repair surface defects in existing paving to provide uniform surface to receive new paving.

D. Where replace asphalt concrete surfacing is shown, remove the full depth of the existing asphalt concrete surfacing and replace with HMA.

E. Before removing asphalt concrete, outline the replacement areas and cut neat lines with a saw or grind to full depth of on the existing asphalt concrete. Do not damage asphalt concrete and base that is to remain in place.

F. Any excavations of the base material beyond the specified plane, shall be replaced with HMA. No additional compensation will be allowed for HMA placed beyond the specified plane.

G. Do not use a material transfer vehicle for replacing asphalt concrete surfacing.

H. When base and surfacing are described to be removed, remove base and surfacing to a depth of at least 6 inches below the grade of the existing surfacing. Backfill resulting holes and depressions.

I. All material removed shall become the property of the Contractor and shall be disposed of in a legal manner.

3.3 COLD PLANING ASPHALT CONCRETE PAVEMENT

A. Cold planning asphalt concrete pavement includes the removal of pavement markers, traffic stripe, and pavement markings within the area of cold planning.

B. Cold plane existing asphalt paving to a minimum depth that results in a new HMA pavement section which is minimum 2-inch thick as shown on the Drawings. Contractor shall make a sawcut after cold planing at the conform edges to allow for a minimum 2-inch vertical surface at the conforms.

C. HMA for temporary tapers must be of the same quality that is used for the HMA overlay.

D. Do not use a heating device to soften the pavement.

E. The cold planning machine must be:

1. Equipped with a cutter head width that matches the planing width unless a wider cutter head is authorized
2. Equipped with automatic controls for the longitudinal grade and transverse slope of the cutter head and:
    a. If a ski device is used, it must be at least 30 feet long, rigid, and a 1-piece unit. The entire length must be used in activating the sensor.
    b. If referencing from existing pavement, the cold planing machine must be controlled by a self-contained grade reference system. The system must be used at or near the centerline of the roadway. On the adjacent pass with the cold planing machine, a joint matching shoe may be used.
3. Equipped to effectively control dust generated by the planing operation.
4. Operated such that no fumes or smoke is produced.

F. Replace broken, missing, or worn machine teeth.

G. If the Contractor does not complete placing the HMA surfacing before opening the area to traffic, the Contractor must:
1. Construct a temporary HMA taper to the level of the existing pavement
2. Place HMA during the next work shift
3. Submit a corrective action plan that shows that the Contractor will complete cold planing and placement of HMA in the same work shift. Do not restart cold planing activities until the corrective action plan is authorized.

H. The completed surface of the planed pavement must not vary more than 0.02 foot when measured with a 12-foot straightedge parallel with the centerline. With the straightedge at right angles to the centerline, the transverse slope of the planed surface must not vary more than 0.03 foot.

I. Where lanes are open to traffic, the drop-off between adjacent lanes must not be more than 0.15 foot.

J. Remove cold planed material concurrently with planing activities such that the removal does not lag more than 50 feet behind the planer. All materials removed shall become the property of the Contractor and shall be disposed of in a legal manner.

K. The Contractor shall be responsible for maintaining the street in a clean condition during the course of the cold planing or grinding operations using a vacuum sweeper.

L. If a drop-off between the existing pavement and the planed areas at transverse joints cannot be avoided before opening to traffic, construct a temporary HMA taper. The HMA temporary taper must be:
1. Placed to the level of existing pavement and tapered on a slope of 30:1 (horizontal: vertical) or flatter to the level of the planed areas.
2. Compacted by any method that will produce a smooth riding surface.

M. Completely remove temporary tapers before placing permanent surfacing.

N. Remove and replace any traffic signal detector loops and loop conductors including the loop conductors leading into the detector box. For City owned traffic signals where traffic signal detector loops are present, the Contractor shall notify the Project Manager a minimum of one (1) week prior to beginning work near the loops. For Caltrans traffic signals the Contractor shall notify Caltrans in conformance with Caltrans requirements.

3.4 CONSTRUCTION

A. Refer to Section 32 12 16 - Asphalt Paving for construction of asphalt paving.

3.5 SPREADING AND COMPACTING EQUIPMENT

A. Refer to Section 32 12 16 - Asphalt Paving for construction of compaction of asphalt paving.

3.6 MATERIAL TRANSFER VEHICLE:

A. Refer to Section 32 12 16 - Asphalt Paving for material transfer vehicle.

3.7 METHOD COMPACTION EQUIPMENT:

A. Refer to Section 32 12 16 - Asphalt Paving for material method compaction equipment.

3.8 SURAFCE PREPARATION:

A. Refer to Section 32 12 16 - Asphalt Paving for surface preparation and tack coat.

3.9 GEOSYNTHETIC PAVEMENT INTERLAYER

A. Where shown on Drawings, place geosynthetic pavement interlayer over a coat of asphalt binder and in compliance with the manufacturer's instructions. Do not place the interlayer on a wet or frozen surface.

B. Before placing the interlayer and asphalt binder:
   1. Repair cracks 1/4-inch and wider, spalls, and holes in the pavement. Repairing cracks is not change order work.
   2. Clean the pavement of loose and extraneous material.

C. Immediately before placing the interlayer, apply 0.25 ± 0.03 gal of asphalt binder per square yard of interlayer or until saturated. Apply asphalt binder the width of the interlayer plus 3 inches on each side. At an overlap, apply asphalt binder on the lower interlayer the same overlap distance as the upper interlayer.

D. Align and place the interlayer with no overlapping wrinkles, except a wrinkle that overlaps may remain if it is less than 1/2-inch thick. If the overlapping wrinkle is more than 1/2-inch thick, cut the wrinkle out and overlap the interlayer no more than 4 inches.

E. Overlap the interlayer borders between 4 to 6 inches. In the direction of paving, overlap the following roll with the preceding roll at any break.

F. Use rolling equipment to correct distortions or wrinkles in the interlayer.

G. If asphalt binder tracked onto the interlayer or brought to the surface by construction equipment causes interlayer displacement, cover it with a small quantity of HMA.

H. Before placing HMA on the interlayer, do not expose the interlayer to:
   1. Traffic except for crossings under traffic control and only after you place a small HMA quantity.
   2. Sharp turns from construction equipment
   3. Damaging elements.

I. Pave HMA on the interlayer during the same work shift. The minimum HMA thickness over the interlayer must be 0.17-foot thick including at pavement conforms as shown on the drawings.

3.10 LONGITUDINAL JOINTS

A. Refer to Section 32 12 16 - Asphalt Paving for longitudinal joints.

3.11 WIDENING EXISTING PAVEMENT

A. If widening existing pavement, construct new pavement structure to match the elevations of the existing pavement's edge before placing HMA over the existing pavement.

3.12 COMPACTION

A. Refer to Section 32 12 16 - Asphalt Paving for compaction.

3.13 PAVEMENT CRACK SEALING

A. Prior to overlaying existing pavements, crack sealing operations shall be performed in accordance with the following:

1. Crack sealing shall be performed on all pavement cracks 1/4-inch wide or wider. Cracks between 1/4-inch and 1/2-inch wide shall be routed to a depth and width of 1/2-inch prior to sealing.
2. Fill or repair cracks wider than 1-inch or as shown on the Drawings.
3. Crack sealing shall be performed after any required pavement repair or grinding operations and prior to placing flexible pavement coatings, pavement reinforcing fabric, or overlay.
4. All pavement cracks not routed shall first be treated for weed prevention.
5. For hot-applied crack treatment material, rout cracks or sawcut to form a reservoir.
6. Immediately prior to performing crack sealing, the cracks shall be cleaned by the use of oil-free compressed air at a pressure of at least 90 psi such that all vegetation, dirt, and other objectionable materials are removed. The compressed air shall be filtered of moisture and oils. Under damp conditions, a hot compressed air lance shall be utilized to dry the cracks as well. The hot air lance must not apply flame directly on the pavement.
7. Crack sealant material shall conform to the provisions of PART 2 “Products” of this Section and shall be applied at the temperature and rate recommended by the manufacturer.
8. Apply crack treatment with a nozzle inserted into the crack. Fill the crack flush. If after 2 days the crack treatment is more than 1/4-inch below the specified level, the sealant fails, or the crack re-opens, re-treat the crack.
9. Extensively cracked pavement areas shall not be crack sealed unless specifically directed by the Project Manager. This is necessary to avoid interference with proper adhesion of the flexible pavement coatings, pavement reinforcing fabric, or overlay, and to avoid subsequent asphalt bleeding on the new surface. Where the Project Manager determines excessive coating or thickness of pavement crack sealant by the Contractor, the Contractor shall perform the necessary pavement base repairs at the Contractor’s expense to correct the problem prior to placement of any flexible pavement coating, pavement reinforcing fabric, or overlay.
10. Immediately remove crack treatment material that is spilled or deposited on the pavement surface.
11. Crack seal areas shall be protected from traffic until the material has sufficiently cured and does not track. Any damage or loss of material from freshly placed crack seal material shall be replaced by the Contractor.
12. Before opening to traffic, apply sand or the manufacturer’s recommended detackifying agent to tacky crack treatment material on the traveled way. Sweep up excess sand before opening to traffic.

3.14 ADJUST IRON CASTINGS TO GRADE

A. Before applying slurry seal or micro-surfacing, cover manholes, valves and monument covers, grates or other exposed facilities located within the area of application using plastic or oil resistant construction paper secured by tape or adhesive to the facility being covered. Reference the covered facilities with enough control points to locate the facilities after application of the seal coat.

B. All Iron Castings shall be set to finish grade after placing the asphalt concrete. The adjustment of structures and monuments to grade shall be in conformance with Section 15, "Existing Facilities," of the State Standard Specifications and this Section.

C. When streets are overlayed unless deemed unsuitable by the Project Manager, existing frames and covers shall be salvaged and re-used. All iron castings damaged during construction shall be replaced by the Contractor with new iron castings at the Contractor's expense. Replacement iron castings for City utility structures shall be replaced in conformance with the appropriate technical section. Replacement iron castings for other Agency utility structures shall be replaced in conformance with the appropriate Agency requirements.

D. All water valve covers shall be exposed on the same day in which they are covered by resurfacing operations.

E. All maintenance hole covers shall be raised no later than 2 working days after resurfacing is placed, and shall be patch-paved with asphalt concrete within 2 working days after being raised.

F. Tops of frames shall be set flush with finish grade. Frames which are not flush with finish grade shall be re-adjusted by the Contractor at the Contractor's expense.

G. After adjusting frames Contractor shall ensure all covers are removable and seat properly when replaced. For new iron castings the new covers shall not rock.

H. Hand mixing of concrete for use in raising iron castings to grade will be allowed. Concrete shall be placed and thoroughly consolidated in conformance with Section 32 13 13 - Concrete Surface Improvements.

I. The contractor shall place a false bottom in manholes and valve boxes prior to starting any work. The contractor is to remove any debris with a vacuum cleaner and remove the false bottom after paving. False bottom is to be constructed of 1" marine grade moisture-resistant plywood or City approved equal. The plywood is cut to a circle or otherwise shaped to fit the bottom of the manhole or valve box and then cut in half. The false bottom is then placed in the manhole or valve box with the seam crossing the flow or in such a manner to protect the sewer system from any debris. False bottom is to be placed on blocks at a minimum of 1" above all inlets to the manhole. False bottom shall be connected to the blocks via nails

or staples to prevent the blocks from falling into the flow. Blocks shall not obstruct any part of the flow. All debris shall be removed from manhole prior to constructing false bottom. All debris shall be removed from manhole each time the manhole is worked on. False bottoms must be approved by the City prior to installations.

J. Asphalt concrete patch paving shall be 1/2" maximum asphalt concrete placed over a tack coat. Patch paving may be placed by hand using a vibratory plate compactor or roller in conformance with this Section.

3.15 SLURRY SEAL & MICRO-SURFACING

A. Proportion slurry seal ingredients in compliance with the authorized mix design. Proportion and blend different aggregate types before adding other ingredients. After proportioning, the slurry seal mixture must be workable.

B. Proportion the micro-surfacing materials using the authorized mix design. Field conditions may require adjustments to the proportions during construction. Obtain Project Manger's written authorization before adjusting proportions.

C. Before placing slurry seal or micro-surfacing, clean the pavement surface by removing loose particles of extraneous materials, including paving and dirt. Use any nondestructive methods, such as flushing and sweeping, cleaning any oil spots.

D. Before placing slurry seal or micro-surfacing, Crack Seal the pavement surface.

E. If the slurry seal and micro-surfacing activities affect access to public parking, residential property or commercial property, business; notify residents, businesses, and utility companies at least 48 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. Be authorized by the Project manager
   5. Have an emergency contact information for the Contractor.

F. Before starting slurry seal and 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. Signs when no longer required shall be removed.

G. Place slurry seal and micro-surfacing of both the pavement and air temperatures are at least 50 degrees F. Do not place Slurry or micro-surfacing if either the pavement or air temperature is below 50-degree F and falling. The expected high temperature must be at least 65 degrees F within 24 hours after placement.

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

I. Longitudinal joint must correspond with lane lines. Spread slurry in full lane widths.

J. Longitudinal and transverse joints must be uniform, straight, neat in appearance, butt-type joints, without material buildup, and without uncovered areas.

K. Spread slurry seal uniformly within the spread rate range of 10 to 15 lbs. of dry aggregate per square yard for Class II aggregate. Do not spot, rehandle or shift the mixture.

L. Coat the pavement surface with CSS grade asphaltic emulsion mixed with additional water. The ratio of water to asphaltic emulsion must be 3 to 1. Apply the tack coat at a rate from 0.08 to 0.15 gal/sq. yd.

M. The slurry seal mixture must be uniform and homogenous after spreading, and there must not be separation of the emulsion and aggregate after setting.

N. The slurry seal surface must be cured to allow traffic without pilot cars within 1 hour after placement. The slurry seal must not show bleeding, raveling, separation, or other distresses for 15 days after placing.

O. Protect the slurry seal from damage until it has cured and will not adhere or picked up by vehicle tires.

P. Before micro-surfacing, fog the roadway surface with water ahead of the spreader box. The fog spray must be adjusted for pavement temperature, surface texture and dryness.

Q. The completed spread rate must be within 10 percent of the specified spread rate. The micro-surfacing spread rates must be within the ranges shown in the following table:

Micro-surfacing Spread Rates

Micro-surfacing type	Location	Range (lbs. of dry aggregate per sq. yd.)
Type II	Full lane width	10-20
Type III[a]	Full lane width	20-32

[a]Over asphalt concrete pavement

R. Spread micro-surfacing either in the direction of traffic or in the opposite direction.

S. Finished micro-surfacing must be free of irregularities such as scratch or tear marks. Do not leave any marks that are over 1-inch wide or 6-inches long.

T. Sweep the micro-surfacing 24 hours after the placement without damaging the micro-surfacing. For 5 days afterward, sweep the micro-surfacing daily.

U. If bleeding, raveling, delaminating, rutting, or wash-boarding occurs after placing the micro-surfacing make repairs as approved by the Project Manager.

V. Sidewalk and driveways must be kept clean with an air compressor after 1st and 5th day of sweeping.

W. Contractor shall not schedule micro-surface more than 20,000 square yards per day with one crew.

X. Contractor may not micro-surface a street if it is a trash pickup day.

Y. Contractor shall provide an accurate schedule every week detailing the date, treatment, and street name that will be constructed.

Z. Contractor shall spread out the streets they resurface each week to allow parking and travel for residents who may not have access to their streets during construction.

3.16 CAPE SEAL & THREE-LAYER TREATMENT

A. Chip seal must be rubberized. Rubberized chip seal ingredients must be in compliance with CalRecycle Grant and the authorized mix design.

B. After chip seal is placed, Contractor must sweep the street every day until final micro-surfacing layer is placed. Contractor must hand sweep loose aggregate from sidewalk and driveways into the gutter before the street is swept daily. The streetsweeper shall remove the aggregate from the gutter. Failure to complete street sweeping as required shall subject the contractor to liquidated damage of $500 per day per street.

C. Once the chip seal has been placed, the road shall be reopened to traffic until a full cure has been obtained before placing the micro-surfacing. This duration is expected to take a minimum of 5 days.

D. Contractor may not cape seal or apply three-layer treatment on a street if it is a trash pickup day.

E. Contractor shall provide an accurate schedule every week detailing the date, treatment, and street name that will be constructed.

F. Contractor shall spread out the streets they resurface each week to allow parking and travel for residents who may not have access to their streets during construction.

3.17 ASPHALT PAVING TOLERANCES

A. Section 01 45 00 – Quality Control: Tolerances.

B. Flatness: Maximum variation of 1/8 inch measured with 10-foot straight edge.

C. Scheduled Compacted Thickness: Within 1/4 inch.

3.18 FIELD QUALITY CONTROL

A. Section 01 45 00 – Quality Control: Requirements for testing, adjusting, and balancing.

B. Asphalt Paving Mix Temperature: Measure temperature at time of placement.

3.19 PROTECTION

A. Section 01 77 00 - Closeout Requirements: Requirements for protecting finished Work.

B. Immediately after placement, protect paving from mechanical injury for until surface temperature is less than 140 degrees F.

END OF SECTION 32 12 17

Attachment B

SECTION 01 31 10 – ADJACENT PROPERTY OWNERS

PART 1 - GENERAL

1.1 ADJACENT PROPERTY OWNERS

A. The Contractor shall give written notice seven (7) calendar days in advance of construction to notify all property owners and their tenants indicating the date(s) of construction within or adjacent to their property. Property owners shall also be notified of fences, mailboxes, etc., that will be temporarily removed for construction or relocated. The Contractor shaft submit to the City Engineer a sample letter of notification for approval three (3) working days prior to distribution to property owners. The contractor may obtain a list of property owners and their addresses from the City of Pittsburg.

B. The Contractor shall provide for continuous vehicular and pedestrian ingress and egress to private properties and residential/commercial driveways adjacent to work through the period of construction.

1.2 SOUND CONTROL REQUIREMENTS

A. Sound control shall conform to the provisions in City Municipal Code, Section 9.44 “Noise”.

B. The noise level from the Contractor’s operations, between the hours of 7:00 a.m. to 5:00 p.m. shall not exceed 100 dBa. From 5:00 p.m. to 7:00 a.m. (if this time period is approved by the City Engineer), shall not exceed 60 dBa exterior noise level unless given written approval by the City Engineer.

C. 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.

1.3 LIMITS OF WORK

A. The street right of way shall be used only for purposes that are necessary to perform the required work. The Contractor shall not occupy the right of way for purposes which are not necessary to perform the required work.

B. Areas available for the use of the Contractor are designated on the plans by easement or right of way lines. Use of the Contractor’s work areas and other City-owned property shall be at the Contractor’s own risk, and the City shall not be

held liable for any damage to, or loss of materials or equipment located within such areas.

C. The Contractor shall remove all equipment, materials, and rubbish from the work areas and other City-owned property which the Contractor occupies and shall leave the areas in a presentable condition, in accordance with the provisions in Section 4-1.13, "Cleanup," of the Caltrans Standard Specifications.

D. The Contractor shall secure at his own expense any area required for plant sites, storage of equipment or materials, or for other purposes if sufficient area is not available to him within the contract limits, or at the sites designated on the plans outside the contract limits.

E. In the areas of City right of way not designated for the exclusive use by the Contractor, the Contractor shall coordinate with adjacent project and property owners to ensure that storage of materials will not restrict access for those projects or properties. If stored materials must be relocated to provide access, the Contractor shall relocate the stored material at his own expense and no claim for costs to relocate the stored materials will be allowed.

F. The Contractor shaft limit his operations to the areas within the existing City right-of- way or in areas the City has acquired a temporary construction easement. Where the specific limits of work are not designated on the plans or specified in these Specifications, the Contractor shall limit his operation to the existing road rights of way.

G. All existing structures, residences, operating utilities, power poles, and other devices within the work area shall be maintained at all time’s during construction.

1.4 USE OF OWNER’S FACILITIES

A. The Contractor may use existing facilities or equipment in the Work for construction purposes, only if the Owner’s written permission is obtained.

B. Restore existing facilities and equipment to original condition in a manner satisfactory to the Owner.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 NOTICE OF AFFECTED PARTIES

A. At ten (10) working days and again at two (2) working days prior to mobilizing to a site or performing any action which affects residents, schools or businesses, the Contractor shall distribute an approved written, “door hanger” type notice to all adjoining residents and businesses, property owners, tenants and applicable parties. Such notice shall state that all vehicles and equipment need to be moved off of the street and include the expected date for start of construction, a general description of the construction activity to take place, expected duration of the activity, traffic delays, alternative routes, driveway closures and the name, address, and a 24-hour local telephone number of the Contractor. The Contractor shall check for messages hourly from 7:00 a.m. to 6:00 p.m. and at least once every twelve (12) hours during nights, weekends and holidays. The Contractor shall respond promptly to all messages.

B. A draft copy of the notice shall be provided to the City Engineer for approval, prior to distribution. The Contractor shall notify all residents and businesses within at least 300 feet of the work. It is the Contractor’s responsibility to keep all affected residents, schools and businesses notified of the work and work schedule, and to provide whatever facilities are necessary to assure the minimum possible inconvenience to their lives and operations.

C. The Contractor shall provide the City Engineer a copy of the proposed written notification prior to mailing or delivery for approval at least five (5) days prior to their distribution. The Contractor shall provide a copy of the written notification as mailed or delivered, as well as a list of all recipients of such notifications. The Contractor shall maintain an updated and chronological record at the job site of all written notifications along with a list of recipients. Such records shall be made available to the engineer upon request. All information shall be submitted to the City Engineer for inclusion on the City of Pittsburg Web Page.

D. Five (5) working days prior to construction activities, the following parties shall also be notified.

Pittsburg Unified School District
Contact: Matthew Belasco
Phone: 925-473-2362
2000 Railroad Ave, Pittsburg CA 94565

Tri Delta Transit
Phone: (925) 706-4375
801 Wilbur Avenue

Antioch, CA 94509

Postal Service
Phone: 925-432-2741
835 Railroad Ave, Pittsburg CA 94565

Police Department
Contact: Lieutenant Lester Galer
Phone: (925) 252-4149
65 Civic Ave, Pittsburg CA 94565

Contra Costa County Fire Protection District
Phone: (925) 941-3300
4005 Port Chicago Highway, Suite 250
Concord, CA 94520-1180

Mt. Diablo Resource Recovery
Phone: (925) 682-9113
555 California Ave, Pittsburg, CA 94565

Chamber of Commerce
Phone: (925) 432 -7301
985 Railroad Ave, Pittsburg CA 94565

E. Delays in performing the work or changes in the construction schedule, for any reason, shall require the Contractor to provide written re-notification to residents, businesses, City services and the local newspaper within 24 hours that any delay or change is reported to or discovered by the City Engineer. If the local paper publishes an incorrect schedule, The Contractor shall re-publish the correct schedule to run the following two (2) consecutive days.

F. Failure to properly notify residents will necessitate the Contractor to reschedule his work with" no additional working days to be added to the Contract and additional liquidated damages applied.

PART 4 - PAYMENT

4.1 MEASUREMENT AND PAYMENT

A. 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.

END OF SECTION 01 31 10