

## **PART C - SPECIAL PROVISIONS**

### **GENERAL**

Whenever reference is made to "Standard Specifications", " it shall be interpreted to mean the State of California Department of Transportation Standard Specifications 2015 as revised by the "Revised Standard Specifications," dated 4-20-18, issued by the State of California Department of Transportation. here the term "Special Provisions" is used in the Standard Specifications, it shall be understood to mean these Specifications.

**The *Standard Specifications* including *Revised Standard Specifications (RSS)* as revised by these special provisions will apply to this project.**

Special provisions are under headings that correspond with the main-section headings of the *Standard Specifications*. A main-section heading is a heading shown in the table of contents of the *Standard Specifications*.

Each special provision begins with a revision clause that describes or introduces a revision to the *Standard Specifications* or *Revised Standard Specifications (RSS)*.

Any paragraph added or deleted by a revision clause does not change the paragraph numbering of the *Standard Specifications* or *RSS* for any other reference to a paragraph of the *Standard Specifications* or *RSS*.

When the word "Department" appears in the Specifications, it refers to the "City."

### **REVISIONS TO STANDARD SPECIFICATIONS AND REVISED STANDARD SPECIFICATIONS (RSS)**

## **DIVISION I GENERAL PROVISIONS**

### **1 GENERAL**

#### **Add to section 1-1.07B:**

**Working Day:** Any day, **except as follows:**

1. Saturdays unless prior approval is received from the City Engineer, Sundays or City Legal Holidays; or
2. Days on which the Contractor is prevented by inclement weather or conditions resulting immediately there from 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 spent on the controlling operation or operations. Construction activities, as defined in Chapter 15.04.055 of the Marina Municipal Code, are prohibited other than between the hours of 7am and 7pm, Monday through Saturday and between the hours of 10am and 7pm on Sunday and Holidays.

## **2 BIDDING**

**Add between the 1st and 2nd paragraphs of the RSS for section 2-1.06B:**

For your general information, the City makes the following supplemental information available:

*“Geotechnical Engineering Report Imjin Parkway Widening Project, Marina, California”*

This report by Parikh Consultants, Inc. is included in the Appendix of these Special Provisions.

*“Geotechnical Investigation Report Retaining Walls Imjin Parkway Widening Project, Marina, California”*

This report by Parikh Consultants, Inc. is included in the Appendix of these Special Provisions.

The Special Provisions take precedent should there be any conflicts between the report’s recommendations and these Special Provisions.

## **3 CONTRACT AWARD AND EXECUTION**

**Delete section 3-1.08.**

## **4 SCOPE OF WORK**

**Replace the last paragraph of section 4-1.07C with:**

You will be responsible for all workshop costs. The Department will not reimburse you for any associated costs with conducting a value analysis workshop.

**Add between 1<sup>st</sup> and 2<sup>nd</sup> paragraphs in section 4-1.13 the following:**

On or before the completion of the work, tear down and remove all temporary structures built by you and remove rubbish of all kinds from any of the grounds which you occupied, and leave them in first-class condition to the satisfaction of the Engineer.

## **5 CONTROL OF WORK**

**Add between 5<sup>th</sup> and 6<sup>th</sup> paragraphs in section 5-1.01:**

At all times provide proper facilities for safe and unrestricted access and inspection of the work by authorized representatives of local, state or federal governments.

Imjin Parkway Widening Project  
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**Add to the end of section 5-1.20A:**

During the progress of the work under this Contract, work under the following contracts may be in progress at or near the job site of this Contract:

**Coincident or Adjacent Contracts**

| Contract no. | County–Route–Post Mile | Location                           | Type of work    |
|--------------|------------------------|------------------------------------|-----------------|
|              |                        | Imjin Pkwy – Abrams to Reservation | PG&E Electrical |
|              |                        |                                    |                 |
|              |                        |                                    |                 |
|              |                        |                                    |                 |

**Replace section 5-1.20E of the RSS with:**

**5-1.20E Water Meter Charges**

Section 5-1.20E applies if a bid item for water meter charges is shown on the Bid Item List. The local water authority is Marina Coast Water District. The local water authority will install the water meters. The charges are as shown in the following table:

**Water Meter Charges**

| Meter size | Quantity | Charge per meter (\$) |
|------------|----------|-----------------------|
| 1.5"       | 3        |                       |
|            |          |                       |
|            |          |                       |

The charges by the local water authority include:

1. Furnishing and installing each water meter
2. Connecting to the local water authority's main water line, including any required hot tap or tee
3. Furnishing and installing an extension pipe from the main water line to the water meter
4. Sterilizing the extension pipe

Make arrangements and pay the charges for installation of the water meters.

If the charge is changed at the time of installation, the Department adjusts the lump sum price based on the difference between the specified charges and the changed charges.

**Replace section 5-1.26 with:**

**5-1.26 CONSTRUCTION SURVEYS**

Perform all necessary construction surveys. Construction surveys must be done in accordance with Chapter 12, "Construction Surveys," of the California Department of Transportation's *Survey Manual*.

All work must be constructed to the lines and grades as shown. Unless authorized by the Engineer, any work done without construction survey line and grade will be done at your risk.

**Delete section 5-1.27E.**

**Replace 2<sup>nd</sup> and 3<sup>rd</sup> paragraph of section 5-1.32 with:**

If no City-owned or City secured area is designated on the plans for your use, you will be responsible to secure additional staging/stockpiling areas at your own expense in order to perform the work.

Defend, indemnify, and hold the City harmless for any damage to or loss of materials or equipment in conformance with the indemnification requirements in the City's construction contract agreement.

**Add to the end of section 5-1.32:**

The City provides certain lands and rights-of-way as shown on the Plans and determined by the Engineer in connection with work under the contract, without cost to you. Limit your operations to the areas and lands provided.

Our use of the City-owned property (off of 8<sup>th</sup> Street near Imjin Road) as shown is limited to the paved areas only. You may clear the paved area of vegetation and debris and may construct temporary fencing around the area. It is the responsibility of the contractor to secure the staging/stockpiling area.

Before final acceptance of the work, obtain a written statement of release indicating the City's acceptance of the site conditions as restored by you.

Personal vehicles of your employees must not be parked on the traveled way or shoulders, including sections closed to traffic.

**Replace RSS 5-1.36A General with the following:**

**5-1.36A General**

Preserve and protect:

1. Highway improvements and facilities
2. Adjacent property
3. Waterways
4. ESAs
5. Lands administered by other agencies
6. Railroads and railroad equipment
7. Nonhighway facilities, including utilities
8. Survey monuments
9. Department's instrumentation
10. Temporary work
11. Roadside vegetation not to be removed
- [12. Christina Williams Memorial](#)
- [12. Preston Park Subdivision Sign](#)

**Add between 4<sup>th</sup> and 5<sup>th</sup> paragraphs in section RSS 5-1.36A:**

The restoration of all existing facilities that are broken or damaged by the installation of work must be of the same kind of material with the same finish and in not less than the same dimensions as the original work unless otherwise directed by the Engineer. All work shall match the appearance of the existing improvements as nearly as possible and approved by the Engineer

**Add to the end of the RSS for section 5-1.36A:**

The existing USACE groundwater sampling facilities along the project length must be made available as requested by the USACE or their representatives. For reference, the USACE assumes access will be required to all groundwater sampling facilities on the dates below. These dates are subject to change and the contractor shall coordinate sampling activities with the USACE.

- February 28 – March 4, 2022
- June 6-10, 2022
- August 29 – September 2, 2022
- December 5-9, 2022
- February 27 - March 3, 2023
- June 5-9, 2023
- August 28 – September 1, 2023

**Add between the 2nd and 3rd paragraphs of the RSS for section 5-1.36C(3):**

During the progress of the work under this Contract, the utility owner will relocate a utility shown in the following table within the corresponding number of working days shown. Notify the Engineer when the site is ready for utility work. After verifying the site is ready for utility work, the Engineer notifies the utility owner. The working days to relocate start on the notification date to the utility owner.

**Utility Relocation and Department-Arranged Time for the Relocation**

| Utility         | Location                  | Working days |
|-----------------|---------------------------|--------------|
| <b>PG&amp;E</b> | Imjin Pkwy and Abrams Dr  | TBD          |
| PG&E            | Imjin Pkwy and Preston Dr | TBD          |
| AT&T            | Imjin Pkwy and Abrams Dr  | TBD          |
|                 |                           |              |

Installation of the utilities shown in the following table requires coordination with your activities. Make the necessary arrangements with the utility company through the Engineer and submit a schedule:

1. Verified by a representative of the utility company
2. Allowing at least the time shown for the utility owner to complete its work

**Utility Relocation and Contractor-Arranged Time for the Relocation**

| Utility         | Utility address | Location                  | Working days |
|-----------------|-----------------|---------------------------|--------------|
| <b>AT&amp;T</b> |                 | Imjin Pkwy and Preston Dr | TBD          |
| MCWD            |                 | Various                   | TBD          |
|                 |                 |                           |              |
|                 |                 |                           |              |

## **6 CONTROL OF MATERIALS**

### **Replace last sentence of the 3rd paragraph of section 6-1.02 with:**

Returning and disposing of City-furnished materials is included in the contract price paid for various items of work.

### **Replace section 6-1.05 with:**

#### **6-1.05 TRADE NAMES AND ALTERNATIVES**

For convenience in designation on the Plans or in the Specifications, certain equipment or materials to be incorporated in the work may be designated under a specific brand, trade name or the name of a manufacturer and catalog information. The use of alternative equipment or material, which is of equal quality and of the required characteristics for the purpose intended, will be permitted, subject to the following requirements.

The burden of proof as to the comparative quality and suitability of alternative equipment or materials shall be upon the Contractor who shall furnish, at the Contractor's own expense, six copies of complete description, information, and performance data showing the equality of the material or equipment offered to those specified, and such other necessary or related information as may be required by the Engineer. The Engineer will be sole judge as to the comparative quality and suitability of alternative equipment or materials and such decision shall be final.

The Contractor, pursuant to Public Contracts Code, Section 3400, shall have at least thirty-five (35) days after award of the contract for submission of data substantiating a request for substitution of "an equal" item.

### **Replace section 6-2.02 with:**

#### **6-2.02 CONTRACTOR QUALITY CONTROL AND TESTING**

##### **6-2.02A General**

Section 6-2.02 applies to the following areas of work:

1. Earthwork under Section 19.
2. Subbases and Bases under Division IV.
3. Bituminous Seals under Section 37.
4. Concrete Pavement under Section 40.
5. Structures under Division VI.
6. Drainage under Division VII.
7. Slope Protection under Section 72.
8. Materials under Division X.

Implement a Contractor Quality Control Plan (CQCP) that consists of plans, procedures, and organization necessary to construct a final product which complies with the contract specifications. CQCP shall cover all construction operations, both onsite and offsite, that require testing to ensure compliance.

The quality assurance/acceptance (QA) testing performed by the Engineer does not relieve you of your responsibility to perform your own quality control (QC) testing as required by the Standard Specifications and these special provisions. You are responsible for the quality of the materials and the quality of work, including your subcontractors, suppliers, and fabricators. You may elect to perform QC testing in addition to those required by these special provisions to ensure satisfactory compliance with all contract requirements.

#### **6-2.02B Contractor Quality Control Manager**

Assign a QC manager for the project as described below.

The QC manager must be responsible directly to you for the quality of the work, including materials and workmanship performed by you and your subcontractors.

Assign the QC manager before the start of the affected work. The QC manager must be the sole individual responsible for:

1. Receiving, reviewing, and approving all correspondence, submittals, and reports before they are submitted to the Department
2. Signing the QC plan
3. Implementing the QC plan
4. Maintaining the QC records

The QC manager must be your employee or must be hired by a subcontractor providing only QC services. The QC manager must not be employed or compensated by a subcontractor or by other persons or entities hired by subcontractors who will provide other services or materials for the project.

Notify the Engineer of the name and contact information of the QC manager.

#### **6-2.02C CQCP Development**

##### **6-2.02C(1) Meeting**

Meet with the Engineer and discuss the CQCP requirements at the preconstruction conference or in a separate meeting a minimum of 9 working days prior to the start of construction.

During this meeting, a mutual understanding of the following CQCP details shall be developed:

1. Construction activities and materials to be included in CQCP.
2. Test procedures to be implemented including frequency and acceptance standards.
3. Certified testing facility to be used.
4. QC activities/procedures/testing.
5. Reporting procedures including deadlines to distribute test results to the Engineer.
6. Remediation or corrective actions.
7. Interrelationship of CQCP Manager and the Engineer's Material and Testing Laboratory QA and testing activities.

Meeting minutes that document a mutual understanding of the CQCP shall be prepared by the Engineer and distributed to the Contractor and Engineer. The minutes shall become a part of the contract file.

##### **6-2.02C(2) Contractor Quality Control Plan**

Within 3 working days of the meeting, start the following process for CQCP approval:

1. Submit 3 copies of the CQCP and allow 3 working days for the Engineer's review. If revisions are required, the Engineer provides comments and specifies the date that the review stopped.
  2. Revise and resubmit the CQCP within 2 working days of receipt of the Engineer's comments.
  3. The Engineer's review resumes when the complete CQCP is resubmitted. Allow 1 working day for the second review or subsequent reviews by the Engineer.
  4. When the Engineer approves the CQCP, submit 4 printed copies of the approved CQCP.
- Do not start any work identified in the CQCP until the CQCP is approved. The start of construction (first working day) will not be delayed, nor an extension of contract time (additional working days) be granted for any delay of work due to preparing and approving the CQCP.

The CQCP must be specific to this contract and address the following QC requirements:

1. Description of the QC organization, including a chart showing lines of authority.
2. Determine when corrective actions are needed if an area of work does not comply with specifications.
3. Identify QC personnel, including the QC Manager, by name, qualifications, duties, responsibilities, and authorities. Provide an organizational chart showing all QC personnel and their assigned QC responsibilities. The QC Manager shall have a minimum of 10 years of construction experience on projects similar to the work under this contract. Identify an Alternate QC Manager to serve in the event of the QC Manager's absence. The requirements for the alternate shall be the same as for the designated QC Manager.
4. Include a letter signed by an authorized official of the Contractor which describes the responsibilities of the QC Manager and delegates sufficient authority to the QC Manager to adequately perform the required duties, including authority to stop work that is not in compliance.
5. Procedures for scheduling, reviewing, certifying, and managing submittals including those of subcontractors, offsite fabricators, suppliers, and manufacturers.
6. Procedures for the quality inspection of the materials which includes contractor verification testing of materials to ensure it meets specifications.
7. Control, verification, and manufacturing plant acceptance testing procedures for each specific test to ensure the quality of Contractor's workmanship. Include test name, reference specification requiring test, feature of work to be tested, test frequency, typical sample locations, required documentation, and person responsible for each test. Laboratory facilities shall be properly certified and approved by the Engineer.
8. Identify process to track preparatory, progress, and follow-up procedure phases.
9. Specify corrective actions, including verification testing, to be implemented upon identification of construction deficiency.
10. Reporting procedures including all proposed QC forms, daily QC reports, and other reporting formats.

## **6-2.02D Procedure**

### **6-2.02D(1) General**

Implement a minimum of three phases of QC for each definable feature of work (i.e. placing aggregate base, installing drainage pipe, pouring concrete sidewalk, compaction of subgrade...etc.).

### **6-2.02D(2) Preparatory Phase**

Prior to beginning each definable feature of work:

1. Review applicable contract plans and specifications.
2. Verify all materials and/or equipment have been tested, and approved.
3. Examine work area to assure all required preceding work has been completed and is in compliance with the contract specifications.
4. Physically examine required materials and equipment to assure they are on hand, conform to the specifications and shop drawings, and are properly stored/stockpiled.
5. Review testing standards and the procedures in the approved CQCP for this item of work.
6. Document construction tolerances and workmanship standards.
7. Request a pre-work conference with the Engineer, QC Manager and applicable QC personnel, and foreman responsible for this definable feature of work. Discuss methods of performing the production and installation work.
8. Instruct all applicable workers as to the acceptable level of workmanship required in order to meet the specifications.
9. Document the preparatory phase.

#### **6-2.02D(3) Progress Phase**

During construction of each definable feature of work:

1. Verify adequacy of all QC measures.
2. Conduct required QC testing and inspection by QC personnel.
3. Analyze QC tests for compliance with contract specifications.
4. Notify Engineer of QC test results.
5. Implement CQCP corrective measures and repeat the above steps if QC test results do not meet contract specifications.
6. Coordinate Engineer's QA testing if QC test results meet contract specifications.
7. Document the progress phase.

#### **6-2.02D(4) Follow Up Phase**

After each definable feature of work is completed and meets specifications:

1. Perform daily visual checks on completed work to ensure the feature of work continues to be in compliance with specifications.
2. Visual checks shall be documented in the CQCP.
3. Conduct final follow-up checks prior to the start of additional features of work that may be affected by the already completed work.
4. Implement corrective actions if completed work no longer complies with specifications. Do not build upon or conceal non-conforming work.

### **6-2.02E Testing**

#### **6-2.02E(1) General**

At a minimum, perform QC testing to the same standard and frequency required for the Engineer's QA testing. After receiving test results, remove or reconstruct any work performed that does not meet the specifications. Furnish split samples upon request by the Engineer for QA testing. Each test shall be started and completed without delay. QA testing by the Engineer and payment for materials placed will not be authorized until final CQCP test reports showing compliance with these specifications have been provided to the Engineer.

### **6-2.02E(2) Certified Laboratory**

Procure the services of an Engineer-approved certified testing laboratory or establish an approved laboratory testing facility at the project site.

Certified laboratories shall follow FHWA and Caltrans certification procedures and be a participant in one or more of the following testing programs:

1. AASHTO Materials Reference Laboratory (AMRL)
2. Cement and Concrete Reference Laboratory (CCRL)
3. Caltrans' Reference Samples Program (RSP)

Certified laboratory personnel shall be certified by one or more of the following:

1. Caltrans District Materials Engineer.
2. Nationally recognized non-Caltrans organizations such as the American Concrete Institute, Asphalt Institute, National Institute of Certification of Engineering Technologies, etc.
3. Other recognized organizations approved by the State of California and/or recognized by local governments or private associations.

The certified laboratory's equipment must be calibrated at least once each year, using an impartial means traceable to the National Institute of Standards and Technology. This is checked as part of the Independent Assurance Program.

### **6-2.02E(3) Testing Procedure**

Perform the following testing activities and provide documentation that all tests and related activities are completed:

1. Verify testing procedures comply with specifications.
2. Verify facilities and testing equipment are available and comply with testing standards.
3. Check test instrument calibration data against certified standards.
4. Prepare recording forms and test identification control number system.
5. Document all passing and failing test results in CQCP with location of the test and the sequential control number identifying the test sample.
6. Provide a copy of tests performed to the Engineer.

Contractor shall make available upon the Engineer's request the proposed laboratory and equipment to make verification and QA testing if the Engineer's material and testing laboratory does not have the required equipment.

#### 6-2.02E(4) Testing Standards

Laboratories utilized for testing soils shall meet criteria detailed in ASTM D 3740 or similar requirements for the Caltrans Laboratory Certification process. Whenever a reference is made in the specifications to any of the California Test numbers specified below, the corresponding ASTM Designation or AASHTO Designation test numbers may be used to determine the quality of materials.

| CALIFORNIA TEST | ASTM DESIGNATION | AASHTO DESIGNATION |
|-----------------|------------------|--------------------|
| 216             | D 1557           | T 180              |
| 231             | D 2922 (a)       | T 238 (a)          |
| 203             | D 422            | T 88               |
| 204             | D 4318           | T 89 & T 90        |
| 504             | C 231            | T 152              |
| 518             | C 138            | T 121              |
| 521             | C 39             | T 22               |
| 523             | C 392 & C 78     | T 177 & T 97       |
| 533             | C 360            | --                 |
| 211             | C 131 & C 535    | T 96               |

Note:

- (a) When ASTM Designation: D 2922 or AASHTO Designation: T 238 is used, the frequency and areal distribution of such tests shall comply with the requirements specified in California Test 231. For each determination of relative compaction by ASTM or AASHTO test methods, laboratory compaction tests per ASTM Designation: D 1557 or AASHTO Designation: T 180 shall be performed, except when the use of previous laboratory maximum dry densities are allowed. Previous laboratory maximum dry densities may be used to determine relative compaction if the material, as determined by the Engineer, is from the same general excavation or plant source and has the same visual characteristics of color, gradation, and soil classification as the previous laboratory maximum dry densities. The use of previous laboratory maximum dry densities will not be permitted for more than 5 working days or for more than 14 determinations of relative compaction.

#### 6-2.02E(5) Failing Tests

Perform the following steps:

1. Record date, time, and location of failing test in CQCP and immediately notify the Engineer.
2. Consult CQCP and implement remediation/corrective action.
3. Document corrective action taken.
4. Retest the work after corrective action.
5. Record result of retest for compliance with specifications. If retest fails again, repeat with step 1.

#### 6-2.02F Reporting

No QA testing will be administered by the Engineer until test reports are provided that verify compliance with specifications.

1. Prepare and maintain a test location plan that will be included in CQCP and provided to the Engineer upon request.

2. Document horizontal and vertical locations of all QC field tests and field sample locations to the nearest foot. Where possible, document all locations with respect to stationing on the project plans.
3. Label/Number all field tests using a sequential numbering system approved by the Engineer. Maintain a Materials Test Log summarizing all QC field and laboratory testing, including failed test results, and results of the QC test compared to the specification requirements.
4. For failing test results, the Materials Test Log shall include a description of the corrective actions taken and the results of tests performed after the corrective action is taken. The Material Test Log shall be updated and maintained by the QC Manager and made available to the Engineer upon request. The Material Test Log will be attached to the approved CQCP.
5. Provide copies of each QC test result to the Engineer within 24 hours after collecting the laboratory test sample or initiating the field test, except on required test duration exceeding 24 hours. When the test duration exceeds 24 hours, distribution of final test results shall be within 24 hours after the completion of the test.

Submit a copy of the final Material Test Log to the Engineer upon substantial completion of the project.

For any single quality characteristic at a specific test location, if the QA test results administered by the City do not comply with specifications:

1. Stop production.
2. Take corrective action per CQCP.
3. Perform QC testing to verify compliance with specifications
4. Provide test results to Engineer. Request 2<sup>nd</sup> QA test if QC tests verify compliance with specifications.
5. In the Engineer's presence, take samples and split each sample into 4 parts. The Contractor's QC laboratory would receive 2 parts for additional testing if necessary. The Engineer tests 1 part for QA compliance with the specifications and reserves and stores 1 part.
6. Demonstrate QA compliance with the specifications otherwise repeat this process until compliance is achieved.

#### **6-2.02G Penalties**

If in the Engineer's opinion you do not comply with or follow your approved CQCP, stop all work and replace your QC Manager. The counting of working days will continue while you identify a new QC manager.

Beginning with the 2<sup>nd</sup> QA test for any single quality characteristic at a specific test location, the City will deduct all associated testing lab costs for additional QA tests from moneys due or that may become due to the Contractor under the contract.

The Engineer will deduct the final payment of CQCP from the contract if the Contractor fails to comply with the approved CQCP or provide all test results and a copy of the final Material Test Log.

#### **6-2.02H Payment**

After the Engineer approves the CQCP, the City pays 25 percent of the bid item price for Contractor Quality Control Plan in the first monthly progress estimate.

The City does not adjust payment of CQCP for an increase or decrease in the quantity of QC tests, including additional testing due to the Contractor, subcontractor, supplier, manufacturer, or fabricator's own construction deficiencies. Section 9-1.06, "Changed Quantity Payment Adjustments," of the Standard Specifications does not apply.

## 7 LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

### Add to Section 7-1.02K(3):

The contractor must permit the Engineer to interview employees during working hours on the job to verify the certified payroll records.

**Replace "65" with "30" in the 4th paragraph of section 7-1.02K(6)(b).**

### Add to section 7-1.02K(6)(b):

Comply with Public Contract Code § 7104, as shown below, while excavating.

*§ 7104. Any public works contract of a local public entity which involves digging trenches or other excavations that extend deeper than four feet below the surface shall contain a clause which provides the following:*

*(a) That the contractor shall promptly, and before the following conditions are disturbed, notify the local public entity, in writing, of any:*

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

*(2) Subsurface or latent physical conditions at the site differing from those indicated by information about the site made available to bidders prior to the deadline for submitting bids.*

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

*(b) That the local public entity shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the contractor's cost of, or the time required for, performance of any part of the work shall issue a change order under the procedures described in the contract.*

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

Designate a competent person to be on site at all times while trench excavation work is being performed. The competent person shall be certified and make daily inspection in accordance with all OSHA requirements. A competent person means one who is capable of identifying existing and predictable

hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them.

Trench shoring and protection is measured along the trench centerline where the trench protection work is actually performed, and only where trenches are five feet or greater in depth or it has been determined by the competent person and approved by the Engineer that trench shoring is required.

**Replace 7-1.02K(6)(f) with:**

**7-1.02K(6)(f)(i) Munitions Safety and Awareness Training**

If any suspicious objects that could be unexploded ordinance or munitions are discovered, the contractor shall cease construction operations within the area of concern immediately. Once personnel are evacuated from the immediate area of concern, the contractor shall contact Mr. James Britt at 831-521-3720 to determine if Explosive Ordinance Disposal (EOD) response needs to be notified.

Construction operations around the area of concern may only resume after Mr. Britt has provided the Engineer with confirmation that construction operations can commence.

Munitions Safety and Awareness Training is required of the prime contractor foreman and supervisor and one supervisor for each subcontractor, at a minimum. The training is approximately 30 minutes in length and is located at KEMRON Environmental Services, 4522 Joe Lloyd Way, Seaside, CA. Contractor shall coordinate the training with Ms. Betsy Hibbits at 831-242-7901.

**7-1.02K(6)(f)(ii) PAYMENT**

The contract lump sum price paid for munitions safety and awareness training includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in munitions safety and awareness training, as specified in these special provisions and as directed by the Engineer.

***PLACEHOLDER - NEED TO CONFIRM APPROACH FOR POSSIBLE ADL***

**Add to the end of the 4<sup>th</sup> paragraph in section 7-1.03:**

Maintaining convenient access to fronting properties may also require constructing new driveways in phases or constructing temporary approaches to one side of the new driveway during construction.

**Replace section 7-1.06D(2) with:**

**7-1.06D(2) LIABILITY INSURANCE**

Contractors shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damage to property, which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors. Maintenance of proper insurance coverage is a material element of the contract and that failure to maintain or renew coverage or to provide evidence of renewal may be treated by your City as a material breach of contract. The cost of such insurance shall be included in the Contractor's bid. Such insurance shall name the City, its governing bodies or boards, officers, agents and employees; and those listed at

the end of this special provision as additional insureds.

a. Minimum Scope of Insurance: Coverage shall be at least as broad as:

1. Insurance Services Office Commercial/General Liability form CG 0001 covering Comprehensive General Liability; and Insurance Services Office form GL 0404. This is a Broad Form endorsement to the Comprehensive General Liability Policy.
2. Insurance Services Office form CA 0001 (Ed. 1/78) covers automobile liability and should be Code 1, "any auto."
3. Insurance coverage shall be written on an occurrence basis on which a claim is paid of the loss occurred during the policy period. Unless there is a significant provision of an "extended reporting period."
4. Workers Compensation coverage as required by the Labor Code of the State of California and Employers' Liability Insurance.

b. Minimum Limits of Insurance: Contractor shall maintain limits no less than:

1. General Liability: \$2,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
2. Automobile Liability: \$1,000,000 per accident for bodily injury and property damage.
3. Employers' Liability: \$1,000,000 per accident for bodily injury or disease.
4. Workers Compensation: Workers Compensation limits as required by the Law.

a. Deductive and Self-Insured Retention: Any deductible or self-insured retentions must be declared to and approved by the City. At the option of the City, either (1) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the City, its officials and employees, and naming the same additional insureds or (2) the Contractor shall procure a bond guaranteeing payment of losses, coverage of the City, its officials and employees, and related investigation, claim administration and defense expenses.

b. Other Provisions: The policies are to contain or be endorsed to contain the following provisions:

1. The City, its governing bodies and commissions, officials, employees and volunteers are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; premises owned, leased or used by the Contractor or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the City, its officials, employees or volunteers, with the exception that the Contractor shall not be required to provide an endorsement that

provides indemnity coverage for the active negligence of such entities.

2. The Contractor's insurance coverage shall be primary insurance as respects the City, its officials, employees and volunteers. Any insurance or self-insurance maintained by the City, its officials, employees or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.
3. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the City, its officials, employees or volunteers.
4. Coverage shall state that the Contractor's insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability.
5. With regard to the Worker's Compensation and Employer's Liability coverage's, the insurer shall agree to waive all rights of subrogation against the City, its officials, employees and volunteers for losses arising from work performed by the Contractor for the City.
6. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the City.
7. Insurance is to be placed with insurers with a Best's rating of no less than A:VII. The Best's rating can be obtained by the Broker or the Association of Bay Area Governments (ABAG) Plan Risk Manager.
8. The Contractor shall furnish the City a copy of the insurance policy and with original endorsements affecting coverage required by this clause. The endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The endorsements are to be received and approved by the City before work commences.
9. The Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverage for subcontractors shall be subject to all of the requirements stated herein.

Name the following list of property owners and occupants of the real property located at the following addresses as additional insured and defend, hold harmless, and indemnify:

| Assessor Parcel No. | Name of Owner                               | Site Address     |
|---------------------|---|------------------|
| 1                   | US Army Reserve                             | (insert address) |
| 2                   | California State University<br>Monterey Bay | (insert address) |
| 3                   | Monterey Salinas Transit                    | (insert address) |
| 4                   | Seahaven HOA                                | (insert address) |

## 8 PROSECUTION AND PROGRESS

**Replace section 8-1.03 with:**

### 8-1.03 PRECONSTRUCTION CONFERENCE

Attend a preconstruction conference with key personnel, including your assigned representatives, major superintendents, and major subcontractors at the City offices at a time determined by the Engineer. Be prepared to discuss the scope of work, contract drawings, specifications, existing conditions, materials to be ordered, equipment to be used, and all essential matters pertaining to the prosecution of and the satisfactory completion of the project as required. Submit documents as required before the preconstruction conference. You must submit two copies, unless noted otherwise, of the following items before work can begin:

1. Baseline schedule using working days format.
2. The on-site authorized representative (and home phone number) who has complete authority to represent you.
3. A list naming each official (with title) who is authorized to sign contract change orders, daily extra work reports, and the final pay estimate.
4. A list of first tier subcontractors, suppliers, manufacturers, or truckers.
5. A list of all the materials which are to be used on the project, their source, and the name(s) and address(es) of the supplier(s). Please identify each material by contract item number and name.
6. A statement giving the name and address of each subcontractor together with the item number, description, unit cost, and total cost of each item to be subcontracted.
7. A list giving the description, identification number, make, model number, and other necessary information for each piece of equipment to be used on this project. (Do not send listing of all items in equipment pool)
8. Three copies of the “Storm Water Pollution Prevention Plan”.
9. Schedules of values for those lump sum bid items as required in these special provisions.
10. Any other submittals and/or approvals required by the Standard Specifications and these special provisions.

**Replace *Reserved* in section 8-1.04C with:**

Section 8-1.04B does not apply.

Start job site activities within 40 days after receiving notice that the Contract has been approved by the City. The start of work may be revised if you and the Engineer mutually agree and the Engineer confirms in writing. Even though the counting of working days may have begun, do not begin work before the preconstruction conference is held. Furnish all specified submittals to the Engineer at, or

prior to, the preconstruction conference. Obtain all specified approvals contained in the Standard Specifications and these special provisions prior to the beginning of work.

Do not start job site activities until the City authorizes or accepts your submittal for:

1. CPM baseline schedule
2. WPCP or SWPPP, whichever applies
3. SSPC QP certifications

You may enter the job site only to measure controlling field dimensions and locate (including potholing) utilities.

Do not start other job site activities until all the submittals from the above list are authorized or accepted and the following information is received by the Engineer:

1. Notice of Materials To Be Used form.

Submit a notice 72 hours before starting job site activities.

**Add to the end of section 8-1.10B:**

Liquidated damages for not completing work on intersecting roads that require complete closure within the specified working days for the specific intersecting roads are \$2000.00 per day.

## **9 PAYMENT**

**Add to the end of the 1<sup>st</sup> paragraph in section 9-1.02C:**

Bid Items designated with (F) in the Proposal Bid Schedule are Final Pay items in accordance with Section 9, "Payment", of the Standard Specifications.

**Replace the 4<sup>th</sup> paragraph in section 9-1.03 with:**

Full compensation for work specified in the project specifications and divisions I, II, and XI of these standard specifications is included in the payment for the bid items involved unless:

1. Bid item for the work is shown on the Bid Item List
2. Work is specified as change order work

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals necessary to the completed work and for performing all work contemplated and embraced under the contract whose payment is not clearly embraced in the various bid items will be considered as included in the payment for the various bid items of work and no additional compensation will be allowed.

**Add to Section 9-1.06A:**

The provisions of sections 9-1.06B and 9-1.06C apply only to major items of work as defined herein.

A major item of work is any item for which the cost, computed on the basis of contract unit price and the quantity shown in the proposal, is equal to or greater than ten (10) percent of the original total contract amount.

**Replace 5th paragraph of section 9-1.07A with:**

For the California Statewide Crude Oil Price Index, go to:

<http://www.dot.ca.gov/hq/construc/crudeoilindex/>

**Add to section 9-1.16A:**

The amount set forth for the bid items hereinafter listed shall be deemed to be the maximum value of the bid item which will be recognized for progress payment purposes:

- |    |  |          |
|----|--|----------|
| A. | Clearing and Grubbing                            | \$ _____ |
| B. | Lead Compliance Plan                             | \$ _____ |
| C. | Prepare Storm Water Pollution Prevention Plan    | \$ _____ |
| D. | Construction Area Signs                          | \$ _____ |
| E. | Progress Schedule (Level 3 Critical Path Method) | \$ _____ |
| F. | Munitions Safety and Awareness Training          | \$ _____ |

The remaining amount, if any, payable for a bid item in excess of the maximum value for progress payment purposes hereinabove listed for the item, will be included for payment in the final estimate made after acceptance of the contract.

**Add to 1st paragraph of section 9-1.16B:**

If a schedule of values is not specified to be submitted or a payment breakdown is not provided in the payment clause of the applicable Standard Specifications or these Special Provisions, progress payments for lump sum bid items will be a percentage of the lump sum bid item price based on the Engineer's determination of the amount of lump sum work already performed. At your option, submit a lump sum breakdown that provides sufficient detail for the Engineer to determine the value of work performed. The Engineer may consider but not exclusively base the determination of progress payments on your lump sum breakdown. The Engineer's determination of progress payments for lump sum bid items under the Contract will be final in accordance with Section 5-1.03 of the Standard Specifications.

Submit a schedule of values for the following lump sum bid items:

- A. Landscaping
- B. Irrigation
- C. Street Lighting System
- D. RRFB Assembly (Pole, Foundation, Signs, RRFB System, PPB, Controller, Conduit)
- E. Traffic Signal Modifications at Reservation Road

**Add to section 9-1.16C:**

In determining the partial payments to be made to the Contractor, only the following listed materials will be considered for inclusion in the payment as materials furnished but not incorporated in the work:

- A. \_Bar Reinforcing Steel (Retaining Wall)
- B. \_Street Light Luminaire (Poles)
- C. \_RRFB Assembly Equipment and Poles
- D. Traffic Signal Poles

**Replace section 9-1.16D with:**

**9-1.16D Mobilization**

Mobilization is eligible for partial payments if the Contract includes a bid item for mobilization. If the Contract does not include a mobilization bid item, mobilization is included in the payment for the various bid items. Mobilization is defined in Public Contract Code § 10104 and the Department will make partial payments under Public Contract Code § 10264. Both of these public contract code sections are duplicated below for your convenience.

***10104.** As used in this part, "mobilization" includes preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies and incidentals to the project site, for the establishment of all offices, buildings and other facilities necessary for work on the project, and for all other work and operations which must be performed or costs incurred prior to beginning work on the various items on the project site.*

***10264. (a)** With the exception of projects over water requiring marine access, and which have a **contract** amount greater than twenty-five million dollars (\$25,000,000), in addition to the provisions for partial payment made in Section 10261, the department may make partial payments for the mobilization costs of a **contract** subject to this chapter, not to exceed the following:*

- (1) When 5 percent of the original **contract** amount is earned, 50 percent of the amount bid for mobilization, or 5 percent of the original **contract** amount, whichever is lesser, may be paid.*
- (2) When 10 percent of the original **contract** amount is earned, 75 percent of the amount bid for mobilization or 7.5 percent of the original **contract** amount, whichever is lesser, may be paid.*
- (3) When 20 percent of the original **contract** amount is earned, 95 percent of the amount bid for mobilization, or 9.5 percent of the original **contract** amount, whichever is lesser, may be paid.*
- (4) When 50 percent of the original **contract** amount is earned, 100 percent of the amount bid for mobilization, or 10 percent of the original **contract** amount, whichever is lesser, may be paid.*
- (5) Upon completion of all work on the project, payment of any amount bid for mobilization in excess of 10 percent of the original **contract** amount will be paid.*

**Replace section 9-1.16F with:**

**9-1.16F Retentions**

The City will retain 5 percent of the estimated value of the work done and 5 percent of the value of materials so estimated to have been furnished and delivered and unused or furnished and stored as aforesaid as part security for your fulfillment of the contract.

For federally funded projects, retention will be released to you after prompt and regular incremental acceptances of portions of the project as determined by the Agency in accordance with Section 3 of the Code of Federal Regulations Title 49 Part 26.29. Accordingly, it is your responsibility for the release of retention held from your subcontractors pursuant to these special provisions to Section 5-1.13A of the Standard Specifications.

You may request the City to make payment of funds withheld to ensure performance under this Contract if you comply with the requirements of Public Contract Code Section 22300. In lieu of retention, you shall deposit in escrow with a bank acceptable to the City, securities eligible for the investment of funds under Government Code Section 16430 or bank or savings and loan certificates of deposit, upon the following conditions:

- A. You will bear the expense of the City and the escrow agent or the bank, in connection with the escrow deposit made.
- B. Securities or certificates of deposit to be placed in escrow shall be of a value at least equivalent to the amounts withheld as specified within the contract agreement. Securities shall be valued by the City, whose decision shall be final.
- C. You shall enter into an escrow agreement substantially similar to the form set forth in Section 22300 of the Public Contract Code, except the form will include provisions governing inter alia any decrease in the value of securities on deposit. The form will be furnished by the County, upon your written request.
- D. You shall obtain the written consent of the surety to such agreement.
- E. If the securities are not listed as eligible under Government Code 16430, you shall obtain approval of the securities by the City before bid opening.

**Replace *Reserved* in section 9-1.17A with:**

Upon satisfactory completion of the entire work, the Engineer will recommend the acceptance of the work to the City Council. If the Council accepts the completed work, it will cause a Notice of Completion to be recorded with the County Recorder.

Thirty-five days after the filing of the Notice of Completion, you will be entitled to the balance due for the completion and acceptance of the work, if certification is made by sworn written statement that all claims have been filed with the City based upon acts or omissions by you and that no liens or withhold notices have been filed against said work or the property on which the work was done, and you have complied with the "Performance of DBEs" section of these specifications.

## **DIVISION II GENERAL CONSTRUCTION**

### **10 GENERAL**

#### **Replace “Reserved” in section 10-1.02A with:**

Before ordering any signal poles and street lights or beginning any excavation, contact USA (Underground Service Alert) to have the location of all utilities marked. Promptly after utility markings are completed, you are to locate and mark the positions of all planned street luminaires, signal standards and pull boxes. Review in the field with the Engineer the markings for possible conflicts with the planned improvements.

Several existing utilities were positively located during design through potholing and the information generated from these potholes is presented in the project plans.

Where possible conflicts with existing utilities are indicated in your field review with the Engineer, you are to promptly pothole to find the exact locations of the utilities at these locations to determine if modifications to the planned work is necessary. Potholing must be performed using non-mechanical vacuum-type excavation and resulting holes properly backfilled and compacted.

The Contractor shall coordinate the layout with the utility company representatives and the Engineer to avoid utility conflicts wherever possible.

All final locations of planned improvements must be determined and approved by the Project Engineer BEFORE any poles (standards) are ordered by the Contractor.

Submit a Traffic Control Plan for Engineer’s review and acceptance, fifteen (15) days prior to start of work. The plan must be stamped and signed by a Licensed Civil or Traffic Engineer, and include details for but not limited to your proposed staging concepts, construction area signage, traffic control systems to facilitate staging in compliance with maintaining traffic requirements in section 12, and it must include provisions for maintaining pedestrian access.

Construct improvements in accordance with the construction staging shown on the plans unless approved by the Engineer.

Do not remove existing traffic stripes/markers and pavement markings more than 5 days prior to HMA overlay.

#### **Add to the end of the RSS for section 10-1.02B:**

Install loop detectors in the uppermost layer of the new pavement.

All permanent erosion control work must be completed by October 1 of each year on all finished cut and embankment slopes.

## 12 TEMPORARY TRAFFIC CONTROL

### **Add to 12-1.01:**

Temporary traffic control is paid either through bid items for specific items of work, or through the lump sum bid item of Traffic Control System. Any work necessary to control traffic not covered by individual bid items is included in the lump sum price paid for Traffic Control System, unless otherwise specified in these special provisions.

### **Replace 12-1.04 with:**

The City does not reimburse you for the cost of furnishing flaggers. Furnishing flaggers is considered as included in Traffic Control System.

### **Replace 12-3.05D with:**

You are paid for Channelizer (Surface Mounted) for each channelizer installed as part of an approved traffic control plan, and as shown in the phase construction plans.

### **Replace “Reserved” in section 12-3.11B(5) with:**

Construction project funding signs (96”x60”) must comply with the details shown on the Caltrans Department’s Traffic Operations website for CA47A (CA). Furnishing, maintaining and removing construction funding signs is included in the payment for construction area signs.

The signs must be a wood-post sign complying with section 82-3.

The sign panels must be framed, single-sheet aluminum panels complying with section 82-2.

The background on the sign must be Type II retroreflective sheeting. The Type II retroreflective sheeting must be on the Authorized Material List for signing and delineation materials.

The legend must be retroreflective except for nonreflective black letters and numerals. The blue must match PR color no. 3 on FHWA’s Color Tolerance Chart. The orange must match PR color no. 6 on FHWA’s Color Tolerance Chart.

The legend for the type of project on construction project funding signs must read as follows:

### **ROADWAY IMPROVEMENT**

The legend for the types of funding on construction project funding signs must read as follows and in the following order:

### **MEASURE X (REGIONAL), SB1 LPP**

The Engineer will provide the year of completion for the legend on construction project funding signs.

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Furnish and install a sign overlay for the year of completion within 10 working days of notification.

The size of the legend on construction project funding signs must be as described. Do not add any additional information unless authorized.

Install 2 construction project funding signs at the locations designated by the Engineer before starting major work activities visible to highway users.

When authorized, remove and dispose of construction project funding signs upon completion of the project.

**Replace item #4 of the 1st paragraph of section) 12-3.11C(2) with:**

4. Post embedment must be 2.5 feet and backfilled with native material. Compact by tamping.

**Replace “Not Use” in section 12-3.11D with:**

Furnishing, installing and maintaining construction funding signs is included in payment for construction area signs.

Payment for construction area signs will be made in increments of the contract lump sum price for this item of work in the following manner:

1. Initial Increment: 60 percent of the lump sum price upon satisfactory completion of installation of signs.
2. Final Increment: Balance of the lump sum price upon satisfactory completion of removal of signs.

**Add to 12-3.20D with:**

You are paid for Temporary Railing (Type K) for each railing installed as part of an approved traffic control plan, and as shown in the phase construction plans.

**Replace section 12-3.24 with:**

**12-3.24 TEMPORARY IN-LINE CRASH CUSHIONS**

**12-3.24A General**

Section 12-3.22 includes specifications for placing in-line temporary crash cushion modules. If activities expose traffic to a fixed obstacle, protect the traffic from the obstacle with an in-line crash cushion module. The crash cushion must be in place before opening traffic lanes adjacent to the obstacle.

**12-3.24B Materials**

The temporary in-line crash cushion must be a Category 3 temporary traffic control device and be

on the State of California Department of Transportation's Highway Safety Features list. This list is maintained by the Division of Engineering Services and can be found at:

[http://www.dot.ca.gov/hq/esc/approved\\_products\\_list/](http://www.dot.ca.gov/hq/esc/approved_products_list/)

Furnish the Engineer one copy of the manufacturer's plan and parts list of the selected temporary in-line crash cushion.

Provide the Engineer with a Certificate of Compliance from the manufacturer in conformance with the provisions in Section 6-3.05E, "Certificates of Compliance," of the Standard Specifications. The Certificate of Compliance must certify that the temporary in-line crash cushion conforms to the prequalified design and material requirements, and was manufactured in conformance with the approved quality control program.

### **12-3.24C Construction**

In-line temporary crash cushion must not encroach on the traveled way.

Maintain in-line temporary crash cushions in place at each location, including times when work is not actively in progress. You may remove the crash cushions during the work shift for access to the work if the exposed fixed obstacle is 15 feet or more from the nearest lane carrying traffic. Reset the crash cushion before the end of the work shift.

Immediately repair in-line temporary crash cushion modules damaged due to your activities. Remove and replace any module damaged beyond repair. Repair and replacement of temporary crash cushion modules damaged by traffic are change order work.

Attach a Type R or Type P marker panel to the front of the temporary crash cushion if the closest point of the crash cushion array is within 12 feet of the traveled way. Firmly fasten the marker panel to the crash cushion with commercial quality hardware or by other authorized methods.

A lateral move of a temporary crash cushion module is change order work if ordered and the repositioning is not shown.

Remove in-line temporary crash cushion modules and marker panels at Contract acceptance. Do not install in-line temporary crash cushion modules in the permanent work.

### **12-3.24D Payment**

You are paid for each time an in-line crash cushion array is placed based as shown in the phase construction plans.

The payment quantity for in-line temporary crash cushion does not include:

1. Temporary crash cushions placed for public safety including those shown on your traffic control plans.
2. Temporary crash cushions placed in excess of the number shown on the phased construction plans.
3. Repositioned Temporary crash cushions

**Add to section 12-3.32A(1):**

Furnish seven (7) portable changeable message signs (PCMS) for the duration of the project, beginning two (2) weeks prior to the first day of construction. Place them at locations as directed by the Engineer. As a part of the Engineer's weekly meeting with you, the PCMS locations and messaging will be discussed. Relocate and reposition them throughout the life of the project as directed by the Engineer. Payment for each PCMS includes the cost for furnishing it for the life of the project, including relocating and repositioning the PCMS.

**Add before the first paragraph in the RSS for section 12-3.32C:**

Place the portable changeable message sign in advance of the 1<sup>st</sup> warning sign for each:

1. Stationary lane closure

**Add to section 12-4.01A:**

Local authorities are defined as, but not limited to, Public Works Department, Police Department, California Highway Patrol, local Fire Department, United States Post Office, local waste management companies, local transit agencies, Emergency Response Companies and/or all businesses or regular users whose ability to perform their daily job will be affected by road closures, detours or general work by the Contractor.

If work vehicles or equipment are parked within 6 feet of a traffic lane, close the shoulder area with fluorescent orange traffic cones or portable delineators. Place the cones or delineators on a taper in advance of the parked vehicles or equipment and along the edge of the pavement at 25-foot intervals to a point not less than 25 feet past the last vehicle or piece of equipment. Use at least 9 cones or delineators for the taper. Use a W20-1, "Road Work Ahead," W21-5b, "Right/Left Shoulder Closed Ahead," or C24(CA), "Shoulder Work Ahead," sign mounted on a crashworthy, portable sign support with flags. The sign must be placed as ordered by the Engineer and at least 48 by 48 inches in size. If a cone or delineator is displaced or overturned, immediately restore the device to its original position or location.

Maintaining Pedestrian Access

You are responsible for providing for and maintaining pedestrian access through and around the construction areas. Temporary pedestrian routes are not shown on the construction staging plans and are your responsibility to plan and implement.

You must have open three (3) cross-walks at each intersection at all times. All temporary pedestrian routes must be ADA compliant. Pedestrian access, including any proposed temporary pedestrian access routes, must be included in your Traffic Control Plan.

Construction Phasing

Construction phases 1,2 and 3 must be constructed sequentially. Sequential phases must be performed in series, they cannot be performed in parallel. Work from the current sequential phase must be substantially completed such that traffic control can be removed before the next sequential phase can be started.

If you recognized any construction conflicts with this planned construction sequence, bring it to the attention of the Engineer immediately for resolution.

## A. Phase 1

Phase 1 scope of work primarily consists of the following constructed in the order listed unless approved by the Engineer:

- Installing phase 1 construction area signs, temporary striping, portable changeable message signs, temporary railing, channelizers and crash cushions, and shifting Imjin Parkway traffic lanes as shown;
- Develop and implement a temporary 3-way stop intersection with phase 1 Imjin Parkway for the two northerly intersecting roads not being closed initially;
- As a first item of phase 1 work after installing signs, barriers and other traffic control devices, constructing temporary Imjin Parkway road improvements along the south side of Abrams Drive intersection for Phase 1 traffic control, and switching Imjin Parkway traffic pattern from existing to the Phase 1 Imjin Parkway traffic control layout;
- constructing all permanent northerly Imjin Parkway improvements, including all utility modifications, , not in conflict with the temporary road work at various intersections, as shown; constructing temporary Imjin Parkway road improvements along north side of Imjin Road intersection necessary for Phase 2 traffic control, as shown;
- constructing all permanent Imjin Parkway and Imjin Road improvements in southeast quadrant of the Imjin Road/Imjin Parkway intersection south of the existing Imjin Parkway not in conflict with temporary road work for connecting Imjin Road to Phase 2 Imjin Parkway traffic lanes; performing roadway excavation along the south side of Imjin Parkway as needed to generate sufficient material for constructing north side embankments and embankment along the south side of Imjin Parkway on east side of Imjin Road intersection;
- constructing temporary Imjin Parkway road improvements along north side of Imjin Road intersection necessary for Phase 2 traffic control, as shown;
- Temporary Imjin Parkway road improvements at the northeast quadrant of Marina Heights intersection for Phase 2 traffic control;
- Temporary Imjin Parkway road improvements at the northeast quadrant of Preston Drive intersection;
- and constructing those portions of the temporary Imjin Road phase 2 road connections not in conflict with Imjin Parkway Phase 1 traffic control.

At your option and expense, transporting excavated material across (from southside to northside) Imjin Parkway for construction of embankments may only be done in the segment between stations 21+00 “IP” and 50+00 “IP” with adequate additional temporary barriers and crash cushion modules, signage and traffic control including any necessary flaggers only during the periods lane closures are allowed on Imjin Parkway as specified elsewhere in these special provisions. Only two crossing locations a minimum of 800 feet apart are allowed.

The temporary road alignment pavement transitions onto active traffic lanes will be done using lane closures as specified elsewhere in section 12 of these special provisions.

The southern Abrams Drive approach to Imjin Parkway may be closed as shown for xx days to construct the temporary road improvements. Road closures as shown for up to xx days will be allowed to construct the northern approaches to Imjin Parkway for Marina Heights Drive, Abrams Drive and Preston Drive. As shown, only one of these intersecting roads may be closed at a time.

As shown, only one of the three intersecting roads (Marina Heights, Abrams, and Preston) on the north side of Imjin Parkway may be closed at a time. Prior to one of the streets being closed, the detour plan for that intersecting street closure must be completed.

You are to develop traffic control plans, and have them approved by the Engineer, for temporary connections of these northerly intersecting streets to the Phase 1 Imjin Parkway alignment in their existing and improved conditions.

Other work may be allowed by the Engineer if you can show that it will not impact traffic.

#### B. Phase 2

Phase 2 scope of work primarily consists of the following constructed in the order listed unless approved by the Engineer:

- Removing phase 1 construction area signs, temporary striping, temporary railing, channelizers and crash cushions, and installing phase 2 construction area signs, temporary striping, portable changeable message signs, temporary railing, channelizers and crash cushions, as shown;
- Develop and implement a temporary 3-way stop Imjin Road intersecting phase 2 Imjin Parkway traffic lanes;
- As a first item of phase 2 work after installing signs, barriers and other traffic control, construct the temporary Imjin Road connection to Imjin Parkway phase 2 traffic lanes as shown;
- And, constructing all permanent southerly Imjin Parkway improvements, including all utility modifications, not in conflict with the temporary road work at various intersections, as shown.

The temporary road alignment pavement transitions onto active traffic lanes will be done using lane closures as specified elsewhere in section 12 of these special provisions.

The Imjin Road approach to Imjin Parkway may be closed as shown for xx days to construct the temporary road improvements.

You are to develop traffic control plans, and have them approved by the Engineer, for temporary connections of Imjin Road, prior to constructing the temporary connection to east of existing intersection, to the Phase 2 Imjin Parkway alignment in its existing condition.

Other work may be allowed by the Engineer if you can show that it will not impact traffic.

#### C. Phase 3

Phase 3 scope of work primarily consists of the following constructed in the order listed unless approved by the Engineer:

- Removing phase 2 construction area signs, temporary striping, temporary railing, channelizers and crash cushions, and installing phase 3 construction area signs, temporary striping, portable changeable message signs, temporary railing, channelizers and crash cushions and shifting Imjin Parkway traffic lanes, as shown;
- And, constructing all remaining permanent Imjin Parkway improvements, including any remaining utility modifications, and permanent improvements to Imjin Road and Abrams Road (south) connecting to Imjin Parkway.
- Removal of phase 3 construction area signs barricades and crash cushions, and replacing temporary striping, markings and signs with permanent striping, markings and roadside signs, and moving traffic to permanent lane configurations.

The temporary road alignment pavement transitions onto active traffic lanes will be done using lane closures as specified elsewhere in section 12 of these special provisions.

The Imjin Road approach to Imjin Parkway may be closed as shown for xx days to construct the temporary road improvements.

You are to develop traffic control plans, and have them approved by the Engineer, for temporary connections of Imjin Road, prior to constructing the temporary connection to east of existing intersection, to the Phase 2 Imjin Parkway alignment in its existing condition.

Other work may be allowed by the Engineer if you can show that it will not impact traffic.

#### D. Final

Phase 3 scope of work primarily consists of the following constructed in the order listed unless approved by the Engineer:

- Final cleanup and “punchlist” work.
- Begin Plant Establishment work

#### Temporary Lane Closures

Temporary lane closures will be allowed subject to the following restrictions.

Imjin Parkway with only 2 through lanes and all intersecting sides streets:

Lane closures that limit traffic to a single traffic lane controlled by flaggers is allowed between x AM and y PM with a 10-minute wait for traffic.

Imjin Parkway with 4 through lanes:

Eastbound lanes: You may reduce eastbound traffic to a single lane between 7 AM - 4 PM (7AM - 3 PM on Fridays).

Westbound lanes: You may reduce westbound traffic to a single lane between x AM and x PM (3 Pm on Fridays).

#### **Replace *Not used* section 12-4.01D with:**

The contract unit price paid per square foot for “Temporary Road Paving” includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in temporary road paving, including but not limited to roadway excavation for temporary road alignment and pavement section, hot mix asphalt (Type A), aggregate base (Class 2), temporary striping, and removal of temporary road when no longer needed to maintain traffic, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

#### **Add to the first paragraph of section 12-4.02C(1):**

You must maintain one paved traffic lane (not less than 11 feet wide) in each direction of travel on Imjin Parkway unless otherwise shown in the construction staging portion of the plans. At no time will

there be less than 1 paved traffic lane not less than 10 feet wide opened for use by traffic in each direction of travel on streets intersecting Imjin Parkway during construction activities unless otherwise shown in the construction phasing portion of the plans or as allowed elsewhere in these special provisions.

Except as shown on construction phasing plans, keep the full width of the traveled way open to traffic when no active construction activities are occurring in the traveled way or within 6 feet of the traveled way and on:

1. Friday after 3:00 p.m.
2. Saturday
3. Sunday
4. Designated holidays

Every Monday by noon, submit a schedule of planned lane and road closures for the next week period. The next week period is defined as Sunday noon through the following Sunday noon.

Submit a schedule not less than 10 days before the anticipated start of any activity that will:

1. Reduce the horizontal clearances of traveled ways, including shoulders, to 2 lanes or less due to operations such as temporary barrier placement and paving

Closure schedules submitted with incomplete or inaccurate information will be rejected and returned for correction and resubmittal. You will be notified of unauthorized closures or closures that require coordination with other parties as a condition of approval.

Submit closure schedule amendments, including adding additional closures, by noon at least 3 business days before a planned closure. Approval of amendments will be at the discretion of the Engineer.

The Engineer must be notified of a cancelled closure a minimum of 2 business days before the date of the closure.

The Engineer may reschedule a closure cancelled due to unsuitable weather.

If a lane closure is not reopened to traffic by the specified time, work must be suspended. No further lane closures are allowed until the Engineer has reviewed and accepted a work plan submitted by you that insures that future lane closures will be reopened to traffic at the specified time. Allow the City 2 business days to review your proposed work plan. You are not entitled to compensation for the suspension of work resulting from the late reopening of closures.

For each 10-minute interval, or fraction thereof past the time specified to reopen a lane closure, the City will deduct \$500.00 per interval from moneys due or that may become due to the Contractor under the contract.

If a street closure is not reopened to traffic by the specified number of days of road closure, the City will deduct \$2000.00 per calendar day the road remains closed beyond the specified number of days the road was allowed to be closed from moneys due or that may become due you under the contract.

**Delete section 12-4.02C(2) of the RSS and section 12-4.02C(2) the Standard Specifications.**

**Add to the end of the first sentence in the first paragraph of section 12-4.02C(7)(a):**

except you may use a moving closure during traffic striping and pavement marker placement using a bituminous adhesive.

**Add to the end of section 12-4.02C(7)(a):**

Whenever components of the traffic control system are displaced or cease to operate or function as specified from any cause, immediately repair the components to the original condition or replace the components and restore the components to the original location.

For a stationary lane closure made only for the work period, remove components of the traffic control system from the traveled way and shoulder, except for portable delineators placed along open trenches or excavation adjacent to the traveled way at the end of each work period. You may store the components at selected central locations designated by the Engineer within the limits of the highway.

**Add to 12-6.01:**

Place temporary traffic stripes and pavement markings as shown on the plans and as required by your approved Traffic Control Plan. When no longer needed, remove temporary traffic stripes and pavement markings

**Replace 12-6.04 with:**

All work associated with furnishing, placing, maintaining, and removing temporary traffic stripes and pavement markings is paid for as Traffic Control System.

## **13 WATER POLLUTION CONTROL**

**Add to section 13-1.03D:**

You are responsible for penalties assessed or levied on you or the City as a result of your failure to comply with the provisions in this section “Water Pollution Control,” including, but not limited to, compliance with the applicable provisions of the Manuals, and Federal, State, and local regulations and requirements as set forth therein. See “Retention of Funds” sub-section later in this special provision.

Penalties as used in this section shall include fines, penalties and damages, whether proposed, assessed, or levied against you or the City, including those levied under the Federal Clean Water Act and the State Porter-Cologne Water Quality Control Act, by governmental agencies or as a result of citizen suits. Penalties shall also include payments made or costs incurred in settlement for alleged violations of the Manuals, or applicable laws, regulations, or requirements. Costs incurred could include sums spent instead of penalties, in mitigation or to remediate or correct violations.

**Add to section 13-3.01A:**

The project is risk level 2.

Discharges of storm water and non-storm water from construction activities disturbing 1 acre or more of soil in a common plan of development must comply with the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2012-0006-DWQ, NPDES No. CAS000002) referred to herein as Permit. Copies of the Permit and modifications thereto are available for review from the State Water Resource Control Board (SWRCB), Storm Water Permit Unit, 1001 "T" Street, P.O. Box 1977, Sacramento, California 95812-1977, Telephone: (916) 341-5254 and may also be obtained from the SWRCB Internet website at:

[http://www.swrcb.ca.gov/water\\_issues/programs/stormwater/](http://www.swrcb.ca.gov/water_issues/programs/stormwater/)

Submit a Notice of Intent (NOI) to the Regional Water Quality Control Board (RWQCB) prior to beginning work. Submit a draft NOI to the City for review prior to submitting to the RWQCB. Notify the Engineer immediately upon request from the regulatory agencies to enter, inspect, sample, monitor, or otherwise access the project site or your records pertaining to water pollution control work. Provide copies of correspondence, notices of violation, enforcement actions or proposed fines by regulatory agencies to the requesting regulatory agency.

The City does not have an agency-specific SWPPP template.

A qualified SWPPP developer (QSD) must develop the SWPPP.

#### **Add to section 13-3.04:**

Implementing the SWPPP is included in the payment for Prepare Water Pollution Control Program. This includes all work associated with implementing your authorized SWPPP, including furnishing, constructing, maintaining, removing, and disposing of water pollution control materials, including, but not limited to, fiber rolls, polyethylene plastic sheeting, gravel bags, silt fencing, and inlet protection.

Temporary reinforced silt fence (Type I) that is shown on the plans is measured and paid for as Temporary Reinforced Silt Fence (Type I). Temporary reinforced silt fence (Type I) that is not shown on the plans but is included in your authorized SWPPP is considered as included in the price paid for water pollution control, and this temporary silt fence (Type I) will not be measured and paid for separately.

Notwithstanding any other remedies authorized by law, the City may retain money due to you under the contract, in an amount determined by the City, up to and including the entire amount of Penalties proposed, assessed, or levied as a result of your violation of the Permit, the Manuals, or Federal or State law, regulations or requirements. Funds may be retained by the City until final disposition has been made as to the Penalties. You shall remain liable for the full amount of Penalties until such time as they are finally resolved with the entity seeking the Penalties.

Retention of funds for failure to conform to the provisions in this section, "Water Pollution Control," shall be in addition to the other retention amounts required by the contract. The amounts retained from you for failure to conform to provisions in this section will be released for payment on the next monthly estimate for partial payment following the date when an approved WPCP has been implemented and maintained, and when water pollution has been adequately controlled, as determined by the Engineer.

When a regulatory agency identifies a failure to comply with the Permit and modifications thereto, the Manuals, or other Federal, State or local requirements, the City may retain money due to you, subject to the following:

- A. The City will give you 30 days notice of the City’s intention to retain funds from partial payments which may become due to you prior to acceptance of the contract. Retention of funds from payments made after acceptance of the contract may be made without prior notice to you.
- B. No retention of additional amounts out of partial payments will be made if the amount to be retained does not exceed the amount being withheld from partial payments pursuant to Section 9-1.16 of the Standard Specifications and these special provisions.
- C. If the City has retained funds, and it is subsequently determined that the City is not subject to the entire amount of the Costs and Liabilities assessed or proposed in connection with the matter for which the retention was made, the City shall be liable for interest on the amount retained for the period of the retention. The interest rate payable shall be 6 percent per annum.

During the first estimate period that the Contractor fails to conform to the provisions in this section, “Water Pollution Control,” the City may retain an amount equal to 25 percent of the estimated value of the contract work performed.

## **14 ENVIRONMENTAL STEWARDSHIP**

### **Add to the end of section 14-1.02:**

An ESA exists on this project.

Before starting job site activities, install temporary fence (Type ESA/Wildlife Exclusion) in conformance with section 16-2.03 to protect the ESA and mark its boundaries.

Limited access to the ESA is allowed for buckwheat transplanting, seeding, and watering. Notify the Engineer \_\_5\_\_ business days or less before the planned entry date. Any other access to the ESA is prohibited.

Access to an ESA other than that described is prohibited.

***ADD SPECIAL PROVISIONS US ARMY CORP OR STATE FISH WILDLIFE or INCIDENTAL TAKE PERMIT***

**Review following for conformance with final BA Report.**

### **Add between the 5<sup>th</sup> and 6<sup>th</sup> paragraphs in section 14-6.03B:**

If construction is scheduled to occur during the nesting bird season (February 15 through September 1), the City will conduct a pre-construction survey through a Qualified Biologist, hired by the City, no more than one week prior to construction to determine the presence/absence of nesting birds within the project site. If active nests are found the Qualified Biologist shall establish an appropriate buffer to be in compliance with Migratory Bird Treaty Act (MBTA) and Fish and Game Code 3503. The CDFW generally considers an appropriate buffer to be 100 feet for passerines and 300 feet for raptors. The

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Qualified Biologist will perform at least two hours of pre-construction monitoring of any active nest to characterize "typical" bird behavior. The Qualified Biologist will monitor the nesting birds and will increase the buffer if the Qualified Biologist determines the birds are showing signs of unusual or distressed behavior by Project activities. Atypical nesting behaviors which may cause reproductive harm include, but are not limited to, defensive flights/vocalizations directed towards Project personnel, standing up from a brooding position, and flying away from the nest. The Qualified Biologist will have authority, through the City Engineer, to order the cessation of all Project activities if the nesting birds' exhibit atypical behavior which may cause reproductive failure (nest abandonment and loss of eggs and/or young) until an appropriate buffer is established. To prevent encroachment, the established buffer(s) must be clearly marked by high visibility material. The established buffer(s) will remain in effect until the young have fledged or the nest has been abandoned as confirmed by the Qualified Biologist. Any sign of nest abandonment must be reported to CDFW within 48 hours.

**Delete section 14-10.02.**

**Replace the 1st paragraph of section 14-11.14A:**

Wood posts from metal beam guardrail removal, wood light pole removal or roadside sign post removal are treated wood waste.

**Add section 14-11.14F:**

#### **14-11.14F Payment**

Payment for complying with section 14-11.14 is included in payment for remove guardrail and remove roadside sign.

## **15 EXISTING FACILITIES**

**Add between the 1st paragraph of section 15-1.03B:**

Remove traffic signal pole foundations entirely.

**Delete the 7th paragraph of section 15-1.03B.**

**Add to the end of section 15-1.03C:**

At least 2 business days before hauling the material to the salvaged material stockpile location, notify the Engineer and inform the City recycle coordinator at telephone no. (831) 884-1212

The stockpile location is:

City of Marina - Public Works Corporation Yard  
2660 5th Avenue  
Marina, CA 93933

**Replace section 16-3 with:**

## **16-3 TEMPORARY PAVEMENT**

### **16-3.01 GENERAL**

Section 16-3 includes specifications for constructing temporary pavement to convey traffic around work to facilitate construction phasing as shown. Temporary pavement includes hot mix asphalt, class 2 aggregate base, excavation, and temporary pavement removal and backfill with native material outside permanent pavement limits. Temporary striping of temporary pavement is not included in payment for temporary pavement.

Hot mix asphalt must comply with section 39.

Class 2 aggregate base must comply with section 26.

Excavation, temporary pavement removal and backfill must comply with section 19.

### **16-3.02 MATERIALS**

Not Used

### **16-3.03 CONSTRUCTION**

Not Used

### **16-3.04 PAYMENT**

Temporary striping of temporary pavement and traffic control necessary to construct temporary pavement is included in the payment for traffic control system.

## DIVISION III EARTHWORK AND LANDSCAPE

### 17 GENERAL

Replace “5” with “2” throughout 4th paragraph in section 17-2.03A.

### 19 EARTHWORK

Replace the 2nd, 3rd, and 4th paragraphs of section 19-2.03B with:

Dispose of surplus material. Ensure enough material is available to complete the embankments before disposing of it.

Add the following section 19-2.03I:

#### 19-2.03I Swale Excavation

The excavation necessary to construct the top finished grade of bioretention swales as shown is paid for as roadway excavation. The excavation for placement of biotreatment soil mix (BSM) is included in the price paid for biotreatment soil mix (BSM).

Add to section 19-3.04:

Class 2 aggregate base placed below footings is paid for as structure backfill.

Pervious and permeable backfill material placed within the limits of payment for retaining walls is paid for as structure backfill (retaining wall).

Add to section 19-7.02C:

Any material imported for the construction of embankments or as backfill for structures, culverts, and other facilities shall meet the following requirements:

|                                    |                            |
|------------------------------------|----------------------------|
| pH <sup>1</sup>                    | > 5.5 (> 7.3) <sup>2</sup> |
| Water Soluble Sulfate <sup>3</sup> | < 0.2%                     |
| Resistivity (R) <sup>1</sup>       | > 3000 ohm cm <sup>2</sup> |

1. Per California Test 532 & 643.
2. For backfill around metal pipe/conduit.
3. Reported as SO<sub>4</sub>.

**Replace *Reserved* in Section 19-11 with:**

## **19-11 SUBGRADE ENHANCEMENT UNDER HMA DIKES**

### **19-11.01 GENERAL**

Section 19-11 includes specifications for placing geogrid under hot mix asphalt dikes adjoining bio treatment swales.

Excavation and backfill of subgrade to place geogrid must comply with section 19.

### **19-11.02 MATERIALS**

Subgrade enhancement geogrid must be biaxial geogrid.

### **19-11.03 CONSTRUCTION**

Comply with section 19-10.03 in installing geogrid.

### **19-11.04 PAVEMENT**

Payment for subgrade enhancement under hot mix asphalt dikes is included in payment for Place Hot Mix Asphalt Dike (Type A).

## **20 LANDSCAPE**

**Replace section 20-1.01A with:**

Section 20 includes general specifications for performing landscaping work.

Perform roadside clearing:

1. As required to prepare the job site for construction work
2. Until the start of the plant establishment work or Contract acceptance, whichever comes first

Check for plant deficiencies before installing any irrigation system in an existing planting area to be maintained.

Unless a supply line is shown through plant holes, relocate any plant hole to clear a supply line. Do not install supply lines, control and neutral conductors, and electrical conduits in common trenches above each other.

**Replace section 20-1.01B with:**

**Compost** – is the product of controlled biological decomposition of organic materials, often including urban plant debris and food waste. It is an organic matter resource that has the unique ability to improve the chemical, physical and biological characteristics of soils or growing media. It contains plant nutrients but is typically not characterized as a fertilizer. *(Excerpted from US Compost Council, Field Guide to Compost Use)*

**Integrated Pest Management** – is a holistic approach to mitigating insects, plant diseases, weeds, and other pests. It involves the use of many strategies for managing, but not eliminating pests. Integrated Pest Management (IPM) uses cultural, mechanical, physical, and biological control methods before using pesticides to control pests and diseases in the landscape. Chemical controls are applied only when monitoring indicates that preventative and non-chemical methods are not keeping pests below acceptable levels. When pesticides are required, the least toxic and the least persistent pesticide that will provide adequate pest control is applied.

The **Organic Materials Research Institute** (OMRI) is a national nonprofit organization founded in 1997 to support the organic community. OMRI reviews products to determine their suitability for producing, processing and handling organic food and fiber under the USDA National Organic Program Rule (OMRI General Materials List).

**Pesticide** – As defined in Section 12753 of the California food and Agricultural Code, a pesticide includes any of the following: “(a) Any spray adjuvant. (b) Any substance, or mixture of substances which is intended to be used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest, which may infest or be detrimental to vegetation, man, animals, or households, or be present in any agricultural or nonagricultural environment whatsoever”. Antimicrobial agents are excluded from the definition of pesticide.

**Replace section 20-1.01C with:**

**Soil Analysis**

Contractor shall arrange and pay for soil testing by an accredited soils laboratory approved by the City’s Representative. Laboratories that participate in the North American Proficiency Testing Program (NAPT) are recommended. See [www.usual.usu.edu/napt](http://www.usual.usu.edu/napt) for participating laboratories. Waypoint Analytical, 1101 S Winchester Blvd, San Jose, CA 95128 (408) 727-0330 (or approved agency).

Soil submitted for testing should be of individual samples taken from three (3) locations as shown on the plans. At each sampling spot dig a spades width hole at least 8 inches deep, and excavate 2 cups of soil, blend together and deliver to the soil lab for testing. Label the soil sample in a clean sealable plastic bag for testing. Label the bag with site information: area of sample plus name of person who took the sample and contact information and include the species of plants provided on the planting plan.

PRODUCT DATA SHEET - At a minimum the soil analysis shall include:

1. soil texture
2. infiltration rate determined by laboratory test or soil texture infiltration rate table
3. pH
4. total soluble salts
5. sodium
6. essential nutrients
7. percent organic matter

Recommendations- request that the laboratory make recommendations for amending the soil with organic compost to bring the soil organic matter to a minimum of 5% by dry weight and incorporating natural, non- synthetic fertilizers to recommended levels for planting area.

The base bid shall include cost of testing site soil and organic amendments noted in this specification section. Adjust the quantities of soil amendments and fertilizer per soil lab written report recommendation. The approved soils laboratory recommendations shall be considered a part of this specification.

Organic Fertilizers: Samples and manufacturer's certificate of fertilizers shall be as directed by the soil test results. Include Manufacturer's literature on each of the materials recommended.

**Add to the end of section 20-1.01D(1):**

Installation shall be by a contractor and crew with at least five years of experience in Landscape Contracting procedures on projects of similar nature or dollar cost.

Contractor shall conform to all local, state/provincial licensing and bonding requirements.

**Replace section 20-1.01D(2):**

The Engineer performs a progress inspection:

1. Before cultivating work starts
2. During pressure testing of irrigation pipe on the supply side of control valves
3. During testing of low voltage conductors
4. During irrigation system functional tests
5. Before planting work starts
6. After completion of planting work

Notify the Engineer at least 4 business days before each inspection is required. Allow at least 3 business days for the Engineer's inspection.

Do not proceed with the next construction activity until the inspection has been completed and any required corrective work has been performed and authorized.

**Replace section 20-1.02A:**

Perform work in accordance with all applicable laws, codes and regulations required by authorities having jurisdiction over such work and provide for all inspections and permits required by Federal, State and local authorities in furnishing, transporting and installing materials.

**Add section 20-1.02D:**

**20-1.02D TOPSOIL**

Contractor shall provide imported planting soil where specified in the plans and details per Soils Lab recommendations. Use topsoil mix that a minimum of 5% and up to 10% organic matter (with 20% or more compost content). Soil portion must be sandy loam as defined by USDA. Submit soil analysis report.

All material shall be free of trash and debris, or any other deleterious materials, and shall be subject to the approval and acceptance of the City’s Representative. The Contractor shall designate their proposed import sources in advance and shall provide source samples and soils test of material to the City’s Representative. Material shall be free of seeds.

Contractor shall utilize all horticulturally suitable soil from on-site topsoil stockpile if available and shall be confirmed with City Representative.

All imported soil to be Class “A”.

The imported soil shall not contain any detectable concentration of chemicals analyzed for by EPA Method 8080, EPA Method 8240/8260, and EPA Method 8270; or any petroleum hydrocarbon identified by EPA Method 8015 - modified for TPH as gasoline, diesel and oil and grease.

|               |                          |            |
|---------------|--------------------------|------------|
| Arsenic (As)  | total arsenic less than  | 7 mg/kg    |
| Cadmium (Cd)  | total cadmium less than  | 35 mg/kg   |
| Chromium (Cr) | total chromium less than | 700 mg/kg  |
| Lead (Pb)     | total lead less than     | 200 mg/kg  |
| Mercury (Hg)  | total mercury less than  | 4 mg/kg    |
| Selenium (Se) | total selenium less than | 200 mg/kg  |
| Zinc (Zn)     | total zinc less than     | 1,000mg/kg |

Imported topsoil shall be fertile, agricultural soil, free of impurities, plants, weeds and roots. Soil shall contain sufficient quantities of nitrogen, phosphorus, potassium, calcium and magnesium to ensure a medium for sustained healthy plant growth and shall meet the following criteria:

| Agricultural Suitability         | Minimum | Maximum |
|----------------------------------|---------|---------|
| Salinity (ECe x 10) (3))         | 0       | 3       |
| Sodium (SAR)                     | 0       | 6       |
| Boron (PPM in Saturated Extract) | 0       | 1       |
| Reaction (pH of Saturated Paste) | 5.5     | 7.5     |

| Particle Size                         | Minimum | Maximum |
|---------------------------------------|---------|---------|
| Silt                                  | 10%     | 30%     |
| Clay                                  | 10%     | 25%     |
| Coarse Sand                           | 5%      | 20%     |
| Gravel (Maximum Aggregate Size 13 mm) | 0%      | 15%     |
| Decomposed Organic Matter             | 2%      | 15%     |

*(Table modified from the US Composting Council Landscape Architectural Specifications)*

Full compensation for providing soil analysis of imported topsoil, as specified in these special provisions, shall be considered as included in the contract lump sum price paid for Planting and no additional compensation will be allowed therefore.

**Add section 20-1.02E:**

**20-1.02E POLYMER**

Polymer coated sand product in the form of a straight additive for increased moisture retention and growth of plants through blending with soil amenities:

1. AquaSmart PRO – 40 lbs. per 1000 SF or Equal, available from: Ewing Irrigation

**Material Submittals**

The contractor shall submit manufacturer’s letters of compliance, samples and manufacturer’s literature for the following items:

1. Fertilizers (If required per Soils Lab recommendations)
4. Organic Compost
5. Mulch
6. Equipment
7. Water Source
8. Sand

## Product Delivery, Storage and Handling

1. All products shall be delivered to the site in manufacturer's unopened standardized containers bearing original labels showing quantity, analysis and name of manufacturer.
2. All materials shall be stored in designated areas and in such a manner as to protect them from weather or other conditions that might damage or impair the effectiveness of the product.

General: All products shall be in conformance with the specifications.

Fertilizer: Commercial fertilizer, (if any is required) shall be per recommendation by Soil and Plant Lab.

### **Add section 20-1.02F:**

#### **20-1.02F PLANTS**

Protect existing improvements and existing trees, as indicated on the plans, unless they are scheduled to be removed.

Certificates of inspection required by law for transportation shall accompany invoice for each shipment of trees. Submit five copies of certificates to City's representative after acceptance of material. Inspection at place of growth does not preclude rejection of trees/plants at project site.

Certificate of contract from plant material suppliers, including species, quantities, and sizes of trees at time of planting (height, width and caliper) shall be submitted to the Landscape Architect prior to site inspection.

Quantities: Plant materials, including seed, shall be furnished in quantities required to complete the work as indicated on the Drawings and shall be of species, kinds, sizes, spacing, etc., specified in the drawings and herein.

Install healthy, vigorous, shapely, well branched plants, densely foliated when in leaf, well rooted with no evidence of having been root bound, restricted or deformed, with a structure typical of the species or variety, free of disease, insect pests, eggs or larvae, and free from physical damage or adverse conditions that would prevent thriving growth.

Plants shall be nursery grown under climatic conditions similar to those of the job site.

Roots to be healthy and extend to the bottoms and sides of the container with no signs of restriction due to kinked, circular or distorted growth or deformed or circling roots at the liner stage. Rooting to be extensive enough to hold the rootball together during planting, but not so dense as to discourage root establishment into surrounding soils

Take precautions to ensure that the plants will arrive at the site in proper condition for successful growth.

Protect plants in transit from windburn and sunburn. Deliver plants with roots moist and showing no indication of drought stress. Protect and maintain plants on site by proper storage and watering.

Plants shall not be pruned prior to delivery.

All plants to be inspected by the Landscape Architect prior to installation. The City's Representative reserves the right to reject any or all plants due to health or structural defects and to inspect plant material prior to shipment after receiving order confirmation from supplying nursery. Notify Landscape Architect 5 days in advance of all required inspections prior to the delivery to site. In case the sample plants reviewed are found to be defective, the Landscape Architect reserves the right to reject the entire lot(s) of plants represented by the defective sample. Remove unsuitable plants and immediately dispose of off the site.

**Add section 20-1.02G:**

**20-1.02G BOULDERS**

Boulders shall be: Napa Basalt, **OR** Gilroy Fieldstone **OR** Sonoma Fieldstone free of sharp corners open cracks or holes. Landscape Architect to approve size and condition per submittal of photos for review and approval.

1. Boulders to be approximately sized at the following dimensions:
  - a. Small: 2' + x 3' + Diameter/27"+
  - b. Large: 3' + x 5' + Diameter/30"+

**20-1.02D(1) Boulder and Stone Layout:**

1. Contractor to coordinate the final placement and layout with the Landscape Architect. The Contractor is to contact Landscape Architect to coordinate date and time to meet in-the-field.
2. Install boulders in mixed sizes, clusters of two, and 3 boulders each within the Roundabouts as indicated on plans.

**Add section 20-1.02H:**

**20-1.02H INTEGRATED/ORGANIC PEST MANAGEMENT**

1. Integrated Pest Management (IPM) practices shall be used to control pests and diseases in the landscape.
2. Synthetic pre-emergents are prohibited.
3. Pesticides that are not allowed by OMRI in its generic materials list are prohibited.
4. No Herbicides shall be permitted on the project.
5. No Rodenticides shall be permitted on the project

**Replace section 20-1.03A:**

Commencement of planting operations shall presume that Contractor has fully examined all areas to be planted and has determined that conditions are satisfactory. At the nursery and upon delivery, plants shall be subject to inspection and approval by City's Representative for conformity with this section. The City's Representative reserves the right to examine and reject any plant material deemed in unhealthy condition during planting or throughout the Guarantee period. Examine areas to receive planting prior to commencement of work such as drainage installation and completed work of other trades.

Take precautions to prevent irrigation water from:

1. Wetting vehicles, pedestrians, and pavement
2. Eroding soil
3. Causing excess runoff

If water use calculations are provided as supplemental project information, water plants under the Model Water Efficient Landscape Ordinance, 23 CA Code of Regs § 490 et seq., and local water agency provisions.

Water plants at night unless otherwise authorized.

Dispose of removed, pruned, and damaged vegetative material.

Contractor may reduce on-site vegetative material to be removed for project construction to chips with a maximum thickness of 1/2 inch and spread it within the job site at locations determined by the Engineer. Coordinate with the Engineer and obtain authorization to spread the material prior to vegetative material removal. Do not substitute chipped material for compost mulch or place it in areas to receive compost mulch.

Carefully pack trees to prevent breaking, damage to bark, branches and root systems, and root cracking. Provide adequate ventilation, but do not expose the plants to the wind during transport – tarp plants or transport in an enclosed vehicle. Protect roots from sun, drying wind and frost. Do not drop trees or plants from vehicles. Legibly label plants with correct botanical name and common name. Store packaged materials in dry locations away from contaminants.

**Replace section 20-1.03C(3) with:**

Control weeds by the use of pesticides (if necessary), hand-pulling, or mowing.

If pesticides are used to control weeds, apply pesticides before the weeds reach the seed stage of growth or exceed 4 inches in length, whichever occurs first. Do not use pesticides at cutting plant locations.

Where cuttings are to be planted, control weeds by hand-pulling within an area 2 feet in diameter centered at each plant location.

Hand-pull weeds before they reach the seed stage of growth or exceed 4 inches in length, whichever occurs first.

Where liner, plug, or seedling plants are to be planted 10 feet or more apart, control weeds by the use of hand-pulling within an area 2 feet in diameter centered at each plant location.

Control weeds by mowing outside of mulched areas, plant basins, groundcover, plant areas, and within areas to be seeded. Mowing must extend to the edges of pavement, dikes, curbs, sidewalks, walls, and fences.

If mowing is to be performed within areas to be seeded, perform mowing as needed until the start of the seeding activity.

Perform mowing before the weeds reach the seed stage of growth or exceed 6 inches in length, whichever occurs first. Mow weeds to a height of 3 inches.

**Replace section 20-1.03D with:**

The areas to be cultivated must extend 12 inches beyond the outer limit of each planting area requiring cultivation.

After initial cultivation, place soil amendment and fertilizer, (if required per Soil Lab recommendations) at specified rates. Re-cultivate to thoroughly mix native soil and amendments. Do not drive on cultivated areas after cultivation.

Planting areas that have been cultivated and become compacted must be re-cultivated. Rocks and debris encountered during soil preparation in planting areas must be brought to the ground surface.

Remove rocks and debris as ordered.

**Replace section 20-3.01C(3) with:**

**20-3.01C(3) WATERING**

Water existing plants to be maintained, transplanted buckwheat plants, and new plants as needed to keep the plants in a healthy growing condition.

**Replace section 20-5.05 with:**

**20-5.05 ROUNDABOUT ART**

**20-5.05A GENERAL**

Section 20-5.05 includes specifications for manufacture, fabrication, and installation of roundabout art.

Welding must comply with Section 11.

Reinforcement must comply with Section 52.

Foundation concrete must comply with Section 90.

Contractor shall coordinate with the City-selected artist on developing the cut out designs for the weathering steel plates based on the following themes:

- Recreational Opportunities
- Natural Habitat
- History of Fort Ord
- Diversity

Contractor shall prepare the artist's designs in a digital format required by the steel cutter and/or manufacturer for review and approval by the Engineer and artist.

Steel cutting shall be by water jet cutter and/or laser cutter. Rounding of exterior and interior edges by the manufacturer is required.

### **20-5.05B MATERIALS**

The roundabout art monument plates are to be 3/4" thick Core Ten self-weathering steel with a yield stress  $F_y = 50\text{ksi}$ .

Welding electrodes shall be compatible with the Cor Ten self-weathering steel and shall produce a weld with similar corrosion resistance and color as the weathering steel.

The concrete must have a minimum compressive strength of  $f'_c = 2,500$  psi and the reinforcing steel must have a yield stress  $F_y = 60$  ksi.

### **20-5.05C SUBMITTALS**

Submit shop drawings for roundabout art, including details of weathering steel plate, anchorage systems, cutout art design, placement within roundabout, installation, and welding details.

Contractor shall prepare the artist's designs in a digital format required by the steel cutter and/or manufacturer for review and approval by the Engineer and artist. Upon approval, Contractor shall submit 1/10 scale 1/8" thick weathering steel "proofs" of the art panels for final review and approval by the Engineer and artist.

The Contractor shall submit the method(s) used to cut the steel panels, the location the panels will be cut, and the type, model, and manufacturer(s) of the cutting equipment to be used.

The Contractor shall submit method(s) for rounding all exterior and interior edges by the manufacturer such that all edges are smooth, and not sharp, to the touch. Upon approval of such method(s), the Contractor shall submit two 3/8" thick weathering steel block samples demonstrating smoothness of exterior and interior cuts to the Engineer for review and approval. Upon approval, one sample shall be kept by the manufacturer for quality control and one sample shall be kept by the Engineer for reference.

## **20-5.05D PAVEMENT**

The contract unit price paid per each for "Roundabout Art (H=8)", "Roundabout Art (H=10)", and "Roundabout Art (H=12)" includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work specified in the Plans and in this Section involved in manufacturing, fabricating, and installing roundabout art, weathering steel panel, foundations, and anchors, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Replace *Reserved* in section 20-5.06 with:**

## **20-5.06 DOLPHIN ART**

### **20-5.06A GENERAL**

Section 20-5.06 includes specifications for manufacture, fabrication, and installation of dolphin art.

Welding must comply with Section 11.

Reinforcement must comply with Section 52.

Foundation concrete must comply with Section 90.

Contractor shall coordinate with the City-selected artist on developing the dolphin art and the necessary foundation for the art piece. See project plans for placement locations. Dolphins are to be pointing in the westbound direction.

### **20-5.06B SUBMITTALS**

Submit shop drawings for dolphin art, including details for materials, dolphin art design, placement within the landscape area before each roundabout, foundation, and welding details.

### **20-5.06C PAVEMENT**

The contract unit price paid per each for "Dolphin Art" includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in manufacture, fabrication, and installation of dolphin art, including art piece and foundations, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Add to the end of Section 20-10.01C:**

Existing buckwheat plants, underlying soil and leaf litter in areas shown on the plans must be salvaged and transplanted to the location shown on the plans prior to construction impacts to these areas. The

areas receiving the transplanted buckwheat plants, underlying soil, and leaf litter are to be protected once the plants have been transplanted and the new buckwheat seed has been spread.

**Replace *Not Used* in section 20-10.01D with:**

**20-10.01D PAVEMENT**

The lump sum price paid for "Buckwheat Relocation and Seeding" includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in salvaging and transplanting the existing buckwheat plants, underlying soil, and leaf litter, watering, seeding the area with new buckwheat seed, and protecting after transplanting, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Replace section 20-2 with:**

**20-2 IRRIGATION**

Shall be per the City of Marina, California Standard Specifications, 2006 edition, and Marina Coast Water District requirements.

**20-3 PLANTING**

**20-3.01 GENERAL**

**20-3.01A General**

**20-3.01A(1) Summary**

Section 20-3.01 includes general specifications for performing planting work.

**20-3.01A(2) Definitions**

**Average plant density:** Number of living plants per square yard determined from a count of sample areas selected by the Engineer representing 3 to 5 percent of the total planted area.

**20-3.01A(3) Submittals**

Submit nursery invoices showing sizes, quantities, and botanical names of plants, including genus, species, and variety. Include lot numbers for plants grown from the same seed lot or cutting source.

**20-3.01A(3)(a) General**

**20-3.01A(3)(b) Vendor Statements**

At least 60 days before planting the plants, submit a statement from the vendor that the order for the plants required, including sample plants used for inspection, has been received and accepted by the vendor. The statement from the vendor must include the plant names, sizes, quantities, and anticipated delivery date.

**20-3.01A(3)(c) Certificates of Compliance**

Submit a certificate of compliance for soil amendment

#### **20-3.01A(4) Quality Assurance**

Plants must comply with federal and State laws requiring inspection for diseases and infestations. Inspection certificates required by law must accompany each shipment of plants.

The Engineer inspects the roots of container-grown sample plants by removing earth from the root ball of not less than 2 plants, nor more than 2 percent of the total number of plants of each species or variety. If container-grown plants are purchased from several sources, the Engineer inspects the roots of not less than 2 of each sample plant species or variety from each source. The root ball of container grown plants must not show evidence of having been restricted, or being under developed or deformed.

If the Engineer finds noncompliant plants, the entire lot represented by the noncompliant sample plants is rejected.

Cuttings with mature or brown stems and cuttings that have been trimmed will be rejected.

#### **20-3.01B Materials 20-3.01B(1) General**

Notify the Engineer at least 10 days before the plants are shipped to the job site.

#### **20-3.01B(2) Plants**

##### **20-3.01B(2)(a) General**

Plants must be true to the type or name shown. Plants must be individually tagged or tagged in groups identifying the plants by species or variety. Tagging is not required for cuttings.

Plants must be healthy, well-formed, free from insect pests and disease, and grown in nurseries inspected by the Department of Food and Agriculture. Plants must not be root-bound.

The plants must be the size and type shown in the following table:

| Plant group designation | Description           | Container size (cu in) |
|-------------------------|-----------------------|------------------------|
| A                       | No. 1 container       | 152–251                |
| B                       | No. 5 container       | 785–1242               |
| C                       | Balled and burlapped  | --                     |
| E                       | Bulb                  | --                     |
| F                       | In flats              | --                     |
| H                       | Cutting               | --                     |
| I                       | Pot                   | --                     |
| K                       | 24-inch box           | --                     |
| M                       | Liner <sup>a</sup>    | --                     |
| O                       | Acorn                 | --                     |
| P                       | Plugs <sup>a, b</sup> | --                     |
| S                       | Seedling <sup>c</sup> | --                     |
| U                       | No. 15 container      | --                     |

<sup>a</sup>Do not use containers made of biodegradable material.

<sup>b</sup>Grown in individual container cells.

<sup>c</sup>Bare root.

Trucks used for transporting plants must be equipped with covers to protect plants from windburn and sunburn.

Handle and pack plants using authorized methods appropriate for the species or variety.

### **20-3.01B(2)(b) Cuttings**

Reserved

### **20-3.01B(3) Soil Amendments**

REPLACE THE WITH:

Soil amendment must comply with the Soil Lab's Recommendations

### **20-3.01B(4) Fertilizers**

Reserved

### **20-3.01B(4)(a) General**

Reserved

### **20-3.01C Tree Protection (1 and 5 Gallon)**

See Landscape Plans Details

### **20-3.01D Construction 20-3.01D(1) General**

Before transporting the plants to the planting area, thoroughly wet the root ball.

### **20-3.01D(2) Pruning**

Reserved

### **20-3.0D(3) Watering**

Water existing plants to be maintained, transplanted trees, and new plants as needed to keep the plants in a healthy growing condition.

### **20-3.01D(4) Replacement Plants**

Plants that show signs of failure to grow at any time or which are so injured or damaged as to render them unsuitable for the purpose intended, must be removed, replaced, and replanted. Replace unsuitable plants within 2 weeks after the Engineer marks or indicates that the plants must be replaced.

Replacement planting must comply with the original planting specifications, sizes and spacing described for the plants being replaced.

Replacement plants must be the same species specified as the plants being replaced.

Place orders for replacement plants with the vendor at a time such that the replacement plants are not in a root-bound condition.

The Department does not pay for replacement plants or the planting of replacement plants.

#### **20-3.01C(5) Maintain Plants**

Maintain plants from the time of planting until Contract acceptance.

#### **20-3.01D Payment**

Not Used

### **20-3.02 PLANTING WORK**

#### **20-3.02A General**

Section 20-3.02 includes specifications for planting plants.

#### **20-3.02B Materials**

Not Used

#### **20-3.02C Construction 20-3.02C(1) General**

Do not start planting until authorized.

Do not start planting in an area until the irrigation functional test has been completed and authorized for the irrigation system serving that area.

#### **20-3.02C(2) Preparing Planting Areas**

The Engineer may designate a location other than that shown, in which case, the Engineer marks the location by a stake, flag, or other marker.

Conduct work such that the existing flow line in drainage ditches is maintained. Material displaced by your activity that interferes with drainage must be removed.

Where a minimum distance to a drainage ditch is shown, locate the plant such that the outer edge of its basin wall is at least the minimum distance shown for each plant involved.

Excavate each planting hole by manual or machine method. The bottom of each planting hole must be flat. Do not use water to excavate the hole.

Unless a larger planting hole is described, the planting hole must be large enough to receive the root ball or the total length and width of roots, backfill, and amendments. Where rock or other hard material prohibits the hole from being excavated, a new hole must be excavated and the abandoned hole backfilled.

#### **20-3.02C(3) Planting Plants 20-3.02C(3)(a) General**

Do not plant plants in soil that is too wet, too dry, not properly amended as described, or in an unsatisfactory condition for planting.

Do not distribute more plants than can be planted and watered on that day.

Water plants immediately after planting. Apply water until the backfill soil around and below the roots or ball of earth around the roots of each plant is thoroughly saturated. If watering with a hose, use a nozzle, water disbursement device, or pressure reducing device. Do not allow the full force of the water from the open end of the hose to fall within the basin around any plant. Several consecutive watering cycles may be necessary to thoroughly saturate the soil.

Where a tree, or shrub is to be planted within a groundcover area or cutting planting area, plant it before planting groundcover.

Where shrubs and groundcovers are shown to be planted in groups, the outer rows directly adjacent to the nearest roadway or highway fence must be parallel to the nearest roadway or highway fence. Stagger shrubs and groundcovers in adjacent rows. Adjust the alignment of the plants within the outer rows.

The Engineer determines the size and location of sample areas used to calculate average plant density.

### **20-3.02C(3)(b) Trees, Shrubs, and Groundcover**

After preparing holes, thoroughly mix soil at the rate shown with native soil to be used as backfill material. Remove containers from plants in a way that the ball of earth surrounding the roots is not broken. Do not cut plant containers before delivery of the plants to the planting area. Plant and water plants immediately after removal from their containers.

Distribute backfill uniformly throughout the entire depth of the plant hole without clods or lumps. After the planting holes have been backfilled, jet water into the backfill with a pipe or tube inserted into the bottom of the hole until the backfill material is saturated for the full depth. If the backfill material settles below this level, add additional backfill to the required level. If a plant settles deeper than shown, replant it at the required level.

Remove nursery stakes after planting.

Where installation of stakes occurs, ensure the root ball is not damaged. Construct a watering basin around each plant.

Install Tree protection within 2 days after planting. Install the foliage protector as follows:

1. Cut the bottom of the wire cylinder/cage to match the slope of the ground. Do not leave sharp points of wire after cutting. Sharp points must be bent over or blunted.
2. Install 2 support stakes for foliage protectors vertically and embed in the soil on opposite sides of the plant crosswise to the direction of the prevailing wind. See Planting Plans, Details

3. Ensure that the wire cylinder/cage is snug against the support stakes but loose enough to be raised to perform weeding within the plant basin.

### **20-3.02C(3)(c) Plants**

Each planting area irrigated by a single control valve must be completely planted and watered before planting other groundcover planting areas.

Plant groundcover plants in moist soil, and in neat, straight rows parallel to the nearest roadway. Stagger plants in adjacent rows.

### **20-3.02C(3)(d) Containers, Liners, Plugs, and Seedling**

Reserved

#### **Plants 20-3.02C(3)(d)(i) General**

Ensure the soil is moist to a minimum depth of 8 inches before planting cuttings.

#### **20-3.02C(3)(d)(v) Liner Plants**

Plant liner plants during the period specified in the special provisions.

#### **20-3.02C(3)(d)(vi) Plug Plants**

Plant plug plants during the period specified in the special provisions.

#### **20-3.02C(3)(d)(vii) Seedling Plants**

Plant seedling plants during the period specified in the special provisions.

### **20-3.02D Payment**

The payment quantity for soil amendment is the volume measured in the vehicle at the point of delivery.

The payment quantity for plants is measured by either the product of the average plant density and the total planted area, or by a count of the living plants in place.

## **20-4 PLANT ESTABLISHMENT WORK**

### **Maintenance, 365 Day Plant Establishment Period and Extended Three-Year Maintenance Contract**

#### **20-4.01 General**

The Contractor shall maintain all planted areas on a continuous basis as they are completed during the progress of the work and during the 365 Day Plant Establishment period, and shall continue to maintain them until final acceptance.

Protect adjacent walls, walks and utilities from damage or staining by soil. Clean up all trash and any soil or dirt spilled on any paved surface at the end of each working day. Maintain silt and sediment control devices, and provide adequate methods to assure that trucks and other equipment do not track soil from the site.

All planting areas shall be kept free of debris and shall be weeded and cultivated at intervals not to exceed 10 days. Any required pruning of plants will be as designated by the Landscape Architect at the start of the plant establishment period and the Contractor shall perform the pruning as part of the plant establishment work under the supervision of a licensed/certified Arborist.

The Contractor shall request a final inspection to begin the plant establishment period after all planting and related work has been completed in accordance with Construction Documents. After planting is completed, a field notification will be issued to the Contractor to establish the effective beginning date of the plant establishment period. The plant establishment period shall be for a period of 180 calendar days and shall be extended by the Landscape Architect if the planted material areas are improperly maintained, appreciable plant replacement is required, or if other corrective work becomes necessary.

Upon completion of the plant establishment period, a final inspection for acceptance will be performed by the Landscape Architect. If the plant establishment period is satisfactory completed ahead of the other work included in the Contract, the maintenance of planted areas shall be continued by the Contractor until all other work has been completed and accepted. Once accepted, a (3) three-year extended plant maintenance contract will commence. During the last winter of the three-year maintenance contract the Contractor shall contact the City Tree Supervisor to conduct an onsite review of each of the tree species installed. This for the purpose of determining the best pruning practices to be carried out at this time on each tree to ensure proper tree growth structuring and branching habit. All trees MUST be properly pruned and accepted by the City prior to the end of the three-year maintenance period.

During the 3 year plant establishment period, (unless during this time period there is an extreme drought) plants to be irrigated in a manner to wean plants off of water and develop drought tolerance:

Water once a week the first year Every other week the second year Every third week the third year.

At the end of the 3 year plant establishment period, the tree protection cages are to be removed off a quarter of the trees, for a one week trial time period, to see if browsing is going to cause plant die-offs. It will be determined at the end of the (1) one week period, through site observations made by the City Representative if the remaining tree protection cages will be removed or remain and be removed at a later date.

#### **20-4.01A Summary**

Section 20-4 includes specifications for performing plant establishment work. Plant establishment consists of caring for the plants, including:

1. Controlling plant growth
2. Controlling rodents, insects, and weeds
3. Replacing damaged plants

4. Watering
5. Operating irrigation system
6. Repairing new irrigation system

Working days on which no work is required are credited as plant establishment working days regardless of whether or not you perform plant establishment work.

If any component of the electric automatic irrigation system is operated manually, the day will not be credited as a plant establishment working day unless the manual operation is authorized.

Working days on which you fail to adequately perform plant establishment work are not credited as plant establishment working days.

#### **20-4.01B Definitions**

**Type 1 plant establishment:** Plant establishment period with the number of working days specified for plant establishment starting after all work has been completed, except for plant establishment work, and other bid items specified to be performed until Contract acceptance.

**Type 2 plant establishment:** Plant establishment period with the number of working days specified for plant establishment starting after all planting work has been completed, except for plant establishment work, and other bid items specified to be performed until Contract acceptance. The Department will not accept the Contract unless the plant establishment work has been satisfactorily performed for at least the number of working days specified for plant establishment.

If maintenance and protection relief is granted for a portion of the work, Type 2 plant establishment period for that portion is the time between completion of all planting work, except for plant establishment work, and the granting of maintenance and protection relief. The Department will not grant relief unless the plant establishment work in the completed portion of the work has been satisfactorily performed for at least the number of working days specified for the plant establishment period.

#### **20-4.01C Submittals 20-4.01C(1) General**

Submit seasonal watering schedules for use during the plant establishment period within 10 days after the start of the plant establishment period. Remote irrigation control system watering schedule must use the remote irrigation control system software program.

Submit updated watering schedules within 5 business days after any changes have been made to the authorized schedules.

Submit a revised watering schedule for each irrigation controller at least 30 days before completion of the plant establishment period.

#### **20-4.01C(2) Notification**

The Engineer notifies you when the plant establishment period starts and furnishes statements regarding the number of working days credited to the plant establishment period after the notification.

#### **20-4.01D Quality Assurance**

Provide training by a qualified person on the use and adjustment of the installed irrigation controllers no more than 30 days before completion of the plant establishment period.

Perform a final inspection of the plant establishment work in the presence of the Engineer 20 to 30 days before Contract acceptance.

### **20-4.02 MATERIALS**

#### **20-4.02A General**

Reserved

#### **20-4.02B Fertilizers**

Reserved

### **Reserved20-4.03 CONSTRUCTION**

#### **20-4.03A General**

Dispose of surplus earth accumulated in roadside clearing and planting areas. Remove tree protectors if plants become restricted.

Keep plant basin walls well formed.

Clean new wye strainers and existing wye strainers that are a part of the new irrigation system annually until the completion of the plant establishment period. The last cleaning must be done within 15 days before the completion of the plant establishment period.

Contractor to provide wye strainers.

Remove, clean, and reinstall new filters and existing filters that are a part of the new irrigation system annually until the completion of the plant establishment period. The last cleaning must be done within 15 days before the completion of the plant establishment period.

#### **20-4.03B Plant Growth Control**

Prune plants planted as part of the Contract only as authorized.

Remove plant growth that extends within 2 feet of sidewalks, curbs, gutters, dikes, shoulders, walls or fences.

#### **20-4.03C Fertilizing**

Reserved

#### **20-4.03D Weed Control**

Control weeds under section 20-1.03C(3).

#### **20-4.03E Plant Staking**

Reserved

**20-4.03F Replacement Plants**

Replacement plants must comply with section 20-3.01C(4).

Replacement of plants up to and including the 365 plant establishment working day must be with a plant of the same size as originally specified. Plants of a larger container size than those originally specified for replacement plants may be used during the first 180 working days of the plant establishment period.

Plants replaced after the 365th plant establishment working day must be the size shown in the following table:

| Plant size<br>(Original)    | Plant size<br>(Replacement) |
|-----------------------------|-----------------------------|
| Pot/liner/plug<br>/seedling | No. 1<br>container          |
| No. 1<br>container          | No. 5<br>container          |
| No. 5<br>container          | No. 15<br>container         |

Other replacement plants must be the same size as originally specified.

**20-4.03G Watering**

Operate the electric automatic irrigation systems in the automatic mode unless otherwise authorized. Water plants utilizing the remote irrigation control system software program unless authorized.

Implement the watering schedule at least 10 days before completion of the plant establishment period.

**20-4.04 PAYMENT**

**20-4.04(1) Payment for 365 Days Plant Establishment Period:**

The **lump sum** price shown in the Bid Item **“Plant Establishment Period (365 Days)”** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in, amendments, trash removal, pruning (if necessary), maintaining the planting and Irrigation as shown on the plans, as specified in the Specifications, these special provisions and as directed by the Engineer and no further compensation will be allowed therefore.

**20-4.04(2) Payment for 3 years Extended Plant Maintenance:**

The **lump sum** price shown in the Bid Item **“Irrigation and Landscaping 3-Years Maintenance Contract”** for extended three years maintenance contract per Section 20-4 PLANT ESTABLISHMENT WORK shall include full compensation to complete and maintain **all the work** as shown on the plans, as specified in the Standard Specifications and these Special Provisions, including furnishing all labor, materials, tools, equipment and incidentals, and performing all adjustments necessary to complete the work, shall be

included in the “**Three Year Maintenance Contract**” and no further compensation will be considered therefore.

**20-4.04(3) Payment for Shrub Planting:**

The lump sum price paid for “**Planting**” shall include full compensation to complete all the work to plant shrubs, trees, grasses, and mulch, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, including furnishing all labor, materials, tools, equipment and incidentals, and performing all adjustments necessary to complete planting, as well as furnish and install planting soil, trenching, excavation and backfill, soil preparation and conditioning, amendments, compost mulch, Maintenance and no additional compensation will be allowed therefore.

**20-5 LANDSCAPE ELEMENTS**

**20-5.01 GENERAL**

**20-5.01A General**

Section 20-5.01 includes general specifications for constructing and installing landscape elements. Earthwork must comply with section 19.

**20-5.01B Materials**

Not Used

**20-5.01C Construction**

Not Used

**20-5.01D Payment**

Not Used

**20-5.02 EDGING**

Not Used

**20-5.03 GROUND COVERS AND MULCHES**

**20-5.03A**

**General**

**20-5.03A(1)(a) Summary**

Section 20-5.03A includes general specifications for placing ground covers and mulches.

**20-5.03A(1)(b) Definitions**

Reserved

**20-5.03A(1)(c) Submittals**

Reserved

**20-5.03A(1)(d) Quality Assurance**

Reserved

## **20-5.03A(2) Materials Reserved**

### **20-5.03A(3)**

#### **Construction**

##### **205.03A(3)(a)**

#### **General**

Before performing ground cover and mulch work, remove plants and weeds to ground level.

##### **20-5.03A(3)(b) Earthwork**

Maintain the planned flow lines, slope gradients, and contours of the job site. Grade subgrade to a smooth and uniform surface.

##### **20-5.03A(3)(c) Treatment of Soil**

Reserved

##### **20-5.03A(3)(d) Filter Fabric**

Reserved

##### **20-5.03A(4) Payment**

For Ground Cover payment see Section 20-4.04(3)

## **20-5.03B Boulders**

Must be clean, obtained from a single source, and must comply with section 20-1.02D and 20-1.02D(1)

##### **20-5.03B(2)(d) Mortar**

Not Used

##### **20-5.03B(3) Construction**

Reserved

##### **20-5.03B(4) Payment**

Payment for "BOULDERS is considered included in the lump sum price paid for Planting and no additional compensation will be allowed therefore.

## **CHANGE TO SECTION 20-5.03C TO READ**

### **20-5.03C Organic Compost Mulch**

Organic Compost Mulch from composted overs derived from recycled green waste material must have been through a 9-16 week composting process and screened to desired sizing. Compost shall be applied as a 3" mulch layer on biotreatment swales and within the roundabouts to prevent the germination of most invasive annual weed species. Where seed is specified, apply the seed on top of the compost to ensure that desirable seed species will germinate.

#### **20-5.03C(1) General**

**20-5.03C(1)(a) Summary**

Reserved

**20-5.03C(1)(b) Definitions**

Reserved

**20-5.03C(1)(c) Submittals**

1. Organic Compost Mulch: Contractor shall submit manufacturer's letters of compliance, 1 lb. sample, and manufacturer's literature on mulch source.
2. Boulder: Contractor shall submit photos of boulders with tape measure indicating size, and supplier's certification on the source, type of Boulders. All Boulders to be sourced from the same location and shall be of the same stone type.

**20-5.03C(1)(d) Quality Assurance**

Reserved

**20-5.03C(2) Materials**

Reserved

**20-5.03C(3) Construction Reserved**

**20-5.03C(4) Payment**

For Ground Cover payment see Section 20-4.04(3)

**20-5.03D**

**Decomposed Granite**

Not Used

**20-6-20-9**

**RESERVED**

**20-10 EXISTING LANDSCAPE**

**20-10.01 GENERAL**

**20-10.01A General**

Section 20-10.01 includes general specifications for performing work on existing planting and irrigation facilities.

**20-10.01B Materials**

Not Used

**20-10.01C Construction**

Transplant any plant to be transplanted and protect any irrigation component to be relocated before performing any other construction activity in the area.

**20-10.01D Payment**

Not Used

## **20-10.02 EXISTING IRRIGATION FACILITIES**

### **20-10.02A General**

#### **20-10.02A(1) Summary**

Section 20-10.02 includes specifications for performing work on existing irrigation facilities. Work performed on existing irrigation facilities must comply with Section 15.

#### **20-10.02A(2) Definitions**

Reserved

#### **20-10.02A(3) Submittals**

Submit a list of irrigation system deficiencies within 7 days of checking the existing facilities.

#### **20-10.02A(4) Quality Assurance**

After irrigation facilities have been relocated, demonstrate in the presence of the Engineer that the relocated facilities function properly.

Certify each existing backflow preventer under section 20-2.02A(4).

### **20-10.02B Materials**

Valve box covers must be the same size as the covers they replace.

Control and neutral conductors must be the same size and color as the control and neutral conductors they replace.

### **20-10.02C**

#### **Construction 20- 10.02C(1) General**

Notify the Engineer at least 4 business days before shutting off the water supply to any portion of the existing irrigation system and immediately after restoring the water supply to any portion of the existing irrigation system.

If an irrigation facility to be relocated is determined unsuitable, replace the irrigation facility under section 20-2. The replacement of the unsuitable facility is change order work.

#### **20-10.02C(2) Check and Test Existing Irrigation Facilities**

Before performing irrigation system work, check existing irrigation facilities to remain in place or to be relocated. The Engineer determines the test watering cycle lengths.

Check for deficiencies including missing parts, damaged components, and improper operation. Correct deficiencies as ordered. The correction of deficiencies is change order work.

#### **20-10.02C(3) Operate Existing Irrigation Facilities**

If the Contract includes a bid item for operate existing irrigation facilities, after performing work under section 20-10.02C(2), operate existing irrigation facilities through Contract acceptance.

Operate existing irrigation facilities except for water meters, underground supply lines, control and neutral conductors, and electrical conduits.

Check for proper operation at least once every 30 days. Adjust, repair, or replace existing irrigation facilities within 7 days of finding any deficiency.

Operate irrigation systems using the automatic irrigation controller until Contract acceptance. You may operate irrigation controllers manually during plant replacement, fertilization, weed germination, and repair work.

Program the irrigation controllers for seasonal requirements.

#### **20-10.02C(4) Remove Irrigation Facilities**

Irrigation facilities to be removed that are more than 6 inches below the finished grade may be abandoned in place unless salvaging is specified or shown

Immediately after disconnecting an existing irrigation facility to be removed or abandoned from an existing facility to remain, the remaining facility must be capped or plugged, or connected to a new or existing irrigation facility.

#### **20-10.02C(5) Replace Valve Box Covers**

Existing valve box covers shown to be replaced must remain in place until the new covers are ready to be installed.

#### **20-10.02C(6) Relocate Backflow Preventer Assemblies**

Install backflow preventer assemblies under section 20-2.02C.

#### **20-10.02C(7) Relocate Water Meters**

Relocate water meters.

#### **20-10.02C(8) Relocate Irrigation Controllers**

Install irrigation controllers under section 20-2.06C.

#### **20-10.02C(9) Salvage Irrigation Facilities**

Salvage irrigation facilities under section 15-1.03C.

#### **20-10.02D Payment**

Not Used

### **20-10.03 EXISTING PLANTING**

#### **20-10.03A General**

##### **20-10.03A(1) Summary**

Section 20-10.03 includes specifications for performing work on existing planted areas.

### **20-10.03A(2) Definitions**

Reserved

### **20-10.03A(3) Submittals**

Submit a work plan for:

1. Transplanting trees. The work plan must include methods for lifting, transporting, storing, planting, guying, and maintaining each tree to be transplanted. Include the root ball size, method of root ball containment, and a maintenance program for each tree.
2. Maintaining existing planted areas. The work plan must include controlling the weeds, fertilizing, mowing and trimming of turf areas, watering, and controlling rodents and pests.

### **20-10.03A(4) Quality Assurance**

Inspect for deficiencies of existing planted areas in the presence of the Engineer. Complete the inspection within 15 days of the start of job site activities.

Deficiencies requiring corrective action include:

1. Weeds
2. Dead, diseased, or unhealthy plants
3. Plant stakes and tree ties that are missing
4. Inadequate plant basins and basin mulch
5. Other deficiencies needing corrective action to promote healthy plant life
6. Rodents and pests

### **20-10.03B Materials**

Not Used

### **20-10.03C Construction 20-10.03C(1) General**

Correct deficiencies of the existing planted areas if ordered within 15 days of the order. Correction of deficiencies is change order work.

### **20-10.03C(2) Prune Existing Plants**

If a bid item for prune existing plants is not shown on the Bid Item List, prune existing plants if ordered. Pruning existing plants is change order work.

### **20-10.03C(3) Transplant Trees** *(If required per Tree Mitigation Plans)*

Prune each tree to be transplanted immediately before lifting.

Prepare each hole in the new location before lifting the tree to be transplanted. Lift each tree to be transplanted as described in the work plan.

Handle and plant each tree to be transplanted under section 20-3.02C(3).

Until a tree is replanted, cover exposed root ball with wet burlap or canvas and cover the crown with 90 percent shade cloth.

Replant each tree on the same day it is lifted if possible. If the transplant location is not ready to receive the tree, store and maintain the tree to be transplanted until the transplant location is authorized. Store the tree in an upright position.

Replace each damaged transplanted tree under section 20-3.01C(4) with the number of trees specified in the special provisions.

The replacement trees must be planted in individual plant holes at the location determined by the Engineer within the area of the tree being replaced. Plant replacement trees under section 20-3.02C.

#### **20-10.03C(4) Maintain Existing Planted Areas**

Section 20-10.03C(4) applies if a bid item for maintain existing planted areas is shown on the Bid Item List.

After deficiencies are corrected, perform work to maintain existing planted areas in a neat and presentable condition and to promote healthy plant growth through Contract acceptance.

Existing plant basins must be kept well-formed and free of sediment. If the existing plant basins need repairs and the basins contain mulch, replace the mulch after the repairs are done.

Control weeds within the existing planted area and:

1. From the existing planted area limit to the adjacent edges of paving and fences if less than or equal to 12 feet
2. From the existing planted area limit to 6 feet beyond the outer limit of the existing planted area if the adjacent edge of paving or fence is more than 12 feet away
3. Within a 3-foot radius from each existing tree and shrub

If a bid item for maintain existing planted areas is not shown on the Bid Item List, maintain existing planted areas if ordered. Maintain existing planted areas is change order work.

#### **20-10.03D Payment**

Not Used

#### **20-10.04–20-10.08**

Reserved

## 21 EROSION CONTROL

Replace *Not Used* in section 21-1.02 with:

### 21-1.02 MATERIALS

#### 21-1.02A SEED OR SEED MIXES

The work shall consist of the Hydroseeding of the exposed new roadway slopes.

The seed mixture, mulch and fertilizer must conform to the following requirements:

| <b>Species</b>             | <b>Application</b>         |
|----------------------------|----------------------------|
| Lasthencia gladrata        | 1lb/ac                     |
| Eschscholtzla californica  | 3lbs/ac                    |
| Lupinus bicolor            | 4lbs/ac                    |
| Lotus scoparius            | 7lbs/ac                    |
| Sisyrinchium bellum        | 4lbs/ac                    |
| Stipa pulchra              | 4lbs/ac                    |
| Baccharis glutinosa        | 6lbs/ac                    |
| Phus ovata                 | 8lbs/ac or container stock |
| Mimulus aurantiacus        | 5lbs/ac or container stock |
| Salvia mellidera           | 2lbs/ac                    |
| Salvia mellidera           | 3lbs/ac                    |
| Encelia californica        | 6lbs/ac                    |
| <b>Total Seed Per acre</b> | <b>52 lbs</b>              |

Mixture to include:

1,200 lbs/acre 100% Wood Fiber, Ecofiber-Profile, or approved equal

75 lbs/acre Tackifier: M-binder, or approved equal

1,000 lbs/acre 7-2-1 Biosol, or approved equal

60 lbs/acre AM 120 Soil Inoculant, or approved equal

After seed, wood fiber, tackifier, fertilizer and soil inoculant are applied, contractor to apply 2,400 lbs/acre ProMatrix Bonded Fiber Matrix, or approved equal.

The seeded areas shall be watered by the CONTRACTOR as required for proper germination and growth for minimum of 60 calendar days. Equipment shall be capable of watering all seeded areas from traveled way.

All seed shall be in conformance with the California State Seed Law of the Department of Agriculture. Each seed bag shall be delivered to the site sealed and clearly marked as to species, purity, percent germination, dealer's guarantee, and dates of test. In addition, the container shall be labeled to clearly reflect the amount of Pure Live Seed (PLS) contained. Prior to seeding at the request of the owner, the contractor shall provide a letter of certification, original Association of Official Seed Analysts (AOSA) seed test results, and calculations of PLS content.

### **21-1.02B 100% WOOD FIBER MULCH**

100% wood hydroseed mulch shall be composed of wood fiber derived from whole wood chips with no growth or germination inhibiting substances, and shall be manufactured in such a manner that when thoroughly mixed with seed, fertilizer, organic stabilizer, and water, in the proportions specified, will form a homogeneous slurry which is capable of being sprayed to form a porous mat. The fibrous mulch in its air-dry state shall contain not more than 15% by weight of water. The fiber shall have a temporary green dye and shall be accompanied by a certificate of compliance stating that the fiber conforms to these specifications.

### **21-1.02C FERTILIZER**

100% wood hydroseed mulch shall be composed of wood fiber derived from whole wood chips with no growth or germination

**Replace *Not Used* in section 21-1.03 with:**

Do not place erosion control measures within three (3) feet from the edge of pavement, back of sidewalk/path or back of swale.

Apply permanent erosion control materials to all completed embankment areas and cut slopes. All fiber rolls that do not conflict with remaining work shall be installed by September 25th. After October 1st, apply permanent erosion control measures at a maximum of one-week intervals to newly completed embankment areas and cut slopes. Do not unnecessarily delay the completion of embankments and cut slopes to delay application of permanent erosion control measures.

If notified by the Engineer that an area is ready to receive erosion control materials, start erosion control (hydroseed) work within 5 business days of the Engineer's notification to perform the work.

Apply erosion control (hydroseed) to all disturbed/exposed areas identified with the cut/fill lines shown on the plans; areas beyond the cut/fill lines that were unnecessarily disturbed in the opinion of the Engineer will not be included in the payment.

Any natural or undisturbed area outside of disturbed/exposed area necessary for construction shall not receive hydroseeding.

The Engineer may change the rates of erosion control (hydroseed) materials to meet field conditions.

Seed may be dry applied at the total rate specified in the preceding table for small areas not accessible by the hydroseeding equipment if approved by the Engineer. Dry-applied seed must be incorporated into the soil a maximum depth of 1/4 inch by raking or dragging.

## **22 FINISHING ROADWAY**

**Replace “Not Used.” In section 22-1.04 with:**

Finishing roadway activities are included in the payment for roadway excavation.

## **26 AGGREGATE BASES**

**Replace 2<sup>nd</sup> paragraph of section 26-1.02A with:**

Only use ¾ inch maximum aggregate grading. Do not change your selected aggregate grading without authorization.

## **DIVISION V SURFACING AND PAVEMENTS**

### **39 ASPHALT CONCRETE**

**Replace the 1<sup>st</sup> paragraph in the RSS of section 39-2.01B(11) with:**

Use 3/8” Type A aggregate gradation with a minimum of 6.4% Grade PG64-10 asphalt binder for HMA dikes.

**Delete the 2nd and 3rd paragraphs and replace the 1st sentence of the 4th paragraph of section 39-2.01C(4)(a) with:**

Place HMA on adjacent traveled way lanes such that at the end of each work shift and traffic allowed onto new HMA, the distance between the ends of HMA layers on adjacent lanes is from 5 to 10 feet.

**Delete the 2nd paragraph in section 39-2.02A(1).**

**Replace *Reserved* in section 39-2.02B(3):**

The grade of asphalt binder for Type A HMA must be PG64-10.

## **DIVISION VI STRUCTURES**

### **51 CONCRETE STRUCTURES**

**Replace the third paragraph of Section 51-1.03F(3) with:**

Finish areas not complying with the Class 1 surface finish requirements using a neat cement wash or with a brush coat or surface film of thin cement mortar composed of one part portland cement and one part of fine sand that will pass through a No. 16 sieve.

#### **PLACEHOLDER FOR ANTI-GRAFFITI COATING OF RETAINING WALLS.**

**Add to section 51-1.04:**

Construction of post pockets for installing chain link fence on top of retaining walls including reinforcement is included in payment for structural concrete (retaining wall).

**Replace the 2nd paragraph of Section 51-7.01A with:**

Drainage inlets, sidewalk cross drains, pipe headwalls, endwalls, junction boxes, and manholes are classified as minor structures.

Unless otherwise specified on the Plans, do not use precast inlet structures.

Structure excavation and backfill must comply with section 19.

Reinforcement must comply with section 52.

Metal grates, frames and cover must comply with section 75.

**Replace the first paragraph of Section 51-7.01B with:**

Comply with the specifications for minor concrete, except the following:

1. Minor Concrete must contain at least 590 pounds of cementitious material per cubic yard.
2. The maximum aggregate size must not be larger than 1 inch or smaller than 3/4 inch.

**Add to Section 51-7.01C:**

When a drainage inlet is constructed in two or more segments, with a construction joint at the pavement subgrade, and the portion of the inlet above the joint is constructed monolithically with the curb and sidewalk, the concrete for the upper portion of the inlet shall be the same class as is used for the curb and sidewalk.

Plastic drainage inlet markers must be installed on all newly constructed drainage inlets. Drainage inlet markers will be furnished by the Engineer. Mechanically clean the concrete

surface before placing plastic drainage inlet markers. Apply a sufficient amount of Sika 11 polyurethane based elastomeric adhesive or approved equal around the perimeter of the marker itself to assure that there are no loose edges around the marker when it is attached to the inlet.

**Replace the second paragraph in section 51-7.01D with:**

Payment for structure excavation and backfill, bar reinforcement, miscellaneous steel, and metal frames grates and covers is included in the payment for the various minor structures.

**Add to the end of section 58-2.02B:**

CMU must be superlite, split face block, integrally colored 'tan'.

## **DIVISION VII DRAINAGE FACILITIES**

### **68 SUBSURFACE DRAINS**

**Replace section 68-5 with:**

#### **68-5 PERMEABLE MATERIAL BLANKET (BIOTREATMENT SWALE)**

##### **68-5.01 GENERAL**

Section 68-5 includes specifications for installing permeable material blankets in bio treatment swales.

##### **68-5.02 MATERIALS**

Permeable material for permeable material blanket must be Class 2 and must comply with section 68-2 except for payment.

Filter fabric must comply with section 96-1.02B.

##### **68-5.03 CONSTRUCTION**

Place filter fabric as follows:

1. Ensure the subgrade complies with the compaction and elevation tolerance specified for the material involved before placing the filter fabric on the subgrade.
2. Handle and place filter fabric under the manufacturer's instructions.
3. Align and place the fabric without wrinkles.
4. Overlap or stitch adjacent borders of the fabric from 12 to 18 inches. The preceding roll must overlap the following roll in the direction the permeable material is being spread or must be stitched. If the fabric is joined by stitching, the fabric must be stitched with yarn of a

contrasting color. The size and composition of the yarn must be as recommended by the fabric's manufacturer. There must be 5 to 7 stitches per inch of seam.

5. Cover the fabric with the planned thickness of permeable material or aggregate subbase material as shown within 24 hours after the filter fabric has been placed.
6. Maintain at least 6 inches of the material between the fabric and your equipment during spreading and compaction of the permeable material and aggregate subbase. Where embankment material is to be placed on the filter fabric, maintain at least 18 inches of embankment material between the fabric and your equipment. Do not operate or drive equipment or vehicles directly on the filter fabric.

Place and consolidate permeable material in conformance with section 19-3.

#### **68-5.04 PAYMENT**

Payment for filter fabric is included in payment for class 2 permeable material.

### **71 EXISTING DRAINAGE FACILITIES**

**Replace items 1 and 2 in the second paragraph in section 71-6.01A with:**

1. Wall of minor concrete not less than 6 inches thick with #4 bar reinforcement 6" on center each way.

**Replace "Reserved" in section 71-6.01D with:**

Plugging pipes with minor concrete as shown is paid for as concrete pipe plug.

## **DIVISION VIII MISCELLANEOUS CONSTRUCTION**

### **72 SLOPE PROTECTION**

**Replace the paragraph in section 72-1.04 of the RSS with:**

Payment for rock slope protection fabric is included in payment for rock slope protection.

### **73 CONCRETE CURBS AND SIDEWALKS**

**Replace 1st paragraph of section 73-1.02A with:**

Comply with section 90-2 "Minor Concrete" except as follows:

1. For all miscellaneous concrete work ,except valley gutters, cross gutters, bus pads, mountable curb, and truck aprons, the cementitious material content of concrete must be at least 505 lb/cu yd.

2. For valley gutters, cross gutters, bus pads, mountable curb, and truck aprons cementitious material content of concrete must be at least 590 lb/cu yd.
3. The maximum size of aggregate used for miscellaneous concrete construction shall be 1 inch.

**Add to section 73-1.02B:**

Install prefabricated detectable warning surface under the requirements of the Department of General Services, Division of State Architect. The finished surfaces of the detectable warning surface shall be free from blemishes.

The manufacturer shall provide a written 5-year warranty for prefabricated detectable warning surfaces, guaranteeing replacement when there is defect in the dome shape, color fastness, sound-on-cane acoustic quality, resilience, or attachment. The warranty period shall begin upon acceptance of the contract.

**Add to section 73-1.03A:**

Construct new sidewalk and new curb monolithically. Construct bus pads and adjoining curb monolithically.

Do not deviate the shape and design of curb ramps and driveways with sidewalk from the standard plans unless noted on the project plans or approved by the Engineer. Do not free form these facilities.

Clean all sawcuts by abrasive blasting or other methods approved by the Engineer.

If new curb, sidewalk or driveway is constructed adjacent to existing curb, sidewalk or driveway, dowel the existing concrete to the new concrete with #4 reinforcing bars. Use a minimum of 3-12-inch long dowels for curb and 12-inch long dowels on 12" centers for sidewalk and valley gutters.

For new curb ramps, detectable warning surfaces shall be prefabricated tiles set directly in newly poured concrete; surface applied tiles or stamped into surface detectable warning surfaces will not be allowed.

Score the surface of sidewalks at intervals not more than 4 feet and must correspond with the weakened plane and expansion joints of the curbs, unless otherwise directed by the Engineer.

Sidewalk with width greater than 5.5 feet, place a centered score line and parallel to the curb. ADA ramps shall be scored in accordance with the Standard Plans. A scoring tool must be used which will leave the edges rounded. On straight work, the scoring lines must be perpendicular to the line of the work; at curves, the scoring lines must be radial to the curb; when longitudinal scoring lines are required, they must be parallel to, or concentric with the line of the work.

Where curb is not adjacent, construct expansion joints at intervals of 24 feet. Fill; expansion joints with premolded joint filler conforming to the provisions of Section 51.. Expansion joint filler must be shaped to fit the concrete that is being placed, with the edge placed 1/8inch below the top of the finished concrete surface.

Concrete placed next to an expansion joint must be finished with an edge tool. Weakened plane joints must be constructed at 12 foot intervals.

**Replace the 4<sup>th</sup> paragraph in section 73-2.03A with:**

Construct expansion joints 3/8 inch wide in curbs at 24 foot intervals except for extruded curb, which must be at 60 foot intervals and at the ends of curb returns, except that expansion joints must not be constructed within 24 feet of an island nose. Fill expansion joints with premolded joint filler conforming to the provisions of section 51. Shape expansion joint filler to the cross section of the curb. Construct weakened plane joints (deep score) at 12 foot intervals.

**Add to section 73-2.04:**

Lengths of curbs and/or gutters at drainage structures, designated as aprons and transitions on the plans, will not be measured. Payment for constructing aprons and transitions is included in the payment of the minor concrete (minor structure).

Curbs and/or gutters measurements shall include curb transitions and depressions along driveways and curb ramps.

Retaining curb located at the back of sidewalk shall be measured and paid for as minor concrete (sidewalk).

**Add to the beginning of section 73-3.03:**

Before placing concrete, verify that forms and site constraints allow the required dimensioning and slopes shown. Immediately notify the Engineer if you encounter site conditions that will not accommodate the design details. Modifications ordered by the Engineer are change order work.

**Add to section 73-3.03:**

Prior to final acceptance, as directed by the Engineer, water test curbs with gutters on slopes of 0.75% or flatter and paved surfaces to verify proper drainage. Any ponding of water greater than 0.25 inch depth will be considered as evidence of poor work techniques and must be corrected by removing and replacing those portions of curb and gutter as necessary to comply with the requirements of this special provision, at no additional expense to the City.

**Replace “Not Used” in section 73-3.04 with:**

Concrete driveways, driveway approaches and curb ramps will be paid for as minor concrete (sidewalk).

Driveways, driveway approaches, island paving, curb ramps, and sidewalks which are contiguous with curb will be measured from a point 6 inches behind the face of curb.

Sidewalk with retaining curb shall be measured transverse from a point 6 inches behind the face of curb to the back of the retaining curb.

No deduction in quantities of minor concrete (sidewalk) will be made for utility covers and portions of inlets behind the projected back of curb line.

Retaining curb is paid for as minor concrete (sidewalk). Sidewalk with retaining curb will be measured transverse from a point 6 inches behind the face of curb to the back of the retaining curb.

Payment for furnishing and installing detectable warnings is included in the cost for minor concrete (sidewalk).

No deduction in quantities of minor concrete (sidewalk) will be made for utility covers and portions of inlets behind the projected back of curb line.

Concrete paving and retaining curb located in island passageways located are measured and paid for as minor concrete (sidewalk).

The cost of furnishing and installing bar reinforcement is included in the price paid for that minor concrete bid item.

The concrete curb poured monolithically with bus pad concrete is measured and paid for as minor concrete (bus pad).

## **77 LOCAL INFRASTRUCTURE**

### **Add section 77-1:**

#### **77-1 REMOVEABLE BOLLARD**

##### **77-1.01 GENERAL**

Section 77-1 includes specifications for removable bollard.

Removable bollard shall be TimberForm series No. 2500, or approved equal.

##### **77-1.02 MATERIALS**

All timber bollard wood components shall be manufactured from Playground Equipment Grade Douglas fir timbers, selected by the equipment manufacturer for strength, durability, and appearance. All timber shall be Coastal Douglas fir (*Pseudo-tsuga menziesii*), free-of-heart-center (F.O.H.C.). To assure long, useful life, timbers containing the heart center or pith of the log shall not be accepted.

All timbers shall be fine-grained, with at least 80 percent of the pieces possessing eight annular rings to the inch, the remainder having at least six rings to the inch. There shall be no loose knots, knotholes, shake, unsound wood, white specks or honeycomb allowed. Except as noted, other characteristics and limiting provisions are in accordance with Paragraph 131-A "Standard Grading Rules for West Coast Lumber".

Bollards shall be removable (-R) mount. Removable bollard post sleeve and in-ground sleeve shall be constructed of 2-3/8" (o.d.) Schedule 40 mild steel pipe. Bollard post and in-ground sleeve shall have interlocking tabs for padlock (by others).

All wood components shall be pressure-preservatively treated with a non-toxic formulation. The preservative solution shall be homogeneous and capable of deep penetration, not merely an emulsion. The treatment shall not materially change the color of the wood to which it is applied.

Preservatives containing arsenic, pentachlorophenol, creosote or similar toxic chemicals as their active ingredient shall not be used.

### **77-1.03 CONSTRUCTION**

To effectively receive pressure preservative treatment of the timber materials, all fabrication, including sawing, notching, drilling, incising and kerfing, must be completed prior to preservative treatment.

Timber bollards shall be size 8 x 8 or 12 x 12 (nominal) with all edges eased (rounded) to a 1/4" radius.

### **77-1.04 SUBMITTALS**

Submit shop drawings for removable bollard.

### **77-1.05 PAYMENT**

The contract unit price paid per each "Removable Bollard" includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in removable bollard, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

## **Add section 77-2:**

### **77-2 USACE GROUNDWATER TREATMENT INFRASTRUCTURE**

#### **77-2.01 GENERAL**

Section 77-2 includes specifications for modification of the exiting USACE groundwater treatment infrastructure.

Contractor must coordinate with USACE prior to construction activities around and directly impacting existing USACE infrastructure. USACE will observe contractor's work and make recommendations, if appropriate, and will report to the USACE the status of construction and acceptability of the contractor's work. Work shall be conducted in a manner that assures the monitoring wells, low point vaults, and leak detection vaults do not incur contamination from existing soil or construction activities. The contractor is responsible for maintaining site security for USACE infrastructure within the project limits of grading for the duration of construction activities.

Construction activities cannot impact the ongoing groundwater monitoring program, transmission of groundwater, and the sampling procedure to collect and transmit groundwater.

The contractor is required to coordinate with the USACE and provide access to the USACE facilities immediately upon request of the USACE.

If adjustment of any pipe casings is required due to the construction of these improvements, contractor shall notify the Engineer and the USACE prior to any adjustment of pipe casing. If approved by the Engineer and the USACE, contractor will proceed with casing adjustment. Upon completion of all work affecting USACE infrastructure, the contractor shall survey the new elevation of the top of adjusted casing (if required), and provide the information to the Engineer and USACE (NGVD29).

### **77-2.02 SUBMITTALS**

Submit shop drawings for all work on USACE infrastructure, including details of low point leak detection vaults, monitoring well lid adjustment, trenching, installation, and modifications to piping system.

The Contractor shall submit the method(s) used to modify the existing piping system.

### **77-2.03 PAYMENT**

The contract unit price paid per each "Removable Bollard" includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in removable bollard, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

## **Add section 77-3:**

### **77-3 BYPASSING WASTEWATER**

Section 77-3 includes specifications for modification of the exiting MCWD force main infrastructure.

Contractor must coordinate with MCWD prior to construction activities around and directly impacting existing MCWD infrastructure. MCWD will observe contractor's work and make recommendations, if appropriate, and will report to the MCWD the status of construction and acceptability of the contractor's work. The contractor is responsible for maintaining site security for MCWD infrastructure within the project limits of grading for the duration of construction activities.

#### **77-3.01 GENERAL**

##### **77-3.01A SYSTEM DESCRIPTION**

1. Performance Requirements
  - a) It is essential to the operation of the existing sewage system that there be no interruption in the flow of sewage throughout the duration of the Project. Provide, maintain, and operate all temporary facilities such as dams, plugs, flow-through plugs, pumping equipment (both

primary and backup units as required) electrical control conduits and all necessary power to intercept the sewage flow before it reaches the point where it would interfere with the Work, carry it past the Work and return it to the existing sewer downstream of the Work.

- b) Design, install, and operate the temporary pumping systems where required
- c) Convey the sewage safely past this Work area. Do not stop or impede the main flows under any circumstances.
- d) Maintain sewage flow around the Work area in a manner that will not cause surcharging of sewers, damage to sewers and that will protect public and private property from damage and flooding including the routing of sewage overflow in the event of failure of any bypass system.
- e) Protect water resources, wetlands, and other natural resources.
- f) Qualified personnel supervising bypass pumping operations 24 hours per day.

## 2. Design Requirements (Pump Station)

- a) Provide plugs, pumps of adequate size to handle peak flow and/or temporary discharge piping to ensure that the total flow into the pump station can be safely diverted around the station to be replaced. Bypass pumping systems will be required to be operated and supervised by qualified personnel 24 hours per day, 7 days per week including holidays during bypass pumping operations.
- b) Provide onsite portable lights for emergency use only.
- c) Provide standby generation facilities for emergency use if pumps are equipped with electric motors.

## 3. Design Requirements

- a) Provide plugs, pumps and sewage haulers of adequate size and all other equipment needed to safely collect peak flow before it enters into the wet well that is to be rehabilitated or overflow to the ground. Pumping and hauling systems will be required to be operated and supervised by qualified personnel 24 hours per day, 7 days per week including holidays during the collection and discharge operations

- b) The temporary pumping bypass should have sufficient pumping capacity to convey the wastewater under the existing station's peak design flow. The approximate design operation point for the existing station is as follows:

**6" Force Main: 520 gpm @ 87 ft TDH**

**8" Force Main: 700 gpm @ 48 ft TDH**

**10" Force Main: 1,250 gpm @ 85 ft TDH**

- c) Solids removed by sewage haulers can be taken to a local landfill.

### **77-3.01B SUBMITTALS**

1. Detailed plans and descriptions outlining complete flow bypass pumping system for each of the four pump stations. Plans shall show system components, layout, piping connection details, power plan, controls and details on equipment specifications (pump rating, pipe size and material, etc). Plans shall include an emergency response plan to be followed in the event of a failure of the systems. All plans shall be submitted to the Engineer at least 10 working days prior to required operation of the bypass systems.
2. Where pumping is required, submit complete information on generation system.
3. Where standby generators are required, submit complete information on generation system. All generators shall be rated for low noise rate compliance in residential neighborhoods. Decibels of generators and pump shall not exceed 65 dBA at 50 feet. The Contractor shall submit proposed generator and dBA rating to the Engineer for approval prior to use.

### **77-3.01C QUALITY ASSURANCE**

1. The bypass system shall be designed and operated so that no sewage overflow or spills occur.
2. Should spills occur, the Contractor will be completely responsible for any overflow or spillage of raw sewage due to failure of any bypass system.
3. Contractor to pay any fines or costs associated with such spillages.
4. Contractor to be responsible for any cleanup or restoration resulting from such spillages.

## **77-3.02 PRODUCTS**

### **77-3.02A PUMP SYSTEMS**

1. Pumps may be gas, electric, or diesel powered.
2. Pumps may be end suction or submersible.
3. Bypass piping shall be rubber gasketed or butt-fused HOPE, with no visible leaks under operating conditions.

## **77-3.03 EXECUTION**

### **77-3.03A GENERAL**

1. If pumping is required across a street or driveway that cannot be closed to traffic, the discharge piping shall be:
  - A. Temporarily buried, backfilled, and paved.
  - B. Collapsible conduit adequate to allow crossing by traffic may be used only during work hours when the contractor is on the project site.
2. Bypass pumping and sewage hauling shall be monitored at all times by a competent person familiar with the pumping equipment.
3. New pumps and pipelines may be utilized to convey sewage prior to final acceptance, provided all pipe and structures downstream have been tested, cleaned, inspected, and accepted.
4. Contractor shall conform to all safety provisions pertaining to confined space entry when entering any manhole.
5. Contractor shall notify Engineer 48 hours prior to commencing bypass system operation.
6. Before final acceptance of the Work on the project, all temporary connections, pumping and piping installed by the Contractor shall be entirely removed, and all affected improvements shall be restored to their original condition, or better, to the satisfaction of Engineer, the District, and/or other agency owning the affected utility.

## **77-3.04 PAYMENT**

Payment for "BYPASSING WASTEWATER" is considered included in the contract price paid for other sanitary sewer force main items and no additional compensation will be allowed therefore.

**Add section 77-4:**

**77-4 ADJUST MANHOLES**

**77-4.01 GENERAL**

Section 77-4 includes specifications for adjusting existing manholes to grade and shall conform to the provisions of Section 71-5.03B "Frames, Covers, Grates, and Manholes" of the State Standard Specifications and these Special Provisions.

**77-4.02 PAYMENT**

The contract unit price paid per each "Adjust SS Manhole to Grade" includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in adjusting sanitary sewer manhole to grade, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The contract unit price paid per each "Adjust Existing SD Manhole to Grade" includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in adjusting storm drain manhole to grade, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**78 INCIDENTAL CONSTRUCTION**

**Add section 78-1:**

**78-1 PRESTON PARK ENTRY MONUMENTS**

**78-1.01 GENERAL**

Section 78-1 includes specifications for salvaging the Preston Park entry monument features.

**78-1.02 CONSTRUCTION**

Salvage Preston Park entry monument features, including raised stone planter materials, monument lettering, and lighting equipment. Deliver salvaged materials to the City as specified in section 15-1.03C.

**78-1.03 PAYMENT**

The lump sum price paid for "Salvage Preston Park Entry Monuments" includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in salvaging and transporting the existing monument features, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Replace section 78-6 with:**

**78-6 ENGINEER'S FIELD OFFICE**

**78-6.01 GENERAL**

Section 78-6 includes general specifications for providing the engineer's field office.

Furnish a field office conforming to these special provisions for the use by the City at the staging area off of 8<sup>th</sup> Street as shown. The field office must be well constructed, properly ventilated, lighted, heated, and air conditioned.

The overall size of the field office must be a minimum of 450 square feet, and must be furnished with doors and windows capable of being locked. The field office must be partitioned to provide one private office of not less than 120 square feet and a conference area of not less than 300 square feet. The doors must have new galvanized or zinc coated stairs with landings as required. Provide to the Engineer a floor plan for review and approval prior to commencement of work.

Locate the field office within the staging area off of 8th Street. Provide two (2) keys for the staging area's lockable gate and for the office door lock assembly to the Engineer. Title to the trailer and provided contents will remain with the contractor.

Preparatory work includes any necessary site grading to place the trailer on a suitable flat area. Grading work must include parking spaces for a minimum of four vehicles and the installation of an all-weather access surface (i.e., aggregate base) to the site from 8th Street and Imjin Road. Upon completion of the project work the area must be returned to the original pre-project grades including the removal of any materials including the aggregate road base.

Furnish the field office with 3 desks capable of being locked; 3-foot by 8-foot conference table; 12 standard chairs; 3 desk chairs with arms; one (1) dry plain paper copying machine with automatic feed and collator similar to Xerox 1012 or Sharp 815 capable of making letter size (8-1/2 x 11), legal size (8-1/2 x 14), and ledger size (11 x 17) copies; 4 x four drawer legal size filing cabinets; 1 plan rack; a fire extinguisher and a safety kit (bandages, gauze, etc.).

The private office must be provided with a lockable closet and at least 25 feet of 12-inch wide shelving located as directed and two (2) portable book cases, each with a minimum of three four-foot long shelves.

Provide garbage collection service at least once per week.

The turnkey modular building must be new, or in like-new condition and not less than 3 years old. Contractor is responsible for all aspects of site preparation, delivery, set up, electrical plan and wiring, fire alarm system, and including all code compliance, applications, permitting and fees.

Provide all labor, materials and equipment required to install a generator to provide adequate power to the trailer.

Provide toilet and wash station facilities that are at a minimum equivalent to the facilities that you provide for your employees at the project site and in accordance with State and local requirements. The toilet facilities may be portable facilities and must be separate from your facilities. Provide maintenance of any portable toilet and wash station facilities throughout the term of the project.

Provide fire extinguishers and mounted as required by the Fire Marshall.

Besides the necessary electrical power for the heating, air conditioning and lighting, provide the necessary electrical service to the trailer to accommodate, at a minimum, the following items: 1 copier, and other standard office equipment. All electrical outlets to contain receptacles must be wired and ready for use, and be installed not less than 6 feet apart.

Provide all repairs and maintenance, including replacement of HVAC filters every 90 days, replacement of ballasts, and replacement of fluorescent light bulbs. Any maintenance requests by the Engineer are to be addressed within 48 hours. The generator must be maintained and refueled as necessary throughout the project by you.

Contractor is responsible for meeting all State and local codes, including applicable building code requirements in accordance with Title 24 of the California Code of Regulations, Department of Housing and Community Development (DOH), Division of the State Architect (DSA), and Department of Motor Vehicles (DMV).

Equipment furnished shall be of standard quality and new, or like new in appearance and function. The office must be installed and ready for occupancy no later than twenty (20) calendar days after the first working day. For each day thereafter that the office is not ready for occupancy, you will be assessed damages in the amount of \$500.00 per calendar day.

The office and all furnished equipment must remain for use by the City and must continue to be maintained until notified in writing by the Engineer that all required final paperwork for project closeout, except paperwork related to progress payments, has been submitted and accepted by the Engineer.

## **78-2.02 PAYMENT**

Payment for Engineer's field office will be made in increments of the contract lump sum price for this item of work in the following manner:

|                    |  |
|--------------------|--|
| Initial Increment: | 25 percent of the lump sum price upon satisfactory completion of installation and setup (ready to occupy). |
| Progress Payment:  | 50 percent of the lump sum price upon satisfactory completion of fifty percent of the contract work.       |
| Final Increment:   | Balance of the lump sum price when contract work is completed and accepted.                                |

## **DIVISION IX TRAFFIC CONTROL DEVICES**

### **81 MISCELLANEOUS TRAFFIC CONTROL DEVICES**

#### **Add to section 81-3.03A:**

Reference and replace all existing blue reflective pavement markers that identify the location of fire hydrants. If an existing blue reflective pavement marker is missing or has been displaced, place a new blue reflective pavement marker as directed by the Engineer.

#### **Replace “*Not Used*” in section 81-3.04 with:**

Furnishing and placing blue reflectors is included in payment for the various bid items.

Furnishing and placing pavement markers is included in the payment for the traffic stripe work that requires them.

### **82 SIGNS AND MARKERS**

#### **Add to section 82-2.02:**

Metal posts shall be a Unistrut telescoping square tube system or an approved equal which consists of square tube that is welded steel with perforations to adjust post height.

#### **Add to section 82-3.03A:**

The R81 (Bike Lane) signs shall be placed on metal posts.

#### **Add to section 82-9.01:**

Salvage sign panels from removed signs. Deliver salvaged panels to the City as specified 15-1.03C.

### **83 RAILINGS AND BARRIERS**

#### **Add to section 83-11.02C(1):**

Salvage metal guardrail material from removed guardrail. Deliver guardrail to the City as specified 15-1.03C. Dispose of all other guardrail materials removed. Note that wood posts are treated wood waste and disposal must comply with section 11-14.

## **84 MARKINGS**

### **Add to section 84-1.04:**

Payment for painting the median and gore island noses as shown is included in the payment for various bid items.

### **Replace 84-2.02I with:**

#### **84-2.02I Methyl Methacrylate Marking (Green)**

##### **84-2.02I(1) General**

The material for the green bicycle lane delineation (green marking) must be methyl methacrylate conforming to this section. Material must be anti-slip treated methyl methacrylate and does not need to be retro-reflective.

The manufacturer must be ISO 9001:2008 certified for design, development and manufacturing of colored pavement materials, and provide proof of current certification.

##### **84-2.02I(2) System Description**

Properly designed roadway pavement coatings have been scientifically formulated to provide the optimal balance of performance properties for a durable, long lasting color and texture to a roadway pavement surface. Some of these key properties include wear and crack resistance, color retention, adhesion, minimal water absorption and increased friction properties. As well, the roadway pavement coating must be environmentally safe and meet EPA requirements for Volatile Organic Compounds (VOC).

- A. The material shall be capable of being applied on bituminous and/or Portland cement concrete pavements and must be able to be applied after 30 days of placement. The use of a compactor or similar equipment shall not be necessary. The material must be able to be applied to asphalt and concrete surfaces without preheating the application surface to a specific temperature.
- B. The material must be capable of conforming to pavement contours, breaks and faults through the action of traffic at normal pavement temperatures. It shall not be necessary to use a grid template or to make pattern grooves or other indentations in the asphalt or concrete surface prior to applying the material. It shall not be necessary to inlay the material in grooves or indentations. It shall not be necessary to heat the pavement or application surface to a specific temperature.

##### **84-2.02I(3) Submittals**

- A. Confirmation of coating color.

**Green:** The color must meet the FHWA guidance for the chromaticity coordinates for bicycle lane coloration. Material shall be tested according to ASTM D 154 Exposure Condition Cycle 1 D65/2 Daytime Chromaticity at 144 hours of exposure. Values for Green Bike lane color shall be X-0.3367/Y-0.4846.

B. Confirmation of anti-skid / anti-slip properties of coating material.

C. Material Warranty

1. Manufacturer provides a full warranty covering 100 percent of the pavement marking materials for one year.
2. Contractor is responsible for quality control of the proper placement of the materials and all other factors that affect the service life of the materials.
3. Contractor removes and replaces 100 percent of the markings for all failed sections at no cost to OWNER in the event of a performance failure.

#### **84-2.02I(4) Delivery, Storage, and Handling**

A. According to manufacturer's recommendations.

B. Provide Material Safety Data Sheets (MSDS) when material is delivered.

#### **84-2.02I(5) Acceptance**

Provide documentation of the manufacturer and production batch identification for the covering used.

#### **84-2.02I(6) Material**

A. The Methyl Methacrylate (MMA) Acrylic Resin Material shall be a 98:2 formulated material capable of being sprayed. No other substitutes (i.e. 4:1, 1:1) MMA material formulations shall be permissible. Material shall be Color-Safe as manufactured by Transpo Industries, Inc..

B. Must be resistant to the detrimental effects of motor fuels, antifreeze, lubricants, hydraulic fluids composed of an ester modified rosin impervious to degradation by motor fuels, lubricants, etc. in conjunction with aggregates, pigments, binders, and anti-skid/anti-slip elements.

C. Pigments and anti-skid/anti-slip elements must be uniformly distributed throughout the material.

Pigments: The pigment system must not contain heavy metals nor any carcinogen, as defined in 29 CFR 1910.1200 in amounts exceeding permissible limits as specified in relevant Federal Regulations.

D. Skid Resistance: Upon application the material shall provide a minimum skid resistance value of 60 BPN when tested according to ASTM E 303 or minimum value of 40 when tested according to ASTM E 274.

E. Hardness: The material must meet a minimum hardness value of 55-60 per ASTM D2240.

F. Environmental Resistance: The material must be resistant to deterioration due to exposure to sunlight, water, salt or adverse weather conditions and impervious to oil and gasoline.

G. The material must be able to be applied in temperatures down to 40 °F.

H. Performance Measures for Durability.

1. Minimum Durability – 90 percent of each colored area, legend, or symbol must be present.

2. Failure to meet any of the specified performance measures on at least 90 percent of the colored area is considered a failure. ENGINEER may require partial or complete replacement of the colored area under the warranty terms.

3. Failure to meet any of the specified performance measures on at least 90 percent of the legend or symbol is considered a complete failure of that legend or symbol. Replace under the warranty terms.

I. Elongation of material resin should have a minimum of 30% when tested in accordance with ASTM D638 Type I.

J. Compressive Strength of mixed material shall be between 2000-3000psi when tested in accordance with ASTM 579 Method B.

K. Water Absorption shall be a maximum of 0.25% when tested in accordance with ASTM D570.

L. Solids Content should be a minimum of 99% when tested in accordance with ASTM D1644.

M. Aggregate: A minimum of 7.0 on the Mohs Hardness Scale and Specific Gravity of 2.65 when tested by ASTM C128..

## **84-2.02I(7) Execution**

### **84-2.02I(7)(a) Preparation**

A. Depending upon the condition and age, existing roadway pavement may or may not be suitable for the successful application of pavement coating. CONTRACTOR can advise whether the roadway pavement is suitable or not. ENGINEER shall make the final determination as to the suitability of the existing roadway pavement.

B. CONTRACTOR is responsible for all surface preparation such as de-greasing, sweeping, power blowing, shot-blasting or power washing, in accordance with manufacturer's instructions.

C. Line control.

1. Establish control points prior to application.
2. Pavement markings that are to be left in place, utilities, drainage structures, curbs and any other structure within or adjacent to the treatment location shall be masked to protect from application. Masking material to be removed with no damage after material is placed.
3. Maintain line within 2 inches of the established control points and mark the roadway between control points as needed. Remove paint that is not placed within tolerance of the established control points and replace at no expense to the OWNER.

### **84-2.02I(7)(b) Application Guideline**

A. A certified applicator shall install or an approved manufacturer's representative shall be present on the jobsite for the first day of application of the methyl-methacrylate based colored pavement material. The manufacturer's representative shall provide the Engineer and Contractor with a copy of written recommendations, technical data sheet complete with application instructions and a product safety data sheet available to anyone that will be exposed to the methyl-methacrylate colored pavement marking system. The manufacturer's representative must have extensive application experience in the installation of methyl-methacrylate colored pavement systems and provide a resume of project completed.

B. The substrate must be completely dry and the surface thoroughly clean before application of the methyl-methacrylate Colored Pavement Marking System coating. The material must cover the entire application area and be flush across the surface. Once applied, no part of the pavement surface must be visible in the application area.

C. Asphalt: The material shall be applied using equipment recommended by the Manufacturer's instructions. The material must be able to be applied at ambient and road temperatures down to 40 °F without any preheating of the pavement to a specific

temperature. A sealer or primer specified by the manufacturer may be applied to the Asphalt prior to material application to ensure proper adhesion, and to provide reinforcement for larger volumes of material. A thermometer shall not be required during the application process. The pavement shall be clean, dry and free of debris.

D. Portland Cement Concrete: The same application procedure shall be used as described above in C. When applying to PCC pavement, a Methyl-Methacrylate Primer shall be used. Primer shall be mixed and applied according to manufacturers recommended instructions and completely cured before application of the Colored Pavement Marking material.

E. No Track Topcoat: Upon and/or during cure (i.e. wet-on-wet) of the Colored Pavement Marking Material, a Methyl-methacrylate based No Track Topcoat shall be mixed and applied (rolled or sprayed) according to manufacturers recommended instructions.

F. Catalyst for the methyl-methacrylate Colored Pavement Marking Material System will be added at the recommendation of the manufacturer dependent on ambient and pavement temperature for methyl-methacrylate Primer, Colored Pavement Marking Material and Top Coat.

G. Final thickness:

1. The material must be supplied at a minimum thickness of 80 mils.

H. Equipment: Application/spray equipment shall utilize static mixers for thorough mixing of the of resin and BPO catalyst. Resin and BPO shall not come in contact until just prior to entering the static mixer. A reversible spray tip shall be mounted directly at output of static mixer. Equipment with mixed resin and catalyst in hoses downstream of static mixer will not be accepted. Equipment must have an electronic, adjustable over and under pressure safety circuit in place on the catalyst pump that will stop the machine if the set pressure is exceeded. In addition machine must have an audible low pressure alarm that sounds if the pressure drops below the setpoint (usually about 1000 PSI). Equipment without an electronic over pressure failsafe and audible low pressure alarm will not be accepted. A factory technician must be on site during project to assure proper use and operation of the equipment.

#### **84-2.02I(7)(c) Opening to Traffic**

A. Minimally, the material must cure before the colored area is opened to traffic.

#### **Add to section 84-2.03A:**

Do not apply thermoplastic or methyl methacrylate striping using hand cart methods.

#### **Replace the first paragraph in section 84-2.01A with:**

Section 84-2 includes specifications for applying permanent and temporary traffic stripes and markings. Temporary traffic stripes and markings may be painted.

**Add to section 84-2.03A:**

Do not apply thermoplastic striping using hand cart methods.

**Replace section 84-2.04 with:**

Thermoplastic traffic stripes will be measured by the linear foot regardless of the number of individual stripes comprising the detail (e.g. Detail 29 placed between Station 1+00 and Station 2+00 will be measured as 100 linear feet even though it consists of 400 linear feet of stripe).

Temporary traffic stripes and markings will not be paid for separately.

**Replace *Reserved* in section 84-9.03C with:**

Residue from the removal of painted or thermoplastic traffic stripes and pavement markings contains lead from the paint or thermoplastic. The average lead concentrations are less than 1,000 mg/kg total lead and 5 mg/L soluble lead. This residue:

1. Is a nonhazardous waste
2. Does not contain heavy metals in concentrations exceeding the thresholds established by the Health and Safety Code and 22 CA Code of Regs
3. Is not regulated under the Federal Resource Conservation and Recovery Act (RCRA), 42 USC § 6901 et seq.

Management of this material exposes workers to health hazards that must be addressed in your lead compliance plan.

# DIVISION X ELECTRICAL WORK

## 86 GENERAL

**Add new section 86-1.01C(12) in the RSS for Section 86:**

**Add to the end of section 86-1.02B(1) of the RSS for section 86:**

High density polyethylene conduit must be Type IPS, DR 9 and comply with ASTM F714. The conduit material must comply with ASTM D3350.

**Replace *Caltrans* in the 4th paragraph of section 86-1.02C(1) with:**

CITY OF MARINA

**Add to the end of section 86-1.02C(3) of the RSS for section 86:**

Hold-down bolts must be a Penta Head 1/2-13UNC and must have a thread lock material.

**Replace *Reserved* in section 86-1.02C(4) of the RSS for section 86 with:**

### **86-1.02C(4)(a) General**

Not Used

### **86-1.02C(4)(b) Tamper-Resistant Non-traffic Pull Box**

A tamper resistant non-traffic pull box must include a pull box and one of the following:

1. Anchored cover
2. Lockable cover
3. Pull box insert

### **86-1.02C(4)(c) Tamper Resistant Traffic Pull Box**

A tamper resistant traffic pull box must include a pull box and 1 anchored cover.

### **86-1.02C(4)(d) Anchored Cover**

The anchored cover must:

1. Be of 1/2-inch-thick mild steel, hot dip galvanized, post fabrication.
2. Be hot dip galvanized after manufacturing with spikes removed from the galvanized surfaces.
3. Have a center space for a top lock nut that must be torqued to 200 ft-lb.
4. Have a center opening for a stainless steel threaded cap to cover the lock nut.
5. Weigh a minimum of 85 lb.
6. Include an all-around security skirt of 1/4-inch-thick steel. The skirt must be sized to encase a non-traffic pull box or sized to fit within a traffic pull box.
7. Be welded to the skirt.

### **86-1.02C(4)(e) Lockable Cover**

The lockable cover must:

1. Be manufactured from minimum 3/16-inch-thick galvanized steel or a polymer of minimum strength equal to 3/16 inch steel
2. Be secured to the pull box with a locking mechanism of equal or greater strength than the manufactured material
3. Have 1/2-by-2-inch slot holes for lifting
4. Have dimensions complying with one of the following:
  - 4.1. Department's standards for pull covers as shown if the lockable cover is secured to the inside lip of the pull

- 4.2 Department's standards for LO and WO for the length and width as shown for pull box covers if the lockable cover is secured to the top of the pull box

#### **86-1.02C(4)(f) Pull Box Insert**

The pull box insert must:

1. Be made of minimum 3/16-inch-thick or 10 gauge mild hot-dipped galvanized steel
2. Have a minimum of 2 mounting brackets that rest under the side or end wall
3. Be lockable with a padlock having a minimum 3/8-inch shackle
4. Have dimensions complying with the Department's standards for LI and WI for the length and width as shown for pull box covers

#### **Replace 86-1.02K(1) of the RSS for section 86 with:**

Luminaire shall be LED. The luminaire shall be:

1. Leotek Model GCL1-80G-MV-WW-2R-GY-610-WL with 115 Watt LED assembly, or approved equal.
2. Leotek Model GCL1-80G-MV-WW-4-GY-610-WL with 115 Watt LED assembly, or approved equal.

Luminaire shall be mounted on 10-foot mast arm.

Luminaire shall be equipped with field adjustable output selector. The initial drive setting shall be set to the drive setting as indicated in these specs.

#### **Replace first sentence of 86-1.02K(2) of the RSS for section 86 with:**

LED luminaire must: **Replace section 86-1-02V of the RSS for section 86 with:**

#### **Replace *Reserved* in section 86-1.02V of the RSS for section 86 with:**

### **86-1.02V Rectangular Rapid Flashing Beacon Assembly**

#### **86-1.02V(1) General**

Rectangular Rapid Flashing Beacon (RRFB) shall comply with FHWA Interim Approval for Optional Use of Rectangular Rapid Flashing Beacons (IA-11), dated July 16, 2008. The assembly shall be pedestrian push button activated.

The system shall be rated for a minimum of 300, 20 second activations per day, year-round operations.

#### **86-1.02V(2) Rectangular Rapid Flashing Beacons (RRFB)**

The RRFB housing shall contain two primary light bars mounted in compliance with MUTCD requirements. The housing shall have side emitting pedestrian confirmation lights. The LEDs used shall be rated for a minimum 15-year life. The RRFB shall meet SAE J595 class 1 intensity and SAE J578 chromaticity.

The RRFB housing shall be made of powder-coated aluminum with a minimum thickness of 0.125", and shall provide a mounting mechanism allowing for directional rotation of the primary light bars toward oncoming traffic at curves, corners, and roundabouts.

The controller shall auto-adjust RRFB brightness based on ambient light levels, and dim during night operations.

Flash duration shall be field-configurable to one second increments.

RRFB bars mounted on a pole shall be able to be independently aimed to optimize performance in each direction.

**86-1.02V(4) Push Buttons**

Push buttons for RRFB assembly shall be accessible pedestrian signals (APS).

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

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

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

**86-1.02V(5) Enclosure**

The controller enclosure shall be a NEMA 3R enclosure with a dead front panel and a hasp with a 7/16-inch hole for a padlock. The enclosure shall be powder coated, hot-dip galvanized, or factory-applied rust resistant prime coat and finish coat.

For some manufacturers, RRFB control systems are integral to the RRFB light bar assembly and therefore an enclosure would not be required for such systems. For such a system, the contractor shall submit product specifications and cut sheet for approval.

**87 ELECTRICAL SYSTEMS**

**Replace the 1st sentence in the 9th paragraph of section 87-1.03A of the RSS for section 87 with:**  
The shutdown of traffic signal systems is allowed only between the hours of \_\_\_\_\_ and \_\_\_\_\_.

**Add to section 87-1.03C of the RSS for section 87:**

*87-1.03C(5) Tamper-Resistant Pull Boxes*

Install the tamper-resistant pull boxes per the manufacturer’s instructions.

**Add to the end of section 87-21.03C of the RSS for section 87:**

Modifying a signal and lighting system includes removing, adjusting, or adding:

1. Foundations
2. Pull boxes
3. Conduit
4. Conductors
5. Cables
6. Standards
7. Signal heads

8. Internally-illuminated street name signs
9. Service equipment enclosure
10. Detectors
11. Accessible pedestrian signals
12. Push button assemblies
13. Pedestrian signal heads
14. Luminaires
15. Photoelectric control
16. Fuse splice connectors
17. Emergency vehicle preemption

**E N D   O F   S P E C I A L   P R O V I S I O N S**