



**PROJECT  
PLANS AND SPECIFICATIONS  
FOR  
OAK MEADOW BANDSTAND AREA IMPROVEMENTS  
21-831-4007**

**Bid Opening  
Wednesday, February 18, 2026, 2:00 pm**

**ISSUE DATE: January 23, 2026**

**OAK MEADOW BANDSTAND AREA IMPROVEMENTS  
# 21-831-4007**

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### Attachments:

A - 100% Bid Set Project Plans

B - Sample Contract

## 1. NOTICE INVITING BIDS

### 1.1. Bid Submission

The Town of Los Gatos (“Town”) will accept electronic bids for its Project # Oak Meadow Bandstand Area Improvements Project #21-831-4007 (“Project”), by or before Wednesday, February 18, 2026, at 2:00 pm, via the Town’s bidding site at <https://procurement.opengov.com/portal/losgatosca>, at which time the bids will be opened electronically, as further specified in the Instructions to Bidders.

### 1.2. Project Information

- A. **Location and Description** - The Project involves the installation of concrete pad, stamped concrete, grading, landscaping, restoration and associated work within the Town, as shown in **Appendix A**, Project Plans, incorporated herein.
- B. **Time for Final Completion** - The Project must be fully completed within 28 calendar days from the start date set forth in the Notice to Proceed. Town anticipates that the Work will begin on or about April 21, but the anticipated start date is provided solely for convenience and is neither certain nor binding.
- C. **Estimated Cost.** The estimated construction cost is 180000.

### 1.3. License and Registration Requirements

- A. **License** - This Project requires a valid California contractor’s license for the following classification(s): Class A or Class C-8.
- B. **DIR Registration** - Town may not accept a Bid Proposal from or enter into the Contract with a bidder, without proof that the bidder is registered with the California Department of Industrial Relations (“DIR”) to perform public work pursuant to Labor Code § 1725.5, subject to limited legal exceptions.

### 1.4. Contract Documents

The plans, specifications, bid forms and contract documents for the Project, and any addenda thereto (“Contract Documents”) may be downloaded from Town’s bidding site <https://procurement.opengov.com/portal/losgatosca>. Printed copy of the Contract Documents is not available from the Town.

### 1.5. Bid Security

The Bid Proposal must be accompanied by bid security of ten percent of the maximum bid amount, in the form of a cashier’s or certified check made payable to Town, or a bid bond executed by a surety licensed to do business in the State of California on the Bid Bond form included with the Contract Documents. The bid security must guarantee that within ten days after Town issues the Notice of Potential Award, the successful bidder will execute the Contract and submit the payment and performance bonds, insurance certificates and endorsements, valid Certificates of Reported Compliance as required under the California Air Resources Board’s In-Use Off-Road Diesel-Fueled Fleets Regulation (13 CCR § 2449 et seq.) (“Off-Road Regulation”), if applicable, and any other submittals required by the Contract Documents and as specified in the Notice of Potential Award.

### 1.6. Prevailing Wage Requirements

- A. **General** - Pursuant to California Labor Code § 1720 et seq., this Project is subject to the prevailing wage requirements applicable to the locality in which the Work is to be performed for each craft, classification or type

of worker needed to perform the Work, including employer payments for health and welfare, pension, vacation, apprenticeship and similar purposes.

- B. **Rates** - The prevailing rates are on file with the Town and are available online at <http://www.dir.ca.gov/DLSR>. Each Contractor and Subcontractor must pay no less than the specified rates to all workers employed to work on the Project. The schedule of per diem wages is based upon a working day of eight hours. The rate for holiday and overtime work must be at least time and one-half.
- C. **Compliance** - The Contract will be subject to compliance monitoring and enforcement by the DIR, under Labor Code § 1771.4.

**1.7. Retention**

The percentage of retention that will be withheld from progress payments is 5 %.

**1.8. Performance and Payment Bonds**

The successful bidder will be required to provide performance and payment bonds, each for 100% of the Contract Price, as further specified in the Contract Documents.

**1.9. Substitution of Securities**

Substitution of appropriate securities in lieu of retention amounts from progress payments is permitted under Public Contract Code § 22300

**1.10. Subcontractor List**

Each Subcontractor must be registered with the DIR to perform work on public projects. Each bidder must submit a completed Subcontractor List form with its Bid Proposal, including the name, location of the place of business, California contractor license number, DIR registration number, and percentage of the Work to be performed (based on the base bid price) for each Subcontractor that will perform Work or service or fabricate or install Work for the prime contractor in excess of one-half of 1% of the bid price, using the Subcontractor List form included with the Contract Documents.

**1.11. Instructions to Bidders**

All bidders should carefully review the Instructions to Bidders for more detailed information before submitting a Bid Proposal. The definitions provided in Article 1 of the General Conditions apply to all of the Contract Documents, as defined therein, including this Notice Inviting Bids.

By: **/s/ Wendy Wood, Town Clerk**

Publication Date: Friday, January 23, 2026

## 2. Instructions to Bidders

Each Bid Proposal submitted to **Town of Los Gatos** ("Town") for its Oak Meadow Bandstand Area Improvements Project #21-831-4007 ("Project") must be submitted in accordance with the following instructions and requirements:

### 2.1. Bid Submission

A. **General** - Each bidder must register for an account on the Town's bidding site, <https://procurement.opengov.com/portal/losgatosca> to submit the Bid Proposal electronically. Plans, Specifications, and Addendums (if any) may be viewed and downloaded free of charge via the internet at <https://procurement.opengov.com/portal/losgatosca>. To be included on the Plan Holder's List for the Project, registered users must download the Plans and Specifications from the bidding website. Each Bid Proposal must be completed and submitted electronically through the bidding site, with all required forms and attachments, by or before the date and time set forth in Section 1 of the Notice Inviting Bids, or as amended by subsequent addendum. Faxed or emailed Bid Proposals will not be accepted. Late submissions will not be considered. Town reserves the right to postpone the date or time for receiving or opening bids. Each bidder is solely responsible for all of its costs to prepare and submit its bid and by submitting a bid waives any right to recover those costs from Town. The bid price(s) must include all costs to perform the Work as specified, including all labor, material, supplies, and equipment and all other direct or indirect costs such as applicable taxes, insurance and overhead.

B. **Bid Opening** - Bids timely submitted via the Town's bidding portal will be opened and publicly read aloud during a Zoom meeting after bids have closed on the day and time listed above. Here is the Zoom link to participate:

<https://losgatosca-gov.zoom.us/j/83324018680>

Meeting ID: 833 2401 8680

A. **DIR Registration** - Subject to limited legal exceptions for joint venture bids and federally-funded projects, Town may not accept a Bid Proposal from a bidder without proof that the bidder is registered with the DIR to perform public work under Labor Code § 1725.5. If Town is unable to confirm that the bidder is currently registered with the DIR, Town may disqualify the bidder and disregard its bid. (Labor Code §§ 1725.5 and 1771.1(a).)

### 2.2. Bid Proposal

A Bid Proposal submitted with exceptions or terms such as "negotiable," "will negotiate," or similar, will be considered nonresponsive. Each Bid Proposal must be accompanied by bid security, as set forth in Section titled "Bid Security" below, and by a completed Subcontractor List and Non-Collusion Declaration using the forms included with the Contract Documents, and any other required enclosures, as applicable.

### 2.3. Bid Security

Each Bid Proposal must be accompanied by bid security of ten percent of the maximum bid amount, in the form of a cashier's check or certified check, made payable to the Town, or bid bond using the form included in the Contract Documents and executed by a surety licensed to do business in the State of California. The bid security must guarantee that, within ten days after issuance of the Notice of Potential Award, the bidder will: execute and submit the enclosed Contract for the bid price; submit payment and performance bonds for 100% of the maximum Contract Price; submit the insurance certificates and endorsements; and submit valid Certificates of Reported Compliance as required by the Off-Road Regulation, if applicable, and any other submittals, if any, required by the Contract Documents or the Notice of

Potential Award. A Bid Proposal may not be withdrawn for a period of 60 days after the bid opening without forfeiture of the bid security, except as authorized for material error under Public Contract Code § 5100 et seq.

#### **2.4. Liquidated Damages**

As further specified in Section 5.4 of the General Conditions, if Contractor fails to complete the Work within the Contract Time, Town will assess liquidated damages in the amount of 1800 per day for each day of unexcused delay in achieving Final Completion, and such liquidated damages may be deducted from Town's payments due or to become due to Contractor under this Contract.

#### **2.5. Requests for Information**

Questions or requests for clarifications regarding the Project, the bid procedures, or any of the Contract Documents must be submitted through the Town's bidding site <https://procurement.opengov.com/portal/losgatosca> and received a minimum of five (5) working days prior to the scheduled bid opening. Oral responses are not authorized and are not binding on the Town. Bidders should submit any such written inquiries at least five Working Days before the scheduled bid opening. Questions received any later might not be addressed before the bid deadline. An interpretation or clarification by Town in response to Questions or requests for clarifications will be issued through an addendum no later than 72 hours prior to bid opening.

#### **2.6. Pre-Bid Investigation**

- A. **General** - Each bidder is solely responsible at its sole expense for diligent and thorough review of the Contract Documents, examination of the Project site, and reasonable and prudent inquiry concerning known and potential site and area conditions prior to submitting a Bid Proposal. Each bidder is responsible for knowledge of conditions and requirements which reasonable review and investigation would have disclosed. However, except for any areas that are open to the public at large, bidders may not enter property owned or leased by the Town or the Project site without prior written authorization from Town.
- B. **Document Review** - Each bidder is responsible for review of the Contract Documents and any informational documents provided "For Reference Only," e.g., as-builts, technical reports, test data, and the like. A bidder is responsible for notifying Town of any errors, omissions, inconsistencies, or conflicts it discovers in the Contract Documents, acting solely in its capacity as a contractor and subject to the limitations of Public Contract Code § 1104. Notification of any such errors, omissions, inconsistencies, or conflicts must be submitted in writing to the Town no later than five Working Days before the scheduled bid opening. (See Section 5, above.) Town expressly disclaims responsibility for assumptions a bidder might draw from the presence or absence of information provided by Town.
- C. **Project Site** - Questions regarding the availability of soil test data, water table elevations, and the like should be submitted to the Town through the bidding site, as specified in Section 5, above. Any subsurface exploration at the Project site must be done at the bidder's expense, but only with prior written authorization from Town. All soil data and analyses available for inspection or provided in the Contract Documents apply only to the test hole locations. Any water table elevation indicated by a soil test report existed on the date the test hole was drilled. The bidder is responsible for determining and allowing for any differing soil or water table conditions during construction. Because groundwater levels may fluctuate, difference(s) in elevation between ground water shown in soil boring logs and ground water actually encountered during construction will not be considered changed Project site conditions. Actual locations and depths must be determined by bidder's field investigation.

The bidder may request access to underlying or background information on the Project site in Town's possession that is necessary for the bidder to form its own conclusions, including, if available, record drawings or other documents indicating the location of subsurface lines, utilities, or other structures.

- D. **Utility Company Standards** - The Project must be completed in a manner that satisfies the standards and requirements of any affected utility companies or agencies (collectively, "utility owners"). The successful bidder may be required by the third party utility owners to provide detailed plans prepared by a California registered civil engineer showing the necessary temporary support of the utilities during coordinated construction work. Bidders are directed to contact the affected third party utility owners about their requirements before submitting a Bid Proposal.

## **2.7. Bidders Interested in More Than One Bid**

No person, firm, or corporation may submit or be a party to more than one Bid Proposal unless alternate bids are specifically called for. However, a person, firm, or corporation that has submitted a subcontract proposal or quote to a bidder may submit subcontract proposals or quotes to other bidders.

## **2.8. Addenda**

Any addenda issued prior to the bid opening are part of the Contract Documents. Subject to the limitations of Public Contract Code § 4104.5, Town reserves the right to issue addenda prior to bid time. Each bidder is solely responsible for ensuring it has received and reviewed all addenda prior to submitting its bid. Bidders should check Town's site periodically for any addenda or updates on the Project at <https://procurement.opengov.com/portal/losgatosca>.

## **2.9. Brand Designations and "Or Equal" Substitutions**

Any specification designating a material, product, thing, or service by specific brand or trade name, followed by the words "or equal," is intended only to indicate quality and type of item desired, and bidders may request use of any equal material, product, thing, or service. All data substantiating the proposed substitute as an equal item must be submitted with the written request for substitution. A request for substitution must be submitted within 35 days after Notice of Potential Award unless otherwise provided in the Contract Documents. This provision does not apply to materials, products, things, or services that may lawfully be designated by a specific brand or trade name under Public Contract Code § 3400(c).

## **2.10. Bid Protest**

Any bid protest against another bidder must be submitted in writing and received by Town sent via email to Gary Heap, Town Engineer, at [gheap@losgatosca.gov](mailto:gheap@losgatosca.gov) before 5:00 p.m. no later than two Working Days following bid opening ("Bid Protest Deadline") and must comply with the following requirements:

- A. **General** - Only a bidder who has actually submitted a Bid Proposal is eligible to submit a bid protest against another bidder. Subcontractors are not eligible to submit bid protests. A bidder may not rely on the bid protest submitted by another bidder, but must timely pursue its own protest. For purposes of this Section 10, a "Working Day" means a day that Town is open for normal business, and excludes weekends and holidays observed by Town. Pursuant to Public Contract Code § 4104, inadvertent omission of a Subcontractor's DIR registration number on the Subcontractor List form is not grounds for a bid protest, provided it is corrected within 24 hours of the bid opening or as otherwise provided under Labor Code § 1771.1(b).

- B. **Protest Contents** - The bid protest must contain a complete statement of the basis for the protest and must include all supporting documentation. Material submitted after the Bid Protest Deadline will not be considered. The protest must refer to the specific portion or portions of the Contract Documents upon which the protest is based. The protest must include the name, address, email address, and telephone number of the protesting bidder and any person submitting the protest on behalf of or as an authorized representative of the protesting bidder.
- C. **Copy to Protested Bidder** - Upon submission of its bid protest to Town, the protesting bidder must also concurrently transmit the protest and all supporting documents to the protested bidder, and to any other bidder who has a reasonable prospect of receiving an award depending upon the outcome of the protest, by email or hand delivery to ensure delivery before the Bid Protest Deadline.
- D. **Response to Protest** - The protested bidder may submit a written response to the protest, provided the response is received by Town before 5:00 p.m., within two Working Days after the Bid Protest Deadline or after actual receipt of the bid protest, whichever is sooner (the "Response Deadline"). The response must attach all supporting documentation. Material submitted after the Response Deadline will not be considered. The response must include the name, address, email address, and telephone number of the person responding on behalf of or representing the protested bidder if different from the protested bidder.
- E. **Copy to Protesting Bidder** - Upon submission of its response to the bid protest to the Town, the protested bidder must also concurrently transmit by email or hand delivery, by or before the Response Deadline, a copy of its response and all supporting documents to the protesting bidder and to any other bidder who has a reasonable prospect of receiving an award depending upon the outcome of the protest.
- F. **Exclusive Remedy** - The procedure and time limits set forth in this Section are mandatory and are the bidder's sole and exclusive remedy in the event of a bid protest. A bidder's failure to comply with these procedures will constitute a waiver of any right to further pursue a bid protest, including filing a Government Code Claim or initiation of legal proceedings.
- G. **Right to Award** - Town reserves the right, acting in its sole discretion, to reject any bid protest that it determines lacks merit, to award the Contract to the bidder it has determined to be the responsible bidder submitting the lowest responsive bid, and to issue a Notice to Proceed with the Work notwithstanding any pending or continuing challenge to its determination.

## 2.11. Reservation of Rights

Town reserves the unfettered right, acting in its sole discretion, to waive or to decline to waive any immaterial bid irregularities; to accept or reject any or all bids; to cancel or reschedule the bid; to postpone or abandon the Project entirely; or to perform all or part of the Work with its own forces. The Contract will be awarded, if at all, within 60 days after opening of bids or as otherwise specified in the Special Conditions, to the responsible bidder that submitted the lowest responsive bid. Any planned start date for the Project represents the Town's expectations at the time the Notice Inviting Bids was first issued. Town is not bound to issue a Notice to Proceed by or before such planned start date, and it reserves the right to issue the Notice to Proceed when the Town determines, in its sole discretion, the appropriate time for commencing the Work. The Town expressly disclaims responsibility for any assumptions a bidder might draw from the presence or absence of information provided by the Town in any form. Each bidder is solely responsible for its costs to prepare and submit a bid, including site investigation costs.

**2.12. Bonds**

Within ten calendar days following Town’s issuance of the Notice of Potential Award to the successful bidder, the bidder must submit payment and performance bonds to Town as specified in the Contract Documents using the bond forms included in the Contract Documents. All required bonds must be calculated on the maximum total Contract Price as awarded, including additive alternates, if applicable.

**2.13. License(s)**

The successful bidder and its Subcontractor(s) must possess the California contractor’s license(s) in the classification(s) required by law to perform the Work. The successful bidder must also obtain a Town business license within ten (10) days following Town’s issuance of the Notice of Potential Award. Subcontractors must also obtain a Town business license before performing any Work.

**2.14. Ineligible Subcontractor**

Any Subcontractor who is ineligible to perform work on a public works project under Labor Code §§ 1777.1 or 1777.7 is prohibited from performing work on the Project.

**2.15. Safety Orders**

If the Project includes construction of a pipeline, sewer, sewage disposal system, boring and jacking pits, or similar trenches or open excavations, which are five feet or deeper, each bid must include a bid item for adequate sheeting, shoring, and bracing, or equivalent method, for the protection of life or limb, which comply with safety orders as required by Labor Code § 6707.

**2.16. In-Use Off-Road Diesel-Fueled Fleets**

If the Project involves the use of vehicles subject to the California Air Resources Board’s In-Use Off-Road Diesel-Fueled Fleets Regulation (13 CCR § 2449 et seq.) (“Off-Road Regulation”), then within ten calendar days following Town’s issuance of the Notice of Potential Award to the successful bidder, the bidder must submit to Town valid Certificates of Reported Compliance for its fleet and its listed Subcontractors, if applicable, in accordance with the Off-Road Regulation, unless exempt under the Off-Road Regulation.

**2.17. Subcontractor Work Limits**

The prime contractor must perform at least 20% of the Work on the Project, calculated as a percentage of the base bid price, with its own forces, except for any Work identified as “Specialty Work” in the Contract Documents. The total bid amount for any such Specialty Work, as shown on the Bid Schedule, may be deducted from the base bid price before computing the 20% self-performance requirement. The remaining Work may be performed by qualified Subcontractor(s).

**2.18. Additive and Deductive Alternates**

As required by Public Contract Code § 20103.8, if this bid solicitation includes additive or deductive items, the following method will be used to determine the lowest bid: The lowest bid will be the lowest total of the bid prices on the base contract and those additive or deductive items that were specifically identified in the bid solicitation or Bid Proposal as being used for the purpose of determining the lowest bid price.

**2.19. Bid Schedule**

Each bidder must complete the Bid Schedule form with unit prices as indicated, and submit the completed Bid Schedule with its Bid Proposal.

- A. **Estimated Quantities** - Unless identified as a “Final Pay Quantity,” the quantities shown on the Bid Schedule are estimated and the actual quantities required to perform the Work may be greater or less than the estimated amount. The Contract Price will be adjusted to reflect the actual quantities required for the Work based on the itemized or unit prices provided in the Bid Schedule, with no allowance for anticipated profit for quantities that are deleted or decreased, and no increase in the unit price, and without regard to the percentage increase or decrease of the estimated quantity and the actual quantity.

**2.20. For Reference Only**

The following documents are provided “For Reference Only,” as defined in Section 3.4 of the General Conditions:

*(Please list all attachments in alphabetical order in the format shown below and then delete this instruction)*

- ATTACHMENT C - Blueprint for a Clean Bay
- ATTACHMENT D - Town of Los Gatos Storm Water Pollution Control Ordinance

**3. Bid Schedule**

This Bid Schedule must be completed and included with the Bid Proposal. Pricing must be provided for each Bid Item as indicated. Items marked “(SW)” are Specialty Work that must be performed by a qualified Subcontractor. The lump sum or unit cost for each item must be inclusive of all costs, whether direct or indirect, including profit and overhead. The sum of all amounts entered in the “Extended Total Amount” column must be identical to the Base Bid price entered in Section 1 of the Bid Proposal form.

AL = Allowance    CF = Cubic Feet    CY = Cubic Yard    EA = Each    LB = Pounds  
 LF = Linear Foot    LS = Lump Sum    SF = Square Feet    TON = Ton (2000 lbs)

**TABLE 1**

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total
1	MOBILIZATION	1	LS		
2	TEMPORARY PEDESTRIAN ACCESS	1	LS		
3	TEMPORARY CONSTRUCTION FENCE	340	LF		
4	DEMOLITION	1	LS	\$5,000.00	
5	CLEARING & GRUBBING	1	LS		
6	EROSION AND SEDIMENT CONTROL	1	LS		
7	EXISTING TREE PROTECTION	2	EA		
8	GRADING (ROUGH & FINE)	1	LS		
9	SOIL PREPARATION	3,098	SF		
10	CONCRETE PAVING TYPE 1 W/ 6" AB	623	SF		
11	CONCRETE PAVING TYPE 2 W/ 6" AB	347	SF		
12	CONCRETE PAVING TYPE 3 W/ 6" AB	2,633	SF		
13	STAMP CONCRETE Type 1 W/ 6" AB (BRICK SUBSITUTE)	252	SF		
14	STAMP CONCRETE Type 2 W/ 6" AB (BRICK SUBSITUTE)	114	SF		
15	CONCRETE CURB @ LAWN AREA	240	LF		

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total
16	TOP SOIL	1	LS		
17	TURF RESTORATION	923	SF		
18	NEW AREA DRAIN	1	LS	\$5,000.00	
<b>TOTAL</b>					

**4. Vendor Questionnaire**

**1. Formation date of company\***

\*Response required

**2. Number of years providing the specified services\***

\*Response required

**3. Please list names and titles of all officers and directors. If an individual or partnership, please list names and addresses of all partners, indicating whether they are general or limited partners.\***

\*Response required

**4. Indicate whether Proposer has ever failed to complete any Agreement awarded to it. If so, note when, where, and why. Attach additional sheets, if necessary. \***

\*Response required

**5. Indicate whether Proposer has been or is the subject of a bankruptcy or insolvency proceeding or subject to assignment for the benefit of creditors. \***

\*Response required

**6. Will you be using subcontractor/s?\***

Yes

No

\*Response required

When equals "Yes"

**6.1. Subcontractor's list\***

Please download the below documents, complete, and upload.

- [Subcontractors list.pdf](#)

\*Response required

**7. Please provide Bid Bond\***

Please download the below documents, complete, and upload.

- [bid bond.pdf](#)

\*Response required

**8. Noncollusion Declaration\***

Please download the below documents, complete, and upload.

- [Noncollusion declaration fo...](#)

\*Response required

**9. Bidder's Certifications and Warranties. \***

By confirming and submitting this Bid Proposal, Bidder certifies and warrants the following:

- Examination of Contract Documents.** Bidder has thoroughly examined the Contract Documents and represents that, to the best of Bidder's knowledge, there are no errors, omissions, or discrepancies in the Contract Documents, subject to the limitations of Public Contract Code § 1104.
- Addenda.** Bidder agrees that it has confirmed receipt of or access to, and reviewed, all addenda issued for this bid. Bidder waives any claims it might have against the Town based on its failure to receive, access, or review any addenda for any reason.
- Examination of Worksite.** Bidder has had the opportunity to examine the Worksite and local conditions at the Project location.
- Bidder Responsibility.** Bidder is a responsible bidder, with the necessary ability, capacity, experience, skill, qualifications, workforce, equipment, and resources to perform or cause the Work to be performed in accordance with the Contract Documents and within the Contract Time.
- Responsibility for Bid.** Bidder has carefully reviewed this Bid Proposal and is solely responsible for any errors or omissions contained in its completed bid. All statements and information provided in this Bid Proposal and enclosures are true and correct to the best of Bidder's knowledge.
- Nondiscrimination.** In preparing this bid, the Bidder has not engaged in discrimination against any prospective or present employee or Subcontractor on grounds of race, color, ancestry, national origin, ethnicity, religion, sex, sexual orientation, age, disability, or marital status.
- Iran Contracting Act.** If the Contract Price exceeds \$1,000,000, Bidder is not identified on a list created under the Iran Contracting Act, Public Contract Code § 2200 et seq. (the "Act"), as a person engaging in investment activities in Iran, as defined in the Act, or is otherwise expressly exempt under the Act.

Please confirm

\*Response required

**10. Award of Contract\***

**Award of Contract.** By confirming and submitting this Bid Proposal, Bidder agrees that, if Town issues the Notice of Potential Award to Bidder, then within ten days following issuance of the Notice of Potential Award to Bidder, Bidder will do all of the following:

- A. **Execute Contract.** Enter into the Contract with Town in accordance with the terms of this Bid Proposal, by signing and submitting to Town the Contract prepared by Town using the form included with the Contract Documents;
- B. **Submit Required Bonds.** Submit to Town a payment bond and a performance bond, each for 100% of the Contract Price, using the bond forms provided and in accordance with the requirements of the Contract Documents;
- C. **Insurance Requirements.** Submit to Town the insurance certificate(s) and endorsement(s) as required by the Contract Documents; and
- D. **Certificates of Reported Compliance.** Submit to Town valid Certificates of Reported Compliance for its fleet and its listed Subcontractors, if applicable, if the Project involves the use of vehicles subject to the Off-Road Regulation. (See Section 16 of the Instructions to Bidders.)

Please confirm

\*Response required

## 5. General Conditions

### Article 1 - Definitions

**Definitions** - The following definitions apply to all of the Contract Documents unless otherwise indicated, e.g., additional definitions that apply solely to the Specifications or other technical documents. Defined terms and titles of documents are capitalized in the Contract Documents, with the exception of the following (in any tense or form): “day,” “furnish,” “including,” “install,” “work day,” or “working day.”

**Allowance** means a specific amount that must be included in the Bid Proposal for a specified purpose.

**Article**, as used in these General Conditions, means a numbered Article of the General Conditions, unless otherwise indicated by the context.

**Change Order** means a written document duly approved and executed by Town, which changes the scope of Work, the Contract Price, or the Contract Time.

**Claim** means a separate demand by Contractor for a change in the Contract Time or Contract Price, that has previously been submitted to Town in accordance with the requirements of the Contract Documents, and which has been rejected by Town, in whole or in part; or a written demand by Contractor objecting to the amount of Final Payment.

**Contract** means the signed agreement between Town and Contractor for performing the Work required for the Project, and all documents expressly incorporated therein.

**Contract Documents** means, collectively, all of the documents listed as such in Section 2 of the Contract, including the Notice Inviting Bids; the Instructions to Bidders; addenda, if any; the Bid Proposal and attachments thereto; the Contract; the Notice of Potential Award and Notice to Proceed; the payment and performance bonds; the General Conditions; the Special Conditions; the Project Plans and Specifications; any Change Orders; and any other documents which are clearly and unambiguously made part of the Contract Documents. The Contract Documents do not include documents provided “For Reference Only,” or documents that are intended solely to provide information regarding existing conditions.

**Contract Price** means the total compensation to be paid to Contractor for performance of the Work, as set forth in the Contract and as may be amended by Change Order or adjusted for an Allowance. The Contract Price is not subject to adjustment due to inflation or due to the increased cost of labor, material, supplies, or equipment following submission of the Bid Proposal.

**Contract Time** means the time specified for complete performance of the Work, as set forth in the Contract and as may be amended by Change Order.

**Contractor** means the individual, partnership, corporation, or joint-venture that has signed the Contract with Town to perform the Work.

**Day** means a calendar day unless otherwise specified.

**Design Professional** means the licensed individual(s) or firm(s) retained by Town to provide architectural, engineering, or other design professional services for the Project. If no Design Professional has been retained for this Project, any reference to Design Professional is deemed to refer to the Engineer.

**DIR** means the California Department of Industrial Relations.

**Drawings** has the same meaning as Plans.

**Engineer** means the Town Engineer and his or her authorized delegees.

**Excusable Delay** is defined in Section 5.3(B), Excusable Delay.

**Extra Work** means new or unforeseen work added to the Project, as determined by the Engineer in his or her sole discretion, including Work that was not part of or incidental to the scope of the Work when the Contractor's bid was submitted; Work that is substantially different from the Work as described in the Contract Documents at bid time; or Work that results from a substantially differing and unforeseeable condition.

**Final Completion** means Contractor has fully completed all of the Work required by the Contract Documents to the Town's satisfaction, including all punch list items and any required commissioning or training, and has provided the Town with all required submittals, including the instructions and manuals, product warranties, and as-built drawings.

**Final Payment** means payment to Contractor of the unpaid Contract Price, including release of undisputed retention, less amounts withheld or deducted pursuant to the Contract Documents.

**Furnish** means to purchase and deliver for the Project.

**Government Code Claim** means a claim submitted pursuant to California Government Code § 900 et seq.

**Hazardous Materials** means any substance or material identified now or in the future as hazardous under any Laws, or any other substance or material that may be considered hazardous or otherwise subject to Laws governing handling, disposal, or cleanup.

**Including**, whether or not capitalized, means "including, but not limited to," unless the context clearly requires otherwise.

**Inspector** means the individual(s) or firm(s) retained or employed by Town to inspect the workmanship, materials, and manner of construction of the Project and its components to ensure compliance with the Contract Documents and all Laws.

**Install** means to fix in place for materials, and to fix in place and connect for equipment.

**Laws** means all applicable local, state, and federal laws, regulations, rules, codes, ordinances, permits, orders, and the like enacted or imposed by or under the auspices of any governmental entity with jurisdiction over any of the Work or any performance of the Work, including health and safety requirements.

**Non-Excusable Delay** is defined in Section 5.3(D), Non-Excusable Delay.

**Plans** means the Town-provided plans, drawings, details, or graphical depictions of the Project requirements, but does not include Shop Drawings.

**Project** means the public works project referenced in the Contract, as modified by any Project alternates elected by Town, if any.

**Project Manager** means the individual designated by Town to oversee and manage the Project on Town's behalf and may include his or her authorized delegee(s) when the Project Manager is unavailable. If no Project Manager has been designated for this Project, any reference to Project Manager is deemed to refer to the Engineer.

**Recoverable Costs** is defined in Section 5.3(F), Recoverable Costs.

**Request for Information** or **RFI** means Contractor's written request for information about the Contract Documents, the Work or the Project, submitted to Town in the manner and format specified by Town.

**Section**, when capitalized in these General Conditions, means a numbered section or subsection of the General Conditions, unless the context clearly indicates otherwise.

**Shop Drawings** means drawings, plan details or other graphical depictions prepared by or on behalf of Contractor, and subject to Town acceptance, which are intended to provide details for fabrication, installation, and the like, of items required by or shown in the Plans or Specifications.

**Specialty Work** means Work that must be performed by a specialized Subcontractor with the specified license or other special certification, and that the Contractor is not qualified to self-perform.

**Specifications** means the technical, text specifications describing the Project requirements, which are prepared for and incorporated into the Contract by or on behalf of Town, and does not include the Contract, General Conditions or Special Conditions.

**Subcontractor** means an individual, partnership, corporation, or joint-venture retained by Contractor directly or indirectly through a subcontract to perform a specific portion of the Work. The term Subcontractor applies to subcontractors of all tiers, unless otherwise indicated by the context. A third party such as a utility performing related work on the Project is not a Subcontractor, even if Contractor must coordinate its Work with the third party.

**Technical Specifications** has the same meaning as Specifications.

**Town** means the Town of Los Gatos, acting through its Town Council, officers, employees, Town Engineer, and any other authorized representatives.

**Town Engineer** means the Engineer for Town and his or her authorized delegee(s).

**Work** means all of the construction and services necessary for or incidental to completing the Project in conformance with the requirements of the Contract Documents.

**Work Day** or **Working Day**, whether or not capitalized, means a weekday when the Town is open for business, and does not include holidays observed by the Town.

**Worksite** means the place or places where the Work is performed, which includes, but may extend beyond the Project site, including separate locations for staging, storage, or fabrication.

## Article 2 - Roles and Responsibilities

### 2.1 Town.

- A. **Town Council.** The Town Council has final authority in all matters affecting the Project, except to the extent it has delegated authority to the Engineer.
- B. **Engineer.** The Engineer, acting within the authority conferred by the Town Council, is responsible for administration of the Project on behalf of Town, including authority to provide directions to the Design Professional and to Contractor to ensure proper and timely completion of the Project. The Engineer's decisions are final and conclusive within the scope of his or her authority, including interpretation of the Contract Documents.
- C. **Project Manager.** The Project Manager assigned to the Project will be the primary point of contact for the Contractor and will serve as Town's representative for daily administration of the Project on behalf of Town. Unless otherwise specified, all of Contractor's communications to Town (in any form) will go to or through the Project Manager. Town reserves the right to reassign the Project Manager role at any time or to delegate duties to additional Town representatives, without prior notice to or consent of Contractor.
- D. **Design Professional.** The Design Professional is responsible for the overall design of the Project and, to the extent authorized by Town, may act on Town's behalf to ensure performance of the Work in compliance with the Plans and Specifications, including any design changes authorized by Change Order. The Design Professional's duties may include review of Contractor's submittals, visits to any Worksite, inspecting the Work, evaluating test and inspection results, and participation in Project-related meetings, including any pre-construction conference, weekly meetings, and coordination meetings. The Design Professional's interpretation of the Plans or Specifications is final and conclusive.

### 2.2 Contractor.

- A. **General.** Contractor must provide all labor, materials, supplies, equipment, services, and incidentals necessary to perform and timely complete the Work in strict accordance with the Contract Documents, and in an economical and efficient manner in the best interests of Town, and with minimal inconvenience to the public.
- B. **Responsibility for the Work and Risk of Loss.** Contractor is responsible for supervising and directing all aspects of the Work to facilitate the efficient and timely completion of the Work. Contractor is solely responsible for and required to exercise full control over the Work, including the construction means, methods, techniques, sequences, procedures, safety precautions and programs, and coordination of all portions of the Work with that of all other contractors and Subcontractors, except to the extent that the Contract Documents provide other specific instructions. Contractor's responsibilities extend to any plan, method or sequence suggested, but not required by Town or specified in the Contract Documents. From the date of commencement of the Work until either the date on which Town formally accepts the Project or the effective date of termination of the Contract, whichever is later, Contractor bears all risks of injury or damage to the Work and the materials and equipment delivered to any Worksite, by any cause including fire, earthquake, wind, weather, vandalism, or theft.

- C. **Project Administration.** Contractor must provide sufficient and competent administration, staff, and skilled workforce necessary to perform and timely complete the Work in accordance with the Contract Documents. Before starting the Work, Contractor must designate in writing and provide complete contact information, including telephone numbers and email address, for the officer or employee in Contractor's organization who is to serve as Contractor's primary representative for the Project, and who has authority to act on Contractor's behalf. A Subcontractor may not serve as Contractor's primary representative.
- D. **On-Site Superintendent.** Contractor must, at all times during performance of the Work, provide a qualified and competent full-time superintendent acceptable to Town, and assistants as necessary, who must be physically present at the Project site while any aspect of the Work is being performed. The superintendent must have full authority to act and communicate on behalf of Contractor, and Contractor will be bound by the superintendent's communications to Town. Town's approval of the superintendent is required before the Work commences. If Town is not satisfied with the superintendent's performance, Town may request a qualified replacement of the superintendent. Failure to comply may result in temporary suspension of the Work, at Contractor's sole expense and with no extension of Contract Time, until an approved superintendent is physically present to supervise the Work. Contractor must provide written notice to Town, as soon as practicable, before replacing the superintendent.
- E. **Standards.** Contractor must, at all times, ensure that the Work is performed in an efficient, skillful manner following best practices and in full compliance with the Contract Documents, Laws, and applicable manufacturer's recommendations. Contractor has a material and ongoing obligation to provide true and complete information, to the best of its knowledge, with respect to all records, documents, or communications pertaining to the Project, including oral or written reports, statements, certifications, Change Order requests, or Claims.
- F. **Meetings.** Contractor, its project manager, superintendent and any primary Subcontractors requested by Town, must attend a pre-construction conference, if requested by Town, as well as weekly Project progress meetings scheduled with Town. If applicable, Contractor may also be required to participate in coordination meetings with other parties relating to other work being performed on or near the Project site or in relation to the Project, including work or activities performed by Town, other contractors, or other utility owners.
- G. **Construction Records.** Contractor will maintain up-to-date, thorough, legible, and dated daily job reports, which document all significant activity on the Project for each day that Work is performed on the Project. The daily report for each day must include the number of workers at the Project site; primary Work activities; major deliveries; problems encountered, including injuries, if any; weather and site conditions; and delays, if any. Contractor will take date and time-stamped photographs to document general progress of the Project, including site conditions prior to construction activities, before and after photographs at offset trench laterals, existing improvements and utilities, damage and restoration. Contractor will maintain copies of all subcontracts, Project-related correspondence with Subcontractors, and records of meetings with Subcontractors. Upon request by the Town, Contractor will permit review of and/or provide copies of any of these construction records.
- H. **Responsible Party.** Contractor is solely responsible to Town for the acts or omissions of any Subcontractors, or any other party or parties performing portions of the Work or providing equipment, materials or services for or on behalf of Contractor or the Subcontractors. Upon Town's written request, Contractor must promptly and

permanently remove from the Project, at no cost to Town, any employee or Subcontractor or employee of a Subcontractor who the Engineer has determined to be incompetent, intemperate or disorderly, or who has failed or refused to perform the Work as required under the Contract Documents.

- I. **Correction of Defects.** Contractor must promptly correct, at Contractor's sole expense, any Work that is determined by Town to be deficient or defective in any way, including workmanship, materials, parts, or equipment. Workmanship, materials, parts, or equipment that do not conform to the requirements under the Plans, Specifications, and other Contract Documents, as determined by Town, will be considered defective and subject to rejection. Contractor must also promptly correct, at Contractor's sole expense, any Work performed beyond the lines and grades shown on the Plans or established by Town, and any Extra Work performed without Town's prior written approval. If Contractor fails to correct or to take reasonable steps toward correcting defective Work within five days following notice from Town, or within the time specified in Town's notice to correct, Town may elect to have the defective Work corrected by its own forces or by a third party, in which case the cost of correction will be deducted from the Contract Price. If Town elects to correct defective Work due to Contractor's failure or refusal to do so, Town or its agents will have the right to take possession of and use any equipment, supplies, or materials available at the Project site or any Worksite on Town property, in order to effectuate the correction, at no extra cost to Town. Contractor's warranty obligations under Section 11.2, Warranty, will not be waived nor limited by Town's actions to correct defective Work under these circumstances. Alternatively, Town may elect to retain defective Work, and deduct the difference in value, as determined by the Engineer, from payments otherwise due to Contractor. This paragraph applies to any defective Work performed by Contractor during the one-year warranty period under Section 11.2.
- J. **Contractor's Records.** Contractor must maintain all of its records relating to the Project in any form, including paper documents, photos, videos, electronic records, approved samples, and the construction records required pursuant to paragraph (G), above. Project records subject to this provision include complete Project cost records and records relating to preparation of Contractor's bid, including estimates, take-offs, and price quotes or bids.
  1. Contractor's cost records must include all supporting documentation, including original receipts, invoices, and payroll records, evidencing its direct costs to perform the Work, including, but not limited to, costs for labor, materials, and equipment. Each cost record should include, at a minimum, a description of the expenditure with references to the applicable requirements of the Contract Documents, the amount actually paid, the date of payment, and whether the expenditure is part of the original Contract Price, related to an executed Change Order, or otherwise categorized by Contractor as Extra Work. Contractor's failure to comply with this provision as to any claimed cost operates as a waiver of any rights to recover the claimed cost.
  2. Contractor must continue to maintain its Project-related records in an organized manner for a period of five years after Town's acceptance of the Project or following Contract termination, whichever occurs first. Subject to prior notice to Contractor, Town is entitled to inspect or audit any of Contractor's records relating to the Project during Contractor's normal business hours. Contractor's records may also be subject to examination and audit by the California State Auditor, pursuant to Government Code § 8546.7. The record-keeping requirements set forth in this subsection 2.2(J) will survive expiration or termination of the Contract.

- K. **Copies of Project Documents.** Contractor and its Subcontractors must keep copies, at the Project site, of all Work-related documents, including the Contract, permit(s), Plans, Specifications, addenda, Contract amendments, Change Orders, RFIs and RFI responses, Shop Drawings, as-built drawings, schedules, daily records, testing and inspection reports or results, and any related written interpretations. These documents must be available to Town for reference at all times during construction of the Project.

### 2.3 Subcontractors.

- A. **General.** All Work which is not performed by Contractor with its own forces must be performed by Subcontractors. Town reserves the right to approve or reject any and all Subcontractors proposed to perform the Work, for reasons including the Subcontractor's poor reputation, lack of relevant experience, financial instability, and lack of technical ability or adequate trained workforce. Each Subcontractor must obtain a Town business license before performing any Work.
- B. **Contractual Obligations.** Contractor must require each Subcontractor to comply with the provisions of the Contract Documents as they apply to the Subcontractor's portion(s) of the Work, including the generally applicable terms of the Contract Documents, and to likewise bind their subcontractors. Contractor will provide that the rights that each Subcontractor may have against any manufacturer or supplier for breach of warranty or guarantee relating to items provided by the Subcontractor for the Project, will be assigned to Town. Nothing in these Contract Documents creates a contractual relationship between a Subcontractor and Town, but Town is deemed to be a third-party beneficiary of the contract between Contractor and each Subcontractor.
- C. **Termination.** If the Contract is terminated, each Subcontractor's agreement must be assigned by Contractor to Town, subject to the prior rights of any surety, but only if and to the extent that Town accepts, in writing, the assignment by written notification, and assumes all rights and obligations of Contractor pursuant to each such subcontract agreement.
- D. **Substitution of Subcontractor.** If Contractor requests substitution of a listed Subcontractor under Public Contract Code § 4107, Contractor is solely responsible for all costs Town incurs in responding to the request, including legal fees and costs to conduct a hearing, and any increased subcontract cost to perform the Work that was to be performed by the listed Subcontractor. If Town determines that a Subcontractor is unacceptable to Town based on the Subcontractor's failure to satisfactorily perform its Work, or for any of the grounds for substitution listed in Public Contract Code § 4107(a), Town may request removal of the Subcontractor from the Project. Upon receipt of a written request from Town to remove a Subcontractor pursuant to this paragraph, Contractor will immediately remove the Subcontractor from the Project and, at no further cost to Town, will either (1) self-perform the remaining Work to the extent that Contractor is duly licensed and qualified to do so, or (2) substitute a Subcontractor that is acceptable to Town, in compliance with Public Contract Code § 4107, as applicable.

### 2.4 Coordination of Work.

- A. **Concurrent Work.** Town reserves the right to perform, have performed, or permit performance of other work on or adjacent to the Project site while the Work is being performed for the Project. Contractor is responsible for coordinating its Work with other work being performed on or adjacent to the Project site, including by any utility companies or agencies, and must avoid hindering, delaying, or interfering with the work of other

contractors, individuals, or entities, and must ensure safe and reasonable site access and use as required or authorized by Town. To the full extent permitted by law, Contractor must hold harmless and indemnify Town against any and all claims arising from or related to Contractor's avoidable, negligent, or willful hindrance of, delay to, or interference with the work of any utility company or agency or another contractor or subcontractor.

- B. **Coordination.** If Contractor's Work will connect or interface with work performed by others, Contractor is responsible for independently measuring and visually inspecting such work to ensure a correct connection and interface. Contractor is responsible for any failure by Contractor or its Subcontractors to confirm measurements before proceeding with connecting Work. Before proceeding with any portion of the Work affected by the construction or operations of others, Contractor must give the Project Manager prompt written notification of any defects Contractor discovers which will prevent the proper execution of the Work. Failure to give notice of any known or reasonably discoverable defects will be deemed acknowledgement by Contractor that the work of others is not defective and will not prevent the proper execution of the Work. Contractor must also promptly notify Town if work performed by others, including work or activities performed by Town's own forces, is operating to hinder, delay, or interfere with Contractor's timely performance of the Work. Town reserves the right to backcharge Contractor for any additional costs incurred due to Contractor's failure to comply with the requirements in this Section 2.4.

**2.5 Submittals.** Unless otherwise specified, Contractor must submit to the Engineer for review and acceptance, all schedules, Shop Drawings, samples, product data, and similar submittals required by the Contract Documents, or upon request by the Engineer. Unless otherwise specified, all submittals, including Requests for Information, are subject to the general provisions of this Section, as well as specific submittal requirements that may be included elsewhere in the Contract Documents, including the Special Conditions or Specifications. The Engineer may require submission of a submittal schedule at or before a pre-construction conference, as may be specified in the Notice to Proceed.

- A. **General.** Contractor is responsible for ensuring that its submittals are accurate and conform to the Contract Documents.
- B. **Time and Manner of Submission.** Contractor must ensure that its submittals are prepared and delivered in a manner consistent with the current Town-accepted schedule for the Work and within the applicable time specified in the Contract Documents, or if no time is specified, in such time and sequence so as not to delay the performance of the Work or completion of the Project.
- C. **Required Contents.** Each submittal must include the Project name and contract number, Contractor's name and address, the name and address of any Subcontractor or supplier involved with the submittal, the date, and references to applicable Specification section(s) and/or drawing and detail number(s).
- D. **Required Corrections.** If corrections are required, Contractor must promptly make and submit any required corrections as specified in full conformance with the requirements of this Section, or other requirements that apply to that submittal.
- E. **Effect of Review and Acceptance.** Review and acceptance of a submittal by Town will not relieve Contractor from complying with the requirements of the Contract Documents. Contractor is responsible for any errors in any submittal, and review or acceptance of a submittal by Town is not an assumption of risk or liability by Town.

- F. **Enforcement.** Any Work performed or any material furnished, installed, fabricated or used without Town's prior acceptance of a required submittal is performed or provided at Contractor's risk, and Contractor may be required to bear the costs incident thereto, including the cost of removing and replacing such Work, repairs to other affected portions of the Work or material, and the cost of additional time or services required of Town, including costs for the Design Professional, Project Manager, or Inspector.
- G. **Excessive RFIs.** A RFI will be considered excessive or unnecessary if Town determines that the explanation or response to the RFI is clearly and unambiguously discernable from the Contract Documents. Town's costs to review and respond to excessive or unnecessary RFIs may be deducted from payments otherwise due to Contractor.

**2.6 Shop Drawings.** When Shop Drawings are required by the Specifications or requested by the Engineer, they must be prepared according to best practices at Contractor's expense. The Shop Drawings must be of a size and scale to clearly show all necessary details. Unless otherwise specified by Town, Shop Drawings must be provided to the Engineer for review and acceptance at least 30 days before the Work will be performed. If Town requires changes, the corrected Shop Drawings must be resubmitted to the Engineer for review within the time specified by the Engineer. For all Project components requiring Shop Drawings, Contractor will not furnish materials or perform any Work until the Shop Drawings for those components are accepted by Town. Contractor is responsible for any errors or omissions in the Shop Drawings, shop fits and field corrections; any deviations from the Contract Documents; and for the results obtained by the use of Shop Drawings. Acceptance of Shop Drawings by Town does not relieve Contractor of Contractor's responsibility.

**2.7 Access to Work.** Contractor must afford prompt and safe access to any Worksite by Town and its employees, agents, or consultants authorized by Town; and upon request by Town, Contractor must promptly arrange for Town representatives to visit or inspect manufacturing sites or fabrication facilities for items to be incorporated into the Work.

**2.8 Personnel.** Contractor and its Subcontractors must employ only competent and skillful personnel to perform the Work. Contractor and its Subcontractor's supervisors, security or safety personnel, and employees who have unescorted access to the Project site must possess proficiency in English sufficient to read, understand, receive, and implement oral or written communications or instructions relating to their respective job functions, including safety and security requirements. Upon written notification from the Engineer, Contractor and its Subcontractors must immediately discharge any personnel who are incompetent, disorderly, disruptive, threatening, abusive, or profane, or otherwise refuse or fail to comply with the requirements of the Contract Documents or Laws, including Laws pertaining to health and safety. Any such discharged personnel may not be re-employed or permitted on the Project in any capacity without Town's prior written consent.

### Article 3 - Contract Documents

#### 3.1 Interpretation of Contract Documents.

- A. **Plans and Specifications.** The Plans and Specifications included in the Contract Documents are complementary. If Work is shown on one but not on the other, Contractor must perform the Work as though fully described on both, consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results. The Plans and Specifications are deemed to include and require everything necessary and reasonably incidental to completion of the Work, whether or not particularly mentioned or shown. Contractor must perform all Work and services and supply all things reasonably related to and inferable from the Contract Documents. In the event of a conflict between the Plans and Specifications, the Specifications

will control, unless the drawing(s) at issue are dated later than the Specification(s) at issue. Detailed drawings take precedence over general drawings, and large-scale drawings take precedence over smaller scale drawings. Any arrangement or division of the Plans and Specifications into sections is for convenience and is not intended to limit the Work required by separate trades. A conclusion presented in the Plans or Specifications is only a recommendation. Actual locations and depths must be determined by Contractor's field investigation. Contractor may request access to underlying or background information in Town's possession that is necessary for Contractor to form its own conclusions.

- B. ***Duty to Notify and Seek Direction.*** If Contractor becomes aware of a changed condition in the Project, or of any ambiguity, conflict, inconsistency, discrepancy, omission, or error in the Contract Documents, including the Plans or Specifications, Contractor must promptly submit a Request for Information to the Engineer and wait for a response from Town before proceeding further with the related Work. The RFI must notify Town of the issue and request clarification, interpretation or direction. The Engineer's clarification, interpretation or direction will be final and binding on Contractor. If Contractor proceeds with the related Work before obtaining Town's response, Contractor will be responsible for any resulting costs, including the cost of correcting any incorrect or defective Work that results. Timely submission of a clear and complete RFI is essential to avoiding delay. Delay resulting from Contractor's failure to submit a timely and complete RFI to the Engineer is Non-Excusable Delay. If Contractor believes that Town's response to an RFI justifies a change to the Contract Price or Contract Time, Contractor must perform the Work as directed, but may submit a timely Change Order request in accordance with the Contract Documents. (See Articles 5 and 6.)
- C. ***Figures and Dimensions.*** Figures control over scaled dimensions.
- D. ***Technical or Trade Terms.*** Any terms that have well-known technical or trade meanings will be interpreted in accordance with those meanings, unless otherwise specifically defined in the Contract Documents.
- E. ***Measurements.*** Contractor must verify all relevant measurements in the Contract Documents and at the Project site before ordering any material or performing any Work, and will be responsible for the correctness of those measurements or for costs that could have been avoided by independently verifying measurements.
- F. ***Compliance with Laws.*** The Contract Documents are intended to comply with Laws and will be interpreted to comply with Laws.

**3.2 Order of Precedence.** Information included in one Contract Document but not in another will not be considered a conflict or inconsistency. Unless otherwise specified in the Special Conditions, in case of any conflict or inconsistency among the Contract Documents, the following order of precedence will apply, beginning from highest to lowest, with the most recent version taking precedent over an earlier version:

1. Change Orders;
2. Addenda;
3. Contract;
4. Notice to Proceed;
5. Federal Contract Requirements (only if used);

6. Special Conditions;
7. General Conditions;
8. Payment and Performance Bonds;
9. Specifications;
10. Plans;
11. Notice of Potential Award;
12. Notice Inviting Bids;
13. Federal Bidding Requirements (only if used);
14. Instructions to Bidders;
15. Contractor's Bid Proposal and attachments;
16. Locations of Work
17. Standard Plans; and
18. Any generic documents prepared by and on behalf of a third party, that were not prepared specifically for this Project, such as the Caltrans Standard Specifications or Caltrans Special Provisions.

**3.3 Caltrans Standard Specifications.** Any reference to or incorporation of the Standard Specifications of the State of California, Department of Transportation ("Caltrans"), including "Standard Specifications," "Caltrans Specifications," "State Specifications," or "CSS," means the most current edition of Caltrans' Standard Specifications, unless otherwise specified ("Caltrans Standard Specifications"), including the most current amendments as of the date that Contractor's bid was submitted for this Project. The following provisions apply to use of or reference to the Caltrans Standard Specifications or Special Provisions:

- A. **Limitations.** The "General Provisions" of the Caltrans Standard Specifications, i.e., sections 1 through 9, do not apply to these Contract Documents with the exception of any specific provisions, if any, which are expressly stated to apply to these Contract Documents.
- B. **Conflicts or Inconsistencies.** If there is a conflict or inconsistency between any provision in the Caltrans Standard Specifications or Special Provisions and a provision of these Contract Documents, as determined by Town, the provision in the Contract Documents will govern.
- C. **Meanings.** Terms used in the Caltrans Standard Specifications or Special Provisions are to be interpreted as follows:
  1. Any reference to the "Engineer" is deemed to mean the Town Engineer.
  2. Any reference to the "Special Provisions" is deemed to mean the Special Conditions, unless the Caltrans Special Provisions are expressly included in the Contract Documents listed in Section 2 of the Contract.
  3. Any reference to the "Department" or "State" is deemed to mean Town.

**3.4 For Reference Only.** Contractor is responsible for the careful review of any document, study, or report provided by Town or appended to the Contract Documents solely for informational purposes and identified as “For Reference Only.” Nothing in any document, study, or report so appended and identified is intended to supplement, alter, or void any provision of the Contract Documents. Contractor is advised that Town or its representatives may be guided by information or recommendations included in such reference documents, particularly when making determinations as to the acceptability of proposed materials, methods, or changes in the Work. Any record drawings or similar final or accepted drawings or maps that are not part of the Contract Documents are deemed to be For Reference Only. The provisions of the Contract Documents are not modified by any perceived or actual conflict with provisions in any document that is provided For Reference Only.

**3.5 Current Versions.** Unless otherwise specified by Town, any reference to standard specifications, technical specifications, or any Town or state codes or regulations means the latest specification, code, or regulation in effect on the date that bids were due.

**3.6 Conformed Copies.** If Town prepares a conformed set of the Contract Documents following award of the Contract, it will provide Contractor with two hard copy (paper) sets and one copy of the electronic file in PDF format. It is Contractor’s responsibility to ensure that all Subcontractors, including fabricators, are provided with the conformed set of the Contract Documents at Contractor’s sole expense.

**3.7 Ownership.** No portion of the Contract Documents may be used for any purpose other than construction of the Project, without prior written consent from Town. Contractor is deemed to have conveyed the copyright in any designs, drawings, specifications, Shop Drawings, or other documents (in paper or electronic form) developed by Contractor for the Project, and Town will retain all rights to such works, including the right to possession.

#### **Article 4 - Bonds, Indemnity, and Insurance**

**4.1 Payment and Performance Bonds.** Within ten days following issuance of the Notice of Potential Award, Contractor is required to provide a payment bond and a performance bond, each in the penal sum of not less than 100% of the Contract Price, and each executed by Contractor and its surety using the bond forms included with the Contract Documents.

- A. **Surety.** Each bond must be issued and executed by a surety admitted in California. If an issuing surety cancels the bond or becomes insolvent, within seven days following written notice from Town, Contractor must substitute a surety acceptable to Town. If Contractor fails to substitute an acceptable surety within the specified time, Town may, at its sole discretion, withhold payment from Contractor until the surety is replaced to Town’s satisfaction, or terminate the Contract for default.
- B. **Supplemental Bonds for Increase in Contract Price.** If the Contract Price increases during construction by five percent or more over the original Contract Price, Contractor must provide supplemental or replacement bonds within ten days of written notice from Town pursuant to this Section, covering 100% of the increased Contract Price and using the bond forms included with the Contract Documents.

**4.2 Indemnity.** To the fullest extent permitted by law, Contractor must indemnify, defend, and hold harmless Town, its Council, officers, officials, employees, agents, volunteers, and consultants (individually, an “Indemnitee,” and collectively the “Indemnitees”) from and against any and all liability, loss, damage, claims, causes of action, demands, charges, fines, costs, and expenses (including, without limitation, attorney fees, expert witness fees, paralegal fees, and fees and costs of litigation or arbitration) (collectively, “Liability”) of every nature arising out of or in connection with the acts or omissions of Contractor, its employees, Subcontractors, representatives, or agents, in bidding or performing the

Work or in failing to comply with any obligation of Contractor under the Contract, except such Liability caused by the active negligence, sole negligence, or willful misconduct of an Indemnitee. This indemnity requirement applies to any Liability arising from alleged defects in the content or manner of submission of Contractor's bid for the Contract. Contractor's failure or refusal to timely accept a tender of defense pursuant to this Contract will be deemed a material breach of the Contract. Town will timely notify Contractor upon receipt of any third-party claim relating to the Contract, as required by Public Contract Code § 9201. Contractor waives any right to express or implied indemnity against any Indemnitee. Contractor's indemnity obligations under this Contract will survive the expiration or any early termination of the Contract.

**4.3 Insurance.** No later than ten days following issuance of the Notice of Potential Award, Contractor must procure and provide proof of the insurance coverage required by this Section in the form of certificates and endorsements acceptable to Town. The required insurance must cover the activities of Contractor and its Subcontractors relating to or arising from the performance of the Work, and must remain in full force and effect at all times during the period covered by the Contract, through the date of Town's acceptance of the Project. All required insurance must be issued by a company licensed to do business in the State of California, and each such insurer must have an A.M. Best's financial strength rating of "A" or better and a financial size rating of "VIII" or better. If Contractor fails to provide any of the required coverage in full compliance with the requirements of the Contract Documents, Town may, at its sole discretion, purchase such coverage at Contractor's expense and deduct the cost from payments due to Contractor, or terminate the Contract for default. The procurement of the required insurance will not be construed to limit Contractor's liability under this Contract or to fulfill Contractor's indemnification obligations under this Contract.

- A. **Policies and Limits.** The following insurance policies and limits are required for this Contract, unless otherwise specified in the Special Conditions:
1. **Commercial General Liability ("CGL") Insurance:** The CGL insurance policy must be issued on an occurrence basis, written on a comprehensive general liability form, and must include coverage for liability arising from Contractor's or its Subcontractor's acts or omissions in the performance of the Work, including contractor's protective coverage, contractual liability, products and completed operations, and broad form property damage, with limits of at least \$2,000,000 per occurrence and at least \$4,000,000 general aggregate. The CGL insurance coverage may be arranged under a single policy for the full limits required or by a combination of underlying policies with the balance provided by excess or umbrella policies, provided each such policy complies with the requirements set forth in this Section, including required endorsements.
  2. **Automobile Liability Insurance:** The automobile liability insurance policy must provide coverage of at least \$2,000,000 combined single-limit per accident for bodily injury, death, or property damage, including hired and non-owned auto liability.
  3. **Workers' Compensation Insurance and Employer's Liability:** The workers' compensation and employer's liability insurance policy must comply with the requirements of the California Labor Code, providing coverage of at least \$1,000,000 or as otherwise required by the statute. If Contractor is self-insured, Contractor must provide its Certificate of Permission to Self-Insure, duly authorized by the DIR.
- B. **Notice.** Each certificate of insurance must state that the coverage afforded by the policy or policies will not be reduced, cancelled or allowed to expire without at least 30 days written notice to Town, unless due to non-payment of premiums, in which case ten days written notice must be made to Town.

- C. **Waiver of Subrogation.** Each required policy must include an endorsement providing that the carrier will waive any right of subrogation it may have against Town.
- D. **Required Endorsements.** The CGL policy, automobile liability policy, pollution liability policy, and builder's risk policy must include the following specific endorsements:
1. The Town, including its Council, officials, officers, employees, agents, volunteers and consultants (collectively, "Additional Insured") must be named as an additional insured for all liability arising out of the operations by or on behalf of the named insured, and the policy must protect the Additional Insured against any and all liability for personal injury, death or property damage or destruction arising directly or indirectly in the performance of the Contract. The additional insured endorsement must be provided using ISO form CG 20 10 11 85 or equivalent form(s) approved by the Town.
  2. The inclusion of more than one insured will not operate to impair the rights of one insured against another, and the coverages afforded will apply as though separate policies have been issued to each insured.
  3. The insurance provided by Contractor is primary and no insurance held or owned by any Additional Insured may be called upon to contribute to a loss.
  4. This policy does not exclude explosion, collapse, underground excavation hazard, or removal of lateral support.
- E. **Contractor's Responsibilities.** This Section 4.3 establishes the minimum requirements for Contractor's insurance coverage in relation to this Project, but is not intended to limit Contractor's ability to procure additional or greater coverage. Contractor is responsible for its own risk assessment and needs and is encouraged to consult its insurance provider to determine what coverage it may wish to carry beyond the minimum requirements of this Section. Contractor is solely responsible for the cost of its insurance coverage, including premium payments, deductibles, or self-insured retentions, and no Additional Insured will be responsible or liable for any of the cost of Contractor's insurance coverage.
- F. **Deductibles and Self-Insured Retentions.** Any deductibles or self-insured retentions that apply to the required insurance (collectively, "deductibles") in excess of \$100,000 are subject to approval by the Town's Risk Manager, acting in his or her sole discretion, and must be declared by Contractor when it submits its certificates of insurance and endorsements pursuant to this Section 4.3. If the Town's Risk Manager determines that the deductibles are unacceptably high, at Town's option, Contractor must either reduce or eliminate the deductibles as they apply to Town and all required Additional Insured; or must provide a financial guarantee, to Town's satisfaction, guaranteeing payment of losses and related investigation, claim administration, and legal expenses.
- G. **Subcontractors.** Contractor must ensure that each Subcontractor is required to maintain the same insurance coverage required under this Section 4.3, with respect to its performance of Work on the Project, including those requirements related to the Additional Insureds and waiver of subrogation, but excluding pollution liability or builder's risk insurance unless otherwise specified in the Special Conditions. A Subcontractor may be eligible for reduced insurance coverage or limits, but only to the extent approved in writing in advance by the Town's Risk Manager. Contractor must confirm that each Subcontractor has complied with these insurance requirements before the Subcontractor is permitted to begin Work on the Project. Upon request by the Town,

Contractor must provide certificates and endorsements submitted by each Subcontractor to prove compliance with this requirement. The insurance requirements for Subcontractors do not replace or limit the Contractor's insurance obligations.

### **Article 5 - Contract Time**

**5.1 Time is of the Essence.** Time is of the essence in Contractor's performance and completion of the Work, and Contractor must diligently prosecute the Work and complete it within the Contract Time.

- A. **General.** Contractor must commence the Work on the date indicated in the Notice to Proceed and must fully complete the Work in strict compliance with all requirements of the Contract Documents and within the Contract Time. Contractor may not begin performing the Work before the date specified in the Notice to Proceed.
- B. **Authorization.** Contractor is not entitled to compensation or credit for any Work performed before the date specified in the Notice to Proceed, with the exception of any schedules, submittals, or other requirements, if any, that must be provided or performed before issuance of the Notice to Proceed.
- C. **Rate of Progress.** Contractor and its Subcontractors must, at all times, provide workers, materials, and equipment sufficient to maintain the rate of progress necessary to ensure full completion of the Work within the Contract Time. If Town determines that Contractor is failing to prosecute the Work at a sufficient rate of progress, Town may, in its sole discretion, direct Contractor to provide additional workers, materials, or equipment, or to work additional hours or days without additional cost to Town, in order to achieve a rate of progress satisfactory to Town. If Contractor fails to comply with Town's directive in this regard, Town may, at Contractor's expense, separately contract for additional workers, materials, or equipment or use Town's own forces to achieve the necessary rate of progress. Alternatively, Town may terminate the Contract based on Contractor's default.

**5.2 Schedule Requirements.** Contractor must prepare all schedules using standard, commercial scheduling software acceptable to the Engineer, and must provide the schedules in electronic and paper form as requested by the Engineer. In addition to the general scheduling requirements set forth below, Contractor must also comply with any scheduling requirements included in the Special Conditions or in the Technical Specifications.

- A. **Baseline (As-Planned) Schedule.** Within ten calendar days following Town's issuance of the Notice to Proceed (or as otherwise specified in the Notice to Proceed), Contractor must submit to Town for review and acceptance a baseline (as-planned) schedule using critical path methodology showing in detail how Contractor plans to perform and fully complete the Work within the Contract Time, including labor, equipment, materials, and fabricated items. The baseline schedule must show the order of the major items of Work and the dates of start and completion of each item, including when the materials and equipment will be procured. The schedule must also include the work of all trades, reflecting anticipated labor or crew hours and equipment loading for the construction activities, and must be sufficiently comprehensive and detailed to enable progress to be monitored on a day-by-day basis. For each activity, the baseline schedule must be dated, provided in the format specified in the Contract Documents or as required by Town, and must include, at a minimum, a description of the activity, the start and completion dates of the activity, and the duration of the activity.

1. **Specialized Materials Ordering.** Within five calendar days following issuance of the Notice to Proceed, Contractor must order any specialized material or equipment for the Work that is not readily available from material suppliers. Contractor must also retain documentation of the purchase order date(s).
- B. **Town's Review of Schedules.** Town will review and may note exceptions to the baseline schedule, and to the progress schedules submitted as required below, to assure completion of the Work within the Contract Time. Contractor is solely responsible for resolving any exceptions noted in a schedule and, within seven days, must correct the schedule to address the exceptions. Town's review or acceptance of Contractor's schedules will not operate to waive or limit Contractor's duty to complete the Project within the Contract Time, nor to waive or limit Town's right to assess liquidated damages for Contractor's unexcused failure to do so.
- C. **Progress Schedules.** After Town accepts the final baseline schedule with no exceptions, Contractor must submit an updated progress schedule and three-week look-ahead schedule, in the format specified by Town, for review and acceptance with each application for a progress payment, or when otherwise specified by Town, until completion of the Work. The updated progress schedule must: show how the actual progress of the Work as constructed to date compares to the baseline schedule; reflect any proposed changes in the construction schedule or method of operations, including to achieve Project milestones within the Contract Time; and identify any actual or potential impacts to the critical path. Contractor must also submit periodic reports to Town of any changes in the projected material or equipment delivery dates for the Project.
  1. **Float.** The progress schedule must show early and late completion dates for each task. The number of days between those dates will be designated as the "float." Any float belongs to the Project and may be allocated by the Engineer to best serve timely completion of the Project.
  2. **Failure to Submit Schedule.** Reliable, up-to-date schedules are essential to efficient and cost-effective administration of the Project and timely completion. If Contractor fails to submit a schedule within the time periods specified in this Section, or submits a schedule to which Town has noted exceptions that are not corrected, Town may withhold up to five percent from payment(s) otherwise due to Contractor until the exceptions are resolved, the schedule is corrected and resubmitted, and Town has accepted the schedule. In addition, Contractor's failure to comply with the schedule requirements in this Section 5.2 will be deemed a material default and a waiver of any claims for Excusable Delay or loss of productivity arising during any period when Contractor is out of compliance, subject only to the limits of Public Contract Code § 7102.
- D. **Recovery Schedule.** If Town determines that the Work is more than one week behind schedule, within seven days following written notice of such determination, Contractor must submit a recovery schedule, showing how Contractor intends to perform and complete the Work within the Contract Time, based on actual progress to date.
- E. **Effect of Acceptance.** Contractor and its Subcontractors must perform the Work in accordance with the most current Town-accepted schedule unless otherwise directed by Town. Town's acceptance of a schedule does not operate to extend the time for completion of the Work or any component of the Work, and will not affect Town's right to assess liquidated damages for Contractor's unexcused delay in completing the Work within the Contract Time.

- F. **Posting.** Contractor must at all times prominently post a copy of the most current Town-accepted progress or recovery schedule in its on-site office.
- G. **Reservation of Rights.** Town reserves the right to direct the sequence in which the Work must be performed or to make changes in the sequence of the Work in order to facilitate the performance of work by Town or others, or to facilitate Town's use of its property. The Contract Time or Contract Price may be adjusted to the extent such changes in sequence actually increase or decrease Contractor's time or cost to perform the Work.
- H. **Authorized Working Days and Times.** Contractor is limited to working Monday through Friday, excluding holidays, during Town's normal business hours, except as provided in the Special Conditions or as authorized in writing by Town. Town reserves the right to charge Contractor for additional costs incurred by Town due to Work performed on days or during hours not expressly authorized in the Contract Documents, including reimbursement of costs incurred for inspection, testing, and construction management services.

### 5.3 Delay and Extensions of Contract Time.

- A. **Notice of Delay.** If Contractor becomes aware of any actual or potential delay affecting the critical path, Contractor must promptly notify the Engineer in writing, regardless of the nature or cause of the delay, so that Town has a reasonable opportunity to mitigate or avoid the delay.
- B. **Excusable Delay.** The Contract Time may be extended if Contractor encounters "Excusable Delay," which is an unavoidable delay in completing the Work within the Contract Time due to causes completely beyond Contractor's control, and which Contractor could not have avoided or mitigated through reasonable care, planning, foresight, and diligence, provided that Contractor is otherwise fully performing its obligations under the Contract Documents. Grounds for Excusable Delay may include fire, natural disasters including earthquake or unusually severe weather, acts of terror or vandalism, epidemic, unforeseeable adverse government actions, unforeseeable actions of third parties, encountering unforeseeable hazardous materials, unforeseeable site conditions, or suspension for convenience under Article 13. The Contract Time will not be extended based on circumstances which will not unavoidably delay completing the Work within the Contract Time based on critical path analysis.
- C. **Weather Delays.** A "Weather Delay Day" is a Working Day during which Contractor and its forces, including Subcontractors, are unable to perform more than 40% of the critical path Work scheduled for that day due to adverse weather conditions which impair the ability to safely or effectively perform the scheduled critical path Work that day. Adverse weather conditions may include rain, saturated soil, and Project site clean-up required due to adverse weather. Determination of what constitutes critical path Work scheduled for that day will be based on the most current, Town-approved schedule. Contractor will be entitled to a non-compensable extension of the Contract Time for each Weather Delay Day in excess of the normal Weather Delay Days within a given month as determined by reliable records, including monthly rainfall averages, for the preceding ten years (or as otherwise specified in the Special Conditions or Specifications).
  - 1. Contractor must fully comply with the applicable procedures in Articles 5 and 6 of the General Conditions regarding requests to modify the Contract Time.

2. Contractor will not be entitled to an extension of time for a Weather Delay Day to the extent Contractor is responsible for concurrent delay on that day.
  3. Contractor must take reasonable steps to mitigate the consequences of Weather Delay Days, including prudent workforce management and protecting the Work, Project Site, materials, and equipment.
- D. **Non-Excusable Delay.** Delay which Contractor could have avoided or mitigated through reasonable care, planning, foresight, and diligence is “Non-Excusable Delay.” Contractor is not entitled to an extension of Contract Time or any compensation for Non-Excusable Delay, or for Excusable Delay that is concurrent with Non-Excusable Delay. Non-Excusable Delay includes delay caused by:
1. weather conditions which are normal for the location of the Project, as determined by reliable records, including monthly rainfall averages, for the preceding ten years;
  2. Contractor’s failure to order equipment and materials sufficiently in advance of the time needed for completion of the Work within the Contract Time;
  3. Contractor’s failure to provide adequate notification to utility companies or agencies for connections or services necessary for completion of the Work within the Contract Time;
  4. foreseeable conditions which Contractor could have ascertained from reasonably diligent inspection of the Project site or review of the Contract Documents or other information provided or available to Contractor;
  5. Contractor’s failure, refusal, or financial inability to perform the Work within the Contract Time, including insufficient funds to pay its Subcontractors or suppliers;
  6. performance or non-performance by Contractor’s Subcontractors or suppliers;
  7. the time required to respond to excessive RFIs (see Section 2.5(G));
  8. delayed submission of required submittals, or the time required for correction and resubmission of defective submittals;
  9. time required for repair of, re-testing, or re-inspection of defective Work;
  10. enforcement of Laws by Town, or outside agencies with jurisdiction over the Work; or
  11. Town’s exercise or enforcement of any of its rights or Contractor’s duties pursuant to the Contract Documents, including correction of defective Work, extra inspections or testing due to non-compliance with Contract requirements, safety compliance, environmental compliance, or rejection and return of defective or deficient submittals.
- E. **Compensable Delay.** Pursuant to Public Contract Code § 7102, in addition to entitlement to an extension of Contract Time, Contractor is entitled to compensation for costs incurred due to delay caused solely by Town, when that delay is unreasonable under the circumstances involved and not within the contemplation of the parties (“Compensable Delay”). Contractor is not entitled to an extension of Contract Time or recovery of costs for Compensable Delay that is concurrent with Non-Excusable Delay.

- F. **Recoverable Costs.** Contractor is not entitled to compensation for Excusable Delay unless it is Compensable Delay, as defined above. Contractor is entitled to recover only the actual, direct, reasonable, and substantiated costs (“Recoverable Costs”) for each working day that the Compensable Delay prevents Contractor from proceeding with more than 50% of the critical path Work scheduled for that day, based on the most recent progress schedule accepted by Town. Recoverable Costs will not include home office overhead or lost profit.
- G. **Request for Extension of Contract Time or Recoverable Costs.** A request for an extension of Contract Time or any associated Recoverable Costs must be submitted in writing to Town within 30 calendar days of the date the delay is first encountered, even if the duration of the delay is not yet known at that time, or any entitlement to the Contract Time extension or to the Recoverable Costs will be deemed waived. In addition to complying with the requirements of this Article 5, the request must be submitted in compliance with the Change Order request procedures in Article 6 below. Strict compliance with these requirements is necessary to ensure that any delay or consequences of delay may be mitigated as soon as possible, and to facilitate cost-efficient administration of the Project and timely performance of the Work. Any request for an extension of Contract Time or Recoverable Costs that does not strictly comply with all of the requirements of Article 5 and Article 6 will be deemed waived.
1. **Required Contents.** The request must include a detailed description of the cause(s) of the delay and must also describe the measures that Contractor has taken to mitigate the delay and/or its effects, including efforts to mitigate the cost impact of the delay, such as by workforce management or by a change in sequencing. If the delay is still ongoing at the time the request is submitted, the request should also include Contractor’s plan for continued mitigation of the delay or its effects.
  2. **Delay Days and Costs.** The request must specify the number of days of Excusable Delay claimed or provide a realistic estimate if the duration of the delay is not yet known. If Contractor believes it is entitled to Recoverable Costs for Compensable Delay, the request must specify the amount and basis for the Recoverable Costs that are claimed or provide a realistic estimate if the amount is not yet known. Any estimate of delay duration or cost must be updated in writing and submitted with all required supporting documentation as soon as the actual time and cost is known. The maximum extension of Contract Time will be the number of days, if any, by which an Excusable Delay or a Compensable Delay exceeds any concurrent Non-Excusable Delay. Contractor is entitled to an extension of Contract Time, or compensation for Recoverable Costs, only if, and only to the extent that, such delay will unavoidably delay Final Completion.
  3. **Supporting Documentation.** The request must also include any and all supporting documentation necessary to evidence the delay and its actual impacts, including scheduling and cost impacts with a time impact analysis using critical path methodology and demonstrating the unavoidable delay to Final Completion. The time impact analysis must be submitted in a form or format acceptable to Town.
  4. **Burden of Proof.** Contractor has the burden of proving that: the delay was an Excusable Delay or Compensable Delay, as defined above; Contractor has fully complied with its scheduling obligations in Section 5.2, Schedule Requirements; Contractor has made reasonable efforts to mitigate the delay and its schedule and cost impacts; the delay will unavoidably result in delaying Final Completion; and any Recoverable Costs claimed by Contractor were actually incurred and were reasonable under the circumstances.

5. *Legal Compliance.* Nothing in this Section 5.3 is intended to require the waiver, alteration, or limitation of the applicability of Public Contract Code § 7102.
6. *No Waiver.* Any grant of an extension of Contract Time, or compensation for Recoverable Costs due to Compensable Delay, will not operate as a waiver of Town's right to assess liquidated damages for Non-Excusable Delay.
7. *Dispute Resolution.* In the event of a dispute over entitlement to an extension of Contract Time or compensation for Recoverable Costs, Contractor may not stop Work pending resolution of the dispute, but must continue to comply with its duty to diligently prosecute the performance and timely completion of the Work. Contractor's sole recourse for an unresolved dispute based on Town's rejection of a Change Order request for an extension of Contract Time or compensation for Recoverable Costs is to comply with the dispute resolution provisions set forth in Article 12 below.

**5.4 Liquidated Damages.** It is expressly understood that if Final Completion is not achieved within the Contract Time, Town will suffer damages from the delay that are difficult to determine and accurately specify. Pursuant to Public Contract Code § 7203, if Contractor fails to achieve Final Completion within the Contract Time due to Contractor's Non-Excusable Delay, Town will charge Contractor in the amount specified in the Contract for each calendar day that Final Completion is delayed beyond the Contract Time, as liquidated damages and not as a penalty. Any waiver of accrued liquidated damages, in whole or in part, is subject to approval of the Town Council or its authorized delegate.

- A. **Liquidated Damages.** Liquidated damages will not be assessed for any Excusable Delay or Compensable Delay, as set forth above.
- B. **Milestones.** Liquidated damages may also be separately assessed for failure to meet milestones specified elsewhere in the Contract Documents.
- C. **Setoff.** Town is entitled to deduct the amount of liquidated damages assessed against any payments otherwise due to Contractor, including progress payments, Final Payment, or unreleased retention. If there are insufficient Contract funds remaining to cover the full amount of liquidated damages assessed, Town is entitled to recover the balance from Contractor or its performance bond surety.
- D. **Occupancy or Use.** Occupancy or use of the Project in whole or in part prior to Final Completion does not constitute Town's acceptance of the Project and will not operate as a waiver of Town's right to assess liquidated damages for Contractor's Non-Excusable Delay in achieving Final Completion.
- E. **Other Remedies.** Town's right to liquidated damages under this Section applies only to damages arising from Contractor's Non-Excusable Delay or failure to complete the Work within the Contract Time. Town retains its right to pursue all other remedies under the Contract for other types of damage, including damage to property or persons, costs or diminution in value from defective materials or workmanship, costs to repair or complete the Work, or other liability caused by Contractor.

## **Article 6 - Contract Modification**

**6.1 Contract Modification.** Subject to the limited exception set forth in subsection (D) below, any change in the Work or the Contract Documents, including the Contract Price or Contract Time, will not be a valid and binding change

to the Contract unless it is formalized in a Change Order, including a “no-cost” Change Order or a unilateral Change Order. Changes in the Work pursuant to this Article 6 will not operate to release, limit, or abridge Contractor’s warranty obligations pursuant to Article 11 or any obligations of Contractor’s bond sureties.

- A. **Town-Directed Changes.** Town may direct changes in the scope or sequence of Work or the requirements of the Contract Documents, without invalidating the Contract. Such changes may include Extra Work as set forth in subsection (C) below, or deletion or modification of portions of the Work. Contractor must promptly comply with Town-directed changes in the Work in accordance with the original Contract Documents, even if Contractor and Town have not yet reached agreement as to adjustments to the Contract Price or Contract Time for the change in the Work or for the Extra Work. Contractor is not entitled to extra compensation for cost savings resulting from “value engineering” pursuant to Public Contract Code § 7101, except to the extent authorized in advance by Town in writing, and subject to any applicable procedural requirements for submitting a proposal for value engineering cost savings.
- B. **Disputes.** In the event of a dispute over entitlement to or the amount of a change in Contract Time or a change in Contract Price related to a Town-directed change in the Work, Contractor must perform the Work as directed and may not delay its Work or cease Work pending resolution of the dispute, but must continue to comply with its duty to diligently prosecute the performance and timely completion of the Work, including the Work in dispute. Likewise, in the event that Town and Contractor dispute whether a portion or portions of the Work are already required by the Contract Documents or constitute Extra Work, or otherwise dispute the interpretation of any portion(s) of the Contract Documents, Contractor must perform the Work as directed and may not delay its Work or cease Work pending resolution of the dispute, but must continue to comply with its duty to diligently prosecute the performance and timely completion of the Work, including the Work in dispute, as directed by Town. If Contractor refuses to perform the Work in dispute, Town may, acting in its sole discretion, elect to delete the Work from the Contract and reduce the Contract Price accordingly, and self-perform the Work or direct that the Work be performed by others. Alternatively, Town may elect to terminate the Contract for convenience or for cause. Contractor’s sole recourse for an unresolved dispute related to changes in the Work or performance of any Extra Work is to comply with the dispute resolution provisions set forth in Article 12, below.
- C. **Extra Work.** Town may direct Contractor to perform Extra Work related to the Project. Contractor must promptly perform any Extra Work as directed or authorized by Town in accordance with the original Contract Documents, even if Contractor and Town have not yet reached agreement on adjustments to the Contract Price or Contract Time for such Extra Work. If Contractor believes it is necessary to perform Extra Work due to changed conditions, Contractor must promptly notify the Engineer in writing, specifically identifying the Extra Work and the reason(s) the Contractor believes it is Extra Work. This notification requirement does not constitute a Change Order request pursuant to Section 6.2, below. Contractor must maintain detailed daily records that itemize the cost of each element of Extra Work, and sufficiently distinguish the direct cost of the Extra Work from the cost of other Work performed. For each day that Contractor performs Extra Work, or Work that Contractor contends is Extra Work, Contractor must submit no later than the following Working Day, a daily report of the Extra Work performed that day and the related costs, together with copies of certified payroll, invoices, and other documentation substantiating the costs (“Extra Work Report”). The Engineer will make any adjustments to Contractor’s Extra Work Report(s) based on the Engineer’s records of the Work. When an Extra

Work Report(s) is agreed on and signed by both Town and Contractor, the Extra Work Report(s) will become the basis for payment under a duly authorized and signed Change Order. Failure to submit the required documentation by close of business on the next Working Day is deemed a full and complete waiver for any change in the Contract Price or Contract Time for any Extra Work performed that day.

- D. **Minor Changes and RFIs.** Minor field changes, including RFI replies from Town, that do not affect the Contract Price or Contract Time and that are approved by the Engineer acting within his or her scope of authority, do not require a Change Order. By executing an RFI reply from Town, Contractor agrees that it will perform the Work as clarified therein, with no change to the Contract Price or Contract Time.
- E. **Remedy for Non-Compliance.** Contractor's failure to promptly comply with a Town-directed change is deemed a material breach of the Contract, and in addition to all other remedies available to it, Town may, at its sole discretion, hire another contractor or use its own forces to complete the disputed Work at Contractor's sole expense, and may deduct the cost from the Contract Price.

**6.2 Contractor Change Order Requests.** Contractor must submit a request or proposal for a change in the Work, compensation for Extra Work, or a change in the Contract Price or Contract Time as a written Change Order request or proposal.

- A. **Time for Submission.** Any request for a change in the Contract Price or the Contract Time must be submitted in writing to the Engineer within 30 calendar days of the date that Contractor first encounters the circumstances, information or conditions giving rise to the Change Order request, even if the total amount of the requested change in the Contract Price or impact on the Contract Time is not yet known at that time. If Town requests that Contractor propose the terms of a Change Order, unless otherwise specified in Town's request, Contractor must provide the Engineer with a written proposal for the change in the Contract Price or Contract Time within five working days of receiving Town's request, in a form satisfactory to the Engineer.
- B. **Required Contents.** Any Change Order request or proposal submitted by Contractor must include a complete breakdown of actual or estimated costs and credits, and must itemize labor, materials, equipment, taxes, insurance, subcontract amounts, and, if applicable, Extra Work Reports. Any estimated cost must be updated in writing as soon as the actual amount is known.
- C. **Required Documentation.** All claimed costs must be fully documented, and any related request for an extension of time or delay-related costs must be included at that time and in compliance with the requirements of Article 5 of the General Conditions. Upon request, Contractor must permit Town to inspect its original and unaltered bidding records, subcontract agreements, subcontract change orders, purchase orders, invoices, or receipts associated with the claimed costs.
- D. **Required Form.** Contractor must use Town's form(s) for submitting all Change Order requests or proposals, unless otherwise specified by Town.
- E. **Certification.** All Change Order requests must be signed by Contractor and must include the following certification:

"The undersigned Contractor certifies under penalty of perjury that its statements and representations in this Change Order request are true and correct. Contractor warrants that this Change Order request is comprehensive and complete

as to the Work or changes referenced herein, and agrees that any known or foreseeable costs, expenses, or time extension requests not included herein, are deemed waived.”

**6.3 Adjustments to Contract Price.** The amount of any increase or decrease in the Contract Price will be determined based on one of the following methods listed below, in the order listed with unit pricing taking precedence over the other methods. Markup applies only to Town-authorized time and material Work, and does not apply to any other payments to Contractor. For Work items or components that are deleted in their entirety, Contractor will only be entitled to compensation for those direct, actual, and documented costs (including restocking fees), reasonably incurred before Contractor was notified of the Town’s intent to delete the Work, with no markup for overhead, profit, or other indirect costs.

- A. **Unit Pricing.** Amounts previously provided by Contractor in the form of unit prices, either in a bid schedule or in a post-award schedule of values pursuant to Section 8.1, Schedule of Values, will apply to determine the price for the affected Work, to the extent applicable unit prices have been provided for that type of Work. No additional markup for overhead, profit, or other indirect costs will be added to the calculation.
- B. **Lump Sum.** A mutually agreed upon, all-inclusive lump sum price for the affected Work with no additional markup for overhead, profit, or other indirect costs.
- C. **Time and Materials.** On a time and materials basis, if and only to the extent compensation on a time and materials basis is expressly authorized by Town in advance of Contractor’s performance of the Work and subject to any not-to-exceed limit. Time and materials compensation for increased costs or Extra Work (but not decreased costs or deleted Work), will include allowed markup for overhead, profit, and other indirect costs, calculated as the total of the following sums, the cumulative total of which may not exceed the maximum markup rate of 15%:
  - 1. All direct labor costs provided by the Contractor, excluding superintendence, project management, or administrative costs, plus 15% markup;
  - 2. All direct material costs provided by the Contractor, including sales tax, plus 15% markup;
  - 3. All direct plant and equipment rental costs provided by the Contractor, plus 15% markup;
  - 4. All direct additional subcontract costs plus 10% markup for Work performed by Subcontractors; and
  - 5. Increased bond or insurance premium costs computed at 1.5% of total of the previous four sums.

**6.4 Unilateral Change Order.** If the parties dispute the terms of a proposed Change Order, including disputes over the amount of compensation or extension of time that Contractor has requested, the value of deleted or changed Work, what constitutes Extra Work, or quantities used, Town may elect to issue a unilateral Change Order, directing performance of the Work, and authorizing a change in the Contract Price or Contract Time for the adjustment to compensation or time that the Town believes is merited. Contractor’s sole recourse to dispute the terms of a unilateral Change Order is to submit a timely Claim pursuant to Article 12, below.

**6.5 Non-Compliance Deemed Waiver.** Contractor waives its entitlement to any increase in the Contract Price or Contract Time if Contractor fails to fully comply with the provisions of this Article. Contractor will not be paid for unauthorized Extra Work.

## Article 7 - General Construction Provisions

### 7.1 Permits, Fees, Business License, and Taxes.

- A. **Permits, Fees, and Town Business License.** Contractor must obtain and pay for all permits, fees, and licenses required to perform the Work, including a Town business license. Contractor must cooperate with and provide notifications to all government agencies with jurisdiction over the Project, as may be required. Contractor must provide Town with copies of all records of permits and permit applications, payment of required fees, and any licenses required for the Work.
- B. **Taxes.** Contractor must pay for all taxes on labor, material, and equipment, except Federal Excise Tax to the extent that Town is exempt from Federal Excise Tax.

**7.2 Temporary Facilities.** Contractor must provide, at Contractor's sole expense, any and all temporary facilities for the Project, including an onsite staging area for materials and equipment, a field office, sanitary facilities, utilities, storage, scaffolds, barricades, walkways, and any other temporary structure required to safely perform the Work along with any incidental utility services. The location of all temporary facilities must be approved by the Town prior to installation. Temporary facilities must be safe and adequate for the intended use and installed and maintained in accordance with Laws and the Contract Documents. Contractor must fence and screen the Project site and, if applicable, any separate Worksites, including the staging area, and its operation must minimize inconvenience to neighboring properties. Additional provisions pertaining to temporary facilities may be included in the Specifications or Special Conditions.

- A. **Utilities.** Contractor must install and maintain the power, water, sewer, and all other utilities required for the Project site, including the piping, wiring, internet and wifi connections, and any related equipment necessary to maintain the temporary facilities.
- B. **Removal and Repair.** Contractor must promptly remove all such temporary facilities when they are no longer needed or upon completion of the Work, whichever comes first. Contractor must promptly repair any damage to Town's property or to other property caused by the installation, use, or removal of the temporary facilities, and must promptly restore the property to its original or intended condition.

**7.3 Noninterference and Site Management.** Contractor must avoid interfering with Town's use of its property at or adjacent to the Project site, including use of roadways, entrances, parking areas, walkways, and structures. Contractor must also minimize disruption of access to private property in the Project vicinity. Contractor must coordinate with affected property owners, tenants, and businesses, and maintain some vehicle and pedestrian access to their residences or properties at all times. Temporary access ramps, fencing or other measures must be provided as needed. Before blocking access to a private driveway or parking lot, Contractor must provide effective notice to the affected parties at least 48 hours in advance of the pending closure and allow them to remove vehicles. Private driveways, residences and parking lots must have access to a roadway during non-Work hours.

- A. **Offsite Acquisition.** Unless otherwise provided by Town, Contractor must acquire, use, and dispose of, at its sole expense, any Worksites, licenses, easements, and temporary facilities necessary to access and perform the Work.
- B. **Offsite Staging Area and Field Office.** If additional space beyond the Project site is needed, such as for the staging area or the field office, Contractor may need to make arrangements with the nearby property owner(s) to secure the space. Before using or occupying any property owned by a third party, Contractor must provide Town with a copy of the necessary license agreement, easement, or other written authorization from the

property owner, together with a written release from the property owner holding Town harmless from any related liability, in a form acceptable to the Town Attorney.

- C. **Traffic Management.** Contractor must provide traffic management and traffic controls as specified in the Contract Documents, as required by Laws, and as otherwise required to ensure public and worker safety, and to avoid interference with public or private operations or the normal flow of vehicular, bicycle, or pedestrian traffic.

**7.4 Signs.** No signs may be displayed on or about Town's property, except signage which is required by Laws or by the Contract Documents, without Town's prior written approval as to size, design, and location.

**7.5 Project Site and Nearby Property Protections.**

- A. **General.** Contractor is responsible at all times, on a 24-hour basis and at its sole cost, for protecting the Work, the Project site, and the materials and equipment to be incorporated into the Work, until the Town has accepted the Project, excluding any exceptions to acceptance, if any. Except as specifically authorized by Town, Contractor must confine its operations to the area of the Project site indicated in the Plans and Specifications. Contractor is liable for any damage caused by Contractor or its Subcontractors to the Work, Town's property, the property of adjacent or nearby property owners and the work or personal property of other contractors working for Town, including damage related to Contractor's failure to adequately secure the Work or any Worksite.
1. Subject to Town's approval, Contractor will provide and install safeguards to protect the Work; any Worksite, including the Project site; Town's real or personal property and the real or personal property of adjacent or nearby property owners, including plant and tree protections.
  2. Town wastewater systems may not be interrupted. If the Work disrupts existing sewer facilities, Contractor must immediately notify Town and establish a plan, subject to Town's approval, to convey the sewage in closed conduits back into the sanitary sewer system. Sewage must not be permitted to flow in trenches or be covered by backfill.
  3. Contractor must remove with due care, and store at Town's request, any objects or material from the Project site that Town will salvage or reuse at another location.
  4. If directed by Engineer, Contractor must promptly repair or replace any property damage, as specified by the Engineer. However, acting in its sole discretion, Town may elect to have the property damage remedied otherwise, and may deduct the cost to repair or replace the damaged property from payment otherwise due to Contractor.
  5. Contractor will not permit any structure or infrastructure to be loaded in a manner that will damage or endanger the integrity of the structure or infrastructure.
- B. **Securing Project Site.** After completion of Work each day, Contractor must secure the Project site and, to the extent feasible, make the area reasonably accessible to the public unless Town approves otherwise. All excess materials and equipment not protected by approved traffic control devices must be relocated to the staging area or demobilized. Trench spoils must be hauled off the Project site daily and open excavations must be protected with steel plates. Contractor and Subcontractor personnel may not occupy or use the Project site for

any purpose during non-Work hours, except as may be provided in the Contract Documents or pursuant to prior written authorization from Town.

- C. **Unforeseen Conditions.** If Contractor encounters facilities, utilities, or other unknown conditions not shown on or reasonably inferable from the Plans or apparent from inspection of the Project site, Contractor must immediately notify the Town and promptly submit a Request for Information to obtain further directions from the Engineer. Contractor must avoid taking any action which could cause damage to the facilities or utilities pending further direction from the Engineer. The Engineer's written response will be final and binding on Contractor. If the Engineer's subsequent direction to Contractor affects Contractor's cost or time to perform the Work, Contractor may submit a Change Order request as set forth in Article 6 above.
- D. **Support; Adjacent Properties.** Contractor must provide, install, and maintain all shoring, bracing, and underpinning necessary to provide support to Town's property and adjacent properties and improvements thereon. Contractor must provide notifications to adjacent property owners as may be required by Laws. See also, Section 7.15, Trenching of Five Feet or More.
- E. **Notification of Property Damage.** Contractor must immediately notify the Town of damage to any real or personal property resulting from Work on the Project. Contractor must immediately provide a written report to Town of any such property damage in excess of \$500 (based on estimated cost to repair or replace) within 24 hours of the occurrence. The written report must include: (1) the location and nature of the damage, and the owner of the property, if known; (2) the name and address of each employee of Contractor or any Subcontractor involved in the damage; (3) a detailed description of the incident, including precise location, time, and names and contact information for known witnesses; and (4) a police or first responder report, if applicable. If Contractor is required to file an accident report with another government agency, Contractor will provide a copy of the report to Town.

## 7.6 Materials and Equipment.

- A. **General.** Unless otherwise specified, all materials and equipment required for the Work must be new, free from defects, and of the best grade for the intended purpose, and furnished in sufficient quantities to ensure the proper and expeditious performance of the Work. Contractor must employ measures to preserve the specified quality and fitness of the materials and equipment. Unless otherwise specified, all materials and equipment required for the Work are deemed to include all components required for complete installation and intended operation and must be installed in accordance with the manufacturer's recommendations or instructions. Contractor is responsible for all shipping, handling, and storage costs associated with the materials and equipment required for the Work. Contractor is responsible for providing security and protecting the Work and all of the required materials, supplies, tools and equipment at Contractor's sole cost until Town has formally accepted the Project as set forth in Section 11.1, Final Completion. Contractor will not assign, sell, mortgage, or hypothecate any materials or equipment for the Project, or remove any materials or equipment that have been installed or delivered.
- B. **Town-Provided.** If the Work includes installation of materials or equipment to be provided by Town, Contractor is solely responsible for the proper examination, handling, storage, and installation in accordance with the Contract Documents. Contractor must notify Town of any defects discovered in Town-provided materials or

equipment, sufficiently in advance of scheduled use or installation to afford adequate time to procure replacement materials or equipment as needed. Contractor is solely responsible for any loss of or damage to such items which occurs while the items are in Contractor's custody and control, the cost of which may be offset from the Contract Price and deducted from any payment(s) due to Contractor.

- C. ***Intellectual Property Rights.*** Contractor must, at its sole expense, obtain any authorization or license required for use of patented or copyright-protected materials, equipment, devices, or processes that are incorporated into the Work. Contractor's indemnity obligations in Article 4 apply to any claimed violation of intellectual property rights in violation of this provision.

## 7.7 Substitutions.

- A. ***"Or Equal."*** Any Specification designating a material, product, or thing (collectively, "item") or service by specific brand or trade name, followed by the words "or equal," is intended only to indicate the quality and type of item or service desired, and Contractor may request use of any equal item or service. Unless otherwise stated in the Specifications, any reference to a specific brand or trade name for an item or service that is used solely for the purpose of describing the type of item or service desired, will be deemed to be followed by the words "or equal." A substitution will only be approved if it is a true "equal" item or service in every aspect of design, function, and quality, as determined by Town, including dimensions, weight, maintenance requirements, durability, fit with other elements, and schedule impacts.
- B. ***Request for Substitution.*** A post-award request for substitution of an item or service must be submitted in writing to the Engineer for approval in advance, within the applicable time period provided in the Contract Documents. If no time period is specified, the substitution request may be submitted any time within 35 days after the date of award of the Contract, or sufficiently in advance of the time needed to avoid delay of the Work, whichever is earlier.
- C. ***Substantiation.*** Any available data substantiating the proposed substitute as an equal item or service must be submitted with the written request for substitution. Contractor's failure to timely provide all necessary substantiation, including any required test results as soon as they are available, is grounds for rejection of the proposed substitution, without further review.
- D. ***Burden of Proving Equality.*** Contractor has the burden of proving the equality of the proposed substitution at Contractor's sole cost. Town has sole discretion to determine whether a proposed substitution is equal, and Town's determination is final.
- E. ***Approval or Rejection.*** If the proposed substitution is approved, Contractor is solely responsible for any additional costs or time associated with the substituted item or service. If the proposed substitution is rejected, Contractor must, without delay, install the item or use the service as specified by Town.
- F. ***Contractor's Obligations.*** Town's approval of a proposed substitution will not relieve Contractor from any of its obligations under the Contract Documents. In the event Contractor makes an unauthorized substitution, Contractor will be solely responsible for all resulting cost impacts, including the cost of removal and replacement and the impact to other design elements.

## 7.8 Testing and Inspection.

- A. **General.** All materials, equipment, and workmanship used in the Work are subject to inspection and testing by Town at all times and at all locations during construction and/or fabrication, including at any Worksite, shops, and yards. All manufacturers' application or installation instructions must be provided to the Inspector at least ten days prior to the first such application or installation. Contractor must, at all times, make the Work available for testing or inspection. Neither Town's inspection or testing of Work, nor its failure to do so, operate to waive or limit Contractor's duty to complete the Work in accordance with the Contract Documents.
- B. **Scheduling and Notification.** Contractor must cooperate with Town in coordinating the inspections and testing. Contractor must submit samples of materials, at Contractor's expense, and schedule all tests required by the Contract Documents in time to avoid any delay to the progress of the Work. Contractor must notify the Engineer no later than noon of the Working Day before any inspection or testing and must provide timely notice to the other necessary parties as specified in the Contract Documents. If Contractor schedules an inspection or test beyond regular Work hours, or on a Saturday, Sunday, or recognized Town holiday, Contractor must notify the Engineer at least two Working Days in advance for approval. If approved, Contractor must reimburse Town for the cost of the overtime inspection or testing. Such costs, including the Town's hourly costs for required personnel, may be deducted from payments otherwise due to Contractor.
- C. **Responsibility for Costs.** Town will bear the initial cost of inspection and testing to be performed by independent consultants retained by Town, subject to the following exceptions:
1. Contractor will be responsible for the costs of any subsequent inspections or tests which are required to substantiate compliance with the Contract Documents, and any associated remediation costs.
  2. Contractor will be responsible for inspection costs, at Town's hourly rates, for inspection time lost because the Work is not ready, or Contractor fails to appear for a scheduled inspection.
  3. If any portion of the Work that is subject to inspection or testing is covered or concealed by Contractor prior to the inspection or testing, Contractor will bear the cost of making that portion of the Work available for the inspection or testing required by the Contract Documents, and any associated repair or remediation costs.
  4. Contractor is responsible for properly shoring all compaction test sites deeper than five feet below grade, as required under Section 7.15 below.
  5. Any Work or material that is defective or fails to comply with the requirements of the Contract Documents must be promptly repaired, removed, replaced, or corrected by Contractor, at Contractor's sole expense, even if that Work or material was previously inspected or included in a progress payment.
- D. **Contractor's Obligations.** Contractor is solely responsible for any delay occasioned by remediation of defective or noncompliant Work or material. Inspection or testing of the Work does not in any way relieve Contractor of its obligations to perform the Work as specified. Any Work done without the inspection(s) or testing required by the Contract Documents will be subject to rejection by Town.
- E. **Distant Locations.** If required off-site testing or inspection must be conducted at a location more than 100 miles from the Project site, Contractor is solely responsible for the additional travel costs required for testing and/or inspection at such locations.

- F. **Final Inspection.** The provisions of this Section 7.8 also apply to final inspection under Article 11, Completion and Warranty Provisions.

**7.9 Project Site Conditions and Maintenance.** Contractor must at all times, on a 24-hour basis and at its sole cost, maintain the Project site and staging and storage areas in clean, neat, and sanitary condition and in compliance with all Laws pertaining to safety, air quality, and dust control. Adequate toilets must be provided, and properly maintained and serviced for all workers on the Project site, located in a suitably secluded area, subject to Town's prior approval. Contractor must also, on a daily basis and at its sole cost, remove and properly dispose of the debris and waste materials from the Project site.

- A. **Air Emissions Control.** Contractor must not discharge smoke or other air contaminants into the atmosphere in violation of any Laws. Contractor must comply with all Laws, including the California Air Resources Board's In-Use Off-Road Diesel-Fueled Fleets Regulation (13 CCR § 2449 et seq.).
- B. **Dust and Debris.** Contractor must minimize and confine dust and debris resulting from the Work. Contractor must abate dust nuisance by cleaning, sweeping, and immediately sprinkling with water excavated areas of dirt or other materials prone to cause dust, and within one hour after the Engineer notifies Contractor that an airborne nuisance exists. The Engineer may direct that Contractor provide an approved water-spraying truck for this purpose. If water is used for dust control, Contractor will only use the minimum necessary. Contractor must take all necessary steps to keep waste water out of streets, gutters, or storm drains. See Section 7.19, Environmental Control. If Town determines that the dust control is not adequate, Town may have the work done by others and deduct the cost from the Contract Price. Contractor will immediately remove any excess excavated material from the Project site and any dirt deposited on public streets.
- C. **Clean up.** Before discontinuing Work in an area, Contractor must clean the area and remove all debris and waste along with the construction equipment, tools, machinery, and surplus materials.
1. Except as otherwise specified, all excess Project materials, and the materials removed from existing improvements on the Project site with no salvage value or intended reuse by Town, will be Contractor's property.
  2. Hauling trucks and other vehicles leaving the Project site must be cleaned of exterior mud or dirt before traveling on Town streets. Materials and loose debris must be delivered and loaded to prevent dropping materials or debris. Contractor must immediately remove spillage from hauling on any publicly traveled way. Streets affected by Work on the Project must be kept clean by street sweeping.
- D. **Disposal.** Contractor must dispose of all Project debris and waste materials in a safe and legal manner. Contractor may not burn or bury waste materials on the Project site. Contractor will not allow any dirt, refuse, excavated material, surplus concrete or mortar, or any associated washings, to be disposed of onto streets, into manholes or into the storm drain system.
- E. **Completion.** At the completion of the Work, Contractor must remove from the Project site all of its equipment, tools, surplus materials, waste materials and debris, presenting a clean and neat appearance. Before demobilizing from the Project site, Contractor must ensure that all surfaces are cleaned, sealed, waxed, or finished as applicable, and that all marks, stains, paint splatters, and the like have been properly removed from the completed Work and the surrounding areas. Contractor must ensure that all parts of the construction are

properly joined with the previously existing and adjacent improvements and conditions. Contractor must provide all cutting, fitting and patching needed to accomplish that requirement. Contractor must also repair or replace all existing improvements that are damaged or removed during the Work, both on and off the Project site, including curbs, sidewalks, driveways, fences, signs, landscaping, utilities, street surfaces and structures. Repairs and replacements must be at least equal to the previously existing improvements, and the condition, finish and dimensions must match the previously existing improvements. Contractor must restore to original condition all property or items that are not designated for alteration under the Contract Documents and leave each Worksite clean and ready for occupancy or use by Town.

- F. **Non-Compliance.** If Contractor fails to comply with its maintenance and cleanup obligations or any Town clean up order, Town may, acting in its sole discretion, elect to suspend the Work until the condition(s) is corrected with no increase in the Contract Time or Contract Price, or undertake appropriate cleanup measures without further notice and deduct the cost from any amounts due or to become due to Contractor.

**7.10 Instructions and Manuals.** Contractor must provide to Town three copies each of all instructions and manuals required by the Contract Documents, unless otherwise specified. These must be complete as to drawings, details, parts lists, performance data, and other information that may be required for Town to easily maintain and service the materials and equipment installed for this Project.

- A. **Submittal Requirements.** All manufacturers' application or installation instructions must be provided to Town at least ten days prior to the first such application. The instructions and manuals, along with any required guarantees, must be delivered to Town for review.
- B. **Training.** Contractor or its Subcontractors must train Town's personnel in the operation and maintenance of any complex equipment or systems as a condition precedent to Final Completion, if required in the Contract Documents.

**7.11 As-built Drawings.** Contractor and its Subcontractors must prepare and maintain at the Project site a detailed, complete and accurate as-built set of the Plans which will be used solely for the purpose of recording changes made in any portion of the original Plans in order to create accurate record drawings at the end of the Project.

- A. **Duty to Update.** The as-built drawings must be updated as changes occur, on a daily basis if necessary. Town may withhold the estimated cost for Town to have the as-built drawings prepared from payments otherwise due to Contractor, until the as-built drawings are brought up to date to the satisfaction of Town. Actual locations to scale must be identified on the as-built drawings for all runs of mechanical and electrical work, including all site utilities installed underground, in walls, floors, or otherwise concealed. Deviations from the original Plans must be shown in detail. The exact location of all main runs, whether piping, conduit, ductwork or drain lines, must be shown by dimension and elevation. The location of all buried pipelines, appurtenances, or other improvements must be represented by coordinates and by the horizontal distance from visible above-ground improvements.
- B. **Final Completion.** Contractor must verify that all changes in the Work are depicted in the as-built drawings and must deliver the complete set of as-built drawings to the Engineer for review and acceptance as a condition precedent to Final Completion and Final Payment.

**7.12 Existing Utilities.**

- A. **General.** The Work may be performed in developed, urban areas with existing utilities, both above and below ground, including utilities identified in the Contract Documents or in other informational documents or records. Contractor must take due care to locate identified or reasonably identifiable utilities before proceeding with trenching, excavation, or any other activity that could damage or disrupt existing utilities. This may include excavation with small equipment, potholing, or hand excavation, and, if practical, using white paint or other suitable markings to delineate the area to be excavated. Except as otherwise provided herein, Contractor will be responsible for costs resulting from damage to identified or reasonably identifiable utilities due to Contractor's negligence or failure to comply with the Contract Documents, including the requirements in this Article 7.
- B. **Unidentified Utilities.** Pursuant to Government Code § 4215, if, during the performance of the Work, Contractor discovers utility facilities not identified by Town in the Contract Documents, Contractor must immediately provide written notice to Town and the utility. Town assumes responsibility for the timely removal, relocation, or protection of existing main or trunkline utility facilities located on the Project site if those utilities are not identified in the Contract Documents. Contractor will be compensated in accordance with the provisions of the Contract Documents for the costs of locating, repairing damage not due to Contractor's failure to exercise reasonable care, and removing or relocating utility facilities not indicated in the Plans or Specifications with reasonable accuracy, and for equipment on the Project necessarily idled during such work. Contractor will not be assessed liquidated damages for delay in completion of the Work, to the extent the delay was caused by Town's failure to provide for removal or relocation of the utility facilities.

**7.13 Notice of Excavation.** Contractor must comply with all applicable requirements in Government Code § 4216 et seq., which are incorporated by reference herein.

**7.14 Trenching and Excavations of Four Feet or More.** As required by Public Contract Code § 7104, if the Work includes digging trenches or other excavations that extend deeper than four feet below the surface, the provisions in this Section apply to the Work and the Project.

- A. **Duty to Notify.** Contractor must promptly, and before the following conditions are disturbed, provide written notice to Town if Contractor finds any of the following conditions:
1. Material that Contractor believes may be a hazardous waste, as defined in § 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 the provisions of existing Laws;
  2. Subsurface or latent physical conditions at the Project site differing from those indicated by information about the Project site made available to bidders prior to the deadline for submitting bids; or
  3. Unknown physical conditions at the Project site of any unusual nature, materially different from those ordinarily encountered and generally recognized as inherent in work of the character required by the Contract Documents.
- B. **Town Investigation.** Town will promptly investigate the conditions and if Town finds that the conditions materially differ from those indicated, apparent, or reasonably inferred from information about the Project site made available to bidders, or involve hazardous waste, and cause a decrease or increase in Contractor's cost of, or the time required for, performance of any part of the Work, Town will issue a Change Order.

- C. **Disputes.** In the event that a dispute arises between Town and Contractor regarding any of the conditions specified in subsection (B) above, or the terms of a Change Order issued by Town, Contractor will not be excused from completing the Work within the Contract Time, but must proceed with all Work to be performed under the Contract. Contractor will retain any and all rights provided either by the Contract or by Laws which pertain to the resolution of disputes between Contractor and Town.

**7.15 Trenching of Five Feet or More.** As required by Labor Code § 6705, if the Contract Price exceeds \$25,000 and the Work includes the excavation of any trench or trenches of five feet or more in depth, a detailed plan must be submitted to Town for acceptance in advance of the excavation. The detailed plan must show the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation. If the plan varies from the shoring system standards, it must be prepared by a California registered civil or structural engineer. Use of a shoring, sloping, or protective system less effective than that required by the Construction Safety Orders is prohibited.

**7.16 New Utility Connections.** Except as otherwise specified, Town will pay connection charges and meter costs for new permanent utilities required by the Contract Documents, if any. Contractor must notify Town sufficiently in advance of the time needed to request service from each utility provider so that connections and services are initiated in accordance with the Project schedule.

**7.17 Lines and Grades.** Contractor is required to use any benchmark provided by the Engineer. Unless otherwise specified in the Contract Documents, Contractor must provide all lines and grades required to execute the Work. Contractor must also provide, preserve, and replace if necessary, all construction stakes required for the Project. All stakes or marks must be set by a California licensed surveyor or a California registered civil engineer. Contractor must notify the Engineer of any discrepancies found between Contractor's staking and grading and information provided by the Contract Documents. Upon completion, all Work must conform to the lines, elevations, and grades shown in the Plans, including any changes directed by a Change Order.

**7.18 Historic or Archeological Items.**

- A. **Contractor's Obligations.** Contractor must ensure that all persons performing Work at the Project site are required to immediately notify the Project Manager, upon discovery of any potential historic or archeological items, including historic or prehistoric ruins, a burial ground, archaeological or vertebrate paleontological site, including fossilized footprints or other archeological, paleontological or historical feature on the Project site (collectively, "Historic or Archeological Items").
- B. **Discovery; Cessation of Work.** Upon discovery of any potential Historic or Archeological Items, Work must be stopped within an 85-foot radius of the find and may not resume until authorized in writing by Town. If required by Town, Contractor must assist in protecting or recovering the Historic or Archeological Items, with any such assistance to be compensated as Extra Work on a time and materials basis under Article 6, Contract Modification. At Town's discretion, a suspension of Work required due to discovery of Historic or Archeological Items may be treated as Excusable Delay pursuant to Article 5, or as a suspension for convenience under Article 13.

**7.19 Environmental Control.** Contractor must not pollute any drainage course or its tributary inlets with fuels, oils, bitumens, acids, insecticides, herbicides or other harmful materials. Contractor must prevent the release of any hazardous material or hazardous waste into the soil or groundwater, and prevent the unlawful discharge of pollutants

into Town's storm drain system and watercourses as required below. Contractor and its Subcontractors must at all times in the performance of the Work comply with all Laws concerning pollution of waterways.

- A. **Stormwater Permit.** Contractor must comply with all applicable conditions of the State Water Resources Control Board National Pollutant Discharge Elimination System General Permit for Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction Activity ("Stormwater Permit").
- B. **Contractor's Obligations.** If required for the Work, a copy of the Stormwater Permit is on file in Town's principal administrative offices, and Contractor must comply with it without adjustment of the Contract Price or the Contract Time. Contractor must timely and completely submit required reports and monitoring information required by the conditions of the Stormwater Permit. Contractor also must comply with all other Laws governing discharge of stormwater, including applicable municipal stormwater management programs.

**7.20 Noise Control.** Contractor must comply with all applicable noise control Laws. Noise control requirements apply to all equipment used for the Work or related to the Work, including trucks, transit mixers or transient equipment that may or may not be owned by Contractor.

**7.21 Mined Materials.** Pursuant to the Surface Mining and Reclamation Act of 1975, Public Resources Code § 2710 et seq., any purchase of mined materials, such as construction aggregate, sand, gravel, crushed stone, road base, fill materials, and any other mineral materials must originate from a surface mining operation included on the AB 3098 List, which may be accessed online at: <https://www.conservation.ca.gov/smgb/Pages/AB-3098-List.aspx>.

## **Article 8 - Payment**

**8.1 Schedule of Values.** Prior to submitting its first application for payment, Contractor must prepare and submit to the Project Manager a schedule of values apportioned to the various divisions and phases of the Work, including mobilization and demobilization. If a Bid Schedule was submitted with Contractor's bid, the amounts in the schedule of values must be consistent with the Bid Schedule. Each line item contained in the schedule of values must be assigned a value such that the total of all items equals the Contract Price. The items must be sufficiently detailed to enable accurate evaluation of the percentage of completion claimed in each application for payment, and the assigned value consistent with any itemized or unit pricing submitted with Contractor's bid.

- A. **Measurements for Unit Price Work.** Materials and items of Work to be paid for on the basis of unit pricing will be measured according to the methods specified in the Contract Documents.
- B. **Deleted or Reduced Work.** Contractor will not be compensated for Work that Town has deleted or reduced in scope, except for any labor, material, or equipment costs for such Work that Contractor reasonably incurred before Contractor learned that the Work could be deleted or reduced. Contractor will only be compensated for those actual, direct and documented costs incurred, and will not be entitled to any mark up for overhead or lost profits.

**8.2 Progress Payments.** Following the last day of each month, or as otherwise required by the Special Conditions or Specifications, Contractor will submit to the Project Manager a monthly application for payment for Work performed during the preceding month based on the estimated value of the Work performed during that preceding month.

- A. **Application for Payment.** Each application for payment must be itemized to include labor, materials, and equipment incorporated into the Work, and materials and equipment delivered to the Project site, as well as

authorized and approved Change Orders. Each payment application must be supported by the unit prices submitted with Contractor's Bid Schedule and/or schedule of values and any other substantiating data required by the Contract Documents.

- B. **Payment of Undisputed Amounts.** Town will pay the undisputed amount due within 30 days after Contractor has submitted a complete and accurate payment application, subject to Public Contract Code § 20104.50. Town will deduct a percentage from each progress payment as retention, as set forth in Section 8.5, below, and may deduct or withhold additional amounts as set forth in Section 8.3, below.

**8.3 Adjustment of Payment Application.** Town may adjust or reject the amount requested in a payment application, including application for Final Payment, in whole or in part, if the amount requested is disputed or unsubstantiated. Contractor will be notified in writing of the basis for the modification to the amount requested. Town may also deduct or withhold from payment otherwise due based upon any of the circumstances and amounts listed below. Sums withheld from payment otherwise due will be released when the basis for that withholding has been remedied and no longer exists.

- A. For Contractor's unexcused failure to perform the Work as required by the Contract Documents, including correction or completion of punch list items, Town may withhold or deduct an amount based on the Town's estimated cost to correct or complete the Work.
- B. For loss or damage caused by Contractor or its Subcontractors arising out of or relating to performance of the Work or any failure to protect the Project site, Town may deduct an amount based on the estimated cost to repair or replace.
- C. For Contractor's failure to pay its Subcontractors and suppliers when payment is due, Town may withhold an amount equal to the total of past due payments and may opt to pay that amount separately via joint check pursuant to Section 8.6(B), Joint Checks.
- D. For Contractor's failure to timely correct rejected, nonconforming, or defective Work, Town may withhold or deduct an amount based on the Town's estimated cost to correct or complete the Work.
- E. For any unreleased stop notice, Town may withhold 125% of the amount claimed.
- F. For Contractor's failure to submit any required schedule or schedule update in the manner specified or within the time specified in the Contract Documents, Town may withhold an amount equal to five percent of the total amount requested until Contractor complies with its schedule submittal obligations.
- G. For Contractor's failure to maintain or submit as-built documents in the manner specified or within the time specified in the Contract Documents, Town may withhold or deduct an amount based on the Town's cost to prepare the as-builts.
- H. For Work performed without Shop Drawings that have been accepted by Town, when accepted Shop Drawings are required before proceeding with the Work, Town may deduct an amount based on the estimated cost to correct unsatisfactory Work or diminution in value.
- I. For fines, payments, or penalties assessed under the Labor Code, Town may deduct from payments due to Contractor as required by Laws and as directed by the Division of Labor Standards Enforcement.

- J. For any other costs or charges that may be withheld or deducted from payments to Contractor, as provided in the Contract Documents, including liquidated damages, Town may withhold or deduct such amounts from payment otherwise due to Contractor.

**8.4 Early Occupancy.** Neither Town's payment of progress payments nor its partial or full use or occupancy of the Project constitutes acceptance of any part of the Work.

**8.5 Retention.** Town will retain five percent of the full amount due on each progress payment (i.e., the amount due before any withholding or deductions pursuant to Section 8.3, Adjustment of Payment Application), or the percentage stated in the Notice Inviting Bids, whichever is greater, as retention to ensure full and satisfactory performance of the Work. Contractor is not entitled to any reduction in the rate of withholding at any time, nor to release of any retention before 35 days following Town's acceptance of the Project.

- A. **Substitution of Securities.** As provided by Public Contract Code § 22300, Contractor may request in writing that it be allowed, at its sole expense, to substitute securities for the retention withheld by Town. Any escrow agreement entered into pursuant to this provision must fully comply with Public Contract Code § 22300 and will be subject to approval as to form by Town's legal counsel. If Town exercises its right to draw upon such securities in the event of default pursuant to section (7) of the statutory Escrow Agreement for Security Deposits in Lieu of Retention, pursuant to subdivision (g) of Public Contract Code § 22300 ("Escrow Agreement"), and if Contractor disputes that it is in default, its sole remedy is to comply with the dispute resolution procedures in Article 12 and the provisions therein. It is agreed that for purposes of this paragraph, an event of default includes Town's rights pursuant to these Contract Documents to withhold or deduct sums from retention, including withholding or deduction for liquidated damages, incomplete or defective Work, stop payment notices, or backcharges. It is further agreed that if any individual authorized to give or receive written notice on behalf of a party pursuant to section (10) of the Escrow Agreement are unavailable to give or receive notice on behalf of that party due to separation from employment, retirement, death, or other circumstances, the successor or delegee of the named individual is deemed to be the individual authorized to give or receive notice pursuant to section (10) of the Escrow Agreement.
- B. **Release of Undisputed Retention.** All undisputed retention, less any amounts that may be assessed as liquidated damages, retained for stop notices, or otherwise withheld pursuant to Section 8.3, Adjustment of Payment Application, will be released as Final Payment to Contractor no sooner than 35 days following recordation of the notice of completion, and no later than 60 days following acceptance of the Project by Town's governing body or authorized designee pursuant to Section 11.1(C), Acceptance, or, if the Project has not been accepted, no later than 60 days after the Project is otherwise considered complete pursuant to Public Contract Code § 7107(c).

**8.6 Payment to Subcontractors and Suppliers.** Each month, Contractor must promptly pay each Subcontractor and supplier the value of the portion of labor, materials, and equipment incorporated into the Work or delivered to the Project site by the Subcontractor or supplier during the preceding month. Such payments must be made in accordance with the requirements of Laws pertaining to such payments, and those of the Contract Documents and applicable subcontract or supplier contract.

- A. **Withholding for Stop Notice.** Pursuant to Civil Code § 9358, Town will withhold 125% of the amount claimed by an unreleased stop notice, a portion of which may be retained by Town for the costs incurred in handling the stop notice claim, including attorneys' fees and costs, as authorized by law.
- B. **Joint Checks.** Town reserves the right, acting in its sole discretion, to issue joint checks made payable to Contractor and a Subcontractor or supplier, if Town determines this is necessary to ensure fair and timely payment for a Subcontractor or supplier who has provided services or goods for the Project. As a condition to release of payment by a joint check, the joint check payees may be required to execute a joint check agreement in a form provided or approved by the Town Attorney's Office. The joint check payees will be jointly and severally responsible for the allocation and disbursement of funds paid by joint check. Payment by joint check will not be construed to create a contractual relationship between Town and a Subcontractor or supplier of any tier beyond the scope of the joint check agreement.

**8.7 Final Payment.** Contractor's application for Final Payment must comply with the requirements for submitting an application for a progress payment as stated in Section 8.2, above. Corrections to previous progress payments, including adjustments to estimated quantities for unit priced items, may be included in the Final Payment. If Contractor fails to submit a timely application for Final Payment, Town reserves the right to unilaterally process and issue Final Payment without an application from Contractor in order to close out the Project. For the purposes of determining the deadline for Claim submission pursuant to Article 12, the date of Final Payment is deemed to be the date that Town acts to release undisputed retention as final payment to Contractor, or otherwise provides written notice to Contractor of Final Payment or that no undisputed funds remain available for Final Payment due to offsetting withholdings or deductions pursuant to Section 8.3, Adjustment of Payment Application. If the amount due from Contractor to Town exceeds the amount of Final Payment, Town retains the right to recover the balance from Contractor or its sureties.

**8.8 Release of Claims.** Town may, at any time, require that payment of the undisputed portion of any progress payment or Final Payment be contingent upon Contractor furnishing Town with a written waiver and release of all claims against Town arising from or related to the portion of Work covered by those undisputed amounts subject to the limitations of Public Contract Code § 7100. Any disputed amounts may be specifically excluded from the release.

**8.9 Warranty of Title.** Contractor warrants that title to all work, materials, or equipment incorporated into the Work and included in a request for payment will pass over to Town free of any claims, liens, or encumbrances upon payment to Contractor.

## **Article 9 - Labor Provisions**

**9.1 Discrimination Prohibited.** Discrimination against any prospective or present employee engaged in the Work on grounds of race, color, ancestry, national origin, ethnicity, religion, sex, sexual orientation, age, disability, or marital status is strictly prohibited. Contractor and its Subcontractors are required to comply with all applicable Laws prohibiting discrimination, including the California Fair Employment and Housing Act (Govt. Code § 12900 et seq.), Government Code § 11135, and Labor Code §§ 1735, 1777.5, 1777.6, and 3077.5.

### **9.2 Labor Code Requirements.**

- A. **Eight Hour Day.** Pursuant to Labor Code § 1810, eight hours of labor constitute a legal day's work under this Contract.
- B. **Penalty.** Pursuant to Labor Code § 1813, Contractor will forfeit to Town as a penalty, the sum of \$25.00 for each day during which a worker employed by Contractor or any Subcontractor is required or permitted to work more

than eight hours in any one calendar day or more than 40 hours per calendar week, except if such workers are paid overtime under Labor Code § 1815.

- C. **Apprentices.** Contractor is responsible for compliance with the requirements governing employment and payment of apprentices, as set forth in Labor Code § 1777.5, which is fully incorporated by reference.
- D. **Notices.** Pursuant to Labor Code § 1771.4, Contractor is required to post all job site notices prescribed by Laws.

**9.3 Prevailing Wages.** Each worker performing Work under this Contract that is covered under Labor Code §§ 1720, 1720.3, or 1720.9, including cleanup at the Project site, must be paid at a rate not less than the prevailing wage as defined in §§ 1771 and 1774 of the Labor Code. The prevailing wage rates are on file with the Town and available online at <http://www.dir.ca.gov/dlsr>. Contractor must post a copy of the applicable prevailing rates at the Project site.

- A. **Penalties.** Pursuant to Labor Code § 1775, Contractor and any Subcontractor will forfeit to Town as a penalty up to \$200.00 for each calendar day, or portion thereof, for each worker paid less than the applicable prevailing wage rate. Contractor must also pay each worker the difference between the applicable prevailing wage rate and the amount actually paid to that worker.
- B. **Federal Requirements.** If this Project is subject to federal prevailing wage requirements in addition to California prevailing wage requirements, Contractor and its Subcontractors are required to pay the higher of the currently applicable state or federal prevailing wage rates.

**9.4 Payroll Records.** Contractor must comply with the provisions of Labor Code §§ 1771.4, 1776, and 1812 and all implementing regulations, which are fully incorporated by this reference, including requirements for monthly electronic submission of payroll records to the DIR.

- A. **Contractor and Subcontractor Obligations.** Contractor and each Subcontractor must keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed in connection with the Work. Each payroll record must contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following:
  1. The information contained in the payroll record is true and correct; and
  2. Contractor or the Subcontractor has complied with the requirements of Labor Code §§ 1771, 1811, and 1815 for any Work performed by its employees on the Project.
- B. **Certified Record.** A certified copy of an employee's payroll record must be made available for inspection or furnished to the employee or his or her authorized representative on request, to Town, to the Division of Labor Standards Enforcement, to the Division of Apprenticeship Standards of the DIR, and as further required by the Labor Code.
- C. **Enforcement.** Upon notice of noncompliance with Labor Code § 1776, Contractor or Subcontractor has ten days in which to comply with the requirements of this section. If Contractor or Subcontractor fails to do so within the ten-day period, Contractor or Subcontractor will forfeit a penalty of \$100.00 per day, or portion thereof, for each worker for whom compliance is required, until strict compliance is achieved. Upon request by the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement, these penalties will be withheld from payments then due to Contractor.

**9.5 Labor Compliance.** Pursuant to Labor Code § 1771.4, the Contract for this Project is subject to compliance monitoring and enforcement by the DIR.

### **Article 10 - Safety Provisions**

**10.1 Safety Precautions and Programs.** Contractor and its Subcontractors are fully responsible for safety precautions and programs, and for the safety of persons and property in the performance of the Work. Contractor and its Subcontractors must at all times comply with all applicable health and safety Laws and seek to avoid injury, loss, or damage to persons or property by taking reasonable steps to protect its employees and other persons at any Worksite, materials and equipment stored on or off site, and property at or adjacent to any Worksite.

- A. **Reporting Requirements.** Contractor must immediately notify the Town of any death, serious injury or illness resulting from Work on the Project. Contractor must immediately provide a written report to Town of each recordable accident or injury occurring at any Worksite within 24 hours of the occurrence. The written report must include: (1) the name and address of the injured or deceased person; (2) the name and address of each employee of Contractor or of any Subcontractor involved in the incident; (3) a detailed description of the incident, including precise location, time, and names and contact information for known witnesses; and (4) a police or first responder report, if applicable. If Contractor is required to file an accident report with a government agency, Contractor will provide a copy of the report to Town.
- B. **Legal Compliance.** Contractor's safety program must comply with the applicable legal and regulatory requirements. Contractor must provide Town with copies of all notices required by Laws.
- C. **Contractor's Obligations.** Any damage or loss caused by Contractor arising from the Work which is not insured under property insurance must be promptly remedied by Contractor.
- D. **Remedies.** If Town determines, in its sole discretion, that any part of the Work or Project site is unsafe, Town may, without assuming responsibility for Contractor's safety program, require Contractor or its Subcontractor to cease performance of the Work or to take corrective measures to Town's satisfaction. If Contractor fails to promptly take the required corrective measures, Town may perform them and deduct the cost from the Contract Price. Contractor agrees it is not entitled to submit a Claim for damages, for an increase in Contract Price, or for a change in Contract Time based on Contractor's compliance with Town's request for corrective measures pursuant to this provision.

**10.2 Hazardous Materials.** Unless otherwise specified in the Contract Documents, this Contract does not include the removal, handling, or disturbance of any asbestos or other Hazardous Materials. If Contractor encounters materials on the Project site that Contractor reasonably believes to be asbestos or other Hazardous Materials, and the asbestos or other Hazardous Materials have not been rendered harmless, Contractor may continue Work in unaffected areas reasonably believed to be safe, but must immediately cease work on the area affected and report the condition to Town. No asbestos, asbestos-containing products or other Hazardous Materials may be used in performance of the Work.

**10.3 Material Safety.** Contractor is solely responsible for complying with § 5194 of Title 8 of the California Code of Regulations, including by providing information to Contractor's employees about any hazardous chemicals to which they may be exposed in the course of the Work. A hazard communication program and other forms of warning and training about such exposure must be used. Contractor must also maintain Safety Data Sheets ("SDS") at the Project site, as

required by Laws, for materials or substances used or consumed in the performance of the Work. The SDS will be accessible and available to Contractor's employees, Subcontractors, and Town.

- A. **Contractor Obligations.** Contractor is solely responsible for the proper delivery, handling, use, storage, removal, and disposal of all materials brought to the Project site and/or used in the performance of the Work. Contractor must notify the Engineer if a specified product or material cannot be used safely.
- B. **Labeling.** Contractor must ensure proper labeling on any material brought onto the Project site so that any persons working with or in the vicinity of the material may be informed as to the identity of the material, any potential hazards, and requirements for proper handling, protections, and disposal.

**10.4 Hazardous Condition.** Contractor is solely responsible for determining whether a hazardous condition exists or is created during the course of the Work, involving a risk of bodily harm to any person or risk of damage to any property. If a hazardous condition exists or is created, Contractor must take all precautions necessary to address the condition and ensure that the Work progresses safely under the circumstances. Hazardous conditions may result from, but are not limited to, use of specified materials or equipment, the Work location, the Project site condition, the method of construction, or the way any Work must be performed.

**10.5 Emergencies.** In an emergency affecting the safety or protection of persons, Work, or property at or adjacent to any Worksite, Contractor must take reasonable and prompt actions to prevent damage, injury, or loss, without prior authorization from the Town if, under the circumstances, there is inadequate time to seek prior authorization from the Town.

## **Article 11 - Completion and Warranty Provisions**

### **11.1 Final Completion.**

- A. **Final Inspection and Punch List.** When the Work required by this Contract is fully performed, Contractor must provide written notification to Town requesting final inspection. The Engineer will schedule the date and time for final inspection, which must include Contractor's primary representative for this Project and its superintendent. Based on that inspection, Town will prepare a punch list of any items that are incomplete, missing, defective, incorrectly installed, or otherwise not compliant with the Contract Documents. The punch list to Contractor will specify the time by which all of the punch list items must be completed or corrected. The punch list may include Town's estimated cost to complete each punch list item if Contractor fails to do so within the specified time. The omission of any non-compliant item from a punch list will not relieve Contractor from fulfilling all requirements of the Contract Documents. Contractor's failure to complete any punch list item within the time specified in the punch list will not waive or abridge its warranty obligations for any such items that must be completed by the Town or by a third party retained by the Town due to Contractor's failure to timely complete any such outstanding item.
- B. **Requirements for Final Completion.** Final Completion will be achieved upon completion or correction of all punch list items, as verified by Town's further inspection, and upon satisfaction of all other Contract requirements, including any commissioning required under the Contract Documents and submission of all final submittals, including instructions and manuals as required under Section 7.10, and complete, final as-built drawings as required under Section 7.11, all to Town's satisfaction.

- C. **Acceptance.** The Project will be considered accepted upon Town Council action during a public meeting to accept the Project, unless the Engineer is authorized to accept the Project, in which case the Project will be considered accepted upon the date of the Engineer's issuance of a written notice of acceptance. In order to avoid delay of Project close out, the Town may elect, acting in its sole discretion, to accept the Project as complete subject to exceptions for punch list items that are not completed within the time specified in the punch list.
- D. **Final Payment and Release of Retention.** Final Payment and release of retention, less any sums withheld pursuant to the provisions of the Contract Documents, will not be made sooner than 35 days after recordation of the notice of completion. If Contractor fails to complete all of the punch list items within the specified time, Town may withhold up to 150% of Town's estimated cost to complete each of the remaining items from Final Payment and may use the withheld retention to pay for the costs to self-perform the outstanding items or to retain a third party to complete any such outstanding punch list item.

## 11.2 Warranty.

- A. **General.** Contractor warrants that all materials and equipment will be new unless otherwise specified, of good quality, in conformance with the Contract Documents, and free from defective workmanship and materials. Contractor further warrants that the Work will be free from material defects not intrinsic in the design or materials required in the Contract Documents. Contractor warrants that materials or items incorporated into the Work comply with the requirements and standards in the Contract Documents, including compliance with Laws, and that any Hazardous Materials encountered or used were handled as required by Laws. At Town's request, Contractor must furnish satisfactory evidence of the quality and type of materials and equipment furnished. Contractor's warranty does not extend to damage caused by normal wear and tear, or improper use or maintenance.
- B. **Warranty Period.** Contractor's warranty must guarantee its Work for a period of one year from the date of Project acceptance (the "Warranty Period"), except when a longer guarantee is provided by a supplier or manufacturer or is required by the Specifications or Special Conditions. Contractor must obtain from its Subcontractors, suppliers and manufacturers any special or extended warranties required by the Contract Documents.
- C. **Warranty Documents.** As a condition precedent to Final Completion, Contractor must supply Town with all warranty and guarantee documents relevant to equipment and materials incorporated into the Work and guaranteed by their suppliers or manufacturers.
- D. **Subcontractors.** The warranty obligations in the Contract Documents apply to Work performed by Contractor and its Subcontractors, and Contractor agrees to be co-guarantor of such Work.
- E. **Contractor's Obligations.** Upon written notice from Town to Contractor of any defect in the Work discovered during the Warranty Period, Contractor or its responsible Subcontractor must promptly correct the defective Work at its own cost. Contractor's obligation to correct defects discovered during the Warranty Period will continue past the expiration of the Warranty Period as to any defects in Work for which Contractor was notified prior to expiration of the Warranty Period. Work performed during the Warranty Period ("Warranty Work") will

be subject to the warranty provisions in this Section 11.2 for a one-year period that begins upon completion of such Warranty Work to Town's satisfaction.

- F. **Town's Remedies.** If Contractor or its responsible Subcontractor fails to correct defective Work within ten days following notice by Town, or sooner if required by the circumstances, Town may correct the defects to conform with the Contract Documents at Contractor's sole expense. Contractor must reimburse Town for its costs in accordance with subsection (H), below.
- G. **Emergency Repairs.** In cases of emergency where any delay in correcting defective Work could cause harm, loss or damage, Town may immediately correct the defects to conform with the Contract Documents at Contractor's sole expense. Contractor or its surety must reimburse Town for its costs in accordance with subsection (H), below.
- H. **Reimbursement.** Contractor must reimburse Town for its costs to repair under subsections (F) or (G), above, within 30 days following Town's submission of a demand for payment pursuant to this provision. If Town is required to initiate legal action to compel Contractor's compliance with this provision, and Town is the prevailing party in such action, Contractor and its surety are solely responsible for all of Town's attorney's fees and legal costs expended to enforce Contractor's warranty obligations herein, in addition to any and all costs Town incurs to correct the defective Work.

**11.3 Use Prior to Final Completion.** Town reserves the right to occupy or make use of the Project, or any portions of the Project, prior to Final Completion if Town has determined that the Project or portion of it is in a condition suitable for the proposed occupation or use, and that it is in its best interest to occupy or make use of the Project, or any portions of it, prior to Final Completion.

- A. **Non-Waiver.** Occupation or use of the Project, in whole or in part, prior to Final Completion will not operate as acceptance of the Work or any portion of it, nor will it operate as a waiver of any of Town's rights or Contractor's duties pursuant to these Contract Documents, and will not affect nor bear on the determination of the time of substantial completion with respect to any statute of repose pertaining to the time for filing an action for construction defect.
- B. **Town's Responsibility.** Town will be responsible for the cost of maintenance and repairs due to normal wear and tear with respect to those portions of the Project that are being occupied or used before Final Completion. The Contract Price or the Contract Time may be adjusted pursuant to the applicable provisions of these Contract Documents if, and only to the extent that, any occupation or use under this Section actually adds to Contractor's cost or time to complete the Work within the Contract Time.

**11.4 Substantial Completion.** For purposes of determining "substantial completion" with respect to any statute of repose pertaining to the time for filing an action for construction defect, "substantial completion" is deemed to mean the last date that Contractor or any Subcontractor performs Work on the Project prior to Town acceptance of the Project, except for warranty work performed under this Article.

## **Article 12 - Dispute Resolution**

**12.1 Claims.** This Article applies to and provides the exclusive procedures for any Claim arising from or related to the Contract or performance of the Work.

- A. **Definition.** “Claim” means a separate demand by Contractor, submitted in writing by registered or certified mail with return receipt requested, for a change in the Contract Time, including a time extension or relief from liquidated damages, or a change in the Contract Price, when the demand has previously been submitted to Town in accordance with the requirements of the Contract Documents, and which has been rejected or disputed by Town, in whole or in part. A Claim may also include that portion of a unilateral Change Order that is disputed by the Contractor.
- B. **Limitations.** A Claim may only include the portion of a previously rejected demand that remains in dispute between Contractor and Town. With the exception of any dispute regarding the amount of money actually paid to Contractor as Final Payment, Contractor is not entitled to submit a Claim demanding a change in the Contract Time or the Contract Price, which has not previously been submitted to Town in full compliance with Article 5 and Article 6, and subsequently rejected in whole or in part by Town.
- C. **Scope of Article.** This Article is intended to provide the exclusive procedures for submission and resolution of Claims of any amount and applies in addition to the provisions of Public Contract Code § 9204 and § 20104 et seq., which are incorporated by reference herein.
- D. **No Work Delay.** Notwithstanding the submission of a Claim or any other dispute between the parties related to the Project or the Contract Documents, Contractor must perform the Work and may not delay or cease Work pending resolution of a Claim or other dispute, but must continue to diligently prosecute the performance and timely completion of the Work, including the Work pertaining to the Claim or other dispute.
- E. **Informal Resolution.** Contractor will make a good faith effort to informally resolve a dispute before initiating a Claim, preferably by face-to-face meeting between authorized representatives of Contractor and Town.

**12.2 Claims Submission.** A Claim must be submitted in writing by registered or certified mail with return receipt requested, and must comply with the following requirements:

- A. **Substantiation.** The Claim must be submitted to Town in writing, clearly identified as a “Claim” submitted pursuant to this Article 12 and must include all of the documents necessary to substantiate the Claim including the Change Order request that was rejected in whole or in part, and a copy of Town’s written rejection that is in dispute. The Claim must clearly identify and describe the dispute, including relevant references to applicable portions of the Contract Documents, and a chronology of relevant events. Any Claim for additional payment must include a complete, itemized breakdown of all known or estimated labor, materials, taxes, insurance, and subcontract, or other costs. Substantiating documentation such as payroll records, receipts, invoices, or the like, must be submitted in support of each component of claimed cost. Any Claim for an extension of time or delay costs must be substantiated with a schedule analysis and narrative depicting and explaining claimed time impacts.
- B. **Claim Format and Content.** A Claim must be submitted submitted in writing by registered or certified mail with return receipt requested in the following format:
  1. Provide a cover letter, specifically identifying the submission as a “Claim” submitted under this Article 12 and specifying the requested remedy (e.g., amount of proposed change to Contract Price and/or change to Contract Time).

2. Provide a summary of each Claim, including underlying facts and the basis for entitlement, and identify each specific demand at issue, including the specific Change Order request (by number and submittal date), and the date of Town's rejection of that demand, in whole or in part.
3. Provide a detailed explanation of each issue in dispute. For multiple issues included within a single Claim or for multiple Claims submitted concurrently, separately number and identify each individual issue or Claim, and include the following for each separate issue or Claim:
  - a. A succinct statement of the matter in dispute, including Contractor's position and the basis for that position;
  - b. Identify and attach all documents that substantiate the Claim, including relevant provisions of the Contract Documents, RFIs, calculations, and schedule analysis (see subsection (A), Substantiation, above);
  - c. A chronology of relevant events; and
  - d. Analysis and basis for claimed changes to Contract Price, Contract Time, or any other remedy requested.
4. Provide a summary of issues and corresponding claimed damages. If, by the time of the Claim submission deadline (below), the precise amount of the requested change in the Contract Price or Contract Time is not yet known, Contractor must provide a good faith estimate, including the basis for that estimate, and must identify the date by which it is anticipated that the Claim will be updated to provide final amounts.
5. Include the following certification, executed by Contractor's authorized representative: "The undersigned Contractor certifies under penalty of perjury that its statements and representations in this Claim submittal are true and correct. Contractor warrants that this Claim submittal is comprehensive and complete as to the matters in dispute, and agrees that any costs, expenses, or delay not included herein are deemed waived."

**C. *Submission Deadlines.***

1. A Claim disputing rejection of a request for a change in the Contract Time or Contract Price must be submitted within 30 days following the date that Town notified Contractor in writing that a request for a change in the Contract Time or Contract Price, duly submitted in compliance with Article 5 and Article 6, has been rejected in whole or in part. A Claim disputing the terms of a unilateral Change Order must be submitted within 30 days following the date of issuance of the unilateral Change Order. These Claim deadlines apply even if Contractor cannot yet quantify the total amount of any requested change in the Contract Time or Contract Price. If the Contractor cannot quantify those amounts, it must submit an estimate of the amounts claimed pending final determination of the requested remedy by Contractor.
2. With the exception of any dispute regarding the amount of Final Payment, any Claim must be filed on or before the date of Final Payment or will be deemed waived.
3. A Claim disputing the amount of Final Payment must be submitted within 30 days of the effective date of Final Payment, under Section 8.7, Final Payment.

4. Strict compliance with these Claim submission deadlines is necessary to ensure that any dispute may be mitigated as soon as possible, and to facilitate cost-efficient administration of the Project. ***Any Claim that is not submitted within the specified deadlines will be deemed waived by Contractor.***

**12.3 Town's Response.** Town will respond within 45 days of receipt of the Claim with a written statement identifying which portion(s) of the Claim are disputed, unless the 45-day period is extended by mutual agreement of Town and Contractor or as otherwise allowed under Public Contract Code § 9204. However, if Town determines that the Claim is not adequately substantiated pursuant to Section 12.2(A), Substantiation, Town may first request in writing, within 30 days of receipt of the Claim, any additional documentation supporting the Claim or relating to defenses to the Claim that Town may have against the Claim.

- A. ***Additional Information.*** If additional information is thereafter required, it may be requested and provided upon mutual agreement of Town and Contractor. If Contractor's Claim is based on estimated amounts, Contractor has a continuing duty to update its Claim as soon as possible with information on actual amounts in order to facilitate prompt and fair resolution of the Claim.
- B. ***Non-Waiver.*** Any failure by Town to respond within the times specified above will not be construed as acceptance of the Claim, in whole or in part, or as a waiver of any provision of these Contract Documents.

**12.4 Meet and Confer.** If Contractor disputes Town's written response, or Town fails to respond within the specified time, within 15 days of receipt of Town's response or within 15 days of Town's failure to respond within the applicable 45-day time period under Section 12.3, respectively, Contractor may notify Town of the dispute in writing sent by registered or certified mail, return receipt requested, and demand an informal conference to meet and confer for settlement of the issues in dispute. If Contractor fails to notify Town of the dispute and demand an informal conference to meet and confer in writing within the specified time, Contractor's Claim will be deemed waived.

- A. ***Schedule Meet and Confer.*** Upon receipt of the demand to meet and confer, Town will schedule the meet and confer conference to be held within 30 days, or later if needed to ensure the mutual availability of each of the individuals that each party requires to represent its interests at the meet and confer conference.
- B. ***Location for Meet and Confer.*** The meet and confer conference will be scheduled at a location at or near Town's principal office.
- C. ***Written Statement After Meet and Confer.*** Within ten working days after the meet and confer has concluded, Town will issue a written statement identifying which portion(s) of the Claim remain in dispute, if any.
- D. ***Submission to Mediation.*** If the Claim or any portion remains in dispute following the meet and confer conference, within ten working days after the Town issues the written statement identifying any portion(s) of the Claim remaining in dispute, the Contractor may identify in writing disputed portion(s) of the Claim, which will be submitted for mediation, as set forth below.

**12.5 Mediation and Government Code Claims.**

- A. ***Mediation.*** Within ten working days after the Town issues the written statement identifying any portion(s) of the Claim remaining in dispute following the meet and confer, Town and Contractor will mutually agree to a mediator, as provided under Public Contract Code § 9204. Mediation will be scheduled to ensure the mutual availability of the selected mediator and all of the individuals that each party requires to represent its interests. If there are multiple Claims in dispute, the parties may agree to schedule the mediation to address all

outstanding Claims at the same time. The parties will share the costs of the mediator and mediation fees equally, but each party is otherwise solely and separately responsible for its own costs to prepare for and participate in the mediation, including costs for its legal counsel or any other consultants.

**B. *Government Code Claims.***

1. Timely presentation of a Government Code Claim is a condition precedent to filing any legal action based on or arising from the Contract. Compliance with the Claim submission requirements in this Article 12 is a condition precedent to filing a Government Code Claim.
2. The time for filing a Government Code Claim will be tolled from the time Contractor submits its written Claim pursuant to Section 12.2, above, until the time that Claim is denied in whole or in part at the conclusion of the meet and confer process, including any period of time used by the meet and confer process. However, if the Claim is submitted to mediation, the time for filing a Government Code Claim will be tolled until conclusion of the mediation, including any continuations, if the Claim is not fully resolved by mutual agreement of the parties during the mediation or any continuation of the mediation.

**12.6 Tort Claims.** This Article does not apply to tort claims and nothing in this Article is intended nor will be construed to change the time periods for filing tort-based Government Code Claims.

**12.7 Arbitration.** It is expressly agreed, under Code of Civil Procedure § 1296, that in any arbitration to resolve a dispute relating to this Contract, the arbitrator's award must be supported by law and substantial evidence.

**12.8 Burden of Proof and Limitations.** Contractor bears the burden of proving entitlement to and the amount of any claimed damages. Contractor is not entitled to damages calculated on a total cost basis, but must prove actual damages. Contractor is not entitled to speculative, special, or consequential damages, including home office overhead or any form of overhead not directly incurred at the Project site or any other Worksite; lost profits; loss of productivity; lost opportunity to work on other projects; diminished bonding capacity; increased cost of financing for the Project; extended capital costs; non-availability of labor, material or equipment due to delays; or any other indirect loss arising from the Contract. The Eichleay Formula or similar formula will not be used for any recovery under the Contract. The Town will not be directly liable to any Subcontractor or supplier.

**12.9 Legal Proceedings.** In any legal proceeding that involves enforcement of any requirements of the Contract Documents, the finder of fact will receive detailed instructions on the meaning and operation of the Contract Documents, including conditions, limitations of liability, remedies, claim procedures, and other provisions bearing on the defenses and theories of liability. Detailed findings of fact will be requested to verify enforcement of the Contract Documents. All of the Town's remedies under the Contract Documents will be construed as cumulative, and not exclusive, and the Town reserves all rights to all remedies available under law or equity as to any dispute arising from or relating to the Contract Documents or performance of the Work.

**12.10 Other Disputes.** The procedures in this Article 12 will apply to any and all disputes or legal actions, in addition to Claims, arising from or related to this Contract, including disputes regarding suspension or early termination of the Contract, unless and only to the extent that compliance with a procedural requirement is expressly and specifically waived by Town. Nothing in this Article is intended to delay suspension or termination under Article 13.

### **Article 13 - Suspension and Termination**

**13.1 Suspension for Cause.** In addition to all other remedies available to Town, if Contractor fails to perform or correct Work in accordance with the Contract Documents, including non-compliance with applicable environmental or

health and safety Laws, Town may immediately order the Work, or any portion of it, suspended until the circumstances giving rise to the suspension have been eliminated to Town's satisfaction.

- A. **Notice of Suspension.** Upon receipt of Town's written notice to suspend the Work, in whole or in part, except as otherwise specified in the notice of suspension, Contractor and its Subcontractors must promptly stop Work as specified in the notice of suspension; comply with directions for cleaning and securing the Worksite; and protect the completed and in-progress Work and materials. Contractor is solely responsible for any damages or loss resulting from its failure to adequately secure and protect the Project.
- B. **Resumption of Work.** Upon receipt of the Town's written notice to resume the suspended Work, in whole or in part, except as otherwise specified in the notice to resume, Contractor and its Subcontractors must promptly re-mobilize and resume the Work as specified; and within ten days from the date of the notice to resume, Contractor must submit a recovery schedule, prepared in accordance with the Contract Documents, showing how Contractor will complete the Work within the Contract Time.
- C. **Failure to Comply.** Contractor will not be entitled to an increase in the Contract Time or Contract Price for a suspension occasioned by Contractor's failure to comply with the Contract Documents.
- D. **No Duty to Suspend.** Town's right to suspend the Work will not give rise to a duty to suspend the Work, and Town's failure to suspend the Work will not constitute a defense to Contractor's failure to comply with the requirements of the Contract Documents.

**13.2 Suspension for Convenience.** Town reserves the right to suspend, delay, or interrupt the performance of the Work in whole or in part, for a period of time determined to be appropriate for Town's convenience. Upon notice by Town pursuant to this provision, Contractor must immediately suspend, delay, or interrupt the Work and secure the Project site as directed by Town except for taking measures to protect completed or in-progress Work as directed in the suspension notice, and subject to the provisions of Section 13.1(A) and (B), above. If Contractor submits a timely request for a Change Order in compliance with Articles 5 and 6, the Contract Price and the Contract Time will be equitably adjusted by Change Order pursuant to the terms of Articles 5 and 6 to reflect the cost and delay impact occasioned by such suspension for convenience, except to the extent that any such impacts were caused by Contractor's failure to comply with the Contract Documents or the terms of the suspension notice or notice to resume. However, the Contract Time will only be extended if the suspension causes or will cause unavoidable delay in Final Completion. If Contractor disputes the terms of a Change Order issued for such equitable adjustment due to suspension for convenience, its sole recourse is to comply with the Claim procedures in Article 12.

**13.3 Termination for Default.** Town may declare that Contractor is in default of the Contract for a material breach of or inability to fully, promptly, or satisfactorily perform its obligations under the Contract.

**Default.** Events giving rise to a declaration of default include Contractor's refusal or failure to supply sufficient skilled workers, proper materials, or equipment to perform the Work within the Contract Time; Contractor's refusal or failure to make prompt payment to its employees, Subcontractors, or suppliers or to correct defective Work or damage; Contractor's failure to comply with Laws, or orders of any public agency with jurisdiction over the Project; evidence of Contractor's bankruptcy, insolvency, or lack of financial capacity to complete the Work as required within the Contract Time; suspension, revocation, or expiration and nonrenewal of Contractor's license or DIR registration; dissolution, liquidation, reorganization, or other major change in Contractor's organization, ownership, structure, or existence as a business entity; unauthorized assignment of Contractor's rights or duties under the Contract; or any material breach of the Contract requirements.

- A. **Notice of Default and Opportunity to Cure.** Upon Town's declaration that Contractor is in default due to a material breach of the Contract Documents, if Town determines that the default is curable, Town will afford Contractor the opportunity to cure the default within ten days of Town's notice of default, or within a period of time reasonably necessary for such cure, including a shorter period of time if applicable.
- B. **Termination.** If Contractor fails to cure the default or fails to expediently take steps reasonably calculated to cure the default within the time period specified in the notice of default, Town may issue written notice to Contractor and its performance bond surety of Town's termination of the Contract for default.
- C. **Waiver.** Time being of the essence in the performance of the Work, if Contractor's surety fails to arrange for completion of the Work in accordance with the Performance Bond within seven calendar days from the date of the notice of termination pursuant to paragraph (C), Town may immediately make arrangements for the completion of the Work through use of its own forces, by hiring a replacement contractor, or by any other means that Town determines advisable under the circumstances. Contractor and its surety will be jointly and severally liable for any additional cost incurred by Town to complete the Work following termination, where "additional cost" means all cost in excess of the cost Town would have incurred if Contractor had timely completed Work without the default and termination. In addition, Town will have the right to immediate possession and use of any materials, supplies, and equipment procured for the Project and located at the Project site or any Worksite on Town property for the purposes of completing the remaining Work.
- D. **Compensation.** Within 30 days of receipt of updated as-builts, all warranties, manuals, instructions, or other required documents for Work installed to date, and delivery to Town of all equipment and materials for the Project for which Contractor has already been compensated, Contractor will be compensated for the Work satisfactorily performed in compliance with the Contract Documents up to the effective date of the termination pursuant to the terms of Article 8, Payment, subject to Town's rights to withhold or deduct sums from payment otherwise due pursuant to Section 8.3, and excluding any costs Contractor incurs as a result of the termination, including any cancellation or restocking charges or fees due to third parties. If Contractor disputes the amount of compensation determined by Town, its sole recourse is to comply with the Claim Procedures in Article 12, by submitting a Claim no later than 30 days following notice from Town of the total compensation to be paid by Town.
- E. **Wrongful Termination.** If Contractor disputes the termination, its sole recourse is to comply with the Claim procedures in Article 12. If a court of competent jurisdiction or an arbitrator later determines that the termination for default was wrongful, the termination will be deemed to be a termination for convenience, and Contractor's damages will be strictly limited to the compensation provided for termination for convenience under Section 13.4, below. Contractor waives any claim for any other damages for wrongful termination including special or consequential damages, lost opportunity costs, or lost profits, and any award of damages is subject to Section 12.8, Burden of Proof and Limitations.

**13.4 Termination for Convenience.** Town reserves the right, acting in its sole discretion, to terminate all or part of the Contract for convenience upon written notice to Contractor.

- A. **Compensation to Contractor.** In the event of Town's termination for convenience, Contractor waives any claim for damages, including for loss of anticipated profits from the Project. The following will constitute full and fair compensation to Contractor, and Contractor will not be entitled to any additional claim or compensation:
1. **Completed Work.** The value of its Work satisfactorily performed as of the date notice of termination is received, based on Contractor's schedule of values and unpaid costs for items delivered to the Project site that were fabricated for incorporation in the Work;
  2. **Demobilization.** Demobilization costs specified in the schedule of values, or if demobilization costs were not provided in a schedule of values pursuant to Section 8.1, then based on actual, reasonable, and fully documented demobilization costs; and
  3. **Termination Markup.** Five percent of the total value of the Work performed as of the date of notice of termination, including reasonable, actual, and documented costs to comply with the direction in the notice of termination for convenience, and demobilization costs, which is deemed to cover all overhead and profit to date.
- B. **Disputes.** If Contractor disputes the amount of compensation determined by Town pursuant to paragraph (A), above, its sole recourse is to comply with the Claim procedures in Article 12, by submitting a Claim no later than 30 days following notice from Town of total compensation to be paid by Town.

**13.5 Actions Upon Termination for Default or Convenience.** The following provisions apply to any termination under this Article, whether for default or convenience, and whether in whole or in part.

- A. **General.** Upon termination, Town may immediately enter upon and take possession of the Project and the Work and all tools, equipment, appliances, materials, and supplies procured or fabricated for the Project. Contractor will transfer title to and deliver all completed Work and all Work in progress to Town.
- B. **Submittals.** Unless otherwise specified in the notice of termination, Contractor must immediately submit to Town all designs, drawings, as-built drawings, Project records, contracts with vendors and Subcontractors, manufacturer warranties, manuals, and other such submittals or Work-related documents required under the terms of the Contract Documents, including incomplete documents or drafts.
- C. **Close Out Requirements.** Except as otherwise specified in the notice of termination, Contractor must comply with all of the following:
1. Immediately stop the Work, except for any Work that must be completed pursuant to the notice of termination and comply with Town's instructions for cessation of labor and securing the Project and any other Worksite(s).
  2. Comply with Town's instructions to protect the completed Work and materials, using best efforts to minimize further costs.
  3. Contractor must not place further orders or enter into new subcontracts for materials, equipment, services or facilities, except as may be necessary to complete any portion of the Work that is not terminated.

4. As directed in the notice, Contractor must assign to Town or cancel existing subcontracts that relate to performance of the terminated Work, subject to any prior rights, if any, of the surety for Contractor's performance bond, and settle all outstanding liabilities and claims, subject to Town's approval.
  5. As directed in the notice, Contractor must use its best efforts to sell any materials, supplies, or equipment intended solely for the terminated Work in a manner and at market rate prices acceptable to Town.
- D. **Payment Upon Termination.** Upon completion of all termination obligations, as specified herein and in the notice of termination, Contractor will submit its request for Final Payment, including any amounts due following termination pursuant to this Article 13. Payment will be made in accordance with the provisions of Article 8, based on the portion of the Work satisfactorily completed, including the close out requirements, and consistent with the previously submitted schedule of values and unit pricing, including demobilization costs. Adjustments to Final Payment may include deductions for the cost of materials, supplies, or equipment retained by Contractor; payments received for sale of any such materials, supplies, or equipment, less re-stocking fees charged; and as otherwise specified in Section 8.3, Adjustment of Payment Application.
- E. **Continuing Obligations.** Regardless of any Contract termination, Contractor's obligations for portions of the Work already performed will continue and the provisions of the Contract Documents will remain in effect as to any claim, indemnity obligation, warranties, guarantees, submittals of as-built drawings, instructions, or manuals, record maintenance, or other such rights and obligations arising prior to the termination date.

#### **Article 14 - Miscellaneous Provisions**

**14.1 Assignment of Unfair Business Practice Claims.** Under Public Contract Code § 7103.5, Contractor and its Subcontractors agree to assign to Town all rights, title, and interest in and to all causes of action it may have under section 4 of the Clayton Act (15 U.S.C. § 15) or under the Cartwright Act (Chapter 2 (commencing with § 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the Contract or any subcontract. This assignment will be effective at the time Town tenders Final Payment to Contractor, without further acknowledgement by the parties.

**14.2 Provisions Deemed Inserted.** Every provision of law required to be inserted in the Contract Documents is deemed to be inserted, and the Contract Documents will be construed and enforced as though such provision has been included. If it is discovered that through mistake or otherwise that any required provision was not inserted, or not correctly inserted, the Contract Documents will be deemed amended accordingly.

**14.3 Waiver.** Town's waiver of a breach, failure of any condition, or any right or remedy contained in or granted by the provisions of the Contract Documents will not be effective unless it is in writing and signed by Town. Town's waiver of any breach, failure, right, or remedy will not be deemed a waiver of any other breach, failure, right, or remedy, whether or not similar, nor will any waiver constitute a continuing waiver unless specified in writing by Town.

**14.4 Titles, Headings, and Groupings.** The titles and headings used and the groupings of provisions in the Contract Documents are for convenience only and may not be used in the construction or interpretation of the Contract Documents or relied upon for any other purpose.

**14.5 Statutory and Regulatory References.** With respect to any amendments to any statutes or regulations referenced in these Contract Documents, the reference is deemed to be the version in effect on the date that bids were due.

**14.6 Survival.** The provisions that survive termination or expiration of this Contract include Contract Section 11, Notice, and subsections 12.1, 12.2, 12.3, 12.4, 12.5, and 12.6 of Section 12, General Provisions; and the following provisions in these General Conditions: Section 2.2(J), Contractor's Records, Section 2.3(C), Termination, Section 3.7, Ownership, Section 4.2, Indemnity, Article 12, Dispute Resolution, and Section 11.2, Warranty.

## **6. Special Conditions**

**Pre-Construction Conference.** Town will designate a date and time for a pre-construction conference with Contractor following Contract execution. Project administration procedures and coordination between Town and Contractor will be discussed, and Contractor must present Town with the following information or documents at the meeting for Town's review and acceptance before the Work commences:

1. Name, 24-hour contact information, and qualifications of the proposed on-site superintendent;
2. List of all key Project personnel and their complete contact information, including email addresses and telephone numbers during regular hours and after hours;
3. Staging plans that identify the sequence of the Work, including any phases and alternative sequences or phases, with the goal of minimizing the impacts on residents, businesses and other operations in the Project vicinity;
4. If required, traffic control plans associated with the staging plans that are signed and stamped by a licensed traffic engineer;
5. Water Pollution Control Plan;
6. Draft baseline schedule for the Work as required under Section 5.2 of the General Conditions, to be finalized within ten days after Town issues the Notice to Proceed;
7. 2 week public notification letter;
8. 2 day (48 hour) notice letter;
9. "No Parking" Sign;
10. Breakdown of lump sum bid items, to be used for determining the value of Work completed for future progress payments to Contractor;
11. Schedule with list of Project submittals that require Town review, and list of the proposed material suppliers;
12. Plan for coordination with affected utility owner(s) and compliance with any related permit requirements;
13. Videotape and photographs recording the conditions throughout the pre-construction Project site, showing the existing improvements and current condition of the curbs, gutters, sidewalks, signs, landscaping, streetlights, structures near the Project such as building faces, canopies, shades and fences, and any other features within the Project area limits;
14. Any other documents specified in the Special Conditions or Notice of Potential Award.

**Close Out Requirements.** Contractor's close out requirements include the following, if applicable:

1. Contractor must replace, with thermoplastic, any existing striping within and adjacent to the Project site that is damaged during the Work. Partially damaged striping must be replaced in its entirety.
2. Contractor must replace any survey monuments that are damaged or removed during the Work, with a Record of Survey filed by a licensed land surveyor as required by California law.
3. Before removing any traffic control or street signs on the Project site, Contractor must take photographs showing their original locations. Upon completion of each phase of construction, Contractor must temporarily reset the signs at those locations. Contractor must then replace the signs permanently upon completion of the Work and the cost of their removal and replacement must be included in the Bid Proposal.
4. Contractor must maintain any rural mail boxes on the Project site and relocate them to their permanent locations as soon as possible in the course of the Work, to the satisfaction of the affected property owners and the postal service.

#### END OF SPECIAL CONDITIONS

### **7. General Constructions Requirements**

#### **7.1. General Constructions Requirements**

##### **Measurement and Payment**

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all of the work involved in compliance with the Plans, Specifications, and "General Construction Requirements" of the contract documents, shall be deemed included in the price paid for other contract items and no additional compensation shall be allowed therefore.

##### **Project Plans**

The attached "Locations of Work" found in Attachment A shall be considered as the Plans.

##### **Order of Work**

Order of Work shall conform to the provisions in Section 5-1.02, "Contract Components," of the Standard Specifications and these Contract Documents.

At least five (5) working days before any work is started, the Contractor shall furnish to the Engineer a written schedule for the work, listing the dates on which individual areas are to be subject to project related work and the extent of impact caused by the work. Additionally, the Contractor shall submit any request for approval for special traffic consideration including but not limited to lane closures, etc. The Contractor shall thenceforth adhere diligently to said written schedule in the prosecution of the work.

Work for this project needs to be coordinated with the 2024 Annual Street Repair and Resurfacing Project. Resurfacing work will generally follow the concrete work but certain work may need to occur around the same time. The Engineer shall be the main contact for the coordination of the work.

The street may not be available for work if scheduling is not requested by the Contractor and approved by the Engineer (5) working days prior to the desired workday.

**Cooperation**

Attention is directed to Section 5-1.36C, "Nonhighway Facilities," of the Standard Specifications.

It is the Contractor's responsibility to work with utility companies to coordinate the removal, relocation, raising to grade, installation of the new facilities, or any other utility work as shown on the plans or indicated in the specifications with the appropriate utility company. The Contractor shall provide advance notification and shall allow sufficient time and work space for the utility company to complete the work necessary.

If in the opinion of the Engineer, the Contractor's operations are delayed by reason of utility facilities not being removed or relocated, the Contractor will be entitled to an extension of time only. The Contractor shall be entitled to no other compensation for such delay.

**Progress Schedule**

The Contractor shall submit a project progress schedule for approval by the Engineer within eight (8) Working Days, not including Saturdays, Sundays, and legal holidays from the date of the Notice of the Award of Contract or 3 days before the pre-construction conference, whichever comes first. Failure to submit an acceptable progress schedule shall result in rejection of the Contractor's proposal. The progress schedule shall be in the form specified below unless otherwise specified in the Special Provision or approved by the Engineer. Updated progress schedules shall be provided by the Contractor monthly with the estimates of work required in Section 9-1.16, "Progress Payments," of the Standard Specifications. No partial payments will be made for any work until an updated schedule has been submitted and approved by the Engineer. Updated schedules shall incorporate all current schedule information, including actual progress, approved time adjustments, and proposed changes in sequence and logic.

The Contractor must furnish a computerized schedule prepared by the critical path method (CPM) which shows the order in which the Contractor proposes to carry out the work; the sequence and interdependence of construction activities; all salient features of the work (including procurement of materials and equipment); the dates on which the Contractor will start the salient features of the work; and the scheduled dates for completing the said salient features. The construction schedule shall include:

- a. Time for submittals and reviews;
- b. Time for fabrication and delivery of manufactured products for the work; and
- c. The interdependence of procurement and construction activities.

The construction schedule shall:

- a. Be a timescaled network diagram referenced to specific calendar dates;
- b. Include time for the Engineer to review submittals or inspect the work; and
- c. Identify the activities which constitute the controlling operations or critical path.

The construction schedule shall not contain multiple critical paths.

Scheduling of change order work is the responsibility of the Contractor. The Contractor shall revise the schedule to incorporate all activities involved in completing the change order work, and submit a new schedule to the Engineer for review.

Delays or changes to non-critical activities will not be considered for a contract time extension. Non-critical activities are those activities which when delayed, do not affect the contract completion time.

The project schedules submitted shall be consistent in all respects with the time and order of work requirements of the contract. The Engineer, at his or her sole discretion, retains the right to reject any and all construction schedules

submitted by the Contractor, including when the Engineer determines that the Contractor has too many items on the Critical Path, or the logic of the schedule is in error, or if the Engineer determines salient items of work are missing from the schedule.

Subject to the above provisions, nothing herein shall preclude the Contractor from early completion of the contract.

The Contractor shall submit updated progress schedules to the Engineer as a condition of approval for the monthly progress payments and final acceptance.

### **Record Drawings**

The Contractor shall keep and maintain on the job site, one record set of drawings. On these, the Contractor shall mark all project conditions, locations, configurations, and any other changes or deviations which may vary from the details represented on the original contract documents, including buried or concealed construction and utility features which are revealed during the course of construction. Final payment will not be approved until the Contractor prepared record drawings have been delivered to the Engineer.

### **General Measurement and Payment Requirements**

The Contractor shall submit in all field quantities completed to date for payment with each monthly pay estimate. The Contractor shall provide, in writing, who from their team will be responsible for field measuring quantities with the Town's representative. Upon completion of a contract bid item, the Contractor's representative shall field measure the final quantities with the Town's representative. This agreed upon amount will be considered final and no re-measuring of these field quantities will be allowed without the approval of the Engineer. All supporting documentation required for payment of an item, shall be submitted by the Contractor within two pay periods following the work. Documentation submitted more than two pay periods after the work was completed will not be paid and the cost of this work shall be borne by the Contractor.

### **Truck Routes**

Per the Town Ordinance Section 15.30.410, the following streets and highways or portions thereof within the Town limits are designated Truck Routes and are authorized for use by operators of trucks and other vehicles, which exceed a maximum gross weight of ten thousand (10,000) pounds:

- Highway 17
- Los Gatos-Saratoga Road (Highway 9)
- Los Gatos-Almaden Road
- Los Gatos Boulevard
- Blossom Hill Road
- Winchester Boulevard
- Lark Avenue

Other Town streets are unauthorized for truck routes unless otherwise approved by the Engineer.

### **Hours of Work**

Unless otherwise approved in writing by the Engineer or specified in these Contract Documents, the hours of work for this project are Monday through Friday, 8:00 AM to 5:00 PM, unless otherwise approved by the Engineer.

The work hours will be strictly enforced. The Engineer has full authority to implement the working hours and completely shut down the construction operations outside the hours of work specified. Should the provisions of this section not be met, liquidated damages of One Thousand Dollars (\$1,000.00) for every 60-minute time period (or portion thereof) beyond the hours of work allowable shall be withheld from moneys due to the Contractor.

### **24-Hour Contact Number**

The Contractor shall assign a project superintendent who has the complete authority to make decisions on behalf of the Contractor. The project superintendent shall be on the job at all times during construction and shall be available and on call 24 hours a day for the duration of the project. The Contractor shall provide to the Engineer and to the Los Gatos-Monte Sereno Police Department a 24-hour contact number for the project superintendent. This number shall not direct calls to a recorder or other message taking service.

### **Advance Public Notification**

Two weeks prior to beginning any work in an area, the Contractor shall deliver written notice to all adjoining residents and businesses, tenants and other applicable parties listed below and all other properties where their only ingress/egress is through the project's work area. Individual or separate notices shall be given for general construction activity in an area as well as specific activities, which will, in any way, inconvenience the resident/property owner/tenant or affect their operations or access to their properties. Such notices shall include the expected date for start of construction, a general description of the construction activity to take place, expected duration of the activity, and the name, address, and the contact number of the Contractor's superintendent. The Contractor shall provide accurate information regarding the construction schedule and activities to be incorporated into the "two-week" notification. The Contractor shall make every effort to coordinate work with individual residents and businesses whose access will be disrupted in order to minimize the disruption and impacts on the resident or business.

The Contractor shall also prove and hand-deliver a "two-day" notice. The notice shall be distributed two working days prior to the work beginning. The "two-day" notice shall be delivered to all adjoining residents and business, tenants, and other applicable parties listed below and any other properties who sole ingress/egress is through the project's work area.

Copies of all notices shall be provided to the Engineer for approval five (5) working days prior to the desired distribution date.

Should the Contractor's schedule change and/or differ in any capacity from the schedule initially mentioned in the notification to the resident/property owner/tenant or from the updates to the Town website, the Contractor shall re-notify all applicable parties (residents/property owner/tenant and/or businesses mentioned below) five (5) working days prior to the beginning of any work on that street.

The Contractor shall contact and coordinate the work with the following parties throughout the project. The "two-week" and "two-day" notification shall also be given to the following parties prior to beginning any work:

Santa Clara Valley Transportation Agency--Steve Newgren--(408) 952-4106  
West Valley Collection and Recycling--(408) 283-8500  
U.S. Postal Service--Post Master--(408) 395-7526  
Los Gatos/Monte Sereno Police Department--(408) 354-8600  
Santa Clara County Fire Department--(408) 378-4010

The Contractor shall also give written notice to residents/businesses for any driveway closures or anticipated service disruptions. The Contractor shall coordinate all disruptions with the appropriate utility, property owner, resident, business and the Town. Notice shall be given in advance and specify the duration of the disruption of any utility, and the temporary closure of access to any driveway. Such notice will comply with the requirements for closure of driveway access as specified under Special Provision Section 10-2, "Traffic Control Requirements."

Lack of proper advance notification and coordination shall result in the work being shut down. All costs associated with the stoppage of work shall be borne by the Contractor.

### **Line and Grade**

The Contractor shall layout the project by providing all stakes and marks needed to establish the lines and grades required for completion of the work specified on the Plans and in these Contract Documents to the satisfaction of the Engineer.

### **Meetings**

Prior to commencement of any work on the project, a pre-construction conference will be scheduled by the Town and held at the Town's Engineering Building or hosted via virtual meeting for the purpose of review and discussion of the project schedule and construction procedures. The Contractor's project manager and/or project superintendent and representatives from all listed subcontractors shall be required to attend the pre-construction conference. The Contractor shall prepare and submit at the pre-construction meeting the proposed project schedule, water pollution control plan, traffic control plan, public notification letter, and other submittals as specified under Special Conditions.

The Contractor shall also schedule and conduct weekly field meetings at locations to be determined by the Town. The meetings shall be held at the same time and place each week and shall include all subcontractors working on the project and discussions of scheduled work on the project during the week of the meeting. The Contractor shall notify the Engineer of the time, date, and location of these meetings 72 hours in advance of the first meeting. Detailed schedules for the following two weeks shall be submitted to the Engineer at each weekly meeting.

### **Waste Haulers and Recycling Operations**

The Contractor shall not impair or impede waste hauler and recycling operations scheduled to be conducted within the project area. It is the Contractor's responsibility to determine which waste hauler and recycling operators are scheduled to operate within the project area, and to develop a project schedule that will not impair or impede the waste hauler or recycling operations.

### **Project Appearance and Street Sweeping**

The Contractor shall maintain a clean work site. Debris developed during construction shall be disposed concurrently with its generation. Stockpiling of debris or construction materials shall not be allowed unless otherwise approved by the Engineer.

The Town prohibits the use of any public property or public right-of-way locations as construction staging points, unless specifically approved by the Engineer.

### **Right-of-Way**

The Contractor shall operate within the public right-of-way only.

### **Work in Private Property**

The Contractor shall secure right-of-entry agreements with each private property owners before any work in private properties. The language for the right-of-entry agreement must be approved by the Town.

### **Tree Protection**

The Contractor shall comply with the Town Ordinance Chapter 29, Article 1, Division 2, "Tree Protection." The Contractor shall provide protective tree fencing per the Town Ordinance Sec. 29.10.1005, "Protection of trees during construction." The Engineer and Town Arborist shall be notified of any damages that occurs to a protected tree during construction.

### **Staging/Disposal Areas**

The Contractor shall survey the area for construction staging. Staging areas shall not be located in a residential area.

The following requirements shall apply to the contractor's staging area:

- No stockpiles or staging area will be allowed in the right-of-way or on undeveloped lots unless specifically approved by the Engineer
- The staging area will be included in the Contractor's SWPPP
- The staging area will not be located in an environmentally or culturally sensitive area and/or impact water resources (rivers, streams, bays, inlets, lakes, drainage sloughs).
- The staging area will not be located in a regulatory floodway or within the base floodplain (100-year).
- The staging area will not affect access to properties or roadways.

The Contractor shall obtain the approval of the Engineer before staging equipment or storing materials in the public right-of-way or on Town property. In addition, the Contractor shall provide proof of an agreement when using private property for staging, if requested by the Engineer.

All debris shall be hauled off and disposed of the same working day in which the material was generated.

Personal vehicles of the Contractor's employees shall not be parked in the neighborhood or on the traveled way. When entering or leaving roadways carrying public traffic, the Contractor's equipment, whether empty or loaded, shall in all cases yield to public traffic and shall travel in the normal direction of travel.

#### **Dust Control**

The following requirements shall be applicable to this contract in lieu of the requirements of Section 18, "Dust Palliatives," of the Standard Specifications:

- A. The Contractor shall provide an acceptable plan for preventing the generation of dust due to the Contractor's operations in the construction zones, along the haul routes, or equipment parking areas. This plan may consist of water sprinkling sweepers or an equivalent service. No separate payment will be made for dust control and all costs in connection therewith shall be included in the payment items to which the work is incidental.
- B. In the event the control of dust is not satisfactory to the Owner, the Owner shall take such measures as may be necessary to ensure satisfactory dust control and deduct the cost of such measures from any payments due to the Contractor.

#### **Water for Construction**

The costs of water as required for the construction and post-construction on this project, including dust control, shall be considered as included in the costs of items bid for applicable item of work and no separate payment will be made therefor. The Contractor shall conform to the requirements of the water company from which water is purchased. In no case shall the Contractor violate the Town's water conservation ordinance.

#### **Sanitation**

The Contractor shall provide for sanitary facilities for the use of the workers on the job. Such facilities shall be placed and maintained by the Contractor so as not to be a nuisance to the neighbors, nor offensive to the senses nor the community standards of decency. The Engineer shall be the sole judge of the adequacy of the facility, the placement, and the maintenance thereof. Upon notification by the Engineer of deficiencies in any of these areas, the Contractor shall make immediate corrections. Failure to take corrective action within 24 hours shall give the Engineer due cause to stop the work in the contract and to order the corrective work to be done on the sanitary facility and to charge all costs of such work against the monies due or to become due to the Contractor.

#### **Water Pollution Control**

Water pollution control work shall conform to the provisions in Section 13, "Water Pollution Control," of the Standard Specifications and these Contract Documents, with the exception of payment. Payment shall be covered under "Measurement and Payment" under these Technical Specifications.

The Contractor shall be responsible for ensuring that all work conforms to the "Best Management Practices for the Construction Industry" found in the Storm Water Pollution Prevention Plan (SWPPP), the "Blueprint for a Clean Bay" handout.

The Contractor shall comply with the requirements of the State Water Resource Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharge Associated with Construction and Land Disturbance Activities.

The Contractor shall not violate any discharge prohibition contained in the California Regional Water Quality Control Board San Francisco Bay Basin Water Quality Control Plan ("Basin Plan").

## **7.2. Traffic Control Requirements**

### **Measurement and Payment**

Full compensation for preparing traffic control plans, temporary pavement delineation, providing construction, changeable message and detour signs, and for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all of the work involved in compliance with the Plans, Specifications, and "Traffic Control Requirements" of the Contract Documents, including any additional changeable message signs, shall be included and paid for in the appropriate bid item price.

## **Bid Item #2 Temporary Pedestrian Access L.S.**

### **General**

Traffic control shall conform to the provisions of Section 12 "Temporary Traffic Control" of the Standard Specifications, Part 6, "Temporary Traffic Control," of the California Manual on Uniform Traffic Control Devices (CA MUTCD) with latest revisions, and these Technical Specifications. Nothing in these Technical Specifications shall be construed as relieving the Contractor from the responsibilities specified in Section 7-1.04, "Public Safety," of the Standard Specifications and these Contract Documents.

The traffic control plan shall be prepared in compliance with the Caltrans Standard Plans and/or CA MUTCD and shall be prepared by a certified traffic engineer or a qualified traffic control professional. The Contractor shall submit a scaled drawing with detailed information, such as lanes to be closed or narrowed, time and days of operation, transitions, cones and barricades, signs, arrow boards, pedestrian and bicycle provisions, etc. The traffic control plan should show length of transitions, cone spacing, sign spacing, etc. based on the posted speed limits or the posted construction zone speed limits. The traffic control plan shall also include a provision for the Contractor to contact and coordinate with the Valley Transportation Authority (VTA) if a bus stop is affected.

The Contractor shall maintain a safe workplace throughout the job including, but not limited to, providing all flaggers, safety equipment, flashing arrow boards, changeable message signs (minimum of two), traffic control devices; maintenance of barricades, safe pedestrian passages along sidewalks, maintenance of handicap access throughout the project site where applicable and maintenance of pavement within the limits of the roadway and driveways with a suitable traffic bearing surface.

The Contractor shall provide and maintain all necessary traffic control devices to ensure safe pedestrian and vehicular access through and around the job site. Warning signs shall be installed at locations in accordance with the CA MUTCD, Part 6, "Temporary Traffic Control." The Contractor shall fulfill the requirements of this section, 24 hours per day, seven days a week, including holidays, from the time the Notice to Proceed is issued until the project is formally accepted.

Should the Contractor fail to perform these duties, the Engineer, at the Engineer's sole discretion, may elect to have City, or contract forces, perform the duties, deducting the expenses incurred from any moneys that are due, or to become due, to the Contractor. By exercising this option, the Contractor is in no way relieved of the responsibility to perform these duties.

The Contractor shall provide a minimum of two competent and qualified flaggers dedicated solely to directing traffic if traffic lanes have been reduced to only one lane for two-way traffic, in and out of driveways and cross-streets and/or across the construction area as deemed to ensure safe traffic control during construction operations. Flaggers shall be equipped with all necessary tools to properly control the traffic.

### **Traffic Control/Management Plan**

A traffic control plan shall be submitted by the Contractor to the Engineer a minimum of five (5) working days prior to any work commencing on the project. The traffic control plan shall be reviewed and accepted by the Engineer prior to any work commencing on the project. All traffic plans shall be prepared in accordance with the CA MUTCD, Part 6, "Temporary Traffic Control," Section 12, "Temporary Traffic Control," of the Standard Specifications, and these Contract Documents.

### **No Parking Signs**

Prior to the start of work which requires parking restriction, the Contractor shall request approval to post and maintain temporary "No Parking" signs on each street where the operations will take place. It shall be the Contractor's responsibility to post "No Parking" signs in the areas where the Contractor's work will require restricted parking. The Town will provide signs for the Contractor's use. To be enforceable, the signs must be posted not less than 72 hours prior to the start of the work at a maximum spacing of 60 feet. The signs must clearly show the date(s) and hours of the parking prohibition, as well as the date and time the signs were posted, and the project name and contractor's phone number. If the work is not performed during the timeframe indicated on the "No Parking" signs, the work will be rescheduled with at least five (5) working days advance notice. The Contractor shall perform all re-posting of "No Parking" signs and re-notification of businesses, tenants, and residents as a result of his failure to meet the posted schedule. Any delays caused by failure of the Contractor to adhere to the approved schedule will be at the Contractor's sole expense. No additional compensation will be allowed for costs resulting from said delays.

The Contractor shall remove the "No Parking" signs immediately when they are no longer needed for use in the respective area of the project. The Contractor shall notify the Los Gatos/Monte Sereno Police Department directly after posting and immediately upon removal of the said signs at (408) 354-8600.

During the morning of each scheduled workday, the Contractor shall be responsible for calling the Los Gatos/Monte Sereno Police Department Police Dispatch to tow cars, if necessary, as approved by the Engineer. The Contractor shall have available for the police responding to the call photo documentation of the "No Parking" signs being posted if the signs were removed or vandalized the previous night.

### **Detours, Temporary Striping, and Barriers**

Any approved detours or barriers, signing and striping necessary to complete the construction of the project shall be provided, installed, maintained, and removed by the Contractor at his expense. Temporary striping shall be self-sticking traffic marking tape, vinyl or otherwise, developed for such use, and shall be used for temporary striping as required,

unless shown otherwise on the plans or specified in the Technical Specifications. No painted temporary striping or markings will be allowed unless the temporary markings will be entirely covered by the permanent markings.

Notify the Los Gatos/Monte Sereno Police Department daily at (408) 354-8600 of street or lane closures or detours within the roadway prior to setting up and upon removal of traffic control devices.

#### **Additional Construction Area Signs and Controls**

In addition to the requirements of the CA MUTCD, the following traffic controls will be required as specified by the Engineer. These additional requirements in no way relieve the Contractor from his obligation to comply with the standards set forth in that manual.

- "Road Work Ahead" (Type C-23(CA)) signs shall be posted in advance of the first major cross street before the start of the work zone to allow traffic to avoid the work zone prior to entering the zone. The signs shall also be posted at the approaches to the project site.
- "End Road Work" (Type G20-2) signs shall be placed at all public road exits from the project site.
- The Contractor shall provide, install and maintain a minimum of four (4) lighted barricades for each individual construction site for concrete improvements (i.e. for curb and gutter removal & replacement and for accessibility ramp installation).
- Changeable message signs will be used starting one (1) week prior to construction beginning and will be maintained in place until construction impacts to the public no longer exist as determined by the Engineer.
- "Bikes May Use Full Lane" (R4-11)–modified for temporary construction sign

The Contractor shall be responsible for locating existing poles on which to mount these signs or shall provide temporary stands or poles on which to place the required signs. The Engineer shall approve the method of attachment to existing poles prior to sign installation. No sign shall be mounted on decorative street light poles unless the Contractor can clearly show that the mounting method will not damage the finish on the poles.

Upon completion of the work, the signs and posts shall be removed and disposed of outside the public right of way in conformance with the provisions in the Standard Specifications.

#### **Maintenance of Pedestrian Access and Circulation**

Safe pedestrian access and circulation that is fully wheelchair accessible shall be maintained by the Contractor through or around the project area. All walkways, pedestrian crossings, ramps and other pedestrian facilities removed or blocked by the Contractor's operations shall be replaced with temporary facilities unless otherwise approved by the Engineer.

Pedestrian access at each individual project site may be diverted for a maximum of five (5) calendar days with approved traffic control plan. Drop off from existing improvements to excavated areas shall be temporarily ramped. Ramps shall be maintained at 12:1 or flatter with compacted sub-grade or base rock material until final improvements are installed.

#### **Lane Closures**

Requests for lane closures shall be made a minimum of five working days prior to the proposed closure. Once the lane closure has been approved by the Town, the Contractor shall post a minimum of five (5) working days in advance of the proposed lane closure a changeable message sign at the limits of each closure or as specified by the Engineer. These changeable message signs shall also be used on the day of the actual closure. The changeable message signs shall indicate the days and hours of the proposed lane closure and the type of work being done during that lane closure.

Flashing arrow signs shall be used for all lane closures. The Contractor shall check with the Engineer to confirm any lane closure restrictions that may be in effect before closing any lanes.

The Contractor shall leave the streets open to traffic until just prior to starting the work, and will provide all barricades, signs and traffic control measures necessary to protect the work.

No work that interferes with public traffic shall be performed outside of the working hours, except as otherwise approved by the Engineer. All traffic lanes shall be open to traffic outside of the working hours.

A minimum of one paved, or surfaced traffic lanes and one paved bicycle lane, not less than fifteen (15) feet wide (10 foot wide for the traveled vehicle lane and 5 feet wide for the bicycle lane), shall be open for use by public traffic in each direction of travel. Traffic may not be routed over unpaved roadways unless authorized by the Engineer.

In addition, the full width of the traveled way on each street shall be open for public use on Saturdays and Sundays (except for those streets approved by the Engineer for weekend work), on designated legal holidays, and when construction operations are not actively in progress. Designated legal holidays are: January 1, the third Monday in January, the third Monday in February, June 19, the last Monday in May, July 4, the first Monday in September, the fourth Thursday of November, and December 25. When a designated holiday falls on a Saturday, the preceding Friday shall be treated as a legal holiday. When a designated holiday falls on a Sunday, the following Monday shall be treated as a legal holiday.

Deviations from the requirements of this section concerning hours of work, which do not change the cost of the work, may be permitted upon the written request of the Contractor, if in the opinion of the Engineer, the general public will be better served and the work expedited. Such deviations shall not be implemented until the Engineer has provided the Contractor with written approval to do so. All other modifications will be made by contract change order.

The Contractor shall pay the Town liquidated damages in the amount of \$1,000 per hour (or part of an hour) for traffic control that is set-up before the designated and approved hours of work. Liquidated damages for failure to open streets by the required time shall be \$1,000.00 per hour.

#### **Traffic Control System for Lane Closure**

A traffic control system shall consist of closing traffic lanes in accordance with the provisions of Section 12, "Temporary Traffic Control," of the Standard Specifications, and these Contract Documents.

The provisions in this section will not relieve the Contractor from the responsibility to provide additional devices or take measures as may be necessary to comply with the provisions of Section 7-1.04, "Public Safety," of the Standard Specifications.

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

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

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

**Temporary Pavement Delineation**

Temporary pavement delineation shall comply with these Technical Specifications and with Section 12-3, "Temporary Traffic Control Devices," of the Standard Specifications, CA MUTCD, and these Contract Documents.

**Property Access Requirements**

The Contractor shall maintain property access to all residents and businesses at all times unless otherwise approved by the Engineer. Upon approval by the Engineer, access to certain properties may be temporarily closed if all of the following conditions can be met:

- a. No options exist to maintain property access and complete the project.
- b. The Contractor has discussed the closure with the resident or business owner in person.
- c. Residents or business owners has been notified, in writing, at least five (5) calendar days in advance of the time and length of closure
- d. Resident or business owners have been reminded of the closure, in writing, at least two (2) working days prior to the actual closure.
- e. The Contractor has provided the resident or business with a contractor name and number to call with questions regarding the closure.
- f. Closure will last no longer than three (3) working days

**Signalized Intersections**

The Contractor shall be responsible for contacting and coordinating with the Town's signal maintenance contractor for any work at signalized intersections. No additional working days will be given due to the Contractor for not scheduling the work with the Town's signal maintenance contractor prior to the start of work.

**8. Technical Specifications**

**8.1. Mobilization**

**Measurement and Payment**

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all of the work involved in compliance with the Plans, Specifications, and "Mobilization" of the Technical Specifications, shall be included and paid for in the appropriate bid item price.

<b>Bid Item #1</b>	<b>Mobilization</b>	<b>L.S.</b>
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**General**

Mobilization includes moving all materials and equipment onto the site of, furnishing and erecting plants, temporary buildings, and other construction facilities as required to ensure proper performance and completion of the Work. Mobilization shall include but not be limited to the following principal items:

- Achieving Town approval of the initial Contract Schedule.
- Moving on to the site of all Contractor's material and equipment required for first month's operations.
- Installing temporary construction power, wiring, and lighting facilities.

- Establishing fire protection system.
- Developing and installing construction water supply.
- Providing field office trailers for the Contractor, and the Engineer if required by the Contract Documents, complete with all specified furnishings and utility services including telephones, telephone appurtenances, computer and printer, and copying machine, Equipment, and Services.
- Providing on site sanitary facilities and potable water facilities.
- Furnishing, installing, and maintaining all storage buildings or sheds required for temporary storage of products, equipment, or materials that have not yet been installed in the Work. All such storage shall meet manufacturer's specified storage requirements, and the specific provisions of the specifications, including temperature and humidity control, if recommended by the manufacturer, and for all security.
- Arranging for and erecting Contractor's work and storage yard
- Posting all OSHA-required notices and establishment of safety programs and ensuring all safety programs required by the Contract Documents are implemented.
- Ensuring Contractor's superintendent is present at the job site full time.
- Furnishing, installing, and maintaining all off-site storage areas as required to undertake the Work, including all requirements of the Zoning Use Permit.
- Ensuring storm water control and biological compliance provisions are in place as required by the Contract Documents.
- Ensuring all requirements of the approved Storm Water Pollution Prevention Program are in place on the Project Site

### **Lump Sum Contract Payment**

For Lump Sum contracts, the percent of the total Contract Price shown for mobilization will be withheld from any money due the Contractor as initial Progress Payments until all mobilization items have been completed. Such retention of money for failure to complete mobilization items shall be in addition to the Town's right to retain any payments due to the Contractor.

Payment for mobilization will be made in the form of a single, lump sum, non-proratable allowance determined by the Engineer, and no part thereof will be approved for payment under the Contract until all mobilization items listed above have been completed as specified.

### **Negotiated Change Orders**

For negotiated Change Orders to any Contract, mobilization shall not exceed more than 5 percent of the total change order cost unless otherwise approved by the Engineer.

## **8.2. Temporary Fencing**

### **Measurement and Payment**

Full compensation for furnishing all labor, materials, tool, equipment, and incidentals, and for doing all of the work in compliance with the Plans, Specifications and "Temporary Fencing", of the Technical Specifications, shall be included and paid for in the appropriate bid item price.

**Bid Item #3                      Temporary Construction Fence                      L.F.**

**General**

Temporary fencing shall conform to Section 80, "Fences," of the Standard Specifications, the plans, and these contract documents. The Contractor shall erect, maintain, and dismantle temporary fencing around construction site and materials storage areas.

**Product**

Unless otherwise indicated, type of temporary chain link fencing shall be Contractor's option. The following types are acceptable:

- New materials or previously used salvaged chain link fencing in good condition.
- Posts: Galvanized steel pipe of diameter to provide rigidity. Post shall be suitable for setting in concrete footings, driving into ground, anchoring with base plates, or inserting in precast concrete blocks.
- Fabric: Woven galvanized steel wire mesh. Provide in continuous lengths to be wire tied to fence posts or prefabricated into modular pipe-framed fence panels. Steel Tubing: shall conform to ASTM A500, Grade B.
- Fence shall be minimum 6' in height in all places measured from adjacent finished grade.

**Execution**

Installation of temporary fencing shall not deter or hinder access to existing and new hose connections and fire hydrants. Maintain 3 feet diameter clear space around fire hydrants. Where fire hydrant or hose connection is blocked by fencing, provide access gate. Provide gates for personnel, delivery of materials, and access by emergency vehicles. Field verify proposed location with Engineer prior to installation.

Chain link posts shall be:

- Space at 10' maximum on center.
- Drive posts, set in holes and backfill, or anchor in precast concrete blocks.
- For soft and unstable ground conditions, install cast concrete plug around post.
- For posts over pavement, use steel post plates or precast concrete blocks.
- For gate posts, use bracing or concrete footings to provide rigidity for accommodating size of gate.

- Attach fabric Securely to posts.
- Install gates with required hardware.

### **Maintenance and Removal**

Maintain fencing in good condition. If damaged, immediately repair.

Remove temporary fencing upon completion of Work or when no longer required for security or control. Backfill holes and compact. Holes in pavement shall be surfaced to match existing paving. Repair damage caused by installation of temporary fencing.

### **8.3. Demolition**

#### **Measurement and Payment**

Full compensation for furnishing all labor, materials, tool, equipment, and incidentals, and for doing all of the work in compliance with the Plans, Specifications and "Demolition", of the Technical Specifications, shall be included and paid for in the appropriate bid item price.

<b>Bid Item #4</b>	<b>Demolition</b>	<b>L.S.</b>
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### **PART 1 -- GENERAL**

#### **THE REQUIREMENT**

- A. The CONTRACTOR shall provide all materials, equipment and labor necessary to perform and complete all demolition work shown on the Drawings and as specified herein. This includes, but is not necessarily limited to, such items as demolition, removal, recycling and disposal of asphalt concrete, miscellaneous concrete, vegetation and all other structures, or features as required.
- B. Manufactured articles, materials, equipment, and accessories shall be demolished in accordance with the manufacturer's printed specifications and recommendations, and industry standards, unless otherwise shown or specified.
- C. Hazardous materials shall be handled, removed and disposed of in accordance with all regulatory agency requirements.
- D. Building utilities shall be disconnected, removed, capped and identified in accordance with the appropriate agency requirements.
- E. The CONTRACTOR shall coordinate with the TOWN for demolition permits required by the TOWN and with all other regulatory agencies and utility companies.

#### **REFERENCE SPECIFICATIONS, CODES, AND STANDARDS**

- A. The demolition and sealing of wells, septic tanks and underground tanks shall be in accordance with regulatory agency requirements. The CONTRACTOR shall obtain all required permits and file all required reports.
- B. Commercial Standards:
  - 1. USA Underground Service Alert.

#### CONTRACTOR SUBMITTALS

- A. **Demolition Schedule:** The CONTRACTOR shall submit a complete coordination schedule for demolition work including shut-off and continuation of utility services prior to start of the work. The schedule shall indicate proposed methods and operations of facility demolition, and provide a detailed sequence of demolition and removal work to ensure uninterrupted operation of occupied areas.
- B. CONTRACTOR submit a Waste Management Plan identifying how that diversion will be met.
- C. The CONTRACTOR shall provide copies of written agreements from private land owner's, landfill operators, or other agencies accepting disposal of any demolished material prior to any work.

#### JOB CONDITIONS

- A. **Condition of Facilities:** The TOWN assumes no responsibility for actual condition of facilities to be demolished. The CONTRACTOR shall visit the site and inspect the existing facilities.

#### PART 2 -- PRODUCTS (Not Used)

#### PART 3 -- EXECUTION

#### OCCUPANCY AND POLLUTION CONTROL

- A. Water sprinkling, temporary enclosures, chutes and other suitable methods shall be used to limit dust and dirt rising and scattering in the air. The CONTRACTOR shall comply with all government regulations pertaining to environmental protection.
- B. Water shall not be used in a manner that creates hazardous or objectionable conditions such as ice, flooding, or pollution.

#### PROTECTION

- A. Safe passage of persons around area of demolition shall be provided in accordance with all safety and regulatory requirements. Operations shall be conducted to prevent damage to adjacent buildings, structures, other facilities, people and property.
- B. Interior and exterior shoring, bracing, or supports shall be provided to prevent movement, settlement or collapse of structures to be demolished and to adjacent facilities to remain.
- C. Existing landscaping materials, structures, and appurtenances which are not to be demolished shall be protected and maintained.and replaced if damaged.

- D. The CONTRACTOR shall protect and maintain conduits, drains, sewers, pipes and wires that are not to be demolished.

#### SMALL STRUCTURE DEMOLITION

- A. Small structures may be removed intact when acceptable to the ENGINEER and approved by the Town Building Official.
- B. Demolition shall proceed in a systematic manner, typically from top of structure to ground.
- C. Concrete and masonry shall be demolished in small sections.

#### BELOW-GRADE DEMOLITION

- A. Footings, foundation walls, below-grade construction and concrete slabs on grade including utility lines shall be demolished and removed to a depth which will not interfere with new construction but shall not be less than 12 inches below existing ground surface or future ground surface, whichever is lower.
- B. Below-grade areas and voids resulting from demolition of structures shall be completely filled.
- C. All fill and compaction shall be in accordance with Section 312300, "Utility Earthwork."
- D. All fill and compaction surfaces shall be graded to meet adjacent contours and to provide flow to surface drainage structures, or as shown on the Drawings.
- E. Where installation of new utilities requires partial removal or demolition of an existing utility, the existing utility shall be removed to sound material. Pipes to be demolished that require no future connection shall be removed to the extent required and sealed and capped. Sanitary sewer laterals shall be removed as required and a new sewer clean out shall be installed in accordance with the

Standard Specifications and Details. Pipes to be demolished that require a connection shall be removed to the extent required to install the new connection. Pipe sections shall be removed either by sawcutting, removing a complete pipe section to an existing joint, or other adequate means which results in a clean joint acceptable to the ENGINEER..

- F. The CONTRACTOR shall demolish and seal all wells, septic tanks and underground tanks in accordance with applicable regulatory agency requirements and permits.
- G. Joint domestic/fire service laterals shall be abandoned as follows:
  - 1. The Blow Off Assembly shall be removed and capped underground.
  - 2. At the connection to the main the existing lateral valve shall be removed and a blind flange shall be installed on the tee at the main. The lateral pipe shall be abandoned in place by capping both ends of the lateral pipe.
  - 3. The existing structural section of the roadway shall be replaced in kind in accordance with the Town Standard specifications.

#### AT GRADE DEMOLITION

- A. All asphalt concrete and all portland cement concrete curbs, gutters, sidewalks, access ramps and driveways shall be saw-cut at the nearest scoreline or deep joint and removed entirely to the saw-cut limits. Where

adjacent pavement or concrete is broken or deteriorated sufficiently to prohibit a sound replacement the entire deteriorated section shall be removed to the limits determined by the ENGINEER.

#### DISPOSAL OF DEMOLISHED MATERIALS

- A. Demolition and removal of debris shall be conducted to ensure minimum interference with roads, streets, walks and other adjacent occupied or used facilities which shall not be closed or obstructed without permission from the TOWN. Alternate routes shall be provided around closed or obstructed traffic ways.
- B. Site debris, rubbish and other materials resulting from demolition operations shall become the property of the CONTRACTOR and shall be removed by the CONTRACTOR at the CONTRACTOR's expense to a suitable site. The proper and legal disposal of demolished materials shall be the responsibility of the CONTRACTOR.

#### PATCHING AND REPAIRING

- A. The CONTRACTOR shall provide patching, replacing, repairing and refinishing of damaged areas or damaged adjacent facilities involved in the demolition. New concrete shall match the existing adjacent surfaces, in kind or of better quality, to the satisfaction of the ENGINEER, at no cost to the TOWN or to the owners of the facilities.

#### CLEANUP

- A. During and upon completion of work the CONTRACTOR shall promptly remove unused tools and equipment, surplus materials, rubbish, debris and dust and shall leave areas affected by work in a clean, approved condition.
- B. The CONTRACTOR shall clean adjacent structures and facilities of dust, dirt and debris caused by demolition, as directed by the ENGINEER or governing authorities, and return adjacent areas to condition existing prior to start of work.
- C. The CONTRACTOR shall clean and sweep daily all street and roads affected by its operation.

### **8.4. Site Clearing and Tree Protection**

#### **Measurement and Payment**

Full compensation for furnishing all labor, materials, tool, equipment, and incidentals, and for doing all of the work in compliance with the Plans, Specifications and "Site Clearing and Tree Protection", of the Technical Specifications, shall be included and paid for in the appropriate bid item price.

<b>Bid Item #5</b>	<b>Clearing and Grubbing</b>	<b>L.S.</b>
<b>Bid Item #7</b>	<b>Existing Tree Protection</b>	<b>E.A.</b>

#### PART 1 - GENERAL

#### SUMMARY

- A. This Section includes the following:
  - 1. Protecting existing trees to remain

- a. Protecting and maintaining existing trees and vegetation not specifically designated for removal, to remain.
- b. Protection shall be extended to trees and/or vegetation located within or adjacent to the Project Site, whether the tree trunk and/or vegetation is located within the designated Limits of Work.

2. Removing existing grass
3. Clearing and grubbing.
4. Stripping and stockpiling topsoil.
5. Removing above- and below-grade site improvements.
6. Minor obstructions above and below grade including irrigation.
7. Disconnecting and capping or sealing site utilities.
8. Temporary erosion and sedimentation control measures.

B. Related Documents:

1. The following applies to this section:
  - a. General provisions of the Contract, including General and Supplementary Conditions.
    - I. The Drawings.
    - II. Division 01 Specification Sections and related requirements in other sections of the Project Manual.
    - III. Related requirements in other Contract Documents listed in the Agreement.
    - IV. Review these documents for coordination with additional requirements and information that apply to work under this Section.
  - a.
  - a.

DEFINITIONS

- A. Tree Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and defined by the drip line of individual trees or the perimeter drip line of groups of trees, unless otherwise indicated
1. "Dripline" shall be generally defined as the outermost extent of the tree's foliated canopy, which encompasses the tree leaves or fronds, trunk, branches, roots, and soil. In no case shall a dripline encompass an area under a tree canopy, which is less than ten feet (10'), in diameter. Since each tree is unique in size, scale, and form, the delineated dripline of each tree shall be refined at the discretion of the Landscape Architect.

2. "Injury" shall be defined, without limitation, as any bruising, scarring, tearing, gouging, or breaking of roots, branches, or trunk(s), soil compaction around the dripline, or contamination around the dripline which results in the decline to the health of the tree
- B. Subgrade: The uppermost surface of an excavation, including excavation for trenches, or the top surface of a fill or backfill immediately below base course, pavement, or topsoil materials.
- C. Unauthorized excavation consists of removing materials beyond indicated subgrade elevations or dimensions without direction by the Owner's representative. Unauthorized excavation, as well as remedial work directed by the Owner's Rep shall be at the Contractor's expense.

3.

#### REFERENCE

- A. Standards for Tree Care Operations (Z133.1), American National Standards Institute, Latest Edition.
- B. Safety Standards for Tree Care Operations (Z133), American National Standards Institute, Latest Edition.
- C. Tree Pruning Guidelines, International Society of Arboriculture, 1995 Edition.
- D. Pruning Standards for Shade Trees, National Arborists Association. Latest Edition

#### MATERIAL OWNERSHIP

- A. Except for stripped topsoil or other materials indicated to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

#### SUBMITTALS

- A. Photographic and/or digitally recorded documentation, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements must be prepared. Unless otherwise documented, any damage discovered to trees, plantings, and site features denoted to remain, will be considered the responsibility of the contractor to correct. The owner may at his/her discretion request such photographs and/or video tapes be submitted at any time
- B. Submit complete detailed schedule and description of Work to be done within dripline, (if any), including list of equipment to be used.
- C. Submit schedule and description of proposed pruning and/or other remedial work to existing plant materials. Submit qualifications describing years of experience and list of similar projects completed for the following:
  1. State of California licensed Pest Control Advisor shall propose application of all herbicides or pesticides.

2. Certified Arborist shall propose pruning of all trees or other vegetation. Certified Arborist shall have a minimum of five (5) year's post-certification experience performing pruning and observation work for projects of comparable size with trees of similar size and nature.
- D. Tree Pruning Company, and List of Certified Tree Workers, who will perform Work on the Project relating requirements herein this Section. Tree Pruning Company shall have a minimum of five (5) years experience specializing in performing the work of this Section for projects of comparable size with trees of similar size and nature.
- E. Record drawings, according to Division 01, identifying and accurately locating capped utilities and other subsurface structural, electrical, and mechanical conditions.
  - 1.

#### PROJECT CONDITIONS

- A. Contractor shall become aquatinted with existing site conditions, verifying quantities and locations of all protected trees and vegetation, and other information as may be necessary. Notify Landscape Architect of unsatisfactory conditions, in writing, prior to commencement of Work.
- B. Tree Flagging: Prior to commencement of Work, Contractor shall flag all existing trees and vegetation to remain and protected throughout the duration of Work. Adequately flag tree trunks with bright-colored tape (neon colors preferred). Verify flagged trees and vegetation with Landscape Architect.
- C. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
  1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
  2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- D. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.
- E. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
- F. Do not commence site clearing operations until temporary erosion and sedimentation control measures are in place.
- G. Improvements on Adjoining Property: Authority for performing indicated removal and alteration work on property adjoining Owner's property shall be obtained by the adjoining property Owner(s) prior to commencement of Work.
- H. Protect existing Work and Work of other trades: Damage to existing construction caused by Work of this Section shall be promptly repaired and/or replaced at the expense of the Contractor.

- I. Environmental Requirements:
  - 1. Perform actual pruning operations (if needed) during those seasons suitable for the specific tree type, in accordance with locally acceptable horticultural practices.
- J. Pre-Tree Pruning/Tree Protection Conference:
  - 1. Contractor shall conduct a Pre-Tree Pruning/Tree Protection Conference at the Project Site with Certified Arborist (who will be on-site supervising the Work of the Project) and the Owner.
  - 2. The Contractor shall be responsible for notifying all parties, in writing, at least seven (7) days in advance to schedule the Conference.
  - 3. The Contractor shall provide to all parties in attendance within seven (7) days a written legible inventory of Work to be accomplished, including species (botanical and common name), location, size, specific pruning needs or tree protection needs as identified during the Conference, recommended pruning or tree protection methods to meet the identified needs, and any additional conditions noted.
- K. Staging Areas - Approval must be obtained from the Owner to use any area for staging that is not specifically identified as such on the plans. The Contractor shall restore all areas used for staging, the extent of said restoration to be defined by the Owner upon granting approval for the use of said area for staging.
- L. Whether shown on the Plan or not, existing improvements, adjacent property, Utility and other facilities, and trees and plants that are not to be removed shall be protected from injury or damage resulting from the Contractor's operations.
- M. The Contractor shall make such investigations and examinations as are required to determine the existence and locations of all pipes, conduits, and other underground improvements and shall consult with and advise the owners of the Utilities before undertaking any work that might endanger them.
- N. The Contractor shall assume full responsibility for any damage to pipes, conduits, poles, or any other structures or Utilities. She/He shall not make any claim for inconvenience, delay or added cost of performing the Work which may be attributed in any degree to inaccuracy of information furnished by the Town relative to the locations, sizes, dimensions, depths, and character of any pipes, conduits, poles, or other structures and Utilities or for failure of the Town to furnish any information relative thereto.
- O. The Town does not guarantee the accuracy or completeness of any data shown on the Plans relative to the locations, sizes, dimensions, depths, and character of pipes, conduits, poles or any other structures or Utilities located above ground or underground.
- P. At locations where lawn sprinkler systems exist, the Contractor will cut and cap water lines at the property lines or at such point as directed by the Engineer. All heads and pipe removed shall be salvaged and returned to their respective owners. Full compensation for cutting and capping water lines shall be considered as included in this item.
- Q. Existing land subdivision monuments and stakes shall be fully protected from damage or displacement and they shall not be disturbed unless directed by the Engineer.

1.

#### QUALITY ASSURANCE

- A. Preinstallation Conference: Conduct conference at Project Site to comply with requirements in Division 1
- B. Pruning and remedial work shall be done under the direct supervision of an Arborist certified by the International Society of Arborists (ISA); or Arborist who is a member of the American Society of Consulting Arborists, in compliance with ISA and ANSI Standards. Arborist shall be on Site continuously while existing trees or roots are being pruned or remedial work is being performed.
- C. Contractor shall guarantee that all plants covered by the Provisions of this Section shall be healthy and in a flourishing condition of active growth for one (1) year from the date of Substantial Completion.
- D. Requirements of the guarantee shall apply if failure of the Contractor to take specified precautions and Work within restrictions of this Section contributes to the destruction, decline, or injury to a tree to remain, in the judgement of the Landscape Architect.
- E. If a tree to remain is destroyed or injured so that in the judgement of the Landscape Architect it should be replaced, it shall be removed at the expense of the Contractor. Contractor shall pay compensation to the Owner of the property where the tree was located at the rate as specified herein this Section (see Compensation).

#### COMPENSATION

- A. Contractor shall replace any existing tree that died or sustained injury from the result of the Contractor's negligence to provide adequate required tree protection, pruning, or maintenance during the course of construction operations. Compensation shall be awarded to the Owner as follows:
  - 1. Contractor shall thoroughly remove damaged tree, including trunk, branches, and roots, at no cost to the Owner, and at the direction of the Landscape Architect.
  - 2. Contractor shall furnish and install per requirements in Section 10-10 "Landscape Planting", with a minimum six-inch (6") caliper tree of the same form, species, and in the same quantity as those tree(s) that were damaged, at the direction of the Landscape Architect. Compensation shall include the actual cost of the item boxed out of the ground; transportation or delivery of boxed item to the site; unloading, planting and staking; maintenance, including watering, fertilizing, pruning, pest control, and other care to bring replacement to same general condition of the original item.
  - 3. Contractor shall provide an additional cash settlement to the Owner, based on the following formula:
    - a. Tree caliper measurement of the damaged tree(s), where caliper is measured at the greatest trunk diameter 24" above the finished grade:

Tree Trunk Caliper

Amount

Less than 12"	\$3,000.00
12" to 18"	\$8,000.00
over 18", add for each caliper inch	\$1,000.00

- A. Contractor shall replace any vegetation (other than trees) that died or sustained injury from the result of the Contractor's negligence to provide adequate required vegetation protection, pruning, or maintenance during the course of construction operations. Compensation shall be awarded to the Owner as follows:
1. Contractor shall thoroughly remove damaged vegetation at no cost to the Owner, and at the direction of the Landscape Architect.
  2. Contractor shall furnish and install per requirements in Section 10-10 "Landscape Planting", with five (5) gallon container stock minimum (as applicable) of the same form, species, and in the same quantity as vegetation that was damaged, at the direction of the Landscape Architect.

## PART 2 - PRODUCTS

### SOIL MATERIALS

- A. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Division 31 Section "Earth Moving."
1. Obtain approved borrow soil materials off-site when satisfactory soil materials are not available on-site.

### TREE PROTECTION MATERIALS

- A. Barricade for Protection of Existing Trees Vegetation
1. Fabric: Utility (snow) type fencing, minimum six feet (6') high, consisting of a vinyl meshed fabric in a bright orange color. Fabric shall be approved by Landscape Architect.
  2. Posts: Metal or wood, sufficient in gauge (as appropriate) and size to support the fabric material in a taut and plumb condition. Posts shall be subject to approval by the Landscape Architect.
  3. Signs: Posted plastic laminated signs, attached to fabric fencing, with words "WARNING- KEEP OUT-TREE PROTECTION ZONE".
- B. Mulch: Where available, Contractor shall stockpile and reuse shredded wood chips produced from on-site tree removals and remedial work, if chips are disease free and acceptable to the Landscape Architect. Where on-site chips are not available, Contractor shall provide mulch as specified in Section 10-10 "Landscape Planting".

## PART 3 - EXECUTION

## PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly flag trees and vegetation to remain or to be relocated.
- C. Protect existing site improvements to remain from damage during construction.
  - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

## TREE PROTECTION

- A. Install tree protection barricades before commencement of Work.
- B. Erect and maintain temporary fencing around tree protection zones before starting site clearing. Remove fence when construction is complete.
- C. Protect existing trees and other vegetation indicated to remain in place against the following:
  - 1. Storage or parking of automobiles or other vehicles.
  - 2. Stockpiling of building materials, refuse, or excavated materials.
  - 3. Use of trees as support posts, power posts, or sign posts, anchorage for ropes, guy wires, or power lines, or other similar functions.
  - 4. Dumping of poisonous materials on or around plant roots, trunks, branches, or foliage. Such materials include, but are not limited to, paint, petroleum products, dirty water, or other deleterious materials.
  - 5. Cutting, breaking, or skinning of roots caused by utility trenching, foundation digging, placement of curbs and trenches, and other miscellaneous excavation without prior written approval by the University's Authorized Representative.
  - 6. Damage by skinning or bruising of bark on trunks or branches, caused by maneuvering vehicles or stacking material or equipment too close to the plant.
  - 7. Compaction of the soil within the dripline of the plants due to movement of trucks or grading machines, pedestrian or vehicular traffic, storage of equipment or materials.
  - 8. Excessive water or heat from equipment, utility line construction, or burning of trash under or near vegetation to remain.
  - 9. Damage to root system from flooding, erosion, and excessive wetting and drying resulting from watering and other operations.
- D. Prior to commencement of construction activities, the Contractor shall erect and maintain a temporary fenced barricade around the dripline of individual trees, around perimeter dripline of groups of trees, or around other vegetation to remain.

1. Prevent damage to roots during installation of barricade posts. Space posts approximately 4'-0" on center and securely attach fabric.
  2. Barricades shall be installed plumb, taut, and sturdy to prevent unauthorized access around dripline of trees and protected vegetation. Repair sagging or damaged barricades immediately.
  3. Immediately after barricade fencing is installed, cover entire soil area inside of the fence area with a four-inch (4") layer of mulch. Keep mulch 18" away from root crown. Irrigate protected trees and vegetation to a moist soil depth of 18" deep.
  4. During the course of construction, relocation of the barricade may be required to facilitate construction. Contractor shall relocate barricade as directed by the Landscape Architect at no additional expense to the Owner.
  5. Remove barricade when construction operations are complete or when directed by Landscape Architect.
- E. Irrigation: Contractor shall supply fresh potable water in adequate amounts and rates of application as required to maintain the health of all protected trees and vegetation throughout the duration of the construction operations. Contractor shall maintain a watering schedule and document dates and duration of irrigation applications.
1. Construct a temporary watering basin, as required, on the surface of the existing undisturbed grade, with imported soil, to aid in the retention of water around existing protected trees and planting.
- F. Do not excavate within drip line of trees, unless approved, in writing, by the Landscape Architect.
- G. Where excavation for new construction is required within drip line of trees, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.
1. Cover exposed roots with burlap and water regularly to keep moist.
  2. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.
  3. Cover exposed roots with wet burlap to prevent roots from drying out. Backfill with soil as soon as possible.
- H. Protect root systems of existing trees and vegetation from damage due to chemically injurious materials in solution caused by run-off or spillage during mixing or placement of construction materials, and drainage of stored materials.
- I. Protect root systems from flooding, erosion, excessive wetting or drying resulting from de-watering or other operations.
- J. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by the Landscape Architect.
1. Employ a qualified arborist, licensed in jurisdiction where Project is located, to submit details of proposed repairs and to repair damage to trees and shrubs.

2. Replace trees that cannot be repaired and restored to full-growth status, as determined by the qualified Arborist.

#### CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.
  1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
  2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
  3. Completely remove stumps, roots, obstructions, and debris extending to a depth of 18 inches below exposed subgrade.
  4. Use only hand methods for grubbing within drip line of remaining trees.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated.
- C. Clearing and grubbing shall conform to the provisions in Section 17-2 of the State Standard Specifications and these provisions.
- D. Unless otherwise specified, the entire area within the Project limits shall be cleared and grubbed. No payment will be made to the Contractor for clearing and grubbing outside these limits, unless such work is authorized by the Engineer.
- E. The Contractor shall inform himself/herself as to all regulations and requirements of the Town of Los Gatos and shall conduct his/her operations in compliance therewith.
- F. Concrete removal shall conform to the provisions in subsection 15-1.03B of the State Standard Specifications and these provisions. Where a portion on an existing concrete facility is to be removed, it shall be cut to a minimum depth of 1 1/2 inches with an abrasive type saw at the first scoring line at or outside the planned joint and removed without damage to any portion that is to remain in place. If curbs and gutters cannot be cut off square and neat, the entire curb and gutter shall be removed to the nearest weakened plane or expansion joint. No patching at expansion joints will be permitted.
- G. All concrete (Portland or asphalt) and oil dirt within the right-of-way shall be removed by the Contractor unless designated to remain on the Plans. Existing manholes, drain wells, drainage structures, irrigation lines, structures and headwalls to be abandoned shall be removed to at least 2 feet below the surface and backfilled or as specified in the Special Conditions.
- H. Where existing house foundations and floor slabs overlap into the project area, the whole foundation will be removed. The portion beyond and outside the project area will be considered within the project area and included in the bid price of removing concrete.

- I. Removal of any existing gravel, crushed rock surfacing, DG, landscape edging, landscape features, irrigation components, minor site furnishings.
  - a.

#### TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
- C. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.

#### PRUNING AND REMEDIAL WORK

- A. Pruning and remedial work shall be done under continuous supervision of the approved Arborist, according to approved submittals, and per ANSI A-300 Pruning Standards.
- B. Provide pruning, cabling and bracing, irrigation, pest and disease control and other remedial treatments as recommended by the approved Arborist, required to assure the long-term health of the trees and existing vegetation, and the safety of persons and property.

#### MAINTENANCE

- A. Keep areas within tree protection barricades free from weeds, trash, and debris. Do not use herbicides.
- B. Maintain mulch layer and protective devices throughout entire period of construction.

#### SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.

#### DISPOSAL

- A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
  1. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities.

- B. Within the limits of clearing, all stumps, large roots, buried logs, and all other organic material shall be removed 3 feet below the existing ground surface or 6 feet below finished grade, whichever is deeper.
- C. Trees and plants that are not designated for removal shall be fully protected from injury by the Contractor at his/her expense. Trees shall be removed in such a manner as not to injure standing trees, plants, and improvements which are to be preserved.
- D. Contractor shall be responsible for disposal at their own expense.

## **8.5. Water Pollution Control**

### **Measurement and Payment**

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all of the work involved in compliance with the Plans, Specifications, and "Water Pollution Control" of the Technical Specifications, shall be included and paid for in the appropriate bid item price.

**Bid Item #6      Erosion and Sediment Control      L.S.**

### **General**

Water pollution control work shall conform to the provisions in Section 13, "Water Pollution Control", of the Caltrans Standard Specifications and these Technical Specifications. Water pollution control work shall conform to the requirements in the Water Pollution Control Program (WPCP) Preparation Manual" and the "Construction Site Best Management Practices (BMPs) Manual," and addenda thereto issued up to, and including, the date of advertisement of the project. These manuals are hereinafter referred to respectively as the "Preparation Manual" and the "Construction Site BMPs Manual", and collectively, as the "Manuals". Copies of the Manuals may be obtained from the Department of Transportation, Material Operations Branch, Publication Distribution Unit, and may also be obtained from the Department's Internet website at:

<https://dot.ca.gov/programs/construction/storm-water-and-water-pollution-control/manuals-and-handbooks>

The Contractor shall know and fully comply with applicable provisions of the Manuals, and Federal, State, and local regulations and requirements that govern the Contractor's operations and storm water and non-storm water discharges from both the project site and areas of disturbance outside the project limits during construction. Attention is directed to Sections 7-1.02, "Laws", and 7-1.05, "Indemnification", of the Standard Specifications.

The Contractor shall be responsible for ensuring that all work conforms to the "Best Management Practices for the Construction Industry" found in the Storm Water Pollution Prevention Plan (SWPPP), the "Blueprint for a Clean Bay" handout.

The Contractor shall comply with the requirements of the State Water Resource Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharge Associated with Construction and Land Disturbance Activities.

The Contractor shall not violate any discharge prohibition contained in the California Regional Water Quality Control Board San Francisco Bay Basin Water Quality Control Plan ("Basin Plan").

Water pollution control requirements shall apply to storm water and non-storm water discharges from areas outside the project site which are directly related to construction activities for this contract including, but not limited to, staging areas, storage yards and access roads. The Contractor shall comply with the Manuals for those areas and shall implement, inspect, and maintain the required water pollution control practices. Installing, inspecting, and maintaining water pollution control practices on areas outside the project limits not specifically arranged and provided for by the Town for the execution of this contract, will not be paid for.

The Contractor shall be responsible for penalties assessed or levied on the Contractor or the Town as a result of the Contractor's 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.

Penalties as used in this section shall include fines, penalties, and damages, whether proposed, assessed, or levied against the Town or the Contractor, 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.

#### **Retention of Funds**

Notwithstanding any other remedies authorized by law, the Town may retain money due the Contractor under the contract, in an amount determined by the Town, up to and including the entire amount of penalties proposed, assessed, or levied as a result of the Contractor's violation of the Manuals, or Federal or State law, regulations or requirements. Funds may be retained by the Town until final disposition has been made as to the penalties. The Contractor 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 for the Contractor's 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 Manuals, or other Federal, State or local requirements, the Town may retain money due the Contractor, subject to the following:

- a. The Town will give the Contractor seventy-two (72) hours' notice of the Town's intention to retain funds from partial payments which may become due to the Contractor prior to acceptance of the contract. Retention of funds from payments made after acceptance of the contract may be made without prior notice to the Contractor.

During the first progress payment period after that the Contractor fails to conform to the provisions in this section, "Water Pollution Control", the Town may retain an amount equal to twenty-five percent (25%) of the estimated value of all contract work performed on the entire contract.

The Contractor shall notify the Engineer immediately upon request from the regulatory agencies to enter, inspect, sample, monitor, or otherwise access the project site or the Contractor's records pertaining to water pollution control

work. The Contractor and the Town shall provide copies of correspondence, notices of violations, enforcement actions or proposed fines by regulatory agencies to the requesting regulatory agency.

### **Water Pollution Control Program Preparation, Approval, and Amendments**

As part of the water pollution control work, a Water Pollution Control Program (WPCP) is required for this contract. The WPCP shall conform to the provisions in Section 13, "Water Pollution Control", of the Standard Specifications, the requirements in the Manuals, and these Technical Specifications. Upon the Engineer's approval of the WPCP, the WPCP shall be considered to fulfill the provisions in Section 13, "Water Pollution Control", of the Standard Specifications for development and submittal of a Water Pollution Control Plan.

No work having potential to cause water pollution shall be performed until the WPCP has been approved by the Engineer. Approval shall not constitute a finding that the WPCP complies with applicable requirements of the Manuals and applicable Federal, State and local laws, regulations, and requirements.

The Contractor shall designate a Water Pollution Control Manager. The Water Pollution Control Manager shall be responsible for the preparation of the WPCP and required modifications or amendments and shall be responsible for the implementation and adequate functioning of the various water pollution control practices employed. The Contractor may designate different Water Pollution Control Managers to prepare the WPCP and to implement the water pollution control practices. The Water Pollution Control Managers shall serve as the primary contact for issues related to the WPCP or its implementation. The Contractor shall assure that the Water Pollution Control Manager(s) have adequate training and qualifications necessary to prepare the WPCP, implement and maintain water pollution control practices, as described in Section 13, "Water Pollution Control", of the Standard Specifications.

Within five (5) working days after the execution of the contract, the Contractor shall submit two (2) copies of the draft WPCP to the Engineer. The Engineer will have five (5) working days to review the WPCP. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the WPCP within five (5) working days of receipt of the Engineer's comments. The Engineer will have five (5) working days to review the revisions. Upon the Engineer's approval of the WPCP, one (1) approved copy of the WPCP, incorporating the required changes, shall be submitted to the Engineer. To allow construction activities to proceed, the Engineer may conditionally approve the WPCP while minor revisions are being completed. In the event the Engineer fails to complete the review within the time allowed, and if, in the opinion of the Engineer, completion of the work is delayed or interfered with by reason of the Engineer's delay in completing the review, the Contractor will be compensated for resulting losses, and an extension of time will be granted, in the same manner as provided for in Section 8-1.07, "Delays", of the Standard Specifications.

The WPCP shall incorporate water pollution control practices in the following categories:

- a. Soil stabilization.
- b. Sediment control.
- c. Wind erosion control.
- d. Tracking control.
- e. Non-storm water management.
- f. Waste management and materials pollution control.

The Contractor shall develop a Water Pollution Control Schedule that describes the timing of grading or other work activities that could affect water pollution. The Water Pollution Control Schedule shall be updated by the Contractor to

reflect changes in the Contractor's operations that would affect the necessary implementation of water pollution control practices.

The Contractor shall prepare an amendment to the WPCP when there is a change in construction activities or operations which may affect the discharge of pollutants to surface waters, ground waters, municipal storm drain systems, or when the Contractor's activities or operations violate Federal, State or local regulations, or when directed by the Engineer. Amendments shall identify additional water pollution control practices or revised operations, including those areas or operations not identified in the initially approved WPCP. Amendments to the WPCP shall be prepared and submitted for review and approval within a time approved by the Engineer, but in no case longer than the time specified for the initial submittal and review of the WPCP.

The Contractor shall keep one copy of the approved WPCP and approved amendments at the project site. The WPCP shall be made available upon request by a representative of the Regional Water Quality Control Board, State Water Resources Control Board, United States Environmental Protection Agency, or the local storm water management agency. Requests by the public shall be directed to the Engineer.

No adjustment in compensation will be made for ordered changes to correct WPCP work resulting from the Contractor's own operations or from the Contractor's negligence.

If requested by the Contractor and approved by the Engineer, changes to the water pollution control program, including addition of new water pollution control practices, will be allowed. Changes shall be included in the approved amendment of the WPCP. If the requested changes result in a net cost increase to the lump sum price for water pollution control, an adjustment in compensation will be made without change to the water pollution control item. The net cost increase to the water pollution control item will be paid for as extra work as provided in Section 4-1.05, "Changes and Extra Work", of the Standard Specifications.

### **WPCP Implementation**

Unless otherwise specified, upon approval of the WPCP, the Contractor shall be responsible throughout the duration of the project for installing, constructing, inspecting, maintaining, removing, and disposing of the water pollution control practices specified in the WPCP and in the amendments. Unless otherwise directed by the Engineer, the Contractor's responsibility for WPCP implementation shall continue throughout any temporary suspension of work ordered in conformance with the provisions in Section 8-1.06, "Suspensions", of the Standard Specifications. Requirements for installation, construction, inspection, maintenance, removal, and disposal of water pollution control practices shall conform to the requirements in the Manuals and these Technical Specifications.

If the Contractor or the Engineer identifies a deficiency in the implementation of the approved WPCP or amendments, the deficiency shall be corrected immediately. The deficiency may be corrected at a later date and time if requested by the Contractor and approved by the Engineer in writing but shall be corrected prior to the onset of precipitation. If the Contractor fails to correct the identified deficiency by the date agreed or prior to the onset of precipitation, the project shall be in nonconformance with this section. Attention is directed to Section 5-1.03, "Engineer's Authority", of the Standard Specifications, and to "Retention of Funds" of this section for possible nonconformance penalties.

If the Contractor fails to conform to the provisions of this section, "Water Pollution Control", the Engineer may order the suspension of construction operations until the project complies with the requirements of this section.

Implementation of water pollution control practices may vary by season. The Construction Site BMPs Manual and these Technical Specifications shall be followed for control practice selection of year-round, rainy season and non-rainy season water pollution control practices.

### *Year-Round Implementation Requirements*

The Contractor shall have a year-round program for implementing, inspecting and maintaining water pollution control practices for wind erosion control, tracking control, non-storm water management, and waste management and materials pollution control.

The National Weather Service weather forecast shall be monitored and used by the Contractor on a daily basis. An alternative weather forecast proposed by the Contractor may be used if approved by the Engineer. If precipitation is predicted, the necessary water pollution control practices shall be deployed prior to the onset of the precipitation.

Disturbed soil areas shall be considered active whenever the soil disturbing activities have occurred, continue to occur or will occur during the ensuing fifteen (15) working days. Non-active areas shall be protected as prescribed in the Construction Site BMPs Manual within ten (10) working days of cessation of soil disturbing activities or prior to the onset of precipitation, whichever occurs first.

### *Rainy Season Implementation Requirements*

Soil stabilization and sediment control practices conforming to the requirements of these Technical Specifications shall be provided throughout the rainy season, defined as between October 15th and April 15th.

An implementation schedule of required soil stabilization and sediment control practices for disturbed soil areas shall be completed no later than fifteen (15) working days prior to the beginning of each rainy season. The implementation schedule shall identify the soil stabilization and sediment control practices and the dates when the implementation will be twenty-five percent (25%), fifty percent (50%) and one hundred percent (100%) complete, respectively. For construction activities beginning during the rainy season, the Contractor shall implement applicable soil stabilization and sediment control practices.

### *Non-Rainy Season Implementation Requirements*

The non-rainy season shall be defined as days outside the defined rainy season. The Contractor's attention is directed to the Construction Site BMPs Manual for soil stabilization and sediment control implementation requirements on disturbed soil areas during the non-rainy season. Disturbed soil areas within the project shall be protected in conformance with the requirements in the Construction Site BMPs Manual with an effective combination of soil stabilization and sediment control.

### **Maintenance**

To ensure the proper implementation and functioning of water pollution control practices, the Contractor shall regularly inspect and maintain the construction site for the water pollution control practices identified in the WPCP. The construction site shall be inspected by the Contractor as follows:

- a. Prior to a forecast storm.
- b. After a precipitation event which causes site runoff.
- c. At twenty-four (24) hour intervals during extended precipitation events.
- d. Routinely, a minimum of once every two (2) weeks outside of the defined rainy season.
- e. Routinely, a minimum of once every week during the defined rainy season.

The Contractor shall use the Caltrans Stormwater Site Inspection Report Form CEM-2030 provided at <http://www.dot.ca.gov/hq/construc/forms.htm>. One copy of each site inspection record shall be submitted to the Engineer within twenty-four (24) hours of completing the inspection.

### Reporting Requirements

If the Contractor identifies discharges into surface waters or drainage systems in a manner causing, or potentially causing, a condition of pollution, or if the project receives a written notice or order from a regulatory agency, the Contractor shall immediately inform the Engineer. The Contractor shall submit a written report to the Engineer within five (5) working days of the discharge event, notice or order. The report shall include the following information:

- a. The date, time, location, nature of the operation, and type of discharge, including the cause or nature of the notice or order.
- b. The water pollution control practices deployed before the discharge event, or prior to receiving the notice or order.
- c. The date of deployment and type of water pollution control practices deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent reoccurrence.
- d. An implementation and maintenance schedule for affected water pollution control practices.

## 8.6. Earth Moving / Rough Grading

### Measurement and Payment

Full compensation for furnishing all labor, materials, tool, equipment, and incidentals, and for doing all of the work in compliance with the Plans, Specifications and "Earth Moving / Rough Grading", of the Technical Specifications, shall be included and paid for in the appropriate bid item price.

Bid Item #8	Grading (Rough & Fine)	L.S.
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PART 1 - GENERAL

### SUMMARY

- A. This Section includes the following:
  1. Preparing subgrades for pavements, lawns, grasses, and exterior plants.
  2. Drainage course for slabs-on-grade.
  3. Subbase course for concrete pavements.
  4. Excavating and backfilling for utility trenches.
- B. Related Sections include the following:
  1. Division 01
  2. Division 02

3. Division 31 Section "Site Clearing and Tree Protection"

4. Division 2

## DEFINITIONS

- A. Backfill: Soil material used to fill an excavation.
  - 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
  - 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Base Course: Course placed between the subbase course and hot-mix asphalt paving.
- C. Bedding Course: Course placed over the excavated subgrade in a trench before laying pipe.
- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Drainage Course: Course supporting the slab-on-grade that also minimizes upward capillary flow of pore water.
- F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
  - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Architect. Authorized additional excavation and replacement material will be paid for according to Contract provisions changes in the Work.
  - 2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.
- G. Fill: Soil materials used to raise existing grades.
- H. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- I. Subbase Course: Course placed between the subgrade and base course for hot-mix asphalt pavement, or course placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.
- J. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
- K. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

## SUBMITTALS

- A. Material Test Reports: For each on-site and borrow soil material proposed for fill and backfill as follows:
  - 1. Classification according to ASTM D 2487.
  - 2. Laboratory compaction curve according to ASTM D 698.

- B. Pre-excavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by earth moving operations. Submit before earth moving begins.

#### QUALITY ASSURANCE

- A. Pre-excavation Conference: Conduct conference at project site.

#### PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
  - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
  - 2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- B. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Architect and then only after arranging to provide temporary utility services according to requirements indicated.
- C. Do not commence earth moving operations until protection measures are in place.
- D. The following practices are prohibited within protection zones:
  - 1. Storage of construction materials, debris, or excavated material.
  - 2. Parking vehicles or equipment.
  - 3. Foot traffic.
  - 4. Erection of sheds or structures.
  - 5. Impoundment of water.
  - 6. Excavation or other digging unless otherwise indicated.
  - 7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
- A. Do not direct vehicle or equipment exhaust towards protection zones.
- A. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones

#### PART 2 - PRODUCTS

#### SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D 2487, free of rock or gravel larger than 3 inches (75 mm) in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
  - 1. Plasticity Index: Not exceeding 15.
- C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487.
  - 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 20) sieve.
- E. Aggregate Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 95 percent passing a 1- 1/2-inch) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.
- F. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve.
- G. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch (25- mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.
- H. Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch (37.5-mm) sieve and 0 to 5 percent passing a No. 8 (2.36-mm) sieve.
- I. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch (25-mm) sieve and 0 to 5 percent passing a No. 4 (4.75-mm) sieve.
- J. Sand: ASTM C 33; fine aggregate.
- K. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.
  - 1.

### PART 3 - EXECUTION

#### PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Preparation of subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface is specified in Division 31 Section "Site Clearing."
- C. Protect and maintain erosion and sedimentation controls, which are specified in Division 31 Section "Site Clearing." during earthwork operations.

#### DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
  - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

#### EXCAVATION

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
  - 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

#### EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch (25 mm). If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
  - 1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.

#### EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

#### EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches (300 mm) higher than top of pipe or conduit, unless otherwise indicated.
  - 1. Clearance: 12 inches each side of pipe or conduit or As indicated.
- C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.
  - 1. Excavate trenches 6 inches deeper than elevation required in rock or other unyielding bearing material, 4 inches deeper elsewhere, to allow for bedding course.

#### SUBGRADE INSPECTION

- A. Proof-roll subgrade below the pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
- B. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Architect, without additional compensation.

#### UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi may be used when approved by Architect.
  - 1. Fill unauthorized excavations under other construction or utility pipe as directed by Architect.
    - a.

#### STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
  - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

#### UTILITY TRENCH BACKFILL

- A. Place backfill on subgrades free of mud, frost, snow, or ice.

- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Backfill trenches excavated under footings and within 18 inches of bottom of footings with satisfactory soil; fill with concrete to elevation of bottom of footings. Concrete is specified in Division 03 Section "[Cast-in-Place Concrete] [Miscellaneous Cast-in-Place Concrete]."
- D. Provide 4-inch- thick, concrete-base slab support for piping or conduit less than 30 inches (750 mm) below surface of roadways. After installing and testing, completely encase piping or conduit in a minimum of 4 inches of concrete before backfilling or placing roadway subbase.
- E. Place and compact initial backfill of [subbase material] [satisfactory soil], free of particles larger than 1 inch in any dimension, to a height of 12 inches over the utility pipe or conduit.
  - 1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of utility piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.
- F. Place and compact final backfill of satisfactory soil to final subgrade elevation.
- G. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

#### SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
  - 1. Under grass and planted areas, use satisfactory soil material.
  - 2. Under walks and pavements, use satisfactory soil material.
  - 3. Under steps and ramps, use engineered fill.
  - 4. Under building slabs, use engineered fill.
  - 5. Under footings and foundations, use engineered fill.
    - a.

#### SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
  - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.

2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

#### COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than [8 inches (200 mm)] <Insert dimension>in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to [ASTM D 698] [ASTM D 1557]:
  1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
  2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 92 percent.
  3. Under lawn or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 85 percent.
  4. For utility trenches, compact each layer of initial and final backfill soil material at 85 percent.

#### GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
  1. Lawn or Unpaved Areas: Plus or minus 1 inch tolerance.
  2. Walks: Plus or minus 1 inch tolerance.
  3. Pavements: Plus or minus 1/2 inch tolerance.
  4. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10- foot straightedge.
- 1.

#### SUBBASE AND BASE COURSES

- A. Place subbase and base course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place subbase and base course under pavements and walks as follows:
  - 1. Shape subbase and base course to required crown elevations and cross-slope grades.
  - 2. Compact subbase and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

#### DRAINAGE COURSE

- A. Place drainage course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place and compact drainage course under cast-in-place concrete slabs-on- grade as follows:
  - 1. Place drainage course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
  - 2. Compact each layer of drainage course to required cross sections and thicknesses to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

#### FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent geotechnical engineering testing agency to perform field quality-control testing.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.
- C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Architect.
- D. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable.
- E. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

#### PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
  - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

#### DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.
- B. Contractor is responsible for disposal at their own expense.

#### **8.7. Landscape Grading / Fine Grading**

##### **Measurement and Payment**

Full compensation for furnishing all labor, materials, tool, equipment, and incidentals, and for doing all of the work in compliance with the Plans, Specifications and "Landscape Grading / Fine Grading", of the Technical Specifications, shall be included and paid for in the appropriate bid item price.

<b>Bid Item #8</b>	<b>Grading (Rough &amp; Fine)</b>	<b>L.S.</b>
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#### GENERAL

##### SUMMARY

- A. This Section includes all materials, labor, transportation, services, and equipment necessary to install landscape planting and landscape construction items as shown on the Contract Drawings, and as specified herein this Section
  - 1. Fine grading
- B. Related Documents:
  - 1. The following applies to this section:
    - a. General provisions of the Contract, including General and Supplementary Conditions.
    - b. The Drawings.
    - c. Division 01 Specification Sections and related requirements in other sections of the Project Manual.
    - d. Related requirements in other Contract Documents listed in the Agreement.

2. Review these documents for coordination with additional requirements and information that apply to work under this Section.

#### REFERENCES

A. General:

1. The following documents form part of the Specifications to the extent stated. Bring conflicts between Specifications, Drawings, and the referenced documents to the attention of the Architect, in writing, for resolution before taking any related action. Where differences exist between codes and standards, the one affording the greatest protection shall apply.
2. If the year of the adoption or latest revision is omitted from the designation, it shall mean the specification, manual or test designation in effect the date the Notice to Proceed with the Work is given.

#### SUMMARY

- A. This Section includes landscape finish grading complete, as shown, and as specified.
- B. Unit Pricing: Lump Sum.

#### PROJECT/SITE CONDITIONS

- A. Existing Conditions: For protection of existing trees to remain, see Contract Drawing.
- B. Dust Nuisance: Assume full responsibility for alleviation or prevention of dust as a result of grading work.
- C. Observation: Site observation for Scope of Work specified herein this Section shall be made by the City. The Contractor shall request, in writing, at least one (1) week in advance of the time that observation is required. The Contractor, City, and/or City shall be in attendance at the Project Site at the time of each scheduled observation. Observation shall be required for the following Scope of Work:
  1. Pre-Construction Meeting.
  2. Incorporation of soil conditioning and fertilizers into the soil.
  3. Upon completion of fine grading operations and prior to planting operations.

#### SEQUENCING AND SCHEDULING:

- A. Complete all finish grading prior to installation of sprinkler irrigation systems in each area graded.
- B. Regrade as required to finish grades established by Architect once the sprinkler system is installed.

## PART 2 - PRODUCTS

### MANUFACTURERS

#### A. Acceptable Manufacturers:

1. Products described below and identified by product name, model number, or other manufacturer designation, are basis of design products. Basis of design products establish the standards of type, function, dimension, in-service performance, physical properties, appearance, warranty, cost, and other characteristics required by the Project.
2. Subject to the requirements of Division 01 "Product Requirements", products of manufacturers not listed may be proposed for substitution, provided they are comparable to the products specified.
  - a. If "No substitutions" is indicated next to the product name, provide only products of listed manufacturers.
  - b. The burden of proof of equality of proposed products is on the Contractor.

## PART 3 - EXECUTION

### EXAMINATION

#### A. Verification of Conditions: Verify that the following items have been completed prior to commencement of finish grading:

1. Installation of topsoil and soil preparation including debris removal.
2. Incorporation of soil amendments.

#### B. INSTALLATION

##### A. Finish Grading:

1. Provide all grades for natural runoff of water without low spots or pockets. Accurately set flow line grades at 2 percent minimum gradient unless otherwise noted in Drawings.
2. Finish grades shall be smooth, even and on a uniform plane with no abrupt changes of surface. Slope uniformly between given spot elevations.
3. Grades not otherwise indicated shall be uniform levels or slopes between points where elevations are given, or between points established by walks, paving, curbs or catch basins.
4. Tops and toes of all slopes shall be rounded to produce a gradual and natural-appearing transition between relatively level areas and slopes.

##### C. Tolerances:

1. All planting areas, including lawn areas, shall be true to grade within 1 in. when tested with a 10 ft. straightedge.
2. Hold finished grades below top of adjacent pavement, headers, curbs, or walls as follows:

- a. Shrub, Annual and Groundcover Areas: 1-1/2 inches.
- b. Sodded Lawn Areas: 1 inch.
- a.

**8.8. Concrete Paving**

**Measurement and Payment**

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all the work involved in compliance with the Plans, Specifications, and "Concrete Paving" of the Technical Specifications, including but not limited to rebar, base rock, and hot mix asphalt, shall be included and paid for in the appropriate bid item price.

<b>Bid Item #10</b>	<b>CONCRETE PAVING TYPE 1 W/ 6" AB</b>	<b>S.F.</b>
<b>Bid Item #11</b>	<b>CONCRETE PAVING TYPE 2 W/ 6" AB</b>	<b>S.F.</b>
<b>Bid Item #12</b>	<b>CONCRETE PAVING TYPE 2 W/ 6" AB</b>	<b>S.F.</b>
<b>Bid Item #15</b>	<b>CONCRETE CURB - LAWN AREA</b>	<b>L.F.</b>

GENERAL

SUMMARY

- A. This Section includes all materials, labor, transportation, services, and equipment necessary to color and finish exterior, plaza, cast-in-place concrete as shown on the Contract Drawings, and as specified herein this Section. This Section includes the following:
  - 1. Concrete Curbs.
  - 2. Concrete Walkways and Plaza
  - 3. Concrete Headers.
- B. Related Documents:
  - 1. The following applies to this section:
    - a. General provisions of the Contract, including General and Supplementary Conditions.
    - b. The Drawings.
    - c. Division 01 Specification Sections and related requirements in other sections of the Project Manual. Including but not limited;
      - I. Section 321373 Concrete Paving Joint Sealants
    - d. Related requirements in other Contract Documents listed in the Agreement.

2. Review these documents for coordination with additional requirements and information that apply to work under this Section.

#### DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, expansive hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume.

#### SUBMITTALS

- A. Product Data: For each type of manufactured material and product indicated.
- B. Design Mixtures: For each concrete pavement mixture. Include alternate mixture designs when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
- C. Qualification Data: For manufacturer and testing agency.
- D. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated, based on comprehensive testing of current materials:
- E. Material Certificates: Signed by manufacturers certifying that each of the following materials complies with requirements:
  1. Cementitious materials.
  2. Steel reinforcement and reinforcement accessories.
  3. Color Admixtures.
  4. Curing compounds.
  5. Applied finish materials.
  6. Bonding agent or epoxy adhesive.
  7. Joint fillers.
  8. Repair materials
- F. Field quality-control test reports.
- G. Minutes of preinstallation conference.
  - 1.

#### QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer of ready-mixed concrete products who complies with ASTM C 94/C 94M requirements for production facilities and equipment.
  - 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."
- B. Testing Agency Qualifications: An independent agency qualified according to ASTM C 1077 and ASTM E 329 for testing indicated, as documented according to ASTM E 548.
  - 1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-01 or an equivalent certification program.
- C. ACI Publications: Comply with ACI 301, "Specification for Structural Concrete," unless modified by requirements in the Contract Documents.
- D. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.
- E. Mockups: Cast mockups of full-size sections of concrete pavement to demonstrate typical joints, surface finish, texture, color, and standard of workmanship.
  - 1. Build mockups in the location and of the size as directed by Owner's Authorized Representative. Mockups shall show full range of colors and finishes indicated on contract drawings. Mockups shall be constructed to show various colors and finishes in the adjacent relationships shown on the contract drawings.
  - 2. Cast additional mockups of any proposed alternative methods of obtaining the desired effects, such as alternative methods of exposing aggregate.
  - 3. Notify Owner's Authorized Representative seven days in advance of dates and times when mockups will be constructed.
  - 4. Obtain Owner's Authorized Representative's approval of mockups before starting construction.
  - 5. Maintain approved mockups during construction in an undisturbed condition as a standard for judging the completed pavement.
  - 6. Demolish and remove approved mockups from the site when directed by Owner's Authorized Representative.
    - a.

#### PROJECT CONDITIONS

- A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

#### PART 2 - PRODUCTS

##### FORM MATERIALS

- A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, smooth exposed surfaces.

1. Use flexible or curved forms for curves with a radius 100 feet or less.
- B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

#### STEEL REINFORCEMENT

- A. Plain-Steel Welded Wire Reinforcement: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.
- B. Deformed-Steel Welded Wire Reinforcement: ASTM A 497, flat sheet.
- C. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 deformed.
- D. Plain Steel Wire: ASTM A 82,
- E. Deformed-Steel Wire: ASTM A 496.
- F. Joint Dowel Bars: Plain steel bars, ASTM A 615/A 615M, Grade 60 (Grade 420). Cut bars true to length with ends square and free of burrs.
- G. Tie Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.
- H. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice."
  1. Equip wire bar supports with sand plates or horizontal runners where base material will not support chair legs.
  - 3.

#### CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source throughout the Project:
  1. Portland Cement: ASTM C 150, Type **II gray** or **white** as indicated on contract drawing
    - a. Fly Ash: ASTM C 618, Class [C] [F].
    - b. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.
- B. Normal-Weight Aggregates: ASTM C 33, Class 4 coarse aggregate, uniformly graded. Provide aggregates from a single source.
  - I. Maximum Coarse-Aggregate Size: 3/4 inch nominal.
  - II. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
- C. Water: ASTM C 94/C 94M.
- D. Air-Entraining Admixture: ASTM C 260.

- E. Chemical Admixtures: ASTM C 494/C 494M, of type suitable for application, certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.

3.

#### ADMIXTURES

- A. General: Admixtures certified by manufacturer to contain not more than 0.1 percent water-soluble chloride ions by mass of cement and to be compatible with other admixtures
- B. Air-Entraining Admixture: ASTM C 260.
- C. Water-Reducing Admixture: ASTM C 494, Type A.
- D. High-Range, Water-Reducing Admixture: ASTM C 494, Type F.
- E. Water-Reducing and Accelerating Admixture: ASTM C 494, Type E.
- F. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.
- G. Colored Admixture (Integral Color), with matching water-based Colored Curing Wax: Provide materials from a single source and shall be like in color and visual appearance:
  - 1. " Concrete Type 2"
    - a. Scofield, L. M. Company, Chromix Admixture. London Gray
    - b. or equal (no known equal).

#### CURING MATERIALS

- A. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth.
- B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- C. Water: Potable.
- D. Clear Solvent-Borne Liquid Membrane-Forming Curing Compound: ASTM C 309, Type I, Class A or B, wax free.
  - 1. Curing compound for colored concrete: Curing compound shall comply with ASTM C- 309 and be approved by pigment manufacturer for use with colored concrete.
- E. Matching-colored, Water-borne Membrane-Forming Curing Compound: ASTM C 309, Type I, Class A.
  - 1. Provide material that has a maximum volatile organic compound (VOC) rating of 350 g/L.
    - a. Lithochrome<sup>®</sup> Color Wax<sup>™</sup>, L.M. Scofield Company.
    - b. or equal (no known equal)

- F. Evaporation Control: Mono-molecular film-forming compound applied to exposed concrete slab surfaces for temporary protection from rapid moisture loss.

#### RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.
- B. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
- C. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class and grade to suit requirements.
  - 1. Types I and II, non-load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.
  - 2. Chemical Surface Retarder (if approved by Owner's Authorized Representative after mock- up review): Water-soluble, liquid-set retarder with color dye, for horizontal concrete surface application, capable of temporarily delaying final hardening of concrete to a depth of 1/8 to 1/4 inch.

#### CONCRETE MIXTURES

- A. Prepare design mixtures, proportioned according to ACI 301, for each type and strength of normal-weight concrete determined by either laboratory trial mixes or field experience.
  - 1. Use a qualified independent testing agency for preparing and reporting proposed concrete mixture designs for the trial batch method.
- A. Proportion mixtures to provide normal-weight concrete with the following properties:
  - 1. Compressive Strength (28 Days): 3000 psi.
  - 2. Maximum Water-Cementitious Materials Ratio at Point of Placement: 0.50.
  - 3. Slump Limit: 4 inches, plus or minus 1/2 inch.
- B. Add air-entraining admixture at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content as follows:
  - 1. Air Content: 3-1/2 percent plus or minus 1.5 percent for 3/4-inch nominal maximum aggregate size
- C. Limit water-soluble, chloride-ion content in hardened concrete to 0.30 percent by weight of cement.
- D. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.
- E. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement according to ACI 301 requirements as follows. Use cementitious materials other than portland cement only where they will not adversely affect the color. Use a minimum of 20 percent fly ash where it will not adversely affect the color.

1. Fly Ash or Pozzolan: 25 percent.
  2. Ground Granulated Blast-Furnace Slag: 50 percent.
  3. Combined Fly Ash or Pozzolan, and Ground Granulated Blast-Furnace Slag: 50 percent, with fly ash or pozzolan not exceeding 25 percent.
- F. Color Pigment: Add color pigment to concrete mixture according to manufacturer's written instructions and to result in hardened concrete color consistent with approved mockup.

#### CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Furnish batch certificates for each batch discharged and used in the Work.
1. When air temperature is between 85 deg F (30 deg C) and 90 deg F (32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.
- B. Project-Site Mixing: Permitted only for concrete that will not be visible, such as for footings and masonry fill. Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Mix concrete materials in appropriate drum-type batch machine mixer.
1. For concrete mixes of 1 cu. yd. (0.76 cu. m) or smaller, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.
  2. For concrete mixes larger than 1 cu. yd. (0.76 cu. m), increase mixing time by 15 seconds for each additional 1 cu. yd. (0.76 cu. m).
  3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mixture type, mixing time, quantity, and amount of water added.

#### PART 3 - EXECUTION

##### EXAMINATION

- A. Examine exposed subgrades and subbase surfaces for compliance with requirements for dimensional, grading, and elevation tolerances.
- B. Prepare subbase and base according to requirements in Division 2 Section "Earthwork."
- C. Proof-roll prepared subbase surface with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding.
- D. Completely proof-roll subbase in one direction. Limit vehicle speed to 3 mph.
- E. Proof-roll with a loaded 10-wheel tandem-axle dump truck weighing not less than 15 tons.

- F. Subbase with soft spots and areas of pumping or rutting exceeding depth of  $\frac{1}{4}$  inch require correction according to requirements in Division 2 Section "Earthwork."
- G. Proceed with concrete pavement operations only after nonconforming conditions have been corrected and subgrade is ready to receive pavement.

#### PREPARATION

- A. Remove loose material from compacted base surface immediately before placing concrete.

#### EDGE FORMS AND SCREED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides for pavement to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

#### STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.
- C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.
- D. Install welded wire reinforcement in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.
- E. Install fabricated bar mats in lengths as long as practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities, or replace units as required before placement. Set mats for a minimum 2-inch (50-mm) overlap of adjacent mats.

#### JOINTS

- A. General: Form construction, isolation, and contraction joints and tool edgings true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated.
  - 1. When joining existing pavement, place transverse joints to align with previously placed joints, unless otherwise indicated.

- B. Construction Joints: Set construction joints at side and end terminations of pavement and at locations where pavement operations are stopped for more than one-half hour unless pavement terminates at isolation joints.
1. Continue steel reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of pavement strips, unless otherwise indicated.
  2. Provide tie bars at sides of pavement strips where indicated.
  3. Butt Joints: Use epoxy bonding adhesive at joint locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
  4. Keyed Joints: Provide preformed keyway-section forms or bulkhead forms with keys, unless otherwise indicated. Embed keys at least 1-1/2 inches (38 mm) into concrete.
  5. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt-coat one-half of dowel length to prevent concrete bonding to one side of joint.
- C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.
1. Locate expansion joints at intervals of 30 feet, unless otherwise indicated.
  2. Extend joint fillers full width and depth of joint.
  3. Terminate joint filler not less than 1/2 inch or more than 1 inch below finished surface if joint sealant is indicated.
  4. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.
  5. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
  6. Protect top edge of joint filler during concrete placement with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.
- D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as follows:
1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with grooving tool to radius indicated. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover marks on concrete surfaces.
  2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch-wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks.
  3. Doweled Contraction Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt coat one-half of dowel length to prevent concrete bonding to one side of joint.

- E. Edging: Tool edges of pavement, gutters, curbs, and joints in concrete after initial floating with an edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate tool marks on concrete surfaces.
- A.

## CONCRETE PLACEMENT

- A. Inspection: Before placing concrete, inspect and complete formwork installation, steel reinforcement, and items to be embedded or cast in. Notify other trades to permit installation of their work.
- B. Remove snow, ice, or frost from subbase surface and reinforcement before placing concrete. Do not place concrete on frozen surfaces.
- C. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.
- D. Comply with ACI 301 requirements for measuring, mixing, transporting, and placing concrete.
- E. Do not add water to concrete during delivery or at Project site.
- F. Do not add water to fresh concrete after testing.
- G. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- H. Consolidate concrete according to ACI 301 by mechanical vibrating equipment supplemented by hand spading, rodding, or tamping.
  - 1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocating reinforcement, dowels, and joint devices.
- I. Screed pavement surfaces with a straightedge and strike off.
- J. Commence initial floating using bull floats or darbies to impart an open textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.
- K. Hot-Weather Placement: Comply with ACI 301 and as follows when hot-weather conditions exist:
  - 1. Cool ingredients before mixing to maintain concrete temperature below 90 deg F (32 deg C) at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
  - 2. Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.

3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

A.

## CONCRETE FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Sandblast Textured Finishes (Concrete Type 1 & 2)
  1. Perform abrasive blast finishing in as continuous an operation as possible, utilizing same work crew to maintain continuity of finish on each surface or area of work.
  2. Use abrasive grit of proper type and gradation to expose fine aggregate and surrounding matrix surfaces to match approved mock-up panels.
  3. Determine type of nozzle, nozzle pressure, and blasting techniques required to match approved mock-up panels.
  4. Abrasive blasting of surfaces shall be done on concrete surfaces of approximately the same age. Required age of concrete shall be determined by small sample and the field constructed mock-up panel.
  5. All work shall conform to CAL OSHA /MSDS for application and clean up procedures.
  6. After concrete has cured, in approximately 30 days after being poured, provide a sandblast- textured finish to expose the desired aggregates below the concrete surface.
- C. Medium Broom Finish (Concrete Type 3)
  - a. Draw a soft bristle broom across float-finished concrete surface perpendicular to line of traffic to provide a uniform, fine-line texture.
  - b. Match approved samples and field mockups, to compare for color(s), texture(s), finish(es), and other characteristics relating to aesthetic effects.
- D. Slip-Resistive Aggregate Finish: Before final floating, spread slip-resistive aggregate finish on pavement surface according to manufacturer's written instructions.
  1. Cure concrete with curing compound recommended by slip-resistive aggregate manufacturer. Apply curing compound immediately after final finishing.
  2. After curing, lightly work surface with a steel wire brush or abrasive stone and water to expose nonslip aggregate.

## CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound, or a combination of these as follows:
  - 1. Moist Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
    - a. Water.
    - b. Continuous water-fog spray.
    - c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.
  - 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
  - 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

#### PAVEMENT TOLERANCES

- A. Comply with tolerances of ACI 117 and as follows:
  - 1. Elevation: 1/4 inch.
  - 2. Thickness: Plus 3/8 inch, minus 1/4 inch.
  - 3. Surface: Gap below 10-foot-long, unleveled straightedge not to exceed 1/4 inch.
  - 4. Lateral Alignment and Spacing of Tie Bars and Dowels: 1 inch.
  - 5. Vertical Alignment of Tie Bars and Dowels: 1/4 inch.
  - 6. Alignment of Tie-Bar End Relative to Line Perpendicular to Pavement Edge: 1/2 inch.
  - 7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Pavement Edge: Length of dowel 1/4 inch per 12 inches.
  - 8. Joint Spacing:  $\pm 0$  inch.

9. Contraction Joint Depth: Plus 1/4 inch, no minus.
10. Isolation Joint Width: Plus 1/8 inch, no minus.

#### FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Testing Services: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
  1. Testing Frequency: Obtain at least 1 composite sample for each 5000 sq. ft. or fraction thereof of each concrete mix placed each day.
    - a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
  2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mix. Perform additional tests when concrete consistency appears to change.
  3. Air Content: ASTM C 231, pressure method; one test for each composite sample, but not less than one test for each day's pour of each concrete mix.
  4. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 deg F (4.4 deg C) and below and when 80 deg F (27 deg C) and above, and one test for each composite sample.
  5. Compression Test Specimens: ASTM C 31/C 31M; cast and laboratory cure one set of three standard cylinder specimens for each composite sample.
  6. Compressive-Strength Tests: ASTM C 39/C 39M; test 1 specimen at 7 days and 2 specimens at 28 days.
    - a. A compressive-strength test shall be the average compressive strength from 2 specimens obtained from same composite sample and tested at 28 days.
- C. Strength of each concrete mix will be satisfactory if average of any 3 consecutive compressive- strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi (3.4 MPa).
- D. Test results shall be reported in writing to Owner's Authorized Representative, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.

- E. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Owner's Authorized Representative but will not be used as sole basis for approval or rejection of concrete.
- F. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Owner's Authorized Representative.
- G. Remove and replace concrete pavement where test results indicate that it does not comply with specified requirements.
- H. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- A.

#### REPAIRS AND PROTECTION

- A. Remove and replace concrete pavement that is broken, damaged, or defective or that does not comply with requirements in this Section.
- B. Protect concrete from damage. Exclude traffic from pavement for at least 14 days after placement.
- C. Maintain concrete pavement free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date scheduled for Substantial Completion inspections.

### **8.9. Concrete Paving Joint Sealants**

#### GENERAL

#### SUMMARY

- A. This Section includes all services, labor, materials, transportation, and equipment necessary to perform the Work indicated on the Contract Drawings and specified herein this Section, as required to properly constructing site exterior horizontal and vertical joint sealants for the following:
  - 1. Exterior joints in the following horizontal surfaces:
    - a. Control, expansion, and isolation joints in cast-in-place concrete pavement.
    - b. Joints between different materials.
  - 2. Other joints, as indicated.
- B. Related Documents:
  - 1. The following applies to this section:
    - a. General provisions of the Contract, including General and Supplementary Conditions.
    - b. The Drawings.
    - c. Division 01 Specification Sections and related requirements in other sections of the Project Manual. Including but not limited;

I. Section 321313 Concrete Paving

- d. Related requirements in other Contract Documents listed in the Agreement.
- 2. Review these documents for coordination with additional requirements and information that apply to work under this Section.

REFERENCES

- A. ASTM: American Society for Testing and Materials
  - 1. ASTM D2628: Standard Specification for Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements
  - 2. ASTM D2835: Standard Specification for Lubricant for Installation of Preformed Compression Seals in Concrete Pavements
- B. CRD: U.S. Army Corps of Engineers Concrete Research Division
  - 1. CRD C548: Handbook for Concrete and Cement Standard Specification for Jet-Fuel and Heat-Resistant Preformed Polychloroprene Elastomeric Joints Seals for Rigid Pavement

SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for Verification: For each type and color of joint sealant required. Install joint-sealant samples in 1/2-inch-wide joints formed between two (2) 6-inch-long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- A. Sand or Grout Mixture for Cobble Band Expansion Joints: Provide a quarter (.25) LB sample of sand or grout mixture suitable for sanding the surface of joint sealant at Cobble Bands.
- B. Product Certificates: Signed by manufacturers of joint sealants certifying that products furnished comply with requirements and are suitable for the use indicated.
- C. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and Citys, and other information specified.
- D. Compatibility and Adhesion Test Reports: From joint sealant manufacturer indicating the following:
  - 1. Materials forming joint substrates and joint-sealant backer materials have been tested for compatibility and adhesion with joint sealants.
  - 2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.

- E. Product Test Reports: From a qualified testing agency indicating joint sealants comply with requirements, based on comprehensive testing of current product formulations.

#### QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has specialized in installing joint sealants similar in material, design, and extent to those indicated for this Project and whose work has resulted in joint-sealant installations with a record of successful in-service performance.
- B. Source Limitations: Obtain each type of joint sealant through one (1) source from a single manufacturer.
- C. Product Testing: Obtain test results for "Product Test Reports" Paragraph in "Submittals" Article from a qualified testing agency, based on testing current sealant formulations within a 36-month period.
  - 1. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated, as documented according to ASTM E 548.
  - 2. Test elastomeric joint sealants for compliance with requirements specified by reference to ASTM C 920, and where applicable, to other standard test methods.
- D. Performance Requirements: Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous seals without staining or deteriorating joint substrates.
- E. Preconstruction Compatibility and Adhesion Testing: Submit to joint sealant manufacturer, for testing indicated below, samples of materials that will contact or affect joint sealants.
  - 1. Use manufacturer's standard test methods to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
  - 2. Submit each type of material, including joint substrates, joint-sealant backer materials, secondary seals, and miscellaneous material.
  - 3. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
  - 4. For materials failing tests, obtain joint sealant manufacturer's written instructions for corrective measures, including the use of specially formulated primers.
  - 5. Testing will not be required if joint sealant manufacturer submits joint preparation data that are based on previous testing of current sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.
- F. Field-Constructed Mock-up Paving Samples: Include joint sealants, in each color/ pattern as required, in all Field-Constructed Mock-up Paving Samples as indicated in Section 321313, Concrete Paving. Approval of Field-Constructed Mock-up Paving Samples shall constitute approval of joint sealant materials prior to beginning of Work herein this Section.
  - 1. Provide joint sealant at concrete to match color of concrete.
    - a.

## FIELD CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions
  - 1. When ambient and substrate temperature conditions are outside limits permitted by joint- sealant manufacturer.
  - 2. When joint substrates are wet.
  - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
  - 4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

## DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project Site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration date, pot life, curing time, and mixing instructions for multicomponent materials.
- B. Store and handle materials to comply with manufacturer's written instructions to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

## WARRANTY

- A. Special Installer's Warranty: Written warranty, signed by Installer, agreeing to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified herein this Section within specified warranty period
  - 1. Warranty Period: Two (2) years from date of Substantial Completion.

## PART 2 - PRODUCTS

### MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products listed in other Part 2 articles.
- B. Products: Subject to compliance with requirements, provide one of the products listed in other Part 2 articles.

### MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backing materials, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer based on testing and field experience.

## ELASTOMERIC JOINT SEALANTS

- A. Multi-Part Elastomeric Joint Sealant Standard for Concrete and Masonry: Pourable, chemically curing elastomeric formulation complying with the following requirements for formulation and with ASTM C 920 for type, grade, class, and uses indicated:
  - 1. Multi-Component Urethane Sealant: Except as otherwise indicated, provide manufacturer's standard, non-modified, three-component material (base, activator, and color catalyst), urethane-based, elastomeric sealant: Gun-grade, Type M (multi- component), Grade NS, Class 25, Type II.
    - a. Acceptable Products: "Lithoseal™ Trafficalk-3G™", L.M. Scofield Company.
    - b. or equal (no known equal)

## JOINT-SEALANT BACKER MATERIALS

- A. General: Provide joint-sealant backer materials that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by joint-sealant manufacturer based on field experience and laboratory testing.
- B. Plastic Foam Joint Fillers: Preformed, compressible, resilient, non-staining, non-waxing, non- extruding strips of flexible plastic foam, either open-cell polyurethane foam or closed-cell polyethylene foam, subject to approval of sealant manufacturer, for cold-applied sealants only. Polystyrene foam is not acceptable.
- C. Elastomeric Tubing Joint Fillers: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056, nonabsorbent to water and gas, and capable of remaining resilient at temperatures down to minus 26d F. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and otherwise contribute to optimum sealant performance.
- D. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self- adhesive tape where applicable.

## MISCELLANEOUS MATERIALS

- A. Primer: Product recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint- sealant-substrate tests and field tests.
- B. Cleaners for Non-porous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants with joint substrates.

- C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.
- D. Sand: Clean, washed, fine-textured plaster sand, with neutral pH and no salinity. Sieve analysis at 100% passing a no. 4 sieve
  - 1.

### PART 3 - EXECUTION

#### EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint- sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint sealant manufacturer's written instructions and the following requirements:
  - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatability by sealant manufacturer), old joint sealant, oil grease, waterproofing, water repellents, water, surface dirt, and stones.
  - 2. Clean porous joint substrate surfaces by brushing, sweeping, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil- free compressed air. Porous joints include the following:
    - a. Concrete.
    - b. Masonry.
  - 3. Remove laitance and form-release agents from concrete.
  - 4. Clean non-porous surfaces with chemical cleaners or other means that do not stain, harm, or leave residues capable of interfering with adhesion of joint sealants. Non-porous joints include the following:
    - a. Metal
    - b. Glass
- B. Joint Priming: Prime joint substrates where indicated or where recommended in writing by joint sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to

comply with joint sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

## INSTALLATION

- A. General: Comply with joint sealant manufacturer's written installation instructions applicable to products and applications indicated, unless more stringent requirements apply
- B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
  - 1. Do not leave gaps between ends of backer materials.
  - 2. Do not stretch, twist, puncture, or tear backer materials.
  - 3. Remove absorbent backer materials that have become wet before sealant application and replace them with dry materials.
- D. Install bond breaker tapes behind sealants where sealant backings are not used between sealants and back of joints.
- E. Install sealants by proven techniques to comply with the following and at the same time backings are installed:
  - 1. Place sealants so they directly contact and fully wet joint substrates.
  - 2. Completely fill recesses provided for each joint configuration.
  - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Non-Sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
  - 1. Remove excess sealants from surfaces adjacent to joint.
  - 2. Use tooling agents that are approved in writing by joint sealant manufacturer and that do not discolor sealants or adjacent surfaces.
- G. Provide joint configuration to comply with joint sealant manufacturer's written instructions, unless otherwise indicated.

- H. Provide recessed joint configuration for silicone sealants of recess depth and at locations indicated.
- I. Apply sand or grout mixture by hand to sealant surface at cobble band expansion joints. Sealant shall be uncured and able to accept and retain dusting of material.
- J. Lightly apply silica sand to all joints (except cobble band joint per #G above) once tooling sealants has been performed.

#### CLEANING

- A. Clean off excess sealants or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur.

#### PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from the original Work.

#### EXTRA MATERIAL

- A. Contractor shall supply City with six (6) extra packages of each sealant type and color specified prior to Substantial Completion of the project.

#### **8.10. Stamped Concrete Paving**

##### **Measurement and Payment**

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all of the work involved in compliance with the Plans, Specifications, and "Planting" of the Technical Specifications, shall be included and paid for in the appropriate bid item price.

##### **Bid Item #13 Stamp Concrete Type 1 w/6" AB (Brick Substitute) SF**

##### **Bid Item #13 Stamp Concrete Type 2 w/6" AB (Brick Substitute) SF**

#### SUMMARY

- A. This Section includes all materials, labor, transportation, services, and equipment necessary to color and finish exterior, plaza, cast-in-place concrete as shown on the Contract Drawings, and as specified herein this Section. This Section includes the following:

1. Stamped Concrete Paving

B. Related Documents:

1. The following applies to this section:

- a. General provisions of the Contract, including General and Supplementary Conditions.
- b. The Drawings.
- c. Division 01 Specification Sections and related requirements in other sections of the Project Manual. Including but not limited;
  - I. Section 321616 Concrete Paving
  - II. Section 321373 Concrete Paving Joint Sealants
- d. Related requirements in other Contract Documents listed in the Agreement.

2. Review these documents for coordination with additional requirements and information that apply to work under this Section.

DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, expansive hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume.

SUBMITTALS

- A. Product Data: For each type of manufactured material and product indicated.
- B. Design Mixtures: For each concrete pavement mixture. Include alternate mixture designs when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
- C. Qualification Data: For manufacturer and testing agency.
- D. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated, based on comprehensive testing of current materials:
- E. Material Certificates: Signed by manufacturers certifying that each of the following materials complies with requirements:
  - 1. Dry-shake colored hardener
  - 2. Antiquing release agent
  - 3. Liquid release agent
  - 4. Imprinting/Texturing tools
  - 5. Curing compound and sealer
- F. Design Mixes: For each type of concrete.

- G. Samples for Initial Selection: Manufacturer's color charts showing full range of colors available.
- H. Field quality-control test reports.
- I. Minutes of preinstallation conference.

#### QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer of ready-mixed concrete products who complies with ASTM C 94/C 94M requirements for production facilities and equipment.
  - 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."
- A. Testing Agency Qualifications: An independent agency qualified according to ASTM C 1077 and ASTM E 329 for testing indicated, as documented according to ASTM E 548.
  - 1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-01 or an equivalent certification program.
- B. ACI Publications: Comply with ACI 301, "Specification for Structural Concrete," unless modified by requirements in the Contract Documents.
- C. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.
- D. Stamped Concrete Paving Mockups:
  - 1. Construct a 10 foot by 10 foot mockup at location selected by Architect.
  - 2. Provide individual mockups for each color and pattern required.
  - 3. Construct mockup using materials, processes, and techniques required for the work, including curing procedures. Incorporate representative control, construction, and expansion joints according to Project requirements. Installer for the work to construct mockup.
  - 4. Notify Architect and Owner a minimum of seven calendar days in advance of the date scheduled for each mockup construction.
  - 5. Obtain the Architect's and Owner's acceptance of each mockup prior to commencement of the work.
  - 6. Each mockup to remain until completion of the work to serve as a quality control standard for the work. Provide suitable protections to preclude damage to mockup.
  - 7. Demolish and remove each mockup from site when directed.
- E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."
  - 1. Before submitting design mixtures, review concrete pavement mixture design and examine procedures for ensuring quality of concrete materials and concrete pavement construction practices. Require representatives, including the following, of each entity directly concerned with concrete pavement, to attend conference:

- a. Contractor's superintendent.
- b. Independent testing agency responsible for concrete design mixtures.
- c. Ready-mix concrete producer.
- d. Concrete pavement subcontractor.

1.

a.

#### PROJECT CONDITIONS

- G. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

#### PART 2 - PRODUCTS

##### ACCEPTABLE MANUFACTURERS

- A. Basis of Design: Provide products specified herein manufactured by Sika Corporation.

##### MATERIALS

- A. Dry-Shake Colored Hardener: Cementitious material containing special hard aggregates, formulated as a high opacity color hardening material for the top surface of freshly place concrete substrates. Highly UV-resistant. Factory proportioned, mixed and packaged, ready-to-use. Comply with ASTM C 979.

1. Product: "LITHOCHROME Color Hardener", Sika Corporation.

2. Colors:

- a. Stamped Concrete Type 1 – Brick Pattern Tan color: Scofield Weat Fields or equal
- b. Stamped Concrete Type 2 – Brick Pattern Red Color : Scofield117 Spring Rose or equal

3. Imprinting Tools: System of matched tools for imparting textures and patterns into freshly placed concrete surfaces.

4. Product: "LITHOTEX Pavecrafters", Sika Corporation.

5. Patterns:

- a. New Brick Herringbone Pattern # S6000 or equal

I. Recommended Contractor Set: 10 Rigid, 2 Flex, 1 Skin, 1 Roller Sleeve

II. Suggested Touch-up and Detailing Tools: Touch-up Texture Skin: New Brick – S7318-TS Touch-up  
Texture Roller Sleeve: New Brick – SR0960 Chisels: 2", 4", & 8" Touch-up Wheel: 3/16" or 3/8"

III. Grout Line Width: 1/4"-3/8", Brick Size: 7 5/8" x 3 3/4"

6. Border Patterns

- a. New Brick Sailor Course Pattern # S6950 or equal
- b. Additional Tools:
  - I. Single Brick Set – S6955
  - II. Recommended Contractor Set: 2 Rigid, 1 Flex, 1 Single Brick Set, 1 Skin, 1 Roller Sleeve
  - III. Suggested Touch-up and Detailing Tools:
    - i. Touch-up Texture Skin: New Brick – S7318-TS
    - ii. Touch-up Texture Roller Sleeve: New Brick – SR0960
    - iii. Chisels: 2", 4", & 8" Touch-up Wheel: 3/16" or 3/8"
  - IV. Grout Line Width: 1/4"-3/8", Grout Line Depth: 1/8"-3/16", Brick Size: 7 5/8" x 3 3/4"
- B. Liquid Release Agent: Colorless, scented liquid formulated to break the bond between imprinting tools and surface of color-hardened concrete. Evaporates completely, leaving no residue.
  1. Product: "SCOFIELD Liquid Release BG", Sika Corporation.
- C. Waterborne Curing Compound and Sealer: Low VOC waterborne modified acrylic formulation. Complies with ASTM C 309.
  1. Product: "SCOFIELD Cureseal-W", Sika Corporation.
- D. CONCRETE MIX DESIGN
  1. General: Refer to Section 321313 "Concrete Paving" for basic concrete paving requirements, including formwork, reinforcement, concrete materials, and mixing.
  2. Minimum Cement Content: 5-1/2 sacks per cubic yard of concrete.
  3. Mix design must not permit segregation of concrete materials during pumping, placing, or consolidation of concrete. Slump not to exceed 4 inches.
  4. Admixtures:
    - a. A normal or retarded-set, water-reducing admixture is permissible.
    - b. An air-entraining admixture complying with ASTM C 260 is acceptable where freeze/thaw durability is required.
    - c. A nonchloride accelerator is acceptable for cold weather concrete placement.
    - d. Do not add a high-range water reducing admixture (superplasticizer).
  5. Do not add calcium chloride to concrete mix.
  6. Use of fly ash as a cement replacement may be acceptable, subject to manufacturer's current recommendations.

7. Do not add water to the mix in the field.

### PART 3 - EXECUTION

#### EXAMINATION

- A. General: Refer to Section 321313 "Concrete Paving" for basic concrete paving execution.
- B. Subgrade to receive stamped concrete paving work must be well drained and have adequate, uniform loadbearing characteristics.
  1. Verify grading will ensure a uniform concrete thickness during concrete placement.
- C. At the time of concrete placement, subgrade must be moist, completely consolidated, and free from frost. If necessary, subgrade may be dampened with water prior to placement; however, freestanding water or soft, muddy, or frozen ground is not permissible.

#### CONCRETE PLACEMENT

- A. General: Place and spread concrete to completely fill all space inside forms. Move concrete into place with square-tipped shovels or concrete rakes.
- B. Consolidate concrete by tamping or vibrating to provide a suitable surface for finishing.
- C. Prior to appearance of excess moisture or bleed water, screed concrete with wood or magnesium straight edge or mechanical vibrating screed.
- D. Continue concrete surface leveling and consolidation with highway magnesium straight edge and (or) magnesium bull float.
- E. Mechanically float concrete surfaces to required flatness and levelness as soon as concrete surface has taken its initial set and will support weight of a power float machine equipped with float shoes or combination blades and operator.
  1. Comply with ACI 302.1R for acceptable tolerances.
- F. Completed concrete placement to result in an open surface suitable to receive colored hardener.

#### STAMPED CONCRETE PAVING INSTALLATION

- A. Apply 2/3 of dry-shake colored hardener at specified application rate to freshly floated concrete surface. Bleed water must not be present during or following application of first and second dry-shake applications.
- B. Do not throw dry-shake colored hardener material; distribute evenly by hand or mechanical spreader designed to apply floor hardeners. Mechanical spreader manufacturer as acceptable to stamped concrete paving manufacturer.
- C. As soon as dry-shake material has absorbed moisture, indicated by uniform darkening of surface, mechanically float concrete surface a second time, just enough to bring moisture from base slab through dry-shake color hardener.

- D. Immediately following second floating, apply remaining 1/3 of dry-shake colored hardener at specified application rate. If applied by hand, broadcast in opposite direction of first application for a more uniform coverage. If a mechanical spreader is used, apply in same manner as previously described.
- E. As soon as dry-shake material has absorbed moisture, mechanically float concrete surface a third time.
- F. Do not add water to the surface.
- G. Begin imprinting operations immediately after applying dry-shake colored hardener, according to manufacturer's written instructions, including application of powder antiquing release agent.

#### SEALING

- A. Prior to sealing, the following conditions must be present:
  - 1. Release agent has been removed.
  - 2. Moisture content of concrete is low enough that alkali and other salts do not become trapped beneath sealer. This will require a minimum of 28 days subsequent to concrete placement, or longer if required.
  - 3. No evidence of free water on concrete surfaces to receive curing and sealing compound.
- B. Seal imprinted concrete with liquid membrane curing and sealing compounds as recommended by manufacturer.
- C. Apply two coats of specified curing and sealing compound according to manufacturer's written instructions.

#### PROTECTION OF FINISHED WORK

- A. Prohibit foot or vehicular traffic on the newly imprinted concrete surface.
- B. Protect floor surface from damage throughout remainder of construction period until Final Acceptance of the work. If a covering material is necessary, surfaces must remain uncovered for a minimum of four days after which they may be covered with a new, smooth, nonstaining reinforced kraft curing paper. Plastic sheeting is unacceptable as a covering material.

#### SCHEDULE

- A. Refer to Drawings for locations of stamped concrete paving applications.

#### **8.11. Planting**

##### **Measurement and Payment**

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all of the work involved in compliance with the Plans, Specifications, and "Planting" of the Technical Specifications, shall be included and paid for in the appropriate bid item price.

#### **Bid Item #9 Soil Preparation LS**

**Bid Item #16      Top Soil              LS**

## SUMMARY

- A. This section describes planting trees, shrubs, and ground cover, including mulching, pruning, guying, and staking.
- B. Related Documents:
  - 1. The following applies to this section:
    - a. General provisions of the Contract, including General and Supplementary Conditions.
    - b. The Drawings.
    - c. Division 01 Specification Sections and related requirements in other sections of the Project Manual.
    - d. Related requirements in other Contract Documents listed in the Agreement.
  - 2. Review these documents for coordination with additional requirements and information that apply to work under this Section.
- A.

## REFERENCES

- A. General:
  - 1. The following documents form part of the Specifications to the extent stated. Bring conflicts between Specifications, Drawings, and the referenced documents to the attention of the Architect, in writing, for resolution before taking any related action. Where differences exist between codes and standards, the one affording the greatest protection shall apply.
  - 2. If the year of the adoption or latest revision is omitted from the designation, it shall mean the specification, manual or test designation in effect the date the Notice to Proceed with the Work is given.
- B. Standards
  - 1. All plant material shall be true to botanical and common name as indicated in the following:
    - a. *Sunset Western Garden Book*, Sunset Publishing Corporation, 2001.
    - b. *American Standard for Nursery Stock, ANSI Z60.1-1966*, edition approved November 6, 1996, American Association of Nurserymen, and American National Standards Institute.
  - 2. All plant material shall conform to the California State Department of Agriculture's regulations for nursery inspections, rules, and ratings.
- C. Section Includes:
  - 1. Fine Grading.
  - 2. Soil Preparation.

3. Pre Plant Weed Control.
4. Tree, Shrub, Groundcover, Bulb, and Vine Planting.
5. Staking, Tying, Guying, and Wrapping.
6. Topsoil.
7. Soil Conditioners, Amendments, and Fertilizers.
8. Mulches (wood products, aggregates, etc.).
9. Erosion Control Materials.
10. Rodent, Rabbit, Deer, and Pest Control.
- 1.

#### PROJECT CONDITIONS

- A. Site shall be free of weeds, native grasses, Bermuda grass, and Kikuyu grass prior to any planting or soil amendment placement.
- B. All rock and other growth or debris accumulated throughout the duration of the project shall be removed from the Project Site by the Contractor.
- C. Prior to excavation for planting or placing of plant materials, the Contractor shall locate all underground utility lines still in use and take proper precautions to avoid damage to such improvements. In the event of a conflict between such lines and plant material locations, the Contractor shall notify the Owner's Authorized Representative who shall arrange for the relocation of one or the other. The Contractor assumes all responsibility for making any or all repairs for damages resulting from Work as specified herein.
- D. Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, cease planting operations and notify Owner's Authorized Representative for further direction.
- E. Grading and soil preparation work shall be performed only during the period when beneficial and optimum results may be obtained. If the moisture content of the soil should reach such a level that working it would destroy soil structure or cause compaction, spreading and grading operations shall be suspended until, in the opinion of the Owner's Authorized Representative, the moisture content is increased or reduced to acceptable levels and the desired results are likely to be obtained.
- F. Contractor shall coordinate all drainage work with the other trades. Established site drainage shall be maintained by the Contractor during all phases of landscape construction.
- G. Grade all areas by filling and/or removing surplus soil as needed to insure proper grades and drainage as indicated on the plans. Unless otherwise noted, soil finish grades shall be below hardscape areas as follows:
  1. Three inches (3") for all planting areas.

- H. All undulations and irregularities in the planting surfaces resulting from tillage, rototilling, and all other operations, and all ridges and rises which are visually evident and would effect the maintenance of any planting area, shall be leveled and floated out before planting operations are initiated.
- I. Final finish grades shall insure positive drainage of the Project Site with all surface drainage away from buildings, walls, and toward driveways, drain inlets, and catch basins.
  - 1. Final grades shall be acceptable to the Owner's Authorized Representative before planting operations will be allowed to commence.
  - 2. The above conditions shall also apply to the final finish grade at the time of project completion.
- J. Actual planting shall be performed during those periods when weather and soil conditions are suitable in accordance with locally-accepted horticultural practice as approved by the Owner's Authorized Representative.
- K. All scales dimensions are approximate. Before proceeding with any Work, the Contractor shall carefully check and verify all dimensions and shall immediately notify the Owner's Authorized Representative of any discrepancy between the Contract Drawings and/or Contract Specifications and the actual Project Site conditions.
- L. Quantities of plant materials are shown for the Contractor's convenience only, and are not guaranteed. The Contractor shall check and verify count, and shall furnish a sufficient number of plant materials as needed to fulfill the intent and complete the Work as shown in the Contract Drawings. Plan plant symbol quantities shall take precedence over quantities indicated in the Plant List and Plan callouts
- M. Contractor shall make arrangements to have a complete set of Contract Drawings and Contract Specifications at the Project Site at all times during Work under this Section.
- N. As-Built Plans: As-Built Plans shall be prepared by the Contractor indicating any deviations in Work described herein and on the Contract Drawings, with respect to changes in materials, plant species, sizes, locations, and alignments. As-Built Plans shall be prepared by marking the changes on a conformed set of Xerox type prints in red ink. Provide As-Built Plans to the City at the end of the contracted Maintenance Period.

## DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Finish Grade: Elevation of finished surface of planting soil.
- C. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- D. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- E. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.

- F. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

## SUBMITTALS

### A. General

1. Product certificates, legible, signed by manufacturer, certifying that their products comply with specified requirements. Certificates shall include grades, analysis, amount, supplier, species, type, size, and quantity where applicable.
2. Manufacturer's certified analysis for standard products.
3. Analysis for other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
4. Label data substantiating that plants, trees, shrubs, and planting materials comply with specified requirements.
5. Soil amendment receipts containing analytical data.
6. Receipts from the soil supplier of all soil mixes specified in this Section.
7. At least one (1) plant of each species delivered to the project site shall have an identification tag from supplying nursery showing botanical and common name of plant.
8. List of all proposed landscape materials indicated by description, manufacturer, and model number. Include catalog cuts and manufacturer's current printed instructions of all material items described herein this Section.
9. List of all trees, shrubs, ground covers, vines, annuals, indicated by botanical name, common name, height, spread, caliper, container size, nursery, and location, contact person at nursery, and any specific remarks (i.e. "unable to locate", "photo submitted", etc.) The list shall be accompanied with color photographs of each tree type. Include a person or tape measurer in each photograph for scale purposes. Approval of photographs, however, does not indicate acceptance of plant material on site.
10. Submit certificates of compliance and invoices for soil amendments, fertilizers, and plant materials, with quantities of each.

### B. Samples:

1. ½ cubic foot each of landscape mulch materials, i.e. shredded bark mulch, aggregate, etc. in labeled plastic bags.
2. 1/2 cubic foot of imported topsoil in a labeled plastic bag.
3. Edging materials and accessories, of manufacturer's standard size, to verify color selected.
4. One (1) tree tie each type used (do not include stake)

- 5. Photographs of all tree material: A person is to be included with the photos for scale relationship Product certificates
- C. Planting Schedule: Indicating anticipated planting dates locations for each type of planting
- D. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of exterior plants during a calendar year. Submit before expiration of required maintenance periods.
- E. Qualification data for firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and address of architects and Citys, and other information specified.
- F. Immediately following site grading and *prior* to commencing soil preparation and any landscape planting operation(s), Contractor shall provide the horticultural soils fertility test and percolation test results to the City to verify required amendment types and quantities as specified:
- G. Soil Fertility Tests, as described herein this Section.
- H. Soil Percolation Tests, as described herein this Section
- I. Warranty: Sample of special warranty

#### QUALITY ASSURANCE

- A. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.
- B. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory.
  - 1. Report suitability of topsoil for plant growth. State-recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory topsoil.
- C. Provide quality, size, genus, species, and variety of exterior plants indicated, complying with applicable requirements in ANSI Z60.1, "American Standard for Nursery Stock."
- D. Preinstallation Conference: Conduct conference at project site
- E. Regulatory Requirements:
  - 1. Contractor shall meet the requirements of applicable laws, codes, and regulations as required by the authorities having jurisdiction over the Work.
- F. Manufacturer's Directions: Follow manufacturer's directions and drawings in all cases where the manufacturer's of articles used in this Section furnish directions covering points not shown in the Contract Drawings and Contract Specifications.
- G. Permits, Fees, Bonds, and Inspections: The Contractor shall arrange and pay for any and all permits, fees, bonds, and inspections necessary to perform and complete his portion of the Work.
- H. Contract Drawings and Contract Specifications:

1. Comply with the intent and meaning of Contract Drawings and Contract Specifications taken as a whole, not taking advantage of any readily perceived error or omission shall any exist.
2. Figures and dimensions on Contract Drawings shall take precedence over measurements by scale, and detailed drawings shall take precedence over general drawings.
3. Refer any errors and discrepancies in or between plans, specifications, lists, or notes to the Owner's Authorized Representative for adjustments or clarification before proceeding with the Work. In the event of errors or discrepancies, the Contractor shall assume responsibility for work performed without referring to the Owner's Authorized Representative for clarification.
4. The Owner's Authorized Representative shall interpret the meaning of the Contract Drawings and Contract Specifications in the event of conflict, and his/her decision shall be final.

#### DELIVERY, STORAGE, AND HANDLING

- A. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind- tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of exterior plants during delivery. Do not drop exterior plants during delivery and handling.
- B. Handle planting stock by root ball.
- C. Deliver exterior plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior plants and trees in shade, protect from weather and mechanical damage, and keep roots moist.
- D. Labeling: Furnish standard products in manufacturer's standard containers bearing original labels legibly showing quantity, analysis, genus/species and name of manufacturer/grower.
- E. Deliver trees, shrubs, ground covers, and plants after preparations for planting have been completed and install immediately. If planting is delayed more than six (6) hours after delivery, set planting materials in shade, protect from weather and mechanical damage, and keep roots moist. Anchor plants to prevent damage from winds.
  1. DO NOT remove container-grown stock from containers before time of planting.
  2. Water root systems of trees and shrubs stored on site with a fine-mist spray. Water as often as necessary to maintain root systems in a moist condition.

#### SEQUENCING AND SCHEDULING

- A. Acceptance: Do not install plant materials prior to acceptance of finish grades and main line trenching/installation of irrigation system.
- B. Coordination: Coordinate with work of other sections to insure the following sequence of events:

1. General: Sprinkler system to be installed and operable prior to installation of plant materials. Schedule hand watering of all plant materials installed prior to sprinkler irrigation system.
2. Plants in Pots: Schedule delivery of plants to coincide with installation of pots.
3. Headers: Install prior to installation of adjacent sprinkler irrigation system.
4. Pruning: Do not prune plant materials prior to installation and acceptance. Request review by Landscape Architect prior to pruning.

## WARRANTY

- A. Special Warranty: Installer's standard form in which Installer agrees to repair or replace plantings that fail in materials, workmanship, or growth within specified warranty period.
  1. Failures include, but are not limited to, the following:
    - a. Death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, abuse by Owner, or incidents that are beyond Contractor's control.
    - b. Structural failures including plantings falling or blowing over.
  2. Warranty Periods from Date of Substantial Completion:
    - a. Trees and Shrubs: One year.
    - b. Ground Cover and Plants: Six months.
- B. Correct Species: Warrant that all plant materials are true to species and variety.
- C. Delays: Delays caused by the Contractor in completing planting operations which extend the planting into more than one planting season shall extend the Warranty Period correspondingly.
- D. Condition of Plants: Plants shall be free of dead or dying branches and branch tips, with foliage of normal density, size and color.
- E. Replacements: As soon as weather conditions permit, replace, without cost to Owner all dead plants and all plants not in a vigorous, thriving condition, as determined by Architect during and at the end of Warranty Period.
- F. Exclusions: Contractor shall not be held responsible for failures due to neglect by Owner, vandalism, and natural disaster, during Warranty Period. Report such conditions.
  - a.
    - 3.
    - 1.

## MAINTENANCE SERVICE

A. Initial Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue until plantings are acceptably healthy and well established, but for not less than maintenance period below.

1. Maintenance Period for Trees and Shrubs: 6 months from date of Substantial Completion.

## B. REPLACEMENTS

### 1. Failed Materials:

- a. Repair and/or replace at no cost to the Owner all plant materials exhibiting conditions which are determined as unacceptable due to workmanship by the Contractor.
- b. Closely match replacements to adjacent specimens of the same species. Apply requirements of this Specification to replacements.
- c. Contractor shall be held responsible for a maximum of two (2) replacements for each failed tree, shrub and vine, and same area of groundcover planting after final acceptance during warranty period.

### C. Incorrect Materials:

1. During Warranty Period, replace at no cost to Owner plants revealed as being untrue to name and species.
2. Provide replacements of a size and quality to match the planted materials at the time the mistake is discovered.

1.

## PART 2 - PRODUCTS

### GENERAL

A. Immediately upon award of Contract for Work in this Section, the Contractor shall locate and purchase or hold for purchase all plant material as required.

B. Contractor shall verify with Owner's Authorized Representative of any plant material stock that has been nursery contract grown by Owner for use within Work of this Contract.

1. Contractor shall review the condition of the plant material with the Owner's Authorized Representative at the nursery maintaining the plant material, and at the time of delivery at the Project Site.

C. All plants shall have a growth habit typical for variety and species, symmetrical, with tightly knit branching, so trained or favored in development and appearance as to be superior in form, number of branches, compactness and symmetry, healthy, vigorous in growth. Plant materials shall also be free from insect pests, eggs and larvae, plant diseases, sun scalds, fresh bark abrasions, excessive abrasions, windburn, saltburn, or other objectionable disfigurements or conditions as determined by the Owner's Authorized Representative.

1. Container stock shall be grown in containers in which delivered for at least six (6) months, but not over two (2) years.
  2. Trees shall be exceptionally heavy, symmetrical, tightly knit, and so trained or favored in development and appearance as to be superior in form for their species, with regard to number of branches, compactness and symmetry.
  3. Pruning of trees as grown at the nursery shall meet the requirements outlined by the International Society of Arboriculture's "Tree Pruning Standards."
  4. Leaders of trees shall not have been pruned by the nursery.
- D. All plant material shall be subject per the California State Department of Agriculture Regulations for Nursery Inspections of Rules and Grading. Quantity and size of all plant shall be No. 1 Grade of Pinto Tag stock, or equal. Pinto tags shall be submitted to the Owner's Authorized Representative upon delivery of the plant material to the Project Site.
- E. Vigor: Plants shall be sound, healthy and vigorous, well branched and densely foliated when in leaf. They shall be free of disease, insect pests, eggs, or larvae. They shall have healthy, well- developed root systems. Plants shall be free from physical damage or adverse conditions which would prevent thriving growth.
- F. Condition of Root System: Samples must prove to be completely free of circling, kinked or girdling trunk surface and center roots and show no evidence of a pot-bound condition. Upon inspection by Architect at the job site, if five (5) percent or more of the plants of each species are found to contain kinked, circling or girdling roots, all plants of that species will be rejected.
- G. MEASUREMENTS:
1. Size Range: If a range of size is given, do not use plant materials less than the minimum size. The measurements specified are the minimum size acceptable and are the measurements after pruning, where pruning is required. Plants that meet the measurements specified, but do not possess a normal balance between height and spread shall be rejected.
  2. Substitutions: Substituted plants shall be true to species and variety and shall conform to measurements specified except that plants larger than specified may be used if accepted. Use of such plants shall not increase Contract price. If larger plants are accepted, increase the ball of earth in proportion to the size of the plant. Plants overgrown for their container size will be rejected.
  3. Unacceptable Trees: Trees that have damaged or crooked leaders, will be rejected. Trees having a main leader shall not have been headed back. Trees with abrasions of the bark, sunscalds, disfiguring knots, or fresh cuts of limbs over 3/4 in. which have not completely callused, will be rejected.
  4. Pruning: Do not prune plants before delivery. Consult Landscape Architect for pruning after installation.
  5. Field Dug Stock: Prior to digging of field grown plant materials, insure that excess loose fill resulting from cultivation around stems and over roots be removed down to natural finish grade at crown of plant materials. During digging, verify that size of tree spade or other equipment is adequate to encompass the

actively growing root zone of all plants. Plants which, after digging, show mostly large fleshy roots and few fibrous roots will be rejected.

A.

#### TREE AND SHRUB MATERIAL

- A. General: Furnish nursery-grown trees and shrubs complying with ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.
- C. Shrub sizes indicated on Drawings are sizes after pruning.

#### GROUND COVER PLANTS

- A. Ground Cover: Provide ground cover of species indicated, established and well rooted in pots or similar containers, and complying with ANSI Z60.1.
- B. Dichondra: Provide dichondra seed with a minimum of 99 percent pure seed, not less than 85 percent germination, and not more than 0.25 percent weed seed.
- C. Dichondra: Provide dichondra plants grown in flats and suitable for cutting into plugs.

#### TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 4 percent organic material content; free of stones 1 inch larger in any dimension and other extraneous materials harmful to plant growth.
  - 1. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
    - a. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient.
  - 2. Topsoil Source: Import topsoil or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from bogs or marshes.
  - 3. Topsoil Source: Amend existing in-place surface soil to produce topsoil. Verify suitability of surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.



1. 1. Provide 7-gram Plant Tablet. Tablet shall be tightly compressed chip-type commercial grade, 12-month slow-release planting tablets, and shall be composed of the following available percentages by weight of plant food (pending results of soil analysis):
  - a. Nitrogen 12.0% minimum
  - b. Phosphoric acid 8.0% minimum
  - c. Potash 8.0% minimum
  - d. Humus 20% minimum
  - e. Humic Acids w/ micronutrients
  - f. and soil enhancers 4% minimum
- 1.
2. Acceptable Manufacturer: Gro-Power or equal, (no known equal) as approved by the City.

#### MULCHES

- A. Organic Bark Mulch: Organic mulch, free from deleterious materials, debris, and weed seed. Suitable as a top dressing of trees, shrubs and groundcovers, consisting of following:
  1. Type: Shredded cedar and/or redwood commercial wood bark products. Bark mulch shall be graded to average dimensions of one-half inches (1/2") to two inches (2") in length, and flat in cross section.
  2. Coverage depth shall be a minimum of three inches (3"), or as indicated on the Contract Drawings.
  3. Acceptable Products & Manufacturers:
  4. Walk-on Fir Bark Mulch as manufactured by Redi-Gro Corporation, Sacramento, CA. 916.381.6063.
  5. Or approved equal.
- B. Gravel Mulch: 3/8" - 1/2" crushed Sierra white granite, free of loam, sand, clay, and other foreign substances.

#### WEED-CONTROL BARRIERS

- A. Type: Permeable weed barrier fabric, "Style 0040" by Amoco Fabrics and Fibers Company, or "Typar" by Reemay, or equal as approved by the City

#### PLANTING SOIL MIX

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, 4 percent organic material minimum, free of stones one inch (1") or larger in any dimension, and other extraneous materials harmful to plant growth.

1. Topsoil Source: Reuse surface soil stockpiled on the site. Verify suitability of surface soil to produce topsoil meeting requirements and amend when necessary. Supplement with imported topsoil when quantities are insufficient. Clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful to plant growth.
2. Topsoil Source: Amend existing surface soil to produce topsoil. Supplement with imported topsoil when required.

#### Tree Stake and Guys

##### A. Tree Staking:

1. Stakes: Lodgepole Pine with 10 in. tapered driving point and chamfered top, green color, treated with copper naphthanate to heartwood.
2. Ties: Black rubber tire tie or other tie as accepted by Owner's representative.

##### B. Tree Guying:

1. Deadman Type: Redwood or cedar with minimum length of 24 in. and sufficient diameter to hold eyebolt securely. Provide each deadman with one (1) 3/4 in. x 4 in. galvanized eyebolt, centered and secured on its side.
2. Guying Cable: White vinyl-coated 7 x 7 galvanized steel cable, size as specified.
3. Tree Collars: 500 I.D. x 12" UV resistant flexible tubing.
4. Turnbuckles: Eye to eye type, zinc plated, size as specified.
5. Cable Clamps: Zinc plated, U-bolt and Clevis type, size as required.

#### PART 3 - EXECUTION

##### Verification of Conditions:

- A. Verify installation conditions as satisfactory to receive work of this Section. Do not install until unsatisfactory conditions are corrected. Beginning work constitutes acceptance of conditions as satisfactory
- B. Finish Grades: Finish grades for planting areas shall have been established in another Section. Verify that all grades are within 1 in. plus or minus of required finish grade.
- C. Soil Preparation: Do not commence planting work prior to completion and acceptance of soil preparation.
- D. Irrigation: Verify that irrigation system has been installed and accepted.
- E. Subdrainage: Verify that all subdrainage systems are functioning properly prior to planting.

## PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, and lawns and existing exterior plants from damage caused by planting operations.
- B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations, outline areas, adjust locations when requested, and obtain Architect's acceptance of layout before planting. Make minor adjustments as required.
- D. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.
  - 1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting

## PLANTING BED ESTABLISHMENT

- A. Loosen subgrade of planting beds to a minimum depth of 6 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
  - 1. Thoroughly blend planting soil mix off-site before spreading.
    - a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
    - b. Mix lime with dry soil before mixing fertilizer.
  - 2. Spread planting soil mix to a depth of 8 inches but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
    - a. Spread approximately 1/2 the thickness of planting soil mix over loosened subgrade. Mix thoroughly into top 4 inches of subgrade. Spread remainder of planting soil mix.
- B. Finish Grading: Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.
- C. Before planting, restore planting beds if eroded or otherwise disturbed after finish grading.

## WEED ABATMENT

- A. Irrigate the prepared site for a period of three weeks to encourage weed growth. After that time, treat and remove all weeds with vinegar and hand tools. If after 1 week further, weeds persist, treat with Round-Up per manufacturers recommendation.

## HEADERS

- A. Lay out locations of headers for review prior to final installation. Install per details in Drawings true to line and grade.

## TREES AND SHRUBS

- A. Excavation of Pits and Trenches: Excavate circular pits with sides sloped inward. Trim base leaving center area raised slightly to support root ball and assist in drainage. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation.
  - 1. Excavate approximately three times as wide as ball diameter.
  - 2. Container-Grown Trees and Shrubs: Excavate to three times (3x) the container width and depth, plus the following setting-layer depth, or as further directed by the Owner.
- B. Before planting, verify that root flare is visible at top of root ball according to ANSI Z60.1.
- C. Stock with Root Balls: Set trees and shrubs plumb and in center of pit or trench with top of root ball flush with adjacent finish grades.
- D. Balled and Burlapped: Remove burlap and wire baskets from tops of root balls and partially from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
- E. Container Grown: Carefully remove root ball from container without damaging root ball or plant.
- F. Fabric Bag Grown: Carefully remove root ball from fabric bag without damaging root ball or plant. Do not use planting stock if root ball is cracked or broken before or during planting operation.
- G. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
  - 1. Use planting soil for backfill as permitted by Agricultural Soils Test.
- H. Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When pit is approximately one-half backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Water again after placing and tamping final layer of planting soil mix.
- I. Continue backfilling process. Water again after placing and tamping final layer of soil.

## TREE AND SHRUB PRUNING

- A. Remove only dead, dying, or broken branches. Do not prune for shape.

- B. Prune, thin, and shape trees and shrubs according to standard horticultural practice. Prune trees to retain required height and spread. Do not cut tree leaders; remove only injured or dead branches from flowering trees. Prune shrubs to retain natural character.

#### GROUND COVER AND PLANT PLANTING

- A. Set out and space ground cover and plants 12 inches.
- B. Dig holes large enough to allow spreading of roots and backfill with planting soil.
- C. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- D. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
- E. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

#### PLANTING BED MULCHING

- A. Install weed-control barriers before mulching according to manufacturer's written instructions. Completely cover area to be mulched, overlapping edges a minimum of 6 inches. Tape or pin seams as recommended by manufacturer.
- B. Mulch backfilled surfaces of planting beds and other areas indicated. Provide mulch ring around trees in lawn areas.
  - 1. [Organic Mulch] [and] [Mineral Mulch]: Apply 3-inch (75-mm) average thickness of mulch, and finish level with adjacent finish grades. Do not place mulch against plant stems.

#### PLANT MAINTENANCE

- A. Tree and Shrub Maintenance: Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, restoring planting saucers, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Spray or treat as required to keep trees and shrubs free of insects and disease.
- B. Ground Cover and Plant Maintenance: Maintain and establish plantings by watering, weeding, fertilizing, mulching, and other operations as required to establish healthy, viable plantings.
- C. Protect exterior plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.

### **8.12. Turf and Grasses**

### **Measurement and Payment**

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all of the work involved in compliance with the Plans, Specifications, and "Turf and Grasses" of the Technical Specifications, shall be included and paid for in the appropriate bid item price.

### **Bid Item #17      Turf Restoration      SF**

#### GENERAL

#### SUMMARY

- A. Section Includes:
  - 1. Seeding.
  - 2. Sodding.
- B. Related Documents:
  - 1. The following applies to this section:
    - a. General provisions of the Contract, including General and Supplementary Conditions.
    - b. The Drawings.
    - c. Division 01 Specification Sections and related requirements in other sections of the Project Manual. Including but not limited;
      - I. Section 320190 Landscape Maintenance
      - II. Section 329119 Landscape Grading
      - III. Section 329300 Planting
    - d. Related requirements in other Contract Documents listed in the Agreement.
  - 2. Review these documents for coordination with additional requirements and information that apply to work under this Section.

#### REFERENCES

- A. General:
  - 1. The following documents form part of the Specifications to the extent stated. Bring conflicts between Specifications, Drawings, and the referenced documents to the attention of the Architect, in writing, for resolution before taking any related action. Where differences exist between codes and standards, the one affording the greatest protection shall apply.

2. If the year of the adoption or latest revision is omitted from the designation, it shall mean the specification, manual or test designation in effect the date the Notice to Proceed with the Work is given.

#### DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Manufactured Soil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- C. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- D. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.
- E. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
  - 1.

#### SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
  1. Certification of each seed mixture for turfgrass sod, identifying source, including name and telephone number of supplier.
- C. Product certificates: For soil amendments and fertilizers, signed by product manufacturer
- D. Planting Schedule: Indicating anticipated planting dates for each type of planting.
- E. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of lawns during a calendar year. Submit before expiration of required maintenance periods.

#### QUALITY ASSURANCE

- A. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.

- B. Soil-Testing Laboratory Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed
- C. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory.
  - 1. Report suitability of topsoil for lawn growth. State-recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory topsoil.

#### DELIVERY, STORAGE, AND HANDLING

- A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable
- B. Sod: Harvest, deliver, store, and handle sod according to requirements in TPI's "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" in its "Guideline Specifications to Turfgrass Sodding." Deliver sod in time for planting within 24 hours of harvesting. Protect sod from breakage and drying.

#### SCHEDULING

- A. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

#### MAINTENANCE SERVICE

- A. See Division 32 "Landscape Maintenance"
- B. Begin maintenance immediately after each area is planted and continue until acceptable lawn is established, but for not less than the following periods:
  - 1. Sodded Lawns: 90 days from date of Substantial Completion.
- C. Maintain and establish lawn by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas and mulch to produce a uniformly smooth lawn.
  - 1. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch. Anchor as required to prevent displacement.
- D. Watering: Provide and maintain temporary piping, hoses, and lawn-watering equipment to convey water from sources and to keep lawn uniformly moist to a depth of 4 inches (100 mm).
  - 1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
  - 2. Water lawn at a minimum rate of 1 inch (25 mm) per week.

- E. Mow lawn as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 40 percent of grass height. Remove no more than 40 percent of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:
  - 1. Mow grass 1/2 to 1 inch (13 to 25 mm) high.
- F. Lawn Postfertilization: Apply fertilizer after initial mowing and when grass is dry.
  - 1. Use fertilizer that will provide actual nitrogen of at least 1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m) to lawn area.

## PART 2 - PRODUCTS

### MANUFACTURERS

- A. Acceptable Manufacturers:
  - 1. Products described below and identified by product name, model number, or other manufacturer designation, are basis of design products. Basis of design products establish the standards of type, function, dimension, in-service performance, physical properties, appearance, warranty, cost, and other characteristics required by the Project.
    - a. Pacific Coast Sod Patterson, CA 95352 Tel: (800) 692-8690
    - a. Or equal
  - 1. Subject to the requirements of Division 01 "Product Requirements", products of manufacturers not listed may be proposed for substitution, provided they are comparable to the products specified.
    - a. If "No substitutions" is indicated next to the product name, provide only products of listed manufacturers.
    - b. The burden of proof of equality of proposed products is on the Contractor.

### SEED

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Journal of Seed Technology; Rules for Testing Seeds" for purity and germination tolerances.
- B. Seed Species: State-certified seed of grass species, as follows:
  - 1. Quality: State-certified seed of grass species as listed below for solar exposure.
  - 2. Quality: Seed of grass species as listed below for solar exposure, with not less than 85
  - 3. percent germination, not less than 95 percent pure seed, and not more than 0.5 percent
  - 4. weed seed:

5. Sun and Partial Shade: Proportioned by weight as follows, or approved equal:
  - a. 50 percent Kentucky Bluegrass.
  - b. 33 percent Creeping Red Fescue.
  - c. 17 percent Kokamo Perennial Ryegrass

#### SOD

- A. Product:
  1. Medallion Dwarf with Bonsai Thickness: 5/8" - 3/4" Sizes: 10" x 72"
  2. Or equal
- A.

#### ORGANIC SOIL AMENDMENTS

- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch (25-mm) sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
  1. Organic Matter Content: 50 to 60 percent of dry weight.
  2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
- B. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials.
  1. In lieu of decomposed wood derivatives, mix partially decomposed wood derivatives with at least 0.15 lb (2.4 kg) of ammonium nitrate or 0.25 lb (4 kg) of ammonium sulfate per cubic foot (cubic meter) of loose sawdust or ground bark.
- C. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.
- A.

#### FERTILIZER

- A. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 4 percent nitrogen and 10 percent phosphoric acid.

- B. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- C. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
  - 1. Composition: 1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m) of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
  - 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.
- D. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
  - 1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
  - 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.

#### MULCHES

- A. Compost Mulch: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch (25-mm) sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
  - 1. Organic Matter Content: 50 to 60 percent of dry weight.
  - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
- B. Fiber Mulch: Biodegradable, dyed-wood, cellulose-fiber mulch; nontoxic; free of plant-growth or germination inhibitors; with maximum moisture content of 15 percent and a pH range of 4.5 to 6.5.

#### PLANTING ACCESSORIES

- A. Selective Herbicides: EPA registered and approved, of type recommended by manufacturer for application.

#### PART 3 - EXECUTION

##### EXAMINATION

- A. Examine areas to receive lawns for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

## PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
- B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

## LAWN PREPARATION

- A. Limit lawn subgrade preparation to areas to be planted.
- B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 6 inches (150 mm). Remove stones larger than 1 inch (25 mm) in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
  - 1. Apply superphosphate fertilizer directly to subgrade before loosening.
  - 2. Thoroughly blend planting soil mix off-site before spreading or spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.
    - a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
    - b. Mix lime with dry soil before mixing fertilizer.
  - 3. Spread planting soil mix to a depth of 6 inches (150 mm) but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
    - a. Spread approximately one-half the thickness of planting soil mix over loosened subgrade. Mix thoroughly into top 4 inches of subgrade. Spread remainder of planting soil mix.
    - b. Reduce elevation of planting soil to allow for soil thickness of sod.
- C. Unchanged Subgrades: If lawns are to be planted in areas unaltered or undisturbed by excavating, grading, or surface soil stripping operations, prepare surface soil as follows:
  - 1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.
  - 2. Loosen surface soil to a depth of at least of 8 inches (200 mm). Apply soil amendments and fertilizers according to planting soil mix proportions and mix thoroughly into top 6 inches of soil. Till soil to a homogeneous mixture of fine texture.
  - 3. Apply superphosphate fertilizer directly to surface soil before loosening.
  - 4. Remove stones larger than 1 inch (25 mm) in any dimension and sticks, roots, trash, and other extraneous matter.
  - 5. Legally dispose of waste material, including grass, vegetation, and turf, off Owner's property.

- D. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch (13 mm) of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit fine grading to areas that can be planted in the immediate future.
- E. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- F. Restore areas if eroded or otherwise disturbed after finish grading and before planting.
- A.

#### SEEDING

- A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph.
  - 1. 1. Evenly distribute seed by sowing equal quantities in two directions at right angles to each
  - 2. other.
  - 3. 2. Do not use wet seed or seed that is moldy or otherwise damaged.
  - 4. 3. Do not seed against existing trees. Limit extent of seed to outside edge of plantingsaucer.
- B. Sow seed at a total rate of 25 lb/1000 sq. ft.
- C. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with fine spray.
- D. Protect seeded areas with slopes not exceeding 1:6 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre to form a continuous blanket 1-1/2 inches in loose thickness over seeded areas.
  - 1. Anchor straw mulch by crimping into soil with suitable mechanical equipment.
- E. Protect seeded areas from hot, dry weather or drying winds by applying compost mulch, peat mulch and planting soil within 24 hours after completing seeding operations. Soak areas, scatter mulch uniformly to a thickness of 3/16 inch, and roll surface smooth.
- F. Do not broadcast or drop seed when wind velocity exceeds 5 mph (8 km/h). Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.

#### SODDING

- A. Lay sod within 24 hours of harvesting. Do not lay sod if dormant or if ground is frozen or muddy.
- B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to subgrade or sod during installation. Tamp and roll lightly to ensure contact with subgrade, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.

- C. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

- 1.

#### CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by lawn work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Erect barricades and warning signs as required to protect newly planted areas from traffic. Maintain barricades throughout maintenance period and remove after lawn is established.
- C. Remove erosion-control measures after grass establishment period.

#### LAWN MAINTENANCE

- A. Maintain and establish lawn by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas and mulch to produce a uniformly smooth lawn. Provide materials and installation the same as those used in the original installation.
- B. Mow lawn as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 1/3 of grass height. Remove no more than 1/3 of grass-leaf growth in initial or subsequent mowings.

### **8.13. Subdrainage**

#### **Measurement and Payment**

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all of the work involved in compliance with the Plans, Specifications, and "Subdrainage" of the Technical Specifications, shall be included and paid for in the appropriate bid item price.

<b>Bid Item #18</b>	<b>Area Drains</b>	<b>LS</b>
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#### PART 1 - GENERAL

#### SUMMARY

- A. This Section includes subdrainage systems for the following:
  - 1. Underslab areas.
  - 2. Landscaped areas.
  - 3.

## B. Related Documents

1. The following applies to this section:
  - a. General provisions of the Contract, including General and Supplementary Conditions.
  - b. The Drawings.
  - c. Division 01 Specification Sections and related requirements in other sections of the Project Manual. Including but not limited;
    - I. Section 311000 Site Clearing
    - II. Section 311000 Earth Moving
    - III. Section 321313 Concrete Paving
    - IV. Section 321416 Brick Unit Paving
    - V. Section 329119 Landscape Grading
    - VI. Section 329300 Planting
  - d. Related requirements in other Contract Documents listed in the Agreement.
2. Review these documents for coordination with additional requirements and information that apply to work under this Section

## REFERENCE

### A. General:

1. The following documents form part of the Specifications to the extent stated. Bring conflicts between Specifications, Drawings, and the referenced documents to the attention of the Architect, in writing, for resolution before taking any related action. Where differences exist between codes and standards, the one affording the greatest protection shall apply.
2. If the year of the adoption or latest revision is omitted from the designation, it shall mean the specification, manual or test designation in effect the date the Notice to Proceed with the Work is given.
3. Standard Specifications - Standard Specifications of the State of California, Business and Transportation Agency, Department of Transportation, CALTRANS.
4. ASTM - American Society for Testing and Materials
5. Town of Los Gatos Specifications and Details and Applicable Regulations.
6. Other applicable federal, state, and local regulations.

## DEFINITIONS

- A. ABS: Acrylonitrile-butadiene-styrene plastic.
- B. HDPE: High-density polyethylene plastic.
- C. PE: Polyethylene plastic.
- D. PP: Polypropylene plastic.
- E. PS: Polystyrene plastic.
- F. PVC: Polyvinyl chloride plastic.
- G. Subdrainage: Drainage system that collects and removes subsurface or seepage water.

#### SUBMITTALS

- A. Product Data: For each type of drainage panel indicated.

#### PROJECT/SITE CONDITIONS

- A. Existing Conditions: For protection of existing plants to remain, see Division 31, Section "Selective Tree Protection and Trimming".
- B. Protection of Utilities:
  - 1. Provide temporary support and protection of underground and surface utility structures, drains, services and other improvements to remain.
  - 2. Where grade or alignment of pipe is obstructed by existing utility structures such as conduits, ducts or pipes, permanently support, relocate, remove or reconstruct the obstruction.
  - 3. Restore all damaged improvements to original condition at no additional cost to Owner.

#### DELIVERY, STORAGE, AND HANDLING

- A. Delivery: All containerized products shall be delivered to the site in manufacturer's original, unopened, legibly labeled containers. All pipe to be delivered bound securely to prevent damage. Supply pallets as required to protect products.
- B. Storage: Protect materials from damage, water and rust. Store pipes on beds which are full length of pipe. Protect plastic materials from direct sunlight.
- C. Pipe: Cap openings to prevent entry of dust, debris and other foreign matter.

#### SEQUENCING AND SCHEDULING

- A. Concealed Work: Verify and locate existing pipes and structures to be coordinated with landscape drainage work.
- B. Lines and Levels: Establish for each drainage system and coordinate with other systems to prevent conflicts and maintain proper clearances.
- C. Notification: Submit written notification of all discrepancies in the Drawings or existing conditions which preclude successful installation of landscape drainage work as specified.
  - 1.

## PART 2 - PRODUCTS

### PERFORATED-WALL PIPES AND FITTINGS

- A. Perforated PE Pipe and Fittings: ASTM F 405 or AASHTO M 252, Type CP; corrugated, for coupled joints.
- B. Perforated PVC Sewer Pipe and Fittings: ASTM D 2729, bell-and-spigot ends, for loose joints

### SOLID-WALL PIPES AND FITTINGS

- A. Cast-Iron Soil Pipe and Fittings: ASTM A 74, Service and Extra-Heavy classes, hub-and-spigot ends, gray, for gasketed joints.
  - 1. Gaskets: ASTM C 564, rubber, of thickness matching class of pipe.
- B. PE Drainage Tubing and Fittings: AASHTO M 252, Type S, corrugated, with smooth waterway, for coupled joints.
  - 1. Couplings: AASHTO M 252, corrugated, band type, matching tubing and fittings.
- C. PVC Sewer Pipe and Fittings: ASTM D 3034, SDR 35, bell-and-spigot ends, for gasketed joints.
  - 1. Gaskets: ASTM F 477, elastomeric seal.

### CLEANOUTS

- A. Cast-Iron Cleanouts: ASME A112.36.2M; with round-flanged, cast-iron housing; and secured, scoriated, Medium-Duty Loading class, cast-iron cover. Include cast-iron ferrule and countersunk, brass cleanout plug.
- B. PVC Cleanouts: ASTM D 3034, PVC cleanout threaded plug and threaded pipe hub.

### SOIL MATERIALS

- A. Backfill, drainage course, impervious fill, and satisfactory soil materials are specified in Division 31 Section "Earth Moving."

## GEOTEXTILE FILTER FABRICS

- A. Description: Fabric of PP or polyester fibers or combination of both, with flow rate range from 110 to 330 gpm/sq. ft. when tested according to ASTM D 4491.
  - 1. Structure Type: Nonwoven, needle-punched continuous filament
  - 2. Style(s): Flat and sock

## PART 3 - EXECUTION

### EARTHWORK

- A. Excavating, trenching, and backfilling are specified in Division 31 Section "Earth Moving."

### PIPING APPLICATIONS

- A. Underground Subdrainage Piping:
  - 1. Perforated PE pipe and fittings, couplings, and coupled joints.
  - 2. Perforated PVC sewer pipe and fittings for loose, bell-and-spigot joints.
- B. Underslab Subdrainage Piping:
  - 1. Perforated PE pipe and fittings, couplings, and coupled joints.
  - 2. Perforated PVC sewer pipe and fittings and loose, bell-and-spigot joints.

### 3.3 CLEANOUT APPLICATIONS

- A. In Underground Subdrainage Piping:
  - 1. At Grade in Earth: Cast-iron or PVC cleanouts.
  - 2. At Grade in Paved Areas: Cast-iron cleanouts.
- B. In Underslab Subdrainage Piping:
  - 1. In Equipment Rooms and Unfinished Areas: Cast-iron cleanouts.
  - 2. In Finished Areas: Copper-alloy cleanouts.

### FOUNDATION DRAINAGE INSTALLATION

- A. Place impervious fill material on subgrade adjacent to bottom of footing after concrete footing forms have been removed. Place and compact impervious fill to dimensions indicated, but not less than 6 inches deep and 12 inches wide.

- B. Lay flat-style geotextile filter fabric in trench and overlap trench sides.
  - C. Place supporting layer of drainage course over compacted subgrade and geotextile filter fabric, to compacted depth of not less than 4 inches.
  - D. Encase pipe with sock-style geotextile filter fabric before installing pipe. Connect sock sections with adhesive or tape.
  - E. Install drainage piping as indicated in Part 3 "Piping Installation" Article for foundation subdrainage.
  - F. Add drainage course to width of at least 6 inches on side away from wall and to top of pipe to perform tests.
  - G. After satisfactory testing, cover drainage piping to width of at least 6 inches on side away from footing and above top of pipe to within 12 inches of finish grade.
  - H. Install drainage course and wrap top of drainage course with flat-style geotextile filter fabric.
  - I. Place layer of flat-style geotextile filter fabric or waterproofing felt over top of drainage course, overlapping edges at least 4 inches
  - J. Place initial backfill material over compacted drainage course. Place material in loose-depth layers not exceeding 6 inches. Thoroughly compact each layer. Final backfill to finish elevations and slope away from building.
- 1.

#### UNDERSLAB DRAINAGE INSTALLATION

- A. Excavate for underslab drainage system after subgrade material has been compacted but before drainage course has been placed. Include horizontal distance of at least 6 inches between drainage pipe and trench walls. Grade bottom of trench excavations to required slope, and compact to firm, solid bed for drainage system.
- B. Lay flat-style geotextile filter fabric in trench and overlap trench sides.
- C. Place supporting layer of drainage course over compacted subgrade and geotextile filter fabric, to compacted depth of not less than 4 inches .
- D. Encase pipe with sock-style geotextile filter fabric before installing pipe. Connect sock sections with adhesive or tape.
- E. Install drainage piping as indicated in Part 3 "Piping Installation" Article for underslab subdrainage.
- F. Add drainage course to width of at least 6 inches on side away from wall and to top of pipe to perform tests.
- G. After satisfactory testing, cover drainage piping with drainage course to elevation of bottom of slab, and compact and wrap top of drainage course with flat-style geotextile filter fabric.

#### PIPING INSTALLATION

- A. Install piping beginning at low points of system, true to grades and alignment indicated, with unbroken continuity of invert. Bed piping with full bearing in filtering material. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions and other requirements indicated.
  - 1. Foundation Subdrainage: Install piping pitched down in direction of flow, at a minimum slope of 0.5 percent and with a minimum cover of 36 inches, unless otherwise indicated.
  - 2. Underslab Subdrainage: Install piping pitched down in direction of flow, at a minimum slope of 0.5 percent.
  - 3. Lay perforated pipe with perforations down.
  - 4. Excavate recesses in trench bottom for bell ends of pipe. Lay pipe with bells facing upslope and with spigot end entered fully into adjacent bell.
- B. Use increasers, reducers, and couplings made for different sizes or materials of pipes and fittings being connected. Reduction of pipe size in direction of flow is prohibited.
- C. Install PE piping according to ASTM D 2321.
- D. Install PVC piping according to ASTM D 2321.

#### PIPE JOINT CONSTRUCTION

- A. Cast-Iron Soil Pipe and Fittings: Hub and spigot, with rubber compression gaskets according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook." Use gaskets that match class of pipe and fittings.
- B. Join PE pipe, tubing, and fittings with couplings for soil-tight joints according to AASHTO's "Standard Specifications for Highway Bridges," Division II, Section 26.4.2.4, "Joint Properties."
- C. Join perforated, PE pipe and fittings with couplings for soil-tight joints according to AASHTO's "Standard Specifications for Highway Bridges," Division II, Section 26.4.2.4, "Joint Properties"; or according to ASTM D 2321.
- D. Join PVC pipe and fittings according to ASTM D 3034 with elastomeric seal gaskets according to ASTM D 2321.
- E. Join perforated PVC pipe and fittings according to ASTM D 2729, with loose bell-and-spigot joints.
- F. Special Pipe Couplings: Join piping made of different materials and dimensions with special couplings made for this application. Use couplings that are compatible with and fit materials and dimensions of both pipes

#### CLEANOUT INSTALLATION

- A. Cleanouts for Foundation Subdrainage:
  - 1. Install cleanouts from piping to grade. Locate cleanouts at beginning of piping run and at changes in direction. Install fittings so cleanouts open in direction of flow in piping.

2. In vehicular-traffic areas, use NPS 4 cast-iron soil pipe and fittings for piping branch fittings and riser extensions to cleanout. Set cleanout frames and covers in a cast-in-place concrete anchor, 18 by 18 by 12 inches in depth. Set top of cleanout flush with grade. Cast-iron pipe may also be used for cleanouts in nonvehicular-traffic areas.
3. In nonvehicular-traffic areas, use NPS 4 Cast Iron or PVC pipe and fittings for piping branch fittings and riser extensions to cleanout. Set cleanout frames and covers in a cast- in-place concrete anchor, 12 by 12 by 4 inches (300 by 300 by 100 mm) in depth. Set top of cleanout plug 1 inch (25 mm) above grade.

B. Cleanouts for Underslab Subdrainage:

1. Install cleanouts and riser extensions from piping to top of slab. Locate cleanouts at beginning of piping run and at changes in direction. Install fittings so cleanouts open in direction of flow in piping.
2. Use NPS 4 cast-iron soil pipe and fittings for piping branch fittings and riser extensions to cleanout flush with top of slab.

1.

## CONNECTIONS

- A. Comply with requirements for piping specified in Town of Lost Gatos guidelines.

## FIELD QUALITY CONTROL

A. Testing and Inspections:

1. After installing drainage course to top of piping, test drain piping with water to ensure free flow before backfilling.
2. Remove obstructions, replace damaged components, and repeat test until results are satisfactory.

- B. Drain piping will be considered defective if it does not pass tests and inspections.

- C. Prepare test and inspection reports.

## CLEANING

- A. Clear interior of installed piping and structures of dirt and other superfluous material as work progresses. Maintain swab or drag in piping and pull past each joint as it is completed. Place plugs in ends of uncompleted pipe at end of each day or when work stops.