

**DEPARTMENT OF PUBLIC WORKS  
ENGINEERING DIVISION**

**GENERAL PROVISIONS, NOTICE TO BIDDERS,  
SPECIAL PROVISIONS, PROPOSAL AND CONTRACT  
FOR**

**Lions Wayside and Delucchi Park Renovations  
Project No. 06716**

**Bid Opening Date – July 17, 2024**

**2:00 p.m.**

To be used in conjunction with the City Standard Specifications and Details dated November 2016, the State Standard Specifications and Plans dated 2015 and all updates at the time of bid, and the Labor Surcharge and Equipment Rental Rates in effect on the date the work is accomplished.

APPROVED

A handwritten signature in blue ink, appearing to read "Adam Nelkie", written over a horizontal line.

Adam Nelkie  
City Engineer  
No. 78830  
Expires: 9/30/2023

## TABLE OF CONTENTS

	<u>PAGE NO.</u>
NOTICE TO BIDDERS .....	1
BID PROPOSAL .....	4
BID BOND FORM .....	8
CERTIFICATION OF BIDDER'S .....	9
EXPERIENCE AND QUALIFICATIONS .....	9
BIDDER'S CONTRACT EXPERIENCE .....	10
BIDDER'S Labor Classifications .....	11
INSTRUCTIONS TO BIDDERS .....	15
AWARD AND EXECUTION OF CONTRACT .....	17
CONTRACT .....	18
CONTRACTOR'S BOND FOR FAITHFUL PERFORMANCE.....	22
LABOR AND MATERIAL BOND .....	24
CONTRACTOR'S BOND FOR ONE YEAR MAINTENANCE .....	25
GENERAL PROVISIONS .....	27
SECTION 1. DEFINITIONS AND TERMS.....	27
SECTION 2. SCOPE OF WORK.....	28
SECTION 3. CONTROL OF WORK AND MATERIALS.....	28
SECTION 4. LEGAL RELATIONS AND RESPONSIBILITY .....	29
SECTION 5. PROSECUTION AND PROGRESS .....	35
SECTION 6. MEASUREMENT AND PAYMENT .....	35
SECTION 7. DISPUTE RESOLUTION .....	37
SPECIAL PROVISIONS .....	44

# NOTICE TO BIDDERS

## Proposals Sought; Time for Receipt

Sealed Bid Proposals will be received by the City Clerk's Office of the City of Pleasanton, Civic Center, in-person at 123 Main Street (or by mail to P.O. Box 520), Pleasanton, CA 94566, until **2:00 p.m., July 17, 2024**, for work as described in the Plans and Specifications entitled:

### **Lions Wayside and Delucchi Park Renovations Project No. 06716**

At the above-mentioned time, date and address, the Bid Proposals will be publicly opened and read.

Please review the City website and/or [bidnetdirect.com](http://bidnetdirect.com) for addendum(s) prior to submission.

#### Scope of Work and Project Location

This work will consist of demolition of existing park facilities and erosion control, grading, drainage, concrete pavement, fencing, walls, planters, a bandstand, electrical, irrigation, and landscaping improvements for the renovation of Lions Wayside and Delucchi Parks at 4401 and 4501 First Street.

The Engineer's cost estimate for the project is **\$1.56 million**.

#### Copies of Plans and Specifications

In order to be an eligible bidder, plans, specifications and all bid proposal and contract documents must adhere to the latest version of all bid documents as amended through any addendums. Plans may be purchased from the Engineering Division of the City of Pleasanton, Civic Center, 200 Old Bernal Avenue, at a cost of **\$50 per set** plus shipping. Plans will be electronically available on the City's website and [bidnetdirect.com](http://bidnetdirect.com) at no charge. The City requires all parties interested in this bid opportunity to email the City and request to be added to the plan holder list. Any addenda will be sent electronically to those on the plan holder list prior to the bid opening date. To request plans or to be added to the plan holder list, please email: [kroberts@cityofpleasantonca.gov](mailto:kroberts@cityofpleasantonca.gov) and [mgruber@cityofpleasantonca.gov](mailto:mgruber@cityofpleasantonca.gov).

#### Bid Security and Contract Bonds

Each Bid Proposal shall be accompanied by either cash, a cashier's check or a certified check, amounting to not less than ten percent of the bid, payable to the order of the City of Pleasanton or by a bond for that amount and payable in the form contained in this bid package. The successful Bidder will be required to furnish performance and payment

bonds, each in an amount not less than one hundred percent (100%) of the contract price, and a maintenance bond not less than ten percent (10%) of the contract price.

### Bid Forms

The Contractor is responsible for reviewing the City of Pleasanton's City Bids website (and/or bidnetdirect.com) to ensure they have the latest addendums and utilize all updated documents issued through addendum. Bidders must complete bid proposal and submit it in its entirety. Failure to do so will cause the bid to be deemed nonresponsive.

City of Pleasanton's City Bids Website:

<http://www.cityofpleasantonca.gov/business/bids.asp>

### Bids Received After Deadline

Bids received after the time established for receiving bids will not be considered. Except as provided in Section "Instruction to Bidders," no Bidder may withdraw a bid after the time established for receiving bids or before the award and execution of the contract, unless the award is delayed for a period of ninety (90) calendar days after the date of the City's opening of bids.

### Rejection of Bids

The City reserves the right to reject any or all bids and to determine which bid is, in the City's judgment, the lowest responsive and responsible bid of a Bidder or group of Bidders. The City also reserves the right to waive any inconsequential omissions or discrepancies in any bid and to delete certain items listed in the bid as set forth therein. Costs for developing, submitting, and presenting bids are the sole responsibility of the Bidder and claims for reimbursement will not be accepted by the City.

### Contractor's License Classification

As provided in California Business & Professions Code Section 7028.15, the City has determined that at the time of bid, the Contractor shall possess a valid **Class A General Engineering** Contractor license. The Contractor's failure to possess the specified license shall render the Bid as non-responsive and shall act to bar award of the contract to any Bidder not possessing said license at the time of bid, unless exempted by federal or state law.

### Contractor's Department of Industrial Relations Registration

Bidder and its Subcontractors must be registered and qualified to perform public work pursuant to section 1725.5 of the Labor Code, subject to limited legal exceptions under Labor Code section 1771.1.

This Contract will be subject to compliance monitoring and enforcement by the California Department of Industrial Relations, pursuant to Labor Code section 1771.4.

Substitution of Securities in Lieu of Retention

At the successful Contractor's option, securities may be substituted for the required retention, in accordance with provisions of Section 22300 of California Public Contract Code.

Prevailing Wage

In accordance with California Labor Code Sections 1770 et seq., the Contractor shall pay general prevailing rate of per diem wages to all workers employed under this contract.

Labor Nondiscrimination

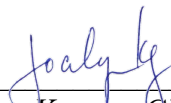
The awarded Contractor shall comply with the requirements of the State of California's Standard Specification Code Section 7-1.01A(4) "Labor Nondiscrimination" under this contract.

Questions

Questions should be directed to the project engineer either in-person at 200 Old Bernal Avenue, Pleasanton, California, by mail at P.O. Box 520, Pleasanton, California 94566-0802, by phone at (925) 931-5650, or by email at [mgruber@cityofpleasantonca.gov](mailto:mgruber@cityofpleasantonca.gov). Questions will only be answered by reference to particular sections of these bid documents. If interpretation is deemed necessary, then the question shall be addressed in writing and a clarification shall be given to all prospective Bidders through addenda. To allow time for issuance of addenda, questions shall only be accepted prior to seven (7) calendar days before the bid opening date.

CITY OF PLEASANTON

Date: 6/20/24

By:   
Jocelyn Kwong, City Clerk

# BID PROPOSAL

## Lions Wayside and Delucchi Park Renovations Project No. 06716

DATE: \_\_\_\_\_

Proposal of \_\_\_\_\_ (hereinafter called "Bidder") a \_\_\_\_\_ organized and existing under the laws of the State \_\_\_\_\_, doing business as \_\_\_\_\_, to the City of Pleasanton, City Clerk, 123 Main Street, Pleasanton, California (hereinafter called "City").

Ladies and Gentlemen:

The Bidder, in compliance with the invitation for bids for the **Lions Wayside and Delucchi Park Renovations – Project No. 06716**, City of Pleasanton, having examined the Plans and Specifications and related documents and the premises of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and supplies, declares that this proposal is made without collusion with any other person, firm or corporation and agrees to construct the project in accordance with the contract documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this Bid Proposal is a part.

Bidder shall agree to commence work under this Contract within fifteen (15) calendar days after the date of written "Notice to Proceed" and fully complete the project within **160 working days** after start of work. Bidder shall pay as liquidated damages in the sum of **\$1,500.00** per calendar day should the successful Bidder fail to complete the work within this time limit unless the successful Bidder is granted a time extension.

Bidder acknowledges receipt of the following addendum:

<u>No.</u>	<u>Date</u>	<u>No.</u>	<u>Date</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Bidder to perform all of the work described in the Contract Documents for the total bid amount entered.

Spec Ref.	Item No.	Qty	Unit of Measure	Item Description	Unit Price	Total
	1.	1	LS	Project Start up		
02 41 13	2.	1	LS	Demolition and Erosion Control		
31 22 00	3.	1	LS	Rough grading		
31 22 00	4.	1	LS	Soil off-haul		
33 40 00	5.	1	EA	Domestic water line reconnection		
33 40 00	6.	1	LS	Dry well		
33 40 00	7.	1	EA	Storm drain P.O.C.		
33 40 00	8.	500	LF	Solid drain line		
33 40 00	9.	115	LF	Perforated drain line		
33 40 00	10.	2	EA	Clean out		
33 40 00	11.	6	EA	Catch basin		
33 40 00	12.	1	EA	Junction box		
32 13 13	13.	9,700	SF	Concrete pavement		
04 22 00	14.	70	LF	Seatwall		
04 22 00	15.	100	LF	Raised planter		
32 13 13	16.	1	LS	Concrete stairs & handrail		
32 31 19	17.	30	LF	Ornamental metal fence		
04 22 00	18.	4	EA	Pilaster		
32 13 13	19.	90	LF	Bandstand seatwall		
32 33 00	20.	6	EA	Picnic table, salvage and reinstall		
32 33 00	21.	1	EA	Picnic table, ADA		
32 33 00	22.	2	EA	Bench		
32 33 00	23.	1	EA	Bench, salvage and reinstall		
32 33 00	24.	11	EA	Trash receptacle		
32 33 00	25.	1	EA	Drinking fountain, salv/reinstall		
32 33 00	26.	1	EA	Dedication plaque		
32 33 00	27.	1	LS	Bandstand structure		
32 84 00	28.	1	LS	Irrigation		
31 92 13	29.	23,850	SF	Soil preparation		
32 93 00	30.	1,450	SF	Mulch		
31 92 13	31.	1	LS	Import Top Soil		
32 93 00	32.	14	EA	Trees, 24" box		
32 93 00	33.	22,400	SF	Turf from sod		
32 93 00	34.	97	EA	Shrub, 1 gallon		
33 40 00	35.	100	LF	Root barrier		
32 01 90	36.	3	MO	Plant maintenance		
26 05 00	37.	1	LS	Site Electrical		
<b>TOTAL BASE BID AMOUNT</b>					\$	
<b>Bid Alternates</b>						
	B-1	1	LS	Delucchi Park Improvements		
	B-2	1	LS	Northern Property Improvements		
	B-3	1	LS	Firehouse Lawn Improvements		
	B-4	1	LS	SWPPP Compliance		
<b>TOTAL BASE BID + BID ALTS</b>					\$	

**The project will be awarded based on the TOTAL BASE BID amount.**

Note: The Bidder acknowledges that the total amount set forth above is for the entire project as represented by the Contract Documents regardless of itemization.



Attached is a bid guaranty bond duly completed by a guaranty company authorized to carry on business in the State of California in the amount of at least ten percent (10%) of the total amount of the bid, or alternately, there is attached a certified or cashier's check payable to the City in the amount of at least ten percent (10%) of the total amount of the bid.

If this Bid Proposal is accepted, bidder agrees to sign the contract and to furnish the performance bond, labor and materials bond, maintenance bond, and the required evidences of insurance within ten (10) working days after receiving written notice of the award of the contract. If bidder fails to contract as provided herein or fails to provide the bonds and/or evidence of insurance, the City may at its option, determine the acceptance thereof shall be null and void, and the forfeiture of such security accompanying this Bid Proposal shall operate and the same shall be the property of the City of Pleasanton.

This Bid Proposal shall be good and may not be modified, withdrawn or canceled for a period of ninety (90) calendar days after the date of the City's opening of bids.

Bidder hereby certifies that the licensing information hereinafter stated is true and correct. Bidder further agrees, if the bid is accepted and a contract for performance of the work is entered into with the City, to so plan work and to prosecute it with such diligence that the work shall be completed within the time stipulated in the agreement. Under the penalty of perjury bidder affirms that, to the best of bidder's knowledge, the representations made in this bid are true.

Bidders are required by law to be licensed and regulated by the contractors' State License Board. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board.

It is a misdemeanor for any person to submit a bid to a public agency in order to engage in the business or act in the capacity of a contractor within this state without having a license therefor, except for specific cases outlined in Business and Professions Code, Section 7028.15.

_____ Name of Bidder	_____ Contractor's License Number
_____ Signature of Bidder	_____ Expiration Date
_____ Print Name	_____ Address of Bidder
_____ Title of Signatory	_____ ( )
_____ State of Incorporation	_____ Telephone Number
_____ DIR Registration Number	_____ Contractor's Email Address

THIS PAGE LEFT INTENTIONALLY BLANK

# BID BOND FORM

Note: Bidders must use this form if a bid bond is to be used as bidder's security. This form is not necessary if cash, cashier's check made payable to the City, or certified check made payable to the City, accompanies the bid.

We, the undersigned, \_\_\_\_\_ (“Principal”), and \_\_\_\_\_ a corporation organized and existing under and by virtue of the laws of the State of \_\_\_\_\_ and authorized to do business in the State of California as a surety, (“Surety”), acknowledge ourselves jointly and severally bound to the CITY OF PLEASANTON for ten percent (10%) of the total bid amount.

Contractor’s Bid       \$ \_\_\_\_\_  
10% Bid Bond         \$ \_\_\_\_\_

The above amount to be paid to the CITY OF PLEASANTON as follows: If Principal’s bid for the work required for the project, described below,

## **Lions Wayside and Delucchi Park Renovations Project No. 06716**

shall be accepted and the proposed contract awarded to Principal, and if Principal shall fail to execute the contract within the time specified in the Award and Execution of Contract section of this Contract Document, and to furnish the required faithful performance and labor and material bonds; otherwise, the obligation shall be void. Bid errors shall not constitute a defense to forfeiture.

If the City of Pleasanton brings suit upon this bond and judgment is recovered, Surety shall pay all costs incurred by the CITY OF PLEASANTON in bringing such suit, including reasonable attorney's fees.

IN WITNESS WHEREOF, we hereunto set our hands and seals this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Principal

\_\_\_\_\_  
By:

\_\_\_\_\_  
Surety:

\_\_\_\_\_  
By:

(Notarization of Surety's signature required)

(corporate seal)

## **CERTIFICATION OF BIDDER'S EXPERIENCE AND QUALIFICATIONS**

The undersigned Bidder certifies that the Bidder is, at the time of the bidding, and shall be, throughout the period of the contract, licensed by the State of California to do the type of work required under the terms of the contract documents. Bidder further certifies that the Bidder is skilled and regularly engaged in the general class and type of work called for in the contract documents.

The Bidder represents that the Bidder is competent, knowledgeable and has special skills in the nature, extent and inherent conditions of the work to be performed. Bidder further acknowledges that there are certain peculiar and inherent conditions existent in the construction of the particular facilities which may create, during the construction program, unusual or peculiar unsafe conditions hazardous to persons and property. Bidder expressly acknowledges that the Bidder is aware of such peculiar risks and has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the construction work with respect to such hazards.

Bidder has been engaged in the contracting business, under the present business name, for \_\_\_\_\_ years. Experience in work of a similar nature to that called for in the contract documents extends over a period of \_\_\_\_\_ years.

## BIDDER'S CONTRACT EXPERIENCE

The Bidder shall list below three projects completed in the last seven (7) years of similar size and complexity that indicate the Bidder's experience as a Contractor.

1.

Project	Amount
Owner	Contact
Telephone	Completion Date

2.

Project	Amount
Owner	Contact
Telephone	Completion Date

3.

Project	Amount
Owner	Contact
Telephone	Completion Date

Name of Bidder \_\_\_\_\_

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

## BIDDER'S Labor Classifications

The Bidder shall list below the anticipated labor classifications completed by Bidder. List Subcontractor's classifications under List of Subcontractors.

- |  |  |   |  |
|--|--|---|--|
| <input type="checkbox"/> ASBESTOS        | <input type="checkbox"/> BOILERMAKER       | <input type="checkbox"/> BRICKLAYERS      | <input type="checkbox"/> CARPENTERS      |
| <input type="checkbox"/> CARPET/LINOLEUM | <input type="checkbox"/> CEMENT MASONS     | <input type="checkbox"/> DRYWALL FINISHER | <input type="checkbox"/> DRYWALL/LATHERS |
| <input type="checkbox"/> ELECTRICIANS    | <input type="checkbox"/> ELEVATOR MECHANIC | <input type="checkbox"/> GLAZIERS         | <input type="checkbox"/> IRON WORKERS    |
| <input type="checkbox"/> LABORERS        | <input type="checkbox"/> MILLWRIGHTS       | <input type="checkbox"/> OPERATING ENG    | <input type="checkbox"/> PAINTERS        |
| <input type="checkbox"/> PILE DRIVERS    | <input type="checkbox"/> PIPE TRADES       | <input type="checkbox"/> PLASTERERS       | <input type="checkbox"/> ROOFERS         |
| <input type="checkbox"/> SHEET METAL     | <input type="checkbox"/> SOUND/COMM        | <input type="checkbox"/> SURVEYORS        | <input type="checkbox"/> TEAMSTER        |
| <input type="checkbox"/> TILE WORKERS    | <input type="checkbox"/> _____             | <input type="checkbox"/> _____            | <input type="checkbox"/> _____           |

B. BIDDER'S FINANCIAL RESPONSIBILITY

Reference is hereby made to the following banks and surety companies as to the financial responsibility and general reliability of the Bidder:

1. Name of Bank \_\_\_\_\_  
Address \_\_\_\_\_
2. Name of Bank \_\_\_\_\_  
Address \_\_\_\_\_
3. Surety Company \_\_\_\_\_  
Address \_\_\_\_\_
4. Surety Company \_\_\_\_\_  
Address \_\_\_\_\_

C. LIST OF SUBCONTRACTORS

In conformance with Section 2.1 – 1.10 of the Caltrans Standard Specifications and § 4100 of California Public Contract Code, the Bidder shall provide the following information for each Subcontractor to whom the Bidder proposes to subcontract portions of the work in an amount in excess of one-half of one percent of the total Bid Proposal OR \$10,000, whichever is greater.

1. Name of Subcontractor \_\_\_\_\_  
Contractor License Number \_\_\_\_\_  
Address \_\_\_\_\_ Phone No. \_\_\_\_\_  
Individual, Partnership or Corporation \_\_\_\_\_  
Dollar Value of work to be Performed \_\_\_\_\_  
Work to be Performed \_\_\_\_\_  
Labor Classification/s \_\_\_\_\_  
DIR Registration # \_\_\_\_\_  
CSLB# \_\_\_\_\_ Email \_\_\_\_\_

2. Name of Subcontractor \_\_\_\_\_

Contractor License Number \_\_\_\_\_

Address \_\_\_\_\_ Phone No. \_\_\_\_\_

Individual, Partnership or Corporation \_\_\_\_\_

Dollar Value of work to be Performed \_\_\_\_\_

Work to be Performed \_\_\_\_\_

Labor Classification/s \_\_\_\_\_

DIR Registration # \_\_\_\_\_

CSLB# \_\_\_\_\_ Email \_\_\_\_\_

3. Name of Subcontractor \_\_\_\_\_

Contractor License Number \_\_\_\_\_

Address \_\_\_\_\_ Phone No. \_\_\_\_\_

Individual, Partnership or Corporation \_\_\_\_\_

Dollar Value of work to be Performed \_\_\_\_\_

Work to be Performed \_\_\_\_\_

Labor Classification/s \_\_\_\_\_

DIR Registration # \_\_\_\_\_

CSLB# \_\_\_\_\_ Email \_\_\_\_\_

4. Name of Subcontractor \_\_\_\_\_

Contractor License Number \_\_\_\_\_

Address \_\_\_\_\_ Phone No. \_\_\_\_\_

Individual, Partnership or Corporation \_\_\_\_\_

Dollar Value of work to be Performed \_\_\_\_\_

Work to be Performed \_\_\_\_\_

Labor Classification/s \_\_\_\_\_

DIR Registration # \_\_\_\_\_

CSLB# \_\_\_\_\_ Email \_\_\_\_\_

5. Name of Subcontractor \_\_\_\_\_

Contractor License Number \_\_\_\_\_

Address \_\_\_\_\_ Phone No. \_\_\_\_\_

Individual, Partnership or Corporation \_\_\_\_\_

Dollar Value of work to be Performed \_\_\_\_\_

Work to be Performed \_\_\_\_\_

Labor Classification/s \_\_\_\_\_

DIR Registration # \_\_\_\_\_

CSLB# \_\_\_\_\_ Email \_\_\_\_\_

6. Name of Subcontractor \_\_\_\_\_

Contractor License Number \_\_\_\_\_

Address \_\_\_\_\_ Phone No. \_\_\_\_\_

Individual, Partnership or Corporation \_\_\_\_\_

Dollar Value of work to be Performed \_\_\_\_\_

Work to be Performed \_\_\_\_\_

Labor Classification/s \_\_\_\_\_

DIR Registration # \_\_\_\_\_

CSLB# \_\_\_\_\_ Email \_\_\_\_\_

Signature of Bidder: \_\_\_\_\_



# INSTRUCTIONS TO BIDDERS

## General

The City of Pleasanton, hereinafter referred to as "City," will receive at the City Clerk's Office of the City of Pleasanton, Civic Center, 123 Main Street, Pleasanton, California, until the hour and day specified in the "Notice to Bidders," sealed Bid Proposals for furnishing materials, equipment and/or labor for performing the work described in these Contract Documents. All Bid Proposals shall be submitted in accordance with the provisions of the "Proposal Requirements and Conditions" set forth under Section 2 of the Standard Specifications of the State of California, except as modified herein.

## Plan Holder List

The City requires all Bidders to be on the project's plan holder list prior to submitting the Bid Proposal. Please see Notice to Bidders for instructions on how to request to be added to the plan holder list.

## Bid Proposal Form

All Bid Proposals shall be submitted on the Bid Proposal forms which are bound herein. All Bid Proposal forms shall be filled in completely in ink with all signature blocks signed by the Bidder. The completed Bid Proposal forms shall remain bound with the Contract Documents provided and shall be sealed in an envelope addressed to the City of Pleasanton, California and clearly labeled with identifying project name and number, and bid opening date.

## Delivery of Bid Proposal

The Bid Proposal shall be delivered by the time and to the place set forth in the "Notice to Bidders." It is the Bidder's sole responsibility to see that his or her Bid Proposal is received in proper time. Any proposal received after the time fixed for opening of bids shall be returned to the Bidder unopened.

## Opening of Bid Proposals

The Bid Proposals shall be publicly opened and read at the time and place fixed in the "Notice to Bidders."

## Modifications and Alternative Proposals

Each Bidder represents that his or her Bid Proposal is based upon the materials and equipment described in the Contract Documents. Unauthorized conditions, limitations or provisions attached to a Bid Proposal will render it non-responsive and may cause its rejection. The completed Bid Proposal forms shall be without interlineations, alterations or erasures. Alternative Bid Proposals will not be considered unless written request has been submitted to the Engineer for approval at least seven (7) calendar days prior to the

date for receipt of Bids. The request shall include the name of substitute material or equipment drawings, cut sheets, performance and test dates and any other data or information necessary for complete evaluation. If the Engineer approves any proposed substitution, such approval shall be set forth in an Addendum. Oral, telegraphic, or telephonic Bid Proposals or modifications will not be considered.

#### Contractor's Department of Industrial Relations Registration

A bid will not be accepted nor any contract entered into without proof that the bidder and its subcontractors are registered with the California Department of Industrial Relations to perform public work pursuant to Labor Code Section 1725.5, subject to limited legal exceptions.

#### Discrepancies in Bid Proposals

In the event there is more than one bid item on a Bid Proposal form, the Bidder shall furnish a price for all items and failure to do so will render the Bid Proposal non-responsive and may cause its rejection. In the event there are unit price bid items on a Bid Proposal form and the "amount" indicated for a unit price bid item does not equal the product of the unit price and quantity, the unit price shall govern and the amount will be corrected accordingly. In the event there is more than one bid item on the Bid Proposal form and the total indicated on the Bid Proposal form does not agree with the sum of the amounts bid on the individual items, the price bid on the individual items shall govern and the total on the proposal will be corrected accordingly.

#### Bid Security

Each Bid Proposal shall be accompanied by cash, a cashier's check or a certified check, amounting to ten percent (10%) of the Bid, payable to the order of the City of Pleasanton or by a bond for that amount and so payable in the form contained in this bid package. The amount so posted shall be forfeited to the City if the successful bidder does not, within ten (10) working days not including Saturday, Sunday and legal holidays after date of postage of mailed written notice that the contract has been awarded, enter into a contract with the City for the work.

After the contract is duly entered into by the successful bidder, the amount of the deposit will be returned to the Bidder. All certified checks, cashier's checks, and cash deposits of the unsuccessful bidders will be returned to the bidders within two (2) weeks after the contract is entered into by the successful bidder.

#### Miscellaneous

For requirements on Bidder's examination of site, withdrawal of proposals, and disqualification of bidders, refer to Section 2 of the Standard Specifications of the State of California.

# AWARD AND EXECUTION OF CONTRACT

## General

Award and execution of Contract shall be in accordance with "Award and Execution of Contract" set forth under Section 3 of the Standard Specifications of the State of California except as modified herein.

## Award of Contract

The City reserves the right to reject for any reason any or all Bid Proposals.

No Bidder shall modify, withdraw or cancel a Bid Proposal or any part thereof for ninety (90) calendar days after the time designated for the opening of Bids in the "Notice to Bidders." Within this time period of ninety (90) days and if the City so chooses, the Contract shall be awarded to the lowest responsible Bidder.

In accordance with the provisions of California Business & Professions Code Section 7028.5, the City has determined that at the time that a bid is submitted, the bidder shall possess a valid **Class A General Engineering** Contractor license. Failure to possess the specified license shall render the bid as non-responsive and shall act to bar award of the Contract to any Bidder not possessing said license at the time of bid.

## Execution of Contract

Within ten (10) working days, not including Saturday, Sundays and legal holidays, after date of postage of mailed notice of award to the lowest responsible Bidder, the following documents shall be submitted to the City.

- Executed contract
- Contract bonds as required by the forms contained herein including:
  - ◇ Faithful Performance Bond for 100% of contract price
  - ◇ Labor and Material Bond for 100% of contract price
  - ◇ Maintenance Bond for 10% of contract price
- Certificates of insurance
- Evidence of a current business license to conduct business in the City of Pleasanton

Failure to submit the above shall be just cause for forfeiture of the Bid Proposal security.

# CONTRACT

## Lions Wayside and Delucchi Park Renovations Project No. 06716

THIS CONTRACT is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_  
by and between \_\_\_\_\_, ("Contractor"), whose address is \_\_\_\_\_  
\_\_\_\_\_, and telephone number is \_\_\_\_\_  
and the CITY OF PLEASANTON, a municipal corporation ("City").

### WITNESSETH:

WHEREAS, the City has awarded to the Contractor a contract for **Lions Wayside and Delucchi Park Renovations, Project No. 06716**

NOW, THEREFORE, in consideration of the mutual promises set forth herein, the parties agree as follows:

1. Work to be Performed. The work will generally consist of:

This work will consist of demolition of existing park facilities and erosion control, grading, drainage, concrete pavement, fencing, walls, planters, a bandstand, electrical, irrigation, and landscaping improvements for the renovation of Lions Wayside and Delucchi Parks at 4401 and 4501 First Street.

Said work is more particularly shown in the following documents which are on file with the Public Works Department, Engineering Division of the City and are incorporated herein by this reference:

- A. Approved Plans and Specifications entitled the **Lions Wayside and Delucchi Park Renovations, Project No. 06716** and addenda thereto, if any.
  - B. Contract Change Orders approved by the City Engineer, done in accordance with the Standard Specifications.
  - C. The elements of the proposal submitted to the City by the Contractor, which the City has accepted.
2. Compensation. The City shall pay the Contractor for work actually performed at the unit prices set out in the Contractor's proposal to the City as set forth in Exhibit A of this agreement and incorporated herein. The quantities of work stated therein are estimates only; actual quantities will be measured for payment in accordance with the specifications.

3. Method of Payment.
  - A. Progress Payments. As of the twentieth day of each month, the Contractor may submit for review a request for progress payment, listing the amount and value of work actually performed during the preceding month, or part thereof. Upon the City Engineer's review and approval, including adjustments if any, City shall make a progress payment to the Contractor.
  - B. 5% Retention. Five percent (5%) of the amount due shall be retained by the City as retention. The City shall retain five percent (5%) of the contract amount for thirty-five (35) days after the Notice of Completion for the work is recorded. The Contractor may elect to receive 100 percent of payments due under the contract documents from time to time, without retention from any portion of the payment by the City, by depositing securities of equivalent value with the City in accordance with the provisions of Section 22300 of the California Public Contract Code. Such securities, if deposited by the Contractor, shall be valued by the City, whose decision on valuation of the securities shall be final. Securities eligible for investment under this provision shall be limited to those listed in Section 16430 of the California Government Code.
  - C. Time of Payment. Requests submitted promptly as of the 20th day of each month will be paid by the 10th day of the following month.
4. Incorporation of Contract Documents. This Contract expressly incorporates all terms and conditions contained in the Contract Documents. In the event there is any conflict between this Contract and the Contract Documents, this Contract shall control.
5. **Indemnification. Contractor shall indemnify, save and hold harmless from and defend the City, members of the City Council and their agents, servants and employees, against any and all claims, costs, demands, causes of action, suits, losses, expense or other detriment or liability arising from or out of acts or omissions of Contractor, its agents, sub-contractors, officials or employees, in connection with the execution of the work covered by this Contract or any amendments thereto.**
6. Certification re: Workers' Compensation. In accordance with Section 1861 of the California Labor Code, each contractor to whom a public works contract is awarded shall sign and file with the awarding body the following certification prior to performing the work of the contract: "I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in

accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."

7. Department of Industrial Relations: Pursuant to Labor Code section 1771.1, the Bidder and its Subcontractors must be registered and qualified to perform public work pursuant to section 1725.5 of the Labor Code, subject to limited legal exceptions.
8. Independent Contractor. The Contractor is an independent contractor retained by the City to perform the work described herein. All personnel employed by the Contractor, including subcontractors, and personnel of said subcontractors, are not and shall not be employees of the City.
9. Warranty Against Defects. The Contractor hereby warrants all work done under this contract against all defects in materials and workmanship for a period of 12 months following City's acceptance of said work. If any defects occur within said 12 months, the Contractor shall be solely responsible for the correction of those defects.
10. Counterparts and Electronic Signatures. This contract may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one agreement. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with U.S. federal E-Sign Act of 2000 (15 U.S. Code §7001 et seq.), California Uniform Electronic Transactions Act (Cal. Civil Code §1633.1 et seq.), or other applicable law) or other transmission method, and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the date and year first above written.

CONTRACTOR:

By: \_\_\_\_\_  
Its Authorized Agent

By: \_\_\_\_\_  
Its Authorized Agent  
*(Second signature required if a corporation)*

CITY OF PLEASANTON:

By: \_\_\_\_\_  
Gerry Beaudin, City Manager

ATTEST:

\_\_\_\_\_

Jocelyn Kwong, City Clerk

APPROVED AS TO FORM:

---

Daniel G. Sodergren, City Attorney

**CONTRACTOR'S BOND FOR FAITHFUL PERFORMANCE**

KNOW ALL PERSONS BY THESE PRESENTS:

Whereas, The City Council of the City of Pleasanton, State of California, and \_\_\_\_\_ (“Principal”) have entered into an agreement whereby Principal agrees to install and complete certain designated public improvements, which said agreement, dated \_\_\_\_\_, 20\_\_, and identified as **Lions Wayside and Delucchi Park Renovations, Project No. 06716**, is hereby referred to and made a part hereof; and

Whereas, Said Principal is required under the terms of said agreement to furnish a bond for the faithful performance of said agreement.

Now, therefore, we, Principal and \_\_\_\_\_ (“Surety”), are held and firmly bound unto the City of Pleasanton, in the penal sum of \_\_\_\_\_ dollars (\$ \_\_\_\_\_) lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above bounded Principal, Principal’s heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and provisions in the said agreement and any alteration thereof made as therein provided, on Principal’s part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless City of Pleasanton, its officers, agents and employees, as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As a part of the obligation secured hereby and in addition to the face amount specified therefor, there shall be included costs and reasonable expenses and fees, including reasonable attorney’s fees, incurred by City of Pleasanton in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the agreement or to the work to be performed thereunder or the specifications accompanying the same shall in anywise affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the agreement or to the work or to the specifications.

In witness whereof, this instrument has been duly executed by the Principal(s) and Surety above named, on \_\_\_\_\_, 20\_\_\_\_.

Contractor

Surety



By: \_\_\_\_\_

By: \_\_\_\_\_

By: \_\_\_\_\_

By: \_\_\_\_\_

Date Signed: \_\_\_\_\_

Surety Address

\_\_\_\_\_

\_\_\_\_\_

Surety's Phone No.

(attach acknowledgments)

## LABOR AND MATERIAL BOND

Whereas, the City Council of the City of Pleasanton, State of California, and \_\_\_\_\_ (“Principal”) have entered into an agreement whereby Principal agrees to install and complete certain designated public improvements, which agreement, dated \_\_\_\_\_, 20\_\_\_\_, and identified as **Lions Wayside and Delucchi Park Renovations, Project No. 06716**, is hereby referred to and made a part hereof; and

Whereas, Under the terms of the agreement, Principal is required before entering upon the performance of the work, to file a good and sufficient payment bond with the City of Pleasanton to secure the claims to which reference is made in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code.

Now, therefore, Principal and the undersigned as corporate surety, are held firmly bound unto the City of Pleasanton and all contractors, subcontractors, laborers, material suppliers, and other persons employed in the performance of the agreement and referred to in Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code in the sum of \_\_\_\_\_ dollars (\$ \_\_\_\_\_), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to this work or labor, that the surety will pay the same in an amount not exceeding the amount hereinabove set forth, and also in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorney’s fees, incurred by City of Pleasanton in successfully enforcing this obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under Title 3 (commencing with Section 9000) of Part 6 of Division 4 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

The surety hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the agreement or the specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration, or addition.

In witness whereof, this instrument has been duly executed by Principal and surety above named, on \_\_\_\_\_, 20\_\_\_\_.

Principal

Surety

By: \_\_\_\_\_

By: \_\_\_\_\_

(signature of Principal and Surety must be notarized)

Bond No. \_\_\_\_\_

**CONTRACTOR'S BOND FOR ONE YEAR MAINTENANCE**

**Lions Wayside and Delucchi Park Renovations  
Project No. 06716**

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the City of Pleasanton has awarded and \_\_\_\_\_ (“Contractor”) is about to execute a Contract for the above-referenced Project ("Contract") and the terms thereof, which are incorporated herein by reference, require the furnishing of a bond with said Contract providing for maintenance for a period of one (1) year from the date of acceptance by the City Council of said contract by the Contractor.

NOW, THEREFORE, WE, Contractor and \_\_\_\_\_ (“Surety”), are held firmly bound unto the City of Pleasanton, as Agency in the penal sum of:

\_\_\_\_\_ DOLLARS, (\$ \_\_\_\_\_), lawful money of the United States of America, said sum being ten percent (10%) of the estimated amount payable by Agency under the terms of the contract, for payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that if the above bounden \_\_\_\_\_, Principal(s), within a period of one (1) year after the completion and acceptance of the project fulfills the provisions of the Contract and complies with any necessary repairs or replacement of faulty materials to the **Lions Wayside and Delucchi Park Renovations, Project No. 06716**, and related facilities, then the above obligation shall be void; otherwise to remain in full force and effect.

No cancellation or termination of this bond by Surety shall be effective unless thirty (30) days prior written notice thereof has been delivered to the City Engineer, provided that no cancellation or termination shall affect any liability incurred or accrued hereunder prior to the expiration of said thirty (30) day period or any work performed under any Contract issued by the City.

This bond is executed in accordance with the rules, regulations, standards, specifications and policies of the City of Pleasanton.

Bond No. \_\_\_\_\_

IN WITNESS WHEREOF, the Principal(s) and Surety have caused these presents to be executed, and corporate names and seals to be hereunto attached by proper officers hereunto duly authorized, the day and year first herein-above written.

Contractor

Surety

By:

By: \_\_\_\_\_

By:

By: \_\_\_\_\_

\_\_\_\_\_  
Date Signed

Surety Address:

\_\_\_\_\_

\_\_\_\_\_

Surety Phone No. ( ) \_\_\_\_\_

(attach acknowledgments)

## GENERAL PROVISIONS

Unless otherwise stated in these Contract Documents or deemed inapplicable by the Engineer, the General Provisions of the State of California Standard Specifications are hereby incorporated with the following General Provisions.

### SECTION 1. DEFINITIONS AND TERMS

As used in these Contract Documents unless the context otherwise requires, the following terms have the meanings indicated:

Addenda: Are written or graphic instruments, clarifications or corrections, issued prior to the execution of the contract, which modify or interpret the Contract Documents.

Bidder: Any individual, partnership or corporation submitting a Bid Proposal for the work described in the Contract Documents.

Bidding Documents: Includes the Notice to Bidders, the Bid Proposal, Bid Bond, Contractor's Information Forms including the Contractor's past experience, financial responsibility and Subcontractors, and Instructions to Bidders.

City: The City of Pleasanton.

City Standard Specifications and Standard Details: Means the November 2016 edition of the City's Standard Specifications and Standard Details.

Contractor: Any individual, partnership or corporation that has entered into a Contract with the City to perform the work described in the Contract Documents.

Contract Documents: Includes the Bidding Documents, the Award and Execution of Contract Requirements, the Contract, the Labor and Material Bond, the Performance Bond, the Maintenance Bond, the City General Provisions, the Special Provisions, Project Plans, the City of Pleasanton Standard Specifications, and Standard Details, the State Standard Specifications and Plans, all Addenda issued by the City and all Change Orders executed by the City.

Engineer: The City Engineer of the City of Pleasanton, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.

General Provisions: Those Specifications that apply to all projects unless specifically modified by Special Provisions.

Project Plans: Drawings specifically prepared for a particular project.

Special Provisions: Specifications specifically prepared for a particular project.

State Standard Specifications and Standard Plans: Means the May 2015 edition of the Standard Specifications and Standard Plans of the State of California, Department of Transportation. Any reference therein to the State of California or a State agency, office or officer shall be interpreted to refer to the City or its corresponding agency, office or officer acting under this contract.

Subcontractor: Any individual, partnership or corporation that has contracted with the Contractor to provide labor, equipment and/or materials described in the Contract Documents which is an amount in excess of one-half of one (1) percent of the Contractor's total Bid.

Work: Material, equipment and labor to be provided to City by the Contractor as defined by the Contract Documents.

## SECTION 2. SCOPE OF WORK

The Work presented in these Contract Documents shall be done in accordance with: 1) the Special Provisions and Project Plans, 2) the City Standard Specifications and Standard Details and 3) the State Standard Specifications and Standard Plans. In case of conflicting portions, the above order of precedence shall prevail. In case of conflict between the specifications and drawings, the specifications shall prevail.

## SECTION 3. CONTROL OF WORK AND MATERIALS

3-01. Protection of Workers in Trench Excavations: As required by Section 6705 of the California Labor Code and in addition thereto, whenever work under the Contract involves the excavation of any trench or trenches 5 feet or more in depth, the Contractor shall submit for acceptance by the City or by a registered civil or structural engineer, employed by the City, to whom authority to accept has been delegated, in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation, of such trench or trenches. If such plan varies from the shoring system standards established by the Construction Safety Orders of the Division of Industrial Safety, the plan shall be prepared by a registered civil or structural engineer employed by the Contractor, and all costs therefore shall be included in the price named in the Contract for completion of the Work as set forth in the Contract Documents. Nothing in this Section shall be construed to impose tort liability on the City, the Engineer, nor any of their officers, agents, representatives, or employees.

3-02. Substitution of Materials; Assignment of Certain Rights: In accordance with the provisions of Section 3400 of the California Public Contract Code, a Contractor shall be provided a period of not less than 35 days after award of the contract for submission of data substantiating a request for a substitution of "an equal" item.

In accordance with Section 4552 of the Government Code, the Bidder shall conform to the following requirements: In submitting a bid to a public purchasing body, the Bidder offers and agrees that if the bid is accepted, it will assign to the purchasing body 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. Sec. 15) or under the Cartwright Act [Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code], arising from purchase of goods, materials, or services by the bidder for sale to the purchasing body pursuant to the bid. Such assignment shall be made and become effective at the time the purchasing body tenders final payment to the Bidder.

#### SECTION 4. LEGAL RELATIONS AND RESPONSIBILITY

##### 4-01. Travel and Subsistence Payments:

- (a) As required by Section 1773.1 of the California Labor Code the Contractor shall pay travel and subsistence payments to each worker needed to execute the Work, as such travel and subsistence payments are defined in the applicable collective bargaining agreements filed in accordance with this Section.
- (b) To establish such travel and subsistence payments, the representative of any craft, classification, or type of worker needed to execute the contracts shall file with the Department of Industrial Relations fully executed copies of collective bargaining agreements for the particular craft, classification or type of work involved. Such agreements shall be filed within 10 days after their execution and thereafter shall establish such travel and subsistence payments whenever filed 30 days prior to the call for bids.

##### 4-02. State Wage Determination:

- (a) As required by Sections 1770 et seq., of the California Labor Code, the Contractor shall pay not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations. Copies of such prevailing rate of per diem wages are on file at the City's Engineering Counter, which copies shall be made available to any interested party on request. The Contractor shall post a copy of such determination at each job site.
- (b) As provided in Section 1775 of the California Labor Code, the Contractor shall, as a penalty to the City, forfeit \$50.00 for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the City Engineer for such work or craft in which such worker is employed for any public work done under the contract by it or by any subcontractor under it.

4-03. Payroll Records; Retention; Inspection; Compliance Penalties; Rules and Regulations

- (a) As required under the provisions of Section 1776 of the California Labor Code, each Contractor and subcontractor shall keep an accurate payroll record, 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 by him or her in connection with the public work.
- (b) The payroll records enumerated in Paragraph 4-03(a), herein, shall be certified and shall be available for inspection at all reasonable hours at the principal office of the Contractor on the following basis:
  - 1. A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request.
  - 2. A certified copy of all payroll records enumerated in Paragraph 4-03(a), herein, shall be made available for inspection or furnished upon request to a representative of the body awarding the contract, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations.
  - 3. A certified copy of all payroll records enumerated in Paragraph 4-03(a), herein, shall be made available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the body awarding the contract, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to subparagraph 4-03(b2), herein, the requesting party shall pay the costs of preparation by the Contractor, subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal offices of the Contractor.
- (c) Each Contractor shall file a certified copy of the records, enumerated in Paragraph 4-03(a) with the entity that requested the records within 10 days after receipt of a written request.
- (d) Any copy of records made available for inspection and copies furnished upon request to the public or any public agency by the awarding body, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement, shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of



the Contractor awarded the contract or performing the contract shall not be marked or obliterated.

- (e) The Contractor shall inform the body awarding the contract of the location of the records enumerated under Paragraph 4-03(a) including the street address, city and county, and shall, within five (5) working days, provide a notice of change of location and address.
- (f) In the event of noncompliance with the requirements of this Article, the Contractor shall have ten (10) days in which to comply subsequent to receipt of written notice specifying in what respects the Contractor must comply with this Article. Should noncompliance still be evident after the 10-day period, the Contractor shall, as a penalty to the state or political subdivision on whose behalf the Contract is made or awarded, forfeit \$25.00 dollars for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. Responsibility for compliance with these Paragraphs 4-03(a) through 4-03(f) lies with the Contractor.
- (g) In conformance with State Bill 854 all contractors and subcontractors must furnish electronic certified payroll records directly to the Labor Commissioner (aka Division of Labor Standards Enforcement) as of projects awarded on or after April 1, 2015 unless exempted by federal or state law.

4-04. Apprentices: Attention is directed to Sections 1777.5 and 1777.6 and 1777.7 of the California Labor Code and Title 8, California Administrative Code Section 200 et seq. To insure compliance and complete understanding of the law regarding apprentices, and specifically the required ratio thereunder, the Contractor (and subcontractors) should, where some question exists, contact the Division of Apprenticeship Standards prior to commencement of the work. Responsibility for compliance with this Section 4.04 lies with the Contractor. The City policy is to encourage the employment and training of apprentices on its construction contracts as may be permitted under local apprenticeship standards.

4-05. Working Hours. The Contractor shall comply with all applicable provisions of Section 1810 to 1815, inclusive, of the California Labor Code relating to working hours. The Contractor shall, as a penalty of the City, forfeit \$25.00 for each worker employed in the execution of the contract by the Contractor or by any Subcontractor for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and 40 hours in any one calendar week, unless such worker receives compensation for all hours worked in excess of eight (8) hours at not less than 1-1/2 times the basic rate of pay.

4-06. Workers' Compensation:

- (a) In accordance with the provisions of Section 1860 of the California Labor Code, the Contractor's attention is directed to the requirement that in accordance with the provisions of Section 3700 of the California Labor Code, every contractor will be required to secure the payment of compensation of his or her employees.
- (b) In accordance with the provisions of Section 1861 of the California Labor Code, each Contractor to whom a public works contract is awarded shall sign and file with the awarding body the following certification prior to performing the work of the contract: "I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."

4-07. Prime Contractor Job Site Postings. Pursuant to Labor Code Section 1771.4, Contractor is required to post all job site notices prescribed by law or regulation. The contractor shall comply with all applicable provisions of section 16451 (d) of California Labor Code relating to the posting of job site notices prescribed by regulation.

4-08. Insurance Requirements for Contractors: BIDDER'S ATTENTION IS DIRECTED TO THE INSURANCE REQUIREMENTS BELOW. IT IS HIGHLY RECOMMENDED THAT BIDDERS CONFER WITH THEIR RESPECTIVE INSURANCE CARRIERS OR BROKERS TO DETERMINE IN ADVANCE OF BID SUBMISSION THE AVAILABILITY OF INSURANCE CERTIFICATES AND ENDORSEMENTS AS PRESCRIBED AND PROVIDED HEREIN. IF AN APPARENT LOW BIDDER FAILS TO COMPLY STRICTLY WITH THE INSURANCE REQUIREMENTS, THAT BIDDER MAY BE DISQUALIFIED FROM AWARD OF THE CONTRACT.

Contractor shall procure and maintain for the duration of this contract, including one year maintenance period, contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, the Contractor's agents, representatives, employees or subcontractors. The cost of such insurance shall be included in the Contractor's bid.

(a) Minimum Scope of Insurance

Coverage shall be at least as broad as:

1. Insurance Services Office form number CG 00 01 (ED. 1/96) covering Commercial General Liability and name the City as additional insured.
2. Insurance Services Office form number CA 00 01 (Ed. 12/93) covering Automobile Liability, Code 1 "any auto."

3. Workers' Compensation insurance as required by the Labor Code of the State of California and Employers Liability insurance, and an endorsement for waiver of subrogation.

(b) Minimum Limits of Insurance

Contractor shall maintain limits no less than:

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

(c) Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by the City. At the option of the City, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the City, its officers, officials, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

(d) Other Insurance Provisions

The policies are to contain, or be endorsed to contain, the following provisions:

1. General Liability and Automobile Liability Coverages
  - a. The City, its officers, officials, employees and volunteers are to be covered as additional insureds as respects: liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; premises owned, occupied or used by the Contractor; or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the City, its officers, officials, employees or volunteers.
  - b. The Contractor's insurance coverage shall be primary insurance as respects the City, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the City, its

officers, officials, employees or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.

- c. The specific coverage obligations set forth in this Section 4-07 are minimums only, and the Contractor shall have the obligation to provide the minimum coverages stated in these Specifications or such greater or broader coverage, if available in the Contractor's policies.
- d. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the City, its officers, officials, employees or volunteers.
- e. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

2. Workers' Compensation and Employers Liability Coverage

The insurer shall agree to waive all rights of subrogation against the City, its officers, officials, employees and volunteers for losses arising from work performed by the Contractor for the Agency.

3. All Coverages

Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the City.

(e) Acceptability of Insurers

Insurance is to be placed with insurers with a Best's rating of no less than A:VII.

(f) Verification of Coverage

The Contractor shall furnish the City with certificates of insurance and with original endorsements effecting coverage required by this clause. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements may be on forms provided by the City. Where by statute, the City's workers' compensation-related forms cannot be used, equivalent forms approved by the Insurance Commissioner are to be substituted. All certificates and endorsements are to be received and approved by the City before work commences. The City reserves the right to require insurance policies, at any time.

(g) Subcontractors

The Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for **each subcontractor. All coverages for subcontractors shall be subject** to all of the requirements stated herein.

4-09. Department of Industrial Relations: **This Contract** will be subject to compliance monitoring and enforcement by the California Department of Industrial Relations, pursuant to Labor Code section 1771.4 Attention is directed to Section 1725.5 of the California Labor Code. To insure compliance and complete understanding of the law regarding contractor registration the Contractor (and subcontractors) should, where some question exists, contact the Department of Industrial Relations prior to submission of bid. Responsibility for compliance with this Section lies with the Contractor and Subcontractors.

## SECTION 5. PROSECUTION AND PROGRESS

5-01. Removal, Relocation, or Protection of Existing Utilities: In accordance with the provisions of Section 4215 of the California Government Code, the Contractor shall not be assessed liquidated damages for delay in completion of the project, when such delay was caused by the failure of the City or owner of the utility to provide for the removal or relocation of such utility facilities.

5-02. Preconstruction Conference: Following award of contract, submittal of executed contract, and approval of certificates of insurance and bonds, but before start of work, a preconstruction conference shall be held at a mutually agreed time and place. The conference shall be arranged by the City and attended by City representatives including the inspector, and the Contractor, Contractor's superintendent and major subcontractors. Contractor shall present at the conference the progress and submittal schedules, and progress payment format, and provide emergency phone numbers.

The purpose of the conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established.

***5-03. Beginning of Work: The Contractor shall be prepared to begin work within fifteen (15) calendar days after "Notice to Proceed".***

## SECTION 6. MEASUREMENT AND PAYMENT

6-01. Payments: Attention is directed to Section 9-1.16, "Partial Payments," and 9-1.17, "Payment After Acceptance," of the State Standard Specifications and these City General Provisions.

As of the 20th day of each month, requests for progress payment listing amount and value of work performed during that month may be submitted for review. Upon review and approval or adjustment by the Engineer, progress payment will be made, retaining five percent (5%) of the amount due. Requests submitted promptly as of the twentieth of the month will be paid normally by the tenth of the following month.

The Bidder's attention is directed to the provisions of Section 9 of the Standard Specifications and the following modification, all of which are applicable to this Contract:

Upon receipt of written notice that the work is ready for final inspection and acceptance, the Engineer shall, within five (5) days, make such inspection, and when the Engineer finds the work acceptable under the Contract and the Contract fully performed, the Engineer will recommend to the City Council (at the next following Council meeting) that the Contract be accepted and a "Notice of Completion" be prepared and recorded. The entire balance found to be due the Contractor, including the retained percentage, shall be paid to the Contractor by the City within fifteen (15) days after the expiration of thirty (30) days following the date of recordation of the Notice of Completion.

The Contractor shall supply with each progress payment request (with the exception of the first progress payment submittal) an email, fax or letter from each subcontractor stating: (a) the date that he/she has received his/her portion of the preceding payment; and (b) if the payment received was the total amount then due. Should the payment not include the total amount invoiced due to a dispute, the subcontractor shall include the details of such dispute in his/her letter with enough information for the City to verify that the provisions of Section 7108.5 of the CA Business and Professions Code have been met.

Before the final payment is due, the Contractor shall submit evidence satisfactory to the Engineer that all payrolls, material bills, and other indebtedness connected with the work have been paid, except that in case of disputed indebtedness or liens, the Contractor may submit in lieu of evidence of payment, a surety bond satisfactory to the City guaranteeing payment of all such disputed amounts when adjudicated in cases where such payment has not already been guaranteed by surety bond.

6-02. Substitution of Securities in Lieu of Retention: Pursuant to Section 22300 of the Public Contract Code, the Contractor may substitute securities for any money held by the City to insure performance of the contract. At the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the City or federally-chartered banks as an escrow agent, who shall return such securities to the Contractor upon satisfactory completion of the contract. Deposit of securities with an escrow agent shall be subject to written agreement in accordance with the provisions of Section 22300. The City shall not certify that the contract has been completed until at least 35 days after filing by the City of a Notice of Completion. Securities shall be limited to those listed in Section 16430 of the California Government Code, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed upon by the Contractor and the City.

## SECTION 7. DISPUTE RESOLUTION

7-01. Claims. This Section 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 change in the Contract Time, including a time extension or relief from liquidated damages, or a change in the Contract Price, that has previously been submitted to City as a Change Order in accordance with the requirements of the Contract Documents, and which has been rejected or disputed by City, in whole or in part.

(B) *Limitations*. A Claim may only include the portion of a previously rejected demand that remains in dispute between Contractor and City. 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 City in full compliance with this Section, and subsequently rejected in whole or in part by City.

(C) *Scope of Section*. This Section 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 Section 9204 and Sections 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 the 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.

7-02. Claims Submission. The following requirements apply to any Claim subject to this Section:

(A) *Substantiation*. The Claim must be submitted to City in writing, clearly identified as a “Claim” submitted pursuant to this Section 7, 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 City’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 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 claimed cost. Any Claim for an extension of time or delay costs must be substantiated with schedule analysis and narrative depicting and explaining claimed time impacts.

(B) *Claim Format.* A Claim must be submitted in the following format:

(1) General introduction, specifically identifying the submission as a “Claim” submitted under this Section 7.

(2) Relevant background information, including identification of the specific demand at issue, and the date of City's rejection of that demand.

(3) Detailed explanation of the issue(s) in dispute. For multiple issues, separately number and identify each issue and include the following for each separate issue:

(a) The background of the issue, including references to relevant provisions of the Contract Documents;

(b) A succinct statement of the matter in dispute, including Contractor’s position and the basis for that position;

(c) A chronology of relevant events;

(d) The identification and attachment of all supporting documents (see subsection (A), above, on Substantiation); and

(e) Use of a separate page for each issue.

(4) Summary of issues and damages.

(5) The following certification, executed by the Contractor’s authorized representative:

“The undersigned Contractor certifies under penalty of perjury that its statements and representations in this Claim are true and correct. Contractor warrants that this Claim is comprehensive and complete as to the matters in dispute, and agrees that any costs, expenses, or delay claim not included herein are deemed waived. Contractor understands that submission of a Claim which has no basis in fact or which Contractor knows to be false may violate the False Claims Act (Government Code Section 12650 et seq.)”

(C) *Submission Deadlines.*

(1) A Claim must be submitted within 15 days of the date that City notified the Contractor in writing that a request for a change in the Contract Time or Contract Price has been rejected in whole or in part.

(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 15 days of the effective date of 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 the Contractor.*

7-03. City's Response. City 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 City and the Contractor or as otherwise allowed under Public Contract Code section 9204. However, if City determines that the Claim is not adequately documented, City 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 City may have against the Claim. If the Contractor fails to submit the additional documentation to City within 15 days of receipt of City's request, the Claim will be deemed waived.

(A) *Additional Information*. If additional information is thereafter required, it may be requested and provided upon mutual agreement of City and Contractor.

(B) *Non-Waiver*. Any failure by City to respond within the times specified above may not be construed as acceptance of the Claim in whole or in part, or as a waiver of any provision of these Contract Documents.

7-04. Meet and Confer. If the Contractor disputes City's written response, or City fails to respond within 45 days of receipt of the Claim with, the Contractor may notify City of the dispute in writing of the 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 the Contractor fails to dispute City's response in writing within the specified time, the Contractor's Claim will be deemed waived.

(A) *Schedule Meet and Confer*. Upon receipt of the demand to meet and confer, City 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 City's principal office.

(C) *Written Statement After Meet and Confer*. Within ten working days after the meet and confer has concluded, City 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 City issues the written statement identifying any portion(s) of the Claim remaining in

dispute, the disputed portion(s) will be submitted for mediation, as set forth below.

7-05. Mediation and Government Code Claims.

(A) *Mediation.* Within ten working days after the City issues the written statement identifying any portion(s) of the Claim remaining in dispute following the meet and confer, City and Contractor will mutually agree to a mediator, as provided under Public Contract Code section 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. The parties will share the costs of mediation equally, except costs incurred by each party for its representation by legal counsel or any other consultants.

(B) *Government Code Claims.*

(1) Timely presentment of a Government Code Claim is a condition precedent to filing any legal action based on or arising from the Contract.

(2) The time for filing a Government Code Claim will be tolled from the time the Contractor submits its written Claim 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.

7-06. Tort Claims. This Section does not apply to tort claims and nothing in this Section is intended nor will be construed to change the time periods for filing tort-based Government Code Claims.

7-07. Arbitration. It is expressly agreed, under California Code of Civil Procedure Section 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.

7-08. Damages. The Contractor bears the burden of proving entitlement to and the amount of any claimed damages. The Contractor is not entitled to damages calculated on a total cost basis, but must prove actual damages. The Contractor is not entitled to recovery of any alleged home office overhead. The Eichleay Formula or similar formula may not be used for any recovery under the Contract. The Contractor is not entitled to consequential damages, including home office overhead or any form of overhead not directly incurred at the 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.

7-09. Multiple Claims. In the interest of efficiency, City, acting in its sole discretion, may elect to process multiple Claims concurrently, in which case the applicable procedures above will be based on the total amount of such Claims rather than the amount of each individual Claim. Any such election will not operate to change or waive any other requirements of this Section.

7-10. Other Disputes. The procedures in this Section 7 will apply to any and all disputes or legal actions, in addition to Claims, arising from or related to this Contract, unless and only to the extent that compliance with a procedural requirement is expressly and specifically waived by City.

# **ATTENTION BIDDERS:**

Your bid shall represent the cost of performing all Work described in the Contract Documents including:

Special Provisions and Project Plans,  
City Standard Specifications and Details,  
State Standard Specifications and Plans, and  
all Addenda and Change Orders.

## ***CITY STANDARD SPECIFICATIONS AND DETAILS***

**(Approved November 2016)**

is a separate document that is  
available at the City of Pleasanton  
Engineering Division,  
Civic Center

200 Old Bernal Avenue (physical  
location) or

P.O. Box 520 (mailing address)  
for a non-refundable cost of \$20.

**Call (925) 931-5650 to request a copy of the  
*City Standard Specifications and Details.***

*The City Standard Specifications and Details can be viewed online at the  
City's Web Page, <http://www.cityofpleasantonca.gov/>  
(Select: Our Government, Public Works, Engineering, Standard  
Specifications & Details)*

THIS PAGE LEFT INTENTIONALLY BLANK

## **SPECIAL PROVISIONS**

(These Special Provisions are to be used in conjunction with the City Standard Specifications and Standard Details, and the State Standard Specifications and Standard Plans)

All work shall be constructed in accordance with the City of Pleasanton Standard Specifications and Details dated November 2016, and as augmented by these Special Provisions. The Sections noted are those in the Standard Specifications except for the new Section(s) added. Where conflict exists between these documents and existing conditions, request clarification from the Project Engineer.

# LIONS WAYSIDE AND DELUCCHI PARKS RENNOVATIONS

CIP NO. 06716

City of Pleasanton

## DEFINITION OF BID ITEMS

Bid Submittal

6/18/2024

TS = Technical Specifications

### **Bid Item #1: Project Start-up**

The contract lump sum price paid for project start-up shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in project start-up, complete in place, including bonding and mobilization, temporary fence, tree protection, construction staking and traffic control, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

### **Bid Item #2: Demolition and Erosion Control (TS 02 41 13)**

The contract lump sum price paid for demolition and erosion control shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in demolition and erosion control, complete in place, including clearing and grubbing, temporary construction entrance, fiber rolls, compost socks, inlet filters, and erosion control measures, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

### **Bid Item #3: Rough Grading (TS 31 22 00)**

The contract lump sum price paid for rough grading shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in rough grading, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

### **Bid Item #4: Soil Off-haul (TS 31 22 00)**

The contract lump sum price paid for soil off-haul shall include full compensation for furnishings all labor, materials, tools, equipment, and incidentals and for doing all work involved in soil off-haul, including soil testing, legal disposal, and dump fees, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #5: Domestic Water Line Reconnection (TS 33 40 00)**

The contract price paid per each for domestic water reconnection shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in domestic water reconnection, including type k copper supply line, point of connection to existing drinking fountain water line, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #6: Dry Well (TS 33 40 00)**

The contract lump sum price paid for dry well shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in dry well, including drain inlet, crushed rock wrapped in filter fabric, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #7: Storm Drain P.O.C. (TS 33 40 00)**

The contract unit price for each storm drain P.O.C. shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in storm drain P.O.C., including connection to existing curb drain inlet, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #8: Solid Drain Line, PVC (TS 33 40 00)**

The contract price paid per linear foot for solid drain line, PVC shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in solid drain line, PVC, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #9: Perforated Drain Line, PVC (TS 33 40 00)**

The contract price paid per linear foot for perforated drain line, PVC shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in perforated drain line, PVC, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #10: Clean Out (TS 33 40 00)**

The contract unit price for each clean out shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in clean out, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #11: Catch Basin (TS 33 40 00)**

The contract unit price for each catch basin shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in catch basin, complete in place, as shown on the plans, as specified in the



Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #12: Junction Box, (TS 33 40 00)**

The contract unit price for each junction box, shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in junction box, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #13: Concrete Pavement (TS 32 13 13)**

The contract price paid per square foot for concrete pavement shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in concrete pavement, complete in place, including integral color, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #14: Seatwall (TS 04 22 00)**

The contract price paid per linear foot for seatwall shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in seatwall, including wall cap, brick veneer, concrete footing, reinforcement, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #15: Raised Planter (TS 04 22 00)**

The contract price paid per linear foot for raised planter shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in raised planter, including wall cap, brick veneer, concrete footing, reinforcement, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #16: Concrete stairs & handrail (TS 32 13 13)**

The contract lump sum price paid for concrete stairs & handrail shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in concrete stairs & handrail, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #17: Ornamental Metal Fence (TS 32 31 19)**

The contract price paid per linear foot for ornamental metal fence shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in ornamental metal fence, including mounting hardware, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #18: Pilaster (TS 04 22 00)**

The contract unit price for each pilaster shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in pilaster, complete in place, including cap, brick veneer, reinforcement, as shown on

the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #19: Bandstand Seatwall (TS 04 22 00)**

The contract price paid per linear foot for bandstand seatwall shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in bandstand seatwall, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #20: Picnic Table, Salvage and Reinstall (TS 32 33 00)**

The contract unit price for each picnic table, salvage and reinstall shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in picnic table, salvage and reinstall, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #21: Picnic Table, ADA (TS 32 33 00)**

The contract unit price for each picnic table, ADA shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in picnic table, ADA, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #22: Bench (TS 32 33 00)**

The contract unit price for each bench shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in bench, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #23: Bench, Salvage and Reinstall (TS 32 33 00)**

The contract unit price for each bench, salvage and reinstall shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in bench, salvage and reinstall, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #24: Trash Receptacle (TS 32 33 00)**

The contract unit price for each trash receptacle shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in trash receptacle, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #25: Drinking Fountain, Salvage and Reinstall (TS 32 33 00)**

The contract unit price for each drinking fountain, salvage and reinstall shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals

and for doing all work involved in drinking fountain, salvage and reinstall, complete in place, including ball valve in valve box, and connection to water supply line, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #26: Dedication Plaque (TS 32 33 00)**

The contract unit price for each dedication plaque shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in dedication plaque, including salvaging existing plaque, cast in place concrete pedestal, installation of plaque to pedestal, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #27: Bandstand Structure (TS 32 33 00)**

The contract lump sum price paid for bandstand structure shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in bandstand structure, complete in place, including bandstand sign and concrete footings, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #28: Irrigation (City Standard Specification Section 18)**

The contract lump sum price paid for irrigation shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in irrigation, including irrigation P.O.C, valves, spray heads, bubblers, control wire, controller assembly, mainline and lateral piping, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #29: Soil Preparation (TS 32 91 13)**

The contract price paid per square foot for soil preparation shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in soil preparation, complete in place, including, but not limited to, fine grading, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #30: Mulch (City Standard Specification Section 20)**

The contract price paid per square foot for mulch shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in mulch, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #31: Import Topsoil (TS 32 91 13)**

The contract lump sum price paid for import topsoil shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in import topsoil, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #32: Trees, 24" Box (City Standard Specification Section 20)**

The contract unit price for each tree, 24" box shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in tree, 24" box, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #33: Turf from Sod (City Standard Specification Section 20)**

The contract price paid per square foot for turf from sod shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in turf from sod, complete in place, including turf from sod and biofiltration sod as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #34: Shrub, 1 gallon (City Standard Specification Section 20)**

The contract unit price for each shrub, 1 gallon shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in shrub, 1 gallon, complete in place, including shrubs and vines, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #35: Root Barrier (City Standard Specification Section 20)**

The contract price paid per linear foot for root barrier shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in root barrier, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #36: Plant Maintenance (City Standard Specification Section 20)**

The contract price paid per month for plant maintenance shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in plant maintenance, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Item #37: Site Electrical (TS 26 05 00 to 26 51 00)**

The contract lump sum price paid for site electrical shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in site electrical, including, but not limited to, metered pedestal panel and controls, pull boxes, festoon light pole and fixtures, deferred submittal and structural engineering for festoon light pole footings, circuits and conduits, stage light fixtures and controls, and stage power receptacles, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Alternate B-1: Delucchi Park Improvements**

The contract lump sum price paid for Delucchi Park Improvements shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in Delucchi Park Improvements, including, but not limited

to, demolition, rough grading, soil offhaul, concrete paving, decomposed granite paving, headerboard, mowband, site furnishings, planting and irrigation, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Alternate B-2: Northern Property Improvements**

The contract lump sum price paid for Northern Property Improvements shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in Northern Property Improvements, including, but not limited to, demolition, rough grading, soil offhaul, concrete paving and mulch, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Alternate B-3: Firehouse Lawn Improvements**

The contract lump sum price paid for Firehouse Lawn Improvements shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in Firehouse Lawn Improvements, including, but not limited to, clear and grub and turf from sod, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

**Bid Alternate B-4: SWPPP Compliance**

The contract lump sum price paid for SWPPP compliance shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in SWPPP compliance, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

# Technical Specifications

## Lions Wayside & Delucchi Parks Renovation

Bid Submittal

June 18, 2024

### TABLE OF CONTENTS

SECTION 02 41 13	DEMOLITION
SECTION 26 05 00	GENERAL ELECTRICAL REQUIREMENTS
SECTION 26 05 19	LINE VOLTAGE WIRE AND CABLE
SECTION 26 05 26	GROUNDING
SECTION 26 05 33	OUTLET, JUNCTION AND PULL BOXES
SECTION 26 05 42	CONDUITS, RACEWAYS AND FITTINGS
SECTION 26 05 43	UNDERGROUND DUCTS
SECTION 26 05 44	IN GRADE PULL BOXES
SECTION 26 24 16	PANELBOARDS
SECTION 26 27 26	DEVICES WIRING
SECTION 26 28 16	CIRCUIT BREAKERS
SECTION 26 51 00	LIGHTING
SECTION 04 22 00	UNIT MASONRY AND PLASTER
SECTION 31 22 00	EARTHWORK AND GRADING
SECTION 31 23 00	TRENCHING AND BACKFILLING
SECTION 32 01 91	TREE PROTECTION AND PRUNING
SECTION 32 13 13	SITE CONCRETE
SECTION 32 15 40	DECOMPOSED GRANITE PAVING
SECTION 32 31 19	METAL AND HARDWARE
SECTION 32 33 00	SITE FURNISHINGS
SECTION 32 91 13	LANDSCAPE SOIL PREPARATION
SECTION 33 40 00	SITE DRAINAGE UTILITIES

**SECTION 02 41 13 DEMOLITION**

**PART 1 – GENERAL**

**1.1 SCOPE**

- A. Perform all demolition activities as shown on the plans and as specified herein including, but not necessarily limited to, the following:
  - 1. Clearing and grubbing
  - 2. Stockpiling
  - 3. Irrigation removal
  - 4. Site furnishings removal
  - 5. Other miscellaneous demolition items
  
- B. Related work specified elsewhere:
  - 1. Earthwork and Grading – Section 31 22 00
  - 2. Landscape Planting – Section 32 93 00

**1.2 REVIEW**

- A. Contractor shall review with the City’s Representative the exact limits of work and extent of materials to be removed.
  - 1. Examine site and structures and determine exact nature and status of structural elements and utilities prior to commencing demolition.
  - 2. City assumes no responsibility for actual condition of items or structures to be demolished.
  - 3. Prior to commencing the work, perform a site survey to identify existing areas of damage to adjacent building areas and other buildings.

**1.3 STANDARDS**

- A. All work shall conform to ANSI A10.6, Safety Requirements for Demolition Operations and to the codes and regulations of the City.

**1.4 SCHEDULE**

- A. Submit schedule indicating proposed methods and sequence of operations for selective demolition work for review prior to commencement of work. Include coordination for shut-off, capping, and continuation of utility services as required.

1. Provide detailed sequence of demolition and removal work to ensure uninterrupted progress of adjacent building uses.
2. Coordinate continued occupancy with adjacent building tenants.

**PART 2 – NOT USED**

**PART 3 – EXECUTION**

**3.1 DEMOLITION OF STRUCTURES**

- A. Provide a minimum of 72 hours advance notice of demolition activities.
- B. Protection: Provide temporary barricades and other forms of protection as required to protect general public from injury due to selective demolition work. Provide protective measures as required to provide free and safe passage of general public to and from occupied portions of building. Erect temporary covered passageways as required by authorities having jurisdiction.
- C. Environmental Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations pertaining to environmental protection.
- D. Utilities: Disconnect all utilities to structures to be demolished in the manner prescribed by the utility company.
- E. Selective Demolition: Perform selective demolition work in a systematic manner. Use methods required to complete work indicated on the plans in accordance with demolition schedule and governing regulations. Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.
- F. Traffic: Do not close, block or otherwise obstruct streets, walks, or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- G. Extent: Demolish foundation walls and footings to a depth of not less than 12 inches below finish grade. Demolish and remove below-grade wood or metal construction. Break up below grade concrete slabs. Completely fill below-grade areas and voids resulting from demolition work. Provide fill consisting of approved



earth, gravel or sand, free of trash and debris, stones over 6 inch diameter, roots or other organic matter.

- H. Clean-up: Remove debris, rubbish and other materials resulting from demolition operations from building site. Transport and legally dispose of materials off site.
- I. Damages: Promptly repair damages caused to adjacent facilities by demolition work at no cost to the City.
- J. Contractor Salvage: Items indicated to be removed but of salvageable value to the Contractor may be removed as work progresses. Transport Contractor salvaged items from the site as they are removed. Storage or sale of removed items on site will not be permitted.

### 3.2 STOCKPILING

- A. Existing asphaltic paving, aggregate base, and concrete rubble shall be stripped and stockpiled for re-use as aggregate base beneath parking paving. Materials not conforming to requirements for aggregate base, as defined in the City Standard Specifications, shall be removed and properly disposed of off-site.

### 3.3 CLEARING AND GRUBBING

- A. Strip the site of all remaining materials not to remain as part of the finished work. All such materials shall be legally disposed of off-site at the Contractor's expense, except as otherwise noted on the plans. Items to be disposed of off-site include but are not limited to the following:
  - 1. Trees, weeds, roots and other organic material, wood and trash.
  - 2. Any rubble remaining from demolition of bandstand, marquee signs, and other signs.
  - 3. Fencing and portions of posts from existing fence section to be modified.
  - 4. Planting areas.
- B. Strip and remove weeds and trash from unpaved areas to be improved. Leave intact ornamental shrubs and trees as identified by the City's Representative. The contractor shall protect surrounding areas from damage by equipment or construction operations.
- C. Tree stumps shall be removed to a minimum of one foot below existing grade and deeper if necessary to accomplish construction.

- D. All edges of existing paving to remain shall be sawcut in a neat and clean manner.
- E. All excavation within the drip line of trees to remain shall be accomplished in a careful manner. No roots greater than 1 inch diameter shall be cut. Where excavation reveals roots greater than 1 inch diameter that will interfere with construction, the Contractor shall notify the City's Representative for direction prior to proceeding.
- F. Where any marked or unmarked utility lines or other underground obstruction or piping may be encountered within the work area, notify the City's Representative or the agencies or service utility companies having jurisdiction thereof, and take necessary measures to prevent interruption of service (if live). Should such lines or service be damaged, broken, or interrupted, those services shall be repaired immediately and restored by the Contractor at the Contractor's own expense.
- G. Abandoned lines, meters and boxes, obstructions or piping shall be removed, plugged or capped in accordance with the requirements and approval of the agencies affected. It shall be the responsibility of the Contractor to ascertain whether any public facilities exist along the line of work, whether or not shown on the plans; and the Contractor shall, at the Contractor's expense, do any necessary work to save from damage all such property in or adjacent to the work, and shall repair all damage thereto caused by the Contractor's operations.
- H. Service connections to adjacent properties requiring removal or adjustment, due to new construction, will be so removed or adjusted during the course of construction operations. The Contractor shall cooperate with the utility companies and/or agencies in such work.
- I. Prior to commencement of site grading work, the Contractor shall notify the City's Representative that the site has been cleared. Site grading shall not commence until the City's Representative has completed review of the site and has given approval to proceed.

END OF SECTION 02 41 13

**SECTION 04 22 00 UNIT MASONRY AND PLASTER**

**PART 1 – GENERAL**

**1.1 SCOPE**

- A. Furnish and install all concrete block masonry work as shown on the plans and as specified herein including, but not necessarily limited to, the following:
  - 1. Seat wall
  - 2. Pilaster
  
- B. Related work specified elsewhere:
  - 1. Site Concrete – Section 32 13 13
  - 2. Signage – Section 32 41 23

**1.2 STANDARDS**

- A. Unless otherwise shown or specified, all materials and methods shall conform to the appropriate current sections of:
  - 1. California Lathing and Plastering Association.
  - 2. Applicable ASTM Specifications as they reasonably apply to this work, except for measurement and payment requirements.

**1.3 SUBMITTALS**

- A. Product Data: Submit manufacturer's product data, installation instructions, anchor details, and general recommendations for each specified miscellaneous metal product and/or fabrication, including paint products, grout, and other finishing materials.
  
- B. Provide sample finishes on the actual surfaces to be painted to verify appearance. Approved samples will become the standard for the work.

**1.4 JOB CONDITIONS**

- A. Apply concrete sealer only when the surface is dry and the atmosphere temperature is 40 degrees F or above.

**PART 2 – PRODUCTS**

**2.1 MATERIALS**

- A. Concrete block: Light weight units, ASTM C-90, Grade N, Type I, modular size as shown on the plans and as required.
- B. Mortar: Shall be SPEC MIX Polyler modified adhered veneer mortar, color shall be SM200 White.
  - 1. ASTM C-270, Type S, using ASTM C-150, Type I Portland Cement, in the following proportions:
    - a. Cement: 1 part
    - b. Hydrated lime or lime putty: 1/4 to 1/2 parts
    - c. Aggregate: 2-1/4 to 3 times the volume of cement and lime
- C. Grout: 28-day minimum compressive strength of 2,000 psi, and shall be composed of 1 part low alkali Portland cement, 2-1/4 to 3 parts sand, and 1 to 2 parts 3/8 inch maximum size pea gravel, to which shall be added not more than 1/10 part of lime. Sufficient water shall be added to produce consistency for pouring without segregation of the constituents of the grout. Combined aggregate volume shall be not more than 4 times that of the cement and lime.
- D. Brick veneer: Shall be thin brick from McNear Brick & Block, Charleston model, Sandmold Series, standard size (5/8" x 2-7/16" x 8-1/8"), or approved equal. Available from SiteOne Landscape Supply, 6450 Trinity Ct, Ste B, Dublin, CA, (925) 829-6040, or approved equal.
- E. Pilaster cap: Empire Precast's Concrete Square Pilaster Wall Cap, Peaked, Item #EP-SRP26P-1, 26" square, 5" tall, finish to be Sandstone (T-L20), color to be Baja (C-015), available from Empire Precast, Lake Elsinore, CA 92530, (951) 609-1590, or approved equal.
- F. Wall cap: Empire Precast's Concrete Wall Cap, square edge 3" thick, 24" length, Item #EP-SRC16S-1, straight, end, and corner caps as needed, finish to be Sandstone (T-L20), color to be Baja (C-015), available from Empire Precast, Lake Elsinore, CA 92530, (951) 609-1590, or approved equal.
- G. Principle reinforcing steel: Deformed steel bars, ASTM-615.
- H. Portland Cement: Type II conforming to ASTM C150.

- I. Water: Fit to drink.
- J. Aggregates: Conforming to ASTM C144. Sand conforming to the following aggregate gradation:

<b>Sieve Size</b>	<b>Percent Passing</b>
No. 4	100
No. 8	100
No. 16	60 - 90
No. 30	35 - 70
No. 50	10 - 30
No. 100	0 - 5

- 1. The aggregate shall not have more than 50% retained between any two consecutive sieves nor more than 25% between the No. 50 and No. 100 sieves.
- K. Concrete Sealer: Flat finish, clear drying; conforming to ASTM D2939, ASTM D466, ASTM E96, ASTM 836, and SS-W-110C.

**PART 3 – EXECUTION**

**3.1 INSPECTION OF SURFACES**

- A. Inspect masonry wall surfaces for suitability for application of brick veneer: joints struck flush, no dust, grease, moisture, paint or other substance present detrimental to good bonding.
  - 1. Check wall for suction appropriate for application of brick veneer. Do not proceed with installation work until unsatisfactory conditions are corrected.
- B. Take all steps necessary for protection of existing improvements. Promptly remove plaster from other surfaces not to be plastered.

**3.2 INSTALLATION**

- A. Masonry Wall:

## UNIT MASONRY AND PLASTER 04 22 00

Lions Wayside & Delucchi Parks Renovation

Page 4 of 4

1. All walls shall be true and plumb and built to dimension, bond and pattern, as shown with unobstructed vertical continuity of the cells to be filled, and allowing maximum size openings for reinforcement.
  2. All grout shall be well rodded or vibrated as pouring progresses. When grouting is stopped for one hour or more, the pour shall be held 1-1/2 inches below the top of the uppermost unit.
  3. Concrete block walls shall be reinforced as detailed on the plans. All steel shall be clean and free of deleterious amounts of rust. Lap all splices a minimum of 27 bar diameters. Install bond beam units at horizontally reinforced sections, and pour grout continuously along the beam at a minimum of 2 inches above and below reinforcement.
  4. Make provision for installation of bolts, anchors, conduit, etc., as required.
- B. Apply concrete sealer per the plans by low-pressure spray, with low delivery and light to medium saturation. Do not atomize. Do not soak. Apply an even blanket mist.

### 3.3 CLEANING

- A. Keep exposed work clean as the work progresses, taking care to prevent mortar staining of the block and surrounding construction.

END OF SECTION 04 22 00

**SECTION 260500 - GENERAL ELECTRICAL REQUIREMENTS**

**PART 1 - GENERAL**

1.01 Description of Work:

- A. The work of this Section consists of providing all required labor, supervision, materials and equipment to satisfactorily complete all electrical installations that are shown on the Drawings, included in these specifications, or otherwise needed for a complete and fully operating facility.
- B. Furnish and install all required in-place equipment, conduits, conductors, cables and any miscellaneous materials for the satisfactory interconnection and operation of all associated electrical systems.

1.02 Related Work:

- A. This Section provides the basic Electrical Requirements which supplement the General Requirements of Division 01 and apply to all Sections of Division 26.

1.03 Submittals:

- A. As specified in Division 01. Submit to the City shop drawings, manufacturer's data and certificates for equipment, materials and finish, and pertinent details for each system specified. Information to be submitted includes manufacturer's descriptive literature of cataloged products, equipment, drawings, diagrams, performance and characteristic curves as applicable, test data and catalog cuts. Obtain written approval before procurement, fabrication, or delivery of the items to the job site. Partial submittals are not acceptable and will be returned without review. Furnish manufacturer's name, trade name, catalog model or number, nameplate data, size, layout dimensions, capacity, project specification and paragraph reference, applicable Federal, Industry and Technical Society Publication References, and years of satisfactory service of each item required to establish contract compliance. Photographs of existing installations and data submitted in lieu of catalog data are not acceptable and will be returned without approval.
- B. Organize submittals for equipment and items related to each specification section together as a package.
- C. Proposed substitutions of products will not be reviewed or approved prior to awarding of the Contract.

- D. Substitutions shall be proven to the City to be equal or superior to the specified product. Architect's decision is final. The Contractor shall pay all costs incurred by the City in reviewing and processing any proposed substitutions whether or not a proposed substitution is accepted.
- E. If a proposed substitution is rejected, the contractor shall furnish the specified product at no increase in contract price.
- F. If a proposed substitution is accepted, the contractor shall be completely responsible for all dimensional changes, electrical changes, or changes to other work which are a result of the substitution. The accepted substitution shall be made at no additional cost to the owner or design consultants.

1.04 Quality Assurance:

- A. Codes: All electrical equipment and materials, including installation and testing, shall conform to the latest editions following applicable codes:
  - 1. California Electrical Code (CEC).
  - 2. Occupational Safety and Health Act (OSHA) standards.
  - 3. All applicable local codes, rules and regulations.
  - 4. Electrical Contractor shall possess a C-10 license and all other licenses as may be required. Licenses shall be in effect at start of this contract and be maintained throughout the duration of this contract.
- B. Variances: In instances where two or more codes are at variance, the most restrictive requirement shall apply.
- C. Standards: Equipment shall conform to applicable standards of American National Standards Institute (ANSI), Electronics Industries Association (EIA), Institute of Electrical and Electronics Engineers (IEEE), and National Electrical Manufacturers Association (NEMA).
- D. Underwriter Laboratories (UL) listing is required for all equipment and materials where such listing is offered by the Underwriters Laboratories. Provide service entrance labels for all equipment required by the NEC to have such labels.



- E. The electrical contractor shall guarantee all work and materials installed under this contract for a period of one (1) year from date of acceptance by owner.
- F. All work and materials covered by this specification shall be subject to inspection at any and all times by representatives of the owner. Work shall not be closed in or covered before inspection and approval by the owner or his representative. Any material found not conforming with these specifications shall, within 3 days after being notified by the owner, be removed from premises; if said material has been installed, entire expense of removing and replacing same, including any cutting and patching that may be necessary, shall be borne by the contractor.

1.05 Contract Documents:

A. Drawings and Specifications:

- 1. In the case of conflict between the drawings and specifications, the specifications shall take precedence.
- 2. Drawings and specifications are intended to comply with all law, ordinances, rules and regulations of constituted authorities having jurisdiction, and where referred to in the Contract Documents, said laws, ordinance, rules and regulations shall be considered as a part of said Contract Documents within the limits specified. The Contractor shall bear all expenses of correcting work done contrary to said laws, ordinance, rules and regulations if the Contractor knew or should have known that the work as performed is contrary to said laws, ordinances, rules and regulations and if the Contractor performed same (1) without first consulting the Architect for further instructions regarding said work and/or (2) disregarded the City instructions regarding said work.

B. Drawings: The Electrical Drawings shall govern the general layout of the completed construction.

- 1. Locations of equipment, panels, pullboxes, conduits, stub-ups, ground connections are approximate unless dimensioned; verify locations with the City prior to installation.
- 2. Review the Drawings and Specification Divisions of other trades and perform the electrical work that will be required for those installations.

## GENERAL ELECTRICAL REQUIREMENTS 26 05 00

Lions Wayside & Delucchi Park Renovation

Page 4 of 13

3. Should there be a need to deviate from the Electrical Drawings and Specifications, submit written details and reasons for all changes to the City for approval.
4. The general arrangement and location of existing conduits, piping, apparatus, etc., is approximate. The drawings and specifications are for the assistance and guidance of the contractor, exact locations, distances and elevations are governed by actual field conditions. Accuracy of data given herein and on the drawings is not guaranteed. Minor changes may be necessary to accommodate work. The contractor is responsible for verifying existing conditions. Should it be necessary to deviate from the design due to interference with existing conditions or work in progress, claims for additional compensation shall be limited to those for work required by unforeseen conditions as determined by the Architect.
5. All drawings and divisions of these specifications shall be considered as whole. The contractor shall report any apparent discrepancies to the Architect prior to submitting bids.
6. The contractor shall be held responsible to have examined the site and compared it with the specifications and plans and to have satisfied himself as to the conditions under which the work is to be performed. He shall be held responsible for knowledge of all existing conditions whether or not accurately described. No subsequent allowance shall be made for any extra expense due to failure to make such examination.

### 1.06 Closeout Submittals:

- A. Manuals: Furnish manuals for equipment where manuals are specified in the equipment specifications or are specified in Division 01.

### 1.07 Coordination:

- A. Coordinate the electrical work with the other trades, code authorities, utilities and the City.
- B. Provide and install all trenching, backfilling, conduit, pull boxes, splice boxes, etc. for all services to the locations indicated on the Drawings.
- C. Contractor shall pay all inspection and other applicable fees and procure all permits necessary for the completion of this work.

- D. Where connections must be made to existing installations, properly schedule all the required work, including the power shutdown periods.
- E. When two trades join together in an area, make certain that no electrical work is omitted.

1.08 Job Conditions:

- A. Operations: Perform all work in compliance with Division 01.
  - 1. Keep the number and duration of power shutdown periods to a minimum.
  - 2. Show all proposed shutdowns and their expected duration on the construction schedule. Schedule and carry out shutdowns so as to cause the least disruption to operation of the City's facilities.
  - 3. Carry out shutdown only after the schedule has been approved, in writing, by the owner. Submit power interruption schedule 15 days prior to date of interruption.
- B. Construction Power: Unless otherwise noted in Division 01 of these specifications, contractor shall make all arrangements and provide all necessary facilities for temporary construction power from the City's on site source. Energy costs shall be paid for by the City.
- C. Storage: Provide adequate storage for all equipment and materials which will become part of the completed facility so that it is protected from weather, dust, water, or construction operations.

1.09 Damaged Products:

- A. Notify the City in writing in the event that any equipment or material is damaged. Obtain approval from the City before making repairs to damaged products.

1.10 Locations:

- A. General: Use equipment, materials and wiring methods suitable for the types of locations in which they are located.

- B. Dry Locations: All those indoor areas which do not fall within the definition below for Wet Locations and which are not otherwise designated on the Drawings.
- C. Wet Locations: All locations exposed to the weather, whether under a roof or not, unless otherwise designated on the Drawings.

1.11 Safety and Indemnity:

- A. The Contractor is solely and completely responsible for conditions of the job site including safety of all persons and property during performance of the work. This requirement will apply continually and not be limited to normal working hours. The contractor shall provide and maintain throughout the work site proper safeguards including, but not limited to, enclosures, barriers, warning signs, lights, etc. to prevent accidental injury to people or damage to property.
- B. No act, service, drawing review or construction review by the City, the Engineer or their Consultants is intended to include reviews of the adequacy of the Contractors safety measures in or near the construction site.
- C. The Contractor performing work under this Division of the Specifications shall hold harmless, indemnify, and defend the City, the Engineer, their consultants, and each of their officers, agents and employees from any and all liability claims, losses, or damage arising out of or alleged to arise from bodily injury, sickness, or death of a person or persons and for all damages arising out of injury to or destruction of property arising directly or indirectly out of or in connection with the performance of the work under this Division of the Specifications, and from the Contractor's negligence in the performance of the work described in the construction contract documents, but not including liability that may be due to the sole negligence of the City, the Engineer, their Consultants or their officers, agents and employees.
- D. If a work area is encountered that contains hazardous materials, the contractor is advised to coordinate with the owner and it's abatement consultant for abatement of hazardous material by the City's Representative. "Hazardous materials" means any toxic substance regulated or controlled by OSHA, EPA, State of California or local rules, regulations and laws. Nothing herein shall be construed to create a liability for Aurum Consulting Engineers regarding hazardous materials abatement measures, or discovery of hazardous materials.

1.12 Arc Flash:

- A. The contractor shall install a clearly visible arc flash warning to the inside door of all panelboards and industrial control panels, as well as to the front of all switchboards and motor control centers that are a part of this project.
- B. The warning shall have the following wording: line 1 “WARNING” (in large letters), line 2 “Potential Arc Flash Hazard” (in medium letters), line 3 & 4 “Appropriate Personal Protective Equipment and Tools required when working on this equipment”.

1.13 Emergency Boxes:

- A. All boxes and enclosures for emergency circuits shall be permanently marked with a readily visible red spray painted mark.

**PART 2 - PRODUCTS**

2.01 Standard of Quality:

- A. Products that are specified by manufacturer, trade name or catalog number establish a standard of quality and do not prohibit the use of equal products of other manufacturers provided they are established to be equal to the specified product and approved by the City prior to installation.
- B. Material and Equipment: Provide materials and equipment that are new and are current products of manufacturers regularly engaged in the production of such products. The standard products shall have been in satisfactory commercial or industrial use for two years prior to bid opening. The two-year period includes use of equipment and materials of similar size under similar circumstances. For uniformity, only one manufacturer will be accepted for each type of product.
- C. Service Support: Submit a certified list of qualified permanent service organizations including their addresses and qualification for support of the equipment. These service organizations shall be convenient to the equipment installation and able to render service to the equipment on a regular and emergency basis during the warranty period of the contract.
- D. Manufacturer's Recommendations: Where installation procedures are required to be in accordance with manufacturer's recommendations, furnish printed copies of the recommendations prior to installation. Installation of the

item shall not proceed until recommendations are received. Failure to furnish recommendation shall be cause for rejection of the equipment or material.

**2.02 Nameplates:**

- A. For each piece of electrical equipment, provide a manufacturer's nameplate showing his name, location, the pertinent ratings, the model designation, and shop order number.
- B. Identify each piece of equipment and related controls with a rigid laminated engraved plastic nameplate. Unless otherwise noted, nameplates shall be melamine plastic 0.125 inch thick, white with black center core. Surface shall be matte finish. Corners shall be square. Accurately align lettering and engrave into the core. Minimum size of nameplates shall be 0.5 by 2.5 inches unless otherwise noted. Where not otherwise specified, lettering shall be a minimum of 0.25 inch high normal block style. Engrave nameplates with the inscriptions indicated on the Drawings and, if not so indicated, with the equipment name. Securely fasten nameplates in place using two stainless steel or brass screws.

**2.03 Fasteners:**

- A. Fasteners for securing equipment to walls, floors and the like shall be either hot-dip galvanized after fabrication or stainless steel.

**2.04 Finish requirements:**

- A. Equipment: Refer to each electrical equipment section of these Specifications for painting requirements of equipment enclosures. Repair any final paint finish which has been damaged or is otherwise unsatisfactory, to the satisfaction of the City.
- B. Wiring System: In finished areas, paint all exposed conduits, boxes and fittings to match the color of the surface to which they are affixed.

**PART 3 - EXECUTION**

**3.01 Workmanship:**

- A. Ensure that all equipment and materials fit properly in their installation.

- B. Perform any required work to correct improperly fit installation at no additional expense to the owner.
- C. All electrical equipment and materials shall be installed in a neat and workmanship manner in accordance with the “NECA-1 Standard Practices for Good Workmanship in Electrical Contracting”. Workmanship of the entire job shall be first class in every respect.

### 3.02 Equipment Installations:

- A. Provide the required inserts, bolts and anchors, and securely attach all equipment and materials to their supports.
- B. Do all the cutting and patching necessary for the proper installation of work and repair any damage done.
- C. Earthquake restraints: all electrical equipment, including conduits over 2 inches in diameter, shall be braced or anchored to resist a horizontal force acting in any direction as per CBC Section 1616A Title 24, part 2, and ASCE7-10, Section 13.3 and 13.6 and Table 13.6-1.
- D. Structural work: All core drilling, bolt anchor insertion, or cutting of existing structural concrete shall be approved by a California registered structural consulting engineer prior to the execution of any construction. At all floor slabs and structural concrete walls to be drilled, cut or bolt anchors inserted, the contractor shall find and mark all reinforcing in both faces located by means of x-ray, pach-ometer, or prof-ometer. Submit sketch showing location of rebar and proposed cuts, cores, or bolt anchor locations for approval.

### 3.03 Field Test:

- A. Test shall be in accordance with Acceptance testing specifications issued by the National Electrical Testing Association (NETA).
- B. Perform equipment field tests and adjustments. Properly calibrate, adjust and operationally check all circuits and components, and demonstrate as ready for service. Make additional calibration and adjustments if it is determined later that the initial adjustments are not satisfactory for proper performance. Perform equipment field test for equipment where equipment field tests are specified in the equipment Specifications. Give sufficient notice to the Architect prior to any test so that the tests may witnessed.

- C. Provide instruments, other equipment and material required for the tests. These shall be of the type designed for the type of tests to be performed. Test instrument shall be calibrated by a recognized testing laboratory within three months prior to performing tests.
- D. Operational Tests: Operationally test all circuits to demonstrate that the circuits and equipment have been properly installed and adjusted and are ready for full-time service. Demonstrate the proper functioning of circuits in all modes of operation, including alarm conditions.
- E. Re-testing will be required for all unsatisfactory tests after the equipment or system has been repaired. Re-test all related equipment and systems if required by the Architect. Repair and re-test equipment and systems which have been satisfactorily tested but later fail, until satisfactory performance is obtained.
- F. Maintain records of each test and submit five copies to the Architect when testing is complete. All tests shall be witnessed by the Architect. These records shall include:
  - 1. Name of equipment tested.
  - 2. Date of report.
  - 3. Date of test.
  - 4. Description of test setup.
  - 5. Identification and rating of test equipment.
  - 6. Test results and data.
  - 7. Name of person performing test.
  - 8. Owner representative.
- G. Items requiring testing shall be as noted in the additional electrical sections of these specifications.

### 3.04 Cleaning Equipment:

- A. Thoroughly clean all soiled surfaces of installed equipment and materials.



**3.05 Painting of Equipment:**

- A. **Factory Applied:** Electrical equipment shall have factory applied painting system which shall, as a minimum, meet the requirements of NEMA ICS 6 corrosion-resistance test and the additional requirements specified in the technical section.
- B. **Field Applied:** Paint electrical equipment as required to match finish of adjacent surfaces.

**3.06 Records:**

- A. Maintain one copy of the contract Drawing Sheets on the site of the work for recording the "as built" condition. After completion of the work, the Contractor shall carefully mark the work as actually constructed, revising, deleting and adding to the Drawing Sheets as required. The following requirements shall be complied with:
  - 1. **Cable Size and Type:** Provide the size and type of each cable installed on project.
  - 2. **Substructure:** Where the location of all underground conduits, pull boxes, stub ups and etc. where are found to differ than shown, carefully mark the correct location on the Drawings. Work shall be dimensioned from existing improvements.
  - 3. **Size of all conduit runs.**
  - 4. **Routes of concealed conduit runs and conduit runs below grade.**
  - 5. **Homerun points of all branch circuit.**
  - 6. **Location of all switchgear, panels, MCC, lighting control panels, pullcans, etc.**
  - 7. **Changes made as a result of all approved change orders, addendums, or field authorized revisions.**
  - 8. **As Builts:** At the completion of the Work the Contractor shall review, certify, correct and turn over the marked up Drawings to the City for his use in preparing "as built" plans.

9. As built Drawings shall be delivered to the City within ten (10) days of completion of construction.

**3.07 Clean Up:**

- A. Upon completion of electrical work, remove all surplus materials, rubbish, and debris that accumulated during the construction work. Leave the entire area neat, clean, and acceptable to the City.

**3.08 Mechanical and Plumbing Electrical Work:**

- A. The requirements for electrical power and/or devices for all mechanical and plumbing equipment supplied and/or installed under this Contract shall be coordinated and verified with the following:
  1. Mechanical and Plumbing Drawings.
  2. Mechanical and Plumbing sections of these Specifications.
  3. Manufacturers of the Mechanical and Plumbing equipment supplied.
- B. The coordination and verification shall include the voltage, ampacity, phase, location and type of disconnect, control, and connection required. Any changes that are required as a result of this coordination and verification shall be a part of this Contract.
- C. The Electrical Contractor shall furnish and install the following for all mechanical and plumbing equipment:
  1. Line voltage conduit and wiring.
  2. Disconnect switches.
  3. Manual line motor starters.
- D. Automatic line voltage controls and magnetic starters shall be furnished by the Mechanical and/or Plumbing Contractor and installed and connected by the Electrical Contractor. When subcontracted for by the Mechanical and/or Plumbing Contractor, all line voltage control wiring installed by the Electrical Contractor shall be done per directions from the Mechanical and/or Plumbing Contractor.
- E. All low voltage control wiring for Mechanical and Plumbing equipment shall be installed in conduit. Furnishing, installation and connection of all low voltage conduit, boxes, wiring and controls shall be by the Mechanical and/or Plumbing Contractor.

F. Disconnects (Motor And Circuit)

1. Disconnect switches shall be as manufactured by ITE- Siemens, General Electric or Square D.

G. Disconnects (Motor: Fused):

1. Disconnect switches shall be provided and located at all motors.
2. Switches for three-phase motors shall be heavy-duty, horsepower rated three-pole, and surface mounted except as noted on drawings.
3. Switches containing more than three poles shall be as specified on the drawings.
4. Switches for single-phase, fractional horsepower motors shall be heavy-duty, horsepower rated.
5. Switches shall be horsepower rated.

H. Manual motor starters, where required, shall have toggle type operators with pilot light and melting alloy type overload relays, SQUARE D COMPANY, Class 2510, Type FG-1P (surface) or Type FS-1P (flush) or ITE, WESTINGHOUSE or GENERAL ELECTRIC equal.

END OF SECTION 260500

**SECTION 260519 - LINE VOLTAGE WIRE AND CABLE**

**PART 1 - GENERAL**

1.01 Description of Work:

- A. The work of this Section consists of providing all wire and cable rated 600 volts or less, including splices and terminations, as shown on the Drawings and as described herein.

1.02 Related Work:

- A. See the following Specification Section for work related to the work in this Section:
  - 1. 260542 Conduits, Raceways and Fittings.
  - 2. 260533 Junction and Pull Boxes.

1.03 Quality Assurance

- A. Field tests shall be performed as specified in paragraph 3.04 of this Section.

**PART 2 - PRODUCTS**

2.01 Conductors:

- A. Conductors shall be copper, type THHN/THWN/MTW oil and gasoline resistant, 600 volt rated insulation.
- B. Conductors shall be stranded copper.
- C. Minimum power and control wire size shall be No. 12 AWG unless otherwise noted.
- D. All conductors used on this Project shall be of the same type and conductor material.

2.02 Cables:

- A. All individual conductors shall be copper with type THHN/THWN, 600 volt rated insulation.

- D. Insulation Marking - All insulated conductors shall be identified with printing colored to contrast with the insulation color.
- E. Color Coding - As specified in paragraph 3.03.
- F. Special Wiring - Where special wiring is proposed by an equipment manufacturer, submit the special wiring requirements to the City's Representative and, if approved, provide same. Special wire shall be the type required by the equipment manufacturer.
- G. Other Wiring - Wire or cable not specifically shown on the Drawings or specified, but required, shall be of the type and size required for the application and as approved by the City's Representative.
- H. Manufacturer - Acceptable manufacturers including Cablec, Southwire, or equal.

**2.03 Terminations:**

- A. Manufacturer - Terminals as manufactured by T&B, Burndy or equal.
- B. Wire Terminations – Stranded conductors shall be terminated in clamping type terminations which serve to contain all the strands of the conductor. Curling of a stranded conductor around a screw type terminal is not allowed. For screw type terminations, use a fork type stake-on termination on the stranded conductor. Use only a stake-on tool approved for the fork terminals selected.
- C. End Seals - Heat shrink plastic caps of proper size for the wire on which used.

**2.04 Tape:**

- A. Tape used for terminations and cable marking shall be compatible with the insulation and jacket of the cable and shall be of plastic material.

**PART 3 - EXECUTION**

**3.01 Cable Installation:**

- A. Clean Raceways - Clean all raceways prior to installation of cables as specified in Section 260542 - Conduits Raceway and Fittings.
- B. All line voltage wiring shall be installed in conduit.

- C. All feeder conductors shall be continuous from equipment to equipment. Splices in feeders are not permitted unless specifically noted or approved by the Electrical Engineer.
- D. All branch circuit wiring shall be run concealed in ceiling spaces, walls, below floors or in crawl spaces unless noted otherwise.
- E. Cable Pulling - Exercise care in pulling wires and cables into conduit or wireways so as to avoid kinking, putting undue stress on the cables or otherwise abrading them. No grease will be permitted in pulling cables. Only soapstone, talc, or UL listed pulling compound will be permitted. The raceway construction shall be complete and protected from the weather before cable is pulled into it. Swab conduits before installing cables and exercise care in pulling, to avoid damage to conductors.
- F. Bending Radius - Cable bending radius shall be per applicable code. Install feeder cables in one continuous length.
- G. Equipment Grounding Conductors - Provide an equipment grounding conductor, whether or not it is shown on the Drawings, in all conduits or all raceways.
- H. Panelboard Wiring - In panels, bundle incoming wire and cables which are No. 6 AWG and smaller, lace at intervals not greater than 6 inches, neatly spread into trees and connect to their respective terminals. Allow sufficient slack in cables for alterations in terminal connections. Perform lacing with plastic cable ties or linen lacing twine. Where plastic panel wiring duct is provided for cable runs, lacing is not necessary when the cable is properly installed in the duct.

### 3.02 Cable Terminations and Splices:

- A. Splices - UL Listed wirenuts.
- B. Terminations - Shall comply with the following:
  - 1. Make up and form cable and orient terminals to minimize cable strain and stress on device being terminated on.
  - 2. Burnish oxide from conductor prior to inserting in oxide breaking compound filled terminal.

3.03 Circuit and Conductor Identification:

- A. Color Coding - Provide color coding for all circuit conductors. Insulation color shall be white for neutrals and green for grounding conductors. Conductor colors shall be as follows:

<u>VOLTAGE</u>	<u>208/120V</u>
Phase A	Black
Phase B	Red
Phase C	Blue
Neutral	White
Ground	Green

- B. Color coding shall be in the conductor insulation for all conductors #10 AWG and smaller; for larger conductors, color shall be either in the insulation or in colored plastic tape applied at every location where the conductor is readily accessible.
- C. Circuit Identification - All underground distribution and service circuits shall be provided with plastic identification tags in each secondary box and at each termination. Tags shall identify the source transformer of the circuit and the building number(s) serviced by the circuit.

3.04 Field Tests:

- A. All systems shall test free from short circuits and grounds, shall be free from mechanical and electrical defects, and shall show an insulation resistance between phase conductors and ground of not less than the requirements of the CEC. All circuits shall be tested for proper neutral connections.
- B. Insulation Resistance Tests: Perform insulation resistance tests on circuits with #2 AWG and larger conductors to be energized with a line-to-neutral voltage of 120 volts or more. Make these tests before all equipment has been connected. Test the insulation with a 500Vdc insulation resistance tester with a scale reading 100 megohms. The insulation resistance shall be 2 megohms or more. Submit results for review.

END OF SECTION 26 05 19

**SECTION 26 05 26 - GROUNDING**

**PART 1 GENERAL**

1.01 Section Includes:

- A. Conduits, wires, ground rods and other materials for the electrical grounding system.

1.02 Related Sections:

- A. Section 260500 - Electrical General Requirements.

**PART 2 PRODUCTS**

2.01 Ground Rod:

- A. "Copperweld" ground rod conforming to or exceeding requirements of U.L. Specification No. 467 (ANSI C-33.8). Rod shall be 3/4" diameter and 10' in length, unless otherwise noted on the Drawings.

2.02 Below Grade Connections:

- A. Compression fittings, Thomas & Betts, Series 52000, 53000 or 54000 or approved equal.

2.03 Hardware:

- A. Bolts, nuts and washers shall be bronze, cadmium plated steel or other non-corrosive materials, approved for the purpose.

2.04 Waterproof Sealant:

- A. Use Kearney "Aqua Seal" mastic sealant on all below grade clamp or compression type connections.

**PART 3 EXECUTION**

3.01 Grounding and Bonding:

- A. Grounding and bonding shall be as required by codes and local authorities.
- B. All electrical equipment shall be grounded, including, but not limited to, panel boards, terminal cabinets and outlet boxes.



## GROUNDING 26 05 26

Lions Wayside & Delucchi Park Renovation

Page 2 of 2

- C. The ground pole of receptacles shall be connected to their outlet boxes by means of a copper ground wire connecting to a screw in the back of the box.
- D. A green insulated copper ground wire, sized to comply with codes, shall be installed in all conduit runs.
- E. All metal parts of pull boxes shall be grounded per code requirements.
- F. All ground conductors shall be green insulated copper.
- G. The ground system electrodes shall be tested for resistance before the equipment ground conductors are connected. Maximum ground system resistance shall be 25 ohms. Install up to two additional ground rods to meet the 25 ohm requirement. Multiple ground rods shall not be less than 10 feet apart.
- H. Grounding of the panels shall be completed as indicated on the Drawings.

END OF SECTION 26 05 26

**SECTION 260533 - OUTLET, JUNCTION AND PULL BOXES**

**PART 1 - GENERAL**

1.01 Description of Work:

- A. The work of this Section consists of providing all required labor, supervision, materials and equipment to satisfactorily complete all electrical installations shown on the drawings, included in these Specification, or otherwise needed for a complete and fully operating facility. The work shall include but not be limited to the following:
- B. Furnish and install all required material, supports and miscellaneous material for the satisfactory interconnection of all associated electrical systems.

1.02 Related Work:

- A. See the following specification sections for work related to the work of this section.
  - 1. 260500 General Electrical Requirements.
  - 2. 260542 Conduits, Raceway and Fittings.
  - 3. 260519 Line Voltage Wire and Cable.

**PART 2 - PRODUCTS**

2.01 Outlet boxes, Junction and Pull boxes

- A. Standard Outlet Boxes: Galvanized, steel, knock-out type of size and configuration best suited to the application indicated on the Drawings. Minimum box size shall be 4 inches square (octagon for most light fixtures) by 1-1/2 inches deep with mud rings as required.
- B. Switch boxes: Minimum box size shall be 4 inches square by 1-1/2 inches deep with mud rings as required. Install multiple switches in standard gang boxes with raised device covers suitable for the application indicated.
- C. Conduit bodies: Cadmium plated, cast iron alloy. Conduit bodies with threaded conduit hubs and neoprene gasketed, cast iron covers. Bodies shall be used to facilitate pulling of conductors or to make changes in conduit direction only. Splices are not permitted in conduit bodies. Crouse-Hinds Form 8 Condulets, Appleton Form 35 Unilets or equal.

- D. Sheet Metal Boxes: Use standard outlet or concrete ring boxes wherever possible; otherwise use a minimum 16 gauge galvanized sheet metal, NEMA I box sized to Code requirements with covers secured by cadmium plated machine screws located six inches on centers. Circle AW Products, Hoffman Engineering Company or equal.
- E. Flush Mounted Pull boxes and Junction boxes: Provide overlapping covers with flush head cover retaining screws, prime coated.

### **PART 3 - EXECUTION**

#### 3.01 Outlet Boxes

##### A. General:

1. All outlet boxes shall finish flush with building walls, ceilings and floors except in mechanical and electrical rooms above accessible ceiling or where exposed work is called for on the Drawings.
2. Install raised device covers (plaster rings) on all switch and receptacle outlet boxes installed in masonry or stud walls or in furred, suspended or exposed concrete ceilings. Covers shall be of a depth to suit the wall or ceiling finish.
3. Leave no unused openings in any box. Install close-up plugs as required to seal openings.

##### B. Box Layout:

1. Outlet boxes shall be installed at the locations and elevations shown on the drawings or specified herein. Make adjustments to locations as required by structural conditions and to suit coordination requirements of other trades.
2. For outlets mounted above the pilaster, coordinate location and mounting heights with pilaster height. Adjust mounting height as necessary.
3. On fire rated walls, the total face area of the outlet boxes shall not exceed 100 square inches per 100 square feet of wall area.

#### 3.02 Junction and Pull Boxes

##### A. General:

## OUTLET, JUNCTION AND PULL BOXES 26 05 33

Lions Wayside & Delucchi Park Renovation

Page 3 of 3

1. Install junction or pull boxes where required to limit bends in conduit runs to not more than 360 degrees or where pulling tension achieved would exceed the maximum allowable for the cable to be installed. Note that these boxes are not shown on the Drawings.
2. Locate pull boxes and junction boxes in concealed locations above accessible ceilings or exposed in electrical rooms, utility rooms or storage areas.
3. Install raised covers (plaster rings) on boxes in stud walls or in furred, suspended or exposed concrete ceilings. Covers shall be of a depth to suit the wall or ceiling finish.
4. Leave no unused openings in any box. Install close-up plugs as required to seal openings.
5. Identify circuit numbers and panel on cover of junction box with black marker pen.

### B. Box Layouts:

1. Boxes above hung ceilings having concealed suspension systems shall be located adjacent to openings for removable recessed lighting fixtures.

### C. Supports:

1. Boxes installed in metal stud walls shall be equipped with brackets designed for attaching directly to the studs or shall be mounted on specified box supports.
2. Boxes installed in suspended ceilings of gypsum board or lath and plaster construction shall be mounted to 16 gauge metal channel bars attached to main ceiling runners.
3. Boxes installed in suspended ceilings supporting acoustical tiles or panels shall be supported directly from the structure above.
4. Boxes mounted above suspended acoustical tile ceilings having exposed suspension systems shall be supported directly from the structure above.

END OF SECTION 26 05 33

**SECTION 260542 - CONDUITS, RACEWAYS AND FITTINGS**

**PART 1 - GENERAL**

1.01 Description of Work:

- A. The work of this section consists of furnishing and installing conduits, raceways and fittings as shown on the Drawings and as described herein.

1.02 Related Work:

- A. See the following specification sections for work related to the work in this section:
  - 1. 260543 Underground Ducts
  - 2. 260544 In Grade Pull Boxes
  - 3. 260519 Line Voltage Wire and Cable
  - 4. 260533 Junction and Pull Boxes

**PART 2 - PRODUCTS**

2.01 Conduits, Raceways:

- A. Electrical Metallic Tubing (EMT) shall be hot-dip galvanized after fabrication. Couplings shall be compression or set-screw type.
- B. Flexible Conduit: Flexible metal conduit shall be galvanized steel.
- C. Galvanized Rigid Steel Conduit (GRS) shall be hot-dip galvanized after fabrication. Couplings shall be threaded type.
- D. Rigid Non-metallic Conduit: Rigid non-metallic conduit shall be PVC Schedule 40 (PVC-40 or NEMA Type EPC-40) conduit approved for underground use and for use with 90° C wires.

2.02 Conduit Supports:

- A. Supports for individual conduits shall be galvanized malleable iron one-hole type with conduit back spacer.
- B. Supports for multiple conduits shall be hot-dipped galvanized Unistrut or Superstrut channels, or approved equal. All associated hardware shall be hot-dip galvanized.

- C. Supports for EMT conduits shall be galvanized pressed steel single hole straps.
- D. Clamp fasteners shall be by wedge anchors. Shot in anchors shall not be allowed.

2.03 Fittings:

- A. Provide threaded-type couplings and connectors for rigid steel conduits; provide steel compression (watertight), or steel set-screw type for EMT, (die-cast zinc or malleable iron type fittings are not allowed). Provide threaded couplings and Meyers hubs for rigid steel conduit exposed to weather.
- B. Fittings for flexible conduit shall be Appleton, Chicago, IL, Type ST, O-Z Gedney Series 4Q by General Signal Corp., Terryville, CT, T & B 5300 series, or approved equal.
- C. Fittings for use with rigid steel shall be galvanized steel or galvanized cast ferrous metal; access fittings shall have gasketed cast covers and be Crouse Hinds Condulets, Syracuse, NY, Appleton Unilets, Chicago, IL, or approved equal. Provide threaded-type couplings and connectors; set-screw type and compression-type are not acceptable.
- D. Fittings for use with rigid non-metallic conduit shall be PVC and have solvent-weld-type conduit connections.
- E. Union couplings for conduits shall be the Erickson type and shall be Appleton, Chicago, IL, Type EC, O-Z Gedney 3-piece Series 4 by General Signal Corp., Terryville, CT, or approved equal. Threadless coupling shall not be used.
- F. Bushings:
  - 1. Bushings shall be the insulated type.
  - 2. Bushings for rigid steel shall be insulated grounding type, O-Z Gedney Type HBLG, Appleton Type GIB, or approved equal.
- G. Conduit Sealants:
  - 1. Fire Retardant Types: Fire stop material shall be reusable, non-toxic, asbestos-free, expanding, putty type material with a 3-hour rating in accordance with UL Classification 35L4 or as specified on the Drawings.

**PART 3 - EXECUTION**

3.01 Conduit, Raceway and Fitting Installation:

- A. For conduit runs exposed to weather provide rigid metal (GRS).
- B. For conduit run underground, in concrete or masonry block wall and under concrete slabs, install minimum ¾" size nonmetallic (PVC) with PVC elbows. Where conduits transition from underground or under slab to above grade install wrapped rigid metal (GRS) elbows and risers.
- C. For conduit runs concealed in steel or wood framed walls or in ceiling spaces or exposed in interior spaces above six feet over the finished floor, install EMT.
- D. Flexible metal conduit shall be used only for the connection of recessed lighting fixtures and motor connections unless otherwise noted on the Drawings. Liquid-tight steel flexible conduit shall be used for motor connections.
- E. The minimum size raceway shall be 1/2-inch unless indicated otherwise on the Drawings.
- F. Installation shall comply with the CEC.
- G. From pull point to pull point, the sum of the angles of all of the bends and offset shall not exceed 360 degrees.
- H. Conduit Supports: Properly support all conduits as required by the NEC. Run all conduits concealed except where otherwise shown on the drawings.
  - 1. Exposed Conduits: Support exposed conduits within three feet of any equipment or device and at intervals not exceeding NEC requirements; wherever possible, group conduits together and support on common supports. Support exposed conduits fastened to the surface of the concrete structure by one-hole clamps, or with channels. Use conduit spacers with one-hole clamps.
    - a. Conduits attached to walls or columns shall be as unobtrusive as possible and shall avoid windows. Run all exposed conduits parallel or at right angles to building lines.
    - b. Group exposed conduits together. Arrange such conduits uniformly and neatly.
  - 2. Support all conduits within three feet of any junction box, coupling, bend or fixture.

## **CONDUITS, RACEWAYS AND FITTINGS 26 05 42**

Lions Wayside & Delucchi Park Renovation

Page 4 of 4

3. Support conduit risers in shafts with Unistrut Superstrut, or approved equal, channels and straps.
  - I. Moisture Seals: Provide in accordance with NEC paragraphs 230-8 and 300-5(g).
  - J. Where PVC conduit transitions from underground to above grade, provide rigid steel 90's with risers. Rigid steel shall be half-lap wrapped with 20 mil tape and extend minimum 12" above grade.
  - K. Provide a nylon pull cord in each empty raceway.
  - L. Provide galvanized rigid steel factory fittings for galvanized rigid steel conduit.
  - M. Slope all underground raceways to provide drainage; for example, slope conduit from equipment located inside a building to the pull box or manhole located outside the building.
  - N. Conduits shall be blown out and swabbed prior to pulling wires, or installation of pull cord in empty conduits.

END OF SECTION 26 05 42



## **SECTION 260543 - UNDERGROUND DUCTS**

### **PART 1 - GENERAL**

#### 1.01 Description of Work:

- A. The work of this section consists of furnishing and installing raceways, raceway spacers with necessary excavation.

#### 1.02 Related Work:

- A. See the following specification sections for work related to the work of this section.
  - 1. 02200 Excavation and Backfill
  - 2. 260542 Conduit Raceway and Fittings

#### 1.03 Standards and Codes:

- A. Work and material shall be in compliance with and according to the requirements of the latest revision of the following standards and codes.
  - 1. National Electrical Code (NEC) (Latest Revision)
  - 2. California Electrical Code (CEC).
  - 3. Underground Installations CEC - Article 300.5
  - 4. Rigid NonMetallic Conduit CEC - Article 347

### **PART 2 - PRODUCTS**

#### 2.01 Raceways:

- A. As specified in Section 260542 Conduits, Raceways and Fittings.

### **PART 3 - EXECUTION**

#### 3.01 Excavation:

**UNDERGROUND DUCTS 26 05 43**

Lions Wayside & Delucchi Park Renovation

Page 2 of 2

- A. As specified in Section 02200, Excavation and Backfill and as required for the work shown on the Drawings.

3.02 Install raceways as indicated on drawings.

3.03 Sand Encasement:

- A. As specified in Section 02200 - Excavation and Backfill.

3.04 Backfill:

- A. As specified in Section 02200 - Excavation and Backfill.

END OF SECTION 26 05 43

## **SECTION 260544 - IN GRADE PULL BOXES**

### **PART 1 - GENERAL**

#### 1.01 Description of Work:

- A. The work of this section consists of providing all labor, supervision, tools, materials, and performing all work necessary to furnish and install pre-cast concrete vaults, and pull boxes with necessary excavation.

#### 1.02 Related Work:

- A. See the following specification sections for work related to the work of this section.
  - 1. 02200 Excavation and Backfill.
  - 2. 260543 Underground Ducts.

#### 1.03 Submittals:

- A. As specified in Section 260500 and Division 01.
  - 1. Catalog Data: Provide manufacturer's descriptive literature - Pre-cast Vaults, Pull Boxes and Accessories.

### **PART 2 - PRODUCTS**

#### 2.01 Materials and Equipment:

##### A. General Requirements:

- 1. Pull boxes for electrical power, controls and other communication circuits shall consist of pre-cast reinforced concrete boxes, extensions' bases, and covers as specified herein and as indicated on the Drawings. Pre-cast units shall be the product of a manufacturer regularly engaged in the manufacture of pre-cast vaults and pull boxes. Acceptable manufacturers are Christy, Utility Vault, Brooks, Associated Concrete or equal.

##### B. Construction:

1. Pre-cast concrete vaults and pull boxes for electrical power distribution and communication circuits with associated risers and tops shall conform to ASTM C478 and ACI 318. Pull boxes shall be the type noted on the Drawings and shall be constructed in accordance with the applicable details as shown. Tops and walls shall consist of reinforced concrete. Walls and bottom shall be of monolithic concrete construction. Duct entrances and windows shall be located near the corners of structures to facilitate cable racking.

C. Covers:

1. The word "ELECTRICAL" shall be cast in the top face of all electrical cable boxes. The word "Signal" or "Fire Alarm" shall be cast in the top of the boxes utilized for these systems.

**PART 3 - EXECUTION**

3.01 Installation:

- A. Install pull boxes where required to limit bends in conduit runs to not more than 360 degrees or where pulling tension achieved would exceed the maximum allowable for the cable to be installed. Note that these boxes are not shown on the Drawings.
- B. Pre-cast pull boxes shall be installed approximately where indicated on the Drawings. The exact location of each pull box shall be determined after careful consideration has been given to the location of other utilities, grading, and paving. All cable boxes and secondary pull boxes shall be installed with a minimum of 6-inch thick crushed rock or sand bedding.
- C. Paved areas - Vaults and pull boxes located in areas to be paved shall be installed such that the top of the cover shall be flush with the finished surface of the paving.
- D. Unpaved Areas - In unpaved areas, the top of vaults and pull box covers shall be approximately 2 inches above finished grade.
- E. Joint Seals - Section joints of pre-cast vaults and pull boxes shall be sealed with compound as recommended by the manufacturer.

**IN GRADE PULL BOXES 26 05 44**

Lions Wayside & Delucchi Park Renovation

Page 3 of 3

- F. Trenching, Backfilling, and Compaction - Trenching, backfilling and compaction shall be as specified in Section 02200 - Excavation and Backfill.

END OF SECTION 26 05 44

**SECTION 262416 - PANELBOARDS**

**PART 1 – GENERAL**

1.01 Description of Work:

- A. The work of this Section consists of providing panelboards and circuit breakers as shown on the Drawings and as described herein.

1.02 Related Work:

- A. See the following specification sections for work related to the work in this Section.
  - 1. 260519 Line Voltage Wire and Cable
  - 2. 260526 Grounding
  - 3. 262816 Circuit Breakers

1.03 Submittals:

- A. Shop Drawings - As specified in Division 01 and Section 260500. For each panelboard and distribution panel furnished under this Contract, submit manufacturer's name, catalog data, and the following information:
  - 1. Panelboard / distribution panel type.
  - 2. Main bus and terminal connection sizes.
  - 3. Location of line connections.
  - 4. Cabinet dimension.
  - 5. Gutter space.
  - 6. Gauge of boxes and fronts.
  - 7. Finish data.
  - 8. Voltage rating.
  - 9. Breaker manufacturer, types, trip rating, and interrupting ratings.

10. When information is available on the Drawings, show breaker circuit numbers and locations along with trip ratings on a panelboard layout.
- B. Single Submittal - A single complete submittal is required for all products covered by this Section.
- C. Closeout Submittals: Submit operation and maintenance data for panelboards and circuit breakers including nameplate data, parts lists, factory and field test reports, recommended maintenance procedures and typewritten as-built panel schedules. Submit in accordance with Division 01.

## **PART 2 – PRODUCTS**

### 2.01 Panelboards:

- A. General: Lighting and Receptacle Panelboards shall be the automatic circuit breaker type. The number and arrangement of circuits, trip ratings, spares and blank spaces for future circuit breakers shall be as shown on the Drawings or, if not shown, 42 circuits. All circuit breakers shall be quick-make, quick-break, thermal-magnetic, bolt-on type (unless otherwise noted on drawings), with 1, 2 or 3 poles a shown, each with a single operating handle. Tandem or piggy-back breakers shall not be used.
- B. Nameplates:
  1. Each panelboard shall have a field mounted identifying, rigid, plastic nameplate giving the panel identification as shown on the Drawings.
  2. Each panelboard shall have a manufacturer's nameplate showing the voltage, bus rating, number of phases, frequency and number of wires.
- C. Construction:
  1. Door and trim shall be finished to match finish type and color of surrounding wall. Box shall be hot-dip galvanized, field finished to match the front.
  2. Panelboards and enclosures shall conform to requirements of all relevant codes. Panelboards shall be suitable for use as service equipment.

3. Panelboards shall be furnished with hinged trim fronts with key latch and a typed directory card and holder. Panelboard circuits shall be arranged with odd numbers on the left and even numbers on the right. Provide weatherproof, NEMA type 3R enclosures for outdoor installation.
  
- D. Busbars: Panelboard busbars shall be phase sequence type suitable for bolt-on circuit breakers. All busbars shall be copper.
  
- E. Circuit Breakers: Circuit breakers shall be the molded case type with trip and interrupting ratings as shown on the Drawings.
  
- F. Manufacturer:
  1. Panelboard manufacturer shall be Square D, or Siemens, or I.E.M , or General Electric, or Eaton Cutler Hammer. Panelboards shall be of the same manufacturer as the switchboard.

### **PART 3 – EXECUTION**

1.01 Installation: Panelboards and Distribution Panels shall be installed where indicated on the Drawings, and in accordance with the manufacturer's instructions.

1.02 Mounting:

- A. Panelboards and Distribution Panels shall be mounted with the top of the box 6'-6" above the floor. Panelboards and Distribution Panels shall be plumb within 1/8-inch. The highest breaker operating handle shall not be higher than 72 inches above the floor.

1.03 Field Tests:

- A. Insulation Resistance Tests: Perform insulation resistance tests on circuits with #2 AWG and larger conductors to be energized with a line-to-neutral voltage of 120 volts or more. Make these tests after all equipment has been connected, except that equipment which may be damaged by the test voltage shall not be connected. Test the insulation with a 500Vdc insulation resistance tester with a scale reading 100 megohms. The insulation resistance shall be 2 megohms or more. Submit results for review.
  
- B. Grounding: Grounding shall conform to Section 260526.



- C. Continuity: Panelboard and Distribution Panel circuits shall be tested for continuity prior to energizing. Continuity tests shall be conducted using a dc device with a bell or buzzer.

END OF SECTION 26 24 16

**SECTION 26 27 26 - DEVICES WIRING**

**PART 1 – GENERAL**

1.01 Description of Work

A. The work of this section consists of:

1. Furnishing, installing, and connecting all duplex receptacles complete with wall plates and/or covers, as shown on the Drawings.
2. Furnishing, installing and connecting all light switches complete with wall plates and or handle operators, as shown on the Drawings.

1.02 Related Work:

A. See the following specification sections for work related to the work of this section:

1. 260542      Conduits, Raceways and Fittings.
2. 260519      Line Voltage Wire and Cable.
3. 260533      Junction and Pull Boxes.

1.03 Submittals: As specified in Section 260500 and Division 01.

- A. Submit manufacturers published descriptive literature properly marked to identify the items to be supplied.
- B. A single complete submittal is required for all products covered by this Section.

**PART 2 – PRODUCTS**

2.01 Receptacles:

A. General - Receptacles shall be heavy duty, high abuse, grounding type.

B. Duplex Receptacles:

1. Receptacles shall be specification grade, rated 20 ampere, two-pole, 3-wire, 125 volt, NEMA 5-20 configuration, self-grounding with screw terminals. Color shall be as selected by the City.

2. Devices shall have a nylon face, back and side wired.
3. Manufacturer: Hubbell #DR20 Series, Leviton #16352 Series.

C. GFCI Receptacles:

1. Device shall be rated 20 ampere, 2-pole, 3-wire, 120 volt, conforming to NEMA 5-20 configuration. Face shall be nylon composition. Unit shall have an LED type red indicator light, test and reset push buttons. Color shall be selected to match post/bandstand color.
2. GFCI component shall meet UL 943 Class A standards with a tripping time of 1/40 second at 5 milliamperes current unbalance. Operating range shall extend from -31°F to 158°F. Unit shall have transient voltage protection and shall be ceramic encapsulated for protection against moisture.
3. Manufacturer: Hubbell #GF20\_\_LA Series, Leviton #7899 Series.

2.02 Switches:

- A. Switches shall be rated 20 amperes to 120/277 volts ac. Units shall be flush mounted, self-grounding, quiet operating rocker devices. Rocker color shall be selected to match post/bandstand color.
  1. Manufacturer: Hubbell #DS\_20\_\_ Series, Leviton #5621 Series. See plans for single pole, three way and four way requirements.
- B. Timed switches: Shall be as designed by Paragon Electric Company # ET2000f or Watt Stopper TS-200 rated for the voltage specified on drawings. Time-out shall be adjustable from 5 minutes up to 12 hours. Unit shall be provided with warning alarm.
- C. Dimmer switches: Switch shall be as specified on drawings, color per architect. Heat fins shall not be removed, where dimmer switches are ganged together, care shall be taken to install correct size backbox to accommodate switches without removing fins.

2.03 Plates:

- A. General - Plates shall be of the style and color to match the wiring devices, and of the required number of gangs. Plates shall conform with NEMA WD 1 , UL 514 and FS W-P-455A. Plates on finished walls shall be non-metallic or stainless steel.

Plates on unfinished walls and on fittings shall be of zinc plated steel or case metal and shall have rounded corners and beveled edges.

- B. Non-Metallic: Plates shall be plain with beveled edges and shall be nylon or reinforced fiberglass.
- C. Stainless Steel: Plates shall be .040 inches thick with beveled edges and shall be manufactured from No. 430 alloy having a brushed or satin finish.
- D. Cast Metal: Plates shall be cast or malleable iron covers with gaskets so as to be moisture resistant or weatherproof.
- E. Blank Plates: Cover plates for future telephone outlets shall match adjacent device wall plates in appearance and construction.
- F. Weatherproof Plate: Cover plates in wet and damp locations shall have recessed in-use covers, Taymac or equal. Back box shall be suitable for the wall material where it is installed.
- G. Labeling: All switch and receptacle plates shall be labeled on the top portion of the plate with the panelboard and circuit number serving that device. Lettering shall be 3/16" minimum high, black color, on clear Mylar 3/8" tape. Manufactured by P-touch or equal.

### **PART 3 – EXECUTION**

#### 3.01 Installation of Wiring Devices:

- A. Interior Locations: In finished walls, install each device in a flush mounted box with washers as required to bring the device mounting strap level with the surface of the finished wall. On unfinished walls, surface mount boxes level and plumb.
- B. Mounting Heights: Adjust boxes so that the front edge of the box shall not be farther back from the finished wall plane than 1/4-inch. Adjust boxes so that they do not project beyond the finished wall. Height of device shall be as follows unless otherwise noted on the drawings:
  - 1. Receptacles 15 Inches from finished floor to bottom of box.
  - 2. Toggle Switches 48 Inches from finished floor to top of box.
- C. Receptacles:

1. Ground each receptacle using a grounding conductor, not a yoke or screw contact.
2. Install receptacles with connections spliced to the branch circuit wiring in such a way that removal of the receptacle will not disrupt neutral continuity and branch circuit power will not be lost to other receptacles in the same circuit.

3.02 Installation of Wall Plates:

- A. General - Plates shall match the style of the device and shall be plumb within 1/16-inch of the vertical or horizontal.
- B. Interior Locations, Finished Walls: Install non-metallic plates so that all four edges are in continuous contact with the finished wall surfaces. Plaster filling will not be permitted. Do not use oversized plates or sectional plates.
- C. Interior (not wet) Locations, Unfinished Walls: Install stainless steel or cast metal cover plates.
- D. Wet Locations: Install cast metal plates with gaskets on wiring devices in such a manner as to provide a rain tight weatherproof installation. Cover shall be [lockable] outdoor "in use" type.
- E. Future Locations: Install blanking cover plates on all unused outlets.

3.03 Tests:

- A. Receptacles:
  1. After installation of receptacles, energize circuits and test each receptacle to detect lack of ground continuity, reversed polarity, and open neutral condition.

END OF SECTION 26 27 26

## **SECTION 26 28 16 - CIRCUIT BREAKERS**

### **PART 1 - GENERAL**

#### 1.01 Description of Work:

- A. The work of this Section consists of providing circuit breakers as shown on the Drawings and as described herein.

#### 1.02 Related Work: See the following Specification Sections for work related to the work in this Section.

- A. 260500      General Electrical Requirements
- B. 262413      Switchboards
- C. 262416      Panelboards and Distribution Panels

#### 1.03 Submittals:

- A. Shop Drawings - Submittals shall be in accordance with Section 260500 and Division 01. For each circuit breaker furnished under this Contract, submit manufacturer's name, catalog data, and the following information:
  - 1. Terminal connection sizes.
  - 2. Voltage rating.
  - 3. Breaker manufacturer, types, trip ratings and interrupting ratings.
- B. Single Submittal - A single complete submittal is required for all products covered by this Section.
- C. Closeout Submittals: Submit in accordance with and Section 260500, operation and maintenance data for circuit breakers including nameplate data, parts lists, manufacturer's circuit breaker timer, current, coordination curves, factory and field test reports and recommended maintenance procedures.

### **PART 2 - PRODUCTS**

#### 2.01 Circuit Breaker: Each circuit breaker shall consist of the following:

- A. A molded case breaker with an over center toggle-type mechanism, providing quick-make, quick-break action. Each circuit breaker shall have a permanent trip unit containing individual thermal and magnetic trip elements in each pole. Multipole circuit breakers shall have variable magnetic trip elements which are set by a single adjustment to assure uniform tripping characteristics in each pole. Circuit breakers shall be of the bolt-on type unless otherwise noted.
- B. Breaker shall be calibrated for operation in an ambient temperature of 40°C.
- C. Each circuit breaker shall have trip indication by handle position and shall be trip-free.
- D. Three pole breakers shall be common trip.
- E. The circuit breakers shall be constructed to accommodate the supply connection at either end of the circuit breaker. Circuit breaker shall be suitable for mounting and operation in any position.
- F. Breakers shall be rated as shown on Drawings.
- G. Circuit breaker and/or Fuse/circuit breaker combinations for series connected interrupting ratings shall be listed by UL as recognized component combinations for use in the end use equipment in which it is installed. Any series rated combination used shall be marked on the end use equipment per CEC section 110-22.
- H. Breakers shall be UL listed. Circuit breakers shall have removable lugs.
- I. Lugs shall be UL listed for copper and aluminum conductors.
- J. Breakers shall be UL listed for installation of mechanical screw type lugs.
- K. Circuit breakers serving HACR rated loads shall be HACR type. Circuit breakers serving other motor loads shall be motor rated.

### **PART 3 - EXECUTION**

#### **3.01 Mounting:**

- A. The highest breaker operating handle shall not be higher than 72 inches above the floor.

END OF SECTION 262816



**SECTION 26 51 00 - LIGHTING**

**PART 1 – GENERAL**

1.01 DESCRIPTION OF WORK

- A. The work of this section consists of providing and installing a complete lighting system, including fixtures, LED light module, hangers, reflectors, glassware, lenses, auxiliary equipment, heat management components, LED driver (integral or remote), and housing.

1.02 RELATED WORK

- A. See the following specification sections for work related to the work of this section:
  - 1. 26 05 00 General Electrical Requirements.
  - 2. 26 05 42 Conduit, Raceway and Fittings.
  - 3. 26 05 19 Line Voltage Wire and Cable.
  - 4. 26 05 33 Junction and Pull Boxes.

1.03 SUBMITTALS: In accordance with Division 01.

- A. Submit descriptive data, photometric curves for each fixture configuration proposed.
- B. Submit shop drawings showing proposed methods for mounting lighting fixtures.
- C. Seismic Requirements: Submit:
  - 1. Sketch or description of the anchorage system if not provided on construction documents.
- D. Submit Operation and Maintenance Data per Division 01.

1.04 WARRANTY

- A. LED light module, LED driver, batteries or other luminaire components which fail within the first year after final acceptance shall be replaced by the Contractor with the warranty clause of the General Provisions.
- B. Replacement components provided under warranty to be provided by contractor, not taken from project spare stock.

**PART 2 – PRODUCTS**

**2.01 GENERAL**

- A. Fixtures shall be of the types, wattages and voltages shown on the Drawings and be UL or equivalent classified and labeled for the intended use.
- B. Substitutions will not be considered unless the photometric distribution curve indicates the proposed fixture is equal to or exceeds the specified luminaire and the substitution is consistent with the design intent.
- C. Luminaire (factory or field installed) wire, and the current carrying capacity thereof shall be in accordance with the CEC.
- D. Luminaires and lighting equipment shall be delivered to the project site complete, with suspension accessories, aircraft cable, stems, hangers canopies, hickey, castings, sockets, holders, LED light engine, diffusers, frames, and related items, including support and braces.

**2.02 LIGHT EMITTING DIODE (LED) LIGHT SOURCES AND LUMINAIRES**

- A. General (Non-Emergency):
  - 1. Provide identical power supply and driver within each luminaire type. Provide power supplies and drivers that are suitable and UL-listed for the electrical characteristics of the supply circuits to which they are to be connected and which are suitable for operating LED or relevant light sources.
  - 2. Unless otherwise specified, provide power supplies of same type and same manufacturer for ease of stocking and replacement.
  - 3. Components shall be configured and installed in luminaire by the luminaire manufacturer.
  - 4. Luminaire housing shall be constructed of painted metal with no sharp edges unless otherwise noted.
  - 5. Provide only luminaires whose design, fabrication and assembly prevent overheating or cycling of light engines or drivers/power supplies under any condition of use.

6. Electronic ballasts shall meet the requirements of the Federal Communications Commission Rules and Regulations, Part 18, Part C (RF Lighting Devices) Non-consumer equipment, regarding radio frequency interference (RFI) (radiated) and electromagnetic interference (EMI) (power line conducted).
  7. Submit light fixture details with luminaire shop drawings.
- B. Emergency Lighting: Battery-backed emergency lighting luminaires shall consist of a normal LED luminaire with some or all of the LEDs connected to a battery and charger.
1. The battery shall be nickel cadmium and sized for a minimum of 90 minutes of luminaire operation unless otherwise noted.
  2. The charger shall be solid-state and include overload, short circuit, brownout and low battery voltage protection.
  3. The battery and charger shall include self-diagnostic and self-exercising circuitry to exercise and test itself for 5 minutes every month and for 30 minutes every 6 months.
  4. The luminaire shall include a test/monitor module with status indicating lights mounted so as to be visible to the public.
  5. The luminaire shall not contain an audible alarm.
  6. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery power and retransfer to normal.
- C: LED Performance and component manufacturer requirements.
1. All color characteristics, SPD (Special Power Distribution) CCT, CRI, CIE Chromaticity Coordinates shall be consistent across the entire dimming range.
  2. LEDs shall comply with ANSI/NEMA/ANSI C78.377-2008 – Specifications for the Chromaticity of Solid State Lighting Products. Color shall remain stable throughout the life of the source. The chromaticity of the installed product shall match IES LM-80 data showing that the LED's do not shift more than .005 DuV from submitted documentation.

3. White LEDs shall have a minimum rated source life of 50,000 hours or as specified: Luminaire Schedule. Multicolor LEDs shall have a minimum rated source life of 100,000 hours. LED “rated source life” shall be determined per IES TM-21 - Projecting Long Term Lumen Maintenance of LED Light Sources based on LM-80 test data. Calculated lifetimes exceeding testing hours per TM-21 are not accepted.
4. Luminaire assembly shall include a method of dissipating heat so as to not degrade life of source, electronic equipment, or lenses. LED luminaire housing shall be designed to transfer heat from the LED board to the outside environment. Luminaire housing shall have no negative impact on life of components. Manufacturer shall provide Luminaire Efficacy (lm/W), total luminous flux (lumens), luminous intensity (candelas), chromaticity coordinates, CCT, CRI, optical performance, polar diagrams, and relevant luminance and illuminance photometric data. Provide data in IES file format in accordance with testing standards IES LM-79-08 and IES LM-82-12, based on test results from an independent Nationally Recognized Testing Laboratory or National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory.
5. Manufacturer will keep record of original chromaticity coordinates for each LED module and have replacement modules or luminaires from within three (3) MacAdamEllipses/ steps of the same coordinates available for the duration of the warranty period.
6. Manufacturer’s LED light engine or equivalent system will be available for ten (10) years: Manufacturer will provide exact replacement parts, complete replacement luminaires, or provide upgraded parts that are designed to fit into the original luminaire and provide equivalent distribution and lumen output to the original, without any negative consequences.
7. All LED sources used in the LED luminaire shall be of proven quality from established and reputable LED manufacturers and shall have been fabricated within 12 months before installation per the date code on the module. Acceptable LED component or module manufacturers unless otherwise noted are:
  - a. Cree, Inc.
  - b. Lumileds
  - c. Nichia Corporation
  - d. Norlux

- e. Lextar
- f. Osram Optronics Semiconductors
- g. Xicato
- h. Bridgelux
- i. Epistar
- j. San'an
- k. Citizen Electronics
- l. General Electric Company
- m. Sora
- n. Samsung
- o. Seoul Semiconductor
- p. Lumenix
- q. Ledengin

### 2.03 LED POWER SUPPLIES/ DRIVERS

1. LED driver shall have a minimum 50,000 hour published life while operating at maximum case temperature and 90 percent non-condensing relative humidity.
2. Driver shall be Sound Rated A+.
3. Driver shall be > 80% efficient at full load across all input voltages.
4. Driver shall include ability to turn off at low control input rather than holding at a minimum dimming level, and shall consume 0.5 Watts or less in standby/off mode. Control deadband at low control input shall be included to allow for voltage variation of incoming signal without causing noticeable variation in luminaire to luminaire output.

5. Drivers shall track evenly across multiple luminaires at all light levels, and shall have an input signal to output light level that allows smooth adjustment over the entire dimming range.
6. Control Input:
  - a. 4-Wire (0-10V DC Voltage Controlled) Dimming Drivers
    - (i) Must meet IEC 60929 Annex E for General White Lighting LED drivers.
    - (ii) Connect to devices compatible with 0 to 10V Analog Control Protocol, Class 2, capable of sinking 0.6 ma per driver at a low end of 0.3V.
    - (iii) Must meet ESTA E1.3 for RGBW LED drivers.
  - b. Digital (DALI Low Voltage Controlled) Dimming Drivers
    - (i) Must meet IEC 62386.
  - c. Digital Multiplex (DMX Low Voltage Controlled) Dimming Drivers
    - (i) Must meet DMX / RDM: USITT DMX512A and ANSI E1.20 (Explore & Address).
    - (ii) Must be capable of signal interpolation and smoothing of color and intensity transitions.
7. Power Factor: The luminaire shall have a power factor of 90% or greater at all standard operating voltages and full luminaire output.
8. THD: Total harmonic distortion (current and voltage) induced into an AC power line by luminaire shall not exceed 10 percent at any standard input voltage and meet ANSI C82.11 maximum allowable THD requirements at full output. THD shall at no point in the dimming curve allow imbalance current to exceed full output THD.
9. In Rush Current: Meet or exceed NEMA 410 driver inrush standard of 430 Amps per 10 Amps load with a maximum of 370 Amps 2 – seconds.
10. RF Interference: The luminaire and associated on-board circuitry must meet Class A emissions limits referred in Federal Communications Commission (FCC) Title 47, Subpart B, Section 15 Non-Consumer requirements for EMI/RFI emissions.

11. Light engines shall be 3500°K and 80CRI minimum, U.O.N. on drawings.
12. Drivers shall be accessible for maintenance or replacement without removal of recessed light fixture and without destruction of the ceiling.

### **PART 3 – EXECUTION**

#### **3.01 INSTALLATION**

##### **A. General:**

1. All fixtures and luminaires shall be clean and lamps shall be operable at the time of acceptance.
2. Install luminaires in accordance with manufacturer's instructions, complete with lamps, ready for operation as indicated.
3. Align, mount, and level the luminaires uniformly.
4. Avoid interference with and provide clearance for equipment. Where an indicated position conflicts with equipment locations, change the location of the luminaire by the minimum distance necessary.
5. Recessed light fixtures in fire rated assemblies shall be installed per an approved UL rated fire rated penetration detail.

##### **B. Mounting and Supports:**

1. Mounting heights shall be as shown on the Architectural and Electrical Drawings. Unless otherwise shown, mounting height shall be measured to the centerline of the outlet box for wall mounted fixtures and to the bottom of the fixture for suspended fixtures and to the bottom of the fixture for all other types.
2. Luminaire supports shall be anchored to structural members.
3. Pendant stem mounted luminaires shall be provided with ball aligners to assure a plumb installation and shall have a minimum 45 degree clean swing from horizontal in all directions. Sway bracing shall be installed as required to limit the movement of the fixture. Fixtures shall be allowed to sway a maximum of 45° without striking any object.

4. Fixture supports shall be designed to resist earthquake forces of seismic zone 4.
5. Refer to fixture mounting details on drawings for installation requirements.
6. Pendant cable mounted luminaries shall be provided with fully adjustable stainless steel aircraft cable hangers unless otherwise noted on the Drawings.

**END OF SECTION 26 51 00**



**SECTION 31 22 00 EARTHWORK AND GRADING**

**PART 1 – GENERAL**

**1.1 SCOPE**

- A. Perform all earthwork and grading as shown on the plans and as specified herein including, but not necessarily limited to, the following:
  - 1. Stockpile topsoil
  - 2. Rough grading operations
  - 3. Soil offhaul
  - 4. Excavation for foundations and footings
  - 5. Placement of import soil
  - 6. Establish subgrade elevations
  - 7. Subgrade compaction
  
- B. Related work specified elsewhere:
  - 1. Demolition – Section 02 41 13
  - 2. Trenching and Backfilling – Section 31 23 00
  - 3. Site Concrete – Section 32 13 13
  - 4. Decomposed Granite Paving – Section 32 15 40
  - 5. Landscape Soil Preparation – 32 91 13
  - 6. Site Drainage Utilities – Section 33 40 00

**1.2 STANDARDS**

- A. Unless otherwise shown or specified, all materials and methods shall conform to the most current Section 19 “Earthwork” of the State of California, Department of Transportation, Standard Specifications (DTSS) as they reasonably apply to this work, except for measurement and payment requirements.

**1.3 QUALITY CONTROL**

- A. Submit a one-gallon sample of the proposed fill material for testing and review by the City at least two (2) weeks prior to proposed use on site. No material shall be used unless approved by the City.
  
- B. All excavation, for the footings, construction of unit masonry, cast in place concrete, subdrain installation, placement and compaction of fill and preparation of subgrade shall be reviewed by the City. The Contractor shall schedule the work

and notify the City at least three (3) working days in advance of each portion of grading operations for their review, testing and approval.

1. The Contractor shall cooperate with the City in performing these tests.
  2. All tests indicating conformance to project requirements shall be paid for by the City.
  3. Costs of retesting and re-inspection required as the result of inadequate, insufficient, or incomplete work by the Contractor shall be deducted from the contract amount.
- C. Compaction Test Method: Where referred to in these specifications, "compaction" or "relative compaction" shall mean the in-place dry density of soil expressed as a percentage of the maximum dry density of the same material as determined by ASTM D-1557-02e1.
- D. The Contractor shall provide compaction testing as required to confirm compliance with these specifications and plans. All costs of such testing will be borne by the City, except as specified under paragraph 1.3B, 3 above.
- E. The City shall be present during all site clearing and grading operations to test and to observe earthwork construction. This representative shall be notified at least three (3) working days prior to commencement of any grading operations to allow for discussion and planning with the earthwork, underground, and paving contractors.

#### 1.4 LAYOUT AND GRADING CONTROL

- A. Grade the site to the tolerances shown. Vertical control is established by the benchmark indicated on the plans.
- B. The Contractor shall engage the services of a City-approved Land Surveyor licensed in California to layout the work. This Surveyor shall certify that the work is completed in a manner that the City can check for conformance as the work progresses.
- C. Tolerances: Site grading shall be to the elevations shown on the plans, plus or minus 0.1 foot vertically.
- D. Dewatering: No soil shall be compacted during periods of rain or when the ground is not drained of all free water. Soil that has been stockpiled and wetted by rain or by any other cause shall not be compacted until it is completely drained and until the moisture content is within the limits approved by the City.

**PART 2 – PRODUCTS**

**2.1 MATERIALS**

- A. Existing material may be used for fill after removal of all debris, and after being moisture-conditioned, if it meets the criteria in paragraph B below.
- B. Soil imported to the site and used for compacted fill shall be free of perishable organic material, and shall meet the following requirements:
  - 1. Physical: 100% passing 4 inch size, 10 to 75% passing the No. 200 sieve. Plasticity Index of 12 maximum when tested in accordance with ASTM D 4318 75.
  - 2. Chemical: Salinity Limit (ECe) saturation extract of 4.0 sodium (SAR) limit of less than 8.0.
  - 3. Boron: Saturation extract concentration less than 1.0 ppm.
- C. Minor quantities of material not meeting the above gradation may be mixed and blended with other on-site material if the resulting mixture conforms to the specifications. If the quantity of material not in conformance with the specifications becomes excessive in the opinion of the City, it shall be removed from the site.
- D. Topsoil: See Landscape Soil Preparation Section 32 91 13 for topsoil requirements.

**PART 3 – EXECUTION**

**3.1 STRIPPING AND STOCKPILING OF NATIVE TOPSOIL**

- A. All vegetation, including the top one to two inches of roots, shall be removed from areas to be graded. The remaining 6 to 12 inches of topsoil shall be stripped and stockpiled in sufficient quantities as required to provide a 6 inch layer of topsoil in all planting areas.

**3.2 ROUGH GRADING**

- A. Prior to commencement of site grading work, the Contractor shall notify the City's Representative that the site has been cleared. The City's Representative shall have sufficient time to review the site. Site grading shall not commence until the City's Representative has completed review of the site and the City has given approval to proceed.

- B. Perform all cut and fill required to bring the site to the grades indicated, with proper allowances for finish materials such as paving and base. Prior to placing new fill, the exposed ground surface should be scarified to a depth of 6 inches (or greater as indicated on the plans), brought to near optimum moisture content, and compacted. Areas to be planted shall be compacted to 85 percent, and areas to be paved shall be compacted to at least 90 percent relative compaction as determined from ASTM Test Method D 1557 78.
- C. Placement and Compaction: Approved fill material shall be placed in layers of 6 to 8 inches in loose thickness and moisture-conditioned as necessary to achieve moisture content suitable for re-compacting. Fill material shall be compacted with equipment of such weight and design as necessary to obtain the specified compaction. Fill shall be compacted to 85 percent relative compaction in areas to be planted and at least 90 percent relative compaction in areas to be paved unless otherwise directed. In pavement areas, the upper 9 inches of subgrade shall have a minimum relative compaction of 95 percent. The resulting subgrade should be smooth and essentially unyielding. In planting areas, the upper 8 inches shall have a minimum relative compaction of 85 percent. Between successive lifts, the fill surface shall be scarified or otherwise processed to obtain satisfactory bonding between the fill lifts.
- D. Re-compaction: Where, in the judgment of the City's Representative, the moisture content is not suitable or insufficient compaction has been obtained, the fill shall be reconditioned and/or re-compacted to the specified density prior to placing any additional fill material. The Contractor shall be responsible for placing and compacting approved fill material in accordance with these specifications. If the Contractor fails to meet the compaction requirements, they shall reduce their rate of haul, furnish additional spreading, moisture conditioning and/or compacting equipment or make any other adjustments necessary to produce a satisfactorily compacted fill.
- E. All excess material and all material that is unsuitable for paving subbase or finish grading shall be disposed of off-site at Contractor's expense, including all testing and fees required by the disposal site.
- F. Where any marked or unmarked utility lines or other underground obstruction or piping may be encountered within the work area, notify the City or the Agencies or service utility companies having jurisdiction thereof, and take necessary measures to prevent interruption of service (if live). Should such lines or service be damaged, broken, or interrupted through the Contractor's own negligence,

those services shall be repaired immediately and restored by them at their own expense. Abandoned lines, meters and boxes, obstructions or piping, shall be removed, plugged or capped in accordance with the requirements and approval of the agencies affected.

- G. Rock Removal: All rocks 8 cubic inches or larger shall be removed completely from the top 6 inches of subgrade prior to placement of topsoil in all planting areas. See Landscape Soil Preparation Section 32 91 13 for additional requirements. All rocks not meeting criteria for fill material shall be legally disposed of off-site as the Contractor's own property.
- H. Earthen Swales: Shall be constructed as shown and described on the plans. All swales shall provide positive drainage.

### 3.3 EROSION CONTROL AND CLEAN-UP

- A. Spillage: Prevent spillage when hauling on, or adjacent to, any public street or highway. In the event that spillage occurs, sweep, wash, or otherwise clean the street or highway until the spillage has been removed.
- B. Dust Control: Take all precautions needed to prevent a dust nuisance to adjacent public and private properties, and to prevent erosion and transportation of soil to adjacent properties, due to work under this contract. All damage caused by the Contractor's work under this contract shall be corrected or repaired by the Contractor at no cost to the City. If the Contractor fails to take the necessary precautions, or make the corrections or repairs promptly, the City shall take the steps deemed necessary and deduct the cost from the contract amount.
- C. Clean-up: The job site shall be kept neat and clear at all times, with all public walks swept clean at the end of each day, and all materials neatly stored. Upon completion of the work under this Section, remove immediately all surplus materials, rubbish and equipment associated with or used in the performance of this work. Failure to perform such clean-up operations within 48 hours of notice by the City shall be considered adequate grounds for having the work completed by others at the Contractor's expense.

END OF SECTION 31 22 00

**SECTION 31 23 00 TRENCHING AND BACKFILLING**

**PART 1 – GENERAL**

1.1 SCOPE

A. Perform all structural excavation, trenching, and backfilling work as shown on the plans and as specified herein including, but not necessarily limited to, the following:

1. Utility trenches
2. Footings
3. Irrigation lines

B. Related work specified elsewhere:

1. Earthwork and Grading – Section 31 22 00
2. Site Concrete – Section 32 13 13
3. Planting Irrigation – Section 32 84 00
4. Landscape Soil Preparation – Section 32 91 13
5. Site Drainage – Section 33 40 00

1.2 STANDARDS

A. Unless otherwise shown or specified, all materials and methods shall conform to the most current Section 19 “Earthwork” of the State of California, Department of Transportation, Standard Specifications (DTSS) as they reasonably apply to this work, except for measurement and payment requirements.

**PART 2 – PRODUCTS**

2.1 MATERIALS

A. Backfill material shall consist of the same material specified under paragraph 2.1B in Section 31 22 00 Earthwork and Grading, unless otherwise indicated on the plans.

B. General Backfill: Backfill material shall be approved by the City’s Representative prior to its use. Excavated material and excess material from site grading may be re-used for backfilling and grading, provided such fill is homogeneous, free from rocks, rubbish, organic material, etc., and consists of fragments capable of being

thoroughly crushed and consolidated into a dense, uniform compact fill, and shall meet the following requirements:

<b>Sieve Size</b>	<b>Percent Passing</b>
1 inch	100
3/4 inch	95 - 100
No. 200	10 - 75
Plasticity index	12 maximum

**PART 3 – EXECUTION**

**3.1 EXCAVATING AND BACKFILLING FOR TRENCHES**

- A. Perform all necessary excavation, shoring, pumping and dewatering, and backfilling required for the proper laying of all underground pipes and conduits.
- B. All piping in ground shall have a minimum cover of 1'-6", except as otherwise indicated on the plans, and shall be laid in ditches dug true to grade and line, avoiding sharp breaks. Piping shall bear equally over its entire length at the bottom of the ditch. Rock or unstable material encountered at grade shall be replaced with sand fill to a depth of 6 inches below pipe.
- C. Backfill (drainage trenches): Drain rock as defined in Section 33 40 00 Site Drainage Utilities.
- D. Backfill (non-drainage trenches): Fill trenches with excavated material in 6 to 8 inch uncompacted thick layers, compacted to 90% relative density. Backfill shall be moisture-conditioned to near-optimum in accordance with ASTM D 1557-02e1.
- E. Backfilling shall be commenced as soon as practical after subsurface work is installed and reviewed by the City’s Representative.
- F. No wood or debris shall be buried in any fill. The fill material shall be non-expansive, meeting the criteria of paragraph 2.1B in Section 31 22 00 Earthwork and Grading.
- G. Provide shoring, excavation, pumping and other requirements as necessary at excavations for points of connection.

**3.2 STRUCTURAL EXCAVATION AND BACKFILL**

## TRENCHING AND BACKFILLING

Lions Wayside & Delucchi Parks Renovation

Page 3 of 3

- A. Structural Excavation: Make all excavation to the grades and elevations shown on the plans, or to the subgrades required to obtain the finished grades shown thereon. Accurately cut footing trenches. Where footings are to be cut "neat", the trench or excavation width shall be increased by 2 inches from the dimensions shown on the plans, so as to permit pouring footings against earth banks. If soil type or weather does not permit such excavations, excavate wide enough to permit full forming of footings. If any excavation is made below proper grade, the City's Representative shall be immediately notified, and the grade shall be restored in whatever manner the City's Representative directs, at no expense to the City. All excavation shall be kept free of standing water until concrete work, paving or backfilling is complete. Shore and brace excavations when required to prevent cave ins.
- B. Foundations from previous structures, underground utilities or other buried structures shall be removed in their entirety and replaced with compacted engineered fill.
- C. When zones of soft or saturated soils are encountered at the over-excavated levels during excavation and compaction, deeper excavation shall be required to expose firm soil. This shall be determined in the field by the City's Representative.

### 3.3 SURPLUS MATERIAL

- A. Any excavated material which proves to be unsuitable, or which is not required for backfilling, shall be removed from the immediate work area and disposed of off-site.

### 3.4 CLEAN-UP

- A. Upon completion of the work under this Section, remove immediately all surplus materials, rubbish and equipment associated with or used in the performance of this work. Failure to perform such clean-up operations within 48 hours shall be considered adequate grounds for having the work completed by others at the Contractor's expense.

END OF SECTION 31 23 00



**SECTION 32 01 91 TREE PROTECTION AND PRUNING**

**PART 1 – GENERAL**

**1.1 SCOPE**

- A. Perform all tree protection and pruning as shown on the plans and as specified herein including, but not necessarily limited to, the following:
  - 1. Tree removal
  - 2. Installation of tree protection fencing
  - 3. Tree protection measures
  - 4. Tree pruning
  
- B. Related work specified elsewhere:
  - 1. Demolition – Section 02 41 13
  - 2. Earthwork and Grading – Section 31 22 00
  - 3. Trenching and Backfilling – Section 31 23 00
  - 4. Site Drainage Utilities – Section 33 40 00

**1.2 STANDARDS**

- A. All work shall be performed in accordance with ANSI-A300 best management practices for tree protection during construction.

**1.3 REFERENCES**

- A. ANSI-A300, Part 5: Management of Trees and Shrubs during Site Planning, Site Development, and Construction, current edition.
  
- B. Glossary of Arboricultural Terms, International Society of Arboriculture, Atlanta, GA.

**1.4 DEFINITIONS**

- A. The term “Tree Protection Zone” (TPZ) shall mean the area beneath a tree’s canopy, or all area within a distance from the trunk equal to five times the tree’s Diameter at Breast Height (DBH), whichever is greater.

**1.5 ACCESS AND STORAGE**

- A. Prior to commencement of work, the Contractor shall meet on-site with the City's Representative to review scope of work, work procedures, access routes, storage areas, and tree protection measures.
- B. No grading, demolition, trenching, parking, storage or dumping of any construction materials is allowed within the TPZ, unless specifically noted on the plans. Exceptions must be reviewed and approved by the City as noted in paragraph 1.6B below.

#### 1.6 COORDINATION AND SCHEDULING OF WORK

- A. All work shall be scheduled and conducted in a cooperative manner in order to give the least possible interference with or annoyance to others. Contractors shall work out any cooperative schedules. Construction of drainage and irrigation lines etc., around existing trees, shall receive priority in scheduling so that trenching, irrigation installation, and backfilling can be done in an expedient manner.
- B. Any work that must occur within the TPZ shall be reviewed and approved by the City. The contractor shall notify the City a minimum of 48 hours in advance of any activity in the TPZ.

### **PART 2 – PRODUCTS**

#### 2.1 FENCING

- A. All trees to be retained shall be temporarily fenced as indicated on the plans, and in accordance with City standards for tree protection during construction. If plans and City standards conflict, the more stringent standard shall prevail.

### **PART 3 – EXECUTION**

#### 3.1 PRESERVATION OF EXISTING TREES

- A. Protection: Shall be as indicated on the plans and in accordance with City Standard Details.
  - 1. Fencing shall be erected before any demolition or construction activities take place on-site and shall not be removed or modified before the end of the project without written authorization from the City.
  - 2. Fencing may be installed in a single run around multiple trees.

## TREE PROTECTION AND PRUNING

Lions Wayside & Delucchi Parks Renovation

Page 3 of 3

- B. Pruning: Pruning of branches and/or roots shall be performed under the supervision of an Arborist certified by the International Society of Arboriculture (ISA) and approved by the City.
- C. Removal: Shall be as specified in Section 02 41 13 Demolition.
- D. Root Cutting: Prior to approved excavation within a TPZ, a trench shall be dug along the edge of the excavation closest to the tree trunk. This trench shall be dug by hand or with an air spade to a depth of 30 inches, and shall be of a sufficient width to manually sever any roots encountered greater than 2 inch diameter. Cuts shall be made perpendicular to the direction of the root's growth, using a clean hand saw. After roots are cleanly severed, excavation equipment may be used as required on the side of the trench farthest from the tree.
  - 1. Within one hour of cutting or exposure, roots shall be covered with moist soil or with burlap that is kept wet until the excavation can be backfilled and watered thoroughly.
- E. Debris Removal: All trimmings, stumps, roots, logs, sod, or any other form of debris resulting from this work shall be cleaned up and legally disposed of off-site at the Contractor's expense. Stumps shall be ground to 12 inches below grade.
- F. Watering: Provide supplemental irrigation as necessary during construction to prevent drought stress.
  - 1. If trees show stress, it may become necessary for the Contractor to perform deep root watering as required at no extra cost to the City.

END OF SECTION 32 01 91

**SECTION 32 13 13 SITE CONCRETE**

**PART 1 – GENERAL**

**1.1 SCOPE**

A. Furnish and install all site concrete as shown on the plans and as specified herein including, but not necessarily limited to, the following:

1. Concrete pavement
2. Concrete bands
3. Concrete stairs
4. Concrete stage
5. Seatwalls
6. Footings and other miscellaneous concrete work
7. Forms and reinforcing

B. Related work specified elsewhere:

1. Earthwork and Grading – Section 31 22 00
2. Asphalt Paving – Section 32 12 16
3. Site Drainage Utilities – Section 33 40 00

**1.2 STANDARDS**

A. Unless otherwise shown or specified, all materials and methods shall conform to the appropriate current sections of:

1. City Standards for Public Improvements.
2. The State of California, Department of Transportation Standard Specifications (DTSS), latest edition, Sections 52 “Reinforcement”, 73 “Concrete Curbs and Sidewalks”, and 90 “Concrete”, except for measurement and payment requirements.
3. Applicable ASTM Specifications as they reasonably apply to this work, except for measurement and payment requirements.
4. American Concrete Institute (ACI), current standards.

**1.3 TOLERANCES**

A. Tolerances for subgrade, subbase and finished grade shall be as specified by the DTSS except that the Contractor shall deliver the full aggregate base and concrete

thickness shown. No combination of high and low tolerances that compromise the section will be permitted.

#### 1.4 QUALITY CONTROL

- A. Concrete Final Finishes: The Contractor shall demonstrate to the satisfaction of the City's Representative that they, or their subcontractor, possesses sufficient skills and experience to perform the work. Photographs and/or site visits of past work may be required to supply this information.
- B. Sample Mockups: A 3'x3' sample of the concrete pavement and 5 linear foot sample of the concrete bands shall be poured and finished at the site for the City's Representative to review prior to commencing concrete pouring. Once the samples have been reviewed, the Contractor shall meet or exceed that quality of finish in all subsequent work. The Contractor shall be responsible for removal of the samples at the completion of the work.
- C. Color Samples: A sample (size indicated above) of each concrete color and finish is required for review by the City's Representative.

#### 1.5 SUBMITTALS

- A. The following shall be submitted by the Contractor to the City's Representative in accordance with the applicable portions of the referenced specifications:
  - 1. The proposed mix design, giving the brand of cement, type, gradations and source of aggregates, water/cement ratio, mix proportions, and unit weight.
  - 2. Manufacturer's literature for admixtures, embedded items, liquid membrane-form curing compound, and non-shrink grout.
  - 3. Certification that materials are in compliance with specification requirements.
  - 4. Method of transporting and placing concrete.

#### 1.6 JOB CONDITIONS

- A. Weather Limitations: Construct concrete surface course only when atmospheric temperature is above 40 degrees F., when the underlying base is dry, and when weather is not rainy.

- B. Grade Control: Establish and maintain the required lines and grades, including cross-slope during construction operations. All concrete shall slope to drain with no ponding of water.

## **PART 2 – PRODUCTS**

### **2.1 MATERIALS**

- A. Forms and Reinforcing: Per DTSS Section 52 “Reinforcement”.
- B. Concrete: All sidewalks, curbs, curb and gutter, curb ramps and driveways shall conform to “Minor Concrete” as defined in DTSS Section 73 “Concrete Curbs and Sidewalks”. All other concrete structures shall conform to “Minor Concrete” as defined in DTSS Section 90 “Concrete”.
  - 1. Cement: Type II modified conforming to ASTM-C-150-02a.
  - 2. Aggregate: Shall not be less than 3/8 inch or more than 1 inch in size.
  - 3. Compression strength at 28 days to be a minimum 3,000 p.s.i.
- C. Color Admixture
  - 1. For pavement at the elevated bandstand and adjacent bandstand wall, add 2.67 lbs of liquid dose or 2 lbs of powder dose of Davis Colors Sierra 61078 per 94 lb sack of cement, or approved equal.
  - 2. For pavements, curbs, bands, stairs and all other visible concrete aside from the bandstand, add 1.16 lbs of liquid dose or 0.75 lbs of powder dose of Davis Colors Sandstone 5237 per 94 lb sack of cement, or approved equal.
  - 3. For concrete footings and all other visible concrete, add Hi-con black at a rate of 1/8 lb. per sack.
- D. Expansion Joint Filler: Shall be Fibre Joint, manufactured by W.R. Meadows Seal Tight, conforming to ASTM D-1751, or approved equal.
- E. Cleaning Agents: As required.
- F. Aggregate Base: Per DTSS Section 26 “Aggregate Bases”, Class 2, with 3/4 inch maximum size.

## **PART 3 – EXECUTION**

### **3.1 PREPARATION**

- A. Clear area to be paved of all debris and organic material. Recompact and regrade as necessary prior to placement of concrete. Verify that the subgrade and/or aggregate base is properly compacted and at suitable grade.
- B. Before beginning paving work and during construction, take all steps necessary for protection of existing improvements. As the concrete is being placed, extreme care shall be taken not to discolor or damage any improvements. If damage occurs, repair same, and if satisfactory repair cannot be made, remove and replace the section as directed.
- C. Formwork and Reinforcement:
  - 1. Assure that excavations and formwork are completed.
  - 2. Check that reinforcement is secured in place.
  - 3. Verify that expansion joint material, anchors, and other embedded items are secured in position.

### 3.2 INSTALLATION

- A. Finishes
  - 1. Broom Finish: Provide a light broom finish with strokes perpendicular to direction of travel along walks.
  - 2. Sandblast Finish: Provide a medium sandblast surface to the surface of the pavement.
  - 3. Trowel Finish: Smooth, parallel to longest surface direction.
- B. Waterproofing: Apply to wall as shown on drawing per manufacturer's instructions.

- 3.3 CLEAN-UP: Upon completion of the work under this Section, remove immediately all surplus materials, rubbish, and equipment associated with or used in the performance of this work.

END OF SECTION 32 13 13

**SECTION 32 14 43 UNIT PAVING**

**PART 1 – GENERAL**

(See also General Provisions, Special Provisions, and General Requirements)

**1.1 SCOPE**

- A. Furnish and install all unit paving as shown on the plans and as specified herein including, but not necessarily limited to, concrete pavers and other miscellaneous items.
- B. Related work specified elsewhere:
  - 1. Earthwork and Grading – Section 31 22 00
  - 2. Site Concrete – Section 32 13 13

**1.2 STANDARDS**

- A. I.C.P.I. (Interlocking Concrete Pavement Institute) technical specifications, available from [www.icpi.org](http://www.icpi.org).
- B. a Applicable ASTM Specifications as they reasonably apply to this work, including, but not limited to:
  - 1. ASTM C936 Solid Concrete Interlocking Paving Units.
  - 2. ASTM C140 Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units

**1.3 SUBMITTALS**

- A. Product data for the following:
  - 1. Materials other than aggregates.
  - 2. Pavers.
- B. Sieve Analyses: For aggregate materials, according to ASTM C 136.
- C. Samples for Initial Selection: Each type of unit paver indicated.
- D. Samples for Verification: Full-size units of each type of unit paver indicated.



- E. Material Certificates: For unit pavers. Include statements of material properties indicating compliance with requirements, including compliance with standards. Provide for each type and size of unit.
- F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for unit pavers, indicating compliance with requirements.
- G. For Manufacturer's catalog product data, installation instructions, and material safety data sheets for safe handling of the specified materials and products.
- H. Paver Installation Subcontractor:
  - 1. A copy of Subcontractor's current certificate from the Mason Contractor's Association of America Masonry Certification program or C-29 Masonry Contractor's License.

#### 1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of porous paver from one source that has resources to provide materials and products of consistent quality in appearance and physical properties.
- B. Mockups: Build a mockup to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
- C. Preinstallation Conference: Conduct conference on-site with the City's Representative prior to paving installation to review limits of work and plan for execution.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store pavers on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied.
- B. Store aggregates where grading and other required characteristics can be maintained and contamination can be avoided.

### **PART 2 – PRODUCTS**

#### 2.1 CONCRETE UNIT PAVERS

- A. Concrete Pavers: Shall be 12" x 12" x 80mm from Basalite Concrete Products, Cityscape model, granite bay color, as available from Peninsula Building Materials, 1175 Aster Avenue, Sunnyvale, CA, 94086, (408) 246-0550, or approved equal

## 2.2 SETTING-BED MATERIALS

- A. Bituminous Setting Bed: asphalt cement mix design to be used in the Bitumen Setting Bed conforming to ASTM D 3381.
  - 1. Sieve analysis per ASTM C 136 for sand mixed with bitumen and sand for joints between concrete pavers.
- B. Paver Mastic: Neoprene modified asphalt adhesive.
  - 1. Mastic (asphalt adhesive):
    - a. Solids (base): 75+/- 1%
    - b. Lbs. /Gal.: 8-8.5 lbs.
    - c. Solvent: Varsol (over 100 degrees F asphalt)
  - 2. Base (2% Neoprene, 10% Fibers, 88% asphalt):
    - a. Melting point-ASTM D-36; 200 degrees F minimum.
    - b. Penetration-77 degrees F, 100 gram load, 5 second (1mm): 23-27
    - c. Ductility-ASTM D-133-44 @ 25 degrees C; 5 cm/minute 125 cm/minute

## **PART 3 – EXECUTION**

### 3.1 PREPARATION

- A. Proof-roll prepared subgrade according to requirements in Section 31 22 00 Earthwork and Grading to identify soft pockets and areas of excess yielding. Proceed with paver installation only after deficient subgrades have been corrected and are ready to receive subbase course for paving.

### 3.2 GENERAL INSTALLATION

- A. Do not use unit pavers with chips, cracks, voids, discolorations, and other defects that might be structurally unsound or visible in finished work.
- B. Cut unit pavers with motor-driven masonry saw equipment to provide clean, sharp, unchipped edges. Cut units to provide pattern indicated and to fit adjoining

work neatly. Use full units without cutting where possible. Hammer cutting is not acceptable.

- C. Tolerances:
  - 1. Variation in Plane between Adjacent Units (Lipping): Do not exceed 1/16 inch unit-to-unit offset from flush.
  - 2. Variation from Level or Indicated Slope: Do not exceed 1/8 inch in 24 inches and 1/4 inch in 10 feet or a maximum of 1/2 inch.
- D. Provide edge restraints as indicated on plans. Install edge restraints before placing unit pavers.
- E. Provide curbs as indicated on plans. Install curbs before placing unit pavers.
  - 1. Install flat-faced cast-in-place concrete curbs on a bedding of compacted base-course material over compacted subgrade. Install curbs before placing base course for pavers. Set curbs at elevations indicated, accurately aligned, and place and compact base-course material behind curbs as indicated.

### 3.3 SETTING-BED INSTALLATION

- A. Compact soil subgrade uniformly to at least 95 percent of ASTM D 698 laboratory density.
- B. Place some bituminous material to produce smooth, firm and even setting bed.
- C. The setting bed shall be rolled with a 600lb., walk-behind, power roller to a nominal depth of 3/4" while still hot. The thickness shall be adjusted so that when the pavers are placed, the top surface of the pavers will be at the required grade.
- D. After the setting bed has cooled, a coating of two (2) % neoprene-modified asphalt adhesive shall be applied by mopping or squeegee or troweling over the top surface of the setting bed. If it is troweled, the trowel shall have serrations not exceeding one-sixteenth (1/16) inch

### 3.4 PAVER INSTALLATION

- A. After the modified asphalt adhesive is applied, carefully place the pavers by hand in straight courses with uniform top surface. Good alignment must be kept and

the pattern shall be shown on the plans. String lines should be utilized to maintain alignment with the specified pattern.

- B. Bituminous set pavers should be rolled or compacted to achieve full bond with the setting bed, reduce lippage and improve the overall flatness of the surface. Protect pavers by using a rubber roller or a 4-5000 LBF plate tamper with a protective mat attached. Plywood may also be utilized and is preferred to sand which may damage the surface of the pavers
  - 1. Compact pavers when there is sufficient surface to accommodate operation of the vibrator, leaving at least 36 inches of uncompacted pavers adjacent to temporary edges.
  - 2. Before ending each day's work, compact installed concrete pavers except for 36 inch width of uncompacted pavers adjacent to temporary edges (laying faces).
  - 3. As work progresses to the perimeter of installation, compact installed pavers that are adjacent to permanent edges unless they are within 36 inches of laying face.
  - 4. Before ending each day's work and when rain interrupts work, cover pavers that have not been compacted and leveling course on which pavers have not been placed with non-staining plastic sheets to protect them from rain.
- C. Remove and replace pavers that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Provide new units to match adjoining units and install in the same manner as the original units, with the same joint treatment and with no evidence of replacement.
- D. Joints shall be filled completely with sand meeting ASTM C-33. Sand shall be swept into joints and rolled or compacted to assure full joints. If not full after compaction, additional sand shall be swept in and again compacted.

END OF SECTION 32 14 43

**SECTION 32 15 40 DECOMPOSED GRANITE PAVING**

**PART 1 – GENERAL**

**1.1 SCOPE**

- A. Furnish and install all decomposed granite paving as shown on the plans and as specified herein including, but not necessarily limited to, the following:
  - 1. Soil sterilant
  - 2. Aggregate base
  - 3. Decomposed granite
  - 4. Stabilizer
  
- B. Related work specified elsewhere:
  - 1. Earthwork and Grading – Section 31 22 00
  - 2. Site Concrete – Section 32 13 13

**1.2 QUALITY CONTROL**

- A. Standards: Unless otherwise shown or specified, all materials and methods shall conform to the appropriate current sections of:
  - 1. The current edition of the State of California, Department of Transportation Standard Specifications (DTSS) Section 20-5 “Landscape Elements”.
  - 2. Applicable ASTM Specifications as they reasonably apply to this work.
  
- B. Tolerances: Tolerances for subgrade, subbase, and finish grade shall be as specified by DTSS, except that the Contractor shall deliver the full decomposed granite thickness shown. No combination of high and low tolerances that compromise the section will be permitted.
  
- C. Reviews: Contractor shall stake and layout all paving areas for review by the City’s Representative prior to excavation.
  
- D. Sample Mockup: The Contractor shall demonstrate to the satisfaction of the City’s Representative that they or their subcontractor possesses sufficient skills and experience to perform the work in all aspects required. A 5 square foot sample of decomposed granite paving shall be installed at the site for review and approval by the City’s Representative. The Contractor shall meet or exceed that quality of

work in all subsequent work. The Contractor shall be responsible for the removal of the sample at the completion of work.

**1.3 SUBMITTALS**

- A. Soil Sterilant: Submit written recommendation from a State of California appropriately licensed individual along with complete product data from proposed manufacturer, for review by City’s Representative and/or the City’s appropriately licensed individual.
- B. Decomposed Granite: A one-quart sample with supplier and source clearly indicated of decomposed granite to be used shall be submitted to the City’s Representative for approval prior to delivery to the site.
- C. Stabilizer: Submit product data.

**PART 2 – PRODUCTS**

**2.1 MATERIALS**

- A. Soil Sterilant: Shall be a commercially available herbicide recommended for this project by a State of California appropriately licensed individual. The licensed individual shall review the type of construction, soils, base, adjacent plantings, time and season of application, and other project requirements; verify compatibility; and recommend procedures for proper application in accordance with the label. The Contractor shall be responsible for all overspray, spreading, or runoff of material into adjacent areas.
- B. Decomposed Granite: Decomposed granite, hereafter referred to as “DG”, shall be a material with a 3/8 inch minus gradation, per the following specifications:

<b>Sieve Size</b>	<b>Percent Passing</b>
3/8 inch	100
No. 4	85 - 100
No. 8	65 - 85
No. 30	35 - 65
No. 200	15 - 30

- 1. The yellow-brown color of decomposed granite is a requirement for this material.

- C. Stabilizer: Decomposed granite stabilizer shall be a patented, non-toxic organic binder that is a colorless and odorless concentrated powder that binds decomposed granite paving to produce a firm surface.

**PART 3 – EXECUTION**

**3.1 INSTALLATION**

- A. Mixing: The stabilizer shall be pre-mixed with the decomposed granite material by the supplier before being delivered to the project site. Bucket mixing or on-site mixing is prohibited. The ratio of stabilizer to decomposed granite shall be per the manufacturer's specification.
- B. Soil Sterilant: Shall be applied to the subgrade soil of areas to be paved prior to paving operations and uniformly applied according to the label. Contractor shall take all precautions necessary to avoid spray onto or runoff into planting areas or other surfaces.
- C. Immediately prior to placing the decomposed granite, the subgrade shall be moistened.
- D. The decomposed granite shall be deposited in such a manner as to minimize the necessity for spotting, picking up, or otherwise shifting the decomposed granite. The decomposed granite shall be leveled by raking and compacted by use of a light roller.
- E. Fill in any low spots or cracks with additional decomposed granite.

**3.2 GRADES**

- A. The finish grades of the decomposed granite paving shall conform to the lines and grades on the plans and allow for drainage.

**3.3 CLEAN-UP**

- A. All waste produced as a result of decomposed granite paving construction shall be removed from the site and disposed of legally. All excess decomposed granite shall be removed from planting areas.

END OF SECTION 32 15 40

## **SECTION 32 31 19 METAL AND HARDWARE**

### **PART 1 – GENERAL**

#### **1.1 SCOPE**

- A. Furnish and install all metal work as shown on the plans and as specified herein including, but not necessarily limited to, the following:
  - 1. Ornamental Metal Fence
- B. Related work specified elsewhere:
  - 1. Site Concrete – Section 32 13 13

#### **1.2 STANDARDS**

- A. The following standards are hereby made a part of this Section and miscellaneous metal work shall conform to the applicable requirements therein except as otherwise specified herein or shown on the plans. Nothing contained herein shall be construed as permitting work that is contrary to code requirements or governing rules and regulations.
  - 1. Section 75 “Miscellaneous Metal” of the Department of Transportation Standard Specifications (DTSS), latest edition.
  - 2. Steel Structures Painting Council Surface Preparation Specifications, Vol. 2, Painting Manual.

#### **1.3 SHOP DRAWINGS**

- A. Submit shop drawings where required by the technical specifications or on the plans for:
  - 1. Ornamental Metal Fence
- B. Shop drawings shall show dimensions, sizes, thicknesses, gauges, finishes, joining, attachments, and relationship of work to adjoining construction. Where concrete, masonry, or other materials must be set to exact locations to receive work, furnish assistance and direction necessary to permit other trades to properly locate their work. Where welded connectors, concrete or masonry inserts are required to receive work, shop drawings shall show exact locations required, and all such drawings shall be furnished to the trades responsible for installing the connectors



or inserts. Catalog work sheets showing illustrated cuts of item to be furnished, scale details, and dimensions may be submitted for standard manufactured items.

## **PART 2 – PRODUCTS**

### **2.1 FASTENINGS**

- A. Intent of Drawings: The drawings are intended to show the number, size, and spacing of nails, bolts, and screws, etc., required for structural strength. If any particular joint is not shown on the drawings, it shall be provided with bolts, screws, and/or nails, as required to be consistent with the fully detailed joints, and shall be subject to the approval of the City’s Representative.
- B. Furnish all hardware required for fastenings, as shown on the plans, and as specified herein, and as required to complete the work. All fasteners shall be hot-dip galvanized. Fasteners shall include, but not be limited to, the following:
  - 1. Nails: Unless otherwise noted, nails shall be hot-dipped 2 oz./s.f. common wire of adequate size for type of fastening, ASTM 153.
  - 2. Bolts: Shall be machine bolts, lag bolts, or carriage bolts of structural grade steel conforming to ASTM A 153, of sizes indicated on the plans. Anchor bolts shall have cut threads.
  - 3. Washers: Shall be of standard malleable iron, ASTM 153.
  - 4. Lag Screws: Shall be of structural grade steel, and shall be hex headed wherever possible, ASTM 153.
  - 5. Galvanizing:
    - a. All ferrous metal fabrications shall be hot-dipped galvanized per ASTM A 153. Fabrications to be painted shall be acid etched prior to painting. Galvanizing for iron and steel hardware shall be in accordance with ASTM 153.
    - b. If necessary, the threads of nuts shall be re-tapped after galvanizing. Any damaged zinc coatings shall be repaired with galvanizing repair compound.

### **2.2 MATERIALS**

- A. Ornamental Metal Fence: Shall be Ameristar Montage II Majestic with 2-rail panels and flush bottom rail, powder coated black color. Fence height, post spacing and surface mounting per plans. Install per manufacturer’s recommendations. As

manufactured and available from Ameristar Fence Products (888) 333-3422, or approved equal.

**PART 3 – EXECUTION**

**3.1 GENERAL**

- A. Verify all measurements on-site prior to ordering materials.
- B. Coordinate all metal work with adjoining work for details of attachment, fitting, etc. Do all cutting, shearing, drilling, punching, threading, tapping, etc., required for miscellaneous metal or for attachment of adjacent work. Drill or punch holes, do not use a cutting torch. Shearing and punching shall leave true lines and surfaces.
- C. Conceal all fastenings where practicable. Thickness of metal and details of assembly and supports shall give ample strength and stiffness. Form joints exposed to weather to exclude water.
- D. Make all permanent connections in ferrous metal surfaces using welds where at all possible. Do not use bolts or screws where they can be avoided. Re-galvanize all welds.
- E. Provide all lugs, clips, anchors and miscellaneous fastenings necessary for the complete assembly and installation.
- F. Set all work plumb, true, rigid, and neatly trimmed out.
- G. Where items must be incorporated or built into adjacent work, deliver them to the trade that is responsible for proper location of such items.

**3.2 WELDING**

- A. Perform all welding in accordance with DTSS Section 75 “Miscellaneous Metal”.
- B. Welds shall be made only by operators experienced in performing the type of work indicated.
- C. Welds normally exposed to view in the finished work shall be uniformly made and shall be ground smooth.
- D. Where welding is done in proximity to glass or finished surfaces, such surfaces shall be protected from damage due to welds, sparks, spatter, or tramp metal.

**3.3 BOLTED, SCREWED AND RIVETED CONNECTIONS**

- A. In general, use bolts for field connections only as detailed. Provide washers under all heads and nuts. Draw all nuts tight and nick threads of permanent connections to prevent loosening. Use beveled washers where bearing is on sloped surfaces.
- B. Each bolt hole in wood shall be drilled 1/16 inch larger than the bolt diameter.
- C. Where screws must be used for permanent connections in ferrous metal, use flat head type, countersunk, with screw slots filled and finished smooth and flush.

**3.4 CLEAN-UP**

- A. Protection and Cleaning: Remove all soiled and foreign matter from finished surfaces and apply such protective measures as required to prevent damage or discoloration of any kind until acceptance of the project.
- B. During construction, keep premises as clear as possible of materials and debris, and at the completion of work remove all tools, appliances, materials, and debris from the premises.

END OF SECTION 32 31 19

**SECTION 32 33 00 SITE FURNISHINGS**

**PART 1 – GENERAL**

**1.1 SCOPE**

A. Furnish and install all site furnishings as shown on the plans and as specified herein including, but not necessarily limited to, the following:

1. Benches
2. Picnic tables
3. Trash receptacles
4. Festoon light poles
5. Salvaged drinking fountains
6. Salvaged plaques
7. Bandstand structure

B. Related work specified elsewhere:

1. Asphalt Paving – Section 32 12 16
2. Site Concrete – Section 32 13 13

**1.2 ACCEPTANCE**

A. Prior to the purchase of the items and within ten (10) working days after award of the contract, the Contractor shall supply the City's Representative with samples of the finishes for approval. No materials for this Section shall be purchased until such approval is granted.

**1.3 CERTIFICATION**

A. Delivery schedules shall be verified and certified in writing to the City's Representative within ten (10) working days after award of the contract.

**1.4 SUBMITTALS**

A. Submit catalog information for items:

1. Bench
2. Backless bench
3. Picnic table
4. ADA picnic table
5. Trash receptacle

6. Festoon light pole
7. Bandstand structure
8. Bandstand sign

## **PART 2 – PRODUCTS**

### 2.1 MATERIALS

- A. Bench: Shall be Outdoor Creations model 408SKB concrete bench with back, armrests, skate deterrents, and center armrests, with City logo, smooth texture, ODC Tan color, standard acrylic finish, mechanically attach with mounting dowels and apply epoxy to cover bottom of leg per manufacturer's recommendations, or approved equal. Available through Outdoor Creations, Inc., 2270 Barney Road, Anderson, CA 96007, (530) 365-6106.
- B. Backless Bench: Shall be Outdoor Creations model 402SK concrete bench with skate deterrents, smooth texture, ODC Tan color, standard acrylic finish, mechanically attach with mounting dowels and apply epoxy to cover bottom of leg per manufacturer's recommendations, or approved equal. Available through Outdoor Creations, Inc., 2270 Barney Road, Anderson, CA 96007, (530) 365-6106.
- C. Picnic Table: Shall be Outdoor Creations, model 100S concrete picnic table, smooth texture, ODC Tan color, standard acrylic finish, mount per manufacturer's recommendations, or approved equal. Available through Outdoor Creations, Inc., 2270 Barney Road, Anderson, CA 96007, (530) 365-6106.
- D. ADA Picnic Table: Shall be Outdoor Creations, model 100SRE concrete picnic table with wheelchair access, smooth texture, ODC tan color, standard acrylic finish, mount per manufacturer's recommendations, or approved equal. Available through Outdoor Creations, Inc., 2270 Barney Road, Anderson, CA 96007, (530) 365-6106.
- E. Trash Receptacle: Shall be Outdoor Creations, model 500 concrete trash receptacle, smooth texture, ODC tan color, standard acrylic finish, lid shall be steel powder coated bronze, secure receptacle to concrete slab with construction epoxy, or approved equal. Available through Outdoor Creations, Inc., 2270 Barney Road, Anderson, CA 96007, (530) 365-6106.
- F. Salvaged furnishings: All existing furnishings specified to be salvaged and reinstalled shall be pressure washed clean prior to installation.
- G. Festoon light pole: Shall be per plans.

- H. Salvaged plaques: Shall be per plans.
  
- I. Bandstand structure: Shall be half hexagon steel structure with metal multi-rib roofing, tongue and groove roof deck, including electrical cutouts, gutters and downspouts, approximately 50' width and 25' length, 6" posts, or approved equal.
  - 1. Lights and receptacles shall be installed per plans and mounted per the manufacturer's recommendations.
  - 2. Colors shall be colonial red metal roof and surrey beige powder coated frame. Wood roof decking shall be specified by the City during submittal review.
  - 3. Ornamental railing shall be included along the sides and rear of the bandstand, per the drawings.
  - 4. Metal sign shall be fabricated per the plans and mounted to the bandstand per the manufacturer's recommendations.
  - 5. Footings shall be per plans.
  - 6. Available through the following acceptable fabricators:
    - a. Poligon, available through All About Play, 3844 Presidio Street, Sacramento, CA 95838, 916-417-8389.
    - b. Icon, available through Park Planet, 415 Elm Street, Red Bluff, CA 96080, 530-244-6116.
    - c. Or approved equal.

**PART 3 – EXECUTION**

**3.1 LAYOUT**

- A. Prior to commencing installation, the Contractor shall stake the site furnishing layout and request a review by the City's Representative to determine adjustments on-site from locations shown on the plans.

**3.2 INSTALLATION**

- A. All site furnishings shall be installed per the manufacturer's specifications.

END OF SECTION 32 33 00

**SECTION 32 91 13 LANDSCAPE SOIL PREPARATION**

**PART 1 – GENERAL**

**1.1 SCOPE**

- A. Furnish and install all landscape soil preparation as shown on the plans and as specified herein including, but not necessarily limited to, the following:
  - 1. Soil testing
  - 2. Stockpiling of native soil
  - 3. Topsoil placement
  - 4. Organic amendment
  - 5. Fertilizer
  - 6. Finish grading
  
- B. Related work specified elsewhere:
  - 1. Earthwork and Grading – Section 31 22 00
  - 2. Landscape Planting – Section 32 93 00

**1.2 QUALITY CONTROL**

- A. Reviews: Contractor shall specifically request at least three (3) working days in advance of the following reviews prior to progressing with the work:
  - 1. Completion of rough grading
  - 2. Verification of amendment incorporation depths
  - 3. Finish grade
  
- B. Certification: Written certificates stating quantity, type, and composition, weight and origin for all amendments and chemicals shall be delivered to the City's Representative before the material is used on the site.
  
- C. Soil Testing: Provide soil samples to Waypoint Analytical, Inc. of Anaheim, (714) 282-8777, for testing in accordance with these specifications. Test results shall be made available to the City's Representative. Allow sufficient time for testing prior to preparing soil for planting.
  - 1. The following soil tests are required under these specifications:
    - a. Native Soil: Prior to construction, submit native soil for horticultural soil analysis, consisting of (2) one-quart samples from

the proposed turf area and (2) one-quart samples from proposed container planting areas. Samples shall be a representative composite taken from several planting areas.

- b. Import Soil: Prior to construction, submit for horticultural soil analysis: one quart-sized sample of import soil.
  - c. Pre-Plant: Following amendment and fine grading and prior to installation of plant material, submit for horticultural soil analysis: one quart-sized sample of in-place topsoil. Sample shall be a representative composite taken from several planting areas.
2. If test results indicate that soils fail to meet the specifications, obtain other sources of import material or re-amend as required. Retest and resubmit until passing results are obtained.
  3. Testing costs for initial samples and costs for any additional samples due to non-compliance shall be paid for by the Contractor.
  4. No material shall be delivered to the site until the City's Representative approves the material.
  5. The Contractor shall allow for sufficient time for testing prior to construction.
- D. Amendment Samples: Provide an analysis of the amendment from a Seal of Testing Assurance (STA) Certified Compost Lab, designated by the U.S. Composting Council (USCC). Or, send a one-gallon sample of each proposed amendment to Soil Control Lab of Watsonville (831) 724-5422, for their testing for conformance to this specification.
1. No material shall be delivered to the site until the City's Representative approves the samples.
  2. Testing costs shall be paid for by the Contractor.
  3. If an alternate laboratory is used, the laboratory must be STA certified by the USCC, using test methods described in the "Test Methods of the Examination of Composting and Compost" (TMECC) test methods manual.
- E. Biotreatment Soil Mix Submittals: Submit to the City's Representative for approval:
1. A one-gallon size sample of biotreatment soil.
  2. Certification from the soil supplier or an accredited laboratory that the biotreatment soil mix meets the requirements of this specification.



3. Grain size analysis results of the fine sand component performed in accordance with ASTM D 422, Standard Test Method for Particle Size Analysis of Soils or Caltrans Test Method (CTM) C202.
  4. Quality analysis results for compost performed in accordance with Seal of Testing Assurance (STA) Standards.
  5. Organic content test results of biotreatment soil mix. Organic content test shall be performed in accordance with Testing Methods for the Examination of Compost and Composting (TMECC) 05.07A, "Loss-On-Ignition Organic Matter Method.
  6. Grain size analysis results of compost component performed in accordance with ASTM D 422, Standard Test Method for Particle Size Analysis of Soils.
  7. A description of the equipment and methods used to mix the sand and compost to produce biotreatment soil mix.
  8. Provide the name of the testing laboratory(s) and the following information:
    - a. Contact person(s)
    - b. Address(es)
    - c. Phone contacts(s)
    - d. E-mail address(es)
    - e. Qualifications of laboratory(s) and personnel including date of current certification by U.S. Composting Council (USCC), ASTM, Caltrans, or approved equal.
- F. Planting Areas: All areas to be planted, whether in seed, sod, container stock, flats, or otherwise, are defined as planting areas in these documents.

## **PART 2 – PRODUCTS**

### **2.1 MATERIALS**

- A. Native Topsoil: Shall be the existing surface layer of soil on-site. This layer typically will be a different color and texture than the subsoil, and may be of varying thicknesses. The Contractor shall be responsible for reviewing the area limits and depths of native topsoil on-site with the City's Representative.
- B. Import Topsoil: Shall be a homogeneous mineral soil classified as loam, sandy clay loam, or sandy loam with clay content between 15 and 25%. The sum of silt plus clay shall be less than 35%. Import topsoil shall not contain more silt and clay than the on-site native soil.

**LANDSCAPE SOIL PREPARATION 32 91 13**

Lions Wayside & Delucchi Parks Renovation

Page 4 of 11

1. Particle size data shall be based upon standard USDA methodology. Of the material falling in the sand category, a minimum of 50% shall fall in the fine sand range .05 - 5.0 mm. Gravel content greater than 2.0 mm shall be less than 15%.
  2. Soil chemistry shall be suitable for growing the plants specified. The soil shall be non-saline as determined on the saturation extract. Salinity shall not exceed 3.0 mmhos/cm, boron shall not exceed 1.0 ppm, and the sodium absorption ratio (SAR) shall not exceed 6.0. Soil reaction as determined on a saturated paste shall fall between 5.5 and 7.5.
  3. The soil shall be free of organic herbicides, or other growth-restricting chemicals. Contamination may be tested by greenhouse trials using rye grass and radish as test crops using the proposed import soil as substrate. These trials require 4 to 5 weeks for completion.
- C. Fertilizer: Shall be determined from the soils test results. For purposes of bidding only, assume the use of 6-20-20 commercial fertilizer, iron sulfate, and 20-10-5 Best-Pak planting packets by J.R. Simplot Company.
- D. Organic Amendment: If recommended by the horticultural soils test, the following materials shall be used as soil amendment.
1. Compost: Shall be Z-Best’s Organic Compost available through Z-Best Composting (408) 846-1574 and shall conform to:
    - a. Seal of Testing Assurance Program from the U.S. Composting Council.
    - b. Compost parameters, below:

Property	Test Method	Unit of Measurement	Requirement
pH	TMECC 04.11-A Elastomeric pH 1:5 slurry method pH	units	6–8.5
Soluble salts	TMECC 04.10-A Electrical conductivity 1:5 slurry method	dS/m (mmhos/cm)	0–10
Moisture content	TMECC 03.09-A Total solids & moisture at 70 ± 5 °C	% wet weight basis	30-60
Organic matter Content	TMECC 05.07-A Loss-on-ignition organic matter method (LOI)	% dry weight basis	30–60
Maturity	TMECC 05.05-A Germination and vigor	% relative to positive control	Seed emergence 80 or above Seedling vigor 80 or above

**LANDSCAPE SOIL PREPARATION 32 91 13**

Lions Wayside & Delucchi Parks Renovation

<b>Property</b>	<b>Test Method</b>	<b>Unit of Measurement</b>	<b>Requirement</b>
Stability	TMECC 05.08-B Carbon dioxide evolution rate	mg CO <sub>2</sub> -C/g OM per day	4 or below
Pathogen	TMECC 07.01-B Salmonella < 3 MPN per 4 grams, dry weight basis	Pass/ Fail	Pass
Pathogen	TMECC 07.01-B Fecal coliform bacteria < 1,000 MPN per gram, dry weight basis	Pass/ Fail	Pass
Physical contaminants	TMECC 02.02-C Man-made inert removal and classification: Plastic, glass, and metal % > 4 mm fraction	% dry weight basis	combined total: < 0.5%
Physical contaminants	TMECC 02.02-C Man-made inert removal and classification: Sharps (sewing needles, straight pins and hypodermic needles) % > 4mm fraction	% dry weight basis	none detected
Particle size fine for compost used as soil amendment	TMECC 02.02-B Sample sieving for aggregate Size classification	% dry weight basis	Pass 2 inch sieve 98% min., Pass 3/8 inch sieve 95% min.
Heavy metals	PASS / FAIL	mg/kg (ppm), dry weight basis	All EPA 503 metal contaminant limits
Carbon:Nitrogen Ratio		Carbon:Nitrogen	≤25:1
Note: TMECC refers to "Test Methods for the Examination of Composting and Compost," published by the United States Department of Agriculture and the United States Compost Council (USCC). (Table modified from the US Composting Council Landscape Architectural Specifications 2005.)			

2. Nitrogen-treated Fir Bark shall conform to:

a. Physical Properties

- 1) 95% -100% passing, sieve size 6.35 mm (1/4 inch)
- 2) 80% - 100% passing, sieve size 2.38 mm (No. 8, 8 mesh)
- 3) 0% - 30% passing, sieve size 500 micron (No. 35, 32 mesh)

b. Chemical Properties

- 1) Nitrogen Content (dry weight basis): 0.4% - 0.6%
- 2) Iron Content: minimum 0.08% dilute acid soluble Fe on dry weight basis

- 3) Soluble Salts: maximum 3.5 millimhos/cm at 25 degrees C. as determined by saturation extract method
- 4) Ash: 0 - 6.0%

E. Biotreatment Soil Mix: Shall meet the following criteria:

- 1. General Requirements: Biotreatment soil mix shall achieve a long-term, in-place infiltration rate of at least 5 inches per hour. Biotreatment soil mix shall also support vigorous plant growth.
  - a. Biotreatment soil mix shall be a mixture of fine sand and compost, measured on a volume basis:
    - 1) 60% - 70% Sand
    - 2) 30% - 40% Compost
- 2. Sand for Biotreatment Soil Mix:
  - a. General: Sand shall be free of wood, waste, coating such as clay, stone, dust, carbonate, etc., or any other deleterious material. All aggregate passing the No. 200 sieve size shall be non-plastic.
  - b. Sand for Biotreatment Soil Mix Texture: Sand for Biotreatment Soil Mix shall be analyzed by an accredited lab using #200, #100, #40 or #50, #30, #16-, #8-, #4-, and 3/8 inch sieves (ASTM D 422, CTM 202 or as approved by municipality), and meet the following gradation:

<b>Sieve Size</b>	<b>Percent Passing (by weight)</b>
3/8 inch	100
No. 4	90 - 100
No. 8	70 - 100
No. 16	40 - 95
No. 30	15 - 70
No. 40 or No. 50	5 - 55
No. 100	0 - 15
No. 200	0 - 5

- 1) Note: All sands complying with ASTM C33 for fine aggregate comply with the above gradation requirements.

3. Compost for Biotreatment Soil Mix: Compost shall conform to the Seal of Testing Assurance Program from the U.S. Composting Council and to the parameters below:
- a. Organic Matter Content: 35% - 75% by dry wt.
  - b. Carbon and Nitrogen Ratio: C:N < 25:1 and C:N > 15:1
  - c. Maturity/Stability: Any one of the following is required to indicate stability:
    - 1) Oxygen Test < 1.3 O<sub>2</sub>/unit TS/hr.
    - 2) Specific Oxy. Test < 1.5 O<sub>2</sub>/unit BVS
    - 3) Respiration Test < 8 C/unit VS/day
    - 4) Dewar Test < 20 Temp. rise (°C) e.
    - 5) Solvita® > 5 Index value
  - d. Toxicity: Any one of the following measures is sufficient to indicate non-toxicity.
    - 1) NH<sub>4</sub><sup>+</sup> : NO<sub>3</sub>-N < 3
    - 2) Ammonium < 500 ppm, dry basis
    - 3) Seed Germination > 80% of control
    - 4) Plant Trials > 80% of control
    - 5) Solvita® > 5 Index value
  - e. Nutrient Content: Provide analysis detailing nutrient content including N-P-K, Ca, Na, Mg, S, and B.
    - 1) Total Nitrogen content 0.9% or above preferred
    - 2) Boron: Total shall be < 80 ppm
  - f. Salinity: Must be reported, < 6.0 mmhos/cm
  - g. PH shall be between 6.2 and 8.2 (may vary with plant species)
  - h. Compost Quality Analysis by Compost Supplier: Before delivery of the compost to the soil supplier the Compost Supplier shall verify the following:
    - 1) Weed seed/pathogen destruction: provide proof of process to further reduce pathogens (PFRP). For example, turned windrows must reach min. 55 C for 15 days with at least 5 turnings during that period.

4. Compost for Biotreatment Soil Mix Texture: Compost for biotreatment soil mix shall be analyzed by an accredited lab using #200, 1/4 inch, 1/2 inch, and 1 inch sieves (ASTM D 422 or as approved by municipality), and meet the following gradation:

<b>Sieve Size</b>	<b>Percent Passing (by weight)</b>
1 inch	99 - 100
1/2 inch	90 - 100
1/4 inch	40 - 90
No. 200	2 - 10

- a. Bulk Density: Shall be between 500 and 1,100 dry lbs./cubic yard
- b. Moisture Content: Shall be between 30% - 55% of dry solids
- c. Inerts: Compost shall be relatively free of inert ingredients including glass, plastic, and paper, < 1% by weight or volume
- d. Select Pathogens: Salmonella < 3 MPN/4 grams of TS, or Coliform Bacteria < 10,000 MPN/gram
- e. Trace Contaminants Metals (Lead, Mercury, etc.) Products: Must meet U.S. EPA, 40 CFR 503 regulations.

**PART 3 – EXECUTION**

**3.1 LIMITS AND GRADES**

- A. Grade Review: Prior to commencing soil preparation operations, Contractor shall request a review by the City’s Representative to verify specified limits and grades of work completed to date and soil preparation work to commence. Complete the rough grading as necessary to round the top and toe of all slopes, providing naturalized contouring to integrate newly graded areas with the natural topography. Finish grading under this Section shall be completed in accordance with the grades indicated on the plans.
- B. Grading at Existing Trees: Soil work within the dripline of existing trees shall be performed in accordance with tree protection requirements indicated on the plans and Section 32 01 91 Tree Protection and Pruning.

**3.2 STRIPPING AND STOCKPILING OF EXISTING TOPSOIL**

- A. Excavation Areas: The native topsoil shall be stripped and stockpiled on-site in sufficient quantities to provide a 6 inch layer throughout all planting areas. Topsoil

to be stripped and stockpiled shall be taken from the surface layer after all organic litter and foreign debris has been removed and properly disposed of.

- B. Existing Grade Unchanged: In those areas where grades are not proposed to be modified (areas of no excavation or fill) the native topsoil shall be left in place. All debris, as well as all rocks over 3/4 inches in diameter, shall be removed from the surface of planting areas.

### 3.3 TOPSOIL PLACEMENT

- A. Depths indicated in this Section are for bidding purposes only. Depth of scarification, height of soil lifts, and depths of incorporation shall be as recommended by the soil testing lab.
- B. Soil Moisture: If soils are saturated, suspend soil work operations until the soil moisture drains to below field capacity.
- C. Subgrade preparation: Excavate planting areas to the proposed subgrade and remove all construction debris and materials.
  - 1. Do not over excavate compacted subgrades of adjacent pavement or structures.
  - 2. Subgrades shall slope approximately parallel to the finished grade and/or toward the subsurface drain lines as shown on the plans.
  - 3. Scarify or rip subgrade to a depth of 7 inches and protect from compaction.
- D. Topsoil Incorporation: Uniformly distribute a 3 inch layer of topsoil and incorporate it into the top 6 inches of subsoil by ripping, scraping, or tilling to mix the subsoil with the topsoil into a homogeneous mixture. Repeat until the total depth of topsoil placed is as indicated on the plans. The final layer of topsoil shall be uniformly distributed in the planting areas and compacted in place to 85% compaction.
- E. Existing Topsoil to Remain: Except within tree protection zones, in those planting areas where native topsoil is to be left in place, cross rip to a depth of 10 inches. Then incorporate the amendments to a homogeneously blended soil depth of 6 inches.

### 3.4 BIOTREATMENT SOIL MIX PLACEMENT

- A. Do not excavate, place soils, or amend soils during wet or saturated conditions.

- B. Operate equipment adjacent to (not in) the biotreatment soil mix facility. If machinery must operate in the facility, use lightweight, low ground-contact pressure equipment.
- C. Place soil in 12 inch lifts with machinery adjacent to the facility. If working within the facility, to avoid over-compacting, place the first lifts at the far end from the entrance and place subsequent lifts backwards toward the entrance.
- D. Allow biotreatment soil mix lifts to settle naturally. Boot pack (walk around to firm) lifts to achieve 85% compaction. After all lifts are placed, wait a few days to check for settlement and add additional media as needed.
- E. Verify biotreatment soil mix elevations before applying mulch or installing plants.

### 3.5 ORGANIC AMENDMENT AND FERTILIZER INCORPORATION

- A. Organic amendment: After topsoil placement and compaction, spread organic amendment at a rate of 6 cubic yards per 1000 square feet, unless otherwise specified by the soils test results.
- B. Fertilizer: Spread uniformly on top of compost at rates determined by the soils test. For bidding purposes only, assume per 1000 square feet:
  - 1. 30 pounds commercial fertilizer (6-20-20)
  - 2. 10 pounds iron sulfate
    - a. Note: Iron sulfate should be applied cautiously, avoiding contact with concrete, since permanent staining may result. Any such stained concrete shall be replaced at Contractor's expense.
- C. Incorporate organic amendment and fertilizer into the top 6 inches of topsoil, until homogeneously blended.

### 3.6 PLANT PITS

- A. Plant Pit Preparation: Plant pits shall have their sides and bottoms loosened or otherwise broken to prevent glazed or compacted surfaces, and shall be as shown on the planting detail.

### 3.7 BACKFILL

- A. Backfill Material and Placement: Only unamended soil shall be used beneath the root ball. Cultivate the bottom of plant pits to improve porosity. Backfill around



sides of the rootball shall be the amended soil taken from adjacent prepared areas. Spread material excavated from plant pits onto adjacent areas as replacement. Should additional backfill be necessary, a mixture of one third organic amendment/fertilizer mix and two thirds topsoil may be used for the top 12 inches of backfill.

**3.8 PLANT PACKETS**

A. Packet Quantities: All container plants shall receive plant packets as follows:

<b>Container Size</b>	<b>Number of Packets</b>
one-gallon plants	one 10-gram packet
five-gallon plants	two 10-gram packets
fifteen-gallon plants	nine 10-gram packets
24-inch box trees	sixteen 10-gram packets
36-inch box trees	twenty-four 10-gram packets

1. Space the packets evenly around the root ball in the backfill, 6 - 8 inches from soil surface and 1 inch away from root ball. City’s Representative may require excavation of up to 5% of all plants selected at random for conformance review.

**3.9 FINISH GRADING**

- A. Grading Operations: Finish grade all irrigated planting areas unless otherwise noted, and remove all rocks and clods over 1 cubic inch to a depth of 1 inch below finish grade. All areas shall be smooth and uniformly graded. All erosion damage during the construction period shall be repaired by the Contractor.
- B. Finish Grades: Unless otherwise noted, all soil finish grades shall be 1 inch below finish grade of walks, pavements, and curbs.

END OF SECTION 32 91 13

**SECTION 33 40 00 SITE DRAINAGE UTILITIES**

**PART 1 – GENERAL**

**1.1 SCOPE**

- A. Furnish and install all storm drain lines and appurtenances as shown on the plans and as specified herein including, but not necessarily limited to, the following:
  - 1. Catch basins
  - 2. Area drains
  - 3. Junction Box
  - 4. Clean out
  - 5. Dry well
  - 6. Solid drainline
  - 7. Perforated drainline
  
- B. Related work specified elsewhere:
  - 1. Earthwork and Grading – Section 31 22 00
  - 2. Trenching and Backfilling – Section 31 23 00
  - 3. Site Concrete – Section 32 13 13

**1.2 STANDARDS**

- A. Unless otherwise specified or shown, all materials and methods shall conform to the appropriate current sections of the State of California, Department of Transportation Standard Specifications (DTSS) as they reasonably apply to this work, except for measurement and payment requirements.

**1.3 TOLERANCES**

- A. Tolerances for pipe trenches, pipe placement, catch basins, and area drains shall be as specified by DTSS. No combination of high and low tolerances that compromise the lines and grades as shown will be permitted.

**1.4 REVIEWS**

- A. 24 hours prior to placement of backfill above the pipe bedding, the City's Representative shall be notified by the Contractor, and shall be allowed a reasonable amount of time to inspect the placement of the pipe and pipe bedding.

**1.5 RECORD DRAWINGS**

- A. The Contractor shall maintain a daily log of on-site installation and changes from the Contract Documents on a set of prints provided to the Contractor by the City for record purposes. A clearly legible and detailed print of said log, acceptable to the Inspector, shall be submitted to the City prior to final payment.

## **PART 2 – PRODUCTS**

### **2.1 MATERIALS**

- A. Drain Pipe (solid and perforated): PVC sewer pipe, SDR-35, size as indicated on the plans, conforming to ASTM D3034 for 4 inch to 15 inch diameter size, and ASTM F679 for 16 inch to 24 inch diameter size.
- B. Drain Rock: Class 2 Permeable Base Rock.
- C. Cobble: Lin Creek Cobbles, 3”-8” size, as available from Lyngso Garden Materials, (650 364-1790), or approved equal.
- D. Catch Basin: Oldcastle Infrastructure - Christy V-12 Drain Box, cast iron grate, ADA approved, with appropriate extensions to extend 2 inches below invert elevations as shown on the plans.
- E. Junction Box: Oldcastle Infrastructure - Christy V-12 Drain Box, solid steel lid, with appropriate extensions to extend 2 inches below invert elevations as shown on the plans.
- F. Dry well: Shall be as indicated on the drawings.
- G. Clean out: Shall be as indicated on the drawings.
- H. Geotextile Fabric: Mirafi 140N non-woven geotextile fabric, or approved equal. As available from SiteOne Landscape Supply, 1145 N. 13th St., San Jose, CA 95112, (408)-295-3376.

## **PART 3 – EXECUTION**

### **3.1 TRENCH EXCAVATION**

- A. Excavation of pipe trenches shall conform to DTSS Section 19-3 “Structure Excavation and Backfill” and Section 31 23 00 Trenching and Backfilling of these specifications.

### **3.2 INSTALLATION**

**SITE DRAINAGE UTILITIES 33 40 00**

Lions Wayside & Delucchi Parks Renovation

Page 3 of 3

- A. Pipes, catch basins, and appurtenances shall be installed to the lines and grades shown and in accordance with applicable sections of the DTSS.

END OF SECTION 33 40 00