



**N**OTICE TO **C**ONTRACTORS,  
**P**ROPOSAL,  
**A**GREEMENT, &  
**S**PECIAL **P**ROVISIONS  
FOR CONSTRUCTION ON  
Project No. 23-068 Package 3  
Roads Program Capital Improvement Project

IN STANISLAUS COUNTY,  
TURLOCK, CALIFORNIA.

---

Municipal Services Department/ Roads Program

Contact Person: Fred Pezeshk, P.E.

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William D. Morris, P.E., P.L.S.  
City Engineer

Proposals shall be delivered to Turlock, California  
at or before 2:00:00 pm local on February 19, 2026  
at the office of the City Engineer,  
Municipal Services Department  
156 S. Broadway, Suite 150  
Turlock, CA 95380  
Phone: 209-668-5520



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# CITY OF TURLOCK, CALIFORNIA

## NOTICE TO CONTRACTORS

Sealed proposals will be received by the City Engineer of the City of Turlock, Municipal Services Department, 156 S. Broadway, Suite 150, Turlock, California 95380, until 2:00:00 pm local on Thursday, February 19, 2026, for:

### Project No. 23-068 Package 3 Roads Program Capital Improvement Project

In accordance with and as described and provided in the plans, specifications and the proposed form of contract therefore, all of which are on file in the office of the City Engineer, and to which special reference is hereby made.

No verbal, telegraphic, electronic mail, facsimile, or telephone Proposals shall be considered.

An optional Pre-Bid meeting will be held on Wednesday, February 4, 2026, at 10:00 am at Turlock City Hall, 156 S. Broadway Turlock, CA 95380.

Proposals are required to be complete and for the entire work, materials and improvements unless the contrary is indicated in the specifications.

All questions shall be directed, in writing, to Fred Pezeshk at email address: [fpezeshk@turlock.ca.us](mailto:fpezeshk@turlock.ca.us) or at physical address:

Municipal Services Department  
156 S. Broadway, Suite 150  
Turlock, CA 95380

Questions regarding alleged patent ambiguity of the plans, specifications, or estimate must be submitted in writing at least five (5) business days, not including City holidays, prior to bid opening. After this time, the City will not consider these questions as bid protests.

### INSPECTION OF SITE

Bidders are required to inspect the sites of the work to satisfy themselves by personal examination or by such other means, as they may prefer, of the locations of the proposed work and of the actual conditions at the project sites. Inspections shall be between the hours of 7:00 a.m. and 5:00 p.m. on weekdays only.

Submission of a bid by the bidder shall constitute acknowledgement that, if awarded the contract, the bidder has relied and is relying on their own examination of

- (a) the sites of work,
- (b) access to the sites and
- (c) all other data and matters requisite to the fulfillment of the work and on their own knowledge of the facilities on and in the vicinity of the sites of the work to be constructed under the contract.

In accordance with the provisions of California Business and professions Code, Section 7028, the Contractor shall possess the following contractor license at the time of bid and for the duration of the contract.

1. A-General Engineering Contractor

All electrical work shall be performed by a contractor or subcontractor with a C-10 Electrical Contractor license.

Failure to possess the specified license(s) shall render the Bid as non-responsive, shall act as a bar to award of the contract to any Bidder not possessing said license(s) at the time of Bid opening and shall result in the forfeiture of the security of said Bidder. Furthermore, any Bidder or Contractor not so licensed shall be subject to all legal penalties imposed by law, including, but not limited to, any appropriate disciplinary action by the Contractor's License Board.

Each proposal must be accompanied by cash, cashier's check, or check certified by a responsible bank, or by a bid bond, the proposed form of which is on file in the office of the City Engineer of said City and to which special reference is hereby made in a sum not less than ten percent (10%) of the total amount bid, payable to the City of Turlock as liquidated damages in the case the bidder is awarded the contract and fails within ten (10) days after the date of mailing to him by the City Engineer of a notice of award of the contract and that the contract is ready for signature to execute the above-mentioned written contract and file with the City Engineer satisfactory insurance certificates as required by the terms of said contract and satisfactory bonds as required by law for the faithful performance of said contract and for the protection of material, men and laborers. Special reference is hereby made to Sections 5100, et. seq., of the Public Contracts Code of the State of California and to the proposed forms for said bonds now on file in the office of the said City Engineer for further particulars regarding bonds.

Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates in the county Stanislaus in which the work is to be done have been determined by the Director of the California Department of Industrial Relations. These wages are set forth in the General Prevailing Wage Rates for this project, available at 156 S. Broadway St, Turlock, CA 95380 and available from the California Department of Industrial Relations' Internet web site at <http://www.dir.ca.gov/DLSR/PWD>.

Bidders' attention is directed to the insurance requirements in the contract. 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 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.

No proposal will be considered unless made on forms furnished by the City Engineer of said City at his office of said City. Each proposal must be sealed, and the envelope containing the same must be addressed to the City Engineer of the City of Turlock and must be plainly marked. Each proposal shall clearly identify the bidders name and address on the sealed envelope.

Each bid shall separately state in figures the price offered for the approximate quantity of each item set forth and shall also state in words and figures the total contract price. Quantities set forth in the proposal form and in the specifications are approximate only, being given as a basis for comparison of bids, and the City of Turlock does not expressly or implied agree that the actual amount of work or materials will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work or materials as may be deemed necessary by the City Engineer.

Proposals may not be withdrawn for a period of sixty (60) days after the time fixed for opening of proposals. The City Council of the City of Turlock reserves the right to reject any and all proposals or any part thereof and to waive any errors or informalities in any proposals and to set and act as sole judge of the merit and qualifications of the equipment, supplies or services offered.

At the request and expense of Contractor, pursuant to Division 2, Part 5, Section 22300, et. seq., of the Public Contracts Code, securities equivalent to any funds withheld as retention from progress payments made under this contract may be deposited with the City of Turlock or with a State or Federally chartered bank as escrow agent, who shall pay such moneys to Contractor upon completion of the contract.

Copies of the Contract Documents, including Instructions to Bidders, Bid Proposal forms, Plans and Specifications, may be downloaded from the City's web site or purchased for a non-refundable fee of two hundred and sixty-eight dollars (\$268) at the Office of the City Engineer, 156 S. Broadway, Ste. 150, Turlock, CA 95380, Phone (209) 668-5520. For additional information, go to <http://www.cityofturlock.org/capitalprojects>

The U.S. Department of Transportation (DOT) provides a toll-free "hotline" service to report bid rigging activities. Bid rigging activities can be reported Mondays through Fridays, between 8:00 a.m. and 5:00 p.m., Eastern Time, Telephone No. 1-800-424-9071. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report these activities. The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

No contractor or subcontractor may be listed on a bid proposal for a public works unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. No contractor or subcontractor may be awarded a contract for public work on a public works unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. The contractors and subcontractors must furnish electronic certified payroll records to the Labor Commissioner.

The contractor shall post job site notices prescribed by regulation. (See 8 Calif. Code Reg. §16451(d) for the notice that previously was required for projects monitored by the CMU.)

DATED: 01/21/2026

CITY OF TURLOCK

By:   
William D. Morris, P.E., P.L.S.  
City Engineer

# PROPOSAL

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Project No. 23-068 Package 3  
Roads Program Capital Improvement Project

City of Turlock, California

DATED: \_\_\_\_\_

To: The Honorable City Council of the City of Turlock, California:

NAME OF BIDDER: \_\_\_\_\_

BUSINESS ADDRESS: \_\_\_\_\_

PLACE OF RESIDENCE: \_\_\_\_\_

Bids are to be submitted for the entire work. The amount of the bid for comparison purposes will be the total of all items. The bidder shall set forth for each unit basis item of work a unit price and a total for the item, and for each lump sum item a total for the item, all in clearly legible figures in the respective spaces provided for that purpose.

In the case of unit basis items, the amount set forth under the "Item Total" column shall be the product of the unit price bid and the estimated quantity for the item. In case of discrepancy between the unit price and the total set forth for a unit basis item, the unit price shall prevail except as provided in (a) or (b), as follows:

(a) If the amount set forth as unit price is unreadable or otherwise unclear, or is omitted, or is the same as the amount as the entry in the item total column, then the amount set forth in the item total column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price;

(b) (Decimal Errors) If the product of the entered unit price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc. from the entered total, the discrepancy will be resolved by using the entered unit price or item total, whichever most closely approximates percentage wise the unit price or item total in the Department's Final Estimate of cost.

## PROPOSAL SUBMITTAL CHECKLIST

The bidder shall provide a complete proposal in a sealed envelope before 2:00 pm local time on February 19, 2026 at the address shown on the cover sheet of these specifications.

FAILURE TO PROVIDE ALL THE REQUIRED DOCUMENTS LISTED IN THE TABLE BELOW MAY CAUSE THE PROPOSAL TO BE CONSIDERED NON-RESPONSIVE.

Complete Proposal	Page No.
<input type="checkbox"/> PROPOSAL AND BIDDING FORM.....	5-12
<input type="checkbox"/> AFFIDAVIT .....	13
<input type="checkbox"/> INFORMATION REQUIRED OF BIDDER .....	14-15
<input type="checkbox"/> BIDDER'S BOND .....	16-17
<input type="checkbox"/> LIST OF SUBCONTRACTORS.....	18
<input type="checkbox"/> IRAN CONTRACTING ACT CERTIFICATION.....	19

The Successful Bidder shall submit within one week after receipt of Bids, one copy of all documentary information generated in preparation of Bid prices for this Project. This material is hereinafter referred to as "Escrow Bid Documents." The Escrow Bid Documents of the Successful Bidder will be held in escrow for the duration of the contract. See Special Provisions Section "Escrow Bid Documents."

In accordance with the annexed Notice to Contractors, the undersigned, as bidder, declares that he has carefully examined the location of the proposed work, the plans, specifications and technical requirements therefore, and the proposed forms of contract and bonds mentioned or referred to in said Notice and on file in the office of the City Engineer of the City of Turlock, together with the prevailing rate of per diem wages for each craft or type of workmen needed to execute said contract; and he proposes and agrees that if this proposal is accepted, he will furnish all labor, materials, equipment, plant transportation, service, sales taxes, permit fees and other costs necessary to complete the construction in strict conformity to the plans and specifications and he will enter into a written contract with the City of Turlock in the form of contract on file in the Office of the City Engineer for such purposes, and that he will execute and/or provide all bonds and insurance certificates required by law and/or by said contract and/or mentioned in said Notice to Contractors all in accordance with and subject to all applicable laws, and that he will take in full payment therefore the following unit prices, to wit:

## BIDDING FORM

City of Turlock is hereinafter called the Owner.

BIDDER: \_\_\_\_\_

The work to be done and referred to herein is in City of Turlock and in Stanislaus County, State of California. It is shown on a set of Plans, entitled: "City of Turlock Construction Plans for Roads Program Capital Improvement Project Number 23-068 Package 3" and is to be constructed in accordance with the Project Specifications and contract documents attached hereto by reference.

In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents and the following Addenda, receipt of all which is hereby acknowledged.

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site and became familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

The undersigned, as Bidder, declares that the only persons, or parties interested in this proposal as principals are those named herein, that this proposal is made without collusion with any other person, firm or corporation; that he has carefully examined the location of the proposed work, the Plans and Specifications referred to, the referenced proposed contract, and the Bidder proposes and agrees that, if this proposal is accepted, he will contract with the Owner to provide all necessary machinery, tools, apparatus and other means of construction, and to do all the work and furnish all the materials specified in the contract in the manner and time therein prescribed, and according to the requirements as therein set forth, and that he will take in full payment therefor the following unit prices as set forth in the Bid Schedule below.

**CITY OF TURLOCK**

**Project No. 23-068 Package 3**  
**Roads Program Capital Improvement Project**

*BID SCHEDULE*

Item	Description	Quantity	Unit	Unit Price	Total
<b>General</b>					
1.	Mobilization	1	LS	\$_____	\$_____
2.	Remove and Replace Monument	8	EA	\$_____	\$_____
3.	Traffic Control	1	LS	\$_____	\$_____
4.	Portable Changeable Message Signs	10	EA	\$_____	\$_____
5.	Construction Funding Signs	10	EA	\$_____	\$_____
6.	Jobsite Management	1	LS	\$_____	\$_____
7.	Storm Water Pollution Prevention Plan (SWPPP) - Preparation and Implementation	1	LS	\$_____	\$_____
8.	Erosion and Dust Control BMPs	1	LS	\$_____	\$_____
9.	Construction Staking	1	LS	\$_____	\$_____
10.	Pothole Existing Utilities	1	LS	\$_____	\$_____
11.	Video Sewer and Storm Drain Video	1	LS	\$_____	\$_____
12.	Clearing and Grubbing	1	LS	\$_____	\$_____
13.	Roadway Excavation	785	CY	\$_____	\$_____
14.	Cold Plane Asphalt Concrete Pavement	38,382	SY	\$_____	\$_____
15.	Unsuitable Material	173	CY	\$_____	\$_____
16.	Remove Concrete Curb & Gutter	2,587	LF	\$_____	\$_____
17.	Remove Concrete Curb	6,548	LF	\$_____	\$_____

Item	Description	Quantity	Unit	Unit Price	Total
18.	Remove Concrete Drive Over Curb & Gutter	669	LF	\$_____	\$_____
19.	Remove Concrete Flatwork	20,516	SF	\$_____	\$_____
20.	Remove & Replace Chain Link Fence	15	LF	\$_____	\$_____
21.	HMA (Type A)	9,453	TON	\$_____	\$_____
22.	Full depth Reclamation-Cement	34,236	SY	\$_____	\$_____
23.	Cement (Full-Depth Reclamation-Cement)	555	TON	\$_____	\$_____
24.	Mix Design (Full-Depth Reclamation-Cement)	1	LS	\$_____	\$_____
25.	Minor Concrete (Curb Ramp)	3,289	SF	\$_____	\$_____
26.	Minor Concrete (Curb and Gutter)	8,951	LF	\$_____	\$_____
27.	Minor Concrete (Curb Only)	53	LF	\$_____	\$_____
28.	Minor Concrete (Drive Over Curb)	806	LF	\$_____	\$_____
29.	Minor Concrete (Sidewalk)	8,032	SF	\$_____	\$_____
30.	Minor Concrete (Driveway)	14,726	SF	\$_____	\$_____
31.	Minor Concrete (Alley Approach)	336	SF	\$_____	\$_____
32.	Minor Concrete (Valley Gutter)	613	SF	\$_____	\$_____
33.	Detectable Warning Surface	412	SF	\$_____	\$_____
34.	Remove Catch Basin	18	EA	\$_____	\$_____
35.	Install New Fire Hydrant Complete	1	EA	\$_____	\$_____
36.	Storm Drain Catch Basin	26	EA	\$_____	\$_____
37.	Storm Drain Manhole	11	EA	\$_____	\$_____
38.	18" Storm Drain Pipe	2,318	LF	\$_____	\$_____
39.	Remove Storm Drain Pipe	228	LF	\$_____	\$_____

Item	Description	Quantity	Unit	Unit Price	Total
40.	Adjust MH to Finished Grade	23	EA	\$_____	\$_____
41.	Adjust Valve to Finished Grade	25	EA	\$_____	\$_____
42.	Relocate Water Meter	2	EA	\$_____	\$_____
43.	Relocate Street Light	1	EA	\$_____	\$_____
44.	Remove Roadside Sign	20	EA	\$_____	\$_____
45.	Relocate Roadside Sign	1	EA	\$_____	\$_____
46.	Install Roadside Sign	46	EA	\$_____	\$_____
47.	Thermoplastic Traffic Stripe	8,828	LF	\$_____	\$_____
48.	Thermoplastic Pavement Marking	4,271	SF	\$_____	\$_____
<b>TOTAL BID</b>					\$_____

(F) denotes final pay item per Section 9-1.02C of the State Standard Specifications.

COMPANY'S NAME: \_\_\_\_\_

BY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
 (Number) \_\_\_\_\_ (Street) \_\_\_\_\_

\_\_\_\_\_ (City) \_\_\_\_\_ (State) \_\_\_\_\_ (ZIP)

CONTRACTOR'S PHONE #: \_\_\_\_\_

NOTE: CONTRACTOR WILL BE REQUIRED TO LIST THEIR LICENSE NUMBER, EXPIRATION DATE, AND APPROPRIATE STATEMENT REGARDING PERJURY AND SIGNED BY INDIVIDUAL AUTHORIZED TO DO SO. FAILURE TO INCLUDE THE ABOVE ITEMS MAY CAUSE SAID CONTRACTOR'S BID TO BE REJECTED.

A-General Engineering Contractor:

\_\_\_\_\_, Contractor's License #\_\_\_\_\_, Class\_\_\_\_\_  
 (Company's Name)

Expires\_\_\_\_\_ DIR #:\_\_\_\_\_

This information is true, is provided as per Section 7028.15 of the Business and Professions Code, and is made herein under penalty of perjury.

X\_\_\_\_\_  
(Bidder's Signature) (Date)

If the proposal is accepted and the undersigned shall fail to contract as aforesaid and fail to file with the City insurance certificates as required by said contract, within fourteen (14) days after the bidder has received notice from the City Engineer or his representative of the City of Turlock that the contract has been awarded to bidder and is ready for signature, the City of Turlock may, at its option, determine that the bidder has abandoned his contract, and thereupon this proposal and the acceptance thereof shall be null and void.

*Also accompanying this proposal is an affidavit of non collusion and questionnaire to general contractors, a statement of proposed sub contractors, if any, the address of mill, shop or office of any sub contractor, and a statement of work to be performed by sub contractors.*

The names and addresses of persons interested in the foregoing proposal as principals are as follows:

(IMPORTANT NOTICE: If bidder or other interested person is a corporation, state legal name of corporation, also names of the president, secretary, treasurer, and manager thereof; if a partnership, state true name of firm, also names of all individual co partners composing firm; if bidder or other interested person is an individual, state first and last name in full.)

Licensed in accordance with an act providing for the registration of Contractors,  
License No.\_\_\_\_\_ Expiration Date\_\_\_\_\_.

DATED:\_\_\_\_\_, 20\_\_\_\_

Address:\_\_\_\_\_

Phone:\_\_\_\_\_

X\_\_\_\_\_  
Signature of Bidder

NOTE: If bidder is a corporation, the legal name of the corporation shall be set forth above together with the signature of the officers authorized to sign contracts on behalf of the corporation; if bidder is a co partnership, the true name of the firm shall be set forth above together with the signature of the partner or partners authorized to sign contracts in behalf of the co partnership; and, if bidder is an individual, his signature shall be placed above. If a signature is by an agent other than an officer of a corporation or a member of the partnership, a Power of Attorney must be on file with the City Clerk prior to opening or submitted with the bid; otherwise, the bid will be disregarded as irregular and unauthorized.

## AFFIDAVIT

The undersigned bidder, being first duly sworn, deposes and says that he/she are the party making the foregoing proposal or bid, that this bid is genuine and not collusive or sham, that said bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any other person or bidder, to put in a sham bid, or that said other person shall refrain from bidding, and has not in any manner sought by collusion to secure any advantage against the said City or any person interested in said improvement, for him/herself or any other person.

X

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

Jurat (Government Code Section 8202)

State of California

County of \_\_\_\_\_

Subscribed and sworn to (or affirmed) before me on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

by \_\_\_\_\_ proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

(AFFIX SEAL)

\_\_\_\_\_  
NOTARY PUBLIC SIGNATURE

\_\_\_\_\_  
NOTARY PUBLIC PRINTED NAME

## INFORMATION REQUIRED OF BIDDER

The bidder is required to provide the following information. Additional sheets may be attached if necessary.

Contractor's mailing address: \_\_\_\_\_

Contractor's telephone number: \_\_\_\_\_

Number of years experience as a contractor in construction work or installation work similar to that required in these specifications:

---

Name of person who inspected the site of the proposed work for your firm:

---

Date of Inspection: \_\_\_\_\_

List at least four projects completed as of recent date:

Project No. and Title: \_\_\_\_\_

Class and Type of Work: \_\_\_\_\_

Name, Address, and Phone No. of Owner \_\_\_\_\_

Registered Engineer in Charge of Project: \_\_\_\_\_

Total Contract amount: \_\_\_\_\_

Contract amount you performed: \_\_\_\_\_

Name of Prime Contractor if you were Sub: \_\_\_\_\_

Date Completed: \_\_\_\_\_

Liquidated Damages Assessed: \_\_\_\_\_

Project No. and Title: \_\_\_\_\_

Class and Type of Work: \_\_\_\_\_

Name, Address, and Phone No. of Owner \_\_\_\_\_

Registered Engineer in Charge of Project: \_\_\_\_\_

Total Contract amount: \_\_\_\_\_

Contract amount you performed: \_\_\_\_\_

Name of Prime Contractor if you were Sub: \_\_\_\_\_

Date Completed: \_\_\_\_\_

Liquidated Damages Assessed: \_\_\_\_\_

Project No. and Title: \_\_\_\_\_  
Class and Type of Work: \_\_\_\_\_  
Name, Address, and Phone No. of Owner \_\_\_\_\_  
Registered Engineer in Charge of Project: \_\_\_\_\_  
Total Contract amount: \_\_\_\_\_  
Contract amount you performed: \_\_\_\_\_  
Name of Prime Contractor if you were Sub : \_\_\_\_\_  
Date Completed: \_\_\_\_\_  
Liquidated Damages Assessed: \_\_\_\_\_

Project No. and Title: \_\_\_\_\_  
Class and Type of Work: \_\_\_\_\_  
Name, Address, and Phone No. of Owner \_\_\_\_\_  
Registered Engineer in Charge of Project: \_\_\_\_\_  
Total Contract amount: \_\_\_\_\_  
Contract amount you performed: \_\_\_\_\_  
Name of Prime Contractor if you were Sub : \_\_\_\_\_  
Date Completed: \_\_\_\_\_  
Liquidated Damages Assessed: \_\_\_\_\_

## BIDDER'S BOND

KNOW ALL MEN BY THESE PRESENTS:

That we \_\_\_\_\_ as  
BIDDER, and \_\_\_\_\_ as  
SURETY a corporation duly organized under the laws of the State of \_\_\_\_\_  
and duly licensed to become sole Surety on bonds required and authorized by the State of California, as  
SURETY, are held and firmly bound unto the City of Turlock, hereinafter called the City, in the penal  
sum of TEN PERCENT (10%) OF THE TOTAL AMOUNT OF THE BID of the Bidder above named,  
submitted by said Bidder to the City, for the work described below, for the payment of which sum in  
lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors,  
administrators and successors, jointly and severally, firmly by these presents. In no case shall the liability  
of the Surety hereunder exceed the sum \_\_\_\_\_

Dollars (\$ \_\_\_\_\_)).

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, whereas the bidder has submitted the  
above-mentioned bid to the City for certain construction specifically described as follows for which bids  
are to be opened at Municipal Services Department, City Hall, 156 S. Broadway Suite 150, Turlock,  
California, on

\_\_\_\_\_, \_\_\_\_\_, 20\_\_\_\_\_. at \_\_\_\_\_.  
(day) (date) (time)  
for

Project No. 23-068 Package 3  
Roads Program Capital Improvement Project

NOW, THEREFORE, if the aforesaid Bidder is awarded the contract and, within the time manner  
required under the specifications after the prescribed forms are presented to him for signature, enters  
into a written contract in the prescribed form in accordance with the bid, and files the two bonds with  
the City, one to guarantee faithful performance and the other to guarantee payment for labor and  
materials as required by law, then obligation shall be null and void; otherwise, it shall be and remain in  
full force and virtue.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall  
pay all costs incurred by the Obligee in such a suit, including a reasonable attorney's fee to be fixed by  
the court.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on  
this \_\_\_\_\_ day of \_\_\_\_\_, 202\_.

BIDDER

\_\_\_\_\_  
(SEAL)  
(Bidder's Name and Corporate Seal)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Print Name and Title)

(ATTACH ACKNOWLEDGMENT OF BIDDER)

SURETY

\_\_\_\_\_  
(SEAL)  
(Surety's Name and Corporate Seal)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Print Name and Title)

(ATTACH ACKNOWLEDGMENT OF SURETY'S  
ATTORNEY-IN-FACT)

NOTE: ATTACH CERTIFIED COPY OF POWER OF ATTORNEY

**SUB-CONTRACTORS**  
Project No. 23-068 Package 3  
Roads Program Capital Improvement Project

Prime Contractor: \_\_\_\_\_ DIR NUMBER: \_\_\_\_\_

Pursuant to California Public Contract Code §4100, the Bidder shall list each subcontractor who will perform Work or labor or who will render service to the prime Contractor in or about the construction of the Work or improvement, or a subcontractor duly licensed who, under subcontract to the prime Contractor, specially fabricates and installs a portion of the Work or improvement according to detailed Drawings contained in the Contract Documents, in an amount in excess of 1/2 of 1 percent of the prime Contractor's total Bid or, in the case of Bids or offers for the construction of streets or highways, including bridges, in excess of 1/2 of 1 percent of the prime Contractor's total Bid or \$10,000, whichever is greater. After the opening of Bids, no changes or substitutions will be allowed except as otherwise provided by law. The listing of more than one subcontractor for each item of Work to be performed with the words "and/or" will not be permitted.

IF NO SUBCONTRACTORS WILL FURNISH WORK, THEN WRITE "NONE" BELOW IN THE SPACE PROVIDED.

## IRAN CONTRACTING ACT CERTIFICATION

Reference: Public Contract Code Section 2200 et seq.

As required by California Public Contract Code Section 2204, the Contractor certifies subject to penalty for perjury that the option checked below relating to the Contractor's status in regard to the Iran Contracting Act of 2010 (Public Contract Code Section 2200 et seq.) is true and correct:

- The Contractor is not:
  - (i) identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203; or
  - (ii) a financial institution that extends, for 45 days or more, credit in the amount of \$20,000,000 or more to any other person or entity identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203, if that person or entity uses or will use the credit to provide goods or services in the energy sector in Iran.
- The City of Turlock has exempted the Contractor from the requirements of the Iran Contracting Act of 2010 after making a public finding that, absent the exemption, the City of Turlock will be unable to obtain the goods and/or services to be provided pursuant to the Contract.
- The amount of the Contract payable to the Contractor for the Project does not exceed \$1,000,000.

Bidder's Signature: \_\_\_\_\_

Bidder's Name and Title: \_\_\_\_\_

Firm: \_\_\_\_\_

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

Note: In accordance with Public Contract Code Section 2205, false certification of this form shall be reported to the California Attorney General and may result in civil penalties equal to the greater of \$250,000 or twice the Contract amount, termination of the Contract and/or ineligibility to bid on contracts for three years.



## AGREEMENT

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### FOR ROADS PROGRAM PUBLIC IMPROVEMENT PROJECT

**Project No. 23-068 Package 3**

#### **Roads Program Capital Improvement Project**

**THIS PUBLIC IMPROVEMENT AGREEMENT** (the “Agreement”) is entered into by and between the CITY OF TURLOCK, a California municipal corporation (“City”), and \_\_\_\_\_, a \_\_\_\_\_ (“Contractor”), on this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ (the “Effective Date”). City and Contractor may be collectively referred to herein as the “Parties” or individually as “Party.” There are no other parties to this Agreement.

#### **RECITALS**

- A. City seeks a duly qualified and licensed firm experienced in the construction of Project No. 23-068 Package 3 (the “Project”).
- B. The Project involves the expenditure of funds in excess of \$5,000 and constitutes a “public project” pursuant to Public Contract Code section 20161.
- C. Contractor has made a proposal to City to provide construction services, a copy of which is attached and incorporated hereto as Exhibit A (the “Services”).
- D. City has determined it is necessary and desirable to employ the services of Contractor to perform construction work on the Project.
- E. City has taken appropriate proceedings to authorize construction of the Project and execution of this contract pursuant to Public Contract Code section 20160 et seq.; specifically, on \_\_\_\_\_, 20\_\_\_\_, at a duly noticed meeting of the City Council of the City of Turlock, this contract for the construction of the improvements hereinafter described was awarded to Contractor as the lowest responsive and responsible bidder for said improvements.

**NOW, THEREFORE**, in consideration of the promises and covenants set forth below, the Parties agree as follows:

## **AGREEMENT**

**1. Contract Documents:** This Agreement, together with the following documents, are collectively referred to herein as the “Contract Documents”:

- i. Notice to Bidders;
- ii. Contractor’s Bid or Proposal accepted by City;
- iii. Special Provisions of the City of Turlock for Project No. 23-068 Package 3;
- iv. Plans and detailed drawings prepared for this Project and approved by City (“Project Plans”);
- v. All bonds and insurance required by the Contract Documents;
- vi. Any and all supplemental agreements amending, decreasing, or extending the work contemplated or which may be required to complete the work in a substantial and acceptable manner; and
- vii. The current edition of the City of Turlock Standard Specifications and Drawings.

All of the Contract Documents are intended to incorporate the terms of the others so that any work called for in one and not mentioned in the other, or vice versa, is to be executed the same as if mentioned in all said documents. The documents comprising the complete contract will hereinafter be referred to as the “Contract.” In case of any dispute regarding the terms of the Contract, the decision of the City Engineer shall be final.

**2. Term.** The Contract shall be effective as of the Effective Date first stated above. Contractor shall not commence work on the Project until it has been given notice by City (“Notice to Proceed”). The Contract shall terminate one (1) year(s) after City accepts Contractor’s performance of the Services by recording a Notice of Completion with the County of Stanislaus Clerk Recorder (the “Term”), unless the Parties mutually agree in writing to terminate the Contract earlier or extend the Term in an agreed writing executed by both Parties.

**3. Scope of Work.**

(a) *Services.* Contractor shall perform the Services described in Exhibit A, subject to all terms and conditions in the Contract. Contractor shall not receive additional compensation for the performance of any Services not described therein.

(b) *Modification.* City, at any time, by written order, may make changes within the general scope of the work under this Agreement or issue additional instructions, require additional work or direct deletion of work. Contractor shall not proceed with any change involving an increase

or decrease in the Contract Price, as defined in Section 4 of this Agreement, without prior written authorization from City. Contractor shall not be entitled to compensation for the performance of any such unauthorized work. Contractor further waives any and all right or remedy by way of restitution or quantum meruit for any and all extra or changed work performed without express and prior written authorization of City. Notwithstanding the foregoing, Contractor shall promptly commence and diligently complete any change to the work subject to City's written authorization issued pursuant to this Section ; Contractor shall not be relieved or excused from its prompt commencement of diligent completion of any change subject to City's written authorization by virtue of the absence or inability of Contractor and City to agree upon the extent of any adjustment to the completion schedule or Contract Price on account of such change. The issuance of a change order pursuant to this Section 3 in connection with any change authorized by City shall not be deemed a condition precedent to Contractor's obligation to promptly commence and diligently complete any such change authorized by City hereunder. City's right to make changes shall not invalidate the Contract nor relieve Contractor of any liability or other obligations under the Contract. Any requirement of notice of changes in the scope of work to Contractor's surety shall be the responsibility of Contractor.

(c) *Specific Materials & Performance of Work.* Contractor shall furnish all tools, equipment, facilities, labor, and materials necessary to perform and complete, in good workmanlike manner, the work of general construction as called for and in the manner designated in, and in strict conformity with, the plans and specifications for said work entitled, "Special Provisions for **Project No. 23-068 Package 3.**" The equipment, apparatus, facilities, labor, and material shall be furnished, and said work performed and completed as required by the Contract under the direction and supervision, and subject to the approval, of the City Engineer or City Engineer's designated agent.

(d) *Exhibits.* All "Exhibits" referred to below or attached hereto are, by this reference, incorporated into the Contract.

<u>Exhibit Designation</u>	<u>Exhibit Title</u>
1. Exhibit A	Scope of Services
2. Exhibit B	Payment by Force Account
3. Exhibit C	Workers' Compensation Insurance Certification
4. Exhibit D	Performance Bond
5. Exhibit E	Payment Bond

**4. Contract Price.** City shall pay, and Contractor shall accept in full payment for the work set forth above in Section 3, Scope of Work, an amount not to exceed \_\_\_\_\_  
**Dollars (\$\_\_\_\_\_ .00)** (the "Contract Price"). Said amount shall be paid pursuant to Section 8 of this Agreement. The Contract Price may only be changed by a contract change order. The value of any work covered by a contract change order for an adjustment in the Contract Price will be determined in the sole discretion of City as follows:

(a) If the work performed is on the basis of unit prices contained in the Contract Documents, the change order will be determined in accordance with the provisions in Section 4-1.05, "Changes and Extra Work", of the Caltrans Standard Specifications, as applicable; or

(b) If the work performed is not included on the engineer's estimate associated with a unit price, the change order will be by a mutually agreed lump sum; or

(c) If the change order is not determined as described above in either subdivision (a) or (b), the change order will be determined on the basis of force account in accordance with the provisions set forth in Exhibit B, "Payment by Force Account," attached hereto and incorporated herein by reference.

**5. Time for Performance.** The time fixed for the commencement of work under the Contract is within ten (10) working days after the Notice to Proceed has been issued. The work on this project, including all punch list items, shall be completed on or before the expiration of **one hundred forty (140) working days (the "Completion Date")** beginning on the first day of work or no later than the tenth day after the Notice to Proceed has been issued.

(a) *Right of City to Increase Working Days:* If Contractor fails to complete the Services by the Completion Date, the City Engineer shall have the right to increase the number of working days in the amount the City Engineer may determine will best serve the interests of City, and if the City Engineer desires to increase said number of working days, the City Engineer shall have the further right to charge Contractor and deduct from the final payment for the work the actual cost of engineering, inspection, superintendence, and other overhead expenses which are directly chargeable to Contractor, and which accrue during the period of such extension, except that the cost of the final service and preparation of the final estimates shall not be included in such charges. No extension of time for completion of Services under the Contract shall be considered unless requested by Contractor at least twenty (20) calendar days prior to the Completion Date, in writing, to the City Engineer.

The Completion Date may only be changed by a contract change order. The value of any work covered by a contract change order for an adjustment in the Completion Date will be determined as follows:

- i. Additional working days will be awarded where the amount of time is mutually agreed upon by Contractor and the City Engineer; or
- ii. Additional working days will be awarded where Contractor is prevented from completing any part of the work identified on the critical path and:
  1. where the delay is caused by acts of public enemy, fire, floods, tsunamis, earthquakes, epidemics, quarantine restrictions, strikes, labor disputes, shortage of materials and freight embargos, provided that Contractor shall notify Engineer in writing of the causes of delay within fifteen (15) days from the beginning of that delay; or
  2. where the delay is caused by actions beyond the control of Contractor; or
  3. where the delay is caused by actions or failure to act by the City Engineer.

Contractor shall not be entitled to an adjustment in the Completion Date for delays within the control of Contractor. Delays resulting from and within the control of a subcontractor or supplier of Contractor shall be deemed to be delays within the control of Contractor.

(b) *Excusable Delays.* Contractor shall not be in breach of the Contract in the event that performance of Services is temporarily interrupted or discontinued due to a "Force Majeure" event which is defined as: riots, wars, sabotage, civil disturbances, insurrections, or explosions; natural disasters, such as floods, earthquakes, landslides, and fires; strikes, lockouts, and other labor disturbances; or other catastrophic events, which are beyond the reasonable control of Contractor. Force Majeure does not include Contractor's financial inability to perform, Contractor's failure to obtain any necessary permits or licenses from other governmental agencies, or Contractor's failure to obtain the right to use the facilities of any public utility where such failure is due solely to the acts or omissions of Contractor. If Contractor's performance of the Services is delayed by an excusable delay, the Completion Date shall be extended for such reasonable time as determined by the City Engineer. Extensions in time must be requested by Contractor within fifteen (15) calendar days of the excusable delay in order to receive consideration.

(c) *Emergency - Additional Time for Performance - Procurement of Materials.* If, because of war or other declared national emergency, the federal or state government restricts, regulates, or controls the procurement and allocation of labor or materials, or both, and if solely because of said restrictions, regulations or controls, Contractor is, through no fault of Contractor, unable to perform the Services, or the work is thereby suspended or delayed, any of the following steps may be taken:

- i. City may, pursuant to resolution of the City Council, grant Contractor additional time for the performance of the Contract, sufficient to compensate in time, for delay or suspension.

To qualify for such extension in time, Contractor within ten (10) days of Contractor's discovering such inability to perform, shall notify the City Engineer in writing thereof, and give specific reasons therefore; the City Engineer shall thereupon have sixty (60) days within which to procure such needed materials or labor as is specified in this agreement, or permit substitution, or provide for changes in the work in accordance with subdivision (b) of this Section.

Substituted materials, or changes in the work, or both, shall be ordered in writing by the City Engineer, and the concurrence of the City Council shall not be necessary. All reasonable expenses of such procurement incurred by the City Engineer shall be defrayed by the Contractor; or

- ii. If such materials or labor cannot be procured through legitimate channels within sixty (60) days after the filing of the aforesaid notice, either Party may, upon thirty (30) days' written notice to the other, terminate this agreement. In such event, Contractor shall be compensated for all work executed upon a unit basis in proportion to the amount of the work completed, or upon a cost-plus-ten-percent

(10%) basis, whichever is the lesser. Materials on the ground, in process of fabrication or in route upon the date of notice of termination specially ordered for the Project and which cannot be utilized by Contractor, shall be compensated for by City at cost, including freight, provided Contractor shall take all steps possible to minimize this obligation; or

- iii. The City Council, by resolution, may suspend the Contract until the cause of inability to perform is removed for a period of not to exceed sixty (60) days.

If the Contract is not canceled, and the inability of Contractor to perform continues without fault on Contractor's part, beyond the time during which the Contract may have been suspended, as herein above provided, the City Council may further suspend the Contract, or either Party hereto may, without incurring any liability, elect to declare the Contract terminated upon the ground of impossibility of performance. In the event City declares this agreement terminated, such declaration shall be authorized by the City Council by resolution, and Contractor shall be notified in writing thereof within five (5) days after the adoption of such resolution. Upon such termination, Contractor shall be entitled to proportionate compensation at the Contract Price for such portion of the Contract as may have been performed; or

- iv. City may terminate the Contract, in which case Contractor shall be entitled to proportionate compensation at the agreed rate for such portion of the Contract as may have been performed. Such termination shall be authorized by resolution of the City Council. Notice thereof shall be forthwith given in writing to Contractor, and the Contract shall be terminated upon receipt by Contractor of such notice.

In the event of the termination provided in this sub-paragraph (iv), none of the covenants, conditions or provisions hereof shall apply to the Services not performed, and City shall be liable to Contractor for the proportionate compensation last herein mentioned.

*(d) Delay Damages.* In the event Contractor, for any reason, fails to perform the Services to the satisfaction of the City Engineer by the Completion Date, City may, in accordance with Section 7203 of the Public Contract Code, in lieu of any other of its rights authorized by Section 6 of this agreement, deduct from payments or credits due Contractor after such breach a sum equal to **six thousand seven hundred and no/100ths Dollars (\$6,700.00)** for each calendar day beyond the Completion Date. This deduction shall not be considered a penalty but shall be considered as delay damages. The aforementioned rate of deduction is an amount agreed to by the Parties as reasonably representing additional construction engineering costs incurred by City if Contractor fails to complete the Services by the Completion Date. However, any deduction assessed as delay damages shall not relieve Contractor from liability for any damages or costs resulting from delays to other contractors on the project or other projects caused by a failure of the assessed Contractor to complete the Services by the Completion Date. Due account shall be taken of any time extensions granted to Contractor by City. Permitting Contractor to continue work beyond the Completion Date shall not operate as a waiver on the part of City of any of its rights under the Contract nor shall it relieve Contractor from

liability for any damages or costs resulting from delays to other contractors on the project or other projects caused by a failure of the assessed Contractor to complete the Services by the Completion Date.

## 6. Termination.

(a) *Option of City to Terminate Contract for Failure to Complete Services.* If a Party should fail to perform any of its obligations hereunder within the time and in the manner herein provided, or otherwise violates any of the terms of the Contract (the “Defaulting Party”), the other Party shall give notice to the Defaulting Party and allow the Defaulting Party ten (10) days to correct such deficiency. If the Defaulting Party does not correct such deficiency, the other Party may immediately terminate the Contract by giving written notice of such termination, stating the reason for such termination. In such event, Contractor shall be entitled to receive payment for all Services satisfactorily rendered until such termination, provided, however, there shall be deducted from such amount the amount of damage, if any, sustained by virtue of any breach of the Contract by Contractor, including Delay Damages. If payment under the Contract is based upon a lump sum in total or by individual task, payment for Services satisfactorily rendered shall be an amount which bears the same ratio to the total fees specified in this Agreement as the Services satisfactorily rendered hereunder by Contractor to the total services otherwise required to be performed for such total fee, provided, however, that there shall be deducted from such amount the amount of damage, if any sustained by City by virtue of any breach of the Contract by Contractor. Upon termination, Contractor shall deliver copies of all Work Product, as defined in Section 19 of this Agreement, to City. If District terminates the Contract before Contractor commences any Services hereunder, City shall not be obligated to make any payment to Contractor.

(b) If Contractor should be adjudged bankrupt or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, or if it or any of its subcontractors should violate any of the provisions of the Contract, City may serve written notice upon it and its surety of its intention to terminate the Contract. Such notice shall contain the reasons for City’s intention to terminate the Contract, and unless such violations shall cease within five (5) calendar days after serving of such notice, the Contract shall cease and terminate upon the expiration of said five (5) calendar days. In the event of any such termination, City shall immediately serve written notice thereof upon the surety and Contractor, and the surety shall have the right to take over and perform the Contract; provided however, that, if the surety does not give City written notice of its intention to take over and perform the Contract or does not commence performance thereof within thirty (30) calendar days from the date of the service of such notice, City may take over the work and prosecute the same to completion by contract or any other method it may deem advisable, for the account and at the expense of Contractor, and Contractor and its surety shall be jointly liable to City for any excess cost occasioned City thereby, and in such event City may, without liability for so doing, take possession of and utilize in completing the work, such materials, appliances, and other property belonging to Contractor as may be on the Project site and necessary thereof.

7. **Liability for Breach:** Neither Party waives the right to recover direct damages against the other for breach of the Contract, including any amount necessary to compensate City for all detriment proximately caused by Contractor's failure to perform its obligations hereunder or which in the ordinary course of things would be likely to result therefrom. City reserves the right to offset such

damages against any payments owed to Contractor. City shall not, in any manner, be liable for special or consequential damages, including but not limited to Contractor's actual or projected lost profits had Contractor completed the Services required by the Contract. In the event of termination by either Party, copies of all finished or unfinished Work Product, as defined in Section 19 of this Agreement, shall become the property of City. Notwithstanding the foregoing, in no event shall City be liable, regardless of whether any claim is based on contract or tort, for any special, consequential, indirect or incidental damages, including, but not limited to, lost profits or revenue, arising out of or in connection with the Contract or the Services performed in connection with the Contract.

## **8. Compensation:**

City shall make payments to Contractor in accordance with the provisions of Section 9 of the City Standard Specifications in legally executed and regularly issued warrants of City, drawn on the appropriate fund or funds as required by law and order of the City Council thereof. Contractor shall be administered a progress payment approximately every thirty (30) calendar days from the time work begins according to the payment schedule furnished by the City Engineer at the time work begins. Contractor shall provide access at all reasonable times to all reports, contract records, contract documents, contract files, and personnel necessary to audit and verify Contractor's charges to City under this Contract.

Monthly progress payments in the amount of 95 percent (95%) of the value of the work will be made to Contractor based on the Contractor's estimate and the schedule of prices contained in the accepted bid. The remaining 5 percent (5%) will be retained by City as partial security for the fulfillment of the Contract except that at any time after 50 percent (50%) of the work has been completed, if the City Engineer finds that satisfactory progress is being made and the Project's critical path of work are on schedule, City may discontinue any further retention. Such discontinuance will only be made upon the written request of Contractor. City may, at any time the City Engineer finds that satisfactory progress is not being made, again institute retention of 5 percent (5%) as specified above. Payment will be made as soon as possible after the preparation of the Contractor's estimate. City shall pay the remaining 5 percent (5%) of the value of the Services completed under this Contract, if unencumbered by retentions for claims, not sooner than the expiration of thirty-five (35) calendar days from the date of recordation of the Notice of Completion, pursuant to Section 2 of this agreement, and not later than sixty (60) days from the "completion" of the Services as said term is defined in Public Contract Code section 7107(c).

No estimate or payment shall be made if, in the judgment of the City Engineer, the work is not proceeding in accordance with the provisions of the Contract, or when, in his judgment, the total value of the work done since the last estimate amounts to less than \$1,000. No progress payments will be made if the time allotted for the job is thirty (30) working days or less. Payment of any progress payment, or the acceptance thereof by Contractor, shall not constitute acceptance of the work performed under this Contractor, or any portion thereof, and shall in no way reduce the liability of Contractor to replace unsatisfactory work or materials, though the unsatisfactory character of such work or materials may not have been apparent or detected at the time such payment was made.

Additionally, as a precondition to City's progress payments hereunder, Contractor shall provide to City, prior to payment, unconditional waivers and releases of stop notices pursuant to Civil Code section 8128 et seq. from each subcontractor and materials supplier. The form of said waivers and releases shall be as set forth in Civil Code section 3262(d)(2).

Pursuant to Public Contract Code section 22300 et seq., Contractor may request the right to substitute securities for any moneys withheld by City to ensure the performance required of Contractor under the Contract, or that City make payment of retentions earned directly into an escrow account established at the expense of Contractor.

## **9. Disputes Pertaining to Payment for Work:**

Should any dispute arise respecting the true value of any work performed, of any work omitted, or of any extra work which Contractor may be required to do, or respecting the size of any payment to Contractor during the performance of the Contract, such dispute shall be decided by the City Engineer, and the decision of the latter shall be final and conclusive. The Parties agree to comply with the claims resolution procedures set forth in Public Contract Code section 9204 when applicable.

(a) *Claims Processing.* Any submission of a claim by Contractor must comply with the requirements of Public Contract Code section 9204. Upon receipt of a claim pursuant to this section, City shall conduct a reasonable review of the claim and, within a period not to exceed forty-five (45) days, shall provide Contractor a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, the Parties may, by mutual agreement, extend the time period provided in this subdivision. Contractor shall furnish reasonable documentation to support the claim. Any payment due on an undisputed portion of the claim shall be processed and made within sixty (60) days after City issues its written statement. If Contractor disputes City's written response, or if City fails to respond to a claim issued pursuant to this section within the time prescribed, Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute.

(b) *Meet-and-Confer Conference.* Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, City shall schedule a meet-and-confer conference within thirty (30) days for settlement of the dispute. Within ten (10) business days following the conclusion of the meet-and-confer conference, if the claim or any portion of the claim remains in dispute, City shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within sixty (60) days after the City issues its written statement.

(c) *Nonbinding Mediation.* Any disputed portion of the claim, as identified by Contractor in writing, shall be submitted to nonbinding mediation, with the Parties sharing the associated costs equally. The Parties shall mutually agree to a mediator within ten (10) business days after the disputed portion of the claim has been identified in writing. If the Parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each Party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject judicial review pursuant to Section 23 of this Agreement.

Notwithstanding any claim, dispute, or other disagreement between the Parties regarding performance under the Contract, the scope of work hereunder, or any other matter arising out of or related to, in any manner, the Contract, Contractor shall proceed diligently with performance of the

Services in accordance with City's written direction, pending any final determination or decision regarding any such claim, dispute, or disagreement.

## **10. Permits and Care of Work:**

Contractor shall, at Contractor's expense, obtain all necessary permits and licenses for the construction of each improvement, give all necessary notices and pay all fees and taxes required by law, except those City fees set forth in Section 1 of the Special Provisions. Contractor has examined the Project site and is familiar with its topography and condition, location of property lines, easements, building lines, and other physical factors and limitations affecting the performance of the Contract. Contractor, at Contractor's expense, shall obtain any permission necessary for any operations conducted off the property owned or controlled by City. Contractor shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance.

## **11. Public Works and Payment of Prevailing Wage:**

(a) *Monitoring and Enforcement.* In accordance with the provisions of Sections 1725.5, 1771.1, 1771.3, and 1771.4 of the Labor Code, all work performed under the Contract is subject to compliance monitoring and enforcement by the Department of Industrial Relations ("DIR"). All work performed by Contractor or its subcontractors under the Contract is subject to the requirements of Labor Code section 1720 et seq. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 of the Labor Code at the time the contract is awarded. Contractor and its subcontractors shall furnish the records specified in Section 1776 of the Labor Code directly to the Labor Commissioner, at least monthly, in the format prescribed by the Labor Commissioner.

In accordance with the provisions of Section 1773.3 of the Labor Code, City shall provide notice to DIR of the award of this Contract within thirty (30) working days of the award. The notice shall be transmitted electronically in a format specified by DIR and shall include the name of Contractor, any subcontractor listed on the successful bid, the bid and contract award dates, the contract amount, the estimated start and completion dates, Project location, and any additional information DIR specifies that aids in the administration and enforcement of Section 1720 et seq. of the Labor Code.

(b) *Wages & Hours of Employment:* In the performance of the Services under the Contract, eight (8) hours shall be the maximum hours of labor on any calendar day, and the minimum wages of compensation of persons performing labor in the execution of this agreement shall be the current prevailing scale of wages determined by DIR for the community. Contractor shall forfeit as penalty Twenty-five and no/100ths Dollars (\$25.00) to be paid to City for each workman employed in the execution of the Contract by Contractor or its subcontractor(s), for each calendar day during which any workman is required or permitted to labor more than eight (8) hours, in violation of provisions of Labor Code section 1810 et seq. Contractor shall post prevailing wage rates at the Project no later than the first day Contractor commences performance of the Services under the Contract.

**12. Superintendence by Contractor:** Contractor shall give personal superintendence to the work on the Project or have a competent foreman or superintendent satisfactory to the City Engineer on the Project at all times during construction and performance of work under the Contract, with authority to act for Contractor.

**13. Inspection and Testing by City:** Contractor shall at all times maintain proper facilities and provide safe access for inspection by City to all parts of the work performed on the Project and to the shops wherein the work is in preparation. Contractor shall notify City with sufficient time in advance of the manufacture of production materials to be supplied by Contractor under the Contract in order for City to arrange for mill or factory inspection and testing of same. Any materials shipped by Contractor from factory prior to having satisfactorily passed such testing and inspection by City's representative or prior to the receipt of notice from such representative that such testing and inspection will not be required shall not be incorporated on the Project. Contractor shall also furnish to City, in triplicate, certified copies of all factory and mill test reports upon request.

**14. Conformity with Law and Safety:** Contractor shall observe and comply with all applicable laws, ordinances, codes, and regulations of governmental agencies, including federal, state, municipal, and local governing bodies having jurisdiction over any or all of the scope of Services, including all provisions of the Occupational Safety and Health Act of 1979 as amended, all California Occupational Safety and Health Regulations, the California Building Code, the American with Disabilities Act, any copyright, patent, or trademark law, and all other applicable federal, state, municipal, and local safety regulations, appropriate trade association safety standards, and appropriate equipment manufacturer instructions. All Services performed by Contractor or its subcontractors must be in accordance with these laws, ordinances, codes, and regulations. Contractor's failure to comply with any laws, ordinances, codes, or regulations applicable to the performance of the Services hereunder shall constitute a breach of contract. In cases where standards conflict, the standard providing the highest degree of protection shall prevail.

If a death, serious personal injury or substantial property damage occurs in connection with the performance of the Contract, Contractor shall immediately notify City's risk manager by telephone. If any accident occurs in connection with the Contract, Contractor shall promptly submit a written report to City, in such form as City may require. This report shall include the following information: (a) name and address of the injured or deceased person(s); (b) name and address of Contractor's subcontractor, if any; (c) name and address of Contractor's liability insurance carrier; and (d) a detailed description of the accident, including whether any of City's equipment, tools, or materials were involved.

If a release of a hazardous material, substance, or waste occurs in connection with the performance of the Contract, Contractor shall immediately notify City. Contractor shall not store hazardous materials or hazardous waste within City limits without a proper permit from City.

**15. Other Contracts:** City may award other contracts for additional work on the Project, and Contractor shall fully cooperate with such other contractors and carefully fit Contractor's own work to that provided under other contracts as may be directed by the City Engineer. Contractor shall not commit or permit any act which will interfere with the performance of work by any other contractor.

**16. Bonds:** Concurrently with the execution hereof, Contractor shall furnish, on the forms provided herein as **Exhibits D and E**, respectively, corporate surety bonds to the benefit of City, issued by a surety company acceptable to City and authorized and admitted to do business in the state of California, as follows:

(a) *Faithful Performance Bond.* In an amount equal to at least one hundred percent (100%) of the Contract Price as security for the faithful performance of the Contract. The bond shall contain a provision that the surety thereon waives the provisions of Sections 2819 and 2845 of the Civil Code.

(b) *Payment Bond.* In an amount equal to at least one hundred percent (100%) of the Contract Price as security for the payment of all persons performing labor and furnishing materials in connection with the Contract. The bond shall be in accordance with the provisions of Sections 3225, 3226, and 3247 through 3252, inclusive, of the Civil Code and Section 13020 of the Unemployment Insurance Code of California. Said bond shall also contain a provision that the surety thereon waives the provisions of Sections 2819 and 2845 of the Civil Code.

The surety companies shall familiarize themselves with all provisions and conditions of the Contract. It is understood and agreed that the surety or sureties waive the right of special notification of any modification or alterations, omissions or reductions, extra or additional work, extensions of time, or any other act or acts by City or its authorized agents under the terms of this Contract and failure to so notify the surety or sureties of such changes shall in no way relieve the surety or sureties of their obligations under the Contract.

## **17. Indemnification:**

(a) *Indemnity for Professional Liability.* When the law establishes a professional standard of care for Contractor's Services, to the fullest extent permitted by law, Contractor shall indemnify, protect, defend, and hold harmless City and any and all of its elective and appointive boards, officers, officials, agents, employees or volunteers ("City's Agents") from and against any and all losses, liabilities, damages, costs, and expenses, including legal counsel's fees and costs but only to the extent Contractor or its subcontractors are responsible for such damages, liabilities and costs on a comparative basis of fault between Contractor or its subcontractors and City in the performance of professional services under the Contract. Contractor shall not be obligated to defend or indemnify City for City's own negligence or for the negligence of others.

(b) *Indemnity for other than Professional Liability.* Other than in the performance of professional services and to the full extent permitted by law, Contractor shall indemnify, defend, and hold harmless City and any and City's Agents from and against any liability, including liability for claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, expenses or costs of any kind, whether actual, alleged or threatened, including legal counsel's fees and costs, court costs, interest, defense costs, and expert witness fees, where the same arise out of, are a consequence of, or are in any way attributable to, in whole or in part, the performance of the Contract by Contractor or by any individual or agency for which Contractor is legally liable, including, but not limited to, officers, agents, employees, or subcontractors of Contractor.

**18. Contractor's Insurance:** Concurrently with the execution hereof, Contractor shall furnish City with satisfactory proof of carriage of the insurance required under this section, and that Contractor shall give City at least thirty (30) days prior notice of the cancellation of any policy during the Term of this contract. Contractor shall not commence work under this Agreement until Contractor has obtained City's approval regarding all insurance requirements, forms, endorsements, amounts, and carrier ratings, nor shall Contractor allow any subcontractor to commence work on a subcontract until all similar insurance required of the subcontractor shall have been so obtained and approved. Contractor shall procure and maintain for the duration of the Contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Services hereunder by Contractor, its agents, representatives, employees or subcontractors. Failure to maintain or renew coverage or to provide evidence of renewal may constitute a material breach of the Contract. Any available insurance proceeds in excess of the specified minimum limits and coverage shall be available to City. The City of Turlock shall be named as a certificate holder.

(a) *General Liability Insurance.* Contractor shall maintain commercial general liability insurance with coverage at least as broad as Insurance Services Office form CG 00 01, in an amount not less than Two Million Dollars (\$2,000,000.00) per occurrence, Four Million Dollars (\$4,000,000.00) general aggregate, and Two Million Dollars (\$2,000,000.00) products and completed operations aggregate for bodily injury, personal injury, and property damage, including, without limitation, blanket contractual liability and coverage for explosion, collapse, and underground property damage hazards. The general aggregate limit shall apply separately to this Project or the general aggregate shall be doubled. Contractor's general liability policies shall be primary and not seek contribution from City's coverages and be endorsed using Insurance Services Office form CG 20 10 to provide that City and its officers, officials, employees, and agents shall be additional insureds under such policies. For construction contracts, an endorsement providing completed operations to the additional insured, ISO form CG 20 37, is also required. The policy shall contain, or be endorsed to contain, the following provisions:

- (1) City, its elective and appointive boards, officers, agents, employees, and volunteers are to be covered as additional insureds with respect to liability arising out of work or operations performed by or on behalf of Contractor, including materials, parts or equipment furnished in connection with such work or operations, which coverage shall be maintained in effect for at least three (3) years following the completion of the work specified in the Contract. General liability coverage can be provided in the form of an endorsement to Contractor's insurance (at least as broad as CG 20 10 for ongoing operations and CG 20 37 for products/completed operations for construction services), or as a separate Owners and Contractors Protective Liability policy providing both ongoing operations and completed operations coverage.
- (2) For any claims related to the Project, Contractor's insurance coverage shall be primary insurance as respects City and any insurance or self-insurance maintained by City shall be excess of Contractor's insurance and shall not contribute with it.

- (3) In the event of cancellation, non-renewal, or material change that reduces or restricts the insurance coverage afforded to City under the Contract, the insurer, broker/producer, or Contractor shall provide City with thirty (30) days' prior written notice of such cancellation, non-renewal, or material change.
- (4) Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under Subdivision (b) of Section 2782 of the Civil Code.

(b) *Workers' Compensation Insurance.* Contractor shall maintain Workers' Compensation Insurance (Statutory Limits) and Employer's Liability Insurance with limits of at least One Million Dollars (\$1,000,000.00) each accident or disease. Contractor shall submit to City, along with the certificate of insurance, a Waiver of Subrogation endorsement in favor of City, its officers, agents, employees, and volunteers.

(c) *Commercial Automobile Liability Insurance.* Contractor shall maintain automobile liability using ISO Business Auto Coverage form CA 00 01, or the exact equivalent, with a limit of no less than Two Million Dollars (\$2,000,000.00) each accident—for owned, leased, hired, non-owned, and borrowed automobiles. The policy shall provide and be endorsed that the City, its officials, officers, agents, employees, and volunteers are included or named as additional insureds. If Contractor owns no vehicles, this requirement may be met through a non-owned auto coverage or an endorsement to the CGL policy.

(d) *Builder's Risk Insurance.* {Intentionally Omitted}

(e) *Contractors Pollution Insurance.* Pollution Coverage shall be maintained on a Contractors Pollution Liability form, or other form acceptable to City, providing coverage for liability arising out of sudden, accidental, and gradual pollution and remediation. The policy limit shall be no less than Two Million Dollars (\$2,000,000.00) per claim. All activities contemplated in the Contract shall be specifically scheduled on the policy as "covered operations." The policy shall provide coverage for the hauling of waste from the Project site to the final disposal location, including non-owned disposal sites.

(f) *Professional Liability Insurance.* Contractor shall maintain professional liability insurance that insures against professional errors and omissions that may be made in performing the Services to be rendered in connection with the Contract, in the minimum amount of Two Million Dollars (\$2,000,000.00) per claim and in the aggregate. Any policy inception date, continuity date, or retroactive date must be before the effective date of this Agreement, and Contractor agrees to maintain continuous coverage through a period no less than three (3) years after completion of the services required by the Contract.

(g) *Umbrella or Excess Policy.* Contractor may use Umbrella or Excess Policies to provide the liability limits as required in this agreement. This form of insurance will be acceptable provided that all of the Primary and Umbrella or Excess Policies shall provide all of the insurance

coverages herein required. The Umbrella or Excess policies shall be provided on a true “following form” or broader coverage basis, with coverage at least as broad as provided on the underlying policies of insurance. No insurance policies maintained by the Additional Insureds, whether primary or excess, and which also apply to a loss covered hereunder, shall be called upon to contribute to a loss until the Contractor’s primary and excess liability policies are exhausted.

(h) *Deductibles and Self-Insured Retentions.* Upon request of City, any deductibles or self-insured retentions must be declared to and approved by City. At the option of City, either: (1) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects City and City’s Agents; or (2) Contractor shall provide a financial guarantee satisfactory to City guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

(i) *Acceptability of Insurers.* Insurance is to be placed with insurers admitted in California with a current A.M. Best’s rating of no less than A-:VII or with an insurer to which City has provided prior approval.

(j) *Verification of Coverage.* Contractor shall furnish City with original certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this Section 18. All certificates and endorsements are to be received and approved by City before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive Contractor’s obligation to provide them. City reserves the right, at any time, to require complete, certified copies of all required insurance policies and endorsements.

(k) *Waiver of Subrogation.* With the exception of professional liability, Contractor hereby agrees to waive subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss. The commercial general liability policy, automobile liability policy, and workers’ compensation policy shall be endorsed to contain a waiver of subrogation in favor of City for all work performed by Contractor, its agents, employees, independent contractors and subcontractors. Contractor shall provide written proof of waiver of subrogation in the Certificate of Insurance. Additionally, Contractor agrees to obtain any available endorsements that may be necessary to effectuate this waiver of subrogation.

(l) *Subcontractors.* Contractor shall ensure all subcontractors furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

**19. Ownership of Work Product:** Any and all work, artwork, copy, posters, billboards, photographs, videotapes, audiotapes, systems designs, software, reports, designs, specifications, drawings, diagrams, surveys, source codes, professional or technical information or data, photographs, notes, letters, emails, or any original works of authorship created by contractor or its subcontractors or subcontractors in connection with Services performed under the Contract (“Work Product”) shall be works for hire as defined under Title 17 of the United States Code, and all copyrights in such works are the property of City. In the event that it is ever determined that any Work Product created by Contractor or its subcontractors or subcontractors under the Contract are not works for hire under U.S. law, Contractor hereby assigns all copyrights to such Work Product to City. With the prior written approval of the City Engineer, Contractor may retain and use copies of such Work Product for reference and as documentation of its experience and capabilities.

All Work Product shall become the property of City irrespective of where located or stored and Contractor agrees to deliver all such documents and information to City, without charge and in whatever form it exists, upon the Completion Date, as may be extended. Contractor shall have no ownership interest in such Work Product.

All Work Product of Contractor under the Contract, including written information which City will cause to be distributed for either internal or public circulation, including both preliminary and final drafts, shall be delivered to City in both printed and electronic form, or as may be specific in Exhibit A.

When the Contract is terminated, Contractor agrees to return to City all documents, drawings, photographs, and other written or graphic material, however produced, that it received from City or City's Agents, in connection with the performance of its Services under the Contract. All materials shall be returned in the same condition as received.

**20. Taxes:** Payment of any taxes, including California sales and use taxes, levied upon the Contract, the transaction, or the Services or goods delivered pursuant hereto, shall be the obligation of Contractor. Contractor shall cooperate with City to the full extent possible to maximize the local allocation of California sales and use tax to City. Such cooperation shall include, but not be limited to:

(a) *Use Tax Direct Payment Permits.* Contractor shall apply for, obtain, and utilize, to the maximum extent reasonable, a California Use Tax Direct Payment Permit.

(b) *Purchases of \$500,000 or More.* Contractor shall require vendors and suppliers located outside California from whom Contractor makes purchases of \$500,000 or more to allocate the use tax to City.

**21. Independent Contractor:** At all times during the Term of the Contract, Contractor shall be deemed to be an independent contractor and shall be wholly responsible for the manner in which Contractor performs the Services required under the Contract. Contractor shall be liable for its acts and omissions, and those of its employees, contractors, subcontractors, representatives, volunteers, and its agents. Nothing contained herein shall be construed as creating an employment, agency, or partnership relationship between City and Contractor. City shall have the right to control Contractor only insofar as the result of Contractor's Services rendered pursuant to the Contract; however, City shall not have the right to control the means by which Contractor accomplishes Services rendered pursuant to the Contract.

**22. Contractor Not Agent:** Except as City may specify in writing, Contractor shall have no authority, express or implied, to act on behalf of City in any capacity whatsoever as an agent. Contractor shall have no authority, express or implied, pursuant to the Contract to bind City to any obligation whatsoever.

**23. Arbitration of Disputes:** All claims, disputes, and other matters in question between City and Contractor arising out of, or relating to, this Contract or the breach thereof, including claims of Contractor for extra compensation of Services related to the project, shall be decided by arbitration

before a single arbitrator in accordance with the provisions of Sections 1281 through 1284.2 of the Code of Civil Procedure (the “Arbitration Laws”) unless the Parties mutually agree otherwise. The provisions of Section 1283.05 of the Arbitration Laws apply to any arbitration proceeding except as otherwise provided in the Contract. The arbitrator shall have authority to decide all issues between

the Parties including, but not limited to, claims for extras, delay, and liquidated damages, if any, provided for the Contract, matters involving defects in the Services performed by Contractor or its subcontractors, rights to payment, and whether the necessary procedures for arbitration have been followed. The award rendered by the arbitrator shall be final and judgment may be entered upon it in accordance with applicable law in any court having competent jurisdiction thereof.

Notice of the demand for arbitration shall be filed in writing with the other Party. The demand for arbitration shall be made within a reasonable time after the claim, dispute, or other matter in question has arisen, and in no event shall it be made after the date when institution of legal or equitable proceedings based on such claim, dispute, or other matter in question would be barred by the applicable statute of limitations.

The parties shall jointly appoint an arbitrator within fifteen (15) calendar days of the date of giving the notice of the demand for arbitration. If the Parties are unable to jointly agree upon the appointment of an arbitrator within said fifteen (15) calendar day period, and do not agree in writing to extend said period for a fixed period, then either Party may seek to have the arbitrator appointed by the Superior Court of Stanislaus County in accordance with the Arbitration Laws.

If any proceeding is brought to contest the right to arbitrate and it is determined that such right exists, the losing Party shall pay all costs and attorney’s fees incurred by the prevailing Party.

In addition to the other rules of law which may be applicable to any arbitration hereunder, the following shall apply:

- (a) Promptly upon the filing of the arbitration, each Party shall be required to set forth in writing and to serve upon each other Party a detailed statement of its contentions of fact and law.
- (b) All Parties to the arbitration shall be entitled to the discovery procedures provided under Section 1283.05 of the California Code of Civil Procedure.
- (c) The arbitration shall be commenced and conducted as expeditiously as possible consistent with affording reasonable discovery as provided herein.
- (d) These additional rules shall be implemented and applied by the arbitrator.

The costs of arbitration shall be borne by the Parties as determined by the arbitrator, but each Party shall bear its own attorney’s fees associated with the dispute with the other Party and to the arbitration.

All administrative remedies required under Section 9 of this Agreement or pursuant to Public Contract Code section 9204, or required by any other law, shall be exhausted prior to commencement of any arbitration under this Section 23.

**24. Provisions Cumulative:**

The provisions of the Contract are cumulative, and in addition to and not in limitation of, any other rights or remedies available to City.

**25. Notices:** All notices shall be in writing and delivered in person or transmitted by certified mail, postage prepaid. Any Party hereto may at any time, by giving ten (10) days' written notice to the other Party hereto, designate any other address in substitution of the address to which such notice or communication shall be given. Such notices or communications shall be given to the Parties at their addresses set forth below.

If to City:

**City of Turlock**  
**Attn: Christopher Fisher, Municipal Services Director**  
**156 S. Broadway, Suite 150**  
**Turlock, CA 95380-5461**

With courtesy copies to:

**City of Turlock, City Attorney's Office**  
**Attn: George A. Petrulakis, City Attorney**  
**156 S. Broadway, Suite 230**  
**Turlock, CA 95380-5456**

If to Contractor:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If to Contractor's Sureties:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**26. City Contract Administrator:** The City's contract administrator and contact person for this Agreement is:

Fred Pezeshk, PE  
City of Turlock, Roads Program Manager  
156 S. Broadway, Suite 150  
Turlock, California 95380-5461  
Telephone: (209) 668-5520  
E-mail: [fpezeshk@turlock.ca.us](mailto:fpezeshk@turlock.ca.us)

**27. Interpretation:** As used herein, any gender includes each other gender, the singular includes the plural and vice versa.

**28. Antitrust Claims:** Contractor or its subcontractors offer and agree to assign to City all rights, title, and interest to any causes of action under Section Four of the Clayton Act and the Cartwright Act concerning antitrust claims.

**29. Use of City Project Number:** Contractor or its subcontractors agree to use the aforementioned City project number on all maps, drawings, submittals, billing, and written correspondence that involve City staff or contracted consultants. Nothing in this section shall preclude Contractor or its subcontractors from using their own project numbers for their own internal use.

**30. No Conflict of Interest:** Contractor represents that no conflict of interest will be created under state or federal law by entering into or in carrying out the Contract.

**31. Confidentiality:** Contractor understands and agrees that, in the performance of Services under the Contract, or in the contemplation thereof, Contractor may have access to private or confidential information that may be owned or controlled by City and that such information may contain proprietary or confidential details, the disclosure of which to third parties may be damaging to City (“Confidential Information”). Contractor shall not, either during or after the Term, disclose to any third party any Confidential Information without the prior written consent of City. If City gives Contractor written authorization to make any such disclosure, Contractor shall do so only within the limits and to the extent of that authorization. Contractor may be directed or advised by the City Attorney on various matters relating to the performance of Services on the Project or on other matters pertaining to the Project, and in such event, Contractor agrees that it will treat all communications between itself, its employees, and its subcontracts as being communications which are within the attorney-client privilege.

**32. Modification.** No alteration, amendment, modification, or termination of the Contract shall be valid unless made in writing and executed by all Parties to the Contract.

**33. Waiver:** No covenant, term, or condition or the breach thereof shall be deemed waived, except by written consent of the Party against whom the waiver is claimed, and any waiver of the breach of any covenant, term, or condition shall not be deemed to be a waiver of any preceding or succeeding breach of the same or any other covenant, term, or condition.

**34. Assignment:** No Party to the Contract shall assign, transfer, or otherwise dispose of this Agreement in whole or in part to any individual, firm, or corporation without the prior written consent of the other Party. Subject to the foregoing provisions, the Contract shall be binding upon, and inure to the benefit of, the respective successors and assigns of the Parties hereto.

**35. Authority:** All Parties to this Agreement warrant and represent that they have the power and authority to enter into this Agreement and the names, titles, and capacities herein stated on behalf of any entities, persons, states, or firms represented or purported to be represented by such entities, person, states, or firms and that all former requirements necessary or required by state or federal law in order to enter into the Contract have been fully complied with. Further, by entering into this Agreement, neither Party hereto shall have breached the terms or conditions of any other contract or agreement to which such Party is obligated, which such breach would have a material effect hereon.

**36. Governing Law:** The Contract shall be governed and construed in accordance with the laws of the state of California.

**37. Severability:** If the Contract in its entirety is determined by an arbitrator or a court of competent jurisdiction to be invalid or unenforceable, the Contract shall automatically terminate as of the date of final entry of judgment. If any provision of the Contract shall be determined to be invalid and unenforceable, or if any provision of the Contract is rendered invalid or unenforceable according to the terms of any federal or state statute, which becomes effective after the Effective Date of this Agreement, the remaining provisions shall continue in full force and effect and shall be construed to give effect to the intent of this Agreement.

**38. Execution and Counterparts:** This Agreement may be executed simultaneously and, in several counterparts, each of which shall be deemed an original but together shall constitute one and the same instrument. The parties agree that this Agreement and any other documents to be delivered in connection herewith may be electronically signed utilizing services such as DocuSign and Nitro Sign, or by transmitting signatures in pdf or similar format, and that any electronic signatures appearing on this Agreement or such other documents are the same as handwritten signature for the purposes of validity, enforceability, and admissibility.

**39. Mandatory and Permissive:** “Shall” and “will” and “agrees” are mandatory. “May” and “can” are permissive.

**40. Headings:** Headings used in this Agreement are for reference purposes only and shall not be considered in construing this Agreement.

**41. Attorney’s Fees and Costs:** Except as expressly provided for in Section 23 of this Agreement, if any action at law or in equity, including action for declaratory relief, is brought to enforce or interpret the provisions of the Contract, the prevailing Party shall be entitled to reasonable attorney’s fees and costs, which may be set by the court in the same action or in a separate action brought for that purpose, in addition to any other relief to which such Party may be entitled.

**42. Necessary Acts and Further Assurances:** The Parties shall, at their own cost and expense, execute and deliver such further documents and instruments and shall take such other actions as may be reasonably required or appropriate to evidence or carry out the intent and purposes of the Contract.

**43. Recitals:** The recitals set forth above (“Recitals”) are true and correct and are hereby incorporated into and made part of this Agreement by this reference. In the event of any inconsistency between the Recitals and Section 1 through 43 of this Agreement, Sections 1 through 43 shall prevail.

*[Signatures on Following Page]*

**CONTRACTOR**

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

Print Name \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_

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

Federal Tax ID or Social Security No:  
\_\_\_\_\_DIR Registration Number:  
\_\_\_\_\_

Affix Contractor's Seal Here

**CITY OF TURLOCK, a municipal corporation**By: \_\_\_\_\_  
Susan E. Borrego, Interim City Manager

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

**APPROVED AS TO SUFFICIENCY:**By: \_\_\_\_\_  
Christopher Fisher, Municipal Services  
Director**APPROVED AS TO FORM:**By: \_\_\_\_\_  
George A. Petrulakis, City Attorney**ATTEST:**By: \_\_\_\_\_  
Nichole Fiez, City Clerk

EXHIBIT A  
**SCOPE OF SERVICES**

City Contract No. \_\_\_\_\_  
City Project No. 23-068 Package 3  
10/2025

**EXHIBIT B**  
**PAYMENT BY FORCE ACCOUNT**

For work paid by force account, the City Engineer compares City's records to Contractor's daily force account work report. When the City Engineer and Contractor agree on the contents of the daily force account work reports, the City Engineer accepts the report and City pays for the work. If the records differ, City pays for the work based only on the information shown on City's records. If a subcontractor performs work at force account, work paid at force account will be accepted at an additional 2 percent (2%) markup to the total cost of that work, including markups, as reimbursement for additional administrative costs. The markups specified in labor, materials, and equipment includes compensation for all delay costs, overhead costs, and profit. If an item's unit price is adjusted for work-character changes, City excludes Contractor's cost of determining the adjustment. Payment for owner-operated labor and equipment is made at the market-priced invoice submitted.

A. Labor. Labor payment is full compensation for the cost of labor used in the direct performance of the work plus a fifteen percent (15%) markup, as set forth below, and consistent with California Labor Code section 1770 et seq. Force account labor payment consists of:

1. Employer payment to the worker for:
  - 1.1 Basic hourly wage
  - 1.2 Health and welfare
  - 1.3 Pension
  - 1.4 Vacation
  - 1.5 Training
  - 1.6 Other State and federal recognized fringe benefit payments
2. Labor surcharge percentage in *Labor Surcharge and Equipment Rental Rates* current during the work paid at force account for:
  - 2.1 Workers' compensation insurance
  - 2.2 Social security
  - 2.3 Medicare
  - 2.4 Federal unemployment insurance
  - 2.5 State unemployment insurance
  - 2.6 State training taxes
3. Subsistence and travel allowances paid to the workers
4. Employer payment to supervisors, if authorized

The fifteen percent (15%) markup consists of payment for all overhead costs related to labor but not designated as costs of labor used in the direct performance of the work including:

- (a) Home office overhead

- (b) Field office overhead
- (c) Bond costs
- (d) Profit
- (e) Labor liability insurance
- (f) Other fixed or administrative costs that are not costs of labor used in the direct performance of the work

B. Materials. Material payment is full compensation for materials the Contractor furnishes and uses in the work. The City Engineer determines the cost based on the material purchase price, including delivery charges, except:

1. A fifteen percent (15%) markup is added;
2. Supplier discounts are subtracted whether the Contractor takes them or not;
3. If the City Engineer believes the material purchase prices are excessive, City pays the lowest current wholesale price for a similar material quantity;
4. If Contractor procured the materials from a source Contractor wholly or partially own, the determined cost is based on the lower of the:
  - 4.1 Price paid by the purchaser for similar materials from that source on Contract items; and
  - 4.2 Current wholesale price for those materials;
5. If Contractor does not submit a material cost record within thirty (30) days of billing, the determined cost is based on the lowest wholesale price:
  - 5.1 During that period
  - 5.2 In the quantities used

C. Equipment Rental. Equipment rental payment is full compensation for:

1. Rental equipment costs, including moving rental equipment to and from the change order work site using its own power.
2. Transport equipment costs for rental equipment that cannot be transported economically using its own power. No payment is made during transport for the transported equipment.
3. Fifteen percent (15%) percent markup.

If Contractor wants to return the equipment to a location other than its original location, the payment to move the equipment must not exceed the cost of returning the equipment to its original location.

If Contractor uses the equipment for work other than work paid by force account, the transportation cost is included in the other work.

Before moving or loading the equipment, Contractor must obtain authorization for the equipment rental's original location.

The City Engineer determines rental costs:

1. Using rates in *Labor Surcharge and Equipment Rental Rates*:
  - 1.1. By classifying equipment using manufacturer's ratings and manufacturer-approved changes.
  - 1.2. Current during the work paid by force account.
  - 1.3. Regardless of equipment ownership but City uses the rental document rates or minimum rental cost terms if:
    - 1.3.1. Rented from equipment business Contractor does not own.
    - 1.3.2. The Labor Surcharge and Equipment Rental Rates hourly rate is \$10.00 per hour or less.
2. Using rates established by the City Engineer for equipment not listed in *Labor Surcharge and Equipment Rental Rates*. Contractor may submit cost information that helps the City Engineer establish the rental rate but City uses the rental document rates or minimum rental cost terms if:
  - 2.1. Rented from equipment business Contractor does not own.
  - 2.2. The City Engineer establishes a rate of \$10.00 per hour or less.
3. Using rates for transport equipment not exceeding the hourly rates charged by established haulers.

Equipment rental rates include the cost of:

1. Fuel	7. Repairs and maintenance
2. Oil	8. Depreciation
3. Lubrication	9. Storage
4. Supplies	10. Insurance
5. Small tools that are not consumed by use	11. Incidentals
6. Necessary attachments	

City pays for small tools consumed by use. The City Engineer determines payment for small tools consumed by use based on Contractor-submitted invoices.

The City Engineer may authorize rates in excess of those in the *Labor Surcharge and Equipment Rental Rates* if:

1. Contractor submits a request to use rented equipment

2. Equipment is not available from Contractor's normal sources or from one of Contractor's subcontractors
3. Rented equipment is from an independent rental company
4. Proposed equipment rental rate is reasonable
5. The City Engineer authorizes the equipment source and the rental rate before Contractor uses the equipment

D. Equipment on the Job Site. For equipment on the job site at the time required to perform work paid by force account, the time paid is the time:

44.

1. To move the equipment to the location of work paid by force account plus an equal amount of time to move the equipment to another location on the job site when the work paid by force account is completed
2. To load and unload equipment
3. Equipment is operated to perform work paid by force account and:
  - 3.1. Hourly rates are paid in 1/2-hour increments
  - 3.2. Daily rates are paid in 1/2-day increments

E. Equipment Not on the Job Site Required for Original-Contract Work. For equipment not on the job site at the time required to perform work paid by force account and required for original-Contract work, the time paid is the time the equipment is operated to perform work paid by force account and the time to move the equipment to a location on the job site when the work paid by force account is completed.

The minimum total time paid is:

1. 1 day if daily rates are paid
2. 8 hours if hourly rates are paid

If daily rates are recorded, equipment:

1. Idled is paid as 1/2 day
2. Operated four (4) hours or less is paid as 1/2 day
3. Operated four (4) hours or more is paid as one (1) day

If the minimum total time exceeds eight (8) hours and if hourly rates are listed, City rounds up hours operated to the nearest 1/2-hour increment and pays based on the hours shown in the following table. The table does not apply when equipment is not operated due to breakdowns, in which case rental hours are the hours the equipment was operated.

Equipment Rental Hours

Hours operated	Hours paid
0.0	4.00

0.5	4.25
1.0	4.50
1.5	4.75
2.0	5.00
2.5	5.25
3.0	5.50
3.5	5.75
4.0	6.00
4.5	6.25
5.0	6.50
5.5	6.75
6.0	7.00
6.5	7.25
7.0	7.5
7.5	7.75
≥8.0	hours used

F. Equipment Not on the Job Site Not Required for Original-Contract Work. For equipment not on the job site at the time required to perform work paid by force account and not required for original-Contract work, the time paid is the time:

1. To move the equipment to the location of work paid by force account plus an equal amount of time to return the equipment to its source when the work paid by force account is completed
2. To load and unload equipment
3. Equipment is operated to perform work paid by force account

G. Non-Owner-Operated Dump Truck Rental. Contractor shall submit the rental rate for non-owner-operated dump truck rental to City. The City Engineer shall determine the payment rate. Payment for non-owner-operated dump truck rental is for the cost of renting a dump truck, including its driver. For the purpose of markup payment only, the non-owner-operated dump truck is rental equipment and the owner is a subcontractor.

The above markups shall constitute full compensation for all home office overhead, field office overhead, bond costs, profit, labor liability insurance, and other fixed or administrative costs that are not costs specifically designated as cost or equipment rental as stated above. The total payment made as provided above shall be deemed to be the actual cost of the work and shall constitute full compensation therefor.

When extra work to be paid for on a force account basis is performed by a subcontractor, an additional markup of 2 percent (2%) will be added to the total cost of that extra work including all markups specified in this Section. The additional 2 percent (2%) markup shall reimburse Contractor for

additional administrative costs, and no other additional payment will be made by reason of performance of the extra work by a subcontractor.

**EXHIBIT C**  
**WORKERS' COMPENSATION INSURANCE CERTIFICATION**

Pursuant to Section 18(b) of the Agreement, Contractor certifies as follows:

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.

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

\_\_\_\_\_  
(Typed or Printed Name)

Business Address (Street Address, City, State & Zip Code):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Business Phone: ( ) \_\_\_\_\_

City Contract No. \_\_\_\_\_  
City Project No. 23-068 Package 3  
10/2025

EXHIBIT D  
PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the **City of Turlock**, State of California, has awarded to \_\_\_\_\_, hereinafter designated as the "Principal," a contract for **Project No. 23-068 Package 3**; and,

WHEREAS, said Principal is required under the terms of said contract to furnish a bond for the faithful performance of said contract.

NOW, THEREFORE, we the Principal, and \_\_\_\_\_ as Surety, are held and firmly bound unto the City of Turlock in the penal sum of \_\_\_\_\_ (\$\_\_\_\_\_), lawful money of the United States for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above bounden Principal, or 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 agreements in said contract and any alteration thereof made as therein provided, on the 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 defend, indemnify and save harmless the City of Turlock, its officers and agents as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and virtue.

And the Surety, for value received hereby stipulates and agrees that, in accordance with the Plans, Standard Specifications, Special Provisions, and other contract documents, no change, extension of time, alteration, or addition to the terms of the contract, or to the work to be performed hereunder, or to 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 of additions to the terms of the Contract to the work, or to the specifications.

The City of Turlock reserves the right to refuse use of any Contractor assigned by any surety to complete the work.

*[Signatures on Following Page]*

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their seals this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the name and corporate seals of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

(Corporate Seal)

**Principal** \_\_\_\_\_

By \_\_\_\_\_

Title \_\_\_\_\_

(Attach Notarial Acknowledgment)

(Corporate Seal)

**Surety** \_\_\_\_\_

Address \_\_\_\_\_

Phone No.: ( ) \_\_\_\_\_ Fax No.: ( ) \_\_\_\_\_

By \_\_\_\_\_  
Attorneys-in-Fact

Title \_\_\_\_\_

(Attach Notarial Acknowledgment)

**NOTE TO SURETY COMPANY:** There must be submitted a certified copy of unrevoked resolution of authority for the attorneys-in-fact.

(Seal)

**Witness** \_\_\_\_\_

Approved as to form:

\_\_\_\_\_  
Risk Manager

City Contract No. \_\_\_\_\_  
City Project No. 23-068 Package 3  
10/2025

EXHIBIT E  
PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the **City of Turlock**, a municipal corporation, has awarded to \_\_\_\_\_, hereinafter designated as the “Principal”, a contract for **Project No. 23-068 Package 3”**; and

WHEREAS, said Principal is required to furnish a bond in connection with said contract, to secure payment of claims of laborers, mechanics, or materialmen employed on work under said contract, as provided by law.

NOW, THEREFORE, we the undersigned Principal and Surety are held and firmly bound unto the City of Turlock in the sum of \_\_\_\_\_

(\$\_\_\_\_\_), said sum being equal to the estimated amount payable by said City of Turlock under the terms of the contract, for which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that if said Principal, or Principal’s heirs, executors, administrators, successors, or assigns, or subcontractors shall fail to pay for any material, provisions, provender, or other supplies, implements, or machinery used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Code with respect to such work or labor, or for any amounts required to be deducted, withheld, and paid over to the Franchise Tax Board from these wages of employees of the Contractor and Contractor’s subcontractors pursuant to the Revenue and Taxation Code, with respect to such work and labor, the Surety or Sureties hereon will pay for the same in an amount not exceeding the sum specified in this bond, otherwise the above obligation shall be void. In case suit is brought upon this bond, said Surety will pay a reasonable attorney’s fee to be fixed by the court.

This bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under Section 3138 of the Civil Code of the State of California so as to give a right of action to them or their assigns in any suit brought upon this bond.

Said Surety, for value received, hereby stipulates and agrees that, in accordance with the Plans, Standard Specifications, Special Provisions, and other Contract Documents, no change, extension of time, alteration or addition to the terms of the contract, or to the work to be performed there under, or to 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 contract, or to the work, or to the specifications.

*[Signatures on Following Page]*

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their seals this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the name and corporate seals of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

(Corporate Seal)

**Principal** \_\_\_\_\_

By \_\_\_\_\_

Title \_\_\_\_\_

(Attach Notarial Acknowledgment)

(Corporate Seal)

**Surety** \_\_\_\_\_

Address \_\_\_\_\_

Phone No.: ( ) \_\_\_\_\_ Fax No.: ( ) \_\_\_\_\_

By \_\_\_\_\_  
Attorneys-in-Fact

Title \_\_\_\_\_

(Attach Notarial Acknowledgment)

**NOTE TO SURETY COMPANY:** There must be submitted a certified copy of unrevoked resolution of authority for the attorneys-in-fact.

(Seal)

**Witness** \_\_\_\_\_

Approved as to form:

\_\_\_\_\_  
Risk Manager

City Contract No. \_\_\_\_\_  
City Project No. 23-068 Package 3  
10/2025

## **SPECIAL PROVISIONS**

City Project No: 23-068 Package 3

Roads Program Capital Improvement Project

### **SECTION 1 SPECIFICATIONS AND PLANS**

#### **SPECIAL NOTES:**

1. Official bid documents including plans and specifications are available online at <http://www.cityofturlock.org/capitalprojects>. All bids submitted for this project must conform to the requirements of the official bid documents, including plans and specifications.
2. An optional Pre-Bid meeting will be held on Wednesday, February 4, 2026, at 10:00 am at Turlock City Hall, 156 S. Broadway Turlock, CA 95380.

#### **1.01 SPECIFICATIONS:**

The work described herein shall be done in accordance with the current City of Turlock Standard Specifications and the 2025 Edition of the State of California, Department of Transportation Standard Specifications (unless a different version is specifically noted) and Standard Plans (with exception that English units are to be used in place of metric) and in accordance with the following Special Provisions.

The Contract Documents are complementary; what is required by one is as binding as if required by all.

It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to City.

Clarifications and interpretations of the Contract Documents shall be issued by Engineer.

In case of conflict or discrepancy between any of the Contract Documents, the order of documents listed below shall be the order of precedence, with the first item listed having the highest precedence.

1. Contract Change Order (Modifications or changes last in time are first in precedence).
2. Addenda to Contract Agreement
3. Contract Agreement
4. Permits
5. Special Provisions
6. Notice Inviting Bids and Instructions to Bidders
7. Project Drawings
8. City of Turlock Standard Specifications
9. City of Turlock Standard Drawings

10. Caltrans Standard Specifications
11. Caltrans Standard Plans
12. California Manual on Uniform Traffic Control Devices

With regards to discrepancies or conflicts between written dimensions given on drawings and the scaled measurements, the written dimensions shall govern.

With regards to discrepancies or conflicts between large-scale drawings and small-scale drawings, the larger scale shall govern.

With regards to discrepancies or conflicts between detailed drawings and referenced standard drawings or plans, the detailed drawings shall govern.

In the event where provisions of codes, safety orders, contract documents, referenced manufacturer's specifications or industry standards are in conflict, the more restrictive and higher quality shall govern.

The Project Plans and Special Provisions are intended to be explanatory of each other. The work shall be performed and completed according to the true spirit, meaning, and intent of the Plans and Special Provisions.

Should it appear that the work to be done or any of the matters relative thereto are not sufficiently detailed or explained in these specifications, the special provisions, or the plans, the Contractor shall apply to the Engineer in writing for such further explanations as may be necessary and shall conform to them as part of the contract. All responses from the Engineer shall also be in writing. In the event of any doubt or question arising respecting the true meaning of these specifications, the special provisions or the plans, reference shall be made to the Engineer, whose decision thereon shall be final.

#### **1.02 CONTRACTOR'S RESPONSIBILITY:**

The Contractor shall examine carefully the site of the work and the plans and specifications therefore. The Contractor shall investigate to their satisfaction as to conditions to be encountered, the character, quality and quantity of surface, subsurface materials or obstacles to be encountered, the work to be performed, materials to be furnished, and as to the requirements of the bid, plans and specifications of the contract.

#### **1.03 COMPLETENESS AND ACCURACY OF PLANS AND SPECIFICATIONS:**

Pursuant to the California Public Contract Code, the bidder is required to review architectural or engineering plans and specifications prior to submission of a bid, and report any errors and omissions noted by Contractor to the architect, engineer or owner five days prior to the bid opening date.

## **SECTION 2 PROPOSAL REQUIREMENTS AND CONDITIONS**

### **2.01 GENERAL:**

The Contractor's attention is directed to the "Notice to Contractor" for the date, time and location of the mandatory Pre-Bid meeting, if applicable.

The bidder's attention is directed to the provisions in Proposal for this bid for the requirements and conditions which the bidder must observe in the preparation of and the submission of the bid.

The bidder's bond shall conform to the bond form in the Bid book for the project and shall be properly filled out and executed. The bidder's bond form included in that book must be used.

In conformance with Public Contract Code Section 7106, a Noncollusion Affidavit is included in the Bid book. Signing the Bid book shall also constitute signature of the Noncollusion Affidavit.

The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of Title 49 CFR (Code of Federal Regulations) part 26 in the award and administration of US DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate. Each subcontract signed by the bidder must include this assurance.

Failure of the bidder to fulfill the requirements of the Special Provisions for submittals required to be furnished after bid opening, including but not limited to escrowed bid documents, where applicable, may subject the bidder to a determination of the bidder's responsibility in the event it is the apparent low bidder on a future public works contract.

### **2.02 EXISTING UTILITIES, FACILITIES, AND SITE CONDITIONS:**

The actual sizes, locations and materials of existing utilities and facilities shown on the plans may vary from what is shown on the plans. Attention is directed to the possible existence of underground facilities not indicated on the plans or in the special provisions. Contractor shall be responsible for verifying the locations and nature of the existing utilities, protecting them from damage and notifying Engineer of their location and nature.

Contractor shall examine carefully the site of the work. It is assumed that Contractor has investigated and is satisfied as to the conditions to be encountered as to the character, quality and quantities of work to be performed.

Although the City of Turlock's soil conditions are homogenous and sandy in nature, various subsurface conditions such as hardpan, and ground water may be encountered. The City of Turlock will not be held responsible in any way for the type and character of subsurface conditions encountered. If a subsurface report is desired by Contractor, it will be Contractor's responsibility and expense to verify the subsurface conditions by boring or other means necessary prior to bidding and/or performing work. Attention is directed to Section 5.21, "Preservation of Property," of these special provisions during boring and other miscellaneous operations.

Full compensation for furnishing all labor, materials, tools, equipment (including dewatering devices), and incidentals, and for doing all the work involved with and/or in verifying existing utilities, facilities, site and subsurface conditions as specified above, shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefore.

Compensation for any portion of the Work not specifically identified in the Bid Schedule or Schedule of Values is understood to be included in the price for other items, unless specified in Special Provisions as extra work. No additional compensation is allowed to ensure the Work is completed as specified in the Contract.

2.03 [NOT USED]

2.04 [NOT USED]

2.05 ESCROW BID DOCUMENTS:

#### 1. SCOPE

The lowest Bidder shall submit, within the specified time after receipt of Bids, one copy of all documentary information generated in preparation of Bid prices for this Project. This material is hereinafter referred to as "Escrow Bid Documents." The Escrow Bid Documents of the Successful Bidder will be held in escrow for the duration of the contract.

The Successful Bidder agrees, as a condition of award of the contract, that the Escrow Bid Documents constitute the complete, only, and all documentary information used in preparation of his Bid. No other Bid preparation information shall be considered in resolving disputes.

Nothing in the Escrow Bid Documents shall change or modify the terms or conditions of the Contract Documents.

#### 2. OWNERSHIP

The Escrow Bid Documents are, and shall always remain, the property of CONTRACTOR, subject only to joint review by OWNER and CONTRACTOR, as provided herein.

OWNER stipulates and expressly acknowledges that the Escrow Bid Documents, as defined herein, constitute trade secrets. This acknowledgment is based on OWNER's express understanding that the information contained in the Escrow Bid Documents is not known outside the Bidder's business, is known only to a limited extent and only by a limited number of employees of the Bidder, is safeguarded while in Bidder's possession, is extremely valuable to Bidder, and could be extremely valuable to Bidder's competitors by virtue of it reflecting Bidder's contemplated techniques of construction. OWNER acknowledges that the Bidder expended substantial sums of money in developing the information included in the Escrow Bid Documents and further acknowledges that it would be difficult for a competitor to replicate the information contained therein. OWNER further acknowledges that the Escrow Bid Documents and the information contained therein are made available to OWNER only because such action is an express prerequisite to award of the contract. OWNER further acknowledges

that the Escrow Bid Documents include a compilation of information used in the Bidder's business, intended to give the Bidder an opportunity to obtain an advantage over competitors who do not know of or use the contents of the documentation. OWNER agrees to safeguard the Escrow Bid Documents, and all information contained therein, against disclosure to the fullest extent permitted by law.

### 3. PROGRAM

Escrow Bid Documents will be used to assist in the negotiation of price adjustments and Change Orders and in the settlement of disputes, claims, and other controversies. They will not be used for pre-award evaluation of CONTRACTOR's anticipated methods of construction or to assess CONTRACTOR's qualifications for performing the Work.

### 4. FORMAT AND CONTENTS

Bidders may submit Escrow Bid Documents in their usual cost estimating format. It is not the intention of this section to cause the Bidder extra work during the preparation of the Bid, but to ensure that the Escrow Bid Documents will be adequate to enable complete understanding and proper interpretation for their intended use. The Escrow Bid Documents shall be in the language of the Specifications.

The Escrow Bid Documents shall include all quantity takeoffs; crew; equipment; calculations of rates of production and progress; copies of quotations from equipment manufacturers, Subcontractors, and Suppliers; and memoranda, narratives, consultants' reports, add/deduct sheets, and all other information used by the Bidder to arrive at the prices contained in the Bid Form. Estimated costs should be broken down into the Bidder's usual estimate categories, such as direct labor, repair labor, equipment operation, equipment ownership, expendable materials, permanent materials, and subcontract costs as appropriate. Plant and equipment and indirect costs should be detailed in the Bidder's usual format. CONTRACTOR's allocation of plant and equipment, indirect costs, contingencies, markup, and other items to each Bid item shall be included.

Bidding Documents provided by the OWNER should not be included in the Escrow Bid Documents unless needed to comply with the requirements of this section.

### 5. SUBMITTAL

The Escrow Bid Documents shall be submitted in a sealed container within one week after the time of receipt of Bids. The container shall be clearly marked on the outside with the Bidder's name, date of submittal, project name, and the words "Escrow Bid Documents."

The Escrow Bid Documents shall be accompanied with a certification signed by an individual authorized by the Bidder to execute the Bid Form, stating that the material in the Escrow Documentation constitutes the complete, only, and all documentary information used in preparation of the Bid and that he has personally examined the contents of the Escrow Bid Documents container and has found that the documents in the container are complete.

Prior to award, Escrow Bid Documents of the apparent Successful Bidder will be unsealed, examined, organized, and inventoried by representatives of OWNER, together with members of CONTRACTOR's staff who are knowledgeable in how the Bid was prepared. This examination is to ensure that the Escrow Bid Documents are authentic, legible, and complete. It will not include review of, and will not constitute approval of, proposed construction methods, estimating assumptions, or interpretations of Contract Documents. This examination is subject to the condition that, as trade secrets, the Escrow Bid Documents are proprietary and confidential as described in Paragraph 2. Examination will not alter any condition(s) or term(s) of the contract.

If all the documentation required in Part 4, "Format and Contents," has not been included in the original submittal, additional documentation shall be submitted, at OWNER's discretion, prior to award of the contract. The detailed breakdown of estimated costs shall be reconciled and revised, if appropriate, by agreement between CONTRACTOR and OWNER before making the award.

If the contract is not awarded to the apparent Successful Bidder, the Escrow Bid Documents of the Bidder next to be considered for award shall be processed as described above.

Timely submission of complete Escrow Bid Documents is an essential element of the Bidder's responsibility and a prerequisite to contract award. Failure to provide the necessary Escrow Bid Documents will be sufficient cause for OWNER to reject the Bid.

If the Bidder's proposal is based on subcontracting any part of the Work, each Subcontractor whose total subcontract price exceeds 5 percent of the total Contract Price proposed by the Bidder shall provide separate Escrow Bid Documents to be included with those of the Bidder. These documents will be opened and examined in the same manner and at the same time as the examination described above for the apparent Successful Bidder.

If CONTRACTOR subcontracts any portion of the Work after award, OWNER retains the right to require CONTRACTOR to submit Escrow Bid Documents from the Subcontractor before the subcontract is approved.

Escrow Bid Documents submitted by unsuccessful Bidders will be returned unopened, unless opened as provided above, as soon as they are no longer needed by OWNER and no later than immediately following award of the contract.

## 6. STORAGE

The Escrow Bid Documents of the Successful Bidder will be placed in escrow prior to award of the contract, for the life of the contract, in a mutually agreeable institution. The cost of storage will be paid by OWNER.

## 7. EXAMINATION AFTER AWARD OF CONTRACT

The Escrow Bid Documents shall be examined by both OWNER and CONTRACTOR, at any time deemed necessary after award of the contract by either OWNER or CONTRACTOR, to assist in the negotiation of price adjustments and Change Orders, or the settlement of disputes.

Examination of the Escrow Bid Documents after award of the contract is subject to the following conditions:

- a. As trade secrets, the Escrow Bid Documents are proprietary and confidential as described in Paragraph 2.
- b. OWNER and CONTRACTOR shall each designate, in writing to the other party and a minimum of 10 days prior to examination, representatives who are authorized to examine the Escrow Bid Documents. No other person shall have access to the Escrow Bid Documents.
- c. Access to the Escrow Bid Documents will take place only in the presence of duly designated representatives of both OWNER and CONTRACTOR.

#### **8. FINAL DISPOSITION**

The Escrow Bid Documents will be returned to CONTRACTOR at such time as the contract has been completed and final settlement has been achieved.

### **SECTION 3 AWARD AND EXECUTION OF CONTRACT**

#### **3.01 GENERAL:**

The Contractor's attention is directed to the provisions in the Contract for the requirements and conditions concerning award and execution of contract.

The contract shall be executed by the successful bidder and shall be returned, together with the contract bonds and insurance, to the City so that it is received within 10 working days after the bidder has received the contract for execution. Failure to do so shall be just cause for forfeiture of the proposal guaranty. The executed contract documents shall be delivered to the following address:

Attention: Gloria Aguilera  
City of Turlock, Municipal Services Department  
156 S Broadway, Suite 150  
Turlock, CA 95380

Bid protests are due in writing by the fifth calendar day after the bid opening and are to be delivered to the following addressees:

William D. Morris, PE, PLS  
City of Turlock, City Engineer  
156 S Broadway Suite 150  
Turlock, CA 95380

AND

Fred Pezeshk, PE  
City of Turlock, Roads Program Manager  
156 S Broadway Suite 150  
Turlock, CA 95380  
Telephone: (209) 668-5520  
E-mail: [FPezeshk@turlock.ca.us](mailto:FPezeshk@turlock.ca.us)

The award of the contract, if it be awarded, will be to the lowest responsible bidder whose bid complies with all the requirements prescribed.

#### **SECTION 4 BEGINNING OF WORK, TIME OF COMPLETION AND DELAY DAMAGES**

Attention is directed to Section 5 "Time for Performance" of the Agreement.

At no time shall construction begin prior to the issuance of the Notice to Proceed. Any work performed prior to the Notice to Proceed shall be done at the Contractor's own risk and payment will not be made therefor.

The Contractor shall follow the sequence of construction and progress of work as specified in Section 5.22, "Order of Work," of these Special Provisions.

Should the Contractor choose to work on a Saturday, Sunday or Legal Holiday as defined in Section 5.15 "Working Hours," of these Special Provisions, the Contractor shall reimburse the City of Turlock the actual cost of engineering, inspection, testing, superintendent, and/or other overhead expenses which are directly chargeable to the contract. Should such work be undertaken at the request of the City, reimbursement will not be required.

Attention is directed to Section 5 (d) "Delay Damages" of the Agreement.

A pre-construction meeting will be held between Contractor and City prior to the beginning of construction. The exact time and place of this conference will be determined by City after award of the construction contract.

## SECTION 5 GENERAL

### 5.01 LABOR NONDISCRIMINATION:

Attention is directed to the following Notice that is required by Chapter 5 of Division 4 of Title 2, California Code of Regulations.

#### NOTICE OF REQUIREMENT FOR NONDISCRIMINATION PROGRAM (GOV. CODE, SECTION 12990)

Your attention is called to the "Nondiscrimination Clause", set forth in Section 7 1.02(2), "Nondiscrimination," of the Caltrans Standard Specifications, which is applicable to all nonexempt state contracts and subcontracts, and to the "Standard California Nondiscrimination Construction Contract Specifications" set forth therein. The Specifications are applicable to all nonexempt state construction contracts and subcontracts of \$5,000 or more.

### 5.02 PREVAILING WAGE:

Attention is directed to Section 7-1.02K "Labor Code," of the Caltrans Standard Specifications, however certified payroll is not submitted to Caltrans for this project. Contractor shall submit certified payroll records to the DIR and to the City.

#### State Prevailing Wage Rates

Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates in the county Stanislaus in which the work is to be done have been determined by the Director of the California Department of Industrial Relations. These wages are set forth in the General Prevailing Wage Rates for this project, available at 156 S. Broadway St, Turlock, CA 95380 and available from the California Department of Industrial Relations' Internet web site at <http://www.dir.ca.gov/DLSR/PWD>. Changes, if any, to the general prevailing wage rates, will be available at the same location. Future effective general prevailing wage rates, that have been predetermined and are on file with the California Department of Industrial Relations are referenced but not printed in the general prevailing wage rates.

### 5.03 DIFFERING SITE CONDITIONS:

1. Contractor's Notification: Promptly notify the City Engineer if you find either of the following conditions:
  - a. Physical conditions differing materially from either of the following:
    - Contract documents
    - Job site examination
  - b. Physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the Contract.
  - c. Include details explaining the information you relied on and the material differences you discovered. If you fail to promptly notify the City Engineer, you waive the differing site condition claim for the period between your discovery of the differing site condition and your notification to the City Engineer. If you disturb the site after discovery and before the Engineer's investigation, you waive the differing site condition claim.

2. Engineer's Investigation and Decision Upon your notification: The Engineer investigates job site conditions and:
  - a. Notifies you whether to resume affected work.
  - b. Decides whether the condition differs materially and is cause for an adjustment of time, payment, or both.

#### 5.04 REMOVAL OF ASBESTOS AND HAZARDOUS SUBSTANCES:

The contractor shall promptly, and before the following conditions are disturbed, notify the local public entity, in writing, of any:

1. Material that the contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.
2. Subsurface or latent physical conditions at the site differing from those indicated by information about the site made available to bidders prior to the deadline for submitting bids.
3. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

Upon notification of any of the above, the City shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the contractor's cost of, or the time required for, performance of any part of the work, a change order shall be issued to modify the contract scope.

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

When the presence of asbestos or hazardous substances are not shown on the plans or indicated in the specifications and the Contractor encounters materials which the Contractor reasonably believes to be asbestos or a hazardous substance as defined in Section 25914.1 of the Health and Safety Code, and the asbestos or hazardous substance has not been rendered harmless, the Contractor may continue work in unaffected areas reasonably believed to be safe. The Contractor shall immediately cease work in the affected area and report the condition to the Engineer in writing.

In conformance with Section 25914.1 of the Health and Safety Code, removal of asbestos or hazardous substances including exploratory work to identify and determine the extent of the asbestos or hazardous substance will be performed by separate contract.

If delay of work in the area delays the current controlling operation, the delay will be considered a right of way delay and the Contractor will be compensated for the delay in conformance with the provisions in Section 8 1.07, "Delays," of the Caltrans Standard Specifications.

## 5.05 SIGNIFICANT CHANGES IN THE CHARACTER OF WORK

The engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the contractor agrees to perform the work as altered.

If the alterations or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work or by affecting other work cause such other work to become significantly different in character, an adjustment, excluding anticipated profit, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the contractor in such amount as the engineer may determine to be fair and equitable.

If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.

The term "significant change" shall be construed to apply only to the following circumstances:

- a. When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or
- b. When a bid item of work, as defined elsewhere in the contract, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

## 5.06 UNAVOIDABLE DELAYS

No extension of time will be granted for a delay caused by a shortage of materials unless the Contractor furnishes to the Engineer documentary proof that he has made every effort to obtain such materials from all known sources, within reasonable reach of the work in a diligent and timely manner. The documentary proof shall indicate that the inability to obtain such materials, when originally planned, did in fact cause a delay in final completion of the entire work which could not be compensated for by revising the sequence of the Contractor's operations. The term "Shortage of Materials" as used in this section, shall not apply to materials, articles, parts, or equipment that are processed, made, constructed, fabricated, or manufactured to meet the specific requirements of the contract. Only the physical shortage of material will be considered under these provisions as a cause for extension of time. Delays in obtaining materials due to priority in filling orders will not constitute a shortage of materials.

## 5.07 SUBCONTRACTING:

No subcontract releases the Contractor from the contract or relieves the Contractor of their responsibility for a subcontractor's work.

If the Contractor violates Pub Cont Code § 4100 et seq., the City may exercise the remedies provided under Pub Cont Code § 4110. The City may refer the violation to the Contractors State License Board as provided under Pub Cont Code § 4111.

Each subcontract must comply with the contract.

Each subcontractor must have an active and valid State contractor's license with a classification appropriate for the work to be performed (Bus & Prof Code, § 7000 et seq.).

At the pre-construction meeting, prior to starting work, Contractor shall submit a complete listing of subcontractors and the value of the work each subcontractor will perform.

Before subcontracted work starts, submit a Subcontracting Request form.

Do not use a debarred contractor; a current list of debarred contractors is available at the Department of Industrial Relations' Web site.

Upon request by the Engineer, immediately remove and not again use a subcontractor who fails to prosecute the work satisfactorily.

#### **5.08 PROMPT PROGRESS PAYMENT TO SUBCONTRACTORS:**

A prime contractor or subcontractor shall pay any subcontractor not later than 10 days of receipt of each progress payment in accordance with the provision in Section 7108.5 of the California Business and Professions Code concerning prompt payment to subcontractors. The 10 days is applicable unless a longer period is agreed to in writing. Any delay or postponement of payment over 30 days may take place only for good cause and with the agency's prior written approval. Any violation of Section 7108.5 shall subject the violating contractor or subcontractor to the penalties, sanction and other remedies of that section. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor.

#### **5.09 PROMPT PAYMENT OF FUNDS WITHHELD TO SUBCONTRACTORS:**

The agency shall hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by the agency of the contract work and pay retainage to the prime contractor based on these acceptances. The prime contractor or subcontractor shall return all monies withheld in retention from all subcontractors within seven (7) days for construction contracts and fifteen (15) days for consultant contracts after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the agency. Any delay or postponement of payment may take place only for good cause and with the agency's prior written approval. Any violation of these provisions shall subject the violating prime contractor or subcontractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business and Professions Code and Section 10262 of the California Public Contract Code for construction contracts, and Section 3321 of the California Civil Code for consultant contracts. This requirement shall not be construed to limit or impair any contractual, administrative or judicial remedies otherwise available to the contractor or subcontractor in the event of a

dispute involving late payment or nonpayment by the contractor; deficient subcontractor performance and/or noncompliance by a subcontractor.

#### 5.10 PAYMENTS:

At the end of each month the Contractor shall submit a proposed progress invoice. The invoice shall delineate each bid item, the amount of work performed for the invoice period (previous month) and the total amount of work performed to date. A sample invoice with all of the required items will be given to the Contractor at the pre-construction meeting.

The Engineer will review the progress invoice and after any changes the Engineer makes, will issue an official invoice for the Contractor to sign. The Contractor shall sign the official invoice and return to the Engineer. After the Engineer receives the signed, official invoice, the progress payment will be processed.

Retention in the amount of 5% of the progress payment amount shall be held from all progress payments. Retention will be released 35 days after the Notice of Completion has been filed, insofar as no stop notices were filed.

Compensation for any portion of the work not specifically identified in the Bid Item List is understood to be included in the price for other items, unless specified in these special provisions as extra work.

#### 5.11 [NOT USED]

#### 5.12 GUARANTY:

Attention is directed to Section 9-4, "Guaranty," of the City of Turlock Standard Specifications.

#### 5.13 PUBLIC SAFETY:

In addition to any other measures taken by Contractor pursuant to the provisions of the Standard Specifications and the General Conditions, Contractor shall install temporary precast concrete barrier rail between any lane carrying public traffic and any excavation, obstacle or storage area when the following conditions exist:

Excavations: Any excavation, the near edge of which is 12 feet or less from the edge of the lane, except:

- (a) Excavations covered with sheet steel or concrete covers of adequate thickness to prevent accidental entry by traffic or the public.
- (b) Excavations less than one foot deep.
- (c) Trenches less than one foot wide for irrigation pipe or electrical conduit or excavations less than one foot in diameter.
- (d) Excavations parallel to the lane for the purpose of pavement widening or reconstruction.
- (e) Excavations in side slopes where the slope is steeper than 4:1.

(f) Excavations protected by existing barrier or railing.

At the end of each working day, if a difference of 0.50 feet exists between the elevation of the existing pavement and the elevation of any excavation within 2 feet of the traveled way, material shall be placed and compacted against the vertical cuts adjacent to the traveled way. During excavation operations, native material may be used for this purpose, however, once the placing of the structural section commences, structural material shall be used. The material shall be placed to the level of the elevation of the top of the existing pavement and tapered at a slope of 4:1 or flatter to the bottom of the excavation. Treated base shall not be used for the taper. Full compensation for placing the material on a 4:1 slope, regardless of the number of times it is required, and subsequent removing or reshaping of the material to the lines and grades shown on the plans shall be considered as included in the cost for other contract items of work and no additional compensation will be allowed therefore.

Personal vehicles of Contractor's employees shall not be parked on the traveled way or shoulders, including any section closed to public traffic. Whenever vehicles or equipment are parked on the shoulder within 6 feet of a traffic lane, the shoulder area shall be closed with traffic cones or portable delineators placed on a taper in advance of the parked vehicles or equipment and along the edge of the pavement at 25 foot intervals to a point not less than 25 feet past the last vehicle or piece of equipment.

During construction all streets shall have a minimum of one traffic lane, not less than 11 feet wide open for use by local traffic to access driveways of all businesses and residences. Pedestrian and emergency vehicle access to all residences and businesses shall be maintained at all times. The full width of the traveled way shall be open for use by public traffic on Saturdays, Sundays and designated legal holidays, after 4:00 p.m. on Fridays and the day preceding designated legal holidays and when construction operations are not actively in progress.

Clean-up shall be done as Work progresses at the end of each day and thoroughly before weekends. The Contractor shall not allow the Work site to become littered with trash and waste material, but shall maintain the same in a neat and orderly condition throughout the construction operation. Materials which need to be disposed shall not be stored at the Project site, but shall be removed by the end of each Working Day. If the job site is not cleaned to the satisfaction of the Engineer, the cleaning will be done or contracted by the City and shall be back-charged to the Contractor and deducted from the Contract Price.

The Contractor shall promptly remove from the vicinity of the completed Work, all rubbish, debris, unused materials, concrete forms, construction equipment, and temporary structures and facilities used during construction. Final acceptance of the Work by the City will be withheld until the Contractor has satisfactorily complied with the foregoing requirements for final clean-up of the Project site.

Construction materials and equipment shall not be stored in Streets, roads, or highways unless otherwise specified in the Special Provisions or approved by the Engineer. The Contractor shall make arrangements for storing its equipment and materials. The Contractor shall make its own arrangements for any necessary off-site storage or shop areas necessary for the proper execution of the Work. Approved areas within Work site may be used for temporary storage; however, the Contractor shall be responsible for obtaining any necessary

permits from the City. In any case, the Contractor's equipment and personal vehicles of the Contractor's employees shall not be parked on the traveled way or on any section where traffic is restricted at any time.

The Contractor shall deliver, handle, and store materials in accordance with the manufacturer's written recommendations and by methods and means that will prevent damage, deterioration, and loss including theft. Delivery schedules shall be controlled to minimize long-term storage of products at the Project site and overcrowding of construction spaces. In particular, the Contractor shall provide delivery and installation coordination to ensure minimum holding or storage times for materials recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other sources of loss.

Storage shall be arranged to provide access for inspection. The Contractor shall periodically inspect to assure materials are undamaged and are maintained under required conditions. All costs associated with the clean-up and storage required to complete the Project shall be the sole responsibility of the Contractor.

#### **5.14 SOUND CONTROL REQUIREMENTS:**

Sound control shall be in accordance with Section 14-8, "Noise and Vibration," of the Caltrans Standard Specifications and these special provisions.

The noise level from Contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., shall not exceed 86 dba at a distance of 50 feet. This requirement in no way relieves Contractor from responsibility for complying with local ordinances regulating noise level.

Said noise level requirements shall apply to all equipment on the job or related to the job, including but not limited to trucks, transit mixers or transient equipment that may or may not be owned by Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety law for the protection of personnel.

Do not deliver, fuel or service construction equipment from 9:00 p.m. to 6:00 a.m. or on Sundays at the project site unless authorized by the Engineer.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefore.

#### **5.15 WORKING HOURS:**

Contractor's working hours shall be between 7:00 a.m. and 5:00 p.m., Monday through Friday, excluding legal holidays.

Contractor shall notify Engineer 48 hours prior to beginning work.

Contractor shall not work outside the above-mentioned working hours without prior written consent of Engineer.

Designated legal holidays are: January 1st, the third Monday in January, the third Monday in February, the last Monday in May, June 19, July 4th, the first Monday in September, November 11th, Thanksgiving Day, the day after Thanksgiving, and December 25th. When a designated legal holiday falls on a Sunday, the following Monday shall be a designated legal holiday. When a designated legal holiday falls on a Saturday, the preceding Friday shall be a designated legal holiday.

#### 5.16 UNDERGROUND SERVICE ALERT REQUIREMENTS:

Contractor shall contact Underground Service Alert of Northern California at least 48 hours in advance of any construction activity, will or could damage or affect any underground utility or subsurface improvement, and obtain an inquiry identification number. Contractor shall notify Underground Service Alert in the event of change in the project limits or change in original work previously shown on the plans or indicated in the specifications. Contractor shall not commence construction prior to City Inspector receiving City's notice from USA North regarding this construction activity.

#### 5.17 DUST CONTROL:

Dust Control shall conform to the provisions in Section 10, "Dust Control", of the City Standard Specifications, these special provisions, and the Dust Control Notes on the Plans.

All exposed surfaces shall be watered a minimum of twice daily, including on holidays and weekends, unless deemed unnecessary due to weather.

Full compensation for Dust Control will be considered as included in the various contract items of work requiring Dust Control, as determined by Engineer, and no separate payment will be made therefor.

#### 5.18 WATERING:

Watering shall be in accordance with Section 17, "Watering," of the Caltrans Standard Specifications.

Full compensation for Watering will be considered as included in the various contract items of work requiring Watering, as determined by Engineer, and no separate payment will be made therefor.

#### 5.19 USE OF HYDRANTS FOR CONSTRUCTION PURPOSES:

City will permit the use of a hydrant for construction purposes provided that the following are abided by:

1. A spanner wrench shall be the only type of wrench used on fire hydrants.
2. Contractor shall be liable for the damages to or loss of all hydrants and associated water lines and equipment which result from the use of this equipment.
3. Water shall only be used within City limits.
4. The vehicle must be approved by Engineer for approved backflow device.
5. Contractor shall pay a deposit on a water meter provided by the City. After the project ended the Contractor shall return the meter to the City for the release of the deposit.

Contractor shall obtain a no-fee monthly hydrant use permit for use of construction water for this project from the City of Turlock Municipal Services Department located at 156 S. Broadway Suite 270, Turlock, California 95380, ph:209-668-5590.

Use of city hydrants does not exempt Contractor from providing a water truck where hydrants cannot be utilized due to unsafe working conditions as deemed by Engineer.

#### 5.20 PROGRESS SCHEDULE:

Contractor shall furnish City with a Critical Path Method progress schedule at the preconstruction meeting. Progress Schedules will be required for this contract and shall conform to the provisions in Section 7-5.01, "Progress Schedule" of the State Standard Specifications. If Contractor falls more than 10 working days behind the schedule, the Contractor shall submit an accelerated schedule to show how the work will be completed by the project Completion Date identified in the Agreement. The progress schedule shall show the construction activities extending for the duration of the working days. Any deviation from the outline must be approved by Engineer. Contractor shall not be allowed to start construction activities until the progress schedule is accepted by Engineer. Payment for the progress schedule shall be included under the Jobsite Management bid item.

#### 5.21 PRESERVATION OF PROPERTY:

The work performed in connection with various existing facilities shall be in accordance with Section 7-8, "Preservation of Property," of the City Standard Specifications and these special provisions.

Due care shall be exercised to avoid injury or damage to existing improvements or facilities, utility facilities, adjacent property, and roadside trees, shrubs and other plants that are to remain in place.

Roadside trees, shrubs and other plants that are not to be removed and pole lines, fences, signs, markers and monuments, buildings and structures, conduits, pipelines under or above aground, sewer and water lines, sprinkler systems above or below ground, all roadway facilities, and any other improvements or facilities within or adjacent to the right-of-way shall be protected from injury or damage, and if ordered by Engineer, Contractor shall provide and install suitable safeguards, approved by Engineer, to protect such objects from injury or damage. If such objects are injured or damaged by reason of Contractor's operations they shall be replaced or restored at Contractor's expense. The facilities shall be replaced or restored to a condition as good or better as when Contractor entered upon the work, or as good as required by the specifications accompanying the contract, if any such objects are a part of the work being performed under the contract. Engineer may make or cause to be made such temporary repairs as necessary to restore to service any damaged facility. The cost of such repairs shall be borne by Contractor and may be deducted from any moneys due or to become due to Contractor under the contract.

The fact that any underground facility is not shown upon the plans shall not relieve Contractor of his responsibility under Section 2.02, "Existing Utilities and Facilities", of these provisions. It shall be Contractor's responsibility, pursuant thereto, to ascertain the location of such underground improvements or facilities that may be subject to damage by reason of his operations.

The Contractor shall protect private improvements from damage. On-site private improvements may include, but are not limited to, trees, shrubbery, lawns, irrigation facilities, structures, mailboxes, parking lot pavement, concrete curbing, and driveway pavement. If such objects are damaged, they shall be replaced, repaired and or restored at the Contractor's expense, to a condition as good or better as when the Contractor entered upon the property, as determined by the City Engineer.

During the contract period, the Contractor will not unreasonably interfere with business operations within the project limits or unreasonably delay access to or from private residential or commercial driveways. The Contractor, under circumstances within his control, will complete construction in a timely and diligent manner. The Contractor shall not be allowed to impact or restrict use of any residential or multi-family or business driveways for more than 48 hours. To meet this schedule the Contractor may submit, for approval by the City Engineer, high strength or early strength concrete mixtures or high strength or early strength concrete accelerators or additives at no additional cost to the City. During the 48 hour driveway closure, the Contractor shall provide street parking for the affected residences and businesses. Pedestrian and emergency vehicle access to all residences and businesses shall be maintained at all times.

The Contractor shall be responsible for repairing, replacing, or modifying all landscape and irrigation systems within and outside the right-of-way areas that are damaged, capped, or removed during construction. Damage shall include all that is caused as a result of any and all work associated with the contract. All repairs to both landscaping and irrigation system shall be done in a manner equal to or better than the previously existing conditions. If irrigation systems are damaged during trenching, curb, gutter and sidewalk improvements or other construction activities, the Contractor shall repair the damage within two (2) calendar days in order to maintain full operation of the system. Any loss and/or subsequent replacement of plant material due to damage of the irrigation system or the neglect to repair it promptly shall be the sole responsibility of the Contractor. Landscape replacement or repair shall be completed as soon as it will not be damaged by further construction activities.

The Contractor is not permitted to cut roots within the root protection zone without permission from the Engineer.

Root Protection Zone – this is the area of land immediately surrounding a tree that is left undisturbed and protected. The dimensions of the root protection zone are determined by measuring the diameter of the trunk and applying one foot of land area for every inch of trunk diameter (trunk diameter is measured at 4½ feet above grade). For example, a tree with a diameter of 12 inches will have a 12 foot radius as a root protection zone.

1. Root and branch pruning shall be done by or under the supervision of an ISA Certified Arborist provided by the Contractor, and meet or exceed ANSI A300 or approved Tree Care Industry Standards. A certified arborist must be onsite during the entirety of pruning and tree trimming. Submit for approval the qualifications of the proposed arborist.
2. Root and branch pruning shall be done prior to disturbance of the site. No disturbance shall be done within a distance of 3x the diameter of the tree, due to stability concerns.
3. Before disturbance, meet with the arborist and City Representative on site to confirm the layout of root and branch pruning.
4. The layout will be marked on the ground between the disturbance and the tree, typically 6" closer to the tree than the back of the new curb.
5. Root and branch pruning shall be done with a sharp tool, in such a way that does not pull on the roots or branches, but leaves smooth cuts, as directed by the certified arborist.

6. Once exposed, roots must be covered within 8 hours. If roots will be left exposed for longer than 8 hours, they must be kept moist. One option is to put moist burlap over the exposed roots or 3" of mulch and water thoroughly.

7-Days prior to beginning work on this project, the Contractor shall be required to notify adjacent or nearby residents / businesses. Residents / businesses shall be notified with a City-approved door hanger.

The Contractor shall be responsible for inserting the date on which a section of sidewalk (and driveways) are to be constructed. The door hangers will advise residents / businesses of parking and irrigation restrictions during and immediately in advance of the construction of proposed improvements. Any changes in the Contractor's schedule shall require that re notification take place at the Contractor's expense. It is the Contractor's responsibility to obtain, at his expense, City-approved door hangers.

Door hangers shall be placed before 1:00 PM seven days before beginning work to allow sufficient time for City inspection of the hangers.

The Contractor shall not be allowed to begin work until the residents / businesses within the work area have been notified. Within 24-hours of distributing the notifications, the Contractor shall submit to the Engineer the street addresses, the time, and the date the notices were placed. The Contractor is responsible for providing on the notice the Contractor's contact phone number(s) to be reached by the residents / businesses after hours and on weekends.

Full compensation for furnishing all labor materials, tools, equipment, and incidentals, and for doing all the work involved in protecting or repairing property as specified above including providing the services of an ISA Certified Arborist, shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefore.

## 5.22 ORDER OF WORK:

No work may take place prior to receipt of the Notice to Proceed. When required by the Special Provisions, the Plans or by the Engineer with advanced written notification of at least fifteen (15) working days, the Contractor shall follow the sequence of operations as set forth therein.

The project improvements will generally be constructed within existing right-of-way; however, some portions of the proposed pavement, curb & gutter, sidewalk, driveway, and curb ramp improvements are currently located outside existing right-of-way. The City is in the process of acquiring the right-of-way required to construct these improvements as shown on the Contract Documents. The Contractor shall work with the City to stage the construction schedule to allow the City up to an additional sixty (60) calendar days to complete right-of-way acquisitions prior to construction of improvements outside existing right-of-way. During such time, the Contractor shall hold their bid item unit pricing without adjustment. The time allowed for the completion of such improvements will be extended by a period of time equal to that lost due to the right of way acquisition.

If work in those areas affected by the right-of-way acquisition delays the current controlling operation by more than sixty (60) calendar days, the delay will be considered a right of way delay and the Contractor will be compensated for the delay in conformance with the provisions in Section 8 1.07, "Delays," of the Caltrans Standard Specifications. No additional compensation will be considered for a delay less than sixty (60) calendar days.

The City may cancel the portion of the work affected by the right-of-way acquisition. In the event of cancelation, the Contractor shall be compensated for all work executed upon a unit basis in proportion to the amount of the work completed, or upon a cost plus-ten-percent (10%) basis, whichever is the lesser. Materials on the ground, in process of fabrication or in route upon the date of notice of cancelation specially ordered for the Project and which cannot be utilized by Contractor, shall be compensated for by City at cost, including freight, provided Contractor shall take all steps possible to minimize this obligation.

The Contractor's attention is directed to Section 7-11 of the City Standard Specifications regarding cooperation between contractors. The Contractor shall coordinate with the Contractors of the projects listed below. See map and cover sheet for each project attached to these specifications.

- Project No. 23-031, Roads Program Capital Improvement Project, Plan Package 2
- Project No. 23-033, City of Turlock Roads Program Capital Improvement Project
- Project No. 23-040, Water Line Replacement for 2024 Roads Program Construction
- Project No. 23-067, Roads Program Capital Improvement Project, Plan Packages 1, 2, & 3
- Project No. 23-068, Roads Program Capital Improvement Project, Plan Packages 1 & 2
- Project No. 23-069, Roads Program Capital Improvement Project

The Contractor shall protect in place the improvements constructed from the projects listed below, which are currently under warranty with the Contractor of that project. The Contractor shall repair any damage caused to these improvements at no additional cost to the City.

- Citywide Street Rehabilitation and Improvement Project Various Locations – Package 3 (City of Turlock Project No. 22-001)
- Southwest Quadrant Road Rehab (Turlock City Project No. 20-002)
- Pedras Road Rehabilitation Civil Improvement Plans (City of Turlock Project No. 21-021)
- Roads Program Capital Improvement Project, Plan Package 3 (City of Turlock Project No. 23-031)
- Roads Program Capital Improvement Project, Plan Package 2 (City of Turlock Project No. 23-031)
- Roads Program Capital Improvement Project, Plan Package 2 (City of Turlock Project No. 23-032)
- City of Turlock Roads Program Capital Improvement Project (City of Turlock Project No. 23-033)

As a first order of work, the Contractor shall construct the concrete and pavement improvements along Bell Street between Merritt Street and Sycamore Street.

The Contractor shall place orders of all of the necessary items specified in the plans and specifications herein within 2 working days after approval of the submittal.

Prior to performing any work that requires a lane closure, a Traffic Control Plan, prepared by the Contractor in general conformance with the provided Traffic Control Plans, shall be reviewed and approved by the City of Turlock. Traffic Control details have been provided as part of the Project Plans, however, the Contractor may find due to their chosen means and methods, a need for a viable method of controlling traffic associated with this Contract work, the Contractor shall have a traffic control plan prepared and signed by a State of California Registered Traffic Engineer hired by the Contractor. Contractor shall comply with the City of Turlock Section 11 "Traffic Safety" and Section 11-2 Temporary Traffic Control Plan.

The Contractor shall not begin demolition or excavation until SWPPP, prepared by the Contractor, is approved by the City of Turlock.

The Contractor shall notify the Engineer and the property owner, 5 working days before beginning work on or adjacent to any private properties.

#### 5.23 AS-BUILTS:

When the job is complete, Contractor shall provide City with as-built drawings. These as-built drawings shall show any and all differences (revisions, additions, etc.) between the signed improvement plans and the installed improvements. The Contractor shall identify the depth and size of all utilities that are located in the field. The as-builts will consist of redlined signed improvement plans. The NOC will not be issued until acceptable as-builts have been received by the Engineer.

#### 5.24 SURVEYING:

Construction survey staking shall be provided by the Contractor and shall comply with Chapter 12 of the Caltrans Surveys Manual. Contractor shall provide staking sufficient for the installation and inspection of all improvements shown on the plans. Staking shall remain in place for the inspection of all improvements and shall not be removed prior to obtaining permission from the Engineer.

Contractor is responsible for all construction surveying needed to verify all dimensions on the drawings. Within the first 10 working days, the Contractor's surveyor shall physically verify all conform or "match existing" locations (elevations and offsets) shown in the plans. The Contractor shall provide an exhibit to the Engineer reporting any discrepancies before proceeding with any other Work.

The Contractor shall perform all survey and layout Work per the benchmark information on the Project Plans. All surveying Work must conform to the Professional Land Surveyors' Act (Business and Professions Code Section 8700 et seq). All Project surveying notes and "cut-sheets" are to be provided to the City after the completion of each surveying activity and all final surveying notes shall be provided before final payment to the Contractor.

The Contractor shall determine line and grade for each curb ramp, as specified in the plans. The line and grades shall meet current ADA guidelines and shall be reviewed by the Engineer prior to construction.

Construction surveying shall be paid per LUMP SUM (LS) bid item and shall include re-staking and replacement of construction survey markers damaged as a result of the Work, vandalism, or accident shall be at the Contractor's expense.

Preservation of existing monuments shall be Contractor's responsibility. Contractor shall notify City of all monuments that may/will be disturbed by construction operations. City will tie off said monuments and provide Contractor a notice to proceed.

Once Contractor is finished with its construction operations, City will relocate the monuments. Contractor shall install a monument well with concrete collar at each location which shall conform to the provisions in Section 22-1 "Survey Monuments" and Drawing M-1 "Monument Detail", of the City Standard Specifications and these specifications.

Prior to installation of all formwork, Contractor shall be required to notify the City a minimum of 48 hours in advance of scheduled formwork activities. The Engineer shall review the survey results and determine if the preparation of the building pad area is in conformance with the project plans and specifications. Contractor shall not proceed with installing formwork until after it is determined that the building pad area is in conformance with the project plans and specifications. After formwork is in place and prior to pouring any concrete, Contractor shall notify the City a minimum of 48 hours in advance for a survey of formwork. Upon completion of the survey, the Engineer may either approve or disapprove of the formwork. Contractor shall not proceed with pouring concrete until after the Engineer has certified that the area is in compliance with the project plans and specifications. Contractor shall be required to correct this work in a manner acceptable to the Engineer if found to not be in conformance with the project plans and specifications at his/her own expense.

#### 5.25 TESTING:

Material testing for this project will be provided by the Contractor as set forth in Section 6 of the State Standard Specifications, the City Standard Specifications and the most current City Quality Assurance Program. The Contractor shall perform all testing to verify compliance with the Specifications of any and all materials furnished by the Contractor. The Contractor shall submit and receive the Engineer's approval of all compliance test results prior to incorporating materials into the project. The Contractor may elect to place material without the approved certificates of compliance and mix designs at Contractor's own risk. The Contractor shall notify the Engineer in writing to get the approval of placement of material without approved certificates of compliance and mix design, and \$10,000 will be withheld from the Contractor's progress payment for each certificate of compliance and mix design until the certificate of compliance and mix designs are submitted and approved.

Unless otherwise noted, the Contractor shall provide all Quality Control Testing including compaction testing for the native soil. Acceptance testing will be performed by the City. Coordination of said testing is the responsibility of Contractor. The Contractor shall provide at least 48 hours' notice to the Engineer in advance of all testing. All costs associated with Quality Control Testing shall be included in the unit prices for the various contract items. No separate payment will be made therefore.

At locations determined per the test method and/or sites chosen by the project inspector, Contractor's testing laboratory will conduct all tests. Contractor shall supply any necessary equipment and or labor required to obtain all samples for the completion of the testing process.

The Size, Frequency, and Location of Sampling and Testing (non-NHS and non-SHS projects) and Materials Typically Accepted by Certificate of Compliance are shown in Appendix 2 and Appendix 3 of the City Quality Assurance Program. Additional requirements are set forth in the State Standard Specifications. All relative compaction shall be determined by 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.

A copy of the City Quality Assurance Program is attached to and made part of these Special Provisions.

## 5.26 SUBMITTALS:

### General

Before making submittals, Contractor shall ensure that products and materials will be available in the quantities and in the time required by the Contract and the approved outline of construction activity. Each submittal shall clearly identify, by highlighting, arrows or other defined and permanent mark, the products and materials proposed for use.

All Submittals shall be made to Engineer by Contractor, including those generated by subcontractors and suppliers. Contractor shall carefully review all subcontractor and supplier submittals before submitting to Engineer for review. Submittals received from sources other than Contractor's office shall be returned without action. If a submittal contains extraneous information, unmarked options or is incomplete, it will be returned to Contractor for correction and require re-submittal.

### Submission

Submittals shall be made electronically in accordance with Section 5.29, "Internet Based Construction Management System," of these special provisions.

Each submittal shall contain, at a minimum, the following information:

1. Title page including the following information:

Name of Contractor  
Name of subcontractor (if applicable)  
Description of item  
Item Number on Bid Schedule  
Contractor's initials and date indicating approval of item for submittal to Engineer

2. The brochure, product data sheet or catalog cut sheet. For all Product Data and Manufacturer's Instructions, excise or cross out non-applicable information and clearly mark applicable information with citations to and terminology consistent with Contract Documents.

3. Submittals that involve engineering computations or original design work shall show the name, the California State registration number, seal, and signature of the Professional Engineer certifying that

such computations or design work are correct and in conformance with applicable standards, codes and accepted engineering practices.

4. For product samples, Contractor shall submit two (2) representative samples, one of which may be retained for the duration of the project or indefinitely at the discretion of Engineer. Although a reasonable attempt will be made to maintain the samples in good condition, neither City nor its representative will be responsible for the condition of the samples if returned to Contractor.

5. For material samples, unless a specific quantity is called for in the contract documents, Contractor shall submit a representative sample of the material, which may be retained for the duration of the project or indefinitely at the discretion of Engineer.

6. Certificates of compliance shall be submitted by Contractor to Engineer for those materials and products for which no sample and test results are specified. Certificates of compliance shall include the following information:

- a. Statement that the product complies with the respective contract specifications.
- b. Producer's name and address, product trade name and catalog number (if applicable), place of product origin, quantity of product to be furnished, and related contract plans and specification section numbers.
- c. A certified copy of test results pertaining to the product from a certified independent testing laboratory. At the option of Engineer certified test results shall be signed and sealed by a Professional Engineer licensed to practice in the state of California.
- d. Safety Data Sheets (SDS) for all materials used or stored on the site that possess a SDS, including materials used by Contractor for maintenance of equipment.

## Review

Submittals will be processed by Engineer within ten (10) working days after receipt. When a submittal cannot be returned within that period, the Engineer will, within a reasonable time after receipt of the submittal, give notice of the date by which that submittal will be returned. Submittal shall receive one of four review actions:

1. No Exceptions Taken – The submittal is approved without comments.
2. Supply as Noted – The submittal is approved, provided that the Contractor addresses the included comments.
3. Rejected – The submitted product cannot meet project requirements and is rejected. Contractor shall provide a separate product that meets project requirements as a resubmittal.
4. Resubmit – The information provided with the submittal does not meet project requirements, however, Engineer has commented on some missing items that, if provided, may meet project

requirements. Contractor shall resubmit the same product and provide additional information per the Engineer's comments.

Engineer will review submittals for general conformance with the Contract Documents. The work shall be in accordance with approved submittals except that the Contractor shall not be relieved of the responsibility for deviations from requirements of the Contract Documents by the Engineer's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Engineer in writing of such deviation at the time of submittal as part of a cover letter to the submittal itself, and as a written communication separate from the submittal cover letter, and (1) the Engineer has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Engineer's approval thereof. The Engineer's review does not extend to accuracy of dimensions, quantities, or performance of equipment and systems designed by the Contractor, or means, methods, techniques, sequences, or procedures. Unless specifically authorized to do so by Engineer, Contractor shall not procure, manufacture, or fabricate any part of the contract work until submittals related to said contract work have been favorably reviewed by Engineer.

### "Or Equal" Items

Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to for review under the circumstances described below.

1. "Or Equal" Items: If in the Engineer's discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may be accomplished. A proposed item of material or equipment will be considered functionally equal to a named item if:

a. In the exercise of reasonable judgment Engineer determines that: (i) it is at least equal in quality, durability, appearance, strength, and design characteristics; (ii) it will reliably perform at least equally well the function of the named item, and;

b. Contractor certifies that: (i) there is no increase in cost to the City; and (ii) it will conform substantially, even with deviations, to the detailed requirements of the item named in the Contract Documents.

## 5.27 NOTICE OF POTENTIAL CLAIM:

Attention is directed to Section 5-1.43 "Potential Claims and Dispute Resolution," of the Caltrans Standard Specifications.

## 5.28 PRESERVATION OF EXISTING MONUMENTS:

Preservation of existing monuments shall be Contractor's responsibility. Contractor shall notify Engineer of all monuments that may/will be disturbed by construction operations. Engineer will tie off said monuments and provide Contractor a notice to proceed.

Once Contractor is finished with its construction operations, Engineer will relocate the monuments. Contractor shall install a monument well with concrete collar at each location which shall conform to the provisions in Section 22-1 "Survey Monuments" and Drawing M-1 "Monument Detail", of the Standard Specifications and these special provisions.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved with protecting existing monuments as specified above, shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefore.

## 5.29 INTERNET BASED CONSTRUCTION MANAGEMENT SYSTEM:

### General

The Engineer and Contractor shall utilize Construction Management System (<http://www.c-mis.com/>), herein after called CMIS, for submission of all data and documents (unless specified otherwise in this Section) throughout the duration of the Contract. CMIS is an electronic project management system accessible through the Internet used to create, share, and review construction management documentation. CMIS is provided by the Engineer at no cost to the Contractor. CMIS will be made available to all Contractors' personnel, subcontractor personnel, suppliers, consultants, Engineer, and any of Engineer's representatives or agents. The joint use of this system is to facilitate electronic exchange of information, automation of key processes, electronic notification of project activity, and overall management of contract documentation. CMIS shall be the primary means of project information submission and management.

The Engineer will establish the Contractor's access to CMIS by enabling access and assigning user profiles to Contractor personnel, including subcontractors and suppliers, as requested by Contractor. All authorized personnel shall have an individual user profile; no joint-use or shared user profiles will be allowed. Each user profile shall be assigned to a user group and have specific permission settings and privileges based on the user's need within CMIS. Entry of information exchanged and transferred between the Contractor and its subcontractors and suppliers on CMIS shall be the responsibility of the Contractor.

The Contractor shall use computer hardware and software that meets the requirements of the CMIS system. As recommendations are modified by CMIS, the Contractor will upgrade their system(s) to meet or exceed the recommendations. Upgrading of the Contractor's computer systems will not be justification for a cost or time modification to the Contract. The Contractor shall ensure its own connectivity to CMIS through their internet service provider.

The Contractor shall be responsible for the validity of the information they place in CMIS, for the training of their personnel to understand and utilize CMIS, as well as the provision and accessibility of adequate resources to connect with CMIS. Accepted users shall be knowledgeable in the use of computers, including Internet browsers, email programs, and the Portable Document Format (PDF) document type. The Contractor shall utilize the existing forms in CMIS to the maximum extent possible. If a form does not exist in CMIS, the Contractor must include their own form or a form provided by the Engineer as an attachment to a submittal, RFI, or other document within CMIS. Note that only the following file types are accepted as attachments to documents within CMIS: PDF files, Microsoft Word (DOC) files, Microsoft Excel (XLS) files, picture files (JPG, TIFF, BMP, JPEG, etc.). PDF documents will be created through electronic conversion prior to uploading, such as through a "print to file" feature or "save as pdf" feature, rather than optically scanned whenever possible.

The Contractor shall provide a list of key CMIS personnel for the Engineer's acceptance. The list shall include the following information: first name, last name, address, title, office phone number, cell phone number, and email address. The Engineer is responsible for adding and removing users from the system and establishing read, write, and approval permission levels.

CMIS instructions are provided in the *Information Handout*.

Responses will be sent back to the Contractor. It is the Contractor's responsibility to disseminate responses to their subcontractors. Subcontractors will not have access to CMIS.

All costs associated with CMIS shall be included in other items of work and no separate payment will be made therefore.

#### Company Documents

This area is reserved for general documentation not related to a specific project. Only the Engineer shall post content in this area. Examples of content found in this area are: the City of Turlock Standard Specifications and Drawings, the Caltrans Standard Specifications, and the Caltrans Standard Plans. All files are in PDF format.

#### Project Summary

The project summary tab provides an overall summary of the project. It includes the current weather, the working days remaining and a summary of work for the past week. The summary of work is generated from the City's project inspector and the daily logs. This tab is for information only and the Contractor shall not take any action here.

#### Task Manager

The project schedule the Contractor submits is converted into a format that is uploaded by the Engineer into the task manager tab. The Contractor is responsible for providing schedule updates to the Engineer whenever the work progress in a manner different than the approved schedule.

#### Change Order Manager

The change order manager tab shall be used to track project change orders. Any potential change orders shall be tracked as a Request for Information (RFI) in the RFI tab. Once the Engineer agrees that a RFI will result

in a contract change order, a new contract change order shall be created by the Engineer in the change order manager tab. The Engineer will finalize the contract change order through this tab. Once the change order is finalized, the Engineer will present the contract change order at a City Council meeting. After City Council approval the Engineer will make payment on the contract change order.

### Transmittals

The transmittal tab shall be used to communicate general project information amongst all parties as well as used by the Contractor in the submission of certified payroll reports. The Engineer will upload the project-specific information including: bid documents, conformed plans, conformed specifications and the Notice to Proceed to the transmittal tab.

The Contractor shall submit certified payroll reports on a weekly basis through the transmittal tab. Each week shall have a separate transmittal where all the certified payroll reports and statements of non-performance for each contractor shall be posted.

### Submittals

All submittals shall be submitted through the submittal tab. The preferred document type is PDF.

Before making submittals, the Contractor shall ensure that products and materials will be available in the quantities and in the time required by the Contract and the approved schedule of activities. Each submittal shall be legible and clearly identify, by highlighting, arrows or other defined and permanent mark, the products and materials proposed for use.

All submittals shall be generated from the prime contractor and any submittals that are uploaded by subcontractors or suppliers will not be reviewed. Contractor shall carefully review all subcontractor and suppliers submittals before submitting it to the Engineer for review. If a submittal contains extraneous information, unmarked options or is otherwise incomplete, it will be rejected and the Contractor shall make corrections and upload the resubmittal. Any resubmittal shall be made to the same transmittal item in CMIS.

Submittals shall be processed by the Engineer within ten working days after upload to CMIS. The Engineer will review submittals for general conformance with the Contract Documents and standards. Such review by the Engineer shall not relieve the Contractor of any responsibility for full compliance with the Contract Documents. Unless specifically authorized to do so by the Engineer, the Contractor shall not procure, manufacture, or fabricate any part of the contract work until submittals related to said contract work have been approved by the Engineer.

Each submittal shall have a unique title that is comprised of the item followed by a comma and the section of the specifications that reference the item (e.g. Minor Concrete, Section 8.01). The submittal type shall either be project materials or project information. The submittal description shall be used to identify any pertinent information or list a description of the item being submitted.

Certificates of compliance shall be submitted through the submittal tab. The submittal type shall be "certificate of compliance".

The Contractor shall submit progress invoices on the last working day of the month through the transmittal tab (select “progress invoice” for the type). The Engineer will review the submitted content and if found acceptable the Engineer will upload an official invoice for the Contractor to sign. The Contractor shall sign in blue ink and upload the signed invoice to the same transmittal where the Engineer will then process for payment.

#### RFIs

Submit an RFI through CMIS upon recognition of any event or question of fact arising under the Contract. The RFI type for this submittal shall be “Request for Information.” The Engineer will also utilize the RFI tab in a similar manner when there is a question for the Contractor; this RFI type shall be “Response Required.”

The Engineer responds to the RFI within 5 business days. Proceed with the work unless otherwise ordered. The Contractor may protest the Engineer’s response by submitting an Initial Potential Claim Record form within 5 business days after receiving the Engineer’s response.

The Prime Contractor shall submit all RFI’s.

#### Daily Logs

The daily log tab is used by the City to document the activities of the work, any correspondence or direction given in the field, safety concerns and general comments about the project. The Contractor may view the contents of this tab for reference purposes. The information entered into the daily log tab is used to populate the project summary tab.

#### WSWD

The weekly statement of working days will be posted to the WSWD tab. CMIS automatically generates the WSWD from the information entered into the daily log tab. The WSWD shows the working days and non-working days charged for the reporting week, any time adjustments, a work completion date with the remaining working days left in the contract and the controlling activities for the week.

The Contractor will be allowed 15 days from the last working day of the weekly statement to protest in writing the correctness of the statement. The Contractor shall submit a transmittal stating what is being protested and the reasons for protest. The Engineer will respond to the protest. The Contractor may protest the Engineer’s response by submitting a claim in accordance with Section 5.27 “Notice of Potential Claim” of the special provisions.

#### **5.30 BUSINESS LICENSE:**

Contractor shall obtain a City of Turlock business license prior to issuance of the Notice to Proceed. The cost of the business license is a up-front fee of eighty four dollars (\$84) plus fifty cents per thousand dollars in revenue received for work performed on the project, made payable on a semi-annual basis. Business Licenses are obtained through the Finance Division at Turlock City Hall, 156 S. Broadway, Suite 114. Additional information can be found on the City’s website at <http://ci.turlock.ca.us/doingbusinessinturlock/businesslicenses/newbusinesslicense.asp>.

Full compensation for obtaining a business license as specified above shall be considered as included in the prices paid for the various contract bid items and no additional compensation will be allowed therefore.

### 5.31 TEMPORARY CONSTRUCTION POWER:

If temporary construction power is determined to be needed by the Contractor to perform the work, Contractor shall arrange and pay for all temporary electric power. The cost of temporary power shall be considered as included in the various contract bid items and no additional compensation will be allowed therefore.

### 5.32 SALVAGE MATERIALS:

If Contractor is directed to salvage materials in the Contract Documents, Contractor shall arrange for delivery of said item(s) to the City of Turlock Corporation Yard located at 701 S. Walnut Road, unless noted otherwise. Contractor shall coordinate delivery of salvaged materials through the public works inspector.

### 5.33 PERMITS:

Permit:	Agency /Division:	Required for:	Fee	Notes
Erosion and Sediment Control Plan	City of Turlock	Any ground disturbing work	\$0	See Special Provisions Section "EROSION CONTROL"
Encroachment Permit	City of Turlock	Any work within City limits, including traffic control	\$0	Issued by City Municipal Services Department after contract execution
Encroachment Permit	Stanislaus County	Any work outside City limits including traffic control	Paid by Contractor, City will reimburse Contractor for permit fee by Change Order	Contractor shall apply for the permit and provide all required information for issuance of a permit. City will assist required with supplementary information as necessary
Monthly Hydrant Use Permit	City of Turlock Municipal Services Department	Use of construction water from hydrants	\$0 though a deposit is required for meter	See Special Provisions section "USE OF HYDRANTS FOR CONSTRUCTION PURPOSES"

### 5.34 UTILITY COORDINATION:

The Contractor's attention shall be directed to Section 5.16, "Underground Services Alert Requirements" and Section 2.02, "Existing Utilities, Facilities, and Site Conditions," of these Special Provisions.

All coordination with the utility companies shall be the Contractor's responsibility. All fees and permits associated with the City of Turlock shall be waived.

The cost to coordinate with utility companies shall be considered as included in the various contract items, and no additional compensation shall be made.

### 5.35 UTILITY VERIFICATION:

The City has endeavored to show on the Plans the approximate locations of utilities. The Contractor shall be responsible for verifying utility locations.

The location and existence of any underground utility or substructure was obtained from a search of available records. No guarantee is made or implied that the information is complete or accurate.

It shall be the Contractor's responsibility alone to determine the location of underground utilities or substructures of every nature and to protect them from damage.

The Contractor shall pothole all utilities, including service connections, which may be in conflict with the work.

### DELAYS

All notification to utility companies insofar as the relocation or removal of a utility shall be made by the Contractor and Engineer shall be notified at least forty eight (48) hours in advance of the needed work. Any costs for delay of the Contractor or utility companies in this regard shall be assigned to the Contractor, if these costs are a result of the Contractor's request being untimely in any respect excepting thereof any delay cost incurred as a result of the utility company not responding at their agreed time.

The Contractor shall submit a Utility Verification Plan to the Engineer for review and approval within 10 business days of Award. The Engineer shall have 5 business days to review the Utility Verification Plan. Potholing and/or verifications may not start until the Contractor's Utility Verification Plan has been approved by the Engineer. The Utility Verification Plan shall include the location of all known improvements and existing utilities (including but not limited to drainage, sewer, water, raw water, gas, petroleum, electric, communication, fiber, irrigation piping and electrical, highway lighting, street lighting, signals, traffic operating systems and railway facilities) that are shown on the plans, marked in the field, or could reasonably be inferred from the presence of visible above ground facilities, such as signal poles, roadway lighting, communication / traffic pull boxes, and existing irrigation facilities. The Utility Verification Plan shall detail the location of each proposed pothole by station and offset, proposed depth of pothole, method of potholing, proposed method of backfilling and surface restoration. The Utility Verification Plan shall also include a schedule of when the Contractor plans to perform the work demonstrated in the Utility Verification Plan noting the dates, times and locations of all lane closures required to perform the potholing and/or verifications. Activities for developing and submitting the Utility Verification Plan, the Engineer's review of the Utility Verification Plan and performing the work detailed in the Utility Verification Plan shall be included in the Contractor's Baseline CPM Schedule, and all subsequent CPM schedules.

Within the first 10 working days, the Contractor shall physically verify all locations of existing utilities, and certify, in writing, that there are no conflicts with planned improvements. If there are conflicts, the Contractor shall indicate in writing, the specific conflict and allow the Engineer 10 working days to provide a response. The Contractor shall include a schedule activity for potholing (the Contractor's responsibility), and notification to the Engineer in the baseline schedule. The 10 working days for Engineer review shall be identified as a City-owned activity in the Contractor's baseline schedule. If there are no conflicts identified, this activity will then be shown as City-owned float. The Contractor shall not proceed with any other construction activities until acceptance is granted by the Engineer.

## COOPERATION

The contractor shall cooperate with all agencies affected by the project and notifying them at least 72-hours prior to commencement of any work and adjacent to this project.

Compensation for conforming to the requirements of "COOPERATION", including furnishing all labor, materials, equipment and incidentals for accomplishing the work as specified herein, shall be considered included in the various contract item of work and no additional compensation shall be allowed.

The Contractor shall:

1. Cooperate with utility personnel; provide access to work site.
2. Coordinate Work of the Contract with affected utilities. All USA markings shall be removed after completion of the work for which the markings were provided, and before City's Acceptance and/or approval of the Work.
3. The Contractor shall coordinate all service disruptions and shutdowns with respective utility agencies.
4. The Contractor shall coordinate with Stanislaus County for portions of work within their right-of- way.

## HIGH RISK UTILITY FACILITIES

Caution shall be used when working on or around high risk facilities within the Work area which may be potentially hazardous if damaged. A hazardous substance shall be defined as one having the potential for an immediate disaster such as, but not limited to, gasoline, electricity, fuel oil, butane, propane, natural gas, chlorine or other chemicals.

Gas pipelines are within the project limits and are considered a high risk utility.

The Contractor shall comply with the following requirements when working around underground

hazardous utilities:

- i. The Contractor shall not trench or excavate within the area where a utility known to carry a hazardous substance exists until its location has been verified by potholing or other proven methods acceptable to the Utility Owner. The intervals between exploratory excavations or location points shall be sufficient to determine the exact location of the line. Unless otherwise directed by the Engineer, potholing for underground hazardous utilities shall be performed by the Contractor.
- ii. If it is determined that the horizontal or vertical clearance between the utility known to carry hazardous substances and the construction limit is less than 12 inches (18 inches if scarifying), the Contractor shall confer with its owner. Unless the owner elects to relocate the line or take it out of service, the Contractor shall not excavate until the line has been completely exposed by the Contractor within the limits of construction.
- iii. Once the physical location of the utility known to carry hazardous substances has been determined, the Contractor, in cooperation with and with the concurrence of the utility owner, shall determine how to protect and/or support the utility from damage before proceeding with the Work.
- iv. During all construction operations, the Contractor shall exercise extreme caution and protect the utilities from damage.
- v. The Contractor shall notify the Engineer, the public agency maintaining records for the jurisdiction in which the Project is located and the owner, if known, whenever previously unidentified or unknown underground utilities are encountered so that the location can be accurately established and made a part of permanent substructure records.

Full compensation for protecting underground hazardous utilities as specified, identified or noted on the Plans shall be considered as included in the prices bid for the various items of work.

## **SECTION 6      CONTROL OF MATERIALS**

The Contractor shall deliver, handle, and store materials in accordance with the manufacturer's written recommendations and by methods and means that will prevent damage, deterioration, and loss including theft. Delivery schedules shall be controlled to minimize long-term storage of products at the Project site and overcrowding of construction spaces. In particular, the Contractor shall provide delivery and installation coordination to ensure minimum holding or storage times for materials recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other sources of loss.

Storage shall be arranged to provide access for inspection. The Contractor shall periodically inspect to assure materials are undamaged and are maintained under required conditions. All costs associated with the clean-up and storage required to complete the Project shall be the Contractor's sole responsibility.

The City uses a Quality Assurance Program (QAP) to ensure a material is produced to comply with the Contract.

The Contractor may examine the records and reports of tests the City performs if they are available at the job site.

Schedule work to allow time for QAP.

Testing of offsite material sources quality control is the Contractor's responsibility.

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

The QC manager shall have a minimum of 5 years of construction experience on projects similar to the work under this contract. Identify an alternate QC manager to serve in the event of the QC manager's absence. The requirements for the alternate shall be the same as for the designated QC manager.

Submit a QC plan that consists of plans, procedures, and organization necessary to construct a final product which complies with the contract. The QC plan shall cover all construction operations, both onsite and offsite, that require testing to ensure compliance. The QC plan shall be available at each location where work is performed.

Do not start any work identified in the QC plan until the QC plan is approved. The start of construction (first working day) will not be delayed, nor an extension of contract time (additional working days) be granted for any delay of work due to preparing and approving the QC plan.

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

1. Description of the QC organization, including an organizational chart showing lines of authority.
2. Determine when corrective actions are needed if an area of work does not comply with specifications.
3. Identify QC personnel, including the QC manager, by name, qualifications, duties, responsibilities, and authorities. Provide an organizational chart showing all QC personnel and their assigned QC responsibilities.
4. Include a letter signed by the Contractor which describes the responsibilities of the QC manager and delegates sufficient authority to the QC manager to adequately perform the required duties, including authority to stop work that is not in compliance.
5. Procedures for scheduling, reviewing, certifying, and managing submittals including those of subcontractors, offsite fabricators, suppliers, and manufacturers.
6. Procedures for the quality inspection of the materials which includes contractor verification testing of materials to ensure it meets specifications.
7. Control, verification, and manufacturing plant acceptance testing procedures for each specific test to ensure the quality of the Contractor's workmanship. Include test name, reference specification requiring

test, feature of work to be tested, test frequency, typical sample locations, required documentation, and person responsible for each test. Laboratory facilities shall be properly certified and approved by the Engineer.

8. Specify corrective actions, including verification testing, to be implemented upon identification of construction deficiency.
9. Reporting procedures including all proposed QC forms, daily QC reports, and other reporting formats.

All costs associated with the QC plan shall be included in the unit prices for the contract items covered in the QC plan. No separate payment will be made therefore.

The Engineer will deduct the costs for testing of materials and work found to be unacceptable, as determined by the tests performed by the City, and the costs for testing of material sources identified by the Contractor which are not used for the work, from moneys due or to become due to the Contractor. The amount deducted will be determined by the Engineer. This testing, includes, but is not limited to, compaction, gradation, concrete testing asphalt, and any other testing identified by a California Test Method (CTM). Testing of offsite material sources shall be considered quality control testing and the Contractor's sole responsibility.

No payment will be made for material incorporated in the work until the correct certificate of compliance has been received and approved by the Engineer.

**SECTION 7 (BLANK)**

## SECTION 8 PROSECUTION AND PROGRESS

### 8.01 START OF JOBSITE ACTIVITIES

The Engineer will issue a Notice to Proceed letter within 10 days after contract approval. The Notice to Proceed letter will state the earliest date on which the Contractor may commence jobsite activities. The Contractor shall not commence jobsite activities, subject to the exceptions listed in this section, prior to:

1. The date stated in the Notice to Proceed letter or
2. The Contractor receives authorization to start or
3. The following listed items are authorized or accepted by the Engineer:
  - 3.1. CPM baseline schedule
  - 3.2. SWPPP
  - 3.3. Contingency plan for opening closures to public traffic
  - 3.4. QC plan
  - 3.5. Material Safety Data Sheets
  - 3.6. Construction surveys
  - 3.7. Utility verification plan
  - 3.8. Notice of Materials to be Used form

Other than the submittals listed above, the Engineers' review times for any other submittals will not begin until the working days for the project have begun.

For purposes of determining time of completion, if the Contractor fails to accomplish all of the above listed items to the Engineer's satisfaction within 10 business-days following the earliest date for starting work as stated in the Notice to Proceed letter, work will be deemed to commence on the 11th business-day after the earliest date for starting work as stated in the Notice to Proceed letter, and each subsequent business-day until the Contractor accomplishes the above listed items to the Engineer's satisfaction will be considered to be a working-day as defined in section 1-1.07B of the State Standard Specifications.

Provided the Contractor has accomplished all of the above listed items to the Engineer's satisfaction, the Contractor shall begin work within 10 working-days after the earliest date for starting work as stated in the Notice to Proceed letter. The Contractor shall diligently prosecute the work to completion within the time limit provided. For purposes of determining time of completion, work will be deemed to commence on the day the Contractor begins work or 11 working-days after the date specified in the Notice to Proceed letter, whichever is earlier, and in accordance with contract requirements.

The Contractor may enter the jobsite prior to the first working day only to:

1. Measure controlling field dimensions and verifying conform locations per Section 5.24 of these specifications.
2. Construction area signs.
3. Implementation of SWPPP best management practices once the SWPPP has been accepted.

Submit a notification 72 hours before starting job site activities.

## 8.02 PROJECT MILESTONES

This section describes damages due to the City should the Contractor fail to meet certain project milestones. Attention is directed to Section 5 "Time of Performance" of the Agreement for liquidated damages for the Contractor's failure to perform all work on this project by the Completion Date.

The Contractor shall perform all required earthwork, grading, and initial paving (first lift) no later than eight (8) calendar days after the date when existing asphalt concrete surfaces have been demolished by way of cold plane grinding from any given area. On road sections that require video inspections of the sewer and storm drain mains in accordance with section 10.36, this time restriction may be extended to twelve (12) total calendar days. In the event the Contractor fails to complete the required work in the timeframe indicated, the City may deduct from payments or credits due Contractor a sum equal to \$2,500 for each and every calendar day delay in finishing the work.

During road closures, the work shall progress continuously until the work is complete and the roadway is fully reopened to traffic. Failure to comply may result in all other work being suspended at the discretion of the City.

## **SECTION 9      DESCRIPTION OF WORK**

The work includes all necessary labor, materials, tools, equipment and any incidentals needed to perform the improvements as shown on the contract plans. The work for Project No. 23-068 Package 3, City of Turlock Roads Program Capital Improvement Project includes curb, gutter, sidewalk, driveway reconstruction, alley reconstruction, ADA curb ramp construction, grinding existing roadway, full depth reclamation, storm drain improvements, adjusting existing manholes and valve covers to grade, signing, striping, and traffic control.

## **SECTION 10 TECHNICAL SPECIAL PROVISIONS**

Project No. 23-068 Package 3  
Roads Program Capital Improvement Project

The technical specifications contained herein have been prepared by or under the direction of the following Registered Persons.

### **TECHNICAL SPECIFICATIONS (SECTIONS 10 THROUGH 13)**

### **REGISTERED CIVIL ENGINEER**



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

## 10.01 MOBILIZATION & DEMOBILIZATION

Mobilization is intended to compensate the Contractor for operations including, but not limited to, those necessary for the movement of personal, equipment, supplies and incidentals to / from the project site; for the payment of premium cost and insurance for the project; for any necessary costs of acquisition of equipment, including purchase and mobilization expense; and for any other work and operations which must be performed or costs that must be incurred incident to the initiation of meaningful work at the site and for which payment is not otherwise provided in the contract.

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

The Contract lump sum price paid for mobilization shall include full compensation for establishing temporary construction storage locations, moving equipment to the project site for the establishment of facilities necessary for work on the project, applying for and obtaining all required permits, and for all other work and operations which must be performed or costs incurred prior to beginning work on the various contract items, including all related administration throughout its duration, and demobilization.

The total price bid for mobilization shall include the cost of all mobilization, demobilization, and administration for the entire contract period.

The City shall make the final determination of the allowable percentage of completion for the payment of mobilization and shall approve the percentage paid based on the percent of contract amount actually earned which will be based upon actual work completed.

## 10.02 REMOVE AND REPLACE MONUMENT

Remove and replace survey monument as shown on the plans. New survey monument work must be performed by a licensed surveyor or civil engineer in the state of California and the work must comply with City Standard Drawing No. M-1.

The quantities of remove and replace monument will be paid for as units determined from actual count.

The contract unit prices paid for remove and replace monuments shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in removing existing and installing new monuments, including disposing excavated materials, backfilling, furnishing and installing monument box, cast iron lid, brick footings, concrete collar and hot mix asphalt paving, complete in place, as shown on the plans, and as specified in these Special Provisions, and as directed by the Engineer.

#### 10.03 [NOT USED]

#### 10.04 TRAFFIC CONTROL SYSTEM

This section includes specifications for maintaining both pedestrian and vehicular traffic including street closure or detours if needed for all work within the public right-of-way. Submit Temporary Traffic Control Plan per section 11-2 of City Standard Specifications for approval before beginning work. Contractor shall submit a completed Temporary Traffic Control Plan Checklist with submittal of the Temporary Traffic Control Plan. The checklist may be found online at the City's website at [https://ci.turlock.ca.us/\\_pdf/trafficengineeringdoc.asp?id=4](https://ci.turlock.ca.us/_pdf/trafficengineeringdoc.asp?id=4).

If construction activities affect access to public parking, residential property, or commercial property, contractor shall post signs on Type II barricades at 100-foot intervals on the affected streets at least 48 hours prior to starting construction. Signs must display No Parking – Tow Away. Signs must state the dates and hours parking or access will be restricted. To avoid unnecessary disruption of parking, placement of signs shall not extend beyond the work planned in Contractor's 3-week look ahead schedule. Parking restrictions are limited to working hours while active construction is being performed at a specific location. Notify residents, businesses, and local agencies at least 24 hours before starting activities. The notice must:

1. Describe the work to be performed
2. Detail streets and limits of activities
3. Indicate dates and work hours
4. Be authorized
5. State applicable penal code

Notify adjacent residents and business in writing 14 calendar days before the scheduled street closure. Include the closure schedule and duration of closures in the notification. Local access must be maintained at all times for traffic to all residences, businesses, and driveways within the construction zone. This includes, but is not limited to, waste management (Turlock Scavenger), delivery (USPS, Fed Ex, etc.), and other City provided services. If the contractor's operations impact the providers' regularly scheduled services, alternative accommodations must be provided to the satisfaction of the Engineer at the Contractor's expense.

Traffic Control Systems shall include all temporary signs required for the direction of public traffic through or around the work during construction. Construction area signs must comply with the latest version of the California Manual on Uniform Traffic Control Devices (MUTCD) and in accordance with Section 11, "Traffic Safety" of City's Standard Specifications.

The cost for lead compliance plan and implementation shall be considered as included in the various

other bid items and no additional compensation will be made therefore.

Construction area signs shall be installed at the locations shown on the plans as directed by the Engineer.

All traffic control devices, including delineators, temporary traffic stripes and pavement markings, barricades and barriers, warning signs and lights, temporary fencing, and flaggers, must comply with the latest version of MUTCD and in accordance with Section 11 of the City Standard Specification.

Traffic Control System will be paid for on a lump sum basis, which lump sum price shall include full compensation for furnishing all labor, including flagging costs, materials, tools, equipment, and incidentals, and for doing all the work involved in traffic control, including preparation of temporary traffic control plan and notifications to residents and business, as specified in these Special Provisions, and as directed by the Engineer.

Full compensation for furnishing, erecting, maintaining, and removing any traffic control devices the Contractor may deem necessary will be considered as included in the lump sum price paid for traffic control system and no additional compensation will be allowed therefor.

#### 10.05 CONSTRUCTION AREA SIGNS:

Construction area signs shall include all temporary signs required for the direction of public traffic through or around the work during construction. Construction area signs must comply with the latest version of the California Manual on Uniform Traffic Control Devices (MUTCD) and in accordance with Section 11, "Traffic Safety" of City's Standard Specifications.

Temporary advance notification signs on Type III barricades shall be placed at all work zone entry points a minimum of 7 days prior to the start of construction at each roadway section. The signs must be 48" x 60" and include the anticipated construction start and completion dates. Reference City Standard Specification Section 11-13.

Construction area signs shall be installed at the locations shown on the plans as directed by the Engineer.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing construction area signs required for the direction of public traffic through or around the work and for erecting or placing, maintaining (including covering and uncovering as needed) and, when no longer required, removing construction area signs at locations shown on the plans, shall be considered as included in the contract lump sum price paid for traffic control system and no separate payment will be made therefor.

Full compensation for furnishing, erecting, maintaining, and removing any additional construction area signs the Contractor may deem necessary will be considered as included in the lump sum price paid for traffic control system and no additional compensation will be allowed therefor.

#### 10.06 PORTABLE CHANGEABLE MESSAGE SIGN

Each portable changeable message sign unit shall consist of a controller unit, a power supply and a

structural support system, all mounted on a trailer. The unit shall comply with section 11-13, "Advance Notification of Work", of City Standard Specification and Section 12-3.32, "Portable Changeable Message Signs", of State Standard Specifications.

Portable changeable message signs will be measured by the unit from actual count provided for the entire duration of construction. The contract unit price paid for portable changeable message sign shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing, placing, operating, maintaining, repairing, replacing, transporting from location to location and removing the portable changeable message signs, as shown on the plans, as specified in City Standard Specifications and these Special Provisions, and as directed by the Engineer.

## 10.07 CONSTRUCTION FUNDING SIGNS

Contractor shall install construction funding signs per the details shown in the plans and in accordance with Section 12-3.11B(5) of State Standard Specifications and these Special Provisions.

Construction funding signs must be 96 by 48 inches complying with Section 6F.109(CA) of the California MUTCD.

Legend for the type of project and the funding partner agency pictographs must comply with detail shown on the plans.

Construction funding signs shown on the plans will be paid for by the unit from actual count designated on the plans or ordered by the Engineer. The contract unit price paid for construction funding sign shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing construction funding signs required, including erecting or placing, maintaining and, when no longer required, removing at locations shown on the plans or as directed by the Engineer.

## 10.08 JOB SITE MANAGEMENT

Job site management work includes spill prevention and control, material management, waste management, and non-stormwater management activities complying with section 13-4 of State Standard Specification except dewatering activities which must comply with Dewatering section of these Special Provisions.

### Dewatering

Contractor shall examine carefully the site of the work. It is assumed that Contractor has investigated and is satisfied as to the conditions to be encountered as to the character, quality and quantities of work to be performed.

Although the City of Turlock's soil conditions are homogenous and sandy in nature, various subsurface conditions such as hardpan, and ground water may be encountered. The City of Turlock will not be held responsible in any way for the type and character of subsurface conditions encountered. If a subsurface report is desired by Contractor, it will be Contractor's responsibility and expense to verify

the subsurface conditions by boring or other means necessary prior to bidding and/or performing work.

The Contractor shall furnish, install, operate and maintain all machinery, appliances, and equipment to maintain all excavations free from water during construction. The Contractor shall dispose of the water so as not to cause damage to public or private property, or to cause a nuisance or menace to the public or violate the law. The dewatering system shall be installed and operated so that the ground water level outside the excavation is not reduced to the extent which would cause damage or endanger adjacent structures or property. The static water level shall be drawn down a minimum of one foot below the bottom of excavations to maintain the undisturbed state of natural soils and allow the placement of any fill to the specified density. The Contractor shall have on hand, pumping equipment and machinery in good working condition for emergencies and shall have workmen available for its operation. Dewatering systems shall operate continuously until backfill has been completed to one foot above the normal static groundwater level.

The contractor shall control surface water to prevent entry into excavations. At each excavation, a sufficient number of temporary observation wells to continuously check the groundwater level shall be provided.

The control of groundwater shall be such that softening of the bottom of excavations, or formation of "quick" conditions or "boils", does not occur. Dewatering systems shall be designed and operated so as to prevent removal of the natural soils. The release of groundwater at its static level shall be performed in such a manner as to maintain the undisturbed state of the natural foundations soils, prevent disturbance of compacted backfill, and prevent flotation or movement of structures, pipelines and sewers. If an NPDES (National Pollutant Discharge Elimination System) permit is required for disposal of water from construction dewatering activities, it shall be obtained by the Contractor prior to any dewatering activities.

The contract lump sum price paid for job site management includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in discharging accumulated stormwater, groundwater, or surface water from excavations or temporary containment facilities as outlined in Section 13-4.03G of the Caltrans Standard Specifications; spill prevention and control, material management, waste management, and non-stormwater management, including identifying, sampling, testing, handling, and disposing of hazardous waste resulting from your activities, as specified in State Standard Specifications and these Special Provisions, and as ordered by the Engineer.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in dewatering activities, shall be considered as included in the lump sum price paid for job site management and no additional compensation will be allowed therefore.

#### 10.09 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Prior to commencing construction, a Contractor shall submit to the Engineer a completed SWPPP signed and certified by a Qualified SSWPP Developer (QSD). Once approved, Contractor shall submit SWPPP and Notice of Intent (NOI) with the California Department of Water Quality Control Board.

Contractor shall adhere to the SWPPP at all times. Contractor shall file the annual report when the project is completed.

All construction activities shall comply with the requirements of the "*State Water Resources Control Board Phase II Small MS4 General Permit Order No. 2013-0001-DWQ, NPDES General Permit No. CAS000004 for Storm Water Discharge Associated within Construction Activity*".

#### Erosion and Dust Control BMPs

Contractor is responsible to furnish, install, maintain, and remove when not needed, appropriate and effective best management practices (BMPs) required by the Permit to reduce erosion and sediment transport and all potential pollutant sources.

Furnish, install, maintain, and remove temporary erosion and sediment control measures as required by the Permit.

Furnish, install, maintain, and remove temporary tracking control measures including street sweeping and dust control measures specified in Section 5.17, "Dust Control", of these Special Provisions. Maintain a clean and safe worksite at all times, including street sweeping. If the Contractor fails to maintain a clean worksite, the City may order street sweeping or corrective action at the Contractor's cost.

The Lump Sum amount for Prepare SWPPP and Erosion and Dust Control BMPs shall include, but not be limited to, full compensation for the following:

1. Submit Permit Registration Documents (PRDs) per Attachment B of the Construction General Permit (CGP) to the State of California Water Resources Control Board, pay associated fees, and obtain permit approval.
2. Develop a SWPPP to conform to determined Risk Level and the Permit. This Project is Risk Level 1.
3. Administer, implement, maintain, and ensure adequate functioning of the various water pollution control measures identified within the SWPPP during construction including all visual inspections, sampling, monitoring and reporting requirements statutorily required for the determined Risk Level of the project site. These tasks shall be performed by the Contractor's Qualified SWPPP Practitioner (QSP) or Qualified SWPPP Developer (QSD).
4. Provide and maintain all documentation (at the jobsite) and administration for the entire Contract period.
5. Perform all work required for construction of effective treatment control Best Management Practices (BMPs), i.e: contingency basins, chemical treatments, etc.

Measurement and payment for prepare SWPPP, as described herein, shall be made at the contract Lump Sum price stated in the proposal. Full compensation for all work involved in the preparation, completion, and revision, including submitting permit registration documents and paying all fees, will be considered as included in the lump sum price paid for prepare SWPPP.

Full compensation for furnishing all work in visual inspections, sampling, monitoring, and reporting as required by the General Permit, shall be considered as included in the contract lump sum price paid for prepare SWPPP and no additional compensation will be allowed therefor.

The lump sum price paid for erosion and dust control BMPs shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing, installing, maintaining, and removing temporary erosion, sediment, and dust control practices as shown on the SWPPP, as specified in these Special Provisions, and as directed by the Engineer.

Full compensation for furnishing and installing treatment control BMPs shall be considered as included in the contract lump sum price paid for Erosion and Dust control BMPs and no additional compensation will be allowed therefor.

#### 10.10 POTHOLE EXISTING UTILITIES

Contractor shall verify the actual depth and horizontal location of existing underground utilities which may conflict with proposed underground storm drain systems, Full Depth Reclamation, or any work associated with this contract. Contractor shall exercise due diligence to utilize techniques and practices which will limit damage to located utilities, including vacuum truck and hand digging, or other means as required by the buried utility owner. Damage to buried utilities as a result of Contractor's failure to pothole shall be the Contractor's responsibility to repair at Contractor's expense.

The project plans depict sizes, horizontal locations, and materials of existing utilities based on surface evidence and facility maps from utility companies. It is possible not all underground laterals for sewer, water and gas are shown on plans. *The Contractor shall determine the presence of other underground utilities inferred from visible facilities, such as buildings, meters, and utility boxes, and it is the contractor's responsibility to positively identify the depths of these facilities before performing work.* Initial potholing was performed to help identify areas and locations where additional potholing would be required and is shown on the plans. Attention is directed to the possibility of utility locators marking utilities in locations other than what is shown on the plans or the possible existence of underground facilities not indicated on the plans or in the Special Provisions.

Contractor shall mark location and results of pothole efforts on an approved plan set. Contractor shall provide one copy, either physical or electronic, to the Engineer after pothole operations have been completed.

Pothole shall be backfilled with Aggregate Base per these specifications and native material in dirt and patched with cold permanent HMA.

The payment for Pothole Existing Utilities including all labor, material, tools, equipment and incidentals, and for doing all the work involved in verifying the actual depth and horizontal location of existing underground utilities, shall be included in Contract lump sum price paid for Pothole Existing Utilities.

#### 10.11 VIDEO SEWER AND STORM DRAIN

The contractor shall furnish closed circuit television equipment for an interior inspection of the existing sewer and storm drain mains located within the roadway reconstruction limits. The first video inspection to document the existing condition of the sewer and storm drain mains shall be conducted within the first 15 working days. The second video inspection to demonstrate the Contractor did not cause any damage to the sewer or storm drain mains shall be conducted within 24 hours of completing final compaction of the subgrade, or micro-cracking of the FDR-C section. An electronic copy of the video inspection (standard DVD or Mpeg file format) shall be provided to the City within 24 hours of each inspection at no additional cost to the City. With the copy of the video, the Contractor shall certify, in writing, there is no damage to the inspected sewer and storm drain mains. If there is damage, the Contractor shall indicate in writing, the specific damage and location. The certification must be submitted to and authorized by the Engineer prior to placing HMA pavement.

The requirements for the sewer and storm drain video inspections include:

1. The Video Inspection Company is to certify as to their ability to adequately perform the video inspection.
2. Contractor will provide the City 48-hour notice of inspection schedule so the City inspector may be present to monitor the inspection.
3. A combination hydro-vac flush truck will be required to be on-site to aid in the video inspection.
4. A copy of the video inspection shall be submitted to the City as proof of inspection along with a certification letter stating no damage to the inspected sewer and storm drain lines has occurred.
5. Sewer lateral lines are to be documented by stationing distance from center line of manhole and the inspection form shall provide a map of the inspected lines.
6. Storm drain lateral lines to and between catch basins shall be video inspected as storm drain mains.
7. To facilitate review, the log of the inspections, the inspection reports, and the inspection videos shall correlate with the utility manholes, catch basins, etc. labeled using the City's numbering system shown in the sewer and storm drain utility grids to be provided by the City.
8. Joints shall have a view perspective, and have each joint inspected by turning the camera 90 degrees to the joint inspecting all 360 degrees of the connection.
9. Sewer laterals shall have a perspective view identifying clock position to the main and a view into the lateral to identify any damage at the lateral connection.
10. If debris are found during the inspection, the inspection must be terminated and restarted once the debris has been removed and more water flushed through the main.
11. Video Inspection shall be performed in the direction of flow.

The payment for sewer and storm drain video inspection including all labor, material, tools, equipment and incidentals, and for doing all the work involved in the sewer and storm drain video inspection shall be included in Contract lump sum price paid for Video Sewer and Storm Drain.

#### 10.12 REMOVE EXISTING IMPROVEMENTS

The Contractor's attention shall be directed to Section 5.16, "Underground Services Alert Requirements" Section 2.02, "Existing Utilities, Facilities, and Site Conditions," Section 5.34 "Utility Coordination", Section 5.35 "Utility Verification", and Section 10.10 "Pothole Existing Utilities" of these Special Provisions.

Concrete, asphalt concrete and all other items designated on the plans to be removed or must be removed in order to install the improvements as shown on the plans, shall be removed and disposed of outside the City's right of way in accordance with the provisions in Section 7-10 of the City Standard Specifications. Sawcut all concrete and asphalt materials surfaces prior to removal per these Special Provision.

The Contractor shall protect all existing structures or facilities which are adjacent to or fall within the limits of the work to be done under this Contract and are called-out as Protect-in-Place. Any structure or facility to be protected which is damaged as a result of the Contractor's construction operation, shall be replaced by the Contractor, at their cost, to the satisfaction of the Engineer.

#### Clearing and Grubbing

Clearing and Grubbing shall conform to the requirements of the provisions in Section 17-2, "Clearing and Grubbing," of the State Standard Specifications, in accordance with the areas identified by the approved project plans, these Special Provisions, and as directed by the Engineer. Existing trash, construction debris, abandoned structures and other deleterious material are included in this item.

Areas to be cleared shall be grubbed to a depth necessary to remove brush, stumps, roots, buried logs or concrete and other objectionable material. Clearing and Grubbing includes trees, less than 6-inches in truck diameter, called-out for removal in the plan. Grubbing shall extend to the limits of work line.

All areas used by the Contractor as temporary right-of-way and staging areas shall not be contaminated with fuels, chemicals, lime or other soil stabilization treatments. All waste oil, solvent, and refined petroleum products shall be collected in appropriate containers and disposed of properly.

All stockpiling of cleared and grubbed material designated by the Contractor for final removal shall be considered incidental to this paid item and no additional compensation shall be allowed therefore.

All combustible waste materials resulting from clearing and grubbing from any construction operations of this Contract shall be removed from the site to an acceptable disposal area.

Clearing and Grubbing shall be limited to the excavation and improvements limits and within two feet (2') of structures, or other items to be constructed. All other vegetation outside clear and grub areas

shall be protected in place from damage resulting from the Contractor's operation. Any item outside the above limits that is damaged or destroyed by the Contractor shall be replaced or restored to its original condition prior to acceptance of the improvements or the Contractor shall compensate the City for its replacement.

Clearing and Grubbing shall include but not be limited to the following:

1. Removal and disposal of all shrubs, trees less than 6-inches trunk diameter, and vegetation as shown on the plans and removal of construction debris, trash, and deleterious material as required to construct the improvement as shown on the Plans and as described in the Specifications, and as directed by the Engineer.
2. Removal items include, but are not limited to, trash, striping (by grinding), landscaping, decorative private property items in public right-of-way, concrete pavers, reinforcing steel, rock, boulders and cobbles, stumps and roots, shrubs, other vegetation or organic materials, soil, irrigation systems, spoils, debris, wood posts, delineators, pavement markers, and all other objectionable materials which interfere with the Work whether or not specifically indicated on the Plans or otherwise shown to be protected or relocated.
3. Abandoned utility lines and structures not removed with Engineer's approval shall be filled with slurry and conduits plugged.

Clearing and grubbing shall also include the relocation, adjusting to grade or salvaging of all facilities so indicated on the Plans which are not designated as separate bid items or which are not included in other bid items.

The Contractor shall notify and coordinate with the Engineer for residential decorative items in City right-of-way, including decorative concrete pavers, decorative wall blocks, rocks used for landscape decoration, boulders, and custom signs. If directed by the Engineer, the Contractor shall salvage the items for the property owners by removing and carefully placing item at a location near the disturbed area on the private property, with the property owner's approval.

Miscellaneous fencing materials may be encountered during Work. The terminal post of each fence removed shall be reinforced by bracing or other appropriate means to maintain the structural integrity of the portion of fence to remain. Relocation and reconnection of existing fences as shown on the Plans shall include all posts, hardware, and all incidentals necessary to complete the Work.

During demolition operations, the Contractor shall provide temporary graded driveways and continuing maintenance thereof to provide safe, smooth, stable and continuous access to all residences and businesses within the Project area. All costs, if any, associated with such grading operations shall be borne by the Contractor and no additional payment shall be made to the Contractor.

Unless otherwise noted on Plans, the Contractor shall protect all existing sewer, water, electric, telephone, communication, television, fire lines, street lights, traffic signal, irrigation, and other utilities, services and systems, whether shown on the Plans or not. The Contractor shall maintain all

services in working condition during the course of the Work.

The Contractor shall remove all existing abandoned pipelines and conduits of any type or use, and pipelines and conduits of any type or use that are abandoned during the course of the Work and shall replace said pipelines and conduits with properly compacted soils. The Contractor shall immediately restore to full operation any utilities, services or systems that are disturbed during the course of the Work.

#### Remove Tree

Trees greater than 6-inches in truck diameter shown on the plans to be removed shall be removed conforming to the requirements of the provisions in Section 17-2, "Clearing and Grubbing," of the State Standard Specifications, in accordance with the areas identified by the approved project plans, these Special Provisions, and as directed by the Engineer.

Field verify trees to be removed before construction.

Cut, remove, and dispose of stumps and rootballs of removed trees a minimum of 24-inches below the existing terrain surface. Apply an herbicide or stump killer approved by the Engineer, to kill remaining roots. The holes resulting from removal of existing trees must be backfilled and compacted with material equivalent to the surrounding material. The backfill must be graded to conform to the adjacent existing grade and must be placed per Section 14 (Errata 1), of the City Standard Specifications.

Dispose of all tree debris from roadway, path or trail at each location before moving to next location.

Payment for Remove Tree shall be at the contract unit price per Each and shall include full compensation for furnishing all labor, materials, tools equipment, and incidentals and for doing all the work involved in removing existing tree, complete in place, including but not limited to, coordination with City to mark trees for removal; removal of the tree, roots, trunk, stump, branches completely; excavation, backfill resultant void; hauling and disposal; and all other appurtenances, as shown on the Plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer.

#### Remove Fence

Payment for Remove Fence shall be at the contract unit price per Linear Foot and shall include full compensation for furnishing all labor, materials, tools equipment, and incidentals and for doing all the work involved in removing existing fence, including but not limited to, removal and disposal of concrete foundations; and excavation, export, backfill, compaction; as shown on the Plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer.

#### Remove Tinhorns

Payment for Remove Tinhorns shall be at the contract unit price per Linear Foot and shall include full

compensation for furnishing all labor, materials, tools equipment, and incidentals and for doing all the work involved in removing existing tinhorns, including but not limited to, removal and disposal of tinhorns; and excavation, export, backfill, compaction; as shown on the Plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer.

#### Remove Catch Basins

Payment for Remove Catch Basins shall be at the contract unit price per Each and shall include full compensation for furnishing all labor, materials, tools equipment, and incidentals and for doing all the work involved in removing existing catch basins, including but not limited to, removal and disposal of catch basins; capping and abandoning connecting pipes in place and excavation, export, backfill, compaction; as shown on the Plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer.

#### Remove Storm Drain Pipe

Payment for Remove Storm drain Pipe shall be at the contract unit price per Linear Foot and shall include full compensation for furnishing all labor, materials, tools equipment, and incidentals and for doing all the work involved in removing existing storm drain pipe, including but not limited to, removal and disposal of storm drain pipe; capping and abandoning connecting pipes in place and excavation, export, backfill, compaction; as shown on the Plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer.

#### Removal and Disposal of Materials

Unless otherwise stated on the Plans or Specifications, all material removed from the Work shall become the property of the Contractor and shall be disposed of in a lawful manner. Burning shall not be permitted on the site.

The Contractor shall conform to the following requirements:

1. In order to protect the public streets from deterioration due to hauling of materials, the Contractor shall submit, prior to the Pre-Construction Meeting, for approval a proposed route for hauling of materials for disposal. Upon approval, the Contractor shall strictly adhere to that route, unless written permission from the Engineer is obtained to change the route.
2. Prior to making removals, the Contractor shall meet with the Engineer to verify the limits of removals, locations of joins, to establish smooth joins and to ensure proper drainage. The Contractor may make minor changes in the location of joins and the limits of removals, provided a smooth join and proper drainage can be achieved and it has obtained prior written approval from the Engineer.

3. The Contractor shall be responsible for recycling and for obtaining a suitable disposal site for the material not suited for recycling, and upon request, file with the Engineer the written consent of the owner of the property upon which he intends to dispose of such material.
4. The Contractor shall notify the Engineer, of any changed conditions or material differing from that represented in the Contract which the Contractor believes to be hazardous waste.
5. All combustible waste materials resulting from clearing and grubbing or from any construction operations of this contract shall be removed from the site as directed by the Engineer.

The Contractor is responsible for securing all required haul permits to transport removal material from the project site to the approved disposal site and the paying of all fees associated with the disposal of this material.

The lump sum price paid for clearing and grubbing shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in clearing and grubbing, including haul permits, fees, removal, haul away, and disposal of materials, as specified in the City and State Standard Specifications, these Special Provisions, and as directed by the Engineer.

All stockpiling of cleared and grubbed material designated by the Contractor for final removal shall be considered incidental to this bid item and no additional compensation shall be allowed.

Reinforcing or other steel may be encountered in portions of existing concrete items to be removed. No additional compensation shall be allowed for the removal of concrete containing reinforcing or other steel.

#### 10.13 INSTALL FENCE

Payment for Install Fence (Type) shall be at the contract unit price per Linear Foot and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in installing new fence of the type shown, including but not limited to, excavation, export, backfill, compaction; new concrete foundations/footings; installing posts, hinges, panels, chain link mesh, braces, appurtenances; and incidentals and for doing the work involved in installing new fence as shown on the Plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer.

#### 10.14 REMOVE CONCRETE CURB

Sawcut and remove and dispose of existing curbs including curb and gutter, shall be at the locations shown on the plans, outlined by limits of the curb and gutter, or as required by the Engineer. Concrete removal shall include, but not be limited to, demolition, sawcutting, haul-off and disposal of excavated

materials, or other work required to remove hardscape for proposed improvements.

Contractor shall leave a neat edge of pavement around all areas to be removed, prior to the start of any excavation.

Payment for remove concrete (curb) shall be at the contract unit price per linear foot and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in removing existing curb, hauling, disposal of both existing concrete and underlying aggregate base or subbase, as specified in these Special Provisions, and as directed by the Engineer.

Payment for remove concrete (curb and gutter) shall be at the contract unit price per linear foot and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in removing existing curb and gutter, hauling, and disposal of both existing concrete and underlying aggregate base or subbase, as required to complete the work in place. Removal of curb and widened gutter at drainage structure inlets shall be paid for under this pay item.

No additional payment for restoration of adjacent trees, roots, grass, and parkway, to remain-in-place, but damaged by the Contractor during construction, shall be made.

#### 10.15 REMOVE CONCRETE FLATWORK

Remove concrete (flatwork) includes remove and dispose of existing driveways, sidewalks, and curb ramps. Removal shall be at the locations shown on the plans, outlined by limits of the driveway and sidewalk, or as required by the Engineer. The concrete removal work shall include, but not be limited to, demolition, sawcutting, haul-off and disposal of excavated materials, or other work required to remove hardscape for proposed improvements.

Contractor shall leave a neat edge of pavement around all areas to be removed, prior to the start of any excavation.

It shall be the sole and exclusive responsibility of the Contractor to provide for and include in its unit price any and all costs and expenses, to notify, schedule, coordinate and provide sufficient and adequate time for any and all inspections and survey as may be required by the plans, specifications, codes, ordinances, the resident, and/or any applicable governmental agency. The contractor shall maintain access for residential driveways and shall coordinate with the City to provide notice of disruptions to access. For sidewalk and curb ramp removal and replacements, the Contractor shall provide signage and pedestrian re-routing options, prior to closures.

Payment for remove concrete (flatwork) shall be at the contract unit price per square yard and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in removing and disposing driveways, sidewalks, and curb ramps, complete in place, including breaking, removal, hauling, and disposal of both existing concrete and underlying aggregate base (as applicable), and backfilling, as shown on the plans, as specified in the City Standard Specifications and these Special Provisions, and as directed by the Engineer.

## 10.16 COLD PLANING AC PAVEMENT

Existing asphalt concrete pavement shall be ground at the locations shown on the plans. The removal depth will vary and shall be as determined by the contractor to establish the new roadway profile grades and cross-slopes shown in the plans. Grind, mill, and cold plane may be used interchangeability to indicate AC Pavement Grind per these project specifications.

Grinding asphalt concrete pavement shall be performed by the cold planing method. Grinding of the asphalt concrete pavement shall not be done by the heater planing method.

Cold planing machines shall be equipped with a cutter head not less than 30-inches in width and shall be operated so as not to produce fumes or smoke. The cold planing machine shall be capable of planing the pavement without requiring the use of a heating device to soften the pavement during or prior to the planing operation.

The depth, width and shape of the cut shall be as indicated on the typical cross sections or as directed by Engineer. The planed AC surface depth is based on the proposed HMA section shown on the typicals in order to meet PG grades on the plans. The final cut shall result in a uniform surface conforming to the typical cross sections. The outside lines of the planed area shall be neat and uniform.

Planed widths of pavement shall be continuous except for intersections at cross streets where the planing shall be carried around the corners and through the conform lines. Following planing operations, a drop off of more than 0.15-foot will not be allowed at any time between adjacent lanes open to public traffic.

Where transverse joints are planed in the pavement at conform lines, no drop-off shall remain between the existing pavement and the planed area when the pavement is opened to public traffic. If asphalt concrete has not been placed to the level of existing pavement before the pavement is to be opened to public traffic a temporary asphalt concrete taper shall be constructed. Asphalt concrete for temporary tapers shall be placed to the level of the existing pavement and tapered on a slope of 30:1 or flatter to the level of the planed area.

Asphalt concrete for temporary tapers shall be commercial quality and may be spread and compacted by any method that will produce a smooth riding surface. Temporary asphalt concrete tapers shall be completely removed, including the removal of all loose material from the underlying surface, before placing the permanent surfacing. Such removed material shall be disposed of outside the highway right of way in accordance with the provisions in Section 7-10 of the City Standard Specifications.

The material planed from the roadway surface, including material deposited in existing gutters or on the adjacent traveled way, shall be become the property of Contractor and shall be disposed of at Contractor's expense. Removal/sweeping operations of cold planed material shall be concurrent with planing operations and follow within 50 feet of the planer, unless otherwise directed by Engineer.

Cold plane operations shall be scheduled such that not more than 7 calendar days shall elapse between the time when transverse joints are planed in the pavement at the conform lines and the permanent

surfacing is placed at such conform lines.

At locations that are to be reconstructed utilizing Full Depth Reclamation-Cement, in lieu of cold planning the existing asphalt concrete, the contractor may pulverize and mix the entire asphalt concrete section into the base and subgrade soil as described in Section 10.21. If the contractor chooses this option, compensation for the pulverization, removal, and hauling away of this additional excess material will be paid as Cold Plane Asphalt Concrete Pavement measured by the square yard as specified in this section.

Quantities of cold planning AC pavement to be paid for by the square yard will be calculated on the basis of the dimensions shown on the plans adjusted by the amount of any change ordered by Engineer. No allowances will be made for grinding outside those dimensions unless otherwise ordered by Engineer.

The contract price paid per square yard for cold planing AC pavement shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in grinding, complete in place, including furnishing and installing temporary hot mix asphalt taper, as shown on the plans, specified in the City Standard Specifications and these Special Provisions, and as directed by Engineer.

#### 10.17 SAWCUTTING

The Contractor shall sawcut or leave a neat edge on the existing pavement at the pavement removal limits specified on the approved Plans in a manner consistent with the applicable governing agency requirements and specifications.

Sawcutting shall be accomplished by the use of a power driven saw. The depth of cut shall be deep enough to produce a clean, straight break without loosening, cracking, or damaging adjoining asphalt or concrete. Waste material from sawcut operations shall be broom cleaned or vacuumed, and disposed of. Cleaning of sawcut area by washing and directing waste to public storm drains shall not be permitted.

The cost for Sawcutting shall be included in the various other bid items and no additional compensation will be made therefore.

#### 10.18 EARTHWORK

Earthwork shall conform to the provisions in Section 19, "Earthwork", of the State Standard Specifications and these Special Provisions.

Surplus excavated material shall become the property of Contractor and shall be disposed of outside the right-of-way and shall conform to the provisions in Section 7-10, "Disposal of Materials Outside the Right of Way", of the City Standard Specifications.

Contractor shall not store any backfill, paving, or excavated material within the City right of way unless approved by Engineer.

When unsuitable materials are encountered, make reasonable efforts, as determined by the Engineer, to either dry out the soil or add moisture as needed to achieve proper compaction. Subgrade material that is pumping, or unstable due to oversaturation shall not be considered Unsuitable Material pursuant to this section. Prior to notifying the Engineer that you have encountered Unsuitable Material, you shall perform Quality Control Testing verifying that material is not exceeding its Optimum Moisture Content requiring additional drying out effort. The Quality Control Testing Results shall accompany the notification to the Engineer that you have encountered Unsuitable Material. In lieu of moisture conditioning the in-place soils, you may remove and replace soil at your expense.

All imported borrow shall be backfill material complying with Section 19-7 of the State Standard Specifications. All backfill material shall be compacted at 95% relative compaction for the entire depth of imported material. The minimum compacted section shall be six inches and shall be composed of import borrow, existing material, or a combination of both. The contractor shall provide a submittal to the Engineer for review prior to importing or placing material.

Roadway excavation will be measured and paid by the cubic yard and the volume is determined from the average end areas and the distance between them. This item will be a final pay item. See section 9-1.02C of the State Standard Specifications.

The above price and payment for roadway excavation shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in importing, excavating, hauling, compacting, and removing the surplus material, as shown on the plans, specified in State Standard Specifications and these Special Provisions, and as directed by Engineer.

#### 10.18A UNSUITABLE MATERIAL

When Unsuitable Materials are encountered, make reasonable efforts, as determined by the Engineer, to either dry out the soil or add moisture as needed to achieve proper compaction.

"Unsuitable Materials" are defined as material encountered below the natural ground surface in embankment areas or below the grading plane in excavation areas that the Engineer determines to be in any of the following conditions:

1. Of such unstable nature that it cannot be compacted to the specified density using ordinary methods at optimum moisture content.
2. Too wet to be properly compacted and cannot be dried before incorporating it into the work.
3. Excessive moisture alone is not sufficient cause for determining that the material is unsuitable inappropriate for the planned use.

Contractor shall notify the Engineer before removing the Unsuitable Material if:

1. Removal is not otherwise described.

2. You request separate payment for the removal and replacement under Item #61- Unsuitable Material

Subgrade material that is pumping, or unstable due to oversaturation shall not be considered Unsuitable Material pursuant to this section. Prior to notifying the Engineer that you have encountered Unsuitable Material, you shall perform Quality Control Testing verifying that material is not exceeding its Optimum Moisture Content requiring additional drying out effort. The Quality Control Testing Results shall accompany the notification to the Engineer that you have encountered Unsuitable Material. In Lieu of moisture conditioning the in-place soils, you may remove and replace soil at your expense.

Typical removal and replacement alternatives may consist of either Option 1 or 2:

1. Remove 6 inches of Unsuitable Material and replace with Class 2 Aggregate base over a Tensar NX750 Geogrid. The surface of the AB should meet the requirements of Section 26 of the Caltrans Standard Specifications and be compacted to at least 95% relative compaction based on the ASTM D1557 method. The geogrid should be placed per the manufacturer's recommended guidelines.
2. Remove 6 inches of Unsuitable Material and replace with compacted asphalt grindings over a Mirafi 160N filter fabric to provide a stabilized base prior to placing the deep lift asphalt. The filter fabric should be placed per the manufacturer's recommended guidelines.

When Unsuitable Material is identified by the Contractor and confirmed by the Engineer, the above price and payment shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in removal and placement alternative 1 or 2 as specified in these Special Provisions, and as directed by Engineer.

The contract price paid per cubic yard (CY) for Unsuitable Material shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for performing all work involved in Unsuitable Material as specified in these Special Provisions and as directed by the Engineer. This includes, but is not limited to, removing and disposing of the Unsuitable Material and furnishing, placing, and compacting the replacement material.

#### 10.19 HOT MIX ASPHALT (Type A)

##### Preconstruction Meetings

Hold a preconstruction meeting with the Engineer per section 36-1.01D(2) of the State Standard Specifications. Discuss project specifications and the processes for producing materials and quality control measures for pavement smoothness including visual inspection of finished HMA surface.

##### Prepare Existing Surface

Contractor shall prep the existing surface prior to placing HMA. Prepping the surface shall consist of sweeping and vacuuming the entire area to remove debris, organic matter, dirt, etc. Any work that will be required to fill potholes or make the surface suitable for paving shall be paid as extra work, through force account.

For full-depth asphalt pavement sections, the underlying subgrade or subbase shall be compacted to at least 95 percent of the maximum dry density (per ASTM D1557) prior to AC paving. Where existing base to remain, Contractor shall compact and prepare per the Aggregate Base requirements in these Special Provisions prior to AC paving.

Prior to any removal of existing asphalt concrete or cold planing, verify all existing ground lines. If you contest the existing ground lines shown in the plans, you must submit your survey information. The Engineer will then have 10 working days to review the submittal. If you begin any removal or cold planing prior to the approval of this submittal, the existing ground lines shown in the plans will be deemed accurate and will be used for calculating quantities of removal or cold planing.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all of the work involved with preparing the existing surface as specified above, shall be considered as included in the price paid for hot mix asphalt (Type A) and no additional compensation will be allowed therefor.

## Materials

Hot Mix Asphalt (HMA) shall conform to the provisions in Section 39-2, "Hot Mix Asphalt," of the State Standard Specifications.

The HMA construction process shall be standard. The aggregate gradation shall be  $\frac{1}{2}$ " and the HMA type shall be type A. The binder shall be PG 70-10.

Schedule smoothness testing with the Engineer. Unless otherwise authorized, all smoothness testing must be performed in the presence of the Engineer in accordance with Pavement Smoothness section of these special provisions.

Add the following City's acceptance requirements for Section 39-2.02A(4)(e) of the State Standard Specifications:

4. Visual inspection of finished HMA surface. HMA must be free of segregation, Coarse or fine aggregate pockets, hardened lumps, marks, tearing, and irregular texture.
  - 4.1. HMA that is determined to be unacceptable by visual inspection by the Engineer shall be repaired by one of the following methods as determined by the Engineer. The Engineer reserves the right to waive and/or reduce the dimensions of the repairs at the Engineer's discretion:
    - 4.1.1. Remove the pavement by an approved method, in the area to be repaired, to provide a minimum of 1.5 inches of new material. No feather paving will be allowed in making the above-mentioned repairs. The pavement shall be removed from lane line to lane line, or lip of gutter to center of roadway where edge lines and/or lane lines are not present. The area to be removed and replaced shall not be less than fifty (50) feet in length in the longitudinal direction.

- 4.1.2. Fog seal. The area and dimensions of the fog seal shall be determined by the Engineer.
- 4.1.3. Slurry seal or Microsurface. Type I or Type II shall be used as determined by the Engineer. The slurry seal or microsurfaced area shall be from lane line to lane line, or lip of gutter to center of roadway where edge lines and/or lane lines are not present. The area to be slurry sealed or microsurfaced shall not be less than twenty (20) feet in length in the longitudinal direction.

Contractor shall submit a quality control plan with the JMF. The JMF will not be accepted until the quality control plan is submitted. The Contractor's quality control plan shall conform to the provisions in 39-2.01A(3) "Submittals" of the State Standard Specifications.

Contractor shall tack coat all surfaces to receive HMA and shall conform to the State Standard Specifications Section 39-2, "Hot Mix Asphalt."

#### Pavement Smoothness

At least 2 business days before performing corrective grinding for areas that do not meet the smoothness requirements, submit a corrective grinding plan as an informational submittal.

The corrective grinding plan must include:

1. Grinder make and model
2. Grinder wheelbase in feet, measured from the front centerline to the back centerline of the single wheel or tandem wheel spread
3. Grinder head position in feet, measured relative to the centerline of the front single wheel or the front tandem wheel spread
4. Tandem wheel spreads in feet
5. Tabular listing of the planned corrective grinding, including:
  - 5.1. Begin and End locations in stationing to the nearest foot
  - 5.2. Width of grind, such as left half lane, right half lane, or full-width lane
  - 5.3. Corresponding grinder head depths to the nearest 0.01 foot
  - 5.4. Direction of grind such as forward, reverse, forward-forward, reverse-reverse, forward-reverse, reverse-forward

Within 2 business days of measuring smoothness with a straightedge, submit a list of the areas requiring smoothness correction or a report stating there are no areas requiring smoothness correction. Identify the areas requiring smoothness correction by:

1. Location number
2. Street name
3. Beginning station to the nearest 0.01 mile
4. For correction areas within a traffic lane:
  - 4.1. Lane direction, *NB*, *SB*, *EB*, or *WB*

- 4.2. Lane number from left to right in the direction of travel
- 4.3. Wheel path, *L* for left, *R* for right, or *B* for both
5. Estimated size of correction area

Perform straightedge measurements in the presence of the Engineer.

Measure pavement smoothness 12-foot straightedge.

The City accepts pavement surfaces for smoothness based on compliance with the smoothness specifications for the type of pavement surface specified.

For areas that require pavement smoothness determined using a 12-foot straightedge, the pavement surface must not vary from the lower edge of the straightedge by more than:

1. 0.01 foot when the straightedge is laid parallel with the traffic lane centerline
2. 0.02 foot when the straightedge is laid perpendicular to the centerline and extends from edge to edge of a traffic lane
3. 0.02 foot when the straightedge is laid within 24 feet of a pavement conform

Notify the Engineer of the start location by station and start time at least 2 business days before each day of smoothness measurements. The Engineer must be present for smoothness measurements.

#### Payment

HMA will be subject to payment adjustments for Price Index Fluctuations per Section 9-1.07 of the State Standards Specifications. The contract price paid per ton of HMA (Type A) shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in placing, compacting, and quality-control of hot mix asphalt including surface preparation, tack coat placement, and pavement smoothness, as shown on the plans, as specified in State Standard Specifications and these Special Provisions, and as directed by the Engineer. This item includes full depth AC Patch adjacent to proposed curbs and gutters, curb ramps and other hardscape construction.

#### 10.20 AGGREGATE BASE

Aggregate base shall conform to the provisions in Section 26, "Aggregate Bases", of the Caltrans Standard Specifications and these special provisions.

The aggregate base grading shall be  $\frac{3}{4}$ " maximum and shall be class 2.

The contract price paid for Aggregate Base shall be included in the minor concrete bid items and include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in placing and compacting the Aggregate Base and no additional compensation will be allowed therefore.

## 10. 21 FULL DEPTH RECLAMATION - CEMENT

Full depth reclamation - cement shall comply with Section 30, "Recycled Pavement" and Section 30-4, "Full Depth Recycling - Cement," of the State Standard Specifications.

Work shall consist of pulverizing existing asphalt concrete, base, and subgrade soil following cold planing of existing asphalt concrete. Re-grade based on PG grades on plans and haul away excess material to allow for the net placement of new asphalt concrete. At the contractor's option, in lieu of cold planing the existing asphalt concrete, the entire asphalt concrete section may be pulverized and mixed into the base and subgrade soil prior to regrading and hauling away the excess material to allow for the net placement of new asphalt concrete. Add cement and water to the blended material in accordance with these and State Standard Specifications. Compact, fine grade to the grades required, cure and micro-crack the completed cement treated surface, prior to placement of asphalt concrete. Micro-cracking of the cement treated surface must be completed 48 to 56 hours after placement.

Obtain and test material every 500 feet from the existing pavement structure by coring. The Contractor may perform additional sampling and testing to optimize the cement content and adjust for varying underlying materials. Determine the exact locations of the sampling locations between wheel paths. Do not sample in the shoulders. Sampling locations must provide sufficient representative material for the mix design.

The cement content must be 3 percent by dry weight of FDR—cement with a dry unit weight of 3.6 lb/sf, except an increase or decrease in the cement content may be ordered based on the Contractor's mix design. The mix design shown on the plans and specification is based on the removal of all existing AC pavement. The actual mix design used for the project shall be determined by the Contractor in accordance with 30-4.01C(2)(b) "Mix Design," of the State Standard Specifications. The mix design shown on the plans and Specifications is based on the removal of all existing AC pavement. The actual mix design used for the project shall be the Contractor's mix design. The mix designs shall be submitted to and authorized by the Engineer prior to cold planning the AC pavement. During progress of the work, if the Contractor encounters an isolated area that requires more cement than described in the mix design for that area, notify the Engineer before applying the cement.

A test strip per Section 30-1.01D(3) of the State Standard Specifications is not required.

At a minimum, separate mix designs must be developed for the following roadway segments:

1. Marshall St west of Johnson Rd
2. Marshall St east of Quincy Rd
3. Sycamore St, Bell St, and Merritt St west of Berkeley Ave
4. Villa Ct, Elena Ct, Andrews Ct, Fairvale Ct, and Merritt St east of Berkeley Ave

Attention is directed to the presence of shallow utilities within the limits of work. Contractor must use appropriate means and methods during construction to avoid damaging underground utilities. This includes but is not limited to, performing handwork around the shallow utilities.

Full depth reclamation - cement will be measured by the square yard, determined from horizontal measurements of the pavement surface to be recycled.

The quantities of cement (full depth reclamation - cement) used in the mix will be measured by the ton.

Mix design for the full depth reclamation - cement will be paid for on the basis of lump sum prices.

The contract price paid per square yard for full depth reclamation - cement shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in constructing the full depth reclamation - cement, complete in place, including cleaning the surface, compacting and grading and surface finishing, all as shown on the plans, and as specified in State Standard Specifications and these Special Provisions, and as directed by the Engineer.

The contract price paid per ton for cement (full depth reclamation - cement) shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in furnishing cement in the mix, complete in place, as shown on the plans, and as specified in State Standard Specifications and these Special Provisions, and as directed by the Engineer.

The contract lump sum prices paid for mix design (full depth reclamation - cement) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in preparing and testing the mix, including adding water, supplementary aggregate if required by the Engineer, setting control additives, mixing water with asphaltic emulsion, and applying sand cover, complete in place, as shown on the plans, as specified in State Standard Specifications and these Special Provisions, and as directed by the Engineer.

## 10.22 MINOR CONCRETE

Minor concrete work includes curb and gutter, curb ramp, sidewalk, alley, driveway, and valley gutter. All minor concrete work shall conform to provisions of Section 13, "Concrete Construction" of the City Standard Specifications.

All minor concrete material shall conform to the provisions of Section 90-2, "Minor Concrete," of the State Standard Specifications.

Contractor shall submit a certificate of compliance for all minor concrete.

Within 72 hours of placing minor concrete, Contractor shall place backfill adjacent to the new concrete and existing grade. Backfill on street side shall consist of aggregate base topped with cutback asphalt except that cutback asphalt may be replaced by aggregate base if paving will start within 14 calendar days. Backfill on property side shall consist of native materials.

Retaining curbs required for construction of alleys are non-pay items and included in the work for Minor Concrete (Alley).

Curb adjacent to valley gutter spandrel shall be paid for per square foot as a part of the valley gutter bid item.

Lines, grades, dimensions and general construction of curb & gutter, valley gutters, driveways, curb ramps, alley approaches and sidewalk shall conform to the City Standard Drawings. Expansion joints shall be placed per standard plan. It is the responsibility of the Contractor to construct all finished surfaces so that positive drainage is maintained.

Prior to installation of all form work, you shall be required to notify the Engineer a minimum of 48 hours in advance of scheduled formwork activities. The Engineer shall review the survey results and determine if the preparation of the subgrade is in conformance with the project plans and specifications. You shall not proceed with installing formwork until after the subgrade has been inspected for conformance with the project plans and specifications. After formwork is in place and prior to pouring any concrete, you shall notify the Engineer a minimum of 48 hours in advance for an inspection of the form work. You shall not proceed with pouring concrete until after the Engineer has inspected the form work for compliance with the project plans and specifications. You shall be required to correct this work in a manner acceptable to the Engineer if found to not be in conformance with the project plans and specifications at your expense.

### Curb Ramp

Curb ramps shall conform to the provisions of Section 13-9, "Curb Ramp" of the City Standard Specifications, the 2010 ADA Standards, and Caltrans Standard Plans.

Contractor shall construct curb ramps as located on the plans and in accordance with Section 13 of the City Standard Specifications and Caltrans Standard Plans.

Contractor will not be allowed to remove and replace all the access ramps at the same time. Contractor shall schedule the removal and replacement to provide pedestrian access at all times as approved by the Engineer.

Contractor shall construct retaining curbs as needed or as shown on the plans and in accordance with Section 13 of the City Standard Specifications and Caltrans Standard Plans.

Quantities of minor concrete (sidewalk, curb ramp, driveways, alley approaches, valley gutters) to be paid for by the square foot will be calculated on the basis of the dimensions shown on the plans adjusted by the amount of any change ordered by Engineer.

Retaining curbs required for construction of curb ramps are non-pay items and included in the work for Minor Concrete (Curb Ramp).

The contract price paid per square foot for minor concrete (sidewalk), minor concrete (driveway), minor concrete (curb ramp), minor concrete (alley), and minor concrete (valley gutter) shall include full compensation for furnishing all labor, material (including adhesive, or reinforcing steel and dowels for anchoring, and expansion joint material), tools, equipment and incidentals, and for doing all the work involved in constructing different types of minor concrete facilities, complete in place, as shown on the plans, specified in the City Standard Specifications and these Special Provisions, and as directed by Engineer. Also included in the price paid per square foot for minor concrete shall be adding coloring and texturing to match existing concrete where walkways are being replaced and protecting in place or replacing in kind existing roof drains.

Full compensation for furnishing the labor needed to form the ramp (including retaining curbs), driveways, curb and gutter and sidewalk areas to the required line and grade per ADA requirements, including grooving details, shall be considered as included in the prices paid for the various Contract items of work involved and no additional compensation will be allowed therefor.

The contract price paid per linear foot for minor concrete (curb) and minor concrete (curb and gutter) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in constructing types of curbs, complete in place, as shown on the plans, and as required by law, as specified in the City Standard Specifications and these Special Provisions, and as directed by the Engineer.

No additional compensation shall be included for sawcutting, replacement of damaged concrete work, slot asphalt patch back, or for additional asphalt concrete pavement removal and replacement for fitting in extruder machinery or forms during the construction of concrete items, but shall be included in the cost of the concrete work being constructed. New or replaced curb and gutter, sidewalk, or driveway shall include any necessary grading behind the improvement to conform to the existing condition up to five feet beyond the improvement, and within the City right of way and no additional compensation shall be included. Existing walkways adjacent to proposed sidewalk or minor concrete improvements shall be reset or repaved by Contractor, as requested by Engineer, to conform to the new minor concrete construction at no additional cost.

Any portions of curb, gutter, sidewalk or any other City improvement damaged by the Contractor during the course of construction be replaced by the Contractor, at their cost, to the satisfaction of the Engineer. The cost of additional replacement of curb, gutter or sidewalk in excess of the estimated quantities shown in the Bid form and Specifications and found necessary during the process of construction (but not due to damage resulting from carelessness on the part of the Contractor during its operation), shall be paid to the Contractor at the unit prices submitted in their bid.

#### 10.23 DETECTABLE WARNING SURFACE

Detectable warning surfaces must be installed per the locations shown on the plans and in accordance with City Standard Drawing C-15 and Section 13-10, "Detectable Warning Surface", of the City Standard Specifications and these Special Provisions.

The Contractor shall install detectable warning surfaces in a manner that extends the entire width of

the opening of the ramp for a depth of 3 feet.

Submit a 5-year manufacturer's replacement warranty against defects in a prefabricated detectable warning surface. The 5-year manufacturer's replacement warranty for a prefabricated detectable warning surface must cover defects in dome shape, color fastness, sound-on-can acoustic quality, resilience, and attachment. The 5-year warranty period starts at Contract acceptance.

Quantities of detectable warning surface placed as shown on the plans or directed by the Engineer will be measured by the square foot as determined from measurement of the area covered by the detectable warning surface.

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

#### **10.24 ADJUST DRAINAGE INLET TO GRADE**

Contractor shall adjust storm drain inlet in accordance to the details shown in the plans. Adjusting storm drain inlets consists of removing partially the inlet and either lowering or raising the drainage structures.

Adjust to grade with new materials that are similar in character to the existing materials.

Where storm drain inlets are adjusted before placing the uppermost layer of pavement or surfacing, limit the work area so that adjusting the inlet and final paving or surfacing withing the same work day. The top of the inlet grate or cover must be protected during paving operation by heavy plywood covers, steel plate covers, or other authorized methods. Excess paving material must be removed before rolling.

Where inlets are adjusted after placing the uppermost layer of pavement or surfacing, do not adjust the inlet to final grade until the paving or surfacing has been completed immediately adjacent to the inlet.

The contract unit price paid for adjust drainage inlet to grade includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in lowering and raising drainage inlet structure including frame and grate to grade, complete in place, including structure excavation and backfill, furnishing and installing additional bar reinforcing steel, concrete and HMA (Type A), as shown on the plans, as specified in the City Standard Specifications and these Special Provisions, and as directed by the Engineer.

#### **10.25 ADJUST FRAMES AND COVERS TO GRADE**

Frames and covers of new and existing utility manhole, shall be adjusted to grade and shall conform to the provisions in Section 12-12, "Adjusting Manhole Frames, Monuments and Valve Boxes", of the City Standard Specifications and these Special Provisions.

All city utilities that are within the limits of the full depth reclamation operation shall be lowered (remove lid and frame) and plated before the full depth reclamation operation.

All city utilities shall be raised up to finished grade within 7 days of paving.

All utilities shall be accessible 24 hours per day, 7 days per week throughout construction. The Contractor shall provide reference marks on the nearest curb for all utilities that are lowered.

The contract price paid per each for adjusting frames and covers to grade or adjust manhole frame and cover to grade shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in lowering and raising utility manhole frames and cover, complete in place, including structure excavation and backfill, furnishing and installing additional bar reinforcing steel, concrete and HMA (Type A), as shown on the plans, specified in the City Standard Specifications, these Special Provisions, and as directed by Engineer.

#### **10.26 STORM DRAIN MANHOLE**

Storm Drain Manholes shall be constructed in accordance with Section 17, "Storm Drain Collection System" of the City of Turlock Standard Specifications, City Standard Plans, these Project Specifications, and the details shown on the plans.

All earthwork shall be done in accordance with the "Earthwork" Section of these Special Provisions.

Before submission of the submittal, the Contractor shall pothole the proposed storm drain alignment for any underground conflicts. Any costs associated with Potholing shall be included in the separate Potholing bid item.

Payment for Storm Drain Manhole shall be at the contract unit price per each and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in constructing the Storm Drain Manhole, including any final rim adjustment, complete in place, as shown on the plans, as specified in the Standard Specifications, these Special Provisions, and as directed by Engineer.

#### **10.27 RELOCATE WATER METER**

Water meters and boxes shall be relocated according to City Standard Specifications, these Special Provisions, and as shown on the plans.

The contract price paid per each for Relocation of the Water Meter shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in cleaning and completely removing and relocating existing water meters and boxes, including excavation, backfill, repair of landscaping and irrigation, replacement of existing concrete, and other appurtenances necessary for the relocation, as shown on the plans, specified in the City of Turlock Standard Specifications, these Special Provisions, and as directed by Engineer.

## 10.28 STORM DRAIN CATCH BASIN

Storm Drain Catch Basins shall be constructed in accordance with Section 17-7, "Catch Basins" of the City of Turlock Standard Specifications, City Standard Plans, these Project Specifications, and the details shown on the plans.

All earthwork shall be done in accordance with the "Earthwork" Section of these Special Provisions.

Payment for Storm Drain Catch Basin shall be at the contract unit price per each and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in installing Storm Drain Catch Basins including connection to existing piping with water stop gasket, complete in place, as shown on the plans, as specified in the Standard Specifications, these Special Provisions, and as directed by Engineer.

## 10.29 STORM DRAIN PIPE

Contractor shall install storm drain pipe in accordance with the Standard Specifications and Drawings, the Project plans, and these special provisions. Contractor shall trench in accordance with Section 14, (Errata 1) "Trenching and Backfilling", and Standard Drawing T-1 through T-6 of the City Standard Specifications and these Special Provisions.

Polyvinyl-Chloride (PVC) Pipe shall be SDR-26 and shall conform to Section 64 of the Caltrans Standard Specifications.

Connection of new storm drain pipe to existing storm drain manholes and catch basins shall comply with Section 17, "Storm Drain Collection System" of the City of Turlock Standard Specifications, City Standard Plans, these project specifications, and the details shown on the plans. Connections to existing manholes and catch basins shall be tested for leakage to the satisfaction of the Engineer prior to acceptance. The Contractor shall be responsible for contacting USA, excavation and backfill for the connection. The Contractor shall test all new storm drain facilities according to the requirements of Section 16, "Wastewater Collection System" of the City of Turlock Standard Specifications.

The length of pipe to be paid for will be the slope length designated by the Engineer. Pipe placed in excess of the length designated will not be paid for, unless pipes are cut to fit a structure or slope. When pipes are cut to fit a structure or slope, the quantity to be paid for will be the length of pipe necessary to be placed before cutting, measured in 2-foot increments. Payment for Storm Drain Pipe shall be at the contract unit price per linear foot and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in installing Storm Drain Pipe, complete in place, as shown on the plans, as specified in the City Standard Specifications, these Special Provisions, and as directed by Engineer. Specifically included in the measurement and payment of storm drain pipe is the trenching, excavation, removal or filling with slurry, capping, and abandoning existing pipe, connecting to existing storm drain manholes and catch basins including furnishing and installing water stop gaskets, replacement of any improvements that are disturbed due to the installation of the pipe, Cleaning and Flushing per Section 16-26 and 16-27 of the City Standard Specifications, and Testing Per Section 16-30 Low Pressure Air Test of the City Standard Specifications.

### 10.30 INSTALL NEW FIRE HYDRANT COMPLETE

Contractor shall install new fire hydrant complete in accordance with the Standard Specifications and Drawings, the Project plans, and these special provisions. Contractor shall trench in accordance with Section 14, (Errata 1) "Trenching and Backfilling", and Standard Drawing T-1 through T-6 of the City Standard Specifications and these Special Provisions.

Polyvinyl-Chloride (PVC) Pipe shall be Class 150 C900 and shall conform to Section 64 of the Caltrans Standard Specifications.

Connection of new fire hydrant to existing water main shall comply with Section 15, "Water Systems" of the City of Turlock Standard Specifications, City Standard Plans, these project specifications, and the details shown on the plans. Connections to existing water main and water valves shall be tested for leakage to the satisfaction of the Engineer prior to acceptance. The Contractor shall be responsible for contacting USA, excavation and backfill for the connection. The Contractor shall test, chlorinate, and disinfect all new water systems according to the requirements of Section 15, "Water Systems" of the City of Turlock Standard Specifications.

Payment for New Fire Hydrant Complete shall be at the contract unit price per each and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in installing fire hydrant assembly, complete in place, as shown on the plans, as specified in the City Standard Specifications, these Special Provisions, and as directed by Engineer. Specifically included in the measurement and payment of new fire hydrant complete is the trenching, excavation, removal or filling with slurry, capping, and abandoning existing pipe, connecting to existing water mains and valves including furnishing and installing blue traffic markers, replacement of any improvements that are disturbed due to the installation of the fire hydrant assembly, cleaning, testing, chlorination, Section 15 of the City Standard Specifications.

### 10.31 RELOCATE STREETLIGHT

Existing streetlights shall be relocated according to City Standard Specifications, these Special Provisions, and as shown on the plans.

The contract price paid per each for the relocation of existing streetlights shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in removing and reinstalling existing streetlights, including coordination with Turlock Irrigation District to disconnect power, excavation, backfill, compaction, new concrete foundations/footings, installation of existing pole in new foundation/footing, connection to existing overhead electrical line, repair of landscaping and irrigation, and other appurtenances necessary for the relocation, as shown on the plans, specified in the City of Turlock Standard Specifications, these Special Provisions, and as directed by Engineer.

### 10.32 THERMOPLASTIC STRIPING AND MARKINGS

All traffic stripes and pavement markings shall conform to Section 84-2, "Traffic Stripes and Pavement

Markings," of State Standard Specifications. All striping and markings shall be thermoplastic.

Thermoplastic traffic stripes will be measured by the linear foot along the line of the traffic stripes, without deductions for gaps in broken traffic stripes. A double thermoplastic traffic stripe, consisting of two 6-inch wide yellow stripes, will be measured as 2 traffic stripes.

Pavement markings shall be measured by the square foot for the area covered.

All conflicting striping and markings shall be completely removed by methods authorized by the Engineer prior to placing new striping and markings.

Payment for thermoplastic pavement markings or thermoplastic traffic stripe shall include full compensation for performing all work required to install thermoplastic pavement markings and thermoplastic traffic stripes, and shall include furnishing and installing pavement markers and establishing alignment for stripes and layout work, respective to the detail on the State Standard Plans, in accordance with these Special Provisions and as directed by the Engineer.

#### **10.33 PAVEMENT MARKERS**

All pavement markers shall conform to Section 81-3, "Pavement Markers," of the State Standard Specifications.

Contractor shall install blue raised reflective pavement markers to mark fire hydrant locations. The blue reflective pavement markers (Type BB) shall be placed per City Standard Drawing W-3.

Ceramic markers shall not be used.

Pavement markers shall be placed 7 calendar days after paving work has ceased.

Payment for pavement markers will be included in the unit price paid for the Thermoplastic Traffic Stripe (per respective detail specified) in accordance with State Standard Plans and shall include full compensation for performing all work required to install pavement markers, in accordance with these Special Provisions and as directed by the Engineer.

Payment for blue reflective pavement markers (Type BB) will be included in the price paid for the various items of work involved and no additional compensation will be allowed therefor.

#### **10.34 REMOVE ROADSIDE SIGN**

Remove roadside sign shall include notifying and coordinating with the Engineer; removal of existing sign panels, post, and foundation as specified on the contract documents or as approved by the Engineer.

All work shall be in accordance with the City Standard Specifications, the Standard Drawings, and these Special Provisions.

The contract price paid per each for remove roadside sign shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all of the work involved in removing existing roadside sign including, but not limited to, removal of the sign post, panel and hardware, as shown on the plans, as specified in the City Standard Specifications, these Special Provisions, and as directed by the Engineer.

The contract unit price paid per each for remove roadside sign shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in removing any footings, concrete foundations, repair of landscaping and irrigation, and removal of other appurtenances as necessary to cleanly and completely remove the existing sign post and backfill excavation areas to grade, complete in place, as shown on the plans, and as specified in these Special Provisions, and as directed by the Engineer.

#### 10.34 RELOCATE ROADSIDE SIGN

Existing roadside signs shall be removed and relocated to the new location shown on the plans. Relocate the roadside sign the same day it is removed from its original location.

Relocate roadside sign using existing posts.

Relocate roadside sign will be measured by the unit, and each individual sign installation will be considered one unit regardless of the number of sign panels involved.

The Contract unit price paid for each relocate roadside sign includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all of the work involved to relocate the existing roadside sign, including, but not limited to, excavation, export, backfill, compaction; new concrete foundations / footings, installation of sign post, sign panels and hardware, complete in place, as shown on the Plans, as specified in the City Standard Specifications, these Special Provisions, and as directed by the Engineer.

#### 10.36 INSTALL ROADSIDE SIGN

Contractor shall install sign panels, posts and foundations in accordance with City Standard ST-11 and ST-12 and these Special Provisions.

Sign panels must comply with the latest version of the California Uniform Traffic Control Devices (CA MUTCD). All signs shall be high intensity prismatic.

The contract price paid per each for install roadside sign-one post shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in installing each roadside sign, including, but not limited to, excavation, export, backfill, compaction; new concrete foundations / footings, installation of sign post, sign panels and hardware, complete in place, as shown on the plans, specified in the City Standard Specifications and these Special Provisions, and as directed by Engineer.

Full compensation for furnishing and installing sign panel fastening hardware shall be considered as

included in the contract prices paid for the roadside signs requiring the hardware and no separate payment will be made therefor.

**SECTION 11 (BLANK)**

**SECTION 12 (BLANK)**

**SECTION 13 (BLANK)**

**SECTION 14****STANISLAUS COUNTY COORDINATION**

Prior to the start of any work within the Stanislaus County right-of-way, the Contractor shall be responsible for attaining the applicable Agency permits and make arrangements for Agency inspections. The Contractor and all subcontractors shall each obtain an Agency business license at his/her expense, and shall be licensed in accordance with State Business and Professions Code.

The Contractor shall be responsible for identifying and obtaining all construction, safety, or miscellaneous permits, licenses, inspections, certificates, or authorizations required by any governing body or entity, and as required for this project, and costs and fees associated with said permits shall be borne solely by the Contractor.

The Contractor shall furnish the Project progress schedule with the anticipated start date, construction activities extending for the duration of the working days, and end date, for construction within the County right-of-way, to the Engineer and the County at the during project mobilization. Any deviation must be approved by Engineer and coordinated with the County. Contractor shall not be allowed to start construction activities with in County right-of-way until the schedule is accepted by Engineer and the County.

The cost for Stanislaus County coordination shall be considered as included in the various contract items, and no additional compensation shall be made

## APPENDIX A: GEOTECHNICAL REPORT

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**GEOTECHNICAL ENGINEERING INVESTIGATION REPORT  
2024 STREET REHABILITATION  
TURLOCK, CALIFORNIA**

**BSK PROJECT G23000018**

**PREPARED FOR:**

**PROVOST & PRITCHARD CONSULTING GROUP  
455 WEST FIR AVENUE  
CLOVIS, CALIFORNIA 93611**

**DECEMBER 10, 2024**

**GEOTECHNICAL ENGINEERING INVESTIGATION REPORT  
2024 STREET REHABILITATION  
TURLOCK, CALIFORNIA**

Prepared for:

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BSK Project: G23000018

December 10, 2024

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- Figure 1: Site Vicinity map
- Figure 2: Boring Location Maps
- Appendix A: Field Exploration
- Appendix B: Laboratory Testing



## 1. INTRODUCTION

This report presents the results of a geotechnical engineering investigation conducted by BSK Associates (BSK), for the street rehabilitation in Turlock, California (Site). The site is located along several streets in Turlock, California, as shown on the Site Vicinity Map, Figure 1. The geotechnical engineering investigation was conducted in accordance with BSK Proposal G23000018, dated December 19, 2023.

This report provides a description of the geotechnical conditions at the Site and provides specific recommendations for earthwork and flexible pavement design recommendations. In the event that changes occur in the design of the project, this report's conclusions and recommendations will not be considered valid unless the changes are reviewed with BSK, and the conclusions and recommendations are modified or verified in writing.



### 1.1. Planned Construction

BSK understands that the project will encompass improvements along the following areas:

**Table 1: Project Street Locations.**

Street Location	Cross Street 1	Cross Street 2
Meadowlark Drive	N Olive Ave.	E Tuolumne Rd
Donnelly Park Drive	Pedras Rd	W Hawkeye Ave
De Pauw Dr, Wabash Dr, and Earlham Dr	Donnelly Park Drive	Valparaiso Drive
Valparaiso Drive	De Pauw Dr	Earlham Dr
N Denair Ave	E Hawkeye Ave	Crane Ave
Hamilton St	E Main St	E Marshall St
Lyons Ave	E Main St	Colorado Ave
N Rose Street	E Canal Dr	Cahill St
Oak St	E Canal Dr	Cooper Ave
Sierra St	E Canal Dr	N Berkeley Ave
Tahoe Dr	E Main St	Yosemite St
Shasta St	E Main St	Sierra St
E Marshall St and Merrit St	Bell St	N Johnson Rd
Sycamore St	Bell St	N Berkeley Ave
E Marshal St	N Quincy Rd	N Daubenberger Rd
Villa Ct, Elena Ct, Andrews Ct, and Fairvale Ct	Merrit St	-

The improvements are anticipated to include new pavement, repair or remove/replace curb, gutter and sidewalk, ADA ramps, driveway, and drainage improvements.



## **1.2 Purpose and Scope of Services**

The objective of this geotechnical investigation was to characterize the subsurface conditions at the project site and provide geotechnical engineering recommendations for the preparation of plans and specifications. The scope of the investigation included a field exploration, laboratory testing, engineering analyses, and preparation of this report.

## **2. FIELD INVESTIGATION AND LABORATORY TESTING**

### **2.1. Field Exploration**

The field exploration for this investigation was conducted under the oversight of a BSK engineer. Thirty-seven (37) borings were drilled at the Site on August 23, 26 through 29, and September 6, 2024, using a diamond coring bit and hand auger equipment. The borings were drilled to a maximum depth of 3 to 4 feet below the existing ground surface (bgs).

The soil materials encountered in the borings were visually classified in the field, and the logs were recorded during the drilling and sampling operations. Visual classifications of the materials encountered in the borings were made in general accordance with the Unified Soil Classification System (ASTM D 2488). A soil classification chart is presented in Appendix A.

Boring logs are presented in Appendix A and should be consulted for more details concerning subsurface conditions. Stratification lines were approximated by the field staff based on observations made at the time of drilling, while the actual boundaries between soil types may be gradual and soil conditions may vary at other locations.

### **2.2 Laboratory Testing**

Laboratory tests were performed on selected soil samples to evaluate moisture content, dry density, maximum density optimum moisture relationship (compaction), sieve analysis, corrosion characteristics (pH, Minimum Resistivity, Soluble Sulfates, and Soluble Chlorides), resistance-value (R-value), Soil Cement testing for FDR, and sand equivalent. In-situ moisture, dry density, and percent minus 200 sieve results are presented on the boring logs. A description of the laboratory test methods and results are presented in Appendix B.

## **3. SITE CONDITIONS**

The following sections address the site descriptions and surface conditions, subsurface conditions, and groundwater conditions at the site. This information is based on BSK's field exploration and published maps and reports.



### **3.1 Site Description and Surface Conditions**

The project includes the improvements of various roads as presented in Table 1. The project site includes asphalt paved 2 lane roadways with paved shoulders and curb and gutter. Most roadways contain sidewalks.

### **3.2 Subsurface Conditions**

The predominant general soil profile for the borings consisted of silty sand with various amounts of silt to the maximum depth of exploration, 3 to 4 feet bgs.

Borings were drilled through existing pavement. Pavement section thickness was measured and is presented in Table 2. R-value and sand equivalent testing was completed for selected near surface samples. Results are also presented in Table 2.



Table 2: Boring Summaries

Boring	AC Thickness (inches)	AB Thickness (inches)	Roadway	R-Value	Sand Equivalent
B-1	2	4	Meadowlark Ln	43	-
B-2	2	4	Meadowlark Ln	-	25
B-3	1 1/4	4 1/2	Donnelly Park Dr	-	-
B-4	2	4	Donnelly Park Dr	-	-
B-5	2 1/2	3	Donnelly Park Dr	62	-
B-6	2 1/2	3	De Pauw Dr	-	-
B-7	1 1/2	4	Wabash Dr	-	26
B-8	2 1/4	7 1/2	Earlham Dr	-	-
B-9	2 1/2	3 1/2	N Denair Ave	-	31
B-10	2 1/2	-	N Denair Ave	-	-
B-11	4	-	N Denair Ave	-	-
B-12	2 1/2	3 1/2	N Denair Ave	-	-
B-13	5	-	N Denair Ave	-	-
B-14	4	-	N Denair Ave	-	-
B-15	4	-	Hamilton St	-	-
B-16	4	-	Shasta St	-	-
B-17	4	-	Tahoe Dr	11	-
B-18	4	-	Tahoe Dr	-	-
B-19	4	2	Sierra St	-	-
B-20	8	-	Sierra St	-	-
B-21	9	-	Sierra St	-	19
B-22	6	-	N Rose St	-	-
B-23	2	9	Oak St	-	26
B-24	2 1/2	-	Oak St	53	-
B-25	2 1/2	-	N Rose St	-	-
B-26	4 1/2	-	Lyons Ave	-	-
B-27	4 1/4	-	E Marshall St	-	-
B-28	4	-	Sycamore St	-	-
B-29	2 1/2	-	Merritt St	52	-
B-30	4 1/2	-	E Marshall St	-	21
B-31	4 1/2	-	E Marshall St	55	-
B-32	4 1/2	-	Merritt St	-	-
B-33	3	8	Merritt St	-	-
B-34	3	1 1/2	Villa Ct	-	-
B-35	3	8	Elena Ct	-	-
B-36	2 1/2	8	E Marshall St	-	-
B-37	Not Measured	Not Measured	N Rose St	-	-



The boring logs in Appendix A provide a more detailed description of the materials encountered, including the applicable Unified Soil Classification System symbols.

### **3.3 Groundwater Conditions**

Groundwater was not encountered at the Site during our exploration on August 23, 26 through 29, and September 6, 2024. The California Department of Water Resources indicates the historic high depth to groundwater was greater than 50 feet. However, fluctuations in the groundwater level or the presence of perched groundwater may occur due to variations in rainfall, irrigation, seasonal factors, pumping from wells and other factors that were not evident at the time of our investigation.

## **4. CONCLUSIONS AND RECOMMENDATIONS**

Based upon the data collected during this investigation, and from a geotechnical engineering standpoint, it is our opinion that the soil conditions would not preclude the construction of the proposed improvements. The following sections include recommendations for conventional pavement sections and full depth reclamation with cement (soil cement pavement). Recommendations for new pipelines and structures can be provided, if desired.

### **4.1 Soil Corrosivity**

Based on test results, on-site near-surface soils have low soluble sulfate and chloride contents and are alkaline. Thus, on-site soils are considered to have a low corrosion potential with respect to soil cement or buried concrete. Buried reinforcing steel protection be provided with the minimum concrete cover required by the American Concrete Institute (ACI) Building Code for Structural Concrete, ACI 318, Chapter 7.7. Buried metal must have protective coatings in accordance with the manufacturer's specifications. If detailed recommendations for corrosion protection are desired, a corrosion specialist should be consulted.

### **4.2 Excavation Stability**

Open trench excavation depths, if any, are expected to be less than 5 feet. Soils encountered within the depth explored are generally classified as Type C soils in accordance with OSHA (Occupational Safety and Health Administration). The slopes surrounding or along temporary excavations may be 1.5:1 for excavations that are less than five feet deep and exhibit no indication of potential caving. Soils encountered near Denair and Canal (boring B-12) exhibited fine sands with 7 percent fines and are likely to require flatter slopes. If areas of sand layers are encountered along the alignment, slopes should be laid back flatter.

Certified trench shields or boxes may also be used to protect workers during construction in excavations.



Temporary excavations for the project construction should be left open for as short a time as possible and should be protected from water runoff. In addition, equipment and/or soil stockpiles must be maintained at least 10 feet away from the top of the excavations. Because of variability in soils, BSK must be afforded the opportunity to observe and document sloping and shoring conditions at the time of construction. Slope height, slope inclination, and excavation depths (including utility trench excavations) must in no case exceed those specified in local, state, or federal safety regulations, (e.g., OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations).

#### 4.3 Conventional Pavement Section Recommendations

R-value testing was completed on six (6) samples based on the predominate soil types encountered at borings B-1, B-5, B-17, B-24, B-29 and B-31 from 0 to 3 feet bgs. BSK recommends a design R-value of 11 be used for Sierra Street, Tahoe Drive, Lyons Avenue east of Oak Street, and Oak Street north of Lyons Avenue. An R-Value of 43 is recommended for Meadowlark Lane. BSK recommends an R-Value of 50 be used for the other streets under consideration.

BSK calculated the conventional pavement section thicknesses for Traffic Indexes (TI) of 5 through 9. However, design for Sierra Street, Tahoe Drive, Lyons Avenue east of Oak Street, and Oak Street north of Lyons Avenue utilized a TI of no greater than 6.0 based on values provided by the Client. BSK has presented a summary of its pavement section thickness recommendations in Tables 3 through 8, *Conventional Pavement Section Recommendations*.

**TABLE 3: Conventional Pavement Section Recommendations - Sierra Street, Tahoe Drive, Lyons Avenue East of Oak Street, and Oak Street North of Lyons Avenue  
(R-Value = 11, 20-yr design life)**

Traffic Index	Conventional Section		
	HMA (inches)	AB (inches)	ASB (inches)
5.0	7	-	-
	3	9	-
	3	4	5
5.5	8	-	-
	3	10.5	-
	3	4	7.5
6.0	9	-	-
	3.5	11.5	-
	3.5	4	8

Notes:

HMA: Hot Mix Asphalt

AB: Caltrans Class 2 Aggregate Base (Minimum R-Value = 78)

ASB: Aggregate Sub Base (Minimum R-Value = 50)



**TABLE 4: Conventional Pavement Section Recommendations with Geogrid -  
Sierra Street, Tahoe Drive, Lyons Avenue East of Oak Street, and Oak Street  
North of Lyons Avenue  
(R-Value = 11, 20-yr design life)**

Traffic Index	Conventional Section	
	HMA (inches)	AB (inches)
5.0	3	7.0
5.5	3	8.5
6.0	3.5	9.0

Notes:

HMA: Hot Mix Asphalt

AB: Caltrans Class 2 Aggregate Base (Minimum R-Value = 78)

ASB: Aggregate Sub Base (Minimum R-Value = 50)

**TABLE 5: Conventional Pavement Section Recommendations – Meadowlark  
Drive  
(R-Value = 43, 20-yr design life)**

Traffic Index	Conventional Section	
	HMA (inches)	AB (inches)
5.0	5	-
	3	4
5.5	6	-
	3	4.5
6.0	6.5	-
	3.5	4.5
6.5	7	-
	3.5	6
7.0	7.5	-
	4	6.5
7.5	8	-
	4.5	6.5
8.0	8.5	-
	4.5	8
8.5	9	-
	5	8
9.0	10	-
	5.5	8.5

Notes:

HMA: Hot Mix Asphalt

AB: Caltrans Class 2 Aggregate Base (Minimum R-Value = 78)



**TABLE 6: Conventional Pavement Section Recommendations with Geogrid –  
Meadowlark Drive  
(R-Value = 43, 20-yr design life)**

Traffic Index	Conventional Section	
	HMA (inches)	AB (inches)
5.0	3	4
5.5	3	4
6.0	3.5	4
6.5	3.5	5
7.0	4	5
7.5	4.5	5.5
8.0	5	5.5
8.5	5	6.5
9.0	5.5	7.0

Notes:

HMA: Hot Mix Asphalt

AB: Caltrans Class 2 Aggregate Base (Minimum R-Value = 78)

**TABLE 7: Conventional Pavement Section Recommendations – All others  
(R-Value = 50, 20-yr design life)**

Traffic Index	Conventional Section	
	HMA (inches)	AB (inches)
5.0	4.5 3	- 4
5.5	5.5 3	- 4
6.0	6 3.5	- 4
6.5	6.5 3.5	- 4.5
7.0	7 4	- 4.5
7.5	7.5 4.5	- 5
8.0	8 4.5	- 6
8.5	8.5 5	- 6
9.0	9 5.5	- 6.5



Notes:  
HMA: Hot Mix Asphalt  
AB: Caltrans Class 2 Aggregate Base (Minimum R-Value = 78)

**TABLE 8: Conventional Pavement Section Recommendations with Geogrid  
– All others  
(R-Value = 50, 20-yr design life)**

Traffic Index	Conventional Section	
	HMA (inches)	AB (inches)
5.0	3	4
5.5	3	4
6.0	3.5	4
6.5	3.5	4.5
7.0	4	4
7.5	4.25	4
8.0	4.5	5
8.5	5	5
9.0	5.5	5

Notes:  
HMA: Hot Mix Asphalt  
AB: Caltrans Class 2 Aggregate Base (Minimum R-Value = 78)

Hot mix asphalt, Class 2 aggregate base, and aggregate subbase should conform to and be placed in accordance with the latest revision of Caltrans Standard Specifications. It is recommended subgrade be scarified to a depth of 12 inches, moisture conditioned and compacted to at least 95 percent maximum density, based on ASTM D1557 prior to placing new aggregate base/subbase section.

#### 4.4 Soil Cement Pavement Section Recommendations

Laboratory testing was completed on a composite sample by mixing soil with 3, 4, and 5 percent cement by dry weight, compacting to 92 percent maximum density, mixed with optimum moisture content plus 3 to 4 percent, cured in a low temperature oven for 7 days, capped, then tested for unconfined compressive strength. Test results are presented in Appendix B.

Based on laboratory testing, 3 percent cement additive would result in cement treated subgrade strengths of greater than 350 psi. Results of the preliminary mix design are provided in Appendix B. BSK recommends using soil-cement with a cement content of 3 percent for a minimum depth of 12 inches for TIs less than 8 and a depth of 13 for TIs of 8 and greater. However, consideration should be given for using the full 18 inches of FDR, if the project constraints allow for the full depth. Note that design for Sierra



Street, Tahoe Drive, Lyons Avenue east of Oak Street, and Oak Street north of Lyons Avenue utilized a TI of no greater than 6.0 based on values provided by the Client. If the TI does exceed 6.0 for these sections, additional soil-cement depth may be required. BSK calculated the pavement section thicknesses using a compressive strength of 350 psi, a design subgrade R-Value of 43 and TIs of 5 through 9. The values presented in Table 6 are valid for the design R-value of 11 at Sierra Street, Tahoe Drive, Lyons Avenue east of Oak Street and Oak Street north of Lyons Avenue, based on these roadways having a proposed design TI if 6 or less. The values presented in Table 6 are also valid for design R-value of 50 in other proposed roadway areas. BSK has presented a summary of its pavement section thickness recommendations in Tables 9, *Soil Cement Pavement Section Recommendations*.

<b>TABLE 9: Soil Cement Pavement Section Recommendations</b> <b>(Cement Content = 3 percent, Unconfined Compressive Strength = 350 psi, R-Value = 43,</b> <b>20-yr design life)</b>		
<b>Traffic Index</b>	<b>FDR-C Section</b>	
	<b>HMA (inches)</b>	<b>Minimum Soil-Cement Thickness (inches)</b>
<b>5.0</b>	3	12
<b>5.5</b>	3	12
<b>6.0</b>	3.5	12
<b>6.5</b>	3.5	12
<b>7.0</b>	4	12
<b>7.5</b>	4.5	12
<b>8.0</b>	4.5	13
<b>8.5</b>	5	13
<b>9.0</b>	5.5	13

Notes:

HMA: Hot Mix Asphalt

FDR-C: Full-depth reclamation with 3 percent cement

The above table assumes aggregate base will not be used. If aggregate base is desired, a minimum of 3 inches of Caltrans Class 2 Aggregate Base (minimum R-Value = 78) should be used. Hot mix asphalt should conform to and be placed in accordance with the latest revision of Caltrans Standard Specifications. BSK recommends after any asphalt removal and grading, uniformly mix remaining material with 3 percent cement, moisture condition to 4 percent above optimum moisture content, and compact it to 95 percent relative compaction by ASTM D1557. Specifications can be provided for use in construction, if desired.

If unstable soil conditions occur during construction, BSK recommends replacing unstable material with a minimum of two feet of Class II aggregate base or 18 inches of soil cement. The aggregate base should be compacted to 95 percent relative compaction, and soil cement should follow recommendations above.



#### 4.4.1 Construction Considerations

Earthwork operations should be scheduled as to avoid working during periods of inclement weather. Should these operations be performed during or shortly following periods of inclement weather, unstable soil conditions may result in the soils exhibiting a “pumping” condition. This condition is caused by excess moisture, in combination with compaction, resulting in saturation and zero air voids in the soils. If this condition occurs, the adverse soils will need to be over-excavated to the depth at which stable soils are encountered and replaced with suitable soils compacted as engineered fill. Alternatively, the Contractor may proceed with grading operations after utilizing an alternative method of soil stabilization, which should be subject to review and approval by BSK prior to implementation.

Cement must be Type II or Type V portland cement specified in ASTM C 150/150M. Cement should be added to the laydown area after pulverizing and shaping. It is recommended mixing equipment overlap passes at least 12 inches to confirm even spreading and mixing. Mixing must occur within 30 minutes of spreading and all grading and compaction must be completed within 2 hours. At least 2 hours of curing time without equipment or traffic loading should be provided, but can be waived if too limiting to traffic.

The minimum depth of cement treat is 13 inches. The mixed material shall have a uniform color reaction with sprayed phenolphthalein pH indicator solution for the full specified treatment depth.

Immediately after compaction, apply water and roll with pneumatic-tired rollers or steel drum roller with no vibration. The finished surface must be free of ruts, bumps, indentations, segregation, raveling, and any loose material. Localized areas of unsuitable material should be removed, disposed and replaced with soil-cement material or new Class 2 AB. As with all in-place recycling operations, control over material uniformity is largely dependent on-site conditions. Field adjustments to parameters such as production and application rates will be necessary during construction as indicated by changes to in-situ conditions or QC/QA test results. Large clumps of material greater than 3 inches in diameter are detrimental to soil-cement material and should be removed prior to final grading and compaction.

Keep the compacted surface damp by lightly watering until asphaltic emulsion is applied.

During the period from 48 to 72 hours after compaction, microcrack the surface by applying 3 single passes with a 12-ton vibratory steel drum roller at maximum amplitude traveling from 2 to 3 mph, regardless of whether asphaltic emulsion has been applied. Shrinkage cracking can develop in soil-cement and ultimately reflect into the HMA layer, opening the pavement to water infiltration and increasing the likelihood of accelerated pavement distress. Microcracking can reduce shrinkage cracking. Microcracking is the application of several vibratory roller passes typically 48 to 72 hours after finishing grading, to create a network of cracks. The goal of microcracking is to prevent severe, wide cracks from forming the potential for reflective cracking through the HMA layer. Microcracking can be performed before or after the application of asphaltic emulsion.



If asphaltic emulsion is to be used, apply a coat of diluted asphaltic emulsion to the finished surface when it is damp but free of standing water. The application rate of asphaltic emulsion must be from 0.13 to 0.25 gal/sq. yd. Do not water after applying asphaltic emulsion. Do not open to traffic without authorization.

Conflicting utilities, including valves and access points, must be referenced and lowered at least 6 inches below the soil-cement depth or worked around. If utility depths have not been confirmed by field inspection, potholing, or GPR, the design soil-cement depth should be at least 12 inches above the approximate utility depth.

## 5. PLANS AND SPECIFICATIONS REVIEW

BSK recommends that it be retained to review the draft plans and specifications for the project, with regard to foundations and earthwork, prior to their being finalized and issued for construction bidding.

## 6. CONSTRUCTION TESTING AND OBSERVATIONS

Geotechnical testing and observation during construction is a vital extension of this geotechnical investigation. BSK recommends that it be retained for those services. Field review during Site preparation and grading allows for evaluation of the exposed soil conditions and confirmation or revision of the assumptions and extrapolations made in formulating the design parameters and recommendations. BSK's observations must be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. BSK must also be called to the Site to observe excavations, prior to placement of pavement, in order to assess whether the actual conditions are compatible with the conditions anticipated during the preparation of this report.

If a firm other than BSK is retained for these services during construction, then that firm must notify the owner, project designers, governmental building officials, and BSK that the firm has assumed the responsibility for all phases (i.e., both design and construction) of the project within the purview of the geotechnical engineer. Notification must indicate that the firm has reviewed this report and any subsequent addenda, and that it either agrees with BSK's conclusions and recommendations, or that it will provide independent recommendations.

## 7. LIMITATIONS

The analyses and recommendations submitted in this report are based upon the data obtained from the Borings performed at the locations shown on the Boring Location Map, Figure 2. The report does not reflect variations which may occur between or beyond the Borings. The nature and extent of such variations may not become evident until construction is initiated. If variations then appear, a re-evaluation of the recommendations of this report will be necessary after performing on-Site observations during the excavation period and noting the characteristics of the variations.

The validity of the recommendations contained in this report is also dependent upon an adequate testing and observation program during the construction phase. BSK assumes no responsibility for construction



compliance with the design concepts or recommendations unless it has been retained to perform the testing and observation services during construction as described above.

The findings of this report are valid as of the present. However, changes in the conditions of the Site can occur with the passage of time, whether caused by natural processes or the work of man, on this property or adjacent property. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation, governmental policy or the broadening of knowledge.

BSK has prepared this report for the exclusive use of the Client and members of the project design team. The report has been prepared in accordance with generally accepted geotechnical engineering practices which existed in Stanislaus County at the time the report was written. No other warranties either expressed or implied are made as to the professional advice provided under the terms of BSK's agreement with Client and included in this report.



## FIGURES





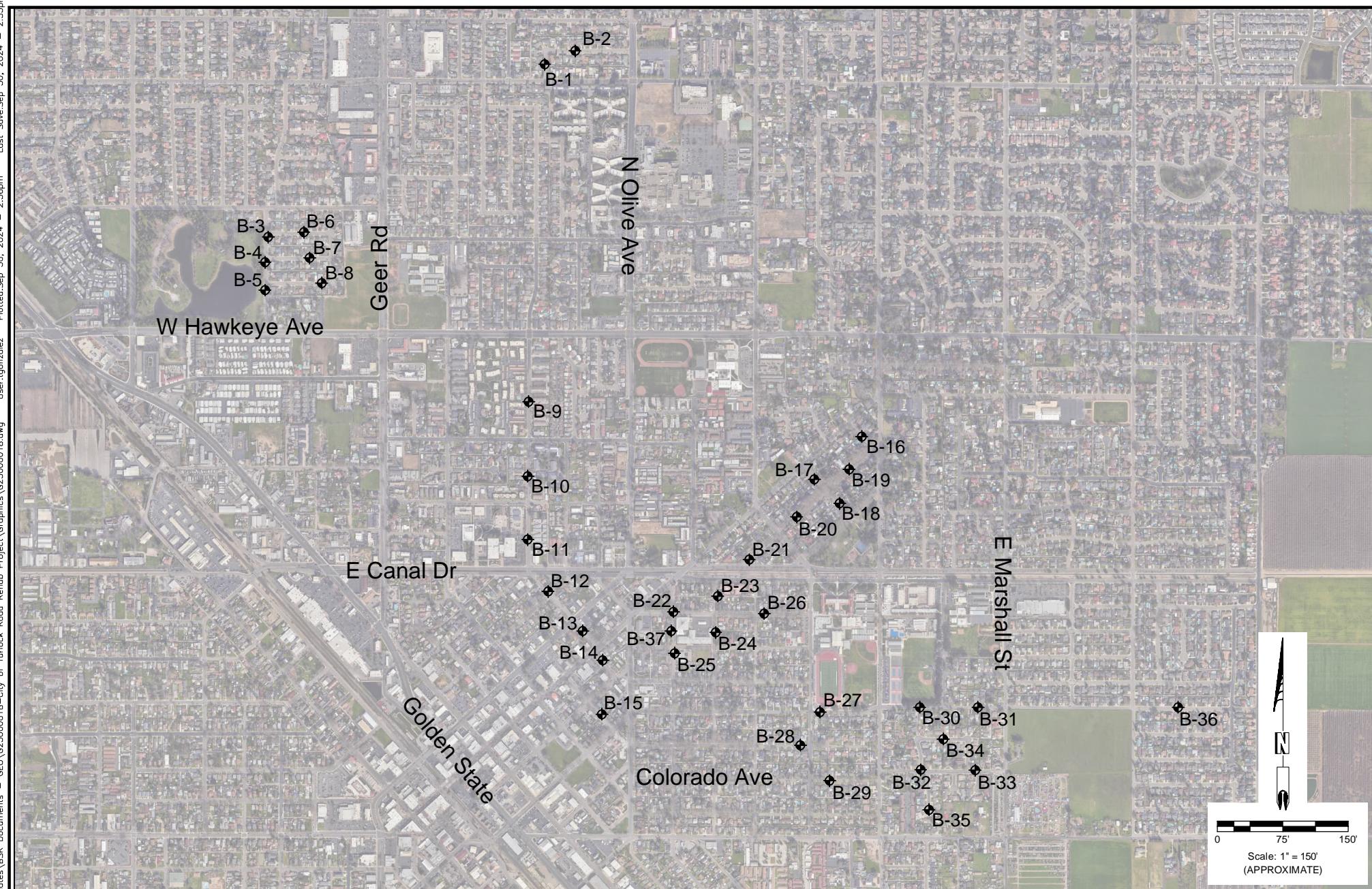
REFERENCE IMAGE: Google Earth

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ASSOCIATES  
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Fresno, California 93727  
Tel. (559) 497-2880

**SITE VICINITY MAP**  
City of Turlock Road Rehabilitation  
Turlock, California

**FIGURE 1**

JOB NO.	G23-000-018
DATE	September 30, 2024
DR. BY	TG
CH. BY	NP
SCALE AS SHOWN	1 OF 1 SHEETS



## LEGEND:



APPROXIMATE BORING LOCATIONS

B-37

REFERENCE IMAGE: Google Earth

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## BORING LOCATION MAP

City of Turlock Road Rehabilitation  
Turlock, California

## FIGURE 2

JOB NO.	G23-000-018	
DATE	September 30, 2024	
DR. BY	TG	SHEET NO. 1
CH. BY	NP	OF 10 SHEETS

Scale: 1" = 150'  
(APPROXIMATE)

**LEGEND:**

APPROXIMATE BORING LOCATIONS

B-6

REFERENCE IMAGE: Google Earth

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**BORING LOCATION MAP**

City of Turlock Road Rehabilitation  
Turlock, California

**FIGURE 2**

JOB NO.	G23-000-018	
DATE	September 30, 2024	
DR. BY	TG	SHEET NO.
CH. BY	NP	2
SCALE AS SHOWN		OF 10 SHEETS

LEGEND:

APPROXIMATE BORING LOCATIONS

B-8

REFERENCE IMAGE: Google Earth

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**BORING LOCATION MAP**

City of Turlock Road Rehabilitation  
Turlock, California

**FIGURE 2**

JOB NO.	G23-000-018
DATE	September 30, 2024
DR. BY	TG
CH. BY	NP
SCALE AS SHOWN	3 OF 10 SHEETS



## LEGEND:



APPROXIMATE BORING LOCATIONS

B-10

REFERENCE IMAGE: Google Earth

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## BORING LOCATION MAP

City of Turlock Road Rehabilitation  
Turlock, California

## FIGURE 2

JOB NO.	G23-000-018	
DATE	September 30, 2024	
DR. BY	TG	SHEET NO. 4
CH. BY	NP	OF 10 SHEETS

SCALE AS SHOWN



LEGEND:



APPROXIMATE BORING LOCATIONS

B-12

REFERENCE IMAGE: Google Earth

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**BORING LOCATION MAP**

City of Turlock Road Rehabilitation  
Turlock, California

**FIGURE 2**

JOB NO.	G23-000-018	
DATE	September 30, 2024	
DR. BY	TG	SHEET NO. 6
CH. BY	NP	OF 10 SHEETS
SCALE AS SHOWN		



## LEGEND:



APPROXIMATE BORING LOCATIONS

B-15

REFERENCE IMAGE: Google Earth

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## BORING LOCATION MAP

City of Turlock Road Rehabilitation  
Turlock, California

## FIGURE 2

JOB NO.	G23-000-018	
DATE	September 30, 2024	
DR. BY	TG	SHEET NO. 5
CH. BY	NP	OF 10 SHEETS
SCALE AS SHOWN		

Scale: 1" = 150'  
(APPROXIMATE)



LEGEND:



APPROXIMATE BORING LOCATIONS

B-21

REFERENCE IMAGE: Google Earth

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**BORING LOCATION MAP**

City of Turlock Road Rehabilitation  
Turlock, California

**FIGURE 2**

JOB NO.	G23-000-018
DATE	September 30, 2024
DR. BY	TG
CH. BY	NP
SCALE AS SHOWN	7 OF 10 SHEETS



## LEGEND:



APPROXIMATE BORING LOCATIONS

B-37

REFERENCE IMAGE: Google Earth

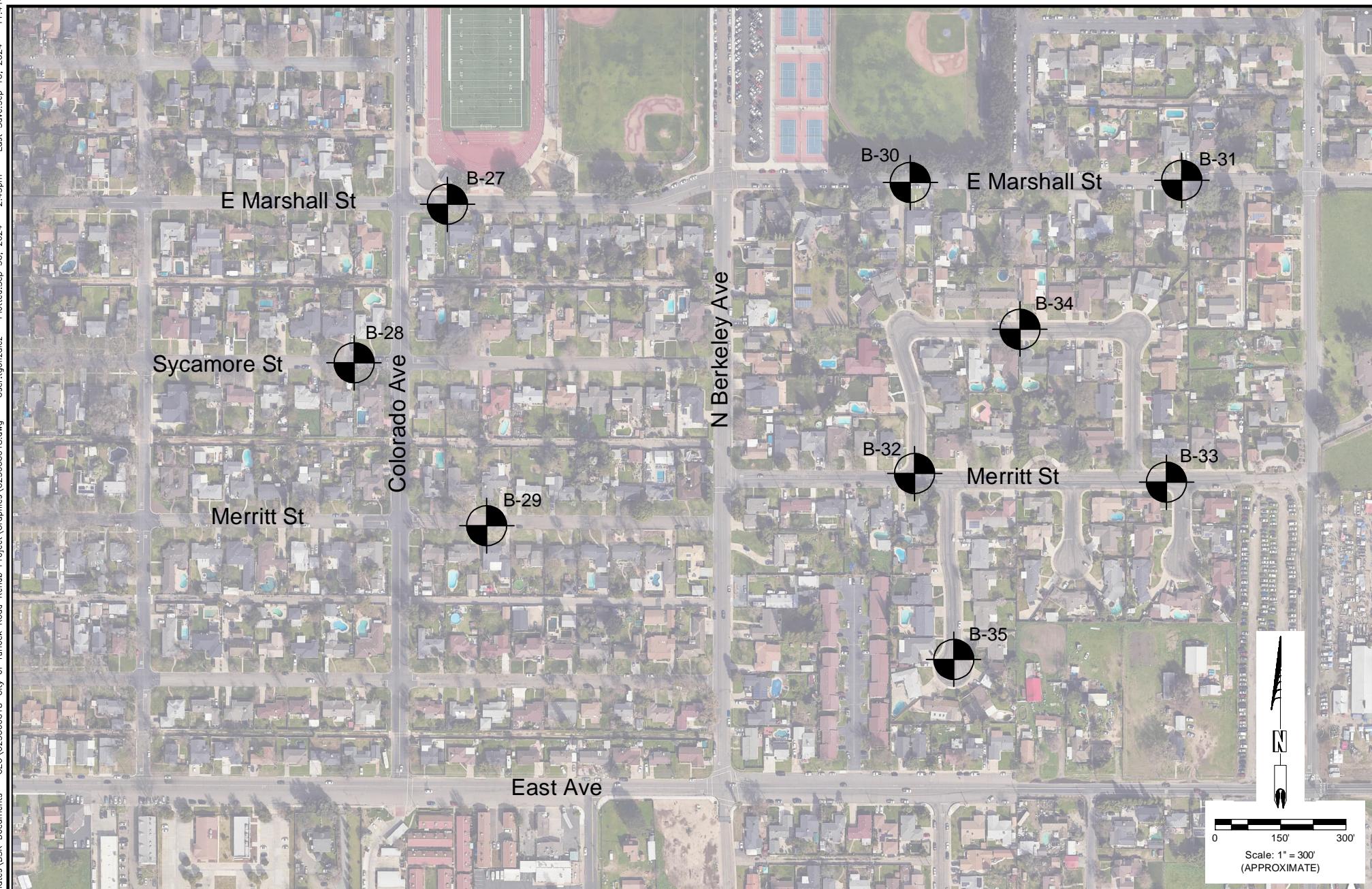
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## BORING LOCATION MAP

City of Turlock Road Rehabilitation  
Turlock, California

## FIGURE 2

JOB NO.	G23-000-018	
DATE	September 30, 2024	
DR. BY	TG	SHEET NO.
CH. BY	NP	8
SCALE AS SHOWN		OF 10 SHEETS

**LEGEND:**

APPROXIMATE BORING LOCATIONS

B-35

REFERENCE IMAGE: Google Earth

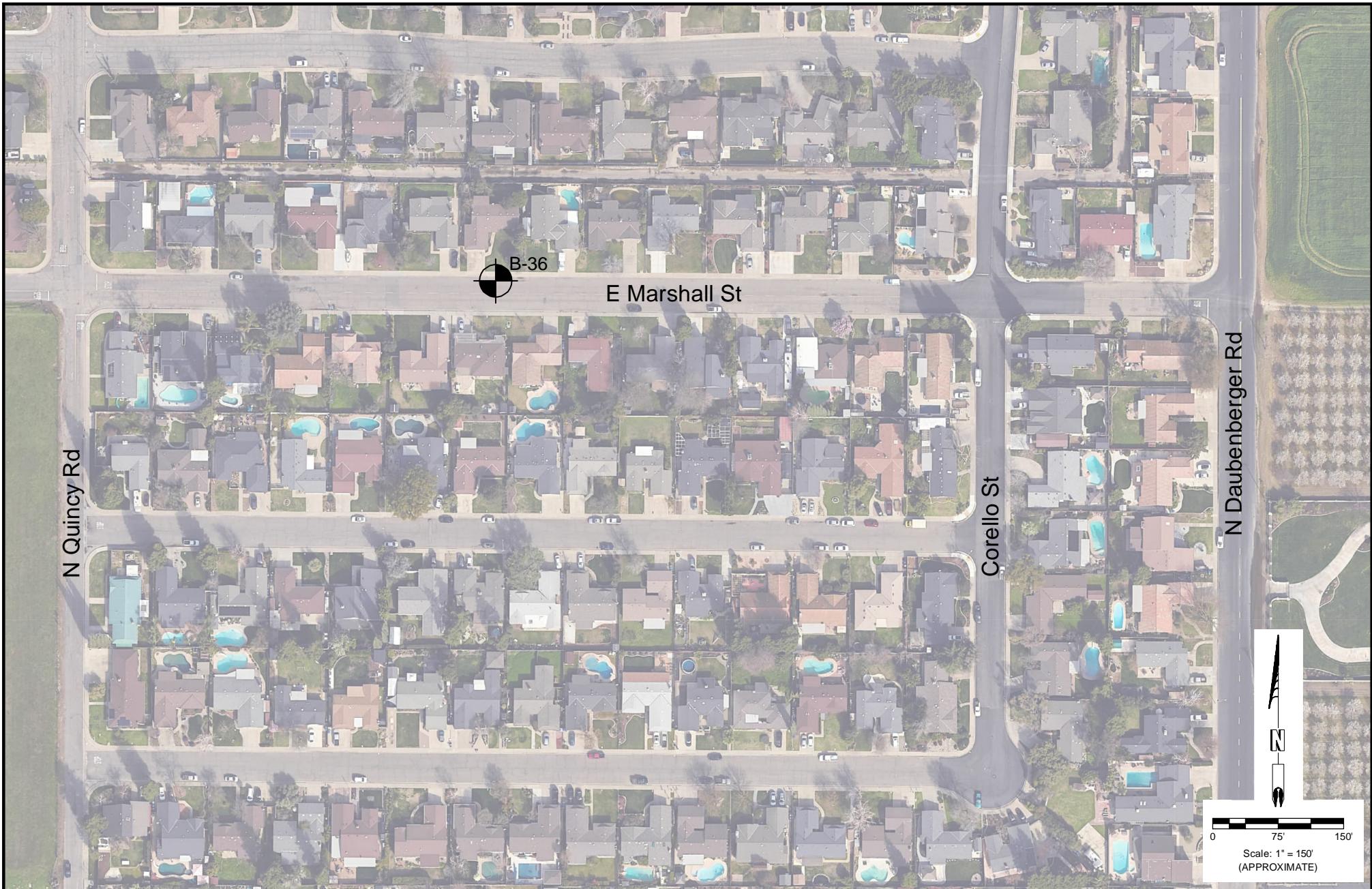
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**BORING LOCATION MAP**

City of Turlock Road Rehabilitation  
Turlock, California

**FIGURE 2**

JOB NO.	G23-000-018	
DATE	September 30, 2024	
DR. BY	TG	SHEET NO. 9
CH. BY	NP	OF 10 SHEETS
SCALE AS SHOWN		



## LEGEND:



APPROXIMATE BORING LOCATIONS

B-36

REFERENCE IMAGE: Google Earth

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## BORING LOCATION MAP

City of Turlock Road Rehabilitation  
Turlock, California

## FIGURE 2

JOB NO.	G23-000-018	
DATE	September 30, 2024	
DR. BY	TG	SHEET NO. 10
CH. BY	NP	OF 10 SHEETS

SCALE AS SHOWN

# **APPENDIX A**

## **FIELD EXPLORATION**



## APPENDIX A

### FIELD EXPLORATION

The field exploration for this investigation was conducted under the oversight of a BSK engineer. Thirty-seven (37) borings were drilled at the Site on August 23, 26 through 29, and September 6, 2024, using a diamond coring bit and hand auger equipment. The borings were drilled to a maximum depth of 3 to 4 feet below the existing ground surface (bgs).

The soil materials encountered in the test borings were visually classified in the field, and the logs were recorded during the drilling and sampling operations. Visual classification of the materials encountered in the test borings was made in general accordance with the Unified Soil Classification System (ASTM D2488). A soil classification chart is presented herein. Boring logs are presented herein and should be consulted for more details concerning subsurface conditions. Stratification lines were approximated by the field staff based on observations made at the time of drilling, while the actual boundaries between soil types may be gradual and soil conditions may vary at other locations.

Subsurface samples were obtained at the successive depths shown on the boring logs by driving samplers which consisted of a 2.5-inch inside diameter (I.D.) California Sampler. The relatively undisturbed soil core samples were capped at both ends to preserve the samples at their natural moisture content. At the completion of the field exploration, the test borings were backfilled with the excavated soil cuttings and capped with asphalt cold patch.



MAJOR DIVISIONS					TYPICAL NAMES		
COARSE GRAINED SOILS More than Half > #200 sieve	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES		
		GRAVELS WITH OVER 15% FINES	GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES		
			GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES		
		SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES		
			SW		WELL GRADED SANDS, GRAVELLY SANDS		
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES	SP		POORLY GRADED SANDS, GRAVELLY SANDS		
		SANDS WITH OVER 15% FINES	SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES		
			SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES		
	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY		
	CL			INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS			
	OL			ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY			
FINE GRAINED SOILS More than Half < #200 sieve	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS		
	CH			INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS			
	OH			ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS			
	HIGHLY ORGANIC SOILS			Pt		PEAT AND OTHER HIGHLY ORGANIC SOILS	

<input checked="" type="checkbox"/>	Modified California	RV	R-Value
<input checked="" type="checkbox"/>	Standard Penetration Test (SPT)	SA	Sieve Analysis
<input checked="" type="checkbox"/>	Split Spoon	SW	Swell Test
<input checked="" type="checkbox"/>	Pushed Shelby Tube	TC	Cyclic Triaxial
<input checked="" type="checkbox"/>	Auger Cuttings	TX	Unconsolidated Undrained Triaxial
<input checked="" type="checkbox"/>	Grab Sample	TV	Torvane Shear
<input checked="" type="checkbox"/>	Sample Attempt with No Recovery	UC	Unconfined Compression
CA	Chemical Analysis	(1.2)	(Shear Strength, ksf)
CN	Consolidation	WA	Wash Analysis
CP	Compaction	(20)	(with % Passing No. 200 Sieve)
DS	Direct Shear		Water Level at Time of Drilling
PM	Permeability		Water Level after Drilling (with date measured)
PP	Pocket Penetrometer		

## SOIL CLASSIFICATION CHART AND LOG KEY

Figure A-1





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Project: Turlock Road

Page 1 of 1

Location: Turlock, CA

Project No.: G23000018

Logged By: A. Sizemore

Checked By: N. Popenoe

Boring: B- 1

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 2" Aggregate Base - 4"	
2			115.8	5.2	23			SM	Silty SAND (SM) - brown, moist, fine to medium grained sand	medium auger  easy auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
5										
6										
7										
8										
9										



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Project: Turlock Road

Page 1 of 1

Location: Turlock, CA

Project No.: G23000018

Logged By: A. Sizemore

Checked By: N. Popenoe

Boring: B- 2

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 2" Aggregate Base - 4"	
2			111.1	5.6				SM	Silty SAND (SM) - brown, moist, fine to medium grained sand	medium auger hard auger
3									Boring terminated at approximately 2.5 feet bgs. due to refusal, strongly cemented No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
5										
6										
7										
8										
9										



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Project: Turlock Road

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Location: Turlock, CA

Project No.: G23000018

Logged By: A. Sizemore

Checked By: N. Popenoe

Boring: B- 3

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 1 1/4" Aggregate Base - 4.5" Silty SAND (SM) - brown, moist, fine to medium grained sand	medium auger
2			103.7	4.0	13			SM	... decreased silt content	easy auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
5										
6										
7										
8										
9										



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Project: Turlock Road

Page 1 of 1

Location: Turlock, CA

Project No.: G23000018

Logged By: A. Sizemore

Checked By: N. Popenoe

Boring: B- 4

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 2" Aggregate Base - 4"	
2			111.4	4.0				SM	Silty SAND (SM) - brown, moist, fine to medium grained sand	medium auger  easy auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
5										
6										
7										
8										
9										



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Project: Turlock Road

Page 1 of 1

Location: Turlock, CA

Project No.: G23000018

Logged By: A. Sizemore

Checked By: N. Popenoe

Boring: B- 5

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 2.5" Aggregate Base - 3"	
2			103.3	4.7	20			SM	Silty SAND (SM) - brown, moist, fine to medium grained sand  ... increased sand content  ... strongly cemented chunks of light gray silt  ... 3/4 - 3" gravel	medium auger  easy auger  hard auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
5										
6										
7										
8										
9										



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Project: Turlock Road

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Location: Turlock, CA

Project No.: G23000018

Logged By: A. Sizemore

Checked By: N. Popenoe

Boring: B- 6

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 2.5" Aggregate Base - 3" Silty SAND (SM) - brown, moist, fine to medium grained sand	medium auger
2										easy auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
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9										



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Project: Turlock Road

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Location: Turlock, CA

Project No.: G23000018

Logged By: A. Sizemore

Checked By: N. Popenoe

Boring: B- 7

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 1.5" Aggregate Base - 4"	
2			107.5	3.6	24			SM	Silty SAND (SM) - brown, moist, fine to medium grained sand	medium auger
3										
4									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
5										
6										
7										
8										
9										



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Project: Turlock Road

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Location: Turlock, CA

Project No.: G23000018

Logged By: A. Sizemore

Checked By: N. Popenoe

Boring: B- 8

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 2.25" Aggregate Base - 7.5"	
2			109.3	4.0				SM	Silty SAND (SM) - brown, moist, fine to medium grained sand	medium auger  easy auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
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9										



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Project: Turlock Road

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Location: Turlock, CA

Project No.: G23000018

Logged By: J. Leu

Checked By: N. Popenoe

Boring: B- 9

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 2.5" Aggregate Base - 3.5"	*Sample disturbed easy auger
1									Silty SAND (SM) - yellow brown, moist, fine to coarse grained sand	
2										
3										
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and Perma Patch.	
4										
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7										
8										
9										



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Project: Turlock Road

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Location: Turlock, CA

Project No.: G23000018

Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-10

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 2.5"	
2			107.9	3.0				SM	Silty SAND (SM) - yellow brown, moist, fine to coarse grained sand	easy auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and Perma Patch.	
4										
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6										
7										
8										
9										



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Project: Turlock Road

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Location: Turlock, CA

Project No.: G23000018

Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-11

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 4"	
2									Silty SAND (SM) - yellow brown, moist, fine to coarse grained sand	
3										
4									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and Perma Patch.	
5										
6										
7										
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9										



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Project: Turlock Road

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Location: Turlock, CA

Project No.: G23000018

Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-12

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 2.5" Aggregate Base - 3.5"	
2			106.1	3.6	7			SP-SM	Poorly Graded SAND with Silt (SP-SM) - yellow brown, moist, fine to coarse grained sand	easy auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and Perma Patch.	
4										
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7										
8										
9										



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Location: Turlock, CA

Project No.: G23000018

Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-13

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 5"	
2			111.1	5.2				SM	Silty SAND (SM) - yellow brown, moist, fine to coarse grained sand	easy auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and Perma Patch.	
4										
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7										
8										
9										



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Location: Turlock, CA

Project No.: G23000018

Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-14

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 4"	
2			103.9	4.8	15			SM	Silty SAND (SM) - yellow brown, moist, fine to coarse grained sand	easy auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and Perma Patch.	
4										
5										
6										
7										
8										
9										



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Project: Turlock Road

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Location: Turlock, CA

Project No.: G23000018

Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-15

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 4"	
2			102.8	4.7				SM	Silty SAND (SM) - yellow brown, moist, fine to coarse grained sand	easy auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and Perma Patch.	
4										
5										
6										
7										
8										
9										



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Location: Turlock, CA

Project No.: G23000018

Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-16

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 4"	
2			102.9	5.5	21			SM	Silty SAND (SM) - yellow brown, moist, fine to coarse grained sand	easy auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and Perma Patch.	
4										
5										
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7										
8										
9										



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Location: Turlock, CA

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Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-17

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 4"	easy - medium auger
2			107.5	6.3	39			SM	Silty SAND (SM) - yellow brown, moist, fine to coarse grained sand, trace clay	
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and Perma Patch.	
4										
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9										



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Project: Turlock Road

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Location: Turlock, CA

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Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-18

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 4"	
2			111.9	7.7				SM	Silty SAND (SM) - yellow brown, moist, fine to coarse grained sand	easy auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and Perma Patch.	
4										
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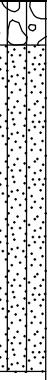
Location: Turlock, CA

Project No.: G23000018

Logged By: A. Sizemore

Checked By: N. Popenoe

Boring: B-19

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 4" Aggregate Base - 2"	
2			96.5	4.7				SM	Silty SAND (SM) - light brownish gray, moist, fine to medium grained sand, moderately cemented  ... weakly cemented	medium auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
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Project: Turlock Road

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Location: Turlock, CA

Project No.: G23000018

Logged By: A. Bravo

Checked By: N. Popenoe

Boring: B-21

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 9"	
2								SM	Silty SAND(SM) - olive brown, moist, fine grained sand, trace gravel, fine to coarse angular/subangular  ... no trace gravel	
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
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Project: Turlock Road

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Location: Turlock, CA

Project No.: G23000018

Logged By: A. Bravo

Checked By: N. Popenoe

Boring: B-22

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 6"	
2			104.9	2.8	27			SM	Silty SAND(SM) - olive brown, moist, fine grained sand, trace fine to coarse subrounded gravel  ... no trace gravel	
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
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7										
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Location: Turlock, CA

Project No.: G23000018

Logged By: A. Bravo

Checked By: N. Popenoe

Boring: B-23

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
0										
1									Asphalt - 2" Aggregate Base - 9"	
2			109.2	5.1				SM	Silty SAND(SM) - olive brown, moist, fine grained sand, trace fine to coarse subrounded gravel  ... no trace gravel	
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
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Project: Turlock Road

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Location: Turlock, CA

Project No.: G23000018

Logged By: A. Bravo

Checked By: N. Popenoe

Boring: B-24

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 2.38"	
2			110.1	4.0	15			SM	Silty SAND(SM) - olive brown, moist, fine grained sand, trace fine to coarse subrounded gravel  ... trace fine angular gravel	
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
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7										
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Location: Turlock, CA

Project No.: G23000018

Logged By: A. Bravo

Checked By: N. Popenoe

Boring: B-25

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 2.5"	
2									Silty SAND(SM) - yellowish brown, moist, fine grained sand, trace subrounded gravel	
3									... no trace gravel	
4									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
5										
6										
7										
8										
9										



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Location: Turlock, CA

Project No.: G23000018

Logged By: A. Bravo

Checked By: N. Popenoe

Boring: B-26

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									<b>Asphalt - 4.5"</b>	
2			108.8	7.1	38			SM	<b>Silty SAND(SM)</b> - olive brown, moist, fine grained sand, trace subrounded gravel, fine to coarse  ... no trace gravel	
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
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6										
7										
8										
9										



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Project: Turlock Road

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Location: Turlock, CA

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Logged By: A. Bravo

Checked By: N. Popenoe

Boring: B-27

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 4.3"	
2			100.6	3.6	32			SM	Silty SAND(SM) - yellowish brown, moist, fine grained sand, fine to medium subangular gravel  ... trace fine to medium angular gravel	
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
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7										
8										
9										



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Location: Turlock, CA

Project No.: G23000018

Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-28

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 4"	
2				94.2	4.1			SM	Silty SAND (SM) - brown, moist, fine to coarse grained sand	easy auger, sample disturbed
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
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Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-29

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 2.5"	
2			104.3	3.3	19			SM	Silty SAND (SM) - brown, moist, fine to coarse grained sand	easy auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
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6										
7										
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9										



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Location: Turlock, CA

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Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-30

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 4.5"	
2			106.0	6.6				SM	Silty SAND (SM) - brown, moist, fine to medium grained sand	easy auger
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
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Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-31

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									<b>Asphalt - 4.5"</b>	
2				98.9	14.2	46		SM	<b>Silty SAND (SM)</b> - brown, moist, fine to medium grained sand	
3								ML	<b>Sandy SILT (ML)</b> - gray brown, moist, fine to medium grained sand, moderately - strongly cemented	
4									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
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Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-32

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 4.5"	
2			108.2	5.0				SM	Silty SAND (SM) - brown, moist, fine to coarse grained sand	
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
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Logged By: J. Leu

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Boring: B-33

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 3"	
									Aggregate Base - 8"	
1								SM	Silty SAND (SM) - brown, moist, fine to medium grained sand	
2			103.6	8.3	40					
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
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6										
7										
8										
9										



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Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-34

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 3"	
2			107.4	6.9				SM	Aggregate Base - 1.5" Silty SAND (SM) - brown, moist, fine to coarse grained sand	
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
5										
6										
7										
8										
9										



BSK Associates  
691 N Laverne Ave, # 101  
Fresno, CA 93727  
Telephone: (559) 497-2888

Project: Turlock Road

Page 1 of 1

Location: Turlock, CA

Project No.: G23000018

Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-35

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 3"	
									Aggregate Base - 8"	
1									Silty SAND (SM) - brown, moist, fine to coarse grained sand	easy auger
2				106.4	5.5			SM		
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
5										
6										
7										
8										
9										



BSK Associates  
691 N Laverne Ave, # 101  
Fresno, CA 93727  
Telephone: (559) 497-2888

Project: Turlock Road

Page 1 of 1

Location: Turlock, CA

Project No.: G23000018

Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-36

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Asphalt - 2.5" Aggregate Base - 8"	
2			117.1	13.0	41			SM	Silty SAND (SM) - brown, moist, fine to coarse grained sand	
3									Boring terminated at approximately 3 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings and capped with Perma Patch.	
4										
5										
6										
7										
8										
9										



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691 N Laverne Ave, # 101  
Fresno, CA 93727  
Telephone: (559) 497-2888

Project: Turlock Road

Page 1 of 1

Location: Turlock, CA

Project No.: G23000018

Logged By: J. Leu

Checked By: N. Popenoe

Boring: B-37

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1									Silty SAND with Gravel (SM) - brown, moist, fine to coarse grained sand	
2									Silty SAND (SM) - yellow brown, moist, fine to coarse grained sand	
3										
4									Boring terminated at approximately 4 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings.	
5										
6										
7										
8										
9										

## **APPENDIX B**

## **LABORATORY TESTING RESULTS**



## APPENDIX B

### LABORATORY TESTING

#### **Moisture-Density Tests**

The field moisture content, as a percentage of dry weight of the soils, was determined by weighing the samples before and after oven drying in accordance with ASTM D2216 test procedures. Dry densities, in pounds per cubic foot, were also determined for undisturbed core samples in general accordance with ASTM D2937 test procedures. Test results are presented on the boring logs in Appendix A.

#### **R-Value Test**

The Resistance-Value of six (6) samples of the surficial soil were tested in accordance with California Department of Transportation's Test Method CT 301. The results of the R-Value tests are presented on Figures B-1 through B-6.

#### **Cement Treated Soil**

A composite sample was mixed 3, 5, and 7 percent cement by dry weight, mixed with optimum plus 3 to 4 percent water, compacted to 95 percent of maximum dry density, oven cured in low temperature oven (between 40.6 and 46 degrees Celsius) for 7 days, and unconfined compression tested in general accordance with Caltrans Test Method 373. The results are presented on Figure B-7, B-8, and B-9.

#### **Maximum Dry Density and Optimum Moisture Content**

A Modified proctor test was performed to determine the maximum dry density and optimum moisture content of a combination of selected soil samples. The sample was compacted under a standardized compaction effort at varying moisture contents in general accordance with ASTM D1557. The results are presented on Figure B-10.

#### **Sand Equivalent**

Sand equivalent testing was performed on three (3) samples and tested in accordance with ASTM D2419. The results are presented on Figures B-11 through B-16.

#### **Expansion Index Test**

One (1) Expansion Index Test was performed on bulk soil samples in the Site area. The tests were performed in general accordance with UBC Standard 18-2/ASTM D4829. The tests results are presented on Figure B-17.



### **Soil Corrosivity**

Two (2) Corrosivity Evaluations were performed on bulk soil samples obtained at the time of drilling in the area of planned construction. The soil was evaluated for pH (CT 643), sulfate ion concentration (CT 417), and chloride ion concentration (CT 422). The test results are presented in Table B-1.

<b>Table B-1: Summary of Corrosion Test Results</b>				
<b>Sample Location</b>	<b>pH</b>	<b>Sulfate, ppm</b>	<b>Chloride, ppm</b>	<b>Minimum Resistivity, Ohm-cm</b>
B-4 @ 0-3 feet bgs	7.3	Not Detected	Not Detected	21,350
B-31 @ 0-3 feet bgs	9.0	26	3.0	4,330





# R-Value

FIGURE B-1

**Fresno**  
691 N Laverne Avenue, Suite 101  
Fresno, CA 93727  
Phone: 559-497-2880

**Client:**

Provost & Pritchard Consulting Group  
455 W. Fir Ave.  
Clovis, CA 93611

**Project:**

G23000018  
City of Turlock Road Rehab Project  
Turlock, CA

**Sample Details**

**Technician:** Leu, Jacob

**Sample Location:** B-1 @ 0-3'

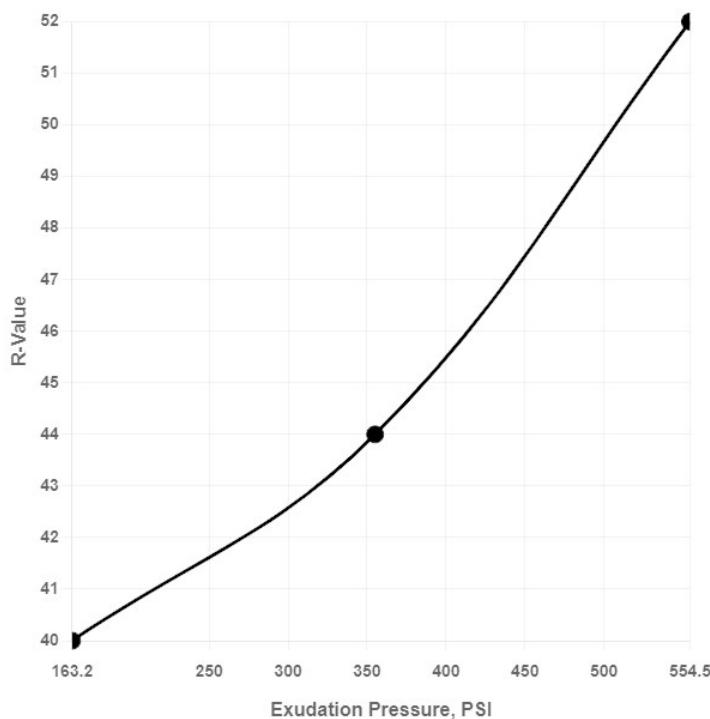
**Lab:** BSK Livermore

**Sample Date:** 08/26/2024

**Sample Number:** 34742

**Test Results**  
**ASTM D2844**

**Sample Description:** Sand



Sample Number	1	2	3
Exudation Pressure, lb.	6965	4460	2050
Exudation Pressure, PSI	554.5	355.1	163.2
Expansion, *0.0001 IN			
Expansion Pressure, PSF	0	0	0
Stabilometer pH @ 2000lbs	45	58	64
Displacement	5.94	5.62	5.53
Resistance Value R	52	44	40
R Value Corrected for Height	52	44	40
% Moisture at Test	10.0	10.8	12.1
Dry Density at Test, PCF	128.5	129.0	123.6

**R-Value @ 300 Exudation Pressure: 43**

**Test Notes:** B-1 @ 0-3'

**Test Completed By:** Trevor Hamilton

**Approved By:** Randy Cortez

**Test Completed Date:** 09/18/2024

**Approved Date:** 09/19/2024



# R-Value

FIGURE B-2

**Fresno**  
691 N Laverne Avenue, Suite 101  
Fresno, CA 93727  
Phone: 559-497-2880

**Client:**

Provost & Pritchard Consulting Group  
455 W. Fir Ave.  
Clovis, CA 93611

**Project:**

G23000018  
City of Turlock Road Rehab Project  
Turlock, CA

**Sample Details**

**Technician:** Leu, Jacob

**Sample Location:** B-5 @ 0-3'

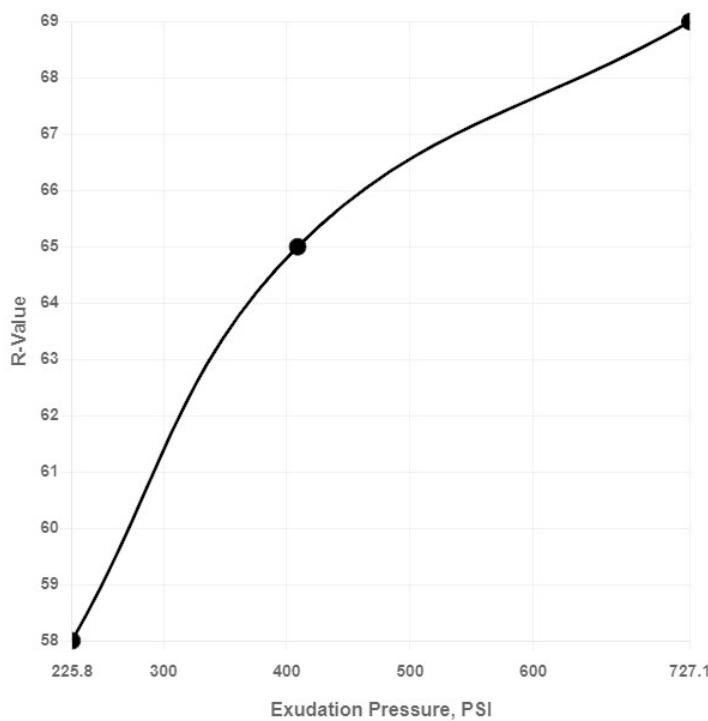
**Lab:** BSK Livermore

**Sample Date:** 08/26/2024

**Sample Number:** 34743

**Test Results**  
**ASTM D2844**

**Sample Description:** Sand



Sample Number	1	2	3
Exudation Pressure, lb.	9133	5134	2836
Exudation Pressure, PSI	727.1	408.8	225.8
Expansion, *0.0001 IN			
Expansion Pressure, PSF	0	0	0
Stabilometer pH @ 2000lbs	27	32	38
Displacement	5.62	5.44	5.78
Resistance Value R	69	65	58
R Value Corrected for Height	69	65	58
% Moisture at Test	8.4	9.2	10.0
Dry Density at Test, PCF	126.0	127.4	124.5

**R-Value @ 300 Exudation Pressure: 62**

**Test Notes:** B-5 @ 0-3'

**Test Completed By:** Trevor Hamilton

**Approved By:** Randy Cortez

**Test Completed Date:** 09/18/2024

**Approved Date:** 09/19/2024



# R-Value

FIGURE B-3

**Fresno**  
691 N Laverne Avenue, Suite 101  
Fresno, CA 93727  
Phone: 559-497-2880

**Client:**

Provost & Pritchard Consulting Group  
455 W. Fir Ave.  
Clovis, CA 93611

**Project:**

G23000018  
City of Turlock Road Rehab Project  
Turlock, CA

**Sample Details**

**Technician:** Leu, Jacob

**Sample Location:** B-17 @ 0-3'

**Lab:** BSK Livermore

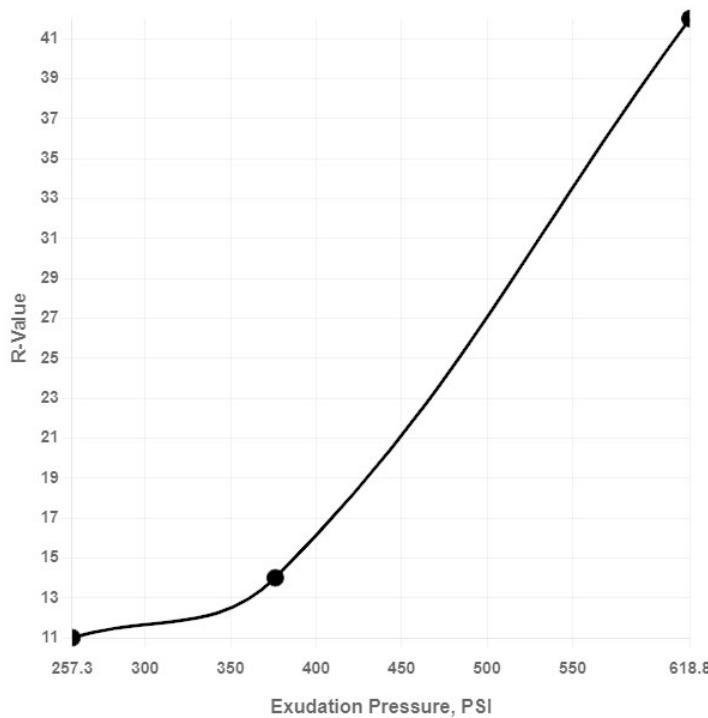
**Sample Date:** 08/26/2024

**Sample Number:** 34744

**Test Results**

ASTM D2844

**Sample Description:** Sandy Clay



Sample Number	1	2	3
Exudation Pressure, lb.	7772	4725	3232
Exudation Pressure, PSI	618.8	376.2	257.3
Expansion, *0.0001 IN			
Expansion Pressure, PSF	0	0	0
Stabilometer pH @ 2000lbs	80	130	137
Displacement	3.45	3.50	3.55
Resistance Value R	42	14	11
R Value Corrected for Height	42	14	11
% Moisture at Test	7.7	8.5	9.3
Dry Density at Test, PCF	132.4	133.4	128.6

**R-Value @ 300 Exudation Pressure: 11**

**Test Notes:** B-17 @ 0-3'

**Test Completed By:** Trevor Hamilton

**Approved By:** Randy Cortez

**Test Completed Date:** 09/18/2024

**Approved Date:** 09/19/2024



# R-Value

FIGURE B-4

**Fresno**  
691 N Laverne Avenue, Suite 101  
Fresno, CA 93727  
Phone: 559-497-2880

## Client:

Provost & Pritchard Consulting Group  
455 W. Fir Ave.  
Clovis, CA 93611

## Project:

G23000018  
City of Turlock Road Rehab Project  
Turlock, CA

## Sample Details

**Technician:** Leu, Jacob

**Sample Location:** B-24 @ 0-3'

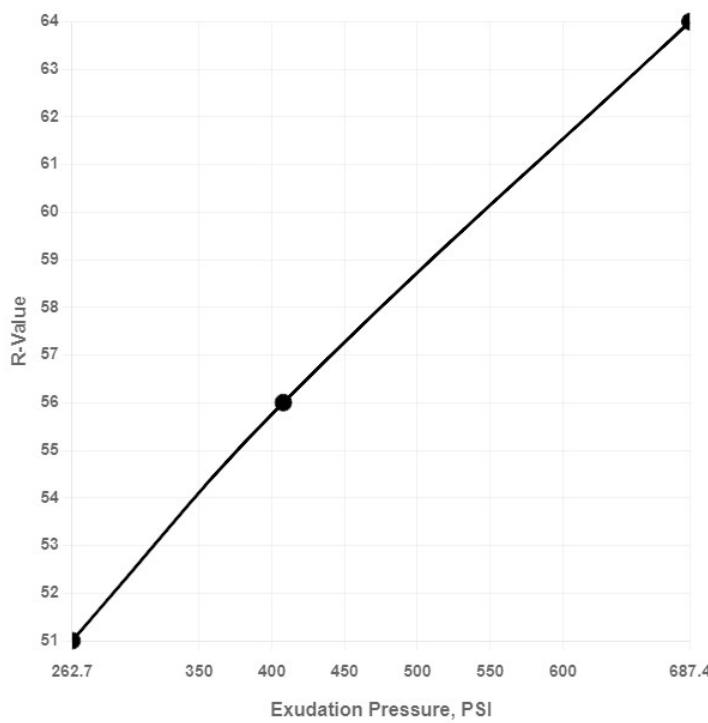
**Lab:** BSK Livermore

**Sample Date:** 08/26/2024

**Sample Number:** 34745

## Test Results ASTM D2844

**Sample Description:** Sand



Sample Number	1	2	3
Exudation Pressure, lb.	8634	5123	3300
Exudation Pressure, PSI	687.4	407.9	262.7
Expansion, *0.0001 IN			
Expansion Pressure, PSF	0	0	0
Stabilometer pH @ 2000lbs	35	45	52
Displacement	5.05	5.10	5.00
Resistance Value R	64	56	51
R Value Corrected for Height	64	56	51
% Moisture at Test	9.4	10.2	11.1
Dry Density at Test, PCF	130.4	128.4	125.2

**R-Value @ 300 Exudation Pressure: 53**

**Test Notes:** B-24 @ 0-3'

**Test Completed By:** Trevor Hamilton

**Approved By:** Randy Cortez

**Test Completed Date:** 09/18/2024

**Approved Date:** 09/19/2024



# R-Value

FIGURE B-5

**Fresno**  
691 N Laverne Avenue, Suite 101  
Fresno, CA 93727  
Phone: 559-497-2880

**Client:**

Provost & Pritchard Consulting Group  
455 W. Fir Ave.  
Clovis, CA 93611

**Project:**

G23000018  
City of Turlock Road Rehab Project  
Turlock, CA

**Sample Details**

**Technician:** Leu, Jacob

**Sample Date:** 08/26/2024

**Sample Location:** B-29 @ 0-3'

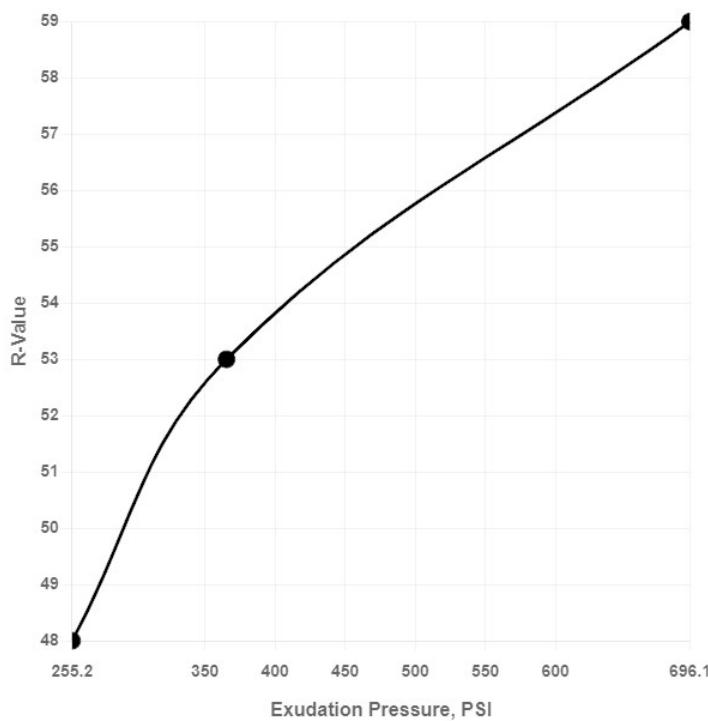
**Sample Number:** 34746

**Lab:** BSK Livermore

**Test Results**

ASTM D2844

**Sample Description:** Sand



Sample Number	1	2	3
Exudation Pressure, lb.	8743	4589	3205
Exudation Pressure, PSI	696.1	365.4	255.2
Expansion, *0.0001 IN			
Expansion Pressure, PSF	0	0	0
Stabilometer pH @ 2000lbs	39	47	54
Displacement	5.44	5.41	5.25
Resistance Value R	59	53	48
R Value Corrected for Height	59	53	48
% Moisture at Test	10.3	11.1	12.0
Dry Density at Test, PCF	125.1	121.8	118.6

**R-Value @ 300 Exudation Pressure: 52**

**Test Notes:** B-29 @ 0-3'

**Test Completed By:** Trevor Hamilton

**Test Completed Date:** 09/18/2024

**Approved By:** Randy Cortez

**Approved Date:** 09/19/2024



# R-Value

FIGURE B-6

**Fresno**  
691 N Laverne Avenue, Suite 101  
Fresno, CA 93727  
Phone: 559-497-2880

**Client:**

Provost & Pritchard Consulting Group  
455 W. Fir Ave.  
Clovis, CA 93611

**Project:**

G23000018  
City of Turlock Road Rehab Project  
Turlock, CA

**Sample Details**

**Technician:** Leu, Jacob

**Sample Location:** B - 31 @ 0 - 3'

**Lab:** BSK Livermore

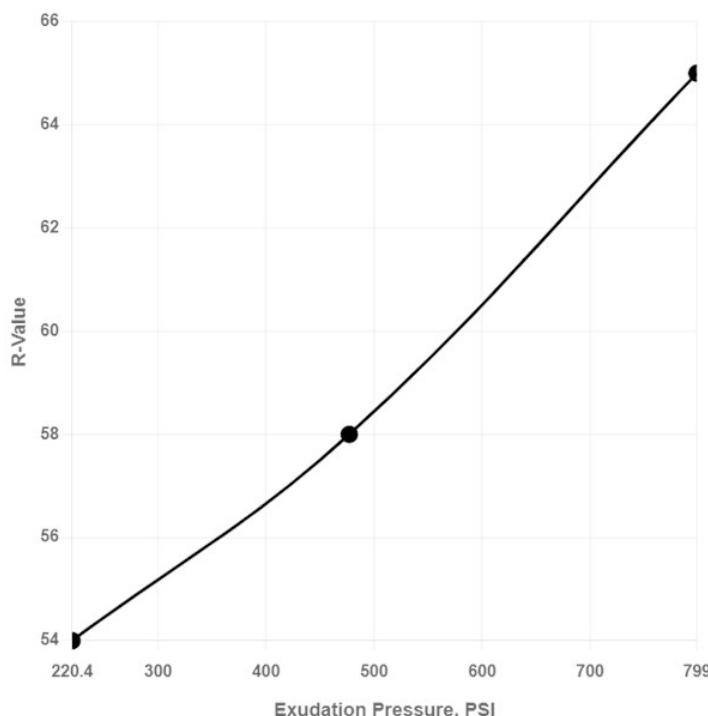
**Sample Date:** 08/26/2024

**Sample Number:** 34525

**Test Results**

**CT 301**

**Sample Description:** Brown sand



Sample Number	1	2	3
Exudation Pressure, lb.	10036	5993	2768
Exudation Pressure, PSI	799.0	477.1	220.4
Expansion, *0.0001 IN			
Expansion Pressure, PSF	0	0	0
Stabilometer pH @ 2000lbs	32	41	44
Displacement	5.40	5.33	5.56
Resistance Value R	65	58	54
R Value Corrected for Height	65	58	54
% Moisture at Test	10.1	10.6	11.0
Dry Density at Test, PCF	117.6	121.7	118.2

**R-Value @ 300 Exudation Pressure: 55**

**Test Completed By:** Trevor Hamilton

**Approved By:** Randy Cortez

**Test Completed Date:** 09/20/2024

**Approved Date:** 09/20/2024

**FIGURE B-7**

**Contact:** T. Gorham  
**Company:** BSK Associates  
**Address:** 691 N Laverne Ave, Suite 101  
 Fresno, CA 93653

**BSK Project No.:** G23000018  
**Report Date:** 9/30/2024  
**Specimen ID No.:** N/A

**Subject:** **Soil-Cement Compression Testing**  
**Project:** Turlock Roads

**Location of Work:** Turlock, CA  
**Sample Location:** B - 32,33,34 & 35 @ 0 - 3'  
**Date Sampled:** 8/26/2024  
**Date of Delivery:** 1/1/1900  
**# of Specimens:** 1

**7 Day Required Strength, (psi):**

Sample	Mixed/ Compacted	Age (days)	Compressive Strength (psi)	Max. Load, (lbs)	Date of Compression Testing	Diameter or Dimension, (in)	Area in inches (squared)	Break Type
1	09/02/24	7	580	7,335	9/9/2024	4.00	12.57	1
2	09/02/24	7	560	7,065	9/9/2024	4.00	12.57	1
3	09/02/24	7	620	7,745	9/9/2024	4.00	12.57	1
<b>7 Day Average, psi</b>			<b>590</b>					

Time Sampled:	
Cement Content:	3%

TYPE 1 = CONE

TYPE 3 = COLUMNAR

TYPE 5 = SIDE FRACTURES AT TOP OR BOTTOM

TYPE 2 = CONE/SPLIT

TYPE 4 = SHEAR

TYPE 6 = SIMILAR TO TYPE 5 BUT END OF CYLINDER IS POINTED

**Soil-Cement specimens were fabricated and cured in accordance with ASTM D559 & D1632, respectively.**  
**Soil-Cement specimens were tested in accordance with ASTM D-1633.**

**FIGURE B-8**  
**BSK Project No.:** G23000018  
**Report Date:** 9/30/2024  
**Specimen ID No.:** N/A

**Contact:** T. Gorham  
**Company:** BSK Associates  
**Address:** 691 N Laverne Ave, Suite 101  
 Fresno, CA 93653

**Subject:** **Soil-Cement Compression Testing**  
**Project:** Turlock Roads

**Location of Work:** Turlock, CA  
**Sample Location:** B - 32,33,34 & 35 @ 0 - 3'  
**Date Sampled:** 8/26/2024  
**Date of Delivery:** 1/1/1900  
**# of Specimens:** 1

**7 Day Required Strength, (psi):**

Sample	Mixed/ Compacted	Age (days)	Compressive Strength (psi)	Max. Load, (lbs)	Date of Compression Testing	Diameter or Dimension, (in)	Area in inches (squared)	Break Type
1	09/02/24	7	910	11,445	9/9/2024	4.00	12.57	1
2	09/02/24	7	880	11,075	9/9/2024	4.00	12.57	1
3	09/02/24	7	880	11,095	9/9/2024	4.00	12.57	1
<b>7 Day Average, psi</b>			<b>890</b>					

Time Sampled:	
Cement Content:	4%

TYPE 1 = CONE

TYPE 3 = COLUMNAR

TYPE 5 = SIDE FRACTURES AT TOP OR BOTTOM

TYPE 2 = CONE/SPLIT

TYPE 4 = SHEAR

TYPE 6 = SIMILAR TO TYPE 5 BUT END OF CYLINDER IS POINTED

**Soil-Cement specimens were fabricated and cured in accordance with ASTM D559 & D1632, respectively.**

**Soil-Cement specimens were tested in accordance with ASTM D-1633.**

**FIGURE B-9**  
**Contact:** T. Gorham  
**Company:** BSK Associates  
**Address:** 691 N Laverne Ave, Suite 101  
**BSK Project No.:** G23000018  
**Report Date:** 9/30/2024  
**Specimen ID No.:** N/A

**Subject:** Soil-Cement Compression Testing  
**Project:** Turlock Roads

**Location of Work:** Turlock, CA  
**Sample Location:** B - 32,33,34 & 35 @ 0 - 3'  
**Date Sampled:** 8/26/2024  
**Date of Delivery:** 1/1/1900  
**# of Specimens:** 1

**7 Day Required Strength, (psi):**

Sample	Mixed/ Compacted	Age (days)	Compressive Strength (psi)	Max. Load, (lbs)	Date of Compression Testing	Diameter or Dimension, (in)	Area in inches (squared)	Break Type
1	09/02/24	7	980	12,295	9/9/2024	4.00	12.57	1
2	09/02/24	7	1,000	12,520	9/9/2024	4.00	12.57	1
3	09/02/24	7	950	11,965	9/9/2024	4.00	12.57	1
<b>7 Day Average, psi</b>			<b>980</b>					

Time Sampled:	
Cement Content:	5%

TYPE 1 = CONE

TYPE 3 = COLUMNAR

TYPE 5 = SIDE FRACTURES AT TOP OR BOTTOM

TYPE 2 = CONE/SPLIT

TYPE 4 = SHEAR

TYPE 6 = SIMILAR TO TYPE 5 BUT END OF CYLINDER IS POINTED

**Soil-Cement specimens were fabricated and cured in accordance with ASTM D559 & D1632, respectively.**

**Soil-Cement specimens were tested in accordance with ASTM D-1633.**



# Laboratory Compaction Curve

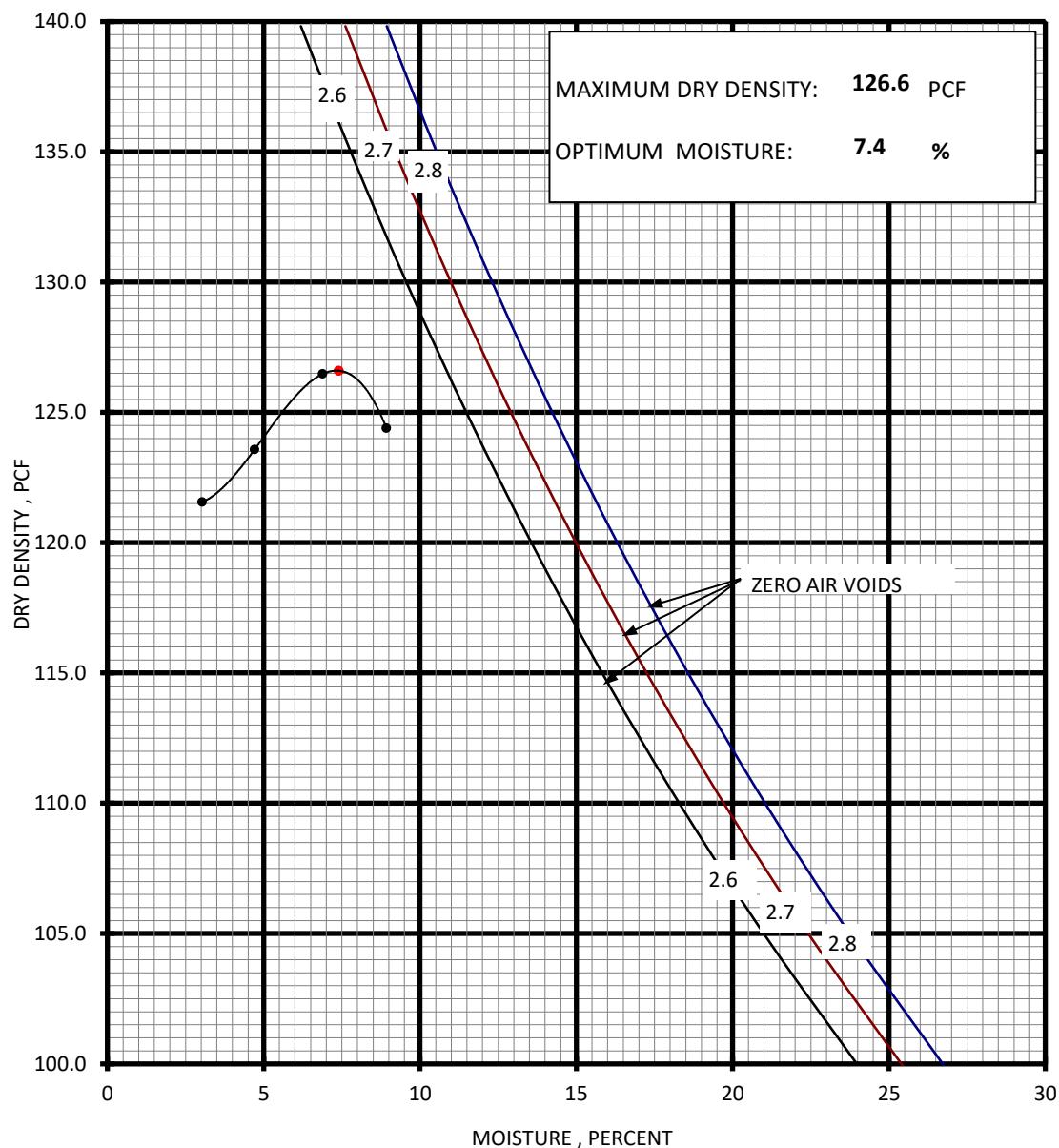
## ASTM D-1557

## FIGURE B-10

691 N. Laverne, Suite 101  
Fresno, CA 93727  
Ph: (559) 497-2868

## **PROCEDURE USED**

### Procedure A      **X**      Procedure B      Procedure C





**Fresno**  
691 N Laverne Avenue, Suite 101  
Fresno, CA 93727  
Phone: 559-497-2880

# Sand Equivalent Test

FIGURE B-11

**Client:**

Provost & Pritchard Consulting Group  
455 W. Fir Ave.  
Clovis, CA 93611

**Project:**

G23000018  
City of Turlock Road Rehab Project  
Turlock, CA

**Sample Details**

**Technician:** Leu, Jacob

**Sample Location:** B-2 @ 0-3'

**Sample Date:** 08/26/2024

**Sample Number:** 34675

**Test Results**

**AASHTO T176**

Trial Number	1	2	3
Clay Reading	11.1	11.2	11.0
Sand Reading	2.7	2.7	2.5
Sand Equivalent	25	25	23
Average Sand Equivalent		25	

**Test Notes:** B-2 @ 0-3'

**Test Completed By:** Rene Gutierrez

**Approved By:** Randy Cortez

**Test Completed Date:** 09/11/2024

**Approved Date:** 09/13/2024



**Fresno**  
691 N Laverne Avenue, Suite 101  
Fresno, CA 93727  
Phone: 559-497-2880

## Sand Equivalent Test

FIGURE B-12

**Client:**

Provost & Pritchard Consulting Group  
455 W. Fir Ave.  
Clovis, CA 93611

**Project:**

G23000018  
City of Turlock Road Rehab Project  
Turlock, CA

**Sample Details**

**Technician:** Leu, Jacob

**Sample Location:** B - 7 @ 0 - 3'

**Sample Date:** 08/26/2024

**Sample Number:** 34531

**Test Results**

**AASHTO T176**

Trial Number	1	2	3
Clay Reading	10.6	10.7	10.5
Sand Reading	2.7	2.8	2.6
Sand Equivalent	26	27	25
Average Sand Equivalent		26	

**Test Notes:** B-7 @ 0-3'

**Test Completed By:** Rene Gutierrez

**Approved By:** Randy Cortez

**Test Completed Date:** 09/06/2024

**Approved Date:** 09/13/2024



**Fresno**  
691 N Laverne Avenue, Suite 101  
Fresno, CA 93727  
Phone: 559-497-2880

## Sand Equivalent Test

FIGURE B-13

**Client:**

Provost & Pritchard Consulting Group  
455 W. Fir Ave.  
Clovis, CA 93611

**Project:**

G23000018  
City of Turlock Road Rehab Project  
Turlock, CA

**Sample Details**

**Technician:** Leu, Jacob

**Sample Location:** B - 9 @ 1 - 3'

**Sample Date:** 08/26/2024

**Sample Number:** 34534

**Test Results**  
**AASHTO T176**

Trial Number	1	2	3
Clay Reading	9.9	9.9	9.2
Sand Reading	3.1	3.0	2.7
Sand Equivalent	32	31	30
Average Sand Equivalent	31		

**Test Notes:** B-9 @ 1'-3'

**Test Completed By:** Rene Gutierrez

**Approved By:** Randy Cortez

**Test Completed Date:** 09/06/2024

**Approved Date:** 09/13/2024



**Fresno**  
691 N Laverne Avenue, Suite 101  
Fresno, CA 93727  
Phone: 559-497-2880

## Sand Equivalent Test

FIGURE B-14

**Client:**

Provost & Pritchard Consulting Group  
455 W. Fir Ave.  
Clovis, CA 93611

**Project:**

G23000018  
City of Turlock Road Rehab Project  
Turlock, CA

**Sample Details**

**Technician:** Leu, Jacob

**Sample Location:** B - 21 @ 0 - 3'

**Sample Date:** 08/26/2024

**Sample Number:** 34605

**Test Results**

**AASHTO T176**

Trial Number	1	2	3
Clay Reading	13.4	13.1	13.0
Sand Reading	2.5	2.4	2.2
Sand Equivalent	19	19	17
Average Sand Equivalent	19		

**Test Notes:** B-21 @ 0-3'

**Test Completed By:** Rene Gutierrez

**Approved By:** Randy Cortez

**Test Completed Date:** 09/09/2024

**Approved Date:** 09/13/2024



**Fresno**  
691 N Laverne Avenue, Suite 101  
Fresno, CA 93727  
Phone: 559-497-2880

## Sand Equivalent Test

FIGURE B-15

**Client:**

Provost & Pritchard Consulting Group  
455 W. Fir Ave.  
Clovis, CA 93611

**Project:**

G23000018  
City of Turlock Road Rehab Project  
Turlock, CA

**Sample Details**

**Technician:** Leu, Jacob

**Sample Location:** B-23 @ 0-3'

**Sample Date:** 08/27/2024

**Sample Number:** 34673

**Test Results**  
**AASHTO T176**

Trial Number	1	2	3
Clay Reading	11.3	10.9	10.8
Sand Reading	2.8	2.8	2.6
Sand Equivalent	25	26	25
Average Sand Equivalent		26	

**Test Notes:** B-23 @ 0-3'

**Test Completed By:** Rene Gutierrez

**Approved By:** Randy Cortez

**Test Completed Date:** 09/09/2024

**Approved Date:** 09/13/2024



**Fresno**  
691 N Laverne Avenue, Suite 101  
Fresno, CA 93727  
Phone: 559-497-2880

## Sand Equivalent Test

FIGURE B-16

**Client:**

Provost & Pritchard Consulting Group  
455 W. Fir Ave.  
Clovis, CA 93611

**Project:**

G23000018  
City of Turlock Road Rehab Project  
Turlock, CA

**Sample Details**

**Technician:** Leu, Jacob

**Sample Location:** B-30 @ 0-3'

**Sample Date:** 08/28/2024

**Sample Number:** 34674

**Test Results**  
**AASHTO T176**

Trial Number	1	2	3
Clay Reading	9.2	9.7	9.2
Sand Reading	1.9	1.9	1.8
Sand Equivalent	21	20	20
Average Sand Equivalent	21		

**Test Notes:** B-30 @ 0-3'

**Test Completed By:** Rene Gutierrez

**Approved By:** Randy Cortez

**Test Completed Date:** 09/12/2024

**Approved Date:** 09/13/2024



**Expansion Index of Soils**  
ASTM D 4829 / UBC Standard 18-2

**FIGURE B-17**

691 N. Laverne, Suite 101  
Fresno, CA 93727  
Ph: (559) 497-2868

Project Name: Turloc Roads Report Date: 9/30/2024  
Project Number: G23 - 000 - 018 Sample Date: 8/28/2024  
Lab Tracking ID: N/A Test Date: 9/5/2024  
Sample Location: B - 36 @ 0 - 3'  
Sample Source: Bulk  
Sampled By: J.Lue Tested By: D.Messfin Reviewed By: N. Popenoe

**TEST DATA**

<b>INITIAL SET-UP DATA</b>			
Sample + Tare Weight (g)	791.9		
Tare Weight (g)	368.6	<b>FINAL TAKE-DOWN DATA</b>	
Wet Weight + Tare	126.7	Wet Weight + Tare	1471.2
Dry Weight + Tare	118.8	Dry Weight + Tare	1420.4
Tare Weight (g)	20.7	Tare Weight (g)	1030.5
Moisture Content (%)	8.1%	Moisture Content (%)	13.0%
Initial Volume (ft <sup>3</sup> )	0.007272	Final Volume (ft <sup>3</sup> )	0.007272
Remolded Wet Density (pcf)	128.3	Final Wet Density (pcf)	134.2
Remolded Dry Density (pcf)	118.8	Final Dry Density (pcf)	118.8
<b>Degree of Saturation</b>	<b>52</b>	<b>Degree of Saturation</b>	<b>84</b>

**EXPANSION READINGS**

Initial Gauge Reading (in)	0.3014
Final Gauge Reading (in)	0.3014
Expansion (in)	0
<b>Expansion Index</b>	<b>0</b>

**Classification of Expansive Soil**

EI	Potential Expansion
0 - 20	Very Low
21 - 50	Low
51 - 90	Medium
91 - 130	High
>130	Very High

## APPENDIX B: PROJECT VICINITY MAPS FOR COORDINATION

zzzzz



## CITY OF TURLOCK

NO SCALE

# CITY OF TURLOCK

## CONSTRUCTION PLANS FOR

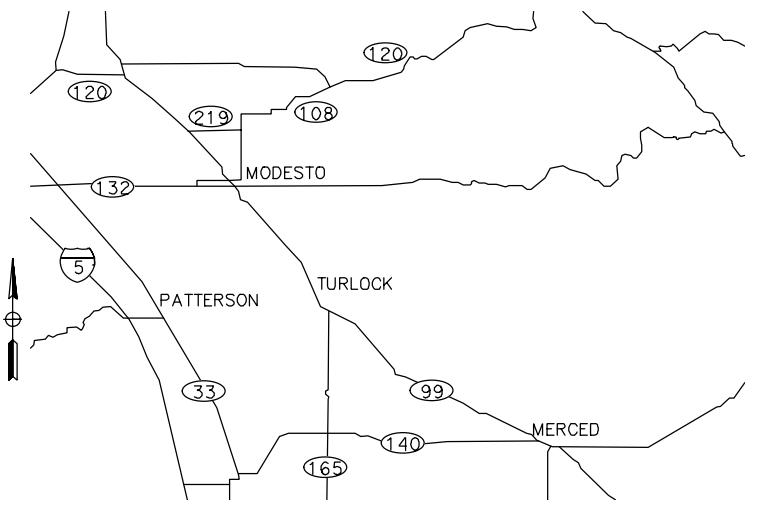
### ROADS PROGRAM CAPITAL IMPROVEMENT PROJECT

CITY PROJECT NO. 23-031

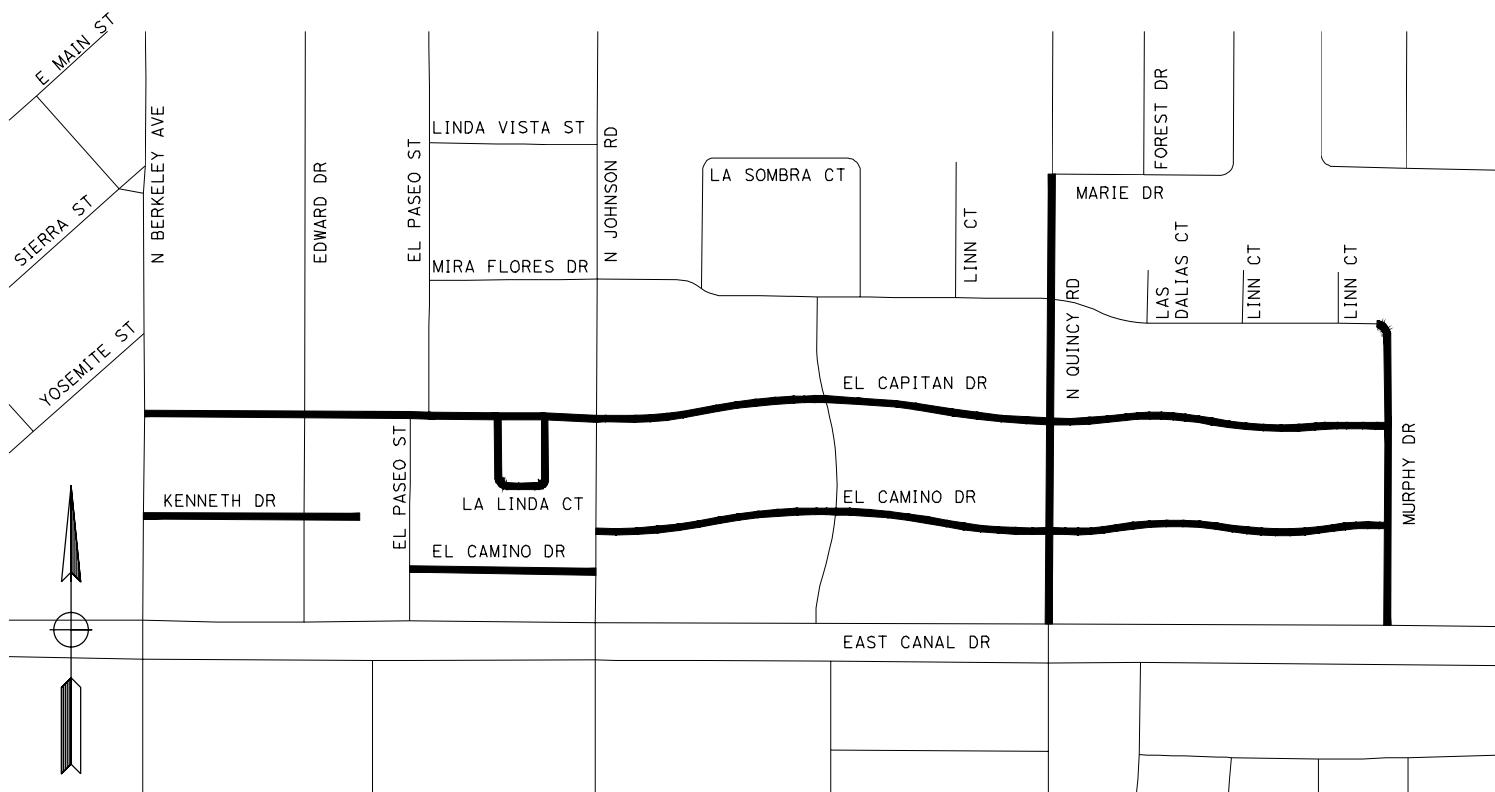
## PLAN PACKAGE 2

EL CAPITAN DR: N BERKELEY AVE TO MURPHY DR  
 KENNETH DR: N BERKELEY AVE TO EAST END  
 EL CAMINO DR: EL PASEO DR TO N JOHNSON RD  
 N JOHNSON RD TO MURPHY DR  
 LA LINDA CT: EL CAPITAN DR TO EL CAPITAN DR  
 N QUINCY RD: E CANAL DR TO MARIE DR  
 MURPHY DR: E CANAL DR TO MIRA FLORES DR

SUPPLEMENTED BY CALTRANS STANDARD PLANS  
 AND STANDARD SPECIFICATIONS DATED 2023  
 & CITY OF TURLOCK ENGINEERING DESIGN  
 STANDARD SPECIFICATIONS AND DRAWINGS DATED  
 2016.



**CALL BEFORE YOU DIG**  
 THE CONTRACTOR SHALL CALL  
 "UNDERGROUND SERVICE ALERT" (USA)  
 AT 811 AT LEAST 2 WORKING DAYS  
 PRIOR TO PERFORMING ANY EXCAVATION



## PROJECT LOCATION MAP

## SHEET INDEX

SHEET	DRAWING	TITLE
1	T-1	TITLE SHEET
2-3	GN-1 TO GN-2	GENERAL NOTES
4	PC-1	PROJECT CONTROL
5	K-1	KEY MAP
6-7	X-1 TO X-2	TYPICAL SECTION
8-18	DM-1 TO DM-11	DEMOLITION PLANS
19-29	L-1 TO L-11	LAYOUTS
30-58	CD-1 TO CD-29	CONSTRUCTION DETAILS
59-83	G-1 TO G-25	GRADING PLANS
84-96	TH-1 TO TH-13	TRAFFIC HANDLING PLANS
97-107	SS-1 TO SS-11	SIGNING AND STRIPING

## CITY OF TURLOCK APPROVAL

WILLIAM D. MORRIS, P.E., P.L.S CITY ENGINEER PUBLIC WORKS DEPARTMENT	DATE
--	------

## UTILITY CONTACTS

UTILITY	CONTACT	PHONE
AT&T	JIM JELLEY	(209) 507-1689
CHARTER COMMUNICATIONS	MITCHELL RODRIQUEZ	(408) 612-7569
TID ELECTRICAL	DAVID PORATH	(209) 605-0945
TID IRRIGATION	TODD TROGLIN	(209) 535-1882
CITY OF TURLOCK ELECTRICAL	DOYLE PERRY	(209) 678-5823
CITY OF TURLOCK STORM AND SEWER	CARLOS GUERRERO	(209) 345-2169
CITY OF TURLOCK WATER	ORLANDO GUTIERREZ	(209) 740-3868
PG&E	TRENT MILLSAP	(209) 561-6070

DESIGNED BY: ANGEL P.  
 DRAWN BY: ANGEL P.  
 CHECKED BY: JON H.  
 SCALE: AS SHOWN  
 DATE: 4/2/2024  
 JOB NO.: 23-00109

NOTE:  
 ALL REFERENCES AND WRITTEN  
 DIMENSIONS SHALL SUPERCEDE ALL  
 SCALED DISTANCES AND SHALL BE  
 VERIFIED IN THE FIELD. ANY  
 DISCREPANCY SHALL BE BROUGHT TO  
 THE ATTENTION OF THE ENGINEER  
 PRIOR TO THE COMMENCEMENT OF WORK.



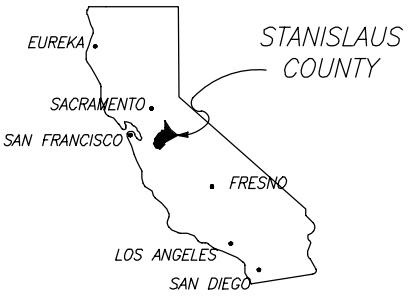
**MARK THOMAS**  
 701 UNIVERSITY AVENUE, SUITE 200  
 SACRAMENTO, CALIFORNIA 95825  
 (916) 381-9100 FAX:(916)381-9180  
 markthomas.com

CITY OF TURLOCK  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION  
 156 S. BROADWAY SUIT 150  
 (209) 668-5520

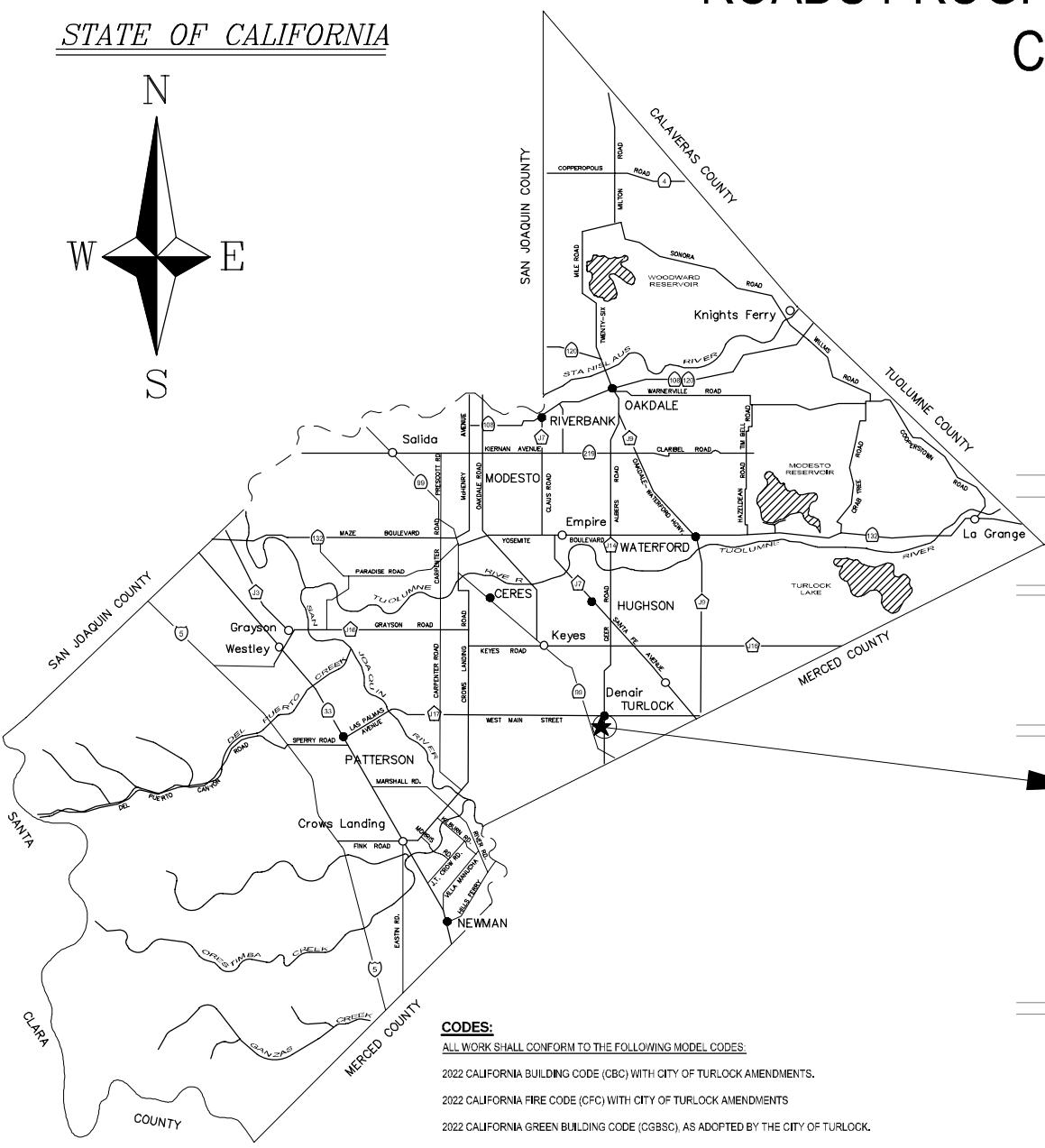
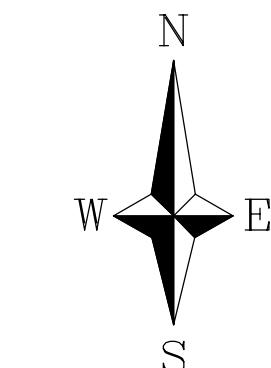


**CITY OF TURLOCK**  
**ROADS PROGRAM - CIP**  
**TITLE**

Sheet 1  
 of 107 Sheets  
**T - 1**



STATE OF CALIFORNIA



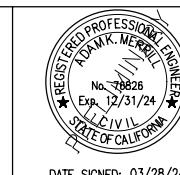
STANISLAUS COUNTY

NO SCALE



Know what's below.  
Call before you dig.

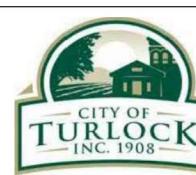
NOTE:  
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DIMENSIONS SHALL SUPERCEDE  
ALL SCALED DISTANCES AND  
SHALL BE VERIFIED IN THE  
FIELD. ANY DISCREPANCY  
SHALL BE BROUGHT TO THE  
ATTENTION OF THE ENGINEER  
PRIOR TO THE COMMENCEMENT  
OF WORK



DATE SIGNED: 03/28/24



3428 Brooksde Road  
Stockton, California 95219  
209-943-2021  
www.siegfriedeng.com



CITY OF TURLOCK  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
156 S. BROADWAY,  
SUITE 150  
(209) 668-5520

VERIFY SCALE	DRAWN BY: JR	DRAWING NO.
0	1"	01
REV. BY: ARM		
CH. BY: AKM		
DATE: 3/28/2024		
SCALE: SEE SHEET		
SEI PROJ NO: 22157		
SHEET:		
01 OF 49		

# CITY OF TURLOCK

## CONSTRUCTION PLANS FOR ROADS PROGRAM CAPITAL IMPROVEMENT PROJECT CITY PROJECT NO. 23-033

### SHEET INDEX

SHEET NO.	DESCRIPTION
01	COVER SHEET
02	GENERAL NOTES
03	KEY MAP & SURVEY CONTROL POINTS
04	TEMPORARY CONSTRUCTION FUNDING SIGN OVERALL PLAN
05	COLUMBIA AVENUE TYPICAL CROSS SECTIONS
06	FARR STREET TYPICAL CROSS SECTIONS
07	LANE AND S. BEECH TYPICAL CROSS SECTIONS
08	S. LAUREL ST TYPICAL CROSS SECTIONS
09	COLUMBIA AVENUE IMPROVEMENTS - STATION 1+00 TO 13+45.51
10	COLUMBIA AVENUE IMPROVEMENTS - STATION 13+45.51 TO END
11	FARR STREET IMPROVEMENTS
12	LANE STREET & S. BEECH STREET IMPROVEMENTS
13	S. LAUREL STREET IMPROVEMENTS
14	COLUMBIA AVENUE SIGNING & STRIPING - STATION 1+00 TO 13+45.51
15	COLUMBIA AVENUE SIGNING & STRIPING - STATION 13+45.51 TO END
16	FARR STREET SIGNING & STRIPING
17	LANE STREET & S. BEECH STREET SIGNING & STRIPING
18	S. LAUREL STREET SIGNING & STRIPING
19	CONSTRUCTION DETAILS I
20	CONSTRUCTION DETAILS II
21	CONSTRUCTION DETAILS III
22	COLUMBIA & FARR CURB RAMP DETAILS
23	COLUMBIA & S. BEECH CURB RAMP DETAILS
24	COLUMBIA & S. ORANGE CURB RAMP DETAILS
25	COLUMBIA & S. LAUREL CURB RAMP DETAILS
26	COLUMBIA & LANDER AVE CURB RAMP DETAILS
27	LANE STREET CURB RAMP DETAILS
28	S. LAUREL STREET CURB RAMP DETAILS
29	COLUMBIA AVENUE GRADING PLAN - STATION 1+00 TO 13+45.51
30	COLUMBIA AVENUE GRADING PLAN - STATION 13+45.51 TO END
31	FARR STREET GRADING PLAN
32	LANE STREET & S. BEECH STREET GRADING PLAN
33	S. LAUREL STREET GRADING PLAN
34	FARR STREET-STORM DRAIN PROFILES I
35	FARR STREET-STORM DRAIN PROFILES II
36	S. BEECH STREET-STORM DRAIN PROFILES I
37	S. BEECH STREET-STORM DRAIN PROFILES II
38	TRAFFIC CONTROL NOTES
39	TRAFFIC CONTROL DETAILS
40	COLUMBIA AVENUE STAGE 1-TRAFFIC CONTROL
41	COLUMBIA AVENUE STAGE 2-TRAFFIC CONTROL
42	FARR STREET STAGE 1-TRAFFIC CONTROL
43	FARR STREET STAGE 2-TRAFFIC CONTROL
44	S. BEECH STREET STAGE 1-TRAFFIC CONTROL
45	S. BEECH STREET STAGE 2-TRAFFIC CONTROL
46	LANE STREET STAGE 1-TRAFFIC CONTROL
47	LANE STREET STAGE 2-TRAFFIC CONTROL
48	S. LAUREL STREET STAGE 1-TRAFFIC CONTROL
49	S. LAUREL STREET STAGE 2-TRAFFIC CONTROL

### CONTACTS

CITY OF TURLOCK PUBLIC WORKS DEPARTMENT  
(209) 668-5520, ENGINEERING@TURLOCK.CA.US  
CITY OF TURLOCK ELECTRICAL  
(209) 679-5823 DOYLE PERRY, DPERRY@TURLOCK.CA.US  
CITY OF TURLOCK STORM AND SEWER  
(209) 345-2169 CARLOS GUERRERO, CGUERRERO@TURLOCK.CA.US  
CITY OF TURLOCK WATER  
(209) 740-3866 ORLANDO GUTIERREZ, OGUTIERREZ@TURLOCK.CA.US  
TURLOCK IRRIGATION DISTRICT (ELECTRICAL)  
6054945 DAVID PORATH, DNPORATH@TID.ORG  
TURLOCK IRRIGATION DISTRICT (IRRIGATION)  
535-1882 TODD TROGLIN, TRTROGLIN@TID.ORG  
CHARTER COMMUNICATIONS  
(209) 633-3303 ABRAHAM ZAMORA, ABRAHAM.ZAMORA@CHARTER.COM

PACIFIC GAS & ELECTRIC (GAS)  
(209) 561-4070 TRENT MILLISAP,  
TWMB@PGE.COM

AT&T  
(209) 507-1689 JIM JELLY,  
JJ2163@ATT.COM

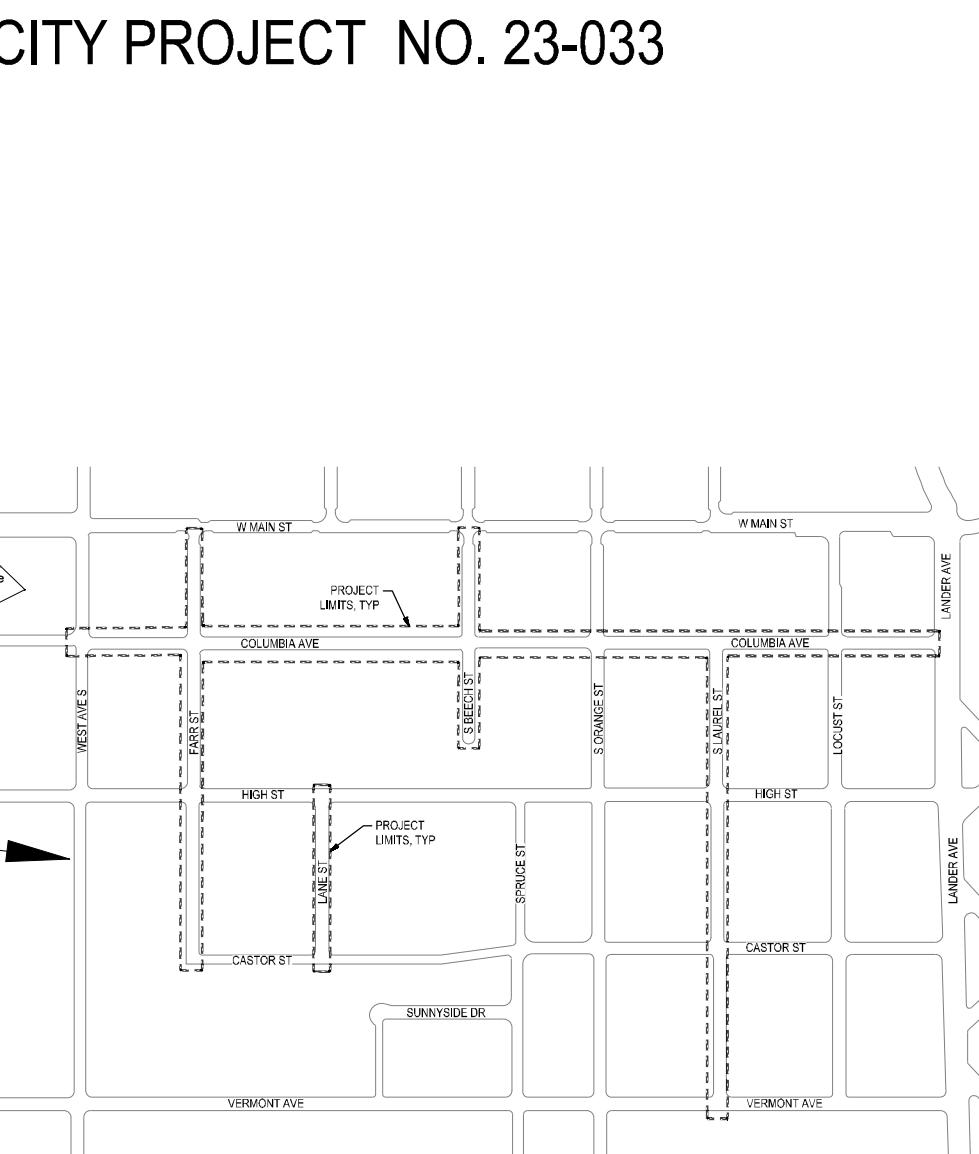
FIRE DEPARTMENT (NON-EMERGENCY)  
(209) 668-5560

POLICE DEPARTMENT (NON-EMERGENCY)  
(209) 668-1200

AMBULANCE  
(209) 632-2271

TURLOCK SCAVENGER  
(209) 668-7274

### PROJECT LOCATION MAP



CIVIL IMPROVEMENTS LIMITS  
THE CITY OF TURLOCK'S ROADS PROGRAM IMPROVEMENTS PROJECT WILL IMPROVE THE EXISTING  
ROADWAY AT COLUMBIA STREET FROM WEST AVENUE SOUTH TO LANDER AVENUE, AT FARR STREET  
FROM WEST MAIN STREET TO CASTOR STREET, AT LAE STREET FROM HIGH STREET TO CASTOR  
STREET, AT SOUTH BEECH STREET AT THE WEST MAIN STREET, AND AT SOUTH LAUREL STREET FROM  
COLUMBIA STREET TO VERNON AVENUE IN THE CITY OF TURLOCK, CALIFORNIA.

### GOVERNING CODES AND ADOPTED STANDARDS

ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE  
REQUIREMENTS OF THE CURRENT CITY OF TURLOCK STANDARD SPECIFICATIONS AND DRAWINGS; THE  
LATEST EDITION OF THE AMERICANS WITH DISABILITIES ACT AND THE LATEST EDITION OF THE STATE OF  
CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS, CITY OF TURLOCK  
STANDARD DRAWINGS ARE AVAILABLE AT THE OFFICE OF THE CITY ENGINEER.

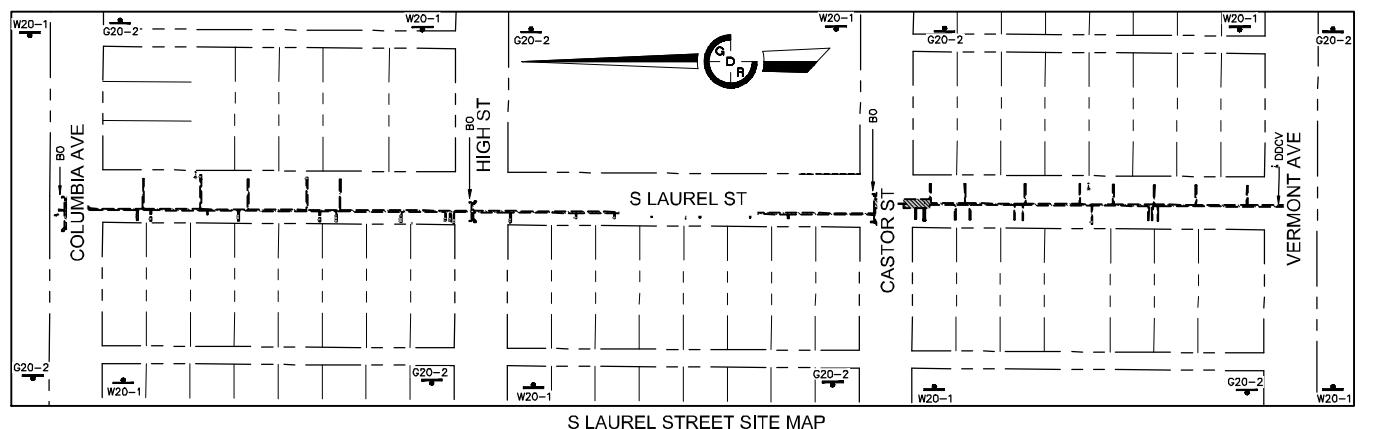
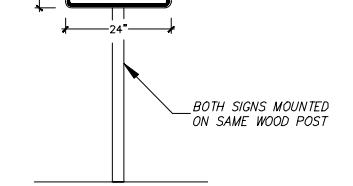
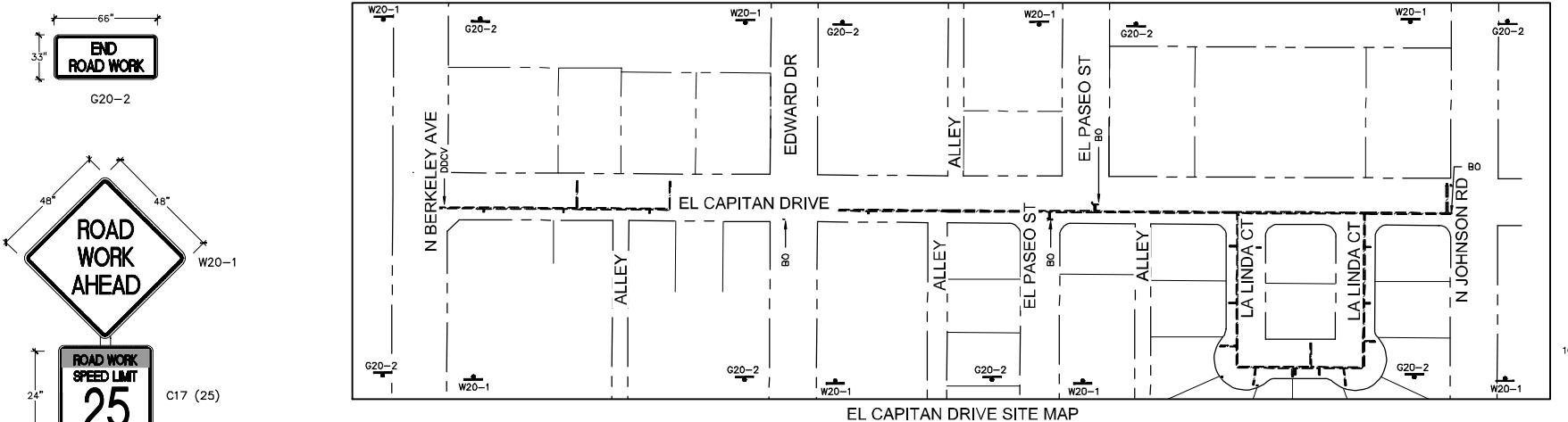
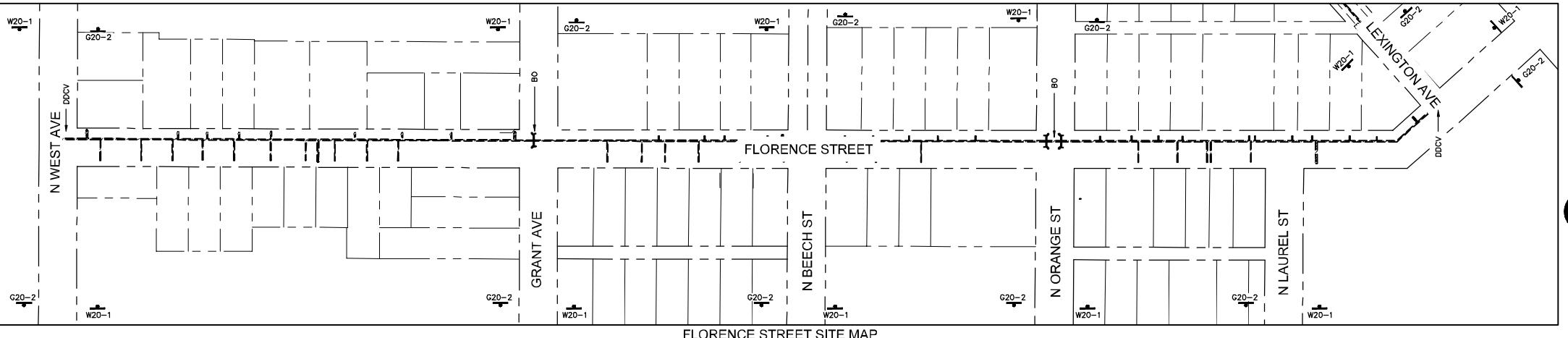
### CITY OF TURLOCK APPROVAL

WILLIAM D. MORRIS, P.E., P.L.S.  
CITY ENGINEER  
PUBLIC WORKS DEPARTMENT

# CITY OF TURLOCK

## CITY PROJECT NO. 23-040 WATER LINE REPLACEMENT FOR 2024 ROADS PROGRAM CONSTRUCTION

CITY OF TURLOCK, STANISLAUS COUNTY, CALIFORNIA



REVIEWED BY UTILITIES MANAGER

BY: CARLOS GUERRERO DATE: \_\_\_\_\_

APPROVED BY CITY OF TURLOCK

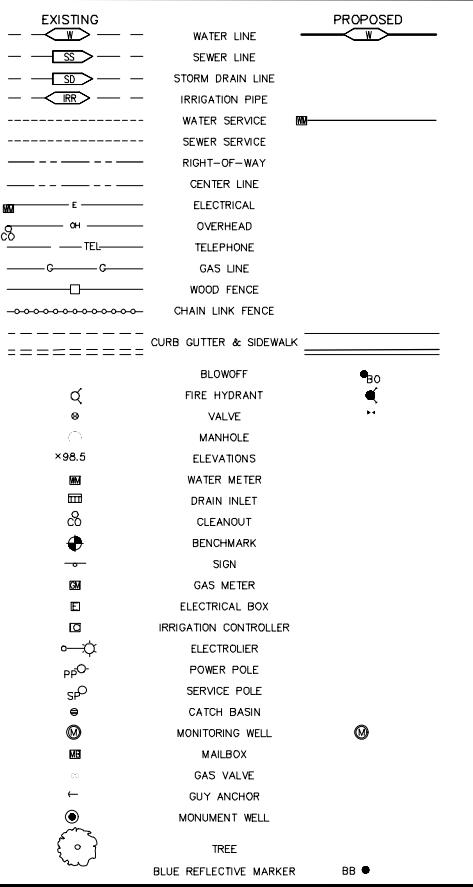
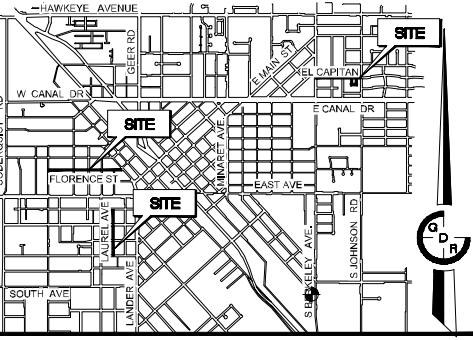
BY: WILLIAM D. MORRIS, RCE 55910 DATE: \_\_\_\_\_

Underground facilities shown were located based on information provided by utility companies and by measuring surface features. No attempt was made to locate other underground facilities that were not readily apparent from a visual inspection of surface features.

Contractor shall verify actual depth and location of all existing utilities prior to construction...call "Underground Service Alert" (U.S.A.), (TOLL FREE) (800) 227-2600 prior to trenching, digging, excavating, or drilling. Pipe pushing, planting trees, digging post holes for fences, etc. (U.S.A.), will supply information or locate and mark any underground facilities.

1. This set of improvement plans is valid for construction purposes ONLY AFTER THEY HAVE BEEN SIGNED BY THE CITY ENGINEER.
2. All contractors involved in the construction of this project shall attend a pre-construction conference arranged by the city at the engineering department for construction and inspection coordination.
3. The city of Turlock standard specifications and drawings are made a part of these plans. Current standards and specifications shall be kept on site during construction.

Approval of these plans does not release the contractor from responsibility for correction of mistakes, errors, or omissions contained therein. If during the course of construction the public interest requires a modification or a departure from the city specifications, or the approved plans, the city shall have the authority to require such modification or departure, and to specify the manner in which the same is made.



1. COVER SHEET
2. GENERAL NOTES
3. FLORENCE ST TOPOGRAPHIC & DEMOLITION
4. FLORENCE ST TOPOGRAPHIC & DEMOLITION
5. EL CAPITAN DR & LA LINDA CT TOPOGRAPHIC & DEMOLITION
6. LAUREL AVE TOPOGRAPHIC & DEMOLITION
7. FLORENCE STREET PLAN AND PROFILE
8. FLORENCE STREET PLAN AND PROFILE
9. FLORENCE STREET PLAN AND PROFILE
10. FLORENCE STREET PLAN AND PROFILE
11. EL CAPITAN DRIVE PLAN AND PROFILE
12. EL CAPITAN DRIVE PLAN AND PROFILE
13. EL CAPITAN DRIVE PLAN AND PROFILE
14. LA LINDA COURT EAST & WEST PLAN AND PROFILE
15. LA LINDA COURT SOUTH PLAN AND PROFILE
16. S LAUREL STREET PLAN AND PROFILE
17. S LAUREL STREET PLAN AND PROFILE
18. S LAUREL STREET PLAN AND PROFILE
19. LEXINGTON AVENUE PLAN AND PROFILE
20. CONSTRUCTION DETAILS
21. CITY STANDARD DETAILS SHEET

### SHEET INDEX

### ABBREVIATIONS

**GDR ENGINEERING, INC.**  
ENGINEERING/SURVEYING/PLANNING

3525 MITCHELL ROAD, SUITE G CERES, CA 95307  
TELEPHONE: (209) 538-3360 FAX: (209) 538-7370  
E-MAIL: GDRENGINEERING@GDRENG.R.COM

### CITY OF TURLOCK WATER LINE REPLACEMENT PLANS COVER SHEET

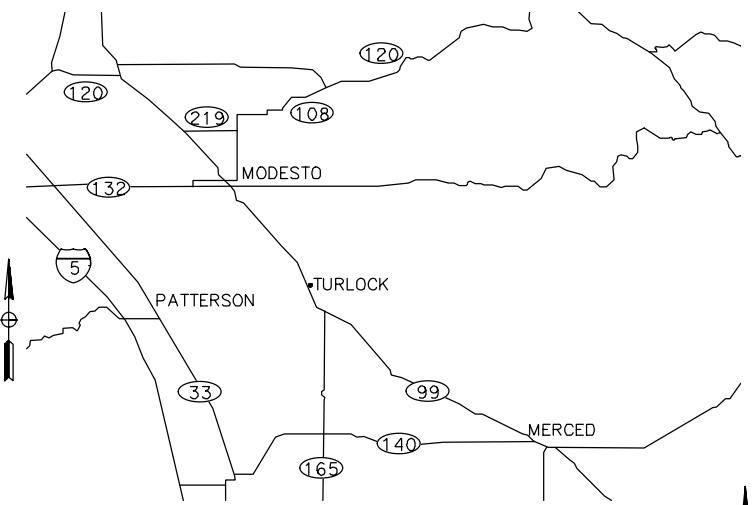
SCALE: AS NOTED	DATE: 02/08/2024
DWG NO. 23052DSQN.dwg	LAYOUT: 1-CVR
DRAWN: JA	CHECKED: _____
DESCRIPTION	DATE BY





### CITY OF TURLOCK

NO SCALE



### VICINITY MAP

NO SCALE

### CALL BEFORE YOU DIG

THE CONTRACTOR SHALL CALL  
"UNDERGROUND SERVICE ALERT" (USA)  
AT 811 AT LEAST 2 WORKING DAYS  
PRIOR TO PERFORMING ANY EXCAVATION

# CITY OF TURLOCK

## CONSTRUCTION PLANS FOR ROADS PROGRAM CIP PROJECT

CITY PROJECT NO. 23-067

### PACKAGE #1

ANDRE LN: W TOULUMNE RD TO W MONTE VISTA AVE; TROY CT, YVONNE CT, TORRE CT, DELTA CT, CURT CT, LEDWITH CT

GETTYSBURG ST: DELS LN TO ANDRE LN; HUGHES CT

TAMPA ST: ANDRE LN TO NIAGRA ST

NIAGRA ST: W MONTE VISTA AVE TO REGIS ST

REGIST ST: NIAGRA ST TO GEER ST

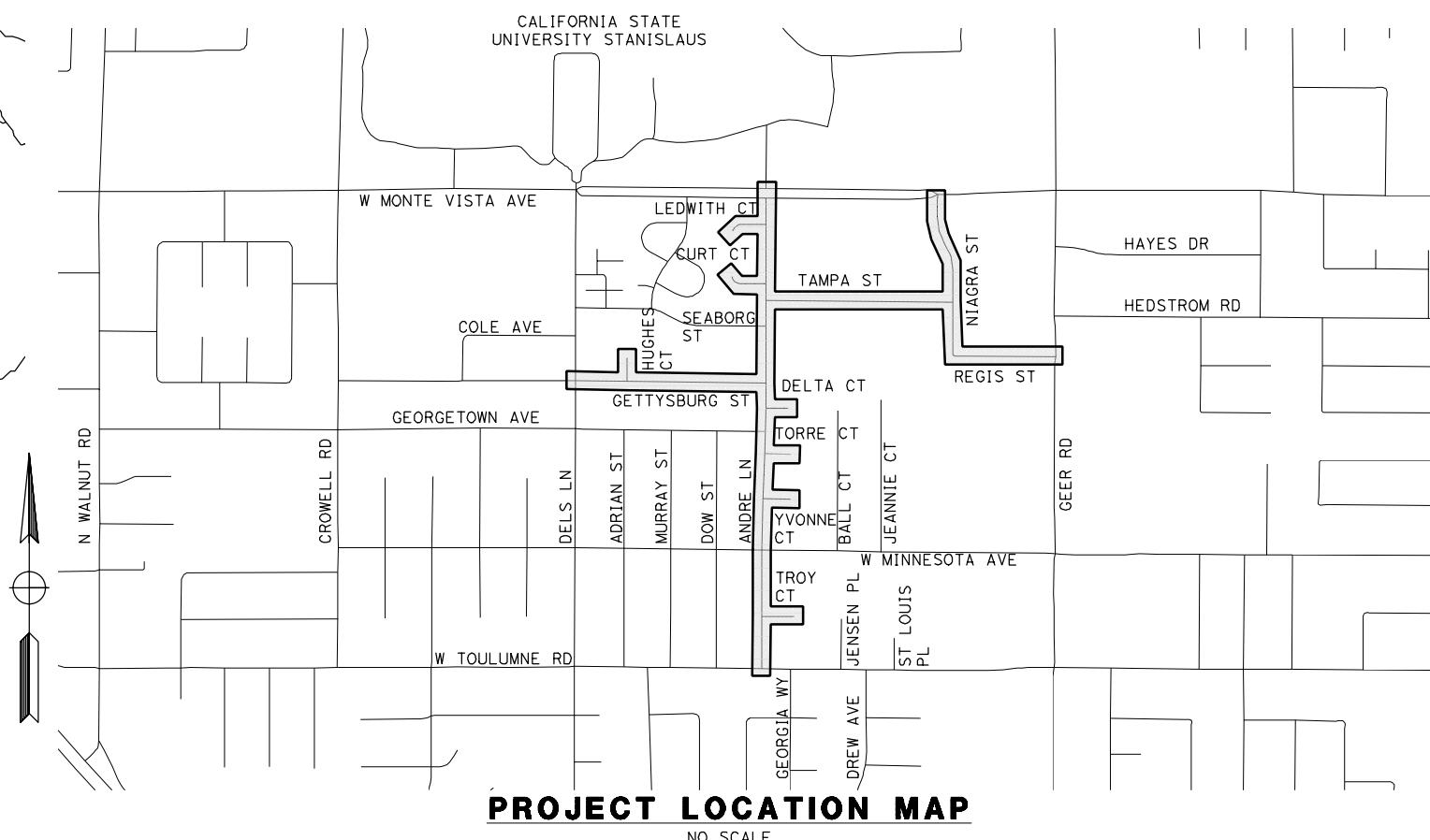
SUPPLEMENTED BY CALTRANS STANDARD PLANS  
AND STANDARD SPECIFICATIONS DATED 2023  
& CITY OF TURLOCK ENGINEERING DESIGN  
STANDARD SPECIFICATIONS AND DRAWINGS DATED  
2016.

### SHEET INDEX

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18-26	L-1 TO L-9	LAYOUTS
27-51	CD-1 TO CD-25	CONSTRUCTION DETAILS
52-60	G-1 TO G-9	GRADING PLANS
61-69	DU-1 TO DU-9	DRAINAGE AND UTILITIES
70-79	TH-1 TO TH-10	TRAFFIC HANDLING PLANS
80-88	SS-1 TO SS-9	SIGNING AND STRIPING
89-91	TS-1 to TS-3	TRAFFIC SIGNAL PLANS

### CITY OF TURLOCK APPROVAL

WILLIAM D. MORRIS, P.E., P.L.S CITY ENGINEER PUBLIC WORKS DEPARTMENTS	DATE
---	------



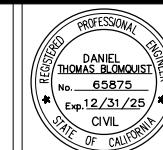
### PROJECT LOCATION MAP

NO SCALE

### 100% PLANS

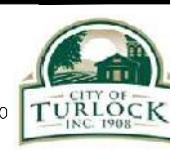
DESIGNED BY: LAPPEN E.
DRAWN BY: LAPPEN E.
CHECKED BY: BLOMQUIST D.
SCALE: AS SHOWN
DATE: 9/13/2024
JOB NO.: 23-067

NOTE:  
ALL REFERENCES AND WRITTEN  
DIMENSIONS SHALL SUPERCEDE ALL  
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PRIOR TO THE COMMENCEMENT OF WORK.



**MARK THOMAS**  
701 UNIVERSITY AVENUE, SUITE 200  
SACRAMENTO, CALIFORNIA 95825  
(916) 381-9100 FAX:(916)381-9180  
markthomas.com

CITY OF TURLOCK  
PUBLIC WORKS  
DEPARTMENT  
ENGINEERING  
DIVISION 156 S.  
BROADWAY SUIT 150  
(209) 668-5520



**CITY OF TURLOCK**  
ROADS PROGRAM CIP  
PACKAGE #1  
TITLE SHEET

Sheet 1  
of  
91 Sheets  
**T - 1**

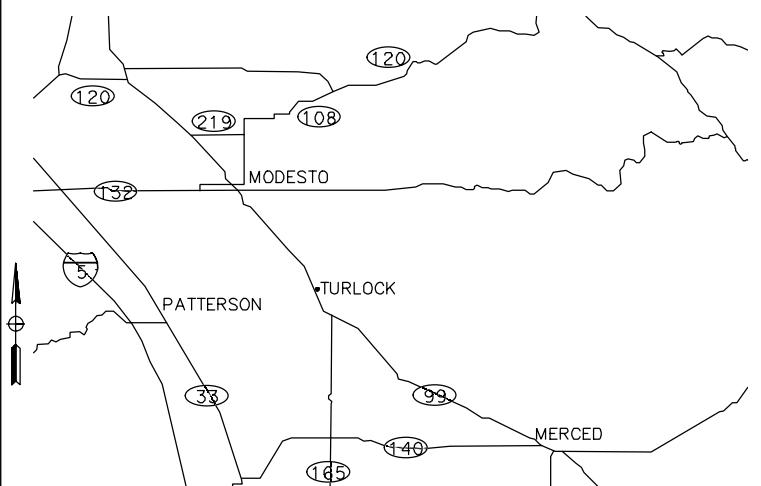
# CITY OF TURLOCK

CONSTRUCTION PLANS FOR  
PAVEMENT REHAB (TO #3)  
CITY PROJECT NO. 23-067  
PACKAGE #2



## CALIFORNIA STATE MAP

NO SCALE

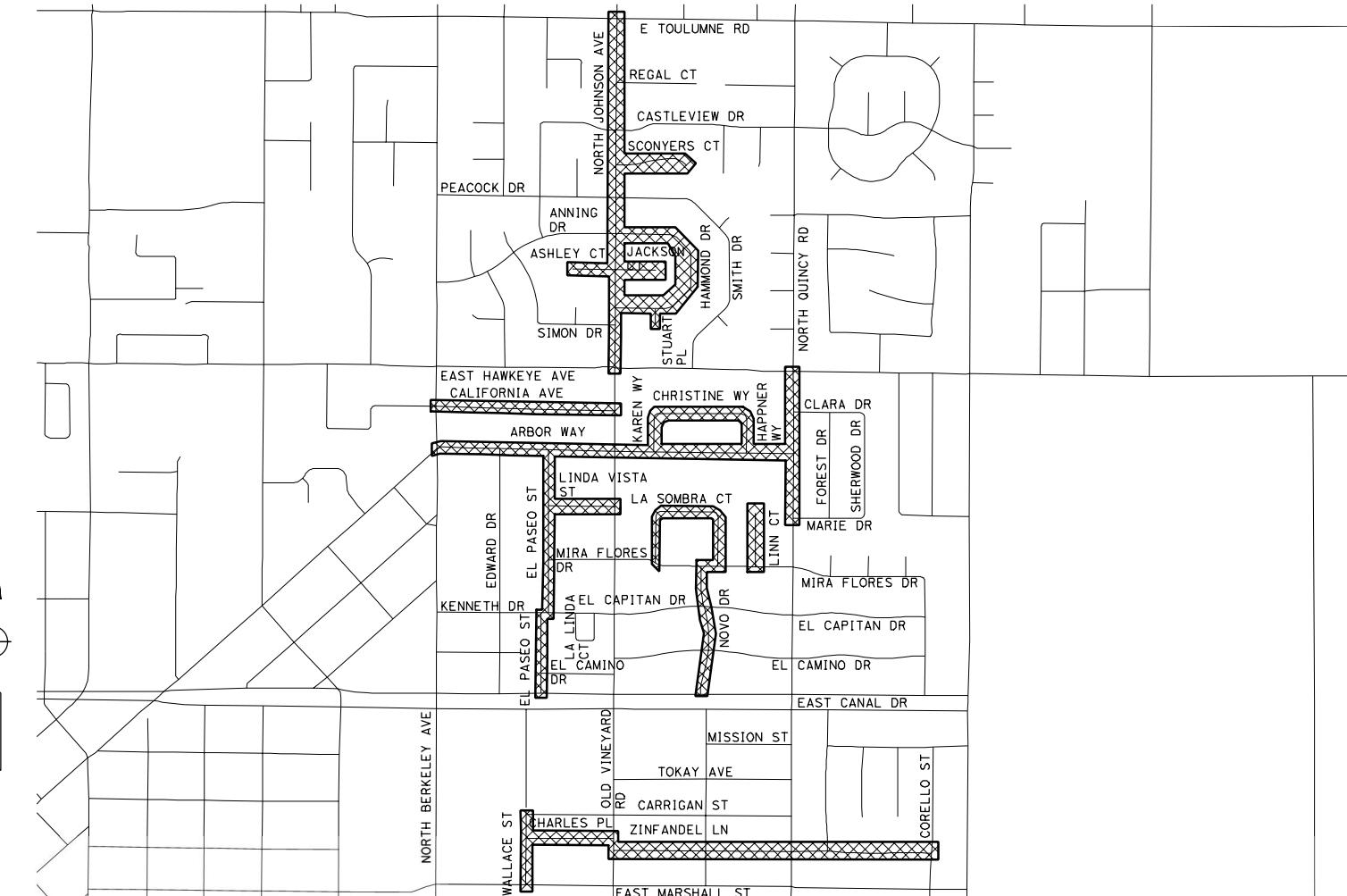


## VICINITY MAP

NO SCALE

## CALL BEFORE YOU DIG

THE CONTRACTOR SHALL CALL  
"UNDERGROUND SERVICE ALERT" (USA)  
AT 811 AT LEAST 2 WORKING DAYS  
PRIOR TO PERFORMING ANY EXCAVATION



PROJECT LOCATION MAP  
60% SUBMITTAL - NOT FOR CONSTRUCTION

DESIGNED BY: POORE, B.  
DRAWN BY: HAYNES, C.  
CHECKED BY: HORNER, C.  
SCALE: AS SHOWN  
DATE: 9/18/2024  
JOB NO.: 24-00061

NOTE:  
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markthomas.com

CITY OF TURLOCK  
PUBLIC WORKS  
DEPARTMENT  
ENGINEERING  
DIVISION 156 S.  
BROADWAY SUIT 150  
(209) 668-5520



**CITY OF TURLOCK  
PAVEMENT REHAB TO#3  
(PACKAGE #2)  
TITLE SHEET**

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4	PC-1	PROJECT CONTROL
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## CITY OF TURLOCK APPROVAL

WILLIAM D. MORRIS, P.E., P.L.S CITY ENGINEER PUBLIC WORKS DEPARTMENTS	DATE
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## UTILITY CONTACTS

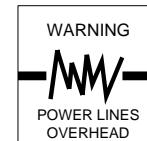
UTILITY	CONTACT	PHONE
AT&T	JIM JELLEY	(209) 507-1689
CHARTER COMMUNICATIONS	MITCHELL RODRIQUEZ	(408) 612-7569
TID ELECTRICAL	DAVID PORATH	(209) 605-0945
TID IRRIGATION	TODD TROGLIN	(209) 535-1882
CITY OF TURLOCK ELECTRICAL	DOYLE PERRY	(209) 678-5823
CITY OF TURLOCK STORM AND SEWER	CARLOS GUERRERO	(209) 345-2169
CITY OF TURLOCK WATER	ORLANDO GUTIERREZ	(209) 740-3868
PG&E GAS	DAVID LOOMIS	(209) 470-0697

SUPPLEMENTED BY CALTRANS STANDARD PLANS  
AND STANDARD SPECIFICATIONS DATED 2023  
& CITY OF TURLOCK ENGINEERING DESIGN STANDARD  
SPECIFICATIONS AND DRAWINGS DATED 2016.

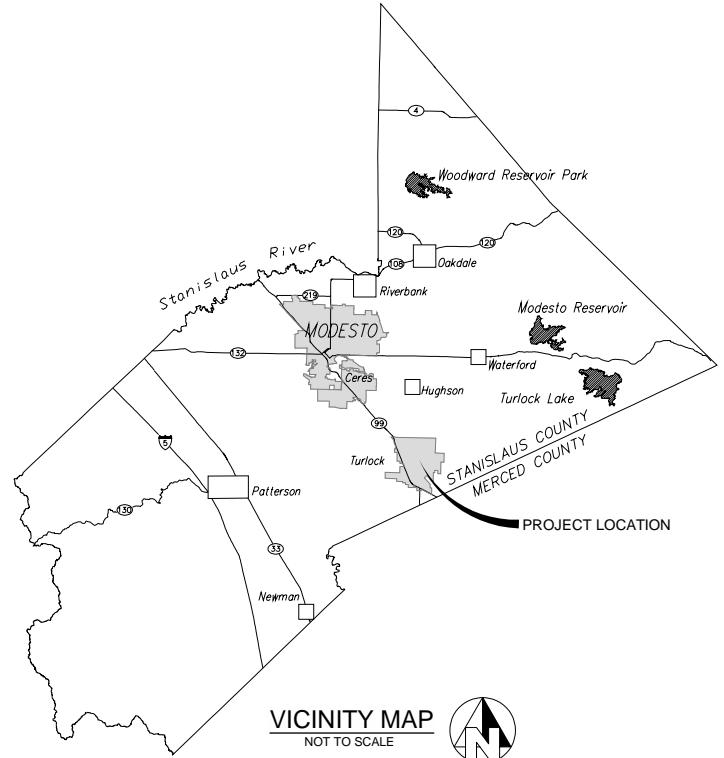
Sheet **1**  
of  
**158** Sheets  
**T - 1**



Know what's below.  
Call before you dig.



**CITY OF TURLOCK  
CONSTRUCTION PLANS FOR  
ROADS PROGRAM CAPITAL  
IMPROVEMENT PROJECT  
CITY PROJECT NO. 23-068 - PACKAGE 1**



#### **SPECIAL NOTE**

WHERE UNDERGROUND AND SURFACE STRUCTURES ARE SHOWN ON THE PLANS, THE LOCATIONS, DEPTH AND DIMENSIONS OF STRUCTURES ARE BELIEVED TO BE REASONABLY CORRECT, BUT ARE NOT GUARANTEED. SUCH STRUCTURES ARE SHOWN FOR THE INFORMATION OF THE CONTRACTOR, BUT INFORMATION SO GIVEN IS NOT TO BE CONSTRUED AS A REPRESENTATION THAT SUCH STRUCTURES WILL, IN ALL CASES, BE FOUND WHERE SHOWN, OR THAT THEY REPRESENT ALL OF THE STRUCTURES WHICH MAY BE ENCOUNTERED.

## SITE SAFETY AND PROTECTION NOTE

THE DUTY OF THE ENGINEER, OWNER OR ITS AGENTS TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE AND THE UNDERTAKING OF INSPECTIONS OR THE GIVING OF INSTRUCTIONS AS AUTHORIZED HEREIN IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF THE ACTUAL CONSTRUCTION NOR MAKE THE ENGINEER, OWNER OR ITS AGENTS RESPONSIBLE FOR PROVIDING A SAFE PLACE FOR THE PERFORMANCE OF WORK BY THE CONTRACTOR, SUBCONTRACTORS, OR SUPPLIERS, OR FOR ACCESS, VISITS, USE, WORK, TRAVEL OR OCCUPANCY BY ANY PERSON.

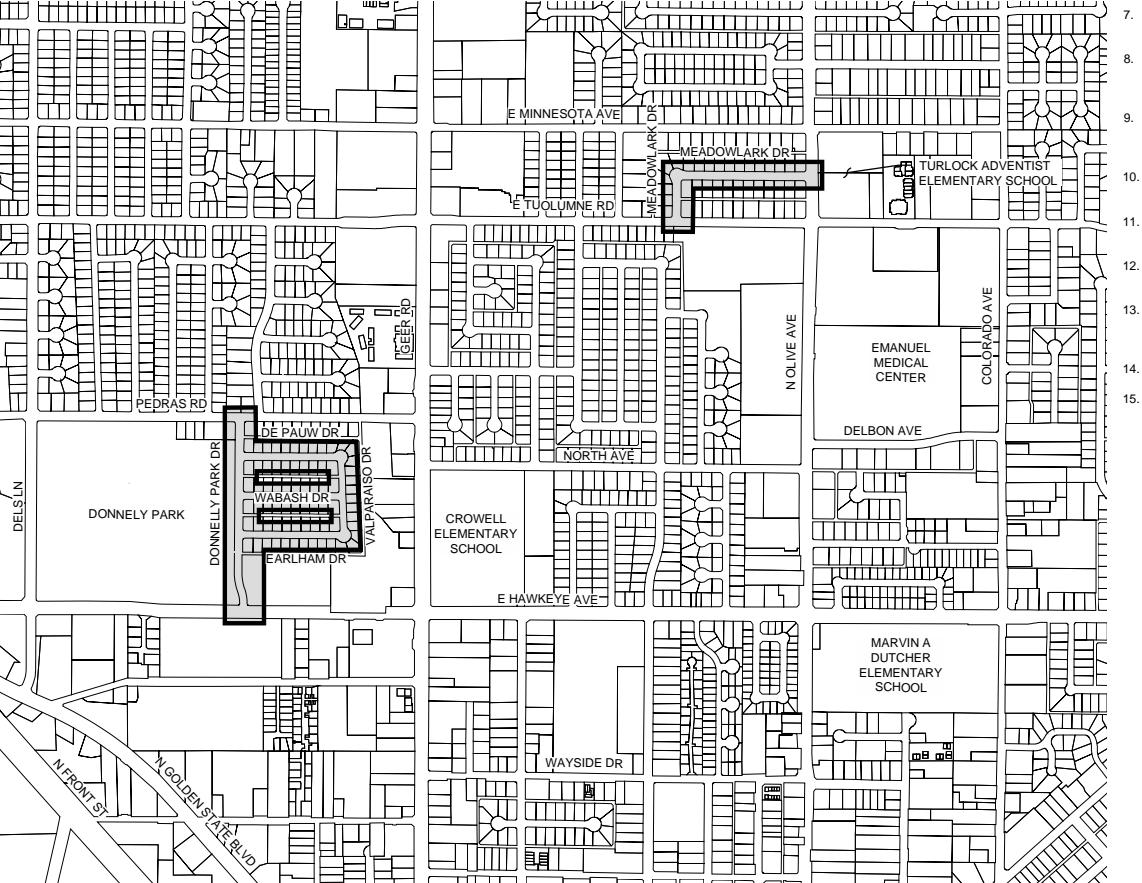
THE CONTRACTOR SHALL HAVE AT THE WORK SITE, COPIES OR SUITABLE EXTRACTS OF CONSTRUCTION SAFETY ORDERS, ISSUED BY CAL-OSHA. CONTRACTOR SHALL COMPLY WITH PROVISIONS OF THESE AND ALL OTHER APPLICABLE LAWS, ORDINANCES AND REGULATIONS. THE CONTRACTOR MUST COMPLY WITH PROVISIONS OF THE SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION, PROMULGATED BY THE SECRETARY OF LABOR UNDER SECTION 107 OF THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT, AS SET FORTH IN TITLE 20 C.F.R.

TO PROTECT THE LIVES AND HEALTH OF CONTRACTOR'S EMPLOYEES UNDER THE CONTRACT, THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION" ISSUED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA, INC., AND SHALL MAINTAIN AN ACCURATE RECORD OF ALL CASES OF DEATH, OCCUPATIONAL DISEASE, AND INJURY REQUIRING MEDICAL ATTENTION OR CAUSING LOSS OF TIME FROM WORK, ARISING OUT OF AND IN THE COURSE OF EMPLOYMENT OR WORK UNDER THE CONTRACT.

THE CONTRACTOR ALONE SHALL BE RESPONSIBLE FOR THE SAFETY, EFFICIENCY, AND ADEQUACY OF CONTRACTOR'S FACILITIES, APPLIANCES, AND METHODS AND FOR ANY DAMAGE, WHICH MAY RESULT FROM THEIR FAILURE OR THEIR IMPROPER CONSTRUCTION, MAINTENANCE OR OPERATION.

THE CONTRACTOR AGREES THAT IT SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER, PROVOST & PRITCHARD CONSULTING GROUP, AND THEIR RESPECTIVE AGENTS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OR WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF OWNER, ENGINEER, OR THEIR RESPECTIVE AGENTS.

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SITE MAP  
NOT TO SCALE

## TOPOGRAPHY NOTE

TOPOGRAPHY SHOWN WAS COLLECTED BY PROVOST & Pritchard Consulting Group During a Field Survey Conducted in March of 2024.

### BOUNDARY NO.

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THE BOUNDARY/EASEMENT INFORMATION SHOWN ON THESE  
PLANS IS BASED UPON RECORD INFORMATION TIED TO PHYSICAL  
MONUMENTS, AND WAS PREPARED UNDER THE DIRECTION OF  
RYAN W. POWERS, PLS 8469

## PRIMARY RENCI

POINT 1000: A FOUND REBAR AND CAP MARKED CONTROL  
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NOTE: THIS CONTROL WAS ESTABLISHED BY SURVEYS  
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RITCHARD



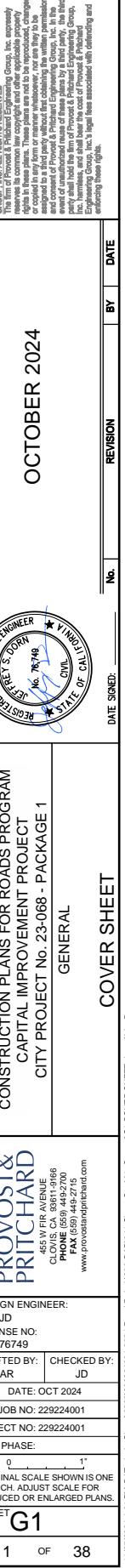
DATE SIGNED: NOV 2024

## APPROVALS

**GENERAL NOTES**

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- 1. CITY OF TURLOCK (209-668-5520) SHALL BE CONTACTED AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF WORK ON OR NEAR EXISTING DISTRICT FACILITIES.
- 2. USED MATERIAL, REJECTS, MISFITS, OR SECONDS, ETC. ARE NOT ACCEPTABLE FOR USE ON CITY OF TURLOCK FACILITIES.
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- 5. ALL CAST-IN-PLACE CONCRETE STRUCTURES SHALL BE FORMED INSIDE AND OUT AND CONCRETE VIBRATED SUFFICIENTLY TO PROVIDE FOR SMOOTH SURFACED WALLS/FLOORS WITHOUT VOIDS AND HONEYCOMBS.
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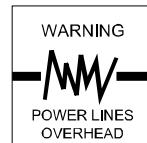


CITY OF TURLOCK  
UNINCORPORATED SERVICES DEPARTMENT  
156 S. BROADWAY, SUITE 150  
(209) 668-5520

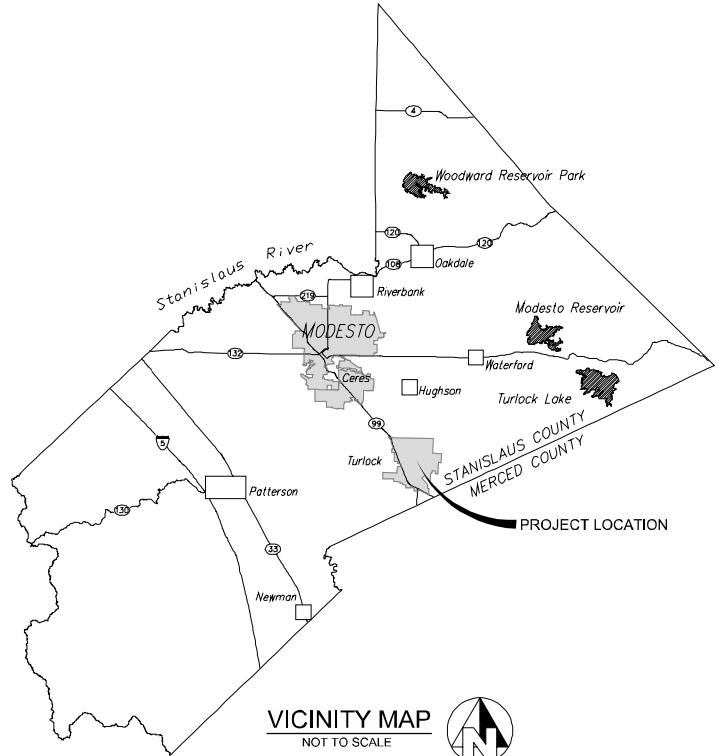
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**Know what's below.  
Call before you dig.**



**CITY OF TURLOCK  
CONSTRUCTION PLANS FOR  
ROADS PROGRAM CAPITAL  
IMPROVEMENT PROJECT  
CITY PROJECT NO. 23-068 PACKAGE 2**



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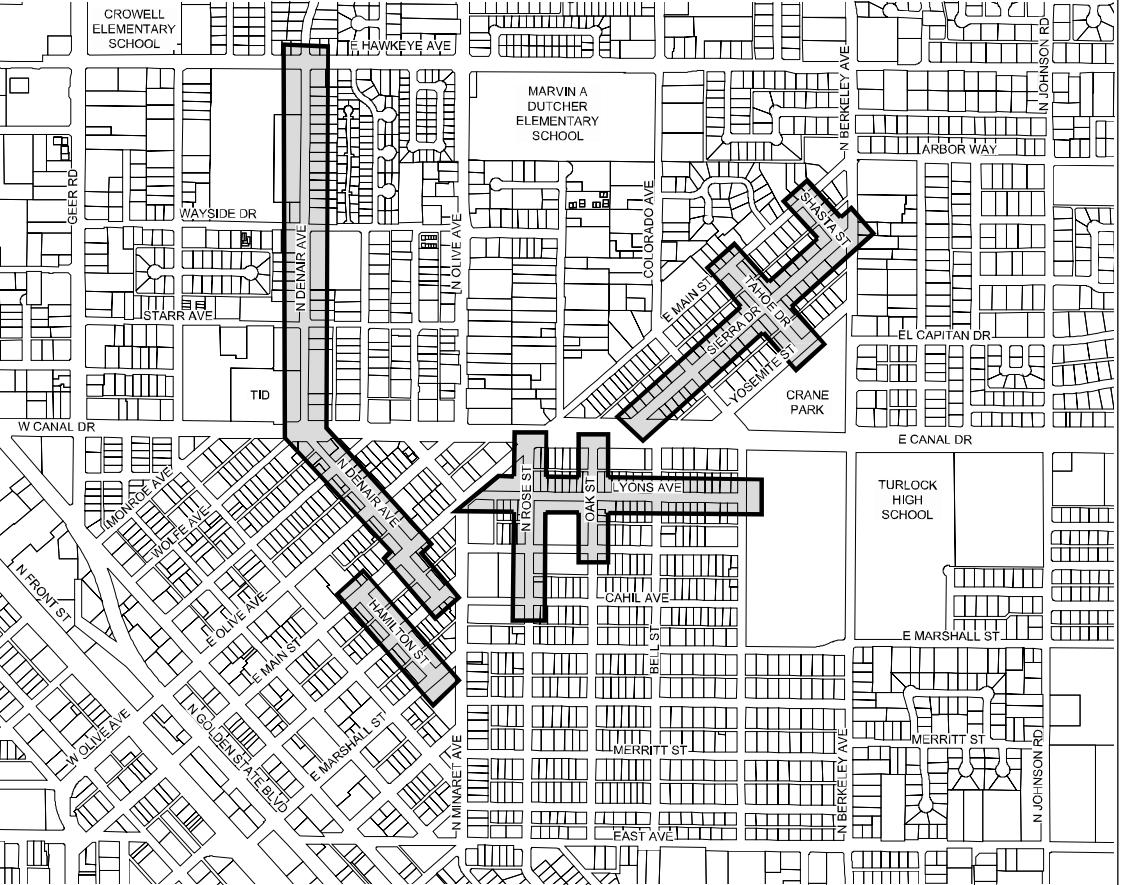
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## APPROVALS

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WILLIAM D. MORRIS, P.E., P.L.S. DATE  
CITY ENGINEER  
PUBLIC WORKS DEPARTMENT

SHEET INDEX			
SEQ. SHEET NO.	DESCRIPTION	SEQ. SHEET NO.	DESCRIPTION
L			
1	COVER SHEET	D14	SITE DETAILS
2	LEGEND & ABBREVIATIONS	D15	SITE DETAILS
PLAN		D16	SITE DETAILS
3	HAMILTON ST STA 10+76.41 - 14+00	D17	SITE DETAILS
4	HAMILTON ST STA 14+00 - 18+28.32	D18	SITE DETAILS
5	DENAIR AVE STA 21+22.46 - 25+00	D19	SITE DETAILS
6	DENAIR AVE STA 25+00 - 28+00	D20	SITE DETAILS
7	DENAIR AVE STA 28+00 - 32+00	D21	SITE DETAILS
8	DENAIR AVE STA 32+00 - 36+25	D22	SITE DETAILS
9	DENAIR AVE STA 36+25 - 41+00	D23	SITE DETAILS
10	DENAIR AVE STA 41+00 - 45+00	D24	SITE DETAILS
11	DENAIR AVE STA 45+00 - 49+00	D25	SITE DETAILS
12	DENAIR AVE STA 49+00 - 53+00	D26	SITE DETAILS
13	DENAIR AVE STA 53+00 - 57+00	D27	SITE DETAILS
14	DENAIR AVE STA 57+00 - 59+80	D28	SITE DETAILS
15	LYONS AVE STA 80+50 - 85+00	D29	SITE DETAILS
16	LYONS AVE STA 85+00 - 90+00	D30	SITE DETAILS
17	LYONS AVE STA 90+00 - 95+00	D31	SITE DETAILS
18	LYONS AVE STA 95+00 - 98+50	D32	SITE DETAILS
19	ROSE ST STA 100+00 - 104+00	D33	SITE DETAILS
20	ROSE ST STA 104+00 - 108+00	D34	SITE DETAILS
21	ROSE ST STA 108+00 - 111+00	D35	SITE DETAILS
22	OAK ST STA 120+00 - 124+00	D36	SITE DETAILS
23	OAK ST STA 124+00 - 127+00	D37	SITE DETAILS
24	SIERRA DR STA 131+50 - 135+00	TRAFFIC HANDLING	
25	SIERRA DR STA 135+00 - 139+00	TH1	LEGEND
26	SIERRA DR STA 139+00 - 143+00	TH2	DETAILS
27	SIERRA DR STA 143+00 - 147+00	TH3	TRAFFIC HANDLING
28	SIERRA DR STA 147+00 - 151+50	TH4	TRAFFIC HANDLING
29	TAHOE STA 150+50 - 154+25	TH5	TRAFFIC HANDLING
30	TAHOE STA 154+25 - 158+00	TH6	TRAFFIC HANDLING
31	SHASTA STA 160+00 - 165+00	TH7	TRAFFIC HANDLING
32	BELL ST STA 188+00 - 192+50	TH8	TRAFFIC HANDLING
		STRIPPING	
33	STANDARD DETAILS	S-1	HAMILTON ST STA 11+00 - 18+00
34	STANDARD DETAILS	S-2	DENAIR AVE STA 20+50 - 28+00
35	STANDARD DETAILS	S-3	DENAIR AVE STA 28+00 - 36+25
36	STANDARD DETAILS	S-4	DENAIR AVE STA 36+25 - 45+00
37	CIVIL DETAILS	S-5	DENAIR AVE STA 45+00 - 53+00
38	CIVIL DETAILS	S-6	DENAIR AVE STA 53+00 - 59+80
39	SITE DETAILS	S-7	LYONS AVE STA 80+50 - 90+00
40	SITE DETAILS	S-8	LYONS AVE STA 90+00 - 98+50
41	SITE DETAILS	S-9	ROSE ST STA 100+00 - 108+00
42	SITE DETAILS	S-10	ROSE ST STA 108+00 - 111+00
43	SITE DETAILS	S-11	OAK ST STA 120+00 - 127+00
44	SITE DETAILS	S-12	SIERRA DR STA 131+50 - 139+00
45	SITE DETAILS	S-13	SIERRA DR STA 139+00 - 147+00
		S-14	SIERRA DR STA 147+00 - 151+00



**CAPITAL IMPROVEMENT PROJECT  
CITY PROJECT No. 23-068**

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**GENERAL**

**COVER SHEET**



CITY OF TURLOCK  
MUNICIPAL SERVICE DEPARTMENT  
ROADS DIVISION  
100 BROADWAY, SUITE 150  
(209) 638-5500

**COVER SHEET**

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**CAPITAL IMPROVEMENT PROJECT**  
**CITY PROJECT No. 23-068**

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GENERAL



ENGINEER:  
FF DORN  
NO:  
749  
DRAWN BY: CHECKED BY:  
JD  
DATE: OCT 2024  
NO: 229224001  
NO: 229224001  
AS/E: 2  
1"  
ALL SCALE SHOWN IS ONE  
ADJUST SCALE FOR  
D OR ENLARGED PLANS



# CITY OF TURLOCK

## CONSTRUCTION PLANS FOR

## ROADS PROGRAM CAPITAL IMPROVEMENT PROJECT

## CITY PROJECT NO. 23-069

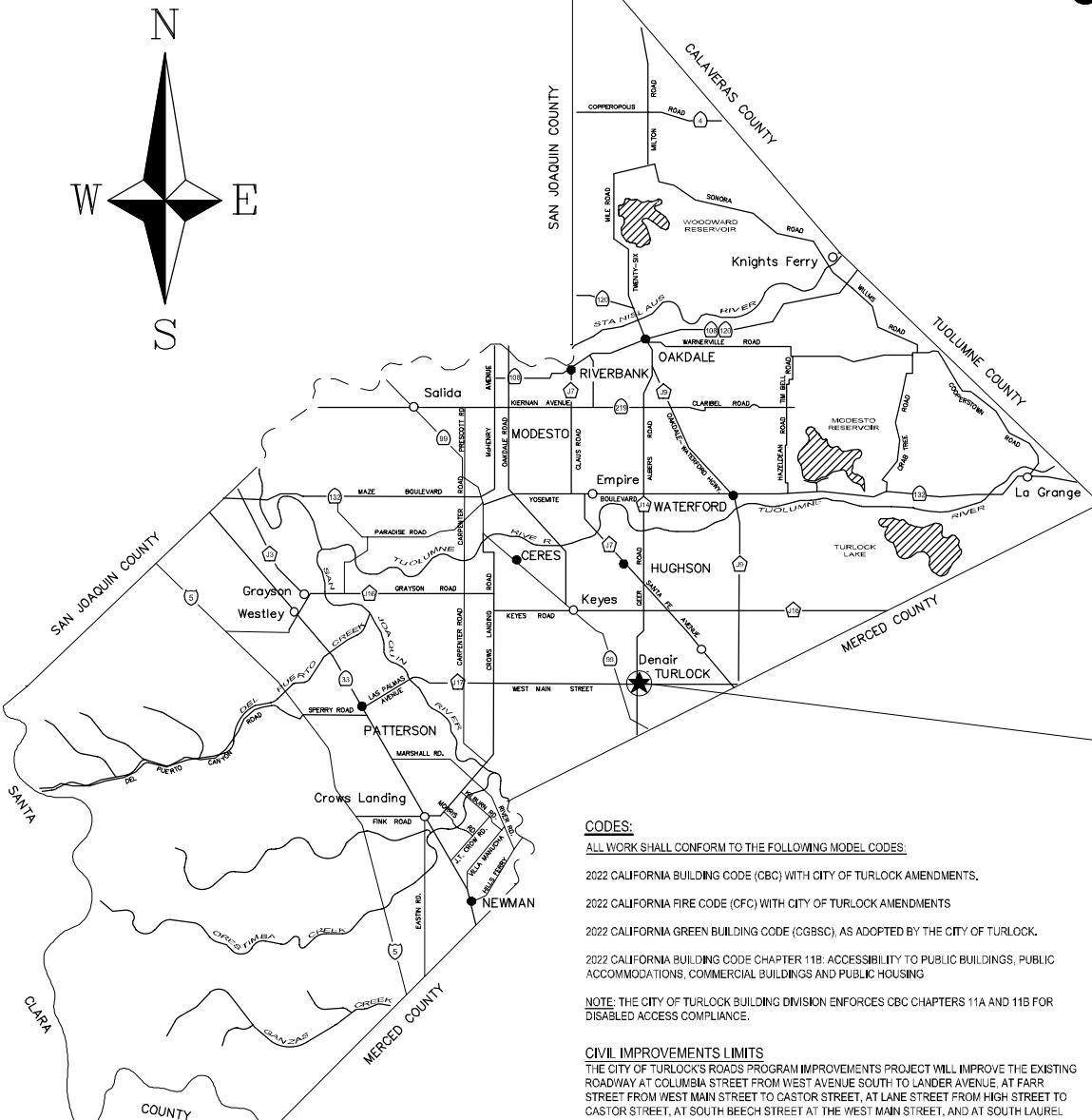
**CITY OF TURLOCK APPROVAL**

WILLIAM D. MORRIS, P.E., P.L.S  
CITY ENGINEER  
PUBLIC WORKS DEPARTMENT

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DATE

STATE OF CALIFORNIA



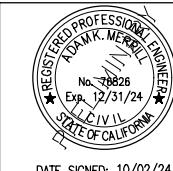
STANISLAUS COUNTY

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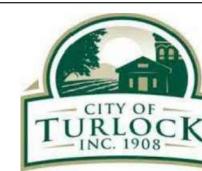


Know what's below.  
**Call** before you

NOTE:  
ALL REFERENCES AND WRITTEN  
DIMENSIONS SHALL SUPERCEDE  
ALL SCALED DISTANCES AND  
SHALL BE VERIFIED IN THE  
FIELD. ANY DISCREPANCY  
SHALL BE BROUGHT TO THE  
ATTENTION OF THE ENGINEER  
PRIOR TO THE COMMENCEMENT  
OF WORK



1



CITY OF TURLOCK PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
156 S. BROADWAY,  
SUITE 150  
(209) 668-5520

COVER SHEET

CAPITAL PROJECT NO. 23-069  
THE CITY OF TURLOCK ROADS PROGRAM

VERIFY SCALE	DRAWN BY: JR	DRAWING NO.  <b>01</b>  SHEET: <b>01 OF 105</b>
0	1"	
REV. BY: ARM		
CH. BY: AKM		
DATE: 10/2/2024		
SCALE: SEE SHEET		
SEI PROJ NO: 22157		

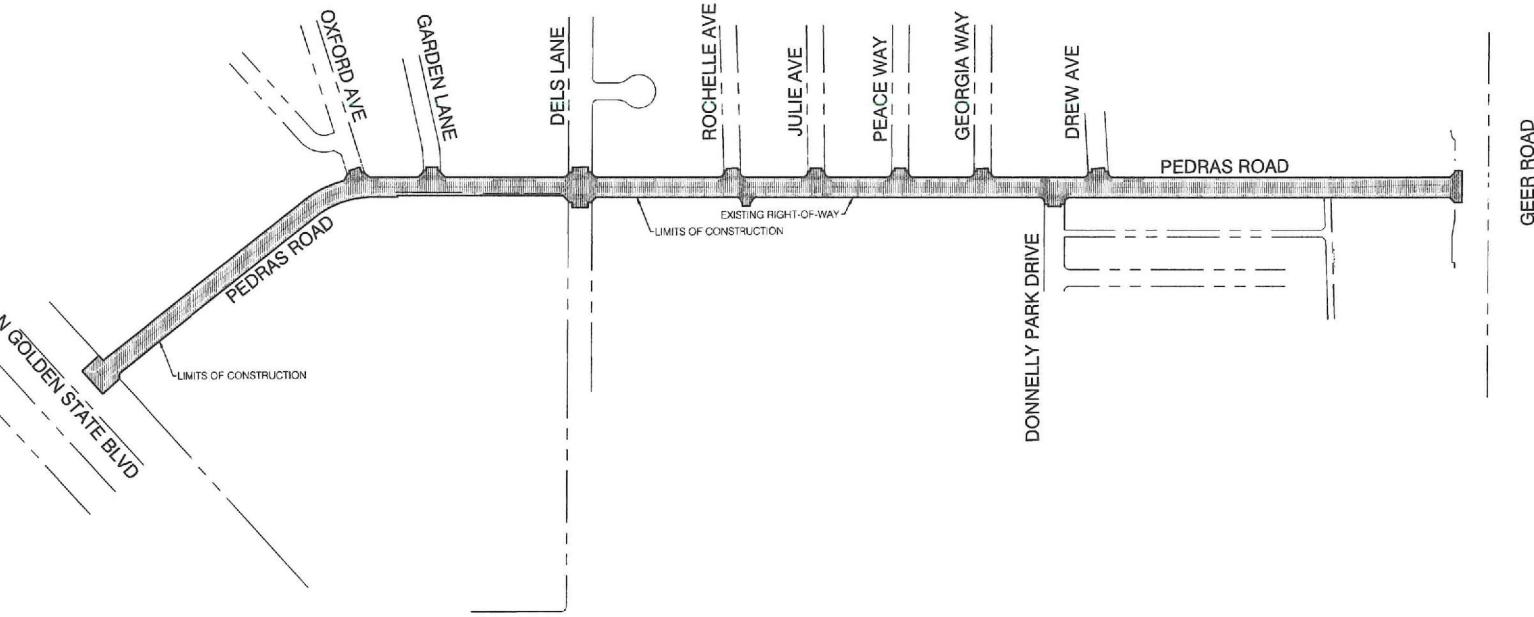
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LEGEND	
EXISTING	PROPOSED
BOUNDARY LINE	
CENTERLINE	
RIGHT-OF-WAY	
PARCEL LINE	
MONUMENT	N/A
SAWCUT	
CURB, GUTTER AND SIDEWALK	
EDGE OF PAVEMENT	
CONCRETE VALLEY GUTTER	
TRENCH DRAIN	
STORM DRAIN (MAIN)	12SD
FORCE MAIN	48TD
DRAINAGE SWALE	
STORM DRAIN MAINTENANCE HOLE	
CURB INLET	
DRAIN INLET	
DRAIN INLET ON MAINTENANCE HOLE	
STORM DRAINAGE FILTER	
WATER (MAIN)	16W
WATER (SERVICE)	8W
WATER VALVE	WV
WATER BLOW OFF VALVE	BO
BACK FLOW PREVENTER	BFP
POST INDICATOR VALVE (SINGLE)	PIV
FIRE DEPARTMENT CONNECTION	FDC
FIRE HYDRANT	
FIRE SPRINKLER RISER	
WATER METER	WM
REDUCED PRESSURE PRINCIPLE	
DETECTOR ASSEMBLY	
SINGLE CHECK DETECTOR ASSEMBLY	
SERVICE STUB	
CLEANOUT	
SEWER MAINTENANCE HOLE	
GREASE TRAP	
SEWER (MAIN)	12SS
JOINT TRENCH (APPROX LOCATION)	
TRANSFORMER (APPROX LOCATION)	
OVER HEAD ELECTRICAL	
SERVICE POLE	SP
JOINT POLE	
JOINT POLE WITH LIGHT	
POWER POLE	
TELEPHONE POLE	
GUY	
ELECTRICAL MANHOLE	
ELECTROLYTIC	
UTILITY BOX	
GAS LINE	G
GAS VALVE	GV
FINISH FLOOR ELEVATION (PROPOSED)	N/A
BUILDING PAD	N/A
TOP OF CURB ELEVATION	68.34 TC
ORIGINAL GROUND	68.32 TC
DIRECTION OF FLOW	3.0%
CONTOURS	32
WALL (SEE LABEL FOR TYPE)	
FENCE (CHAINLINK OR VINYL)	
FENCE (WIRE OR HOGWIRE)	
FENCE (WOOD OR WROUGHT IRON)	
FENCE (SPLIT RAIL)	
TREE OR SHRUB	N/A
TREE STUMP	N/A
IRRIGATION LINE	IRL
IRRIGATION VALVE	IV
IRRIGATION PRESSURE MANHOLE/VALVE	N/A
SIGN	
PERCOLATION TEST LOCATION	N/A
R-VALUE SAMPLE LOCATION	N/A
CORE SAMPLE LOCATION	PDX
KEYNOTE SYMBOL	(DOM)

# CIVIL IMPROVEMENT PLANS FOR CITY OF TURLOCK PROJECT NO. 21-021 (099)

## PEDRAS ROAD REHABILITATION

### TURLOCK, CALIFORNIA



#### ABBREVIATIONS

±	PLUS OR MINUS (NOT EXACT)	DR	DRIVE	MH	Maintenance Hole	RPPB	REDUCED PRESSURE
(@)	AGGREGATE BASE	E	EAST	N	NORTH	S	BACKFLOW PREVENTER
AB	AS-AS CONCRETE	EC	END OF CURVE	NDS	NDSC (MANUFACTURER)	SC	SLOPE OR SOUTH
ACC	ACCESSORY	EM	ELECTRIC METER	NO	NOT INCLUDED	SCDA	STANISLAUS COUNTY
ADT	AV-HAG: DAILY THICK TRAFFIC	EBC	ELECTROBLEED	NSE	NORTHSTAR ENGINEERING	SD	SINGLE CHECK DETECTOR
AG	ATRUM GRATE	ELEV	ELEVATION	NTS	NOT TO SCALE	SG	ASSEMBLY
ALT	ALTERNATE	EP	EDGE OF PAVEMENT	OC	ON CENTER	SHT	STORM DRAIN
APN	ASSESSORS PARCEL NUMBER	ER	END OF RETURN	OF	OFFSET	SIM	SUB-GRADE
AV	AUTOMATIC SPRINKLER RISER	ESMT OR EASE	EASEMENT	OG	ORIGINAL GROUND / GRADE	ST	SHEET
AVE	AVENUE	ESMT OR EASE	EXISTING	OHE	OVERHEAD ELECTRIC	STB	SIMILAR
B.C.	B.C. CURVE	FDC	FEED-THROUGH CONNECTION	P OR PAV	PORCEMENT	STL	STREET NAME SIGN
BCY	BCY	FDS	FLARED END SECTION	PCC	POINT OF COMPOUND CURVE OR	STA	STEEL
BFP	BACK FLOW PREVENTOR	FF	FINISH FLOOR	PCC	PORTLAND CEMENT CONCRETE	STD	STATION
BK	BOOK	FG	FINISH GRADE	PG	PAGE	STD	STANDARD
BM	BENCH MARK	FH	FIRE HYDRANT	PG&E	PACIFIC GAS AND ELECTRIC	SS	SIDEWALK
BW	BACK OF WALK	FL	FLOW LINE	PIV	PRESSURE INDICATOR VALVE	SWS	SANITARY SEWER
BSL	BED SETBACK LINE	FM	FORCE MAIN	PL	PROPERTY LINE	TC	TOP OF CURB
BVC	BED VERTICAL CURVE	FS	FORCE SPRUCE	PM	PROPRIETARY	TD	TEMPERATURE
CC	CONCRETE	FR	FRYE SPRINKLER RISER	PCC	POINT OF CONNECTION	TDC	TOP-OF-DRIVE OVER CURB
C&G OR C.G.	CURB AND GUTTER	GB	GRADE BREAK	PP	POWER POLE	TEMP	TEMPORARY
CB	CATCH BASIN	GR	GRADE, GRADE, OR GROUND	PRC	POINT OF REVERSE CURVATURE	TG	TOP OF GRATE
CDS	CONTINUOUS DEFLECTION	GS	GROUND SHOT ELEVATION	PROF	PROFILE	THRU	THROUGH
CIP	CAST IRON PIPE	GS@W	GROUND SHOT AT WALL	PTD	PTDF	TRAFFIC INDEX	
C OR C.E.	CENTRAL	GV	GATE VALVE	TID	TID		
CMP	CORRUGATED METAL PIPE	HORZ	HORIZONTAL	TUE	TURLOCK IRRIGATION DISTRICT		
CO	CLEAN OUT	HP	HIGH POINT	TUE	TUE		
COMP	COMPACTATION	HPS	HIGH PRESSURE SODIUM	PVC	PUBLIC UTILITY EASEMENT		
CONC OR CC	CONCRETE	HGT	HEIGHT	PW	POLYVINYL CHLORIDE PIPE		
C.O.T	CITY OF TURLOCK	HWHY	HIGHWAY	RECLAIMED WATER	PTC	TREE PLANTING EASEMENT	
CT	CURB RETURN	ID	INSIDE DIAMETER	R	TOP OF VERTICAL CURB		
CV	CHECK VALVE	IRR	INVERT	RC	TOP-OF-DRIVE OVER CURB		
DDCV	DOUBLE DETECTOR CHECK VALVE	LF	IRRIGATION	RCP	TOP-OF-DRIVE OVER CURB		
DI	DRAIN INLET	LN	LINEAR FEET OR LINEAR FEET	R.D	TOP-OF-DRIVE OVER CURB		
DIA	DIA	LP	LOW POINT	RET	TOP-OF-DRIVE OVER CURB		
DIP	DUCTILE IRON PIPE	LT	LEFT	RPODA	TOP-OF-DRIVE OVER CURB		
(DOM)	DOMESTIC	MAX	JOINT TRENCH	RV	TOP-OF-DRIVE OVER CURB		
				WWF	TOP-OF-DRIVE OVER CURB		
					UNLESS OTHERWISE NOTED		
					VERTICAL		
					VTF		
					WATER OR WEST		
					WATER OR WEST		
					WATER SERVICE		
					WAY		
					WITH		
					WELDED WIRE FABRIC		

#### APPROVALS

APPROVED BY THE CITY OF TURLOCK  
WILLIAM D. MORRIS, RCE 55910  
CITY ENGINEER  
8/9/23

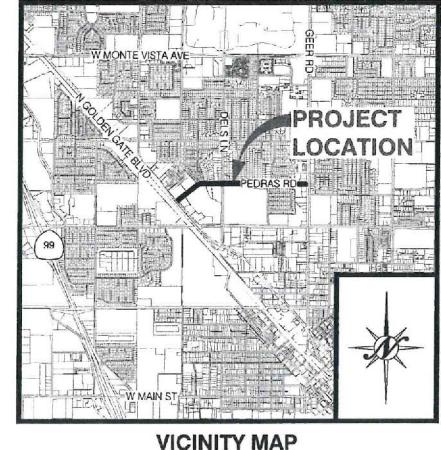


#### PREPARED FOR

CITY OF TURLOCK  
156 S. BROADWAY, SUITE 150  
TURLOCK, CA 95370  
P: (209) 668-6021  
CONTACT: RANDALL JONES

#### PROJECT LOCATION

SITE ADDRESS  
PEDRAS ROAD  
TURLOCK, CA 95382



REVISIONS	DESCRIPTIONS	DATE	APPROVED
NO.			

#### COVER SHEET

CIVIL IMPROVEMENT PLANS FOR  
PEDRAS ROAD REHABILITATION  
TURLOCK, CALIFORNIA

NorthStar  
Engineering Group, Inc.  
Engineering • Surveying • Planning  
601 2nd Street  
(209) 524-3526 fax  
C1.1

Job #: 21-269  
Scale: AS SHOWN  
Drawn: FSEN/ML  
Design: CRW  
Chkd: JPE  
Sheet Number  
C1.1

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## APPENDIX C: QUALITY ASSURANCE PLAN 7-30-2021

AAAAAA

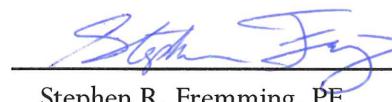
# QUALITY ASSURANCE PROGRAM

## CITY OF TURLOCK



156 S BROADWAY ST  
TURLOCK, CA 95380

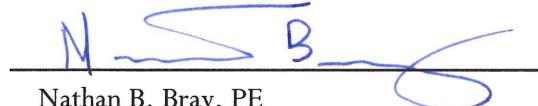
Prepared By:



Stephen R. Fremming, PE  
Principal Civil Engineer



Approved By:



Nathan B. Bray, PE  
Interim Development Services Director / City Engineer



Date:

July 30, 2021

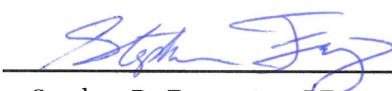
# QUALITY ASSURANCE PROGRAM

## CITY OF TURLOCK



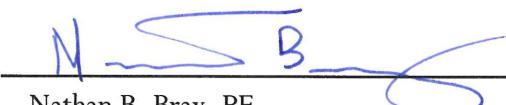
156 S BROADWAY ST  
TURLOCK, CA 95380

Prepared By:

  
Stephen R. Fremming, PE  
Principal Civil Engineer



Approved By:

  
Nathan B. Bray, PE  
Interim Development Services Director/City Engineer



Date:

July 30, 2021

## 1.0 PURPOSE

The purpose of this program is to provide assurance that the materials incorporated into construction projects are in conformance with the contract specifications. To accomplish this purpose, the following terms and definitions will be used:

### DEFINITION OF TERMS

- Acceptance Testing (AT) – Sampling and testing, or inspection, to determine the degree of compliance with contract requirements.
- Independent Assurance Program (IAP) – Verification that AT is being performed correctly by qualified testers and laboratories.
- Quality Assurance Program (QAP) - A sampling and testing program that will provide assurance that the materials and workmanship incorporated into the construction contract are in conformance with the contract specifications. The main elements of a QAP are the AT and IAP.
- Source Inspection – AT of manufactured and prefabricated materials at locations other than the job site, generally at the manufactured location.

This QAP applies to both local projects not located on the National Highway System (NHS) or the State Highway System (SHS), as well as projects located on the NHS and SHS. Said projects are referred to as “Non-NHS” and “Non-SHS”. For projects located on the NHS and SHS, the City of Turlock adopts the Caltrans QAP Sampling and Testing Frequency Tables located in Appendix 1 and as detailed in the following Caltrans documents: Construction Manual, Construction Manual Supplement for Local Agency REs, Local Assistance Structure Representative Guidelines, and Independent Assurance Manual. For Non-NHS and non-SHS projects that receive federal funds, the City of Turlock utilizes the Sampling and Testing Frequency Tables located in Appendix 2.

## 2.0 MATERIALS LABORATORY

The City of Turlock will use a private consultant materials laboratory to perform AT on Federal-aid and other designated projects. The materials laboratory shall be under the responsible management of a California Registered Engineer with experience in sampling, inspection and testing of construction materials. The Engineer shall certify the results of all test performed by laboratory personnel under the Engineer’s supervision. The materials laboratory shall contain certified test equipment capable of performing the test conforming to the provisions of this QAP.

The materials laboratory used shall provide documentation that the laboratory complies with the following procedures:

1. Correlation Testing Program – The materials laboratory shall be a participant in one or more of the following testing programs:

- a. AASHTO Materials Reference Laboratory (AMRL)
- b. Cement and Concrete Reference Laboratory (CCRL)
- c. Caltrans' Reference Samples Program (RSP)

2. Certification of Personnel – The materials laboratory shall employ personnel who are certified by one or more of the following:

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

3. Laboratory and Testing Equipment – The materials laboratory shall only use laboratory and testing equipment that is in good working order. All such equipment shall be calibrated at least once each year. All testing equipment must be calibrated by impartial means using devices of accuracy traceable to the National Institute of Standards and Technology. A decal shall be firmly affixed to each piece of equipment showing the date of the last calibration. All testing equipment calibration decals shall be checked as part of the IAP.

### **3.0 ACCEPTANCE TESTING (AT)**

AT will be performed by a materials laboratory certified to perform the required tests. The tests results will be used to ensure that all materials incorporated into the project are in compliance with the contract specifications.

Testing methods will be in accordance with the California Test Methods or a national recognized standard (i.e., AASHTO, ASTM, etc.) as specified in this QAP.

Sample locations, number of samples, sampling, and test frequencies shall be in accordance with the contract specifications, though shall not be less stringent than that shown in Appendix 1 to this QAP.

### **4.0 INDEPENDENT ASSURANCE PROGRAM (IAP)**

IAP shall be provided by personnel from an independent materials laboratory chosen the City of Turlock. IAP will be used to verify that the sampling and testing procedures are being performed properly and that all testing equipment is in good working condition and properly calibrated.

IAP personnel shall be certified in all required testing procedures, as part of IAP, and shall not be involved in any aspect of AT.

IAP shall be performed on every type of materials test required for the project. Proficiency tests shall be performed on Sieve Analysis, Sand Equivalent, and Cleanliness Value tests. All other types of IAP shall be witness tests.

Poor correlation between acceptance tester's results and other test results may indicate probable deficiencies with the acceptance sampling and testing procedures. In cases of unresolved discrepancies, a complete review of AT shall be performed by IAP personnel. IAP samples and tests are not to be used for determining compliance with contract requirements. Compliance with contract requirements is determined only by AT.

## **5.0 REPORTING ACCEPTANCE TESTING RESULTS**

The following are time periods for reporting material test results to the Resident Engineer:

- When the aggregate is sampled at material plants, test results for Sieve Analysis, Sand Equivalent and Cleanliness Value should be submitted to the Resident Engineer within 24 hours after sampling.
- When materials are sampled at the job site, test results for compaction and maximum density should be submitted to the Resident Engineer within 24 hours after sampling.
- When soils and aggregates are sampled at the job site:
  - Test results for Sieve Analysis, Sand Equivalent and Cleanliness Value should be submitted to the Resident Engineer within 72 hours after sampling.
  - Test results for "R" Value and asphalt concrete extraction should be submitted to the Resident Engineer within 96 hours after sampling.

When sampling products such as Portland Cement Concrete (PCC), cement-treated base (CTB), hot mix asphalt (HMA), and other such materials; the time of such sampling shall be varied with respect to the time of the day insofar as possible; in order to avoid a predictable sampling routine. The reporting of AT results shall be done on an expedited basis such as by fax or email.

## **6.0 TESTING OF MANUFACTURED MATERIALS**

During the Design phase of the project, the Project Engineer may submit a "Source Inspection Request" to the consultant for inspection and testing of manufactured and prefabricated materials by their materials laboratory. A list of materials that can be typically accepted on the basis of certificates of compliance during construction is found in Appendix 2. All certificates of compliance shall conform to the requirements of the contract specifications.

## **7.0 PROJECT CERTIFICATION**

Upon completion of a Federal-aid project, a "Materials Certificate" shall be completed by the Resident Engineer. The City shall include a "Materials Certificate" in the Report of Expenditures submitted to the Caltrans District Director. A copy of the "Materials Certificate" shall also be

included in the City's construction records. The City Engineer in charge of the construction function for the City shall sign the certificate. All materials incorporated into the work which does not conform to specifications must be explained and justified on the "Materials Certificate".

## **8.0 RECORDS**

All material records of samples and tests, material releases and certificates of compliance for the construction project shall be incorporated into the Resident Engineer's project file. If a Federal-aid Project, the project files shall be available for at least 3 years following the date of final project voucher.:.

When two or more projects are being furnished identical materials simultaneously from the same plant, it is not necessary to take separate samples or perform separate test for each project; however copies of the test reports are to be provided for each of the projects to complete the records.

## **9.0 LIST OF APPENDICES**

- Appendix 1 – Size, Frequency, and Location of Sampling and Testing (NHS and SHS projects)
- Appendix 2 - Size, Frequency, and Location of Sampling and Testing (non-NHS and non-SHS projects)
- Appendix 3 - Materials Typically Accepted by Certificate of Compliance

## **APPENDIX 1**

Size, Frequency, and Location of Sampling and Testing (NHS and SHS projects)

Earthwork (*Standard Specifications Section 19*) (1 of 3)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>STRUCTURE BACKFILL (Section 19-3.02C)</b>					
Sieve Analysis	California Test 202	50 lb	Materials site or stockpile	1 every 3,000 tons or 2,000 cu yd	If uniform material is within specification limits, test frequency may be decreased to 1 per day
Sand Equivalent	California Test 217	50 lb	Materials site or stockpile	1 every 3,000 tons or 2,000 cu yd	If uniform material is within specification limits, test frequency may be decreased to 1 per day
Relative Compaction	California Test 231	Sample for California Test 216	Project site in accordance with California Test 231	1 every 2,000 sq yd and test compaction at every 8 in. of thickness	Relative compaction test is required at each location structure backfill is placed
Maximum Wet Density	California Test 216	35 lb	Relative compaction test site locations	1 every relative compaction test	Wet common-composite test maximum value may be used in accordance with California Test 231
<b>PERVIOUS BACKFILL MATERIAL (Section 19-3.02D)</b>					
Sieve Analysis	California Test 202	50 lb	Stockpile	1 every 3,000 tons or 2,000 cu yd	If uniform material within specification limits, test frequency may be decreased to 1 per day
<b>COMPACTION (Section 19-5)</b>					
R-Value	California Test 301	50 lb	Project site	Test to verify R-value if differing site conditions are encountered	If R-value testing in the materials report is incomplete because of preproject conditions, then test to verify design R-value
Relative Compaction	California Test 231	Sample for California Test 216	California Test 216	1 every 2,000 sq yd	
Maximum Wet Density	California Test 216	35 lb	Relative compaction test site locations	1 every relative compaction test	

Earthwork (*Standard Specifications Section 19*) (2 of 3)

Test	Test Method	Sample Size & Container Size	Sampling Location (See Note 1)	Acceptance Test Frequency	Remarks
<b>EMBANKMENT CONSTRUCTION (Section 19-6)</b>					
Relative Compaction	California Test 231	Sample for California Test 216	Project site in accordance with California Test 231	1 every 2,000 sq yd and test compaction at every 8 in. of thickness	
Maximum Wet Density	California Test 216	35 lb	Relative compaction test site locations	1 every relative compaction test	Wet common-composite test maximum value may be used in accordance with California Test 231
<b>GEOSYNTHETIC REINFORCED EMBANKMENT (Section 19-6.02B)</b>					
Plasticity Index	California Test 204	50 lb	Materials site or stockpile	1 per source before use	
pH	California Test 643	50 lb	Materials site or stockpile	1 per source before use	
Sieve Analysis	California Test 202	50 lb	Stockpile	Before use, 1 every 3,000 tons or 2,000 cu yd	If material is uniform and well within specification limits, the test frequency may be decreased to 1 per day
<b>BORROW MATERIAL (Section 19-7)</b>					
R-Value	California Test 301	50 lb	Import borrow source	1 per source	Test for R-value only when an R-value is specified for import borrow in the special provisions; if material at import borrow source is not uniform, increase testing frequency

Earthwork (*Standard Specifications Section 19*) (3 of 3)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>SHOULDER BACKING (Section 19-9)</b>					
Crushed Particles	California Test 205	50 lb	Materials site or stockpile	1 per project before use	
Durability	California Test 229	50 lb	Materials site or stockpile	1 per project before use	
Unit Weight	California Test 212 Rodding Method	50 lb	Materials site or stockpile	1 per project before use	
Sieve Analysis	California Test 202	50 lb	Materials site or stockpile	1 every 3,000 tons or 2,000 cu yd	If uniform material is within specification limits, test frequency may be decreased to 1 per day
Sand Equivalent	California Test 217	50 lb	Materials site or stockpile	1 every 3,000 tons or 2,000 cu yd	If uniform material is within specification limits, test frequency may be decreased to 1 per day

## Note:

1. Refer to California Test 125 for sampling procedures.

Stabilized Soils (*Standard Specifications* Section 24) (1 of 3)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>LIME (Section 24-2.02)</b>					
Various properties	See <i>Standard Specifications</i> Section 24-2.02	One 10-lb sample for each type and source of lime; use a 2-qt airtight container	Initial sample provided by contractor; subsequent sampling from mid-point of delivery	Each 100 tons of lime, 2 per day maximum	Must be on an Authorized Material List and certificate of compliance must accompany each shipment; recommend 1 acceptance test per 5 samples of lime
<b>LIME TREATMENT</b>					
<b>DETERMINATION OF LIME APPLICATION RATE (Section 24-2.01D)</b>					
Unconfined Compressive Strength	California Test 373	100 lb	Native soils; test each type of material to be treated	Before soil stabilization work and if source of lime changes	To determine appropriate lime content
Optimum Moisture Content	California Test 373	100 lb	Native soils; test each type of material to be treated	Before soil stabilization work	
<b>VERIFICATION OF LIME APPLICATION RATE AND STABILIZED SOIL MIXTURE (Section 24-2.01D)</b>					
Lime Application (Dry Form)	Calibrated tray method or equal	Building paper or pan of known area	Surface receiving lime	Each 40,000 sq ft, 2 per day minimum	To determine if application rate is within $\pm$ 5% of ordered application rate
Lime Application (Slurry Form)	Volumetric measurement that is then reduced to lime weight	Determined over known area	Slurry holding tank	Each 40,000 sq ft, 2 per day minimum	To determine if application rate is within $\pm$ 5% of ordered application rate
Uniformity of Mixed Stabilized Soil	Phenolphthalein alcohol indicator solution spray	N/A	Representative areas	Each day at five separate locations	Taken after completion of initial mixing

## Stabilized Soils (Standard Specifications Section 24) (2 of 3)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>VERIFICATION OF LIME APPLICATION RATE AND STABILIZED SOIL MIXTURE (Section 24-2.01D)</b>					
Moisture Content of Mixed Stabilized Soil	California Test 226	0.25 lb each sample	Representative areas at mid depth	Each day at five separate locations to verify contractor's quality control tests	Taken during mellowing period
Gradation of Mixed Stabilized Soil	California Test 202	25 lb	Representative areas	1 every 4,000 sq yd, 1 per day minimum	Taken before compaction
<b>MIXED STABILIZED SOIL (Sections 24-2.01 and 24-2.03)</b>					
Relative Compaction	California Test 231	Sample for California Test 216	Project site in accordance with California Test 231	1 every 2,000 sq yd and test compaction at every 6 in. of thickness	
Maximum Wet Density	California Test 216	35 lb	Relative compaction test site locations	1 every relative compaction test	Wet common-composite test maximum value may be used in accordance with California Test 231
Dimensions	Measurement	N/A	Random locations in place after compaction	As necessary for verification of stabilized soil thickness and surface grades	

Stabilized Soils (*Standard Specifications* Section 24) (3 of 3)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>CURING SEAL-ASPHALTIC EMULSION (Section 24-1.02C)</b>					
Various properties based on asphaltic emulsion type used	Based on asphaltic emulsion type used; see <i>Standard Specifications</i> Section 94	1 liter (or 1 qt) wide-mouth plastic bottle with screw on lids that are sealed with tape	Sampling line leading to the spray bar	1 each shipment	Each shipment must be accompanied by a certificate of compliance; recommend 1 random test from samples taken

## Note:

1. Refer to California Test 125 for sampling procedures.

Aggregate Subbases (*Standard Specifications* Section 25)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>AGGREGATE SUBBASE</b>					
Gradation (Sieve Analysis)	California Test 202	50 lb	Windrow or roadway	Every 3,000 tons or 2,000 cu yd (See Note 2)	If uniform material is within specification limits, frequency may be decreased to 1 test per day
Sand Equivalent	California Test 217	50 lb	Windrow or roadway	Every 3,000 tons or 2,000 cu yd (See Note 2)	If uniform material within specification limits, frequency may be decreased to 1 test per day
R-Value	California Test 301	50 lb	Windrow or roadway	Every 3,000 tons or 2,000 cu yd	R-value testing may be reduced to 1 acceptance test per project when test records demonstrate that comparable material from the same source meets minimum R-value requirements
Relative Compaction	California Test 231	Sample for California Test 216	Roadway in accordance with California Test 231	Every 2,000 sq yd	
Maximum Wet Density	California Test 216	35 lb	Relative compaction test site locations	Every 2,000 sq yd	Wet common-composite test maximum value may be used in accordance with California Test 231
Dimensions	N/A	N/A	Random locations	As necessary for acceptance	Verify thickness of aggregate subbase

## Notes:

1. Refer to California Test 125 for sampling procedures.
2. If material is outside the specification limits, sample and test representative material every 500 cu yd so that deductions may be taken for noncompliant material.

Aggregate Bases (*Standard Specifications Section 26*)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>AGGREGATE BASES</b>					
Gradation (Sieve Analysis)	California Test 202	50 lb	Windrow or roadway	Every 3,000 tons or 2,000 cu yd (See Note 2)	If uniform material is within specification limits, frequency may be decreased to 1 test per day
Sand Equivalent	California Test 217	50 lb	Windrow or roadway	Every 3,000 tons or 2,000 cu yd (See Note 2)	If uniform material is within specification limits, frequency may be decreased to 1 test per day
Resistance Value (R-Value)	California Test 301	50 lb	Windrow or roadway	Every 3,000 tons or 2,000 cu yd	R-value testing may reduced to 1 acceptance test per project when test records demonstrate that comparable material from the same source meets minimum R-value requirements
Durability Index	California Test 229	50 lb	Windrow or roadway	1 per project	Durability test not required for Class 3 aggregate base
Moisture	California Test 226	25 lb	Materials site or stockpile	2 daily when aggregate base is paid for by weight	
Relative Compaction	California Test 231	Sample for California Test 216	Roadway in accordance with California Test 231	Every 2,000 sq yd	
Maximum Wet Density	California Test 216	35 lb	Relative compaction test site locations	Every 2,000 sq yd	Wet common-composite test maximum value may be used in accordance with California Test 231
Dimensions	N/A	N/A	Random locations	As necessary for acceptance	Verify thickness of aggregate base

## Notes:

1. Refer to California Test 125 for sampling procedures.
2. If material is outside the specification limits, sample and test representative material every 500 cu yd so that deductions may be taken for noncompliant material.

Cement Treated Bases (*Standard Specifications Section 27*) (1 of 3)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>CEMENT TREATED BASE Class A or Class B</b>					
<b>AGGREGATE</b>					
Gradation (Sieve Analysis)	California Test 202, California Test 105	40 lb	Plant, truck, windrow, or roadway	1 every 3,000 tons or 2,000 cu yd, minimum 1 per day of production	
Sand Equivalent	California Test 217	40 lb	Plant, truck, windrow, or roadway	1 every 3,000 tons or 2,000 cu yd, minimum 1 per day of production	
<b>AGGREGATE Class B</b>					
R-Value (with and without cement)	California Test 301	100 lb for aggregate qualification	Windrow or roadway	Before production	
<b>CEMENT Type II Portland Cement</b>					
Various properties must comply with <i>Standard Specifications Section 90-1.02B(2)</i>	See <i>Standard Specifications Section 90-1.02B(2)</i>	8 lb	Cement treated base plant or cement spreader	1 each 100 tons of cement, 2 per day maximum	Recommend 1 acceptance test per project for cement from approved suppliers and certificate of compliance with each shipment
<b>WATER</b>					
Chlorides	California Test 422	Clean 2-qt plastic jug with lined, sealed lid	1 per source; at point of use		Water supplies for domestic use do not need to be tested

Cement Treated Bases (*Standard Specifications Section 27*) (2 of 3)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>WATER (Cont.)</b>					
Sulfates	California Test 417	Clean 2-qt plastic jug with lined, sealed lid	1 per source; at point of use		Water supplies for domestic use do not need to be tested
<b>COMPLETED MIX Class A</b>					
Compressive Strength	California Test 312	See California Test 312, Part II	Windrow or roadway before compaction	1 per day	If first 3 days of production test records demonstrate materials are in compliance, recommend test every 5 days of production
<b>COMPLETED MIX Class B</b>					
R-Value	California Test 301	50 lb	Windrow or roadway before compaction	1 every 3,000 tons or 2,000 cu yd	Recommend R-value testing be reduced to 1 every 10,000 cu yd when test records demonstrate that material from the same source, and having comparable grading and sand equivalent values, meets the minimum R-value requirements

Cement Treated Bases (*Standard Specifications Section 27*) (3 of 3)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>COMPLETED MIX Class A and Class B</b>					
Cement Content	California Test 338	See California Test 338, Part I	Windrow or roadway before compaction	1 every 1,500 tons or 1,000 cu yd, minimum 1 per day of production	
Optimum Moisture	California Test 312	See California Test 312	Windrow or roadway	Before production	
Moisture Content	California Test 226	10 lb in sealed container	Roadway before compaction	2 daily	
Relative Compaction	California Test 312 or 231	Sample for California Test 216	Roadway in accordance with California Test 231	1 every 2,000 sq yd	
Maximum Wet Density	California Test 216, California Test 312	35 lb	Relative compaction test site locations	1 every 2,000 sq yd	Wet common-composite test maximum value may be used in accordance with California Test 231
Dimensions	N/A	N/A	Random locations	As necessary for acceptance	Verify thickness of cement treated base

Note:

1. Refer to California Test 125 for sampling procedures.

Concrete Bases (*Standard Specifications Section 28*)

## Lean Concrete Base

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>LEAN CONCRETE BASES</b>					
Compressive strength (7-days)	ASTM C39	6 cylinders 6x12 in. - 3 tests	Concrete truck discharge chute	1,000 cu yd or 1 day's production if less than 1,000 cu yd	
Compressive strength (3-days)	ASTM C39	6 cylinders 6x12 in. - 3 tests	Concrete truck discharge chute	1,000 cu yd or 1 day's production if less than 1,000 cu yd	Optional test to qualify for a transverse contraction joint waiver
<b>RAPID STRENGTH CONCRETE BASE</b>					
Modulus of rupture (7-days)	California Test 524	3 beams - 6x6x20 inches	Concrete truck discharge chute	1 per 500 cu yd or 1 day's production if less than 500 cu yd	
<b>LEAN CONCRETE BASE RAPID SETTING</b>					
Compressive strength (7-days)	California Test 521	6 cylinders 6x12 in. - 3 tests	Concrete truck discharge chute	1 per 500 cu yd or 1 day's production if less than 500 cu yd	
<b>CONCRETE BASE</b>					
Modulus of rupture (7-days)	California Test 523	2 beams of 6x6x32 in. for centerpoint loading or 6x6x20 in. for third-point loading	Concrete truck discharge chute	1,000 cu yd or 1 day's production if less than 1,000 cu yd	
Dimensions	N/A	N/A	Random locations	As necessary for acceptance	Verify thickness of base

Note:

1. Refer to California Test 125 for sampling procedures.

Treated Permeable Bases (*Standard Specifications* Section 29)  
 Asphalt Treated Permeable Base (ATPB) (1 of 4)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>AGGREGATE</b>					
Percentage Crushed Particles	California Test 205	Combined two 40-lb canvas bags (See Note 2) or Batch 160 lb (proportioned per bin percentages)	Plant	Before production and minimum 1 random for every 50,000 tons or less of paving	
Los Angeles Rattler (at 500 revolutions)	California Test 211	Combined two 40-lb canvas bags (See Note 2) or Batch 160 lb (proportioned per bin percentages)	Plant	Before production and minimum 1 random for every 50,000 tons or less of paving	
Film Stripping	California Test 302	Combined two 40-lb canvas bags (See Note 2) or Batch 160 lb (proportioned per bin percentages)	Plant	Before production and minimum 1 random for every 50,000 tons or less of paving	
Gradation (Sieve Analysis)	California Test 202	Combined two 20-lb canvas bags (See Note 3) or Batch 40 lb (proportioned per bin percentages)	Plant	1 for every 4 hours of production	

Treated Permeable Bases (*Standard Specifications* Section 29)  
 Asphalt Treated Permeable Base (ATPB) (2 of 4)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>AGGREGATE (Cont.)</b>					
Cleanness Value	California Test 227	Combined two 20-lb canvas bags (See Note 3) or Batch 40 lb (proportioned per bin percentages)	Plant	1 for every 4 hours of production	Recommend 1 acceptance test per day if 3 consecutive results exceed 62
<b>ASPHALT</b>					
Various properties based on asphalt type used; see <i>Standard Specifications</i> Section 92	Based on asphalt type used; see <i>Standard Specifications</i> Section 92	1-qt double-seal friction-top metal cylindrical shaped can	Asphalt feed line connecting plant storage tanks	1 per day	Certificate of compliance required for each shipment; if asphalt binder source is not on approved list, sample and test asphalt before use
<b>COMPLETED MIX</b>					
Asphalt Content	California Test 382	40 lb in metal containers	Plant, truck, windrow, or roadbed	1 for every 4 hours of production	
<b>AGGREGATE</b>					
Los Angeles Rattler (loss at 500 revolutions)	California Test 211	50 lb	Plant	Before production and minimum 1 random for every 25,000 cu yd	
Soundness	California Test 214	50 lb	Plant		
Sieve Analysis (Gradation)	California Test 202	40 lb	Plant	1 for every 4 hours of production; (See Note 4)	

Treated Permeable Bases (*Standard Specifications* Section 29)  
 Asphalt Treated Permeable Base (ATPB) (3 of 4)

Test	Test Method	Sample Size & Container Size	Sampling Location (See Note 1)	Acceptance Test Frequency	Remarks
<b>AGGREGATE (Cont.)</b>					
Cleanness Value	California Test 227				
<b>CEMENT</b>					
Cement, various properties; must comply with <i>Standard Specifications</i> Section 90-1.02B(2)	Must comply with <i>Standard Specifications</i> Section 90-1.02B(2)	8 lb	Concrete plant	1 for each 100 tons, 2 per day max	Recommend 1 acceptance test per project for cement from approved suppliers with certificate of compliance
<b>WATER</b>					
Chlorides	California Test 422	Clean 2-qt plastic jug with lined, sealed lid At point of use; see Remarks	1 per source		Water supplies for domestic use do not need to be tested
Sulfates	California Test 417	Clean 2-qt plastic jug with lined, sealed lid At point of use; see Remarks	1 per source		Water supplies for domestic use do not need to be tested
Setting Time	ASTM C 191 or ASTM C 266	Contact METS for required quantity of water sample	At point of use	1 per source	Water supplies for domestic use do not need to be tested
Mortar Compressive Strength	ASTM C109	Contact METS for required quantity of water sample	At point of use	1 per source	Water supplies for domestic use do not need to be tested
Coloring Agents	Must comply with <i>Standard Specifications</i> Section 90-1.02D	Contact METS for required quantity of water sample	At point of use	1 per source	Water supplies for domestic use do not need to be tested

Treated Permeable Bases (*Standard Specifications Section 29*)  
 Asphalt Treated Permeable Base (ATPB) (4 of 4)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>WATER</b>					
Alkalies	Must comply with <i>Standard Specifications</i> Section 90-1.02D	Contact METS for required quantity of water sample	At point of use	1 per source	Water supplies for domestic use do not need to be tested
Specific Gravity	Must comply with <i>Standard Specifications</i> Section 90-1.02D	Contact METS for required quantity of water sample	At point of use	1 per source	Water supplies for domestic use do not need to be tested

## Notes:

1. Refer to California Test 125 for sampling procedures.
2. Store one 40-lb canvas bag for dispute resolution.
3. Store one 20-lb. canvas bag for dispute resolution.
4. If test records determine that aggregate gradation or cleanliness value is close to specification limit or outside the specification limits, sample and test concrete every 300 cu yd so that deductions may be taken for noncompliant material.

Reclaimed Pavement (*Standard Specifications Section 30*)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>PULVERIZED ROADBED (Section 30-2)</b>					
Thickness	Thickness-Field Measurement	Field Measurement	Random location	3 per lot	
Relative Compaction (% min)	California Test 231	Sample for California Test 216	In accordance with California Test 231	1 every 2,000 sq yd and test compaction at every 6 in. of thickness	
<b>FULL DEPTH RECLAMATION—FOAMED ASPHALT (Section 30-3)</b>					
Relative Compaction (% min)	California Test 231	Sample for California Test 216	In accordance with California Test 231	1 every 2,000 sq yd and test compaction at every 6 in. of thickness	
Thickness	Thickness	California Test 531. 4- or 6-in.-diameter core, full thickness	3 random locations per lot	See Section 4-4004 of this manual	
<b>FULL DEPTH RECLAMATION—Cement (Section 30-4)</b>					
Thickness	Thickness-Core thickness measurement	California Test 531, 4- or 6-in.-diameter core, full thickness	3 random locations per lot	See Section 4-4004 of this manual	
Cement application rate	Calibrated tray or equal	Building paper or pan of known area	Surface receiving cement	Each 40,000 sq ft, 2 per day minimum	To determine if application rate is within $\pm$ 5% of mix design rate
Relative Compaction (% min)	California Test 231	Sample for California Test 216	In accordance with California Test 231	1 every 2,000 sq yd and test compaction at every 6 in. of thickness	

## Notes:

1. Refer to California Test 125 for sampling procedures.

## Bituminous Seals (Standard Specifications Section 37) (1 of 9)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>ASPHALTIC EMULSION AND ASPHALTIC EMULSION FOR FLUSH COAT</b>					
Various properties in accordance with Section 37 of Standard Specifications	See Section 37-2.02A(4)(b)(ii) of Standard Specifications	1 liter (or 1 qt) wide-mouth plastic bottle with screw on lids that are sealed with tape	Transport tanker	Each shipment	Certificate of compliance required with each shipment
Asphaltic emulsion spread rate	CT 339	Per test method	Full width of boot truck	Once per project	
<b>POLYMER MODIFIED ASPHALTIC EMULSION</b>					
Viscosity	AASHTO T 59	1 liter (or 1 qt) wide-mouth plastic bottle with screw on lids that are sealed with tape	Transport tanker	Each shipment	Certificate of compliance required with each shipment
Sieve Test	AASHTO T 59	1 liter (or 1 qt) wide-mouth plastic bottle with screw on lids that are sealed with tape	Transport tanker	Each shipment	Certificate of compliance required with each shipment
Demulsibility	AASHTO T 59	1 liter (or 1 qt) wide-mouth plastic bottle with screw on lids that are sealed with tape	Transport tanker	Each shipment	Certificate of compliance required with each shipment

## Bituminous Seals (Standard Specifications Section 37) (2 of 9)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>POLYMER MODIFIED ASPHALTIC EMULSION (Cont.)</b>					
Torsional Recovery	California Test 332	1 liter (or 1 qt) wide-mouth plastic bottle with screw on lids that are sealed with tape	Transport tanker	Each shipment	Certificate of compliance required with each shipment
Penetration	AASHTO T 49	1 liter (or 1 qt) wide-mouth plastic bottle with screw on lids that are sealed with tape	Transport tanker	Each shipment	Certificate of compliance required with each shipment
Ring and Ball	AASHTO T 53	1 liter (or 1 qt) wide-mouth plastic bottle with screw on lids that are sealed with tape	Transport tanker	Each shipment	Certificate of compliance required with each shipment

## Bituminous Seals (Standard Specifications Section 37) (3 of 9)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>ASPHALT MODIFIER FOR ASPHALT RUBBER BINDER</b>					
Viscosity	ASTM D445	1-qt round wide-mouth can with friction top lid or 1-qt rectangular can with screw-on lid	Sample port on tanker truck	1 random per project	
Flash Point	ASTM D92	1-qt round wide-mouth can with friction top lid or 1-qt rectangular can with screw-on lid	Sample port on tanker truck	1 random per project	
Molecular Analysis	ASTM D2007	1-qt round wide-mouth can with friction top lid or 1-qt rectangular can with screw-on lid	Sample port on tanker truck	1 random per project	
<b>CRUMB RUBBER MODIFIER FOR ASPHALT RUBBER BINDER</b>					
Wire in CRM (max %)	CT 385	CRM scrap tire: Two 2.5 lb in gallon zip-lock bags  CRM high natural: Two 2.5 lb in gallon zip-lock bags	CRM bulk bag	Minimum 1 random per project	

## Bituminous Seals (Standard Specifications Section 37) (4 of 9)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>CRUMB RUBBER MODIFIER FOR ASPHALT RUBBER BINDER (Cont.)</b>					
Fabric in CRM (max %)	CT 385	CRM scrap tire: Two 2.5 lb in gallon zip-lock bags  CRM high natural: Two 2.5 lb in gallon zip-lock bags	CRM bulk bag	Minimum 1 random per project	
CRM particle length		CRM scrap tire: Two 2.5 lb in gallon zip-lock bags  CRM high natural: Two 2.5 lb in gallon zip-lock bags	CRM bulk bag	Minimum 1 random per project	
CRM specific gravity	CT 208				
Natural rubber content in high nature CRM (%)	ASTM D297				
<b>ASPHALT RUBBER BINDER</b>					
Cone Penetration		1-qt double-seal friction-top metal cylindrical shaped can	Asphalt feed line connecting to the HMA plant	Production start-up evaluation and 1 random per 5 samples	Certificate of compliance required with each shipment

## Bituminous Seals (Standard Specifications Section 37) (5 of 9)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>ASPHALT RUBBER BINDER (Cont.)</b>					
Resilience		1-qt double-seal friction-top metal cylindrical shaped can	Asphalt feed line connecting to the HMA plant	Production start-up evaluation and 1 random per 5 samples	Certificate of compliance required with each shipment
Softening point		1-qt double-seal friction-top metal cylindrical shaped can	Asphalt feed line connecting to the HMA plant	Production start-up evaluation and 1 random per 5 samples	Certificate of compliance required with each shipment
Asphalt Rubber Binder Viscosity	ASTM D7741	1 gal metal cylindrical shaped can with double-seal friction top	Asphalt storage tank	The greater of 1 every 5 lots or once a day	For safety, engineer may witness contractor perform test
Base Asphalt Binder Properties	See Standard Specifications Section 92	Five 1-qt double-seal friction-top metal cylindrical shaped can	Asphalt storage tank	The greater of 1 every 5 lots or once a day	Certificate of compliance required for each shipment; if asphalt binder source is not on approved list, test before use
<b>SCREENINGS/AGGREGATE FOR CHIP SEALS</b>					
LA Rattler	California Test 211	50 lb in canvas bags or 5-gal buckets	Stockpile	Once per project	
% Crushed Particles	AASHTO T 335	50 lb in canvas bags or 5-gal buckets	Stockpile	Once per project	

Bituminous Seals (*Standard Specifications Section 37*) (6 of 9)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>SCREENINGS/AGGREGATE FOR CHIP SEALS</b>					
Film Stripping	California Test 302	50 lb in canvas bags or 5-gal buckets	Stockpile	Once per project	
Sieve Analysis	California Test 202	30 lb	Stockpile	Twice daily	
Cleanliness Value	California Test 227	30 lb	Stockpile	Once daily	
<b>SAND FOR FLUSH COAT</b>					
Sieve Analysis	California Test 202	25 lb	Stockpile	Once per project	
<b>CRACK TREATMENTS</b>					
Crack Treatment Material					
Softening point	ASTM D36	2 each 3-lb minimum samples in silicone release boxes	From crack treatment material dispensing wand	Once per project	Indicate the specified type of crack treatment material on the TL-0101
Cone penetration	ASTM D5329	2 each 3-lb minimum samples in silicone release boxes	From crack treatment material dispensing wand	Once per project	Indicate the specified type of crack treatment material on the TL-0101
Resilience	ASTM D5329	2 each 3-lb minimum samples in silicone release boxes	From crack treatment material dispensing wand	Once per project	Indicate the specified type of crack treatment material on the TL-0101

Bituminous Seals (*Standard Specifications Section 37*) (7 of 9)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>CRACK TREATMENTS (Cont.)</b>					
Crack Treatment Material					
Tensile adhesion	ASTM D5329	2 each 3-lb minimum samples in silicone release boxes	From crack treatment material dispensing wand	Once per project	Indicate the specified type of material on the TL-0101
Asphalt compatibility	ASTM D5329	2 each 3-lb minimum samples in silicone release boxes	From crack treatment material dispensing wand	Once per project	Indicate the specified type of material on the TL-0101
Flexibility	ASTM D3111	2 each 3-lb minimum samples in silicone release boxes	From crack treatment material dispensing wand	Once per project	Indicate the specified type of material on the TL-0101
Specific gravity	ASTM D70	2 each 3-lb minimum samples in silicone release boxes	From crack treatment material dispensing wand	Once per project	Indicate the specified type of material on the TL-0101
Sieve test	See note in Section 37-6.01D(3) "Department Acceptance" of the <i>Standard Specifications</i>	2 each 3-lb minimum samples in silicone release boxes	From crack treatment material dispensing wand	Once per project	Indicate the specified type of material on the TL-0101

## Bituminous Seals (Standard Specifications Section 37) (8 of 9)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>SAND FOR CRACK TREATMENT</b>					
Sieve Analysis	California Test 202	25 lb	Stockpile	Once per project	
<b>SLURRY SEAL AGGREGATE</b>					
Los Angeles Rattler (loss at 500 revolutions)	California Test 211	50 lb	Stockpile	Once per project	
Percentage of Crushed Particles	California Test 205	50 lb	Stockpile	Once per project	
Film Stripping	California Test 302	50 lb	Stockpile	Once per project	
Durability Index	California Test 229	50 lb	Stockpile	Once per project	
Sieve Analysis	California Test 202, California Test 105	30 lb	Stockpile	Once daily	
Sand Equivalent	California Test 217	30 lb	Stockpile	Once daily	
<b>MICRO-SURFACING AGGREGATES</b>					
Los Angeles Rattler (loss at 500 revolutions)	California Test 211	50 lb	Stockpile	Once per project	
Percentage of Crushed Particles	California Test 205	50 lb	Stockpile	Once per project	
Durability Index	California Test 302	50 lb	Stockpile	Once per project	

Bituminous Seals (*Standard Specifications Section 37*) (9 of 9)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>MICRO-SURFACING AGGREGATES (Cont.)</b>					
Sieve Analysis	California Test 202	30 lb	Stockpile	Once daily	
Sand Equivalent	California Test 217	30 lb	Stockpile	Once daily	

Note:

1. Refer to California Test 125 for sampling procedures.

Asphalt Concrete (*Standard Specifications Section 39*) (1 of 14)

Test	Test Method	Sample Size & Container Type	Sampling Location (Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
<b>AGGREGATE: All Types of HMA</b>						
Gradation (Sieve Analysis) (See Note 2)	AASHTO T 27, California Test 105, California Test 384	Combined six 20-lb canvas bags (see See Note 3) or Batch 30 lb (proportioned per bin percentages)	HMA plant	For standard process, 1 for each 750 tons, 1 per day minimum For statistical pay factor (SPF) process, per stratified random sampling plan (See Notes 10 and 11)	Production start-up evaluation. For standard process, minimum 1 per day of paving For SPF process, test per stratified random sampling plan (See Note 14)	
Sand Equivalent	AASHTO T 176	Combined six 20-lb canvas bags (See Note 3) or Batch 30 lb (proportioned per bin percentages)	HMA plant or before lime treatment	For standard process, 1 for each 750 tons, 1 per day minimum, For SPF process, same frequency as gradations	Production start-up evaluation. For standard process, minimum 1 per day of paving For SPF process, test with gradation samples	Not required for OGFC (open graded friction course)

Asphalt Concrete (*Standard Specifications Section 39*) (2 of 14)

Test	Test Method	Sample Size & Container Type	Sampling Location (Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
<b>AGGREGATE: All Types of HMA</b>						
Percent Crushed Particles (Coarse)	AASHTO T 335	Combined six 20-lb canvas bags (See Note 3) or Batch 30 lb (proportioned per bin percentages)	HMA plant or before lime treatment	1 for each 750 tons, 1 per day minimum For the SPF process, see Note 17	Production start-up evaluation, and minimum 1 random for every 25,000 tons or less of paving For the SPF process, see Note 17	
Percent Crushed Particles (Fine)	AASHTO T 335	Combined six 20-lb canvas bags (See Note 3) or Batch 30 lb (proportioned per bin percentages)	HMA plant or before lime treatment	1 for each 750 tons, 1 per day minimum For the SPF process, see Note 17	Production start-up evaluation, and minimum 1 random for every 25,000 tons or less of paving For the SPF process, see Note 17	
LA Rattler (500 Revolutions)	AASHTO T 96	Combined six 20-lb canvas bags (See Note 3) or Batch 30 lb (proportioned per bin percentages)	HMA plant or before lime treatment	1 for each 750 tons, 1 per day minimum For the SPF process, see Note 17	Production start-up evaluation, and minimum 1 random for every 50,000 tons or less of paving For the SPF process, see Note 17	

Asphalt Concrete (*Standard Specifications Section 39*) (3 of 14)

Test	Test Method	Sample Size & Container Type	Sampling Location (Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
<b>AGGREGATE: All Types of HMA (Cont.)</b>						
LA Rattler (100 Revolutions)	AASHTO T 96	Combined six 20-lb canvas bags (See Note 3) or Batch 30 lb (proportioned per bin percentages)	HMA plant or before lime treatment	1 for each 750 tons, 1 per day minimum For the SPF process, see Note 17	Production start-up evaluation, and minimum 1 random for every 50,000 tons or less of paving For the SPF process, see Note 17	
Fine Aggregate Angularity	AASHTO T 304, Method A	Combined six 20-lb canvas bags (See Note 3) or Batch 30 lb (proportioned per bin percentages)	HMA plant or before lime treatment	1 for each 750 tons, 1 per day minimum For the SPF process, see Note 17	Production start-up evaluation, and minimum 1 random for every 50,000 tons or less of paving For the SPF process, see Note 17	Not required for OGFC or Minor HMA
Flat and Elongated Particles	ASTM D4791	Combined six 20-lb canvas bags (See Note 3) or Batch 30 lb (proportioned per bin percentages)	HMA plant or before lime treatment	1 for each 750 tons, 1 per day minimum For the SPF process, see Note 17	Production start-up evaluation, and minimum 1 random for every 50,000 tons or less of paving For the SPF process, see Note 17	Not required for Minor HMA

Asphalt Concrete (*Standard Specifications* Section 39) (4 of 14)

Test	Test Method	Sample Size & Container Type	Sampling Location (Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
<b>ASPHALT BINDER</b>						
Various properties based on asphalt type used (see <i>Standard Specifications</i> Section 92)	See <i>Standard Specifications</i> Section 92	1-qt double-seal friction-top metal cylindrical shaped can	Asphalt feed line connecting the plant storage tanks	1 per day of HMA production	1 random for every 5 samples	Certificate of compliance required for each shipment; if asphalt binder source is not on approved list, sample and test asphalt before use
<b>ASPHALT RUBBER BINDER</b>						
Asphalt Rubber Binder Properties	See <i>Standard Specifications</i> Section 39-2.03A(4)(e)(ii)	1-qt double-seal friction-top metal cylindrical shaped can	Asphalt rubber feed line from the HMA plant	1 every lot	Production start-up evaluation and 1 random per 5 samples	Certificate of compliance required for each lot
Asphalt Rubber Binder Viscosity	ASTM D7741	1 gal double-seal friction-top metal cylindrical shaped can	Asphalt rubber feed line connecting to the HMA plant	1 every lot	1 every lot	For safety, engineer may witness contractor perform test

Asphalt Concrete (*Standard Specifications Section 39*) (5 of 14)

Test	Test Method	Sample Size & Container Type	Sampling Location (Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
<b>ASPHALT RUBBER BINDER (Cont.)</b>						
Base Asphalt Binder Properties	See <i>Standard Specifications</i> Section 92	1-qt double-seal friction-top metal cylindrical shaped can	Asphalt storage tank	Each shipment	Production start-up evaluation and 1 random per 5 samples	Certificate of compliance required for each shipment; if asphalt binder source is not on approved list, sample and test asphalt before use
Asphalt Modifier Properties	ASTM D445 ASTM D92 ASTM D2007	1-qt double-seal friction-top metal cylindrical shaped can or 1-qt rectangular can with screw-on lid	Sample port on tanker truck	Each shipment	1 random per project	
Crumb Rubber Modifier (CRM) Properties	California Test 208, California Test 385, ASTM D297	CRM scrap tire: Two 2.5 lb in gallon zip-lock bags; CRM high natural: Two 2.5 lb in gallon zip-lock bags	CRM bulk bag	Each shipment	1 random per project	

Asphalt Concrete (*Standard Specifications Section 39*) (6 of 14)

Test	Test Method	Sample Size & Container Type	Sampling Location (Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
<b>HOT MIX ASPHALT: Type A</b>						
Moisture Content	AASHTO T 329	10 lb, sealed metal container	Loose mix from behind the paver (See Note 4)	Production start-up evaluation, and minimum 1 per project	Production start-up evaluation, and minimum 1 per project during paving	Test within 1 hour of sampling
Asphalt Binder Content	AASHTO T 308, Method A	60 lb (See Notes 5 and 18) (8x8x4=6 boxes, 8½x8½x4 ½=4 boxes) (See Notes 5 and 18)	Loose mix from behind the paver (See Note 4)	For standard process, 1 for each 750 tons, 1 per day minimum. For SPF process, per stratified random sampling plan (See Notes 10 and 11)	Production start-up evaluation; For standard process, minimum 1 per day of paving For SPF process, per stratified random sampling plan (See Note 14)	
Maximum Theoretical Density	AASHTO T 209	60 lb (See Notes 5 and 18) (8x8x4=6 boxes, 8½x8½x4 ½=4 boxes) (See Notes 5 and 18)	Loose mix from behind the paver (See Note 4)	For standard process, 1 for each 750 tons, 1 per day minimum For SPF process, two samples per shift with verification density cores (See Notes 10 and 13)	Production start-up evaluation. For standard process, 1 random test per day of paving For SPF process, per stratified random sampling plan	

Asphalt Concrete (*Standard Specifications Section 39*) (7 of 14)

Test	Test Method	Sample Size & Container Type	Sampling Location (See Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
<b>HOT MIX ASPHALT: Type A (Cont.)</b>						
Air Void Content	AASHTO T 269	100 lb (See Note 5) (8x8x4=10 boxes, 8½x8½x4 ½=8 boxes)	Loose mix from behind the paver (See Note 4)	Production start-up evaluation, 1 every 25,000 tons of paving. For HMA placed using SPF, see Notes 10 and 11	Production start-up evaluation, and minimum 1 random for every 25,000 tons of paving, except for HMA placed using SPF, see Note 14	
Voids in Mineral Aggregate	SP-2 Asphalt Mixture Volumetrics	100 lb (See Note 5) (8x8x4=10 boxes, 8½x8½x4 ½=8 boxes)	Loose mix from behind the paver (See Note 4)	Production start-up evaluation, 1 every 25,000 tons of paving	Production start-up evaluation, and minimum 1 random for every 25,000 tons of paving	
Dust Proportion	SP-2 Asphalt Mixture Volumetrics	100 lb (See Note 5) (8x8x4=10 boxes, 8½x8½x4 ½=8 boxes)	Loose mix from behind the paver (See Note 4)	Production start-up evaluation, 1 every 25,000 tons of paving	Production start-up evaluation, and minimum 1 random for every 25,000 tons of paving	

Asphalt Concrete (*Standard Specifications* Section 39) (8 of 14)

Test	Test Method	Sample Size & Container Type	Sampling Location (Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
<b>HOT MIX ASPHALT: Type A (Cont.)</b>						
Hamburg Wheel Track	California Test 389	70 lb (See Notes 5 and 18) (8x8x4=7 boxes, 8½x8½x4 ½=6 boxes)	Loose mix at plant, truck, or windrow	Production start-up evaluation, 1 every 10,000 tons of paving For SPF process, see Note 16	Production start-up evaluation, and minimum 1 random for every 10,000 tons or less of paving For SPF process, see Note 16	Not required for Minor HMA
<b>HOT MIX ASPHALT: With RAP/RAS</b>						
Binder Recovery	AASHTO T 164 ASTM D1856	10 lb (8x8x4=1 box, 8½x8½x4 ½=1 box) (See Note 18)	Loose mix from behind the paver (See Note 4)	Production start-up evaluation, 1 every 25,000 tons of paving	1 random for every 25,000 tons or less of paving	

Asphalt Concrete (*Standard Specifications Section 39*) (9 of 14)

Test	Test Method	Sample Size & Container Type	Sampling Location (Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
<b>RUBBERIZED HOT MIX ASPHALT: Gap Graded</b>						
Moisture Content	AASHTO T 329	10 lb, sealed metal container	Loose mix from behind the paver (See Note 4)	Production start-up evaluation, and minimum 1 per project	Production start-up evaluation, and minimum 1 per project during paving	Test within 1 hour of sampling
Asphalt Binder Content	AASHTO T 308, Method A	60 lb (See Notes 5 and 18) (8x8x4=6 boxes, 8½x8½x4 ½=4 boxes)	Loose mix from behind the paver (See Note 4)	1 for each 750 tons, 1 per day minimum. For HMA placed using SPF, see Notes 10 and 11	Production start-up evaluation; 1 random test per day of paving. For HMA placed using SPF, see Note 10	
Maximum Theoretical Density	AASHTO T 209	60 lb (See Notes 5 and 18) (8x8x4=6 boxes, 8½x8½x4 ½=4 boxes)	Loose mix from behind the paver (See Note 4)	1 for each 750 tons, 1 per day minimum. For HMA placed using SPF, see Notes 11 and 13	Production start-up evaluation; minimum 1 per day of paving, except for HMA placed using SPF, see Notes 10 and 13	

Asphalt Concrete (*Standard Specifications Section 39*) (10 of 14)

Test	Test Method	Sample Size & Container Type	Sampling Location (Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
<b>RUBBERIZED HOT MIX ASPHALT: Gap Graded (Cont.)</b>						
Air Void Content	AASHTO T 269	100 lb (See Notes 5 and 18) (8x8x4= 10 boxes, 8½x8½x4 ½=8 boxes)	Loose mix from behind the paver (See Note 4)	Production start-up evaluation, 1 every 25,000 tons of paving. For HMA placed using SPF, see notes 10 and 11	Production start-up evaluation, and minimum 1 random test for every 25,000 tons of paving For SPF process, test per stratified random sampling plan. See note 14	
Voids in Mineral Aggregate	SP-2 Asphalt Mixture Volumetrics	100 lb (See Notes 5 and 18) (8x8x4= 10 boxes, 8½x8½x4 ½=8 boxes)	Loose mix from behind the paver (See Note 4)	Production start-up evaluation, 1 every 25,000 tons of paving	Production start-up evaluation, and minimum 1 random test for every 25,000 tons of paving	
Dust Proportion	SP-2 Asphalt Mixture Volumetrics	100 lb (See Notes 5 and 18) (boxes, 8x8x4=10 boxes, 8½x8½x4 ½=8 boxes)	Loose mix from behind the paver (See Note 4)	Production start-up evaluation, 1 every 25,000 tons of paving	Production start-up evaluation, and minimum 1 random test for every 25,000 tons of paving	

Asphalt Concrete (*Standard Specifications* Section 39) (11 of 14)

Test	Test Method	Sample Size & Container Type	Sampling Location (Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
<b>RUBBERIZED HOT MIX ASPHALT: Gap Graded (Cont.)</b>						
Hamburg Wheel Track	California Test 389	75 lb (See Notes 5 and 18) (8x8x4=7 boxes, 8½x8½x4 ½=6 boxes)	Loose mix at plant, truck, or windrow	Production start-up evaluation 1 every 10,000 tons of paving For SPF process, see Note 16	Production start-up evaluation, and minimum 1 random test for every 10,000 tons or less of paving For SPF process, see Note 16	
<b>OPEN GRADED FRICTION COURSE (OGFC)</b>						
Asphalt Binder Content	AASHTO T 308, Method A	20 lb (See Note 5) 4, 1-gal metal containers with friction lids	Loose mix from behind the paver (See Note 4)	1 for each 750 tons, 1 per day minimum	Production start-up evaluation; minimum 1 per day of paving	

Asphalt Concrete (*Standard Specifications* Section 39) (12 of 14)

Test	Test Method	Sample Size & Container Type	Sampling Location (Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
<b>OPEN GRADED FRICTION COURSE (OGFC) (Cont.)</b>						
Moisture Content	AASHTO T 329	10 lb, sealed metal container	Loose mix from behind the paver (See Note 4)	Production start-up evaluation, and minimum 1 per project	Production start-up evaluation, and minimum 1 per project during paving	Test within 1 hour of sampling
<b>BONDED WEARING COURSE: Gap Graded (BWC-G) (See Note 7)</b>						
Asphalt Binder Content	AASHTO T 308, Method A	20 lb (See Note 5) 4, 1-gal metal containers with friction lids	Loose mix at plant	1 for each 750 tons, 1 per day minimum	Production start-up evaluation. Minimum 1 per day of paving	
Moisture Content	AASHTO T 329	10 lb sealed metal container	Loose mix at plant	Production start-up evaluation, and minimum 1 per project	Production start-up evaluation, and minimum 1 per project during paving	Samples should be tested within 1 hour of sampling
<b>PAVEMENT DENSITY</b>						
Density of cores (% of maximum theoretical density) (See Note 8)	California Test 375	4- or 6-in cores	Final layer, cored to the specified total paved thickness	For the standard process, 1 for each 250 tons For the SPF process, test per stratified random sampling plan. See Note 12	For the standard process, 1 for each 250 tons For SPF process, test per stratified random sampling plan. See Note 14	Density applies to HMA thickness of 0.15 ft or greater

Asphalt Concrete (*Standard Specifications Section 39*) (13 of 14)

Test	Test Method	Sample Size & Container Type	Sampling Location (See Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
<b>PAVEMENT SMOOTHNESS</b>						
Straightedge	N/A	N/A	Pavement surface (See Note 9)	Entire final surface	Entire final surface	Areas exempt from Inertial Profiler
Inertial Profiler for Mean Roughness Index and Areas of Localized Roughness	California Test 387 AASHTO R 56 & AASHTO R 57	Each 0.1 mile	Pavement surface	Entire final surface	Entire final surface	Entire final surface excluding areas requiring straightedge; use contractor-furnished profiles for IRI values within 10% of Caltrans' IRI values
<b>TACK COAT</b>						
Asphalt Binder	Based on asphalt type used (see <i>Standard Specifications</i> Section 92)	1-qt double-seal friction-top metal cylindrical shaped can	Spray bar on asphalt distributor truck	Each truckload	1 random per project	

Asphalt Concrete (*Standard Specifications* Section 39) (14 of 14)

Test	Test Method	Sample Size & Container Type	Sampling Location (See Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
<b>TACK COAT (Cont.)</b>						
Spread Rate	California Test 339	N/A	Pavement	N/A	As necessary for verification of tack coat spread rate	Verify tack coat spray rate is sufficient to meet the minimum specified residual rate. (See example in Section 4-9403, "During the Course of Work," in this manual)
Asphaltic Emulsion	Based on emulsion type used (see <i>Standard Specifications</i> Section 94)	1 liter (or 1 qt) wide-mouth plastic bottle with screw on lids that are sealed with tape	Spray bar on emulsion distributor truck	Each truckload	1 random per project	

## Notes:

1. Refer to California Test 125 for sampling procedures.
2. When using RAP, RAS, or RAP/RAS, adjust gradation by the correction factor determined under California Test 384.
3. Store three 20-lb canvas bags for dispute resolution.
4. Sampling HMA behind the paver is the preferred location. You may also take samples from the windrow, production plant, or truck.
5. Sample sizes are based on split samples—one sample for acceptance testing, and one for dispute resolution. Store one-half of the boxes or cans for dispute resolution.

6. Contractor ships directly to district material laboratory.
7. For bonded wearing course using RHMA-G, RHMA-O, or HMA-O, sampling and testing must comply with requirements for RHMA-G, RHMA-O, or HMA-O.
8. Determine percent of maximum theoretical density under California Test 375, except use AASHTO T 275 to determine in-place density of each core and AASHTO T 209, Method A to determine maximum theoretical density instead of calculating maximum density.
9. May use Inertial Profiler data and ProVAL Rolling Straightedge module to assist in determining where to check with 12-foot straightedge.
10. For the statistical pay factor (SPF) process, and for each lot, prepare a stratified random sampling plan for the following pay factor quality characteristic: aggregate gradations, binder content, air voids, and percent of maximum theoretical density. Sample at milestones identified in the stratified random sampling plan. Do not share the verification sampling time or location with the contractor until immediately before sampling. Do not share the stratified random sampling plan with the contractor until completion of the lot. For guidance on developing the engineer's stratified random sampling plans, refer to section 4-3902K, "Stratified Random Sampling Plan" of this manual.
11. Obtain enough material to split each sample into four parts. Perform verification testing on one part, provide one part to the contractor, hold one part for dispute resolution testing, and reserve the fourth part for additional verification testing in the event the lot runs short and you do not have at least the 3 tests needed for verification.
12. To determine in-place density, obtain verification density cores from the contractor's subplot identified in the engineer's stratified random sampling plan. Break the identified subplot into three equal parts, and randomly determine the coring location of each part. At each location, core three samples aligned longitudinally within 1 to 2 feet of the center core. Retain the center core for verification testing, and randomly determine which of the two remaining cores will be provided to the contractor and which will be retained by the engineer.
13. To determine the paving shift's maximum theoretical density value used for verification of percent in-place density, obtain two samples of HMA from each paving shift the verification density cores are obtained from. Determine the shift's maximum theoretical density value used for the verification by averaging the test results of the two samples. The two samples must be obtained randomly from the first and last half of the paving shift, or from a split of a single sample pulled within the subplot the density cores are obtained from.
14. Do not share the test results of pay factor quality characteristics with the contractor until completion of the lot.
15. For HMA placed using SPF, during production, sample non-pay factor items at the frequency determined by the engineer. Notify the contractor of your intent to sample, and obtain enough material to split into four parts. Test one part, provide one part to the contractor, and retain one part for independent third party testing. When sampling for non-pay factors, except sand equivalent testing, pull two samples from two consecutive sublots. If the first sample fails, immediately test the second sample. Refer to Section 4-3904A(5), "Monitoring Non-Pay Factor Quality Characteristics using Statistical Pay Factor Specifications" of this manual for guidance related to non-pay factor testing.
16. For HMA placed using SPF, when sampling for Hamburg Wheel Track, pull one additional sample for testing from the contractor's next subplot. Test this second sample if the first sample fails.
17. For HMA placed using SPF, sample at same frequency as aggregate gradations, except pull two samples and test the second sample if the first sample fails.
18. Box quantities indicated represent recommended amounts for each individual test. Use CT 125 Appendix B Table 1 for more comprehensive quantities or suites of tests.

Concrete Pavement (*Standard Specifications Section 40*) (1 of 2)

See Table 6-1.17 for concrete materials

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>CONCRETE</b>					
Modulus of Rupture (Open to Traffic)	California Test 523 (Field Curing)	3 beams of 6x6x20 in. for third-point loading	Concrete truck discharge chute	1 set for the last pavement section placed before opening to traffic	Not used for acceptance, only to verify that pavement can be opened to traffic
Modulus of Rupture (28-days)	California Test 523	3 beams of 6x6x20 in. for third-point loading	Concrete truck discharge chute	1 set per age for each 1,000 cu yd, 1 per day minimum (See Note 2)	Recommend frequency of every 2,000 cu yd if after 10 sets all tests are in compliance
Air Content	California Test 504	See test method	Concrete truck discharge chute	1 every day of production	Only test when air entrainment is specified
<b>PAVEMENT</b>					
Thickness	California Test 531	4-in. diameter core, full thickness of pavement	See Section 4-4004, "Level of Inspection," of this manual	1 every 1,200 sq yd	
Dowel Bar Alignment and Concrete Consolidation	Measurement and Inspection	4-in. diameter core size	Transverse pavement joints	1 test every 700 sq yd	Each test consists of 2 cores, one on each end of dowel bar
Tie Bar Alignment and Concrete Consolidation	Measurement and Inspection	4-in. diameter core size	Longitudinal pavement joints	1 test every 4,000 sq yd	Each test consists of 2 cores, one on each end of tie bar
Coefficient of Friction	California Test 342	N/A	Pavement surface	1 test for each day of paving	Each test consists of 5 measurements
Smoothness - Straightedge	Measurement with 12-ft straightedge	N/A	Pavement surface	Entire final surface requiring straightedge	

Concrete Pavement (*Standard Specifications* Section 40) (2 of 2)

See Table 6-1.17 for concrete materials

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>PAVEMENT (Cont.)</b>					
Smoothness - Inertial Profiler for Mean Roughness Index and Areas of Localized Roughness	AASHTO R 56, AASHTO R 57, and California Test 387	0.1 mile	Pavement surface	Entire final surface	Entire final surface excluding specified areas

Notes:

1. Refer to California Test 125 for sampling procedures.
2. If concrete modulus of rupture is close to specification limit or outside the specification limits, sample and test concrete every 1,000 cu yd so that deductions may be taken for noncompliant material.

Existing Concrete Pavement (*Standard Specifications* Section 41)

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>INDIVIDUAL SLAB REPLACEMENT WITH RAPID STRENGTH CONCRETE (Section 41-9)</b>					
Coefficient of Friction	California Test 342	N/A	Pavement surface	1 every 1,200 sq yd	Each test consists of 5 measurements
Smoothness - Straightedge	Measurement with 12-ft straightedge	N/A	Pavement surface	Entire final surface	Areas exempt from Inertial Profiler
Modulus of rupture (3-days)	California Test 524	3 beams of 6x6x20 inches	Concrete truck discharge chute	1 per shift	

## Notes:

1. Refer to California Test 125 for sampling procedures.

Concrete Structures (*Standard Specifications* Section 51)

See Table 6-1.17 for concrete materials

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>JOINT SEALS TYPE B (Section 51-2.02C)</b>					
Various properties; must comply with <i>Standard Specifications</i> Section 51-2.02C(2)	See <i>Standard Specifications</i> Section 51-2.02C(2)	1 piece, 3 ft	Job site	Each lot	Certificate of compliance and certified test report required for each lot; test report must include the seal movement rating, manufacturer minimum uncompressed width and test results; submit samples at least 30 days before use
<b>JOINT SEALS Type A and Type AL (Section 51-2.02B)</b>					
	Use Authorized Material List at: <a href="https://dot.ca.gov/programs/engineering-services/product-evaluation-program">https://dot.ca.gov/programs/engineering-services/product-evaluation-program</a>	1 qt of each component and primer	Job site	1 sample from each component of each batch	Certificate of compliance required for each batch of sealant; submit samples at least 30 days before use

Notes:

1. Refer to California Test 125 for sampling procedures.

Concrete (*Standard Specifications Section 90*) (1 of 9)  
 Concrete, Except Minor Concrete and Rapid Strength Concrete

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>AGGREGATE: Coarse Aggregate</b>					
Los Angeles Rattler (loss at 500 revolutions)	California Test 211	See Note 2	Stockpile	Before production and minimum 1 random test for every 25,000 cu yd	1 for every 4,000 cu yd, if initial test shows abrasion loss greater than 40%
Cleanliness Value	California Test 227	25 lb	Stockpile	Before production and minimum 1 for every 600 cu yd, 1 per day minimum	Recommend 1 acceptance test per day if 3 consecutive results exceed 80; increase sampling to 1 for every 300 cu yd (deductive lot) with engineer's authorization
Sieve Analysis	California Test 202	50 lb	Belt Feed	Before production and minimum 1 for every 600 cu yd, 1 per day minimum	Recommend 1 acceptance test per day if 3 consecutive results are within operating range; increase sampling to 1 for every 300 cu yd (deductive lot) with engineer's authorization
<b>AGGREGATE: Fine Aggregate</b>					
Organic Impurities	California Test 213	See Note 2	Stockpile	Before production or when contamination is suspected	
Durability	California Test 229	See Note 2	Stockpile	Before production	
Sand Equivalent	California Test 217	25 lb	Stockpile	Before production and minimum 1 for every 600 cu yd, 1 per day minimum	Recommend 1 acceptance test per day if 3 consecutive results exceed 80; increase sampling to 1 for every 300 cu yd (deductive lot) with engineer's authorization

Concrete (*Standard Specifications Section 90*) (2 of 9)  
 Concrete, Except Minor Concrete and Rapid Strength Concrete

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>AGGREGATE: Fine Aggregate</b>					
Sieve Analysis	California Test 202	50 lb	Belt feed	Before production and minimum 1 for every 600 cu yd, 1 per day minimum	Recommend 1 acceptance test per day if 3 consecutive results are within operating range; increase sampling to 1 for every 300 cu yd (deductive lot) with engineer's authorization
<b>AGGREGATE: Coarse &amp; Fine Aggregate</b>					
Specific Gravity and Absorption	California Test 206, California Test 207	See Note 2	Stockpile	Before production and when aggregate source changes	
Soundness	California Test 214	See Note 2	Stockpile	Before production	Soundness for fine aggregate waived if durability is $\geq 60$
Sieve Analysis (combined gradation determined with fine and coarse aggregate sieve analyses)	California Test 202		N/A	Before production and minimum 1 for every 600 cu yd, 1 per day minimum	Recommend 1 acceptance test per day if 3 consecutive results are within operating range. Increase sampling to 1 for every 300 cu yd (deductive lot) with engineer's authorization

Concrete (*Standard Specifications Section 90*) (3 of 9)  
 Concrete, Except Minor Concrete and Rapid Strength Concrete

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>CEMENTITIOUS MATERIALS</b>					
Cement, various properties; must comply with <i>Standard Specifications Section 90-1.02B(2)</i>	See <i>Standard Specifications Section 90-1.02B(2)</i>	8 lb	Concrete plant	Sample each 100 tons of cement, 2 per day maximum	Cement must be on Authorized Material List; cement accepted based on certificate of compliance with each shipment; recommend 1 verification test per 5 samples
Supplementary Cementitious Materials (SCM), various properties; must comply with <i>Standard Specifications Section 90-1.02B(3)</i>	See <i>Standard Specifications Section 90-1.02B(3)</i>	8 lb	Concrete plant	Sample each 100 tons of SCM, 2 per day maximum	SCM must be on Authorized Materials List; SCM accepted based on certificate of compliance with each shipment; recommend 1 verification test per 5 samples
<b>WATER</b>					
Chlorides	California Test 422	Clean 2-qt plastic jug with lined, sealed lid	At point of use	1 per source	Water supplies for domestic use do not need to be tested
Sulfates	California Test 417	Clean 2-qt plastic jug with lined, sealed lid	At point of use	1 per source	Water supplies for domestic use do not need to be tested
Setting Time	ASTM C 191 or ASTM C 266	Contact METS for required quantity of water sample	At point of use	1 per source	Water supplies for domestic use do not need to be tested

Concrete (Standard Specifications Section 90) (4 of 9)  
 Concrete, Except Minor Concrete and Rapid Strength Concrete

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>WATER (Cont.)</b>					
Mortar Compressive Strength	ASTM C109	Contact METS for required quantity of water sample	At point of use	1 per source	Water supplies for domestic use do not need to be tested
Coloring Agents	Must comply with Standard Specifications Section 90-1.02D	Contact METS for required quantity of water sample	At point of use	1 per source	Water supplies for domestic use do not need to be tested
Alkalies	Must comply with Standard Specifications Section 90-1.02D	Contact METS for required quantity of water sample	At point of use	1 per source	Water supplies for domestic use do not need to be tested
Specific Gravity	Must comply with Standard Specifications Section 90-1.02D	Contact METS for required quantity of water sample	At point of use	1 per source	Water supplies for domestic use do not need to be tested
<b>ADMIXTURES: Air Entraining Agent</b>					
Air entraining properties Must comply with Standard Specifications Section 90-1.02E	See Standard Specifications Section 90-1.02E	1-qt can or plastic bottle of liquid, 2 lb of powder	Concrete plant	Sample each shipment	Must be on Authorized Materials List and certificate of compliance must accompany each shipment; recommend 1 verification test per 5 samples

Concrete (*Standard Specifications Section 90*) (5 of 9)  
 Concrete, Except Minor Concrete and Rapid Strength Concrete

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>CHEMICAL ADMIXTURE: Water Reducers or Set Retarders</b>					
Claimed properties, chloride identification	ASTM C494 Type A, B, D, F or Type G California Test 415	1-qt can of liquid, 2 lb of powder	Concrete plant	Sample each shipment	Must be on Authorized Materials List and certificate of compliance must accompany each shipment; recommend 1 verification test per 5 samples
<b>CONCRETE for Pavement and Structures</b>					
Shrinkage	AASHTO T 160 Modified See Standard Specifications Section 90-1.01D(3)	Set of three: 4x4x11½ in.	During mix design process	Before production	Engineer may use contractor-provided test result for acceptance; test results must be within 3 years of contract authorization date
<b>CONCRETE Designated Compressive Strength 3600 psi or Greater</b>					
Yield	California Test 518	See test method	Concrete truck discharge chute; (See Note 3)	As necessary to assure accuracy of mix design; minimum 2 per each mix design	No deductions for cement content will be made based on the results of California Test 518
Concrete Uniformity	ASTM C143, California Test 533	See test method	Concrete truck discharge chute (See Note 3)	When compressive test specimen is fabricated and when consistency or uniformity is questionable, minimum 2 per day	

Concrete (*Standard Specifications* Section 90) (6 of 9)  
 Concrete, Except Minor Concrete and Rapid Strength Concrete

Test	Test Method	Sample Size & Container Size	Sampling Location See Note 1)	Acceptance Test Frequency	Remarks
<b>CONCRETE Designated Compressive Strength 3600 psi or Greater (Cont.)</b>					
Concrete Uniformity	California Test 529	100 lb	Concrete truck discharge chute (See Note 3)	When uniformity is questionable	
Compressive Strength	ASTM C172, California Test 540	1 set of 2 cylinders 6x12 in. or 1 set of 3 cylinders 4x8 in. for each test	Concrete truck discharge chute (See Note 3)	1 set per age for every 300 cu yd concrete or as required for acceptance, minimum 1 set per project	For trial batches, see <i>Standard Specifications</i> or job special provisions and Section 6-3, "Field Tests," of this manual
Air Content	California Test 504	See test method	Concrete truck discharge chute (See Note 3)	1 every 4 hours of production and when test specimens are fabricated	Where air is specified for freeze-thaw resistance, a minimum of 1 every 30 cu yd
<b>CONCRETE WITH COMPRESSIVE STRENGTH LESS THAN 3,600 psi</b>					
Concrete Uniformity	ASTM C143, California Test 533	See test method	Concrete truck discharge chute (See Note 3)	When compressive test specimen is fabricated and when uniformity is questionable	

Concrete (*Standard Specifications* Section 90) (7 of 9)  
 Concrete, Except Minor Concrete and Rapid Strength Concrete

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>CONCRETE WITH COMPRESSIVE STRENGTH LESS THAN 3,600 psi</b>					
Concrete Uniformity	California Test 529	100 lb	Concrete truck discharge chute (See Note 3)	When uniformity is questionable	
Compressive Strength	California Test 540, California Test 521	1 set of 2 cylinders, 6x12 in. or 1 set of 3 cylinders 4x8 in. for each test	Concrete truck discharge chute (See Note 3)	1 set per age for every 300 cu yd, minimum 1 set per project	
Air Content	California Test 504	See test method	Concrete truck discharge chute (See Note 3)	When compressive test specimens are fabricated	Where air is specified for freeze-thaw resistance, a minimum of 1 every 100 cu yd
<b>CURING COMPOUND</b>					
Curing Compound; must comply with <i>Standard Specifications</i> Section 90-1.03B(3)	ASTM C309	1-qt can	At time of use (See Note 1)	1 every shipment	<p>Each shipment must have certificate of compliance that includes:</p> <ol style="list-style-type: none"> <li>1. Test results for tests specified in Section 90-1.01D(6) of <i>Standard Specifications</i></li> <li>2. Certification that material was tested within 12 months before use</li> </ol>

Concrete (*Standard Specifications* Section 90) (8 of 9)  
 Concrete, Except Minor Concrete and Rapid Strength Concrete

Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
<b>CEMENTITIOUS MATERIALS</b>					
Cement, various properties; must comply with <i>Standard Specifications</i> Section 90-1.02B(2)	See <i>Standard Specifications</i> Section 90-1.02B(2)	8 lb	Concrete plant	Sample and test if cement quality is questionable	Cement source must be shown on Authorized Materials List; certificate of compliance must accompany each cement shipment
Supplementary cementitious materials (SCM), various properties; must comply with <i>Standard Specifications</i> Section 90-1.02B(3)	See <i>Standard Specifications</i> Section 90-1.02B(3)	8 lb	Concrete plant	Sample and test if SCM quality is questionable	SCM source must be shown on Authorized Materials List; certificate of compliance must accompany each SCM shipment
<b>ADMIXTURES: Air Entraining Agent</b>					
Air entraining properties; must comply with <i>Standard Specifications</i> Section 90-1.02E	See <i>Standard Specifications</i> Section 90-1.02E	N/A	N/A		Must be on Authorized Materials List and certificate of compliance must accompany each shipment
<b>CHEMICAL ADMIXTURES: Water Reducers or Set Retarders</b>					
Claimed properties, chloride identification	ASTM C494 Type A, B, D, F or Type G California Test 415	N/A	N/A		Must be on Authorized Materials List and certificate of compliance must accompany each shipment

Concrete (*Standard Specifications* Section 90) (9 of 9)  
Minor Concrete

Test	Test Method	Sample Size & Container Size	Sampling Location	Acceptance Test Frequency	Remarks
<b>CONCRETE</b>					
Yield	California Test 518	See test method	Concrete truck discharge chute (See Note 3)	As necessary to assure accuracy of mix design; minimum 1 per each mix design	No deductions for cement content will be made based on the results of California Test 518
Compressive Strength	California Test 540, California Test 521	1 set of 2 cylinders 6x12 in. or 1 set of 3 cylinders 4x8 in. for each test	Concrete truck discharge chute (See Note 3)	Sample and test if concrete quality is questionable; minimum 1 per mix design	Minor concrete must have the strength described or 2,500 psi, whichever is greater; see <i>Standard Specifications</i> Section 90-1.02A
Air Content	California Test 504	See test method	Concrete truck discharge chute (See Note 3)	Where air is specified for freeze-thaw resistance, a minimum of 1 every 100 cu yd	
<b>CURING COMPOUND</b>					
Curing Compound; must comply with <i>Standard Specifications</i> Section 90-1.03B(3)	ASTM C309	1-qt can	At time of use; (See Note 1)	1 every shipment	Each shipment must have certificate of compliance that includes: 1. Results for tests specified in Section 90-1.01D(6) of <i>Standard Specifications</i> 2. Certification that material was tested within 12 months before use

## Notes:

1. Refer to California Test 125 for sampling procedures.
2. For initial testing, provide 100 lb of 1-1/2 in. x 3/4 in., 75 lb of 3/4 in. x No. 4, 75 lb of pea gravel, and 50 lb of sand. Use this material for California Test 202, 206, 207, 211, 213, 214, 217, 227 and 229.
3. Refer to California Test 539 for method of sampling fresh concrete.

## Miscellaneous Materials (1 of 5)

Test	Test Method	Sample Size & Container Size	Sampling Location	Acceptance Test Frequency	Remarks
<b>BARBED WIRE AND WIRE MESH FENCES (Section 80-2)</b>					
Barbed Wire, various properties; must comply with <i>Standard Specifications</i> Section 80-2.02D	ASTM A121	1 yd length	Job site	As necessary for verification if quality is questionable	
<b>BOLTS AND HARDWARE (Section 75)</b>					
		2 samples each diameter		Each lot	Sample and test if not previously inspected at the source
<b>CHAIN LINK FENCES (Section 80-3)</b>					
Wire Mesh, various properties; must comply with <i>Standard Specifications</i> Section 80	ASTM A116, Class 1	2 ft width	Job site	Each lot for verification if quality is questionable	Certificate of compliance required for vinyl clad fencing
<b>CONCRETE PIPE (Section 65)</b>					
Compliance with specifications		Contact METS for instructions		Contact METS for instructions	Sample and test if not previously inspected at source
<b>CONDUIT (Section 86-1.02B)</b>					
Conduit, various properties; must comply with <i>Standard Specifications</i> Section 86-1.02B	See <i>Standard Specifications</i> Section 86-1.02B	2 ft. long from center of length, 2 samples each size	Job site	As necessary for verification if quality is questionable	

## Miscellaneous Materials (2 of 5)

Test	Test Method	Sample Size & Container Size	Sampling Location	Acceptance Test Frequency	Remarks
<b>ELECTRICAL CONDUCTORS AND CABLES (Section 86-1.02F)</b>					
Electrical conductors and cables, various properties; must comply with <i>Standard Specifications</i> Section 86-1.02F	See <i>Standard Specifications</i> Section 86	2 ft. long, include markings, 2 samples per gauge	Job site	Each lot for verification if quality is questionable	
<b>EXPANSION JOINT FILLER</b>					
Compliance with specifications		6 in. long, full width of sheet		Each 1,000 sq ft not less than 2 per shipment	
<b>GEOSYNTHETICS (Section 96)</b>					
Various properties; must comply with <i>Standard Specifications</i> Section 96	See <i>Standard Specifications</i> Section 96	1 piece, 3 ft x full width of roll	Job site	Each lot for verification if quality is questionable. See Remarks	Certificate of compliance required for each lot; unroll at least 1 circumference before sampling
<b>PAINT (Section 91)</b>					
Paint, various properties; must comply with <i>Standard Specifications</i> Section 91	See <i>Standard Specifications</i> Section 91	For miscellaneous painting, 1 qt (see Section 6-2 of this manual)	Job site	Each batch	If less than 20 gallons, testing not required and resident engineer must field release. Zinc-rich primer must be on the Authorized Materials List
<b>PAVEMENT MARKERS (Section 81-3)</b>					
Pavement Markers, various properties; must comply with <i>Standard Specifications</i> Section 81-3	See <i>Standard Specifications</i> Section 81-3	20 markers	Job site	As necessary for verification if quality is questionable	Each shipment must have certificate of compliance

## Miscellaneous Materials (3 of 5)

Test	Test Method	Sample Size & Container Size	Sampling Location	Acceptance Test Frequency	Remarks
<b>PERMEABLE MATERIALS: (Section 68-2.02F)</b>					
Durability Index	California Test 229	50 lb	Stockpile	Before use	
Sieve Analysis	California Test 202	50 lb	Stockpile	Before use, 1 every day	
<b>PERMEABLE MATERIALS: Class 3 (Section 68-2.02F)</b>					
Crushed Faces	California Test 205	50 lb	Stockpile	Before use	
<b>PRESTRESSED TENDON GROUT (Section 50)</b>					
Efflux time	California Test 541	One 6x12 in. cylinder mold can	From batch immediately after mixing for prequalification, thereafter from outlet end of tendon, storage tank, or both	At the start of each day's work, and thereafter 1 test per each 5% of ducts; see Remarks	Repeat acceptance tests whenever source of material is changed
<b>RAISED BARS (PRECAST)</b>					
Compliance with specifications		1 unit or full size bar		Each lot	Sample and test if not previously inspected at the source
<b>REINFORCING STEEL (Section 52)</b>					
Reinforcing Steel, various properties	See Standard Specifications Section 52	2 samples, 30 in., except 40 in. for No. 14 and No. 18	Job site	As necessary for verification if quality is questionable	Each shipment must be accompanied by a certificate of compliance
<b>SLOPE PROTECTION (Section 72)</b>					
Size	N/A		Quarry or stockpile	As required for acceptance	Adequate size of slope protection documented by measuring or weighing the material
Apparent Specific Gravity	California Test 206	75 lb	Quarry or stockpile	Before use	

## Miscellaneous Materials (4 of 5)

Test	Test Method	Sample Size & Container Size	Sampling Location	Acceptance Test Frequency	Remarks
<b>SLOPE PROTECTION (Section 72) (Cont.)</b>					
Absorption	California Test 206	75 lb	Quarry or stockpile	Before use	
Durability Index	California Test 229	75 lb	Quarry or stockpile	Before use	
<b>STEEL PRODUCTS</b>					
		Contact METS for instructions		Contact METS for instructions	
<b>STRUCTURAL STEEL AND MISCELLANEOUS METAL (Sections 55 &amp; 75)</b>					
		2 samples, 30-in., cut parallel to direction of rolling		Each heat or melt or 10 tons or fraction	Sample and test if not previously inspected at the source
<b>STRUCTURAL STEEL COATINGS (Section 59)</b>					
Paint, various properties; must comply with <i>Standard Specifications</i> Section 59	See Standard Specifications Section 59	For bridge or major structure, send an unopened 5-gal can	Job site	Each batch; see Remarks	Unused portion of 5-gal sample will be returned to job; see Section 6-2, "Acceptance of Manufactured or Fabricated Materials and Products," of this manual
<b>WATER-PROOFING MATERIALS (Section 54)</b>					
Glass Fiber	ASTM D1668, Type 1	9 sq ft of asphalt saturated cotton fabric	Job site	1 sample from each lot	
Asphalt	ASTM D449	5 lb of asphalt	Job site	1 sample from each lot	
Primer	ASTM D41	1 qt of asphalt primer	Job site	1 sample from each lot	

## Miscellaneous Materials (5 of 5)

Test	Test Method	Sample Size & Container Size	Sampling Location	Acceptance Test Frequency	Remarks
<b>WELDED WIRE REINFORCEMENT (Section 52-1.02C)</b>					
Welded Wire Reinforcing Steel, must comply with <i>Standard Specifications</i> Section 52-1.02C	ASTM A 1064/A 1064M	9 sq ft	Job site	As necessary for verification if quality is questionable	Each shipment must be accompanied by a certificate of compliance

## **APPENDIX 2**

Size, Frequency, and Location of Sampling and Testing (non-NHS and non-SHS projects)

**Sampling and Testing Frequency Table**  
*for projects OFF the SHS.*

**HOT MIX ASPHALT (HMA) / ASPHALT CONCRETE (AC)**

Quality Characteristic	Test Method	Minimum Sampling and Testing Frequency	Location/Time of Sampling
Aggregate Gradation (Sieve)	CT 202	1 Per 1000 Tons or Part Thereof ; Minimum 1 per day during production/placement of at least 300 tons per day.	At Plant Per CT 125 (a)
Sand Equivalent	CT 217		Loose Mix Behind Paver Per CT 125
Asphalt Binder Content	CT 382	1 Per 1000 Tons or Part Thereof ; Minimum 1 per day during production/placement of at least 300 tons per day. (b)	Random Locations Per CT 375 (c)
In-Place Density and Relative Compaction (Nuclear )	Nuclear (b) CT 375 or ASTM D2950 (c)		
Theoretical Maximum Specific Gravity and Density (Rice)	CT 309	1 Per Day During Production/Placement of At Least 300 Tons Per Day	Loose Mix Behind Paver Per CT 125
HMA Moisture Content	CT 226 or CT 370		
Stabilometer Value (d)	CT 366		
Asphalt Binder	Sample per Section 92	Sample 1 min. per day for production over 300 tons per day; See (f) regarding testing.	At Plant Per CT 125
Smoothness	12-foot Straightedge	As necessary to confirm contract compliance.	Final Pavement Surface

- (a) Exact tonnage of sample location to be determined by Random Sampling Plans
- (b) Compaction determined by Nuclear Density Device. Core testing required if compaction fails the nuclear test
- (c) Correlation between core densities and nuclear device required only if compaction fails the nuclear test
- (d) Report the average of 3 tested briquettes from a single split source
- (e) Use CT 309 to determine maximum theoretical density in lieu of CT 367 calculated maximum theoretical density
- (f) No testing required unless warranted by concern ; sample and store until completion of project

### SUBGRADE (DISTURBED BASEMENT SOIL) OR EMBANKMENT

Quality Characteristic	Test Method	Minimum Sampling and Testing Frequency	Location/Time of Sampling
Maximum Density and Relative Compaction	CT 216/CT 231	1 Min. Test per 5000 sq ft under vehicle traveled way and shoulder 1 Min. Test Per 300 linear foot under sidewalk	Random locations as determined by the Engineer in place after compaction.

### AGGREGATE BASES AND SUBBASES, IMPORTED BORROW

Quality Characteristic	Test Method	Minimum Sampling and Testing Frequency	Location/Time of Sampling
Sieve Analysis	CT 202	1 Min. Test Per Material Source	Sample from site stockpile/plant prior to placement.
R-Value	CT 301		
Sand Equivalent	CT 217		
Maximum Density and Relative Compaction	CT 216/CT 231	1 Min. Test per 5000 sq ft	Random locations as determined by the Engineer in place after compaction.

### STRUCTURE BACKFILL, SELECT BACKFILL

Quality Characteristic	Test Method	Minimum Sampling and Testing Frequency	Location/Time of Sampling
Sieve Analysis	CT 202	1 Min. Test Per Material Source	Sample from site stockpile/plant prior to placement
R-Value	CT 301		
Sand Equivalent	CT 217		
Maximum Density and Relative Compaction	CT 216/CT 231	1 Min. Test Per 2 Vertical Lifts of Placement	Random locations as determined by the Engineer in place after compaction.

## PORTLAND CEMENT CONCRETE (PCC) - STRUCTURAL AND SIGNAL/LIGHTING FOUNDATIONS

### COARSE AGGREGATE

Quality Characteristic	Test Method	Minimum Sampling and Testing Frequency	Location/Time of Sampling
Sieve Analysis	CT 202	1 min. test per 500 cu yds and per each material source ; 1 min. test on smaller projects; If bridge, 1 min. set per separate pour per abutment/pier/deck.	Sample from site stockpile/plant prior to placement
Cleanliness Value	CT 227		

### FINE AGGREGATE

Quality Characteristic	Test Method	Minimum Sampling and Testing Frequency	Location/Time of Sampling
Sieve Analysis	CT 202	1 min. test per 500 cu yds and per each material source ; 1 min. test on smaller projects; If bridge, 1 min. set per separate pour per abutment/pier/deck.	Sample from site stockpile/plant prior to placement
Sand Equivalent	CT 217		

### WET MIX

Quality Characteristic	Test Method	Minimum Sampling and Testing Frequency	Location/Time of Sampling
Slump/Penetration	CT 533	2 per day	Sample from truck/work site
Cylinders	CT 539/540	1 min. set of 3 per day; If bridge, 1 min. set per separate pour of abutment/pier/deck.	

## **APPENDIX 3**

Materials Typically Accepted by Certificate of Compliance

## Materials Typically Accepted by Certificate of Compliance

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- Reinforcing Steel
- Treated Timber and Lumber
- Plastic Pipe
- Plastic Pipe Fittings
- Reinforced Concrete Pipe
- Corrugated Metal Pipe
- Drop Inlets
- Prefabricated Manhole Bases and Cones
- Thermoplastic Pavement Markings and Stripes
- Pavement Markers
- Conductors
- Conduit
- Electrical Components
- Pavement Reinforcing Fabric
- Portland Cement
- PCC Admixtures
- Minor concrete
- Asphalt (Oil)
- Liquid Asphalt
- Asphaltic Emulsion
- Epoxy
- Valve Boxes