NOTICE TO CONTRACTORS,

PROPOSAL,

AGREEMENT, &

SPECIAL PROVISIONS

FOR CONSTRUCTION ON

Project No. 23-069

Roads Program Capital Improvement Project

IN STANISLAUS COUNTY,
TURLOCK, CALIFORNIA.

Municipal Services Department/ Roads Program

Contact Person: Fred Pezeshk

REGISTERED PROFESSIONAL ENGINEER
WILLIAM D. MORRIS
No. 55910
CIVIL
STATE OF CALIFORNIA

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 **September 5, 2025**
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 Friday, September 5, 2025**, for:

Project No. 23-069
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 Thursday, August 21, 2025, 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 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 bidder's 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 of Turlock web site or purchased for a non-refundable fee of three hundred and fifty-three dollars **($353)** 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: 08/08/2025 CITY OF TURLOCK

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

PROPOSAL

Project No. 23-069
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 **2:00:00 pm local on Friday, September 5, 2025** 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.**

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 23-069"** 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. 23-069
Roads Program Capital Improvement Project

BID SCHEDULE

	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT COST	TOTAL
1	MOBILIZATION, DEMOBILIZATION, BONDS, INSURANCE & PERMITS	LS	1		
2	REMOVE AND RESET MONUMENT	EA	23		
3	PORTABLE CHANGEABLE MESSAGE SIGN	EA	10		
4	TRAFFIC CONTROL SYSTEM	LS	1		
5	TEMPORARY CONSTRUCTION FUNDING SIGNS	EA	9		
6	JOB SITE MANAGEMENT	LS	1		
7	MONUMENT PRESERVATION	LS	1		
8	CONSTRUCTION STAKING	LS	1		
9	SWPPP	LS	1		
10	TEMPORARY EROSION CONTROL AND DUST CONTROL	LS	1		
11	POTHOLING EXISTING UTILITIES	LS	1		
12	CLEAR & GRUB	LS	1		
13	ROADWAY EXCAVATION (F)	CY	10,480		
14	ASPHALT CONCRETE REMOVAL	SF	502		
15	CONCRETE SECTION REMOVAL	SF	17,278		
16	CONCRETE VERTICAL CURB REMOVAL	LF	1,469		
17	CONCRETE VERTICAL CURB & GUTTER REMOVAL	LF	8,337		
18	CONCRETE DRIVEWAY REMOVAL	SF	9,342		
19	CONCRETE VALLEY GUTTER REMOVAL	LF	211		
20	REMOVE TINHORNS	LF	72		
21	RELOCATE ROADSIDE SIGN PANEL AND POST	EA	9		
22	REMOVE TREE	EA	6		

23	REMOVE FENCE (WOOD)	LF	64		
24	REMOVE FENCE (CHAIN LINK)	LF	80		
25	HMA TYPE A	TON	12,420		
26	SLURRY SEAL	SF	57,652		
27	MINOR CONCRETE (SIDEWALK)	SF	17,776		
28	MINOR CONCRETE (DRIVEWAY)	SF	14,914		
29	MINOR CONCRETE (VALLEY GUTTER)	SF	1,836		
30	MINOR CONCRETE (CURB & GUTTER)	LF	11,971		
31	MINOR CONCRETE (CURB RAMP)	SF	3,824		
32	MINOR CONCRETE (ROLLED CURB)	LF	530		
33	TRUNCATED DOMES	SF	509		
34	THERMOPLASTIC STRIPING (DETAIL 2)	LF	9,847		
35	THERMOPLASTIC STRIPING (DETAIL 22)	LF	2,080		
36	THERMOPLASTIC STRIPING (12" STOP BAR)	LF	710		
37	THERMOPLASTIC PAVEMENT MARKINGS (WHITE CROSSWALK)	SF	9,028		
38	THERMOPLASTIC PAVEMENT MARKINGS (WHITE STOP LEGEND)	SF	857		
39	BLUE FIRE HYDRANT PAVEMENT MARKER (TYPE BB)	EA	37		
40	ARROW STRIPING (TYPE 1 10')	SF	98		
41	INSTALL YIELD PAVEMENT MARKINGS	SF	423		
42	INSTALL NEW R1-1 SIGN PANEL AND POST	EA	2		
43	RESET STREET NAME PANEL AND POST	EA	3		
44	RESET STREET NAME PANEL ON R1-1 POST	EA	2		
45	RESET R1-1 SIGN PANEL AND POST	EA	6		
46	INSTALL NEW R1-5 PANEL AND POST	EA	30		
47	RESET R5-1 SIGN ON R1-1 POST	EA	1		
48	RESET R6-1L SIGN ON R1-1 POST	EA	1		

49	INSTALL R6-1L SIGN ON STREET LIGHT	EA	1		
50	INSTALL W11-2, W16-7P SIGN PANELS, AND POST	EA	40		
51	INSTALL W11-2 AND W16-7P SIGN PANELS ON EXISTING POST/POLE	EA	4		
52	RESET W3-1 AND POST	EA	1		
53	INSTALL FENCE (WOOD)	LF	56		
54	INSTALL FENCE (CHAIN LINK)	LF	70		
55	ADJUST WATER METER TO GRADE	EA	11		
56	ADJUST WATER VALVE TO GRADE	EA	1		
57	RELOCATE WATER METER	EA	6		
58	REPLACE WATER VALVE BOX	EA	45		
59	RESET FIRE HYDRANT TO GRADE	EA	2		
60	RELOCATE ELECTRICAL BOX	EA	2		
61	ADJUST GAS VALVE TO GRADE	EA	2		
62	ADJUST SANITARY SEWER MANHOLE TO GRADE	EA	26		
63	ADJUST SANITARY SEWER CLEANOUT TO GRADE	EA	3		
64	ADJUST STORM DRAIN MANHOLE TO GRADE	EA	3		
65	STORM DRAIN CONNECTION TO MAIN	EA	10		
66	STORM DRAIN MANHOLE	EA	14		
67	REMOVE AND REPLACE STORM DRAIN CATCH BASIN	EA	7		
68	STORM DRAIN CATCH BASIN	EA	17		
69	18" STORM DRAIN PIPE	LF	3,051		
70	ABANDON IN PLACE EXISTING STORM DRAIN PIPE	LF	234		
71	ABANDON IN PLACE EXISTING STORM DRAIN INLET	EA	7		
72	ABANDON IN PLACE EXISTING STORM DRAIN DRY WELL	EA	6		
73	RECONNECT UNDERDRAIN PIPE	EA	5		
74	REINSTALL TRAFFIC LOOP	LS	1		

75	RELOCATE MAILBOX	EA	2		
76	CONCRETE ROLLED CURB REMOVAL	LF	652		
77	REMOVE EXISTING 30" IRRIGATION PIPE, BACKFILL, AND CONCRETE PLUG ENDS AT RIGHT OF WAY.	LF	120		
78	18" STORM DRAIN PERFORATED PIPE	LF	20		
79	STORM DRAIN CLEANOUT	EA	1		
80	3/4" CRUSHED ROCK AT FRENCH DRAIN	CY	10		
81	MIRAFI GEOTEXTILE FABRIC	SF	438		
82	6 MIL POLY SHEETING	SF	165		
83	CONSTRUCTION AREA SIGNS	LS	1		
84	AGGREGATE BASE (CLASS 2)	CY	3,026		
85	CCTV STORM DRAIN AFTER IMPROVEMENTS	LF	3,071		
86	UNSTABLE MATERIAL	CY	823		
87	REPLACE WATER METER	EA	1		
88	1.5" ASPHALT GRIND	SY	128		
	TOTAL				

(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 copartners 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. 23-069
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. 23-069

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.

NAME	LICENSE NUMBER	DIR NUMBER	ADDRESS	WORK ITEMS TO BE PERFORMED AND % OF ITEM

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

FOR ROADS PROGRAM PUBLIC IMPROVEMENT PROJECT

Project No. 23-069

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 _____ (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. 23-069**;
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. 23-069."** 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.

	Exhibit Designation	Exhibit Title
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 Fifty (150)** 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 **Ninety-Seven Hundred** and no/100ths Dollars **($9700.00)** 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.

(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. 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), 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). 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) *Auto Insurance*. Contractor shall maintain auto liability coverage for owned, non-owned, and hired autos 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) per accident. If Contractor owns no vehicles, this requirement may be met through a non-owned auto endorsement to the CGL policy.

(d) *Builder's Risk Insurance.* Upon commencement of construction and with approval of City, Contractor shall obtain and maintain Builder's Risk/Course of Construction insurance. The policy shall be provided for replacement value on an "all-risk" basis. City shall be named as Loss Payee on the policy and there shall be no coinsurance penalty provision in any such policy. The policy must include: (1) coverage for removal of debris and insuring the buildings, structures, machinery, equipment, materials, facilities, fixtures, and all other properties constituting a part of the project; (2) coverage with limits sufficient to insure the full replacement value of any property or equipment stored either on or off the project site, whether provided from within a Builder's Risk policy or through the addition of an Installation Floater. Such insurance shall be on a form acceptable to City to ensure

adequacy of terms and limits. Contractor shall not be required to maintain property insurance for any portion of the Project following transfer of control thereof to City. REPLACE WITH {Intentionally Omitted} WHEN NOT REQUIRED

(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. REPLACE WITH {Intentionally Omitted} WHEN NOT REQUIRED

(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. REPLACE WITH {Intentionally Omitted} WHEN NOT REQUIRED

(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 Commercial General Liability and automobile Liability 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 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 include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

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

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 party 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 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

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

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:

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: ( ) _____

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. 23-069;** 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

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**. **23-069**; 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

SPECIAL PROVISIONS

City Project No: 23-069

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 Friday, January 10, 2025, at 10:00 am at Turlock City Hall, 156 S. Broadway Turlock, CA 95380.

3. Slurry Seal Sweeping: At least 48 hours prior to beginning of vacuuming and sweeping, the Contractor shall post all parking areas that re to be worked upon with approved, "No Parking – Tow Away" sign. These signs shall also state the day of the week and hours of no parking. Contractor shall thoroughly sweep and vacuum all areas. Contractor shall provide the City with a detailed street schedule for the street sweeping days.

1.01 SPECIFICATIONS:

The work described herein shall be done in accordance with the current City of Turlock Standard Specifications and the 2023 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

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 Aguilero
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

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 19th, 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. Where commercial and multi-family residential properties are served by multiple driveways, Contractor shall maintain at least one driveway open for resident and business access at all times. Where commercial and multi-family residential properties are served by a single driveway, Contractor shall stage construction and provide temporary measures (i.e., plating) to maintain a minimum 10-foot open width for the driveway at all times. 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. 23-033, 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 2 & 3

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 1 (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 1 (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)
- Roads Program Capital Improvements Project, Bid Package 1 (City of Turlock Project No. 23-068)
- Roads Program Capital Improvements Project, Bid Package 1, 2, & 3 (City of Turlock Project No. 23-067)

The intersection of S. Orange and South Avenue shall not be blocked during pick up and drop off times: 8:00a.m. – 4:00p.m. on weekends and crosswalks shall remain accessible.
Wakefield Elementary School Access Driveway at S. Orange shall remain open Monday through Friday between 6:00 a.m. and 7:00 a.m. for deliveries.
The intersection of S. Orange and Bernell Avenue shall remain open to allow drop-off at Bernell Avenue, West of the intersection.

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.

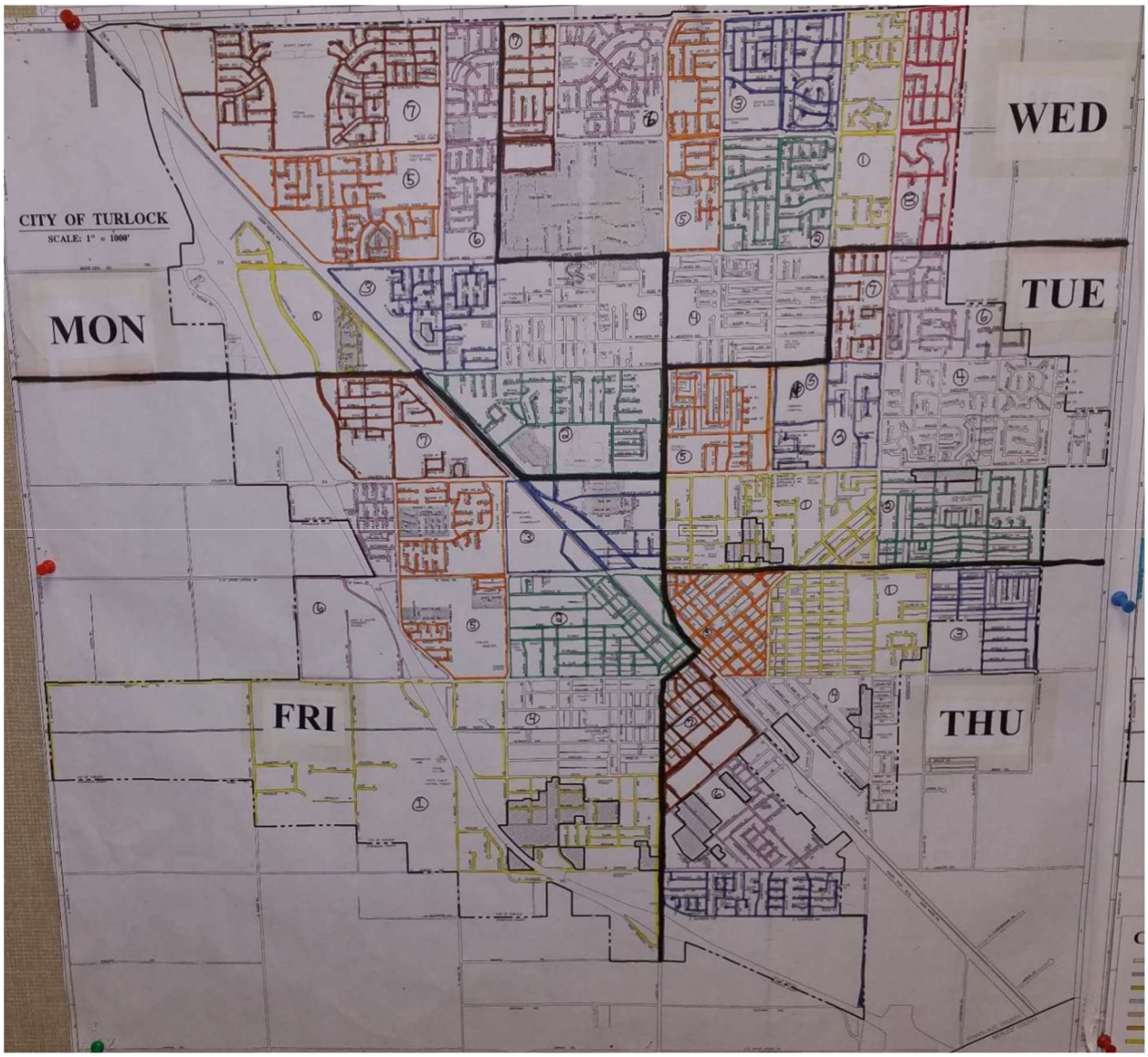
Prior to performing any work that requires a lane closure, a Traffic Control Plan, prepared by the Contractor in general conformance with the provided Traffic Control Plans, shall be reviewed and approved by the City of Turlock. Traffic Control details have been provided as part of the Project Plans, 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.

Coordination with Turlock Scavenger:

Contractor shall prepare daily schedules to avoid conflicts with garbage pick up by Turlock Scavenger. Contractor shall not complete any work in a given area on a scheduled garbage pick up day for that area. See map showing Turlock Scavenger’s pick up schedule below.



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 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 of 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 locating utilities per Section 5.35 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. In the event the Contactor fails to complete the required work in the timeframe indicated, the City may deduct from payments or credits due Contractor a sum equal to $500 for each and every calendar day delay in finishing the work.

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. 23-069, City of Turlock Roads Program Capital Improvement Project includes curb, gutter, sidewalk, driveway reconstruction, alley reconstruction, ADA curb ramp construction, grinding existing roadway, pavement rehabilitation, storm drain improvements, adjusting existing manholes and valve covers to grade, signing, striping, and traffic control.

SECTION 10 TECHNICAL SPECIAL PROVISIONS

Project No. 23-069 Package 1
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

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 CONSTRUCTION STAKING

The Contractor's attention shall be directed to Special Provisions Section 5.24, "Surveying." The Contractor shall provide a City of Turlock Survey Monument Preservation Form and provide construction staking as needed to accurately construct the project improvements. Any additional staking needed for construction not included in this specification section shall be the responsibility of the Contractor and shall be included in the Bid Item list as a lump sum cost.

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.

If construction activities affect access to public parking, residential property, or commercial property, contractor shall post signs 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 calendars day 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 TEMPORARY 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 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 of accumulated stormwater, shall be considered as included in the lump sum price paid for job site management and no additional compensation will be allowed, therefore. See Caltrans Standard Specification Section 13-4.03G for language.

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 Phae 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 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 building, 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 no more than 14 days prior to the removal of the existing roadway. 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 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, a log of the inspections performed shall correlate with the manholes, stationing, etc., shown on the project plans and the video inspection produced.
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 and 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; caping 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 CURBS

Remove and dispose of existing curbs including curb and gutter and rolled curbs, 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 (rolled 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 (DRIVEWAYS, SIDEWALKS, CURB RAMPS)

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 (Driveways, Sidewalks, Curb Ramps) shall be at the contract unit price per square foot 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 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.

Should the contractor damage the saw-cut edges during construction, the contractor shall re-cut the edges at their cost as directed by the Engineer.

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

10.17 REMOVE AND INSTALL FENCE

Remove existing fence, including gates, shall be removed, salvaged if possible, and reconstructed or reinstalled at locations shown on the plans and as directed by the Engineer. Upon approval of the Engineer, Contractor may reuse existing fence elements, including poles, posts, chain link mesh, and wood paneling. Removal of any footings, concrete foundations, repair of landscaping and irrigation, and removal of other appurtenances as necessary to cleanly and completely remove the existing fencing and backfill excavation areas to grade and allow for the construction of proposed improvements shall be included in the bid price for this item.

Removed facilities shall become the property of the Contractor and shall be removed from the project site, except as otherwise directed by the Engineer.

Proper and suitable tools and appliances for safe handling of posts, panels, and chain link mesh shall be employed. Care shall be exercised to avoid damage to posts, panels, or chain link mesh. All materials shall be carefully examined by the Contractor for defects at the time of installation, and no defective materials shall be installed. New concrete foundations / footings in-kind shall be poured unless directed otherwise by the Engineer.

Panels shall be carefully erected, true to line and grade. Posts and panels shall be plumb and level. Posts' vertical, with the deviation from the vertical for the full height of the post, shall not exceed

the maximum variation from plumb of 1/8 inch (3 mm).

Payment for Remove and 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 and for doing all the work involved in Reset Fence, including, but not limited to, removal and disposal of concrete foundations; excavation, export, backfill, compaction; new concrete foundations / footings; reinstalling posts, hinges, panels, chain link mesh, braces, appurtenances; and incidentals and for doing the work involved in relocating or resetting fence; as shown on the Plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer.

10.18 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 Contractors 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.

10.19 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.

10.20 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 of 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.

10.21 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.

10.22 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 determined by excavation or other proven methods acceptable to the Engineer. 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, excavation 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 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 excavation and trenching 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

10.23 ADJUST FRAMES AND COVERS & BOXES TO GRADE:
Frames and covers of existing manholes, valve boxes, boxes, etc., shall be temporary lowered below the grading plane and protected in place prior to the grading operations. Frames and covers of new and existing manholes, valve boxes, boxes, etc, 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.

The contract price paid per each for Adjusting Frames and Covers to Grade (per utility type) or Adjust Box to Grade (per utility and box type) or Adjust Survey Monument Cover to Grade shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in Adjusting Frames and Covers to Grade, complete in place, as shown on the plans, specified in the standard specifications and these special provisions, and as directed by Engineer. No additional compensation shall be made for adjustment of existing brick and mortar frames and covers or boxes to grade.

10.24 LANDSCAPING
Contractor shall restore all existing landscaping and/or irrigation disturbed during construction activities. Replace landscaping with sod where grass is disturbed. The Contractor shall relocate sprinklers as necessary so as to water owner's landscaping, but not new concrete surfaces, typical of all locations where grass or bushes have been planted by owners.

Contractor shall be responsible for maintaining irrigation in the case of any interruption of service, including during holidays and weekends. Any dead landscaping due to construction activities or interruption of irrigation service shall be replaced in kind by the Contractor at no additional cost.

Unless otherwise specified, l**a**ndscaping shall be considered as included in the various other bid items and no additional compensation will be made therefore. Landscaping includes furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in seeding, planting, irrigation, relocation or repair of irrigation lines as shown on the plans, specified in the standard specifications and these special provisions, and as directed by Engineer.

10.25 EARTHWORK
Earthwork shall conform to the provisions in Section 19, "Earthwork", of 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 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 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.

10.26 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, material, 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.

10.27 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, scarify subgrade at least 6 inches, uniformly moisture condition, 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. The subgrade should be firm, stable, and non-yielding following compaction and 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 State Standard Specifications.

The HMA construction process shall be standard. The base layer shall consist of a ¾" aggregate gradation and the surface layer shall be ½" 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 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 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 inch
   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 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.

10.28 AGGREGATE BASE
Aggregate base shall conform to the provisions in Section 26, "Aggregate Bases", of the 2024 Caltrans Standard Specifications and these special provisions.

The aggregate base grading shall be ¾" 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.

The contract price paid for cubic yard for Aggregate Base placed in the roadway structural section on S. Orange Street will be under the Aggregate Base (Class 2) bid item 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.

10.29 MINOR CONCRETE:
Minor concrete work includes rolled curbs, 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 State Standard Specifications.

Contractor shall submit a certificate of compliance for all minor concrete.

Retaining curbs required for construction of alleys are non-pay items and included in the work for Minor Concrete (Alley).

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 area is in conformance with the project plans and specifications. You shall not proceed with installing formwork until after it is determined that the subgrade area is in 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 a survey of form work. Upon completion of the survey, the Engineer may either approve or disapprove of the form work. You shall not proceed with pouring concrete until after the Engineer has certified that the area is in 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 and the 2010 ADA Standards.

Contractor shall construct curb ramps as located on the plans and in accordance with Section 13 of the City Standard Specifications.

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.

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.

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.

10.30 DETECTABLE WARNING SURFACE (TRUNCATED DOMES):

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.

10.31 STORM DRAIN MANHOLE / CLEANOUT

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 (Size) and Storm Drain Cleanout 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 and Storm Drain Cleanout, including any final rim adjustment, complete in place, as shown on the plans, and as required by law, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

10.32 STORM DRAIN CATCH BASIN

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, material, tools, equipment and incidentals, and for doing all the work involved in installing Catch Basins, complete in place, as shown on the plans, specified in the standard specifications and these special provisions, and as directed by the Engineer.

10.33 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, "Trenching Excavations (Errata 1) of the Standard Specifications and these Special Provisions.

Reinforced Concrete Pipe (RCP) shall conform to Section 65 of the 2024 Caltrans Standard

Specifications and shall be D-2000.

Polyvinyl-Chloride (PVC) Pipe shall conform to Section 64 of the 2024 Caltrans Standard Specifications and shall be SDR26.

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, material, tools, equipment and incidentals, and for doing all the work involved in installing storm drain pipe, complete in place, as shown on the plans, specified in the standard specifications and these special provisions, and as directed by the Engineer. Specifically included in the measurement and payment of storm drain pipe is the trenching, excavation and replacement of any improvements that are disturbed due to the installation of the pipe.

10.34 CONNECT TO EXISTING STORM DRAIN MANHOLE

Connection of new storm drain pipe to existing storm drain manhole 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. The connection shall be tested for leakage to the satisfaction of the Engineer prior to acceptance. The contractor will be responsible for contacting USA, excavation and back fill for the tie-in, and all traffic safety.

Payment for Connect to Existing Storm Drain Manhole shall be at the contract unit price per each and shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in connecting proposed drainage system to existing manhole, excavation and backfill, testing, complete in place, as shown on the plans, specified in the standard specifications and these special provisions, and as directed by the Engineer.

10.35 REMOVE PAVEMENT DELINEATION AND PAVEMENT MARKERS

Existing pavement delineation and markers are anticipated to be removed during pavement removal or grinding operations, or as indicated on the plans to be removed by sandblasting. Pavement markers shall
be removed and disposed of outside the roadway right of way in accordance with the provisions in Section 81-8 of the 2024 Caltrans Standard Specifications.

Removal of Pavement Delineation and Pavement Markers shall be considered as included in the various Pavement Grind or Remove AC Pavement and Base bid items and no additional compensation will be made therefore.

10.36 TEMPORARY PAVEMENT STRIPING AND MARKINGS

The Contractor shall furnish, place, maintain and remove temporary markings (tape) in accordance with industry standard accepted practices. Nothing in these Special Provisions shall be construed as to reduce the minimum standards specified in the California MUTCD for streets and highways. Temporary pavement delineation shall not be applied over existing markings, and shall be maintained until replaced with permanent one. Any temporary pavement marking conflicting with new traffic pattern shall be promptly removed, or removed as directed by the Engineer.

Temporary Pavement Striping and Markings shall be included the Lump Sum price paid for

Temporary Traffic Control and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in installing the temporary pavement striping and markings, complete in place, as shown on the plans, and as required by law, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10.37 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.

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.

10.38 PAVEMENT MARKERS

All pavement markers shall conform to Section 81-3, "Pavement Markers," of the 2024 Caltrans Standard Specifications.

Contractor shall install blue raised reflective pavement markers to mark fire hydrant locations. The blue reflective pavement markers shall be placed per City of Turlock 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 Thermoplastic Striping (per respective detail specified) in accordance with the 2024 Caltrans 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) shall be at the contract unit price per each and shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in the installation for blue reflective pavement markers (Type BB) complete in place, as shown on the plans, specified in the standard specifications and these special provisions, and as directed by the Engineer.

10.39 PAINT CURB (RED CURB, WHITE CURB, AND HOUSE NUMBERS)

Contractor shall paint face and top of curbs red, for parking restriction, and white with black numbering for house numbers per City of Turlock Standard Drawing M-4, in accordance with the current MUTCD standards. The Contractor shall document all existing locations where curbs are

painted and improvements are proposed. Contractor shall submit one 1-gallon sample of the paint to be used.

The cost for painting new curb shall be considered as included in the cost of Minor Concrete (Curb and Gutter – Type), and shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in painting red curb to delineate parking restriction, painting house numbers on curb, complete in place, as shown on the plans, specified in the standard specifications and these special provisions, and as directed by Engineer.

Payment for Paint Existing Curb shall be at the contract unit price per linear foot and shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in preparation of existing surface, painting red curb to delineate parking restriction, painting curb white and house numbers on curb, complete in place, as shown on the plans, specified in the standard specifications and these special provisions, and as directed by Engineer.

10.40 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.

10.41 RESET EXISTING SIGN PANEL

Existing sign panel shall be removed and reinstalled at the location shown on the plans and as directed by the Engineer. Upon approval of the Engineer, Contractor may reuse existing sign panel and hardware. If sign panel is damaged during removal process, Contractor shall furnish a new panel at no additional cost.

Removed facilities shall become the property of the Contractor and shall be removed from the project site, except as otherwise directed by the Engineer.

The contract price paid per each for Reset Existing Sign Panel shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in removal and disposal of existing panel hardware, reinstallation of panel and associated hardware

and appurtenances; and incidentals and for doing the work involved in relocating panel as shown on Plans, specified in the standard specifications and these special provisions, and as directed by Engineer.

10.42 INSTALL ROADSIDE SIGN

Contractor shall install sign panels, sign posts, and foundations in accordance with Standard Specifications, the Standard Drawings and these special provisions.

The contract price paid per each for Install Sign Panel and Install Sign Post shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in installing each signpost, including, but not limited to, excavation, export, backfill, compaction; new concrete foundations / footings, installation of sign post, complete in place, as shown on the plans, specified in the standard specifications and these special provisions, and as directed by Engineer.

10.43 INSTALL SIGN PANEL

Contractor shall install sign panels, sign posts, and foundations in accordance with City of Turlock Standards and these Special Provisions.

Sign panels must comply with the lates version of the California Uniform Traffic Control Devices (CA MUTCD) and City of Turlock Standards. All signs shall be high intensity prismatic.

The contract price paid per each for install roadside sign panel and sign 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 panel and post, 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.

10.44 FINAL CLEANUP

Upon completion of the work, the Contractor shall remove all equipment, debris, and shall leave the site in a neat clean condition to the satisfaction of the Engineer. The Contractor shall clean the area of all construction related materials and sweep the entire project area including sidewalk and gutter thoroughly. All construction signs, cones, barricades, and conflicting markings shall be removed. At the request of the Contractor, a final punchlist will be provided. After all items of the punchlist have been completed to the satisfaction of the Engineer, the Engineer will issue substantial completion. The accrual of working days will cease after substantial completion has been issued.

The cost for final cleanup shall be considered as included in the various contract items, and no additional compensation shall be made.

10.45 AS-BUILT DRAWINGS

The Contractor shall maintain a neatly marked set of full-sized record drawings showing the final location and layout of all facilities. As-Built Record Drawings shall reflect change orders, accommodations and adjustments to all improvements constructed. Where necessary, supplemental

drawings shall be prepared by the contractor.

Prior to acceptance of the project, the Contractor shall deliver to the Engineer, one set of neatly marked As-Built Record Drawings. As-Built Drawings shall be reviewed, and the complete As-Built Record Drawings set shall be current with all changes and deviations redlined. The final As-Built Drawings shall be accepted by the Engineer as a precondition to the final progress payment approval and/or final City acceptance.

The cost for preparation of As-Built Drawings shall be considered as included in the various contract items, and no additional compensation shall be made.

10.46 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.

10.47 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.

10.48 RELOCATE MAILBOX

Relocate mailbox shall conform to the requirements of Section 78-21, "Resetting and Relocating Mailboxes," of the Standard Specifications, except as herein provided.

The Contractor shall temporarily relocate existing mailboxes, including joint/gang and private mailboxes, which interfere with construction operations. Mailboxes shall be accessible for delivery at all times. Contractor to coordinate with United State Postal Service (USPS) the location and type of box for temporary mailboxes. Contractor to provide Engineer a copy of coordination with USPS before removal of existing mailboxes.

The Contractor shall remove the existing mailboxes from their mountings in a manner such that they are not damaged. If mailboxes are damaged by the Contractor's operations, then the Contractor, at the Contractor's expense, shall replace each damaged mailbox with a new mailbox

of the same dimensions and quality as the existing mailbox exhibited when new. If any mailboxes are replaced by the Contractor, the Contractor shall provide address lettering and any other lettering equivalent to that on the existing mailbox which is being replaced.

Unless directed by the Engineer to remove and salvage for the property owner, the Contractor shall remove and dispose of existing posts and mounting hardware for mailboxes that are to be permanently relocated.

Existing mailboxes, which are not temporarily relocated, shall be protected from damage during construction. Existing mailboxes, which are damaged by the Contractor, shall be replaced as directed by the Engineer at the expense of the Contractor.

When construction is complete, Contractor to coordinate with the affected owner(s) or as directed by the Engineer to install new mailbox in final position on supports equivalent to the original.

The contract unit price paid per each for relocate mailbox shall Full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in Relocate Existing Mailbox as necessary (regardless of number of moves required) during construction, and furnishing new posts, planks and hardware necessary to reset the mailboxes, shall be considered as included in the contract price paid for the **Relocate Existing Mailbox** and no additional compensation will be allowed therefor.

10.49 ABANDON STORM DRAIN PIPE, INLET, AND DRYWELL

Existing Storm Drain Drywell Inlets, pipes, and Manholes designated on the plans to be abandoned, shall be filled, and the grate and frame salvaged. Any storm drain pipe connections within the Storm Drain Inlet shall be plugged and abandoned in place. The Storm Drain Inlet miscellaneous items from removal of the storm drain inlet will be the Contractor's responsibility. Contractor shall follow all City Standards and it is the Contractor's responsibility the Existing Rockwells are abandoned following City Standards.

The Contractor shall be responsible for identifying, isolating, and properly abandoning all designated storm drain pipes and dry wells that are to be removed from service, as shown on the project plans or directed by the City Engineer.

Storm drain pipes to be abandoned in place shall be completely disconnected from active storm drain or drainage systems. Pipe openings at each end shall be permanently sealed using an approved watertight plug, bulkhead, or grout seal, and each end of the pipe shall be capped with a minimum 3-foot length of concrete to ensure structural stability and prevent soil intrusion.

Dry wells to be abandoned shall be permanently decommissioned by removing surface grates, risers, and debris, then filling the chamber and vertical shaft completely with native soil, compacted sand, flowable fill, or other inert material acceptable to the City of Turlock Public Works Department. The bases of maintenance access or drainage facilities shall be broken up to prevent water from collecting in the abandoned structure in accordance with Caltrans Construction Manual Section 4-7103E. The top of the well shall be capped with a concrete slab or grouted seal no less than 12 inches thick, located at least 12 inches below subgrade unless otherwise directed.

All abandoned structures and excavated areas shall be backfilled and compacted in accordance with City of Turlock Public Works standards and project specifications.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all work involved with removing bollards all in accordance with the plans, specifications and these Special Provisions shall be considered as included in the unit price paid for Abandon in Place Existing Storm Drain Pipe, Storm Drain Inlet, & Dry well and 30" Irrigation Pipe to be excavated, backfilled, and plugged at Right of Way. No additional compensation will be allowed.

10.50 REPLACE FIRE HYDRANT

Fire hydrant shall be installed according to City Standard Specifications, these Special Provisions, and as shown on the plans.

The Contractor shall be responsible for coordinating all activities related to fire hydrant replacement, including notifications, permits, approvals, and ensuring minimal disruption to fire protection services. Fire hydrants shall not remain out of service longer than 48 hours per replacement event unless written approval is obtained in advance from the Turlock Fire Prevention Bureau and the City of Turlock Municipal Services Department (water utility). The Contractor shall coordinate all fire hydrant replacement activities to minimize disruption to fire protection services. A minimum of 2 business days' advance written notice shall be provided to the Fire Prevention Bureau (Fire Marshal, fire@turlock.ca.us, or 209-668-5580) and to the Municipal Services Department (municipalservices@turlock.ca.us, or 209-668-5590) prior to taking any hydrant offline. Notification shall also be made to the local fire dispatch center.
If the outage is expected to exceed 48 hours, the Contractor shall implement temporary fire protection measures, which may include a temporary hydrant, fire watch personnel, tanker standby, or other provisions acceptable to the Turlock Fire Prevention Bureau.

The Contractor shall obtain any required permits prior to performing work involving fire hydrants, including but not limited to the City of Turlock Hydrant Use Permit for water withdrawal during construction.
All replaced fire hydrants shall be fully reconnected, flushed, and tested for pressure and flow to ensure compliance with the Turlock Fire Department requirements before being placed back in service.

The Contractor shall maintain records of all notifications, approvals, permits, and test results. Copies shall be submitted to the project owner and the Turlock Fire Prevention Bureau upon request.

The contract price paid per each for Remove and Replace Fire Hydrant 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 installing fire hydrant including excavation, backfill, repair of concrete, 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.

10.51 REINSTALL TRAFFIC LOOP

Traffic Loop shall be installed according to City Standard Specifications, these Special Provisions, and as shown on the plans.

Traffic Loop 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 loop, as specified in these Special Provisions, and as directed by the Engineer.

10.52 3/4" CRUSHED ROCK AT FRENCH DRAIN WITH MIRAFI GEOTEXTILE FABRIC

The Crushed Rock at French Drain shall be ¾" maximum.

The contract price paid for Crushed Rock shall be paid per cubic yard and the contract price paid for Mirafi Geotextile Fabric shall be paid by square foot. French Drain shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in French Drain with 3/4" Crushed Rock and Mirafi Geotextile Fabric. Included but not limited to bringing rock to site, placing the crushed rock, installing the fabric, cleaning and other appurtenances necessary for the French Drain installation as shown on the plans, specified in the City of Turlock Standard Specifications, these Special Provisions, and as directed by Engineer.

10.53 CRACK TREATMENT

Contractor shall seal cracks within all areas to receive slurry treatment. Crack treatment work shall conform to Type 2 per Section 37-6 "Crack Treatments" of the Caltrans Standard Specifications. Crack treatment shall be allowed to cure for a minimum of seventy-two (72) hours prior to applying pavement surface treatment.

If the crack treatment material is accepted based on a Certificate of Compliance, Quality Assurance testing is not required by the City. If the material is not accepted based on a Certificate of Compliance, the City will perform Quality Assurance testing per Section 37-6.01D of the Caltrans Standard Specifications.

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

10.54 SLURRY SEAL

Slurry seal shall conform to Type II per the provisions in Section 37-3, "Slurry Seal", of the Caltrans Standard Specifications and these special provisions.

The slurry seal area shall be considered as the entire width of roadway and shall extend the full length of the street to the limits of the adjacent street unless otherwise indicated.

Select locations require the use of either asphaltic emulsion Type PMQS1h or PMCQS1h and which shall conform to the requirements in Section 94, "Asphaltic Emulsions," of the Caltrans Standard Specifications.

The contractor shall prepare the existing paved surfaces for slurry seal. Such preparation shall include
thoroughly cleaning the area by sweeping, or other means necessary to remove all loose particles of paving, oil spots, vegetation, dirt, debris, litter, leaves and any other extraneous material.
At least 48 hours prior to the beginning of slurry seal operations, the Contractor shall notify all affected businesses, agencies and residences by an approved, written notice detailing locations and

limits of work to be done and the hours of work. The Contractor shall, prior to the beginning of slurry seal operations, post all parking areas that are to be worked upon with approved, "No Parking - Tow Away" sign. These signs shall also state the day of the week and hours of no parking. A copy of said notice shall be supplied to the City at the pre-construction meeting.

The contractor shall remove and dispose of all pavement markers, thermoplastic and painted lines prior to slurry seal work on any individual street. If the contractor chooses to use a grinding machine to remove the pavement markers and lane lines, a sweeper vehicle shall follow within 500 feet of the grinding operation at all times.

All manhole covers, valve boxes, monuments, and utility vaults shall be masked prior to slurry sealing, in accordance with Section 37-2.03D "Surface Preparation" of the Caltrans Specifications. Masking shall be performed in such a manner that lettering is not obliterated and covers are not sealed in place. Contractor shall utilize smaller/less heavy equipment on bike path areas to prevent damage of existing surfaces. Any damage to the existing surface of bike paths resulting from the Contractors operations shall be repaired by the Contractor at no expense to the City. At the conclusion of slurry sealing, the Contractor shall remove all masking material and demonstrate the "freeness" of all covers to the satisfaction of the City Engineer.

Hand tools shall be available in order to remove spillage. Ridges or bumps in the finished surface will not be permitted. The mixture shall be uniform and homogeneous after spreading on the surface and shall not show separation of the emulsion and aggregate after setting.

Vehicular traffic, including public traffic, shall not be allowed upon the work until, in the Engineer's
judgment; the slurry sealed surface is able to sustain traffic without visible damage or marking. A minimum of 4 hours cure time will be required for all treated surfaces.

ROLLING AFTER SLURRY

Once the slurry seal surface has cured sufficiently to support rubber tired vehicle traffic and the danger of material pick-up has passed, the slurry shall be rolled by a pneumatic-tired roller having tire pressures of 40-50 pounds per square inch. Sufficient water shall be used to prevent pick-up of the slurry material. Excess wetting water on the roller tires will not be permitted.

The pneumatic-tired roller shall have a minimum weight of 18,000 pounds (with ballast) and a minimum of 7 smooth treaded tires, each with a minimum tire size of 7.5x15 and 6 ply rating. A smaller pneumatic-tired roller may be required on bike path areas to prevent damage to existing surfaces. Any damage to the existing surface of bike paths resulting from the Contractors operations shall be repaired by the Contractor at no expense to the City. A minimum of 4 complete passes over each slurry street shall be performed to achieve a tight and dense surface.

Type II Slurry Seal will be measured and paid for by the square yard as determined by the Engineer and adjusted by the amount of any change order.

The contract price paid per square yard for Type II Slurry Seals shall be at the respective unit prices as set forth in the proposal and shall include all labor, materials, tools, equipment, saw cutting, excavation, hauling, rolling, sweeping, compaction and all work necessary for the completion of these items as specified in the City of Turlock Standard Specifications and Drawings, the plans, these Special Provisions and as directed by the Engineer.

10.55 CURB RAMP GRIDING
Contractor shall grind the existing asphalt concrete at each curb ramp opening prior to placement of slurry seal such that the finish surface is even with, or no more than 1/4" above the toe of the gutter after placement of slurry seal.

The contract price paid per each for Curb Ramp Grinding shall be at the respective unit prices as set forth in the proposal and shall include all labor, materials, tools, equipment, saw cutting, excavation, hauling, rolling, sweeping, compaction and all work necessary for the completion of these items as specified in the City of Turlock Standard Specifications and Drawings, the plans, these Special Provisions and as directed by the Engineer.

10.56 STREET SWEEPING
At least 48 hours prior to the beginning of vacuuming and sweeping, the Contractor shall post all parking areas that are to be worked upon with approved, "No Parking - Tow Away" sign. These signs shall also state the day of the week and hours of no parking. A copy of said notice shall be supplied to the City at the pre-construction meeting.

Contractor shall submit a street sweeping schedule for the City's review.

Thoroughly vacuum and sweep all slurry pavements prior to striping, or 2 weeks after the slurry seal placement, whichever is sooner.

Thoroughly vacuum and sweep all slurry pavements 2 week after striping.

The contract lump sum price paid for street sweeping shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all the work involved in street sweeping the areas shown on the plans and as specified in the standard specifications and these special provisions, and as directed by Engineer.

10.57 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.

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.

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

SIEGFRIED

GEOTECHNICAL REPORT
CITY OF TURLOCK TASK ORDER #2 ROAD CIP
TURLOCK, CALIFORNIA

Prepared for City of Turlock

June 21, 2024

STOCKTON
3428 Brookside Rd.
Stockton, CA 95219
t: 209.943.2021

SAN JOSE
111 N. Market St., #300
San Jose, CA 95113
t: 408.754.2021

SACRAMENTO
1164 National Ave, #20
Sacramento, CA 95834
t: 916.520.2777

MODESTO
101 Sycamore Ave, #100
Modesto, CA 95354
t: 209.762.3580

SIEGFRIED

June 21, 2024

Fred Pezeshk, PE
Roads Program Manager
City of Turlock, Public Works Department
Engineering Division
156 S. Broadway, Ste 150
Turlock, CA 95380

RE: GEOTECHNICAL REPORT
CITY OF TURLOCK CAPITAL IMPROVEMENTS PROJECT
ROADWAY REHABILITATION FOR TASK ORDER NO. 2
VARIOUS STREETS IN TURLOCK, CALIFORNIA

Dear Fred,

As requested, we have performed a geotechnical study of the existing pavement sections and subsurface conditions along various roadways in Turlock, California. The purpose of our study was to evaluate the existing pavement sections by determining the existing pavement sections (asphalt concrete and aggregate base) thickness and collecting underlying samples of the subgrade. The findings and this study, in addition to conversations with you and site visits, were used to determine feasible pavement rehabilitation options for consideration based on the City's objectives.

We appreciate the opportunity to collaborate with you on this project. If additional information is needed or if there are inquiries in this report, please do not hesitate to contact me.

Sincerely,

Bradford Quon, GE
Geotechnical Manager | Principal
SIEGFRIED

TABLE OF CONTENTS

PART 1. INTRODUCTION

1.1. PROJECT DESCRIPTION

We understand various roadways are being rehabilitated as shown in Plate 1. For organization of this report, we reproduce the City's generated list of the streets identified for rehabilitation that shows the beginning and ending location, and the length in Table 1 below. For organization and coordination of street segments in this study, we systematically assigned the street identification as shown. The average PCI provided by others for each roadway segment is reproduced in the table.

Table 1: Roadway Segments assigned for this Task Order

Road Name	Begin Location	End Location	Segment Length $(ft)^2$	PCI (Avg ~30)
Angelus Street	S. Soderquist Rd.	1054 Angelus St.	510	13
Angelus Street	1054 Angelus St.	West Ave. South	776	7
Angelus Street	Spruce St.	West Ave. South	1,286	29
Angelus Street	S. Orange St.	Spruce St.	233	58
Angelus Street	Lander Ave.	S. Orange St.	1,043	33
Bernell Avenue	Bethany Ave.	S. Orange St.	400	31
N. Beech Street	Flower St.	Park St.	318	12
N. Beech Street	Florence St.	Flower St.	384	12
N. Beech Street	W. Olive Ave.	Florence St.	328	13
N. Beech Street	W. Main St.	W. Olive Ave.	358	3
Clifford Avenue	Flower St.	Park St.	318	23
Clifford Avenue	131 Clifford Ave.	Flower St.	638	28
Clifford Avenue	W. Main St.	131 Clifford Ave.	395	74
Florence Street	N. 1st St.	N. Broadway St.	387	59
Florence Street	N. Broadway St.	N. Laurel St.	492	91
Florence Street	N. Laurel St.	Grant Ave.	1,168	65
Florence Street	Grant Ave.	West Ave. North	738	19
W. Olive Avenue	Grant Ave.	West Ave. North	735	76
W. Olive Avenue	N. Laurel St.	Grant Ave.	1,174	7
W. Olive Avenue	Lander Ave.	N. Laurel St.	623	93
S. Orange Street	Lewis St.	Montana Ave.	519	3
S. Orange Street	South Ave.	Bernell Ave.	718	0
The Burl	North End	Chestnut St.	374	4

PART 2. FINDINGS

2.1. FIELD EXPLORATION

We advanced pavement cores through the pavement at multiple locations as shown on Plates 2.0 and 2.1. We advanced borings at approximately 700-foot intervals through the existing pavement section with a 4¼ inch outer diameter core barrel and into native soil. We advanced a total of 32 cores. The maximum depth of exploration was approximately 39 inches below the paved surface. Bulk samples of the subgrade were collected, placed in plastic bags, and sealed to prevent moisture loss. The samples were transported to the laboratory for testing and analysis. We also performed Dynamic Cone Penetration (DCP) Testing on limited locations to evaluate the penetration resistance and other engineering parameters such as correlated California Bearing Ratio.

2.2. SITE AND SUBSURFACE CONDITIONS

The existing streets measured varied in asphalt concrete and underlying base thickness, when encountered. The asphalt concrete ranged from 1¾ to 7¾ inches thick. Aggregate baserock was generally not observed in the cores, except for a few various locations. Where encountered, the base thickness measured approximately 3½ to 8¼ inches. The surface of the asphalt showed signs of distress (i.e., alligator cracking, potholes, rutting, and peeling/raveling) due to heavy traffic loading as well as distress (i.e., longitudinal/transverse cracking, patching, and block cracks) due to age, construction, utilities, or other factors. A summary of the existing asphalt concrete and aggregate base thickness (if encountered) are presented in Table 2 along with the typical pavement distresses observed at near location.

The underlying subgrade generally consists of silty sand and sandy silt. This soil was generally moist. The measured asphalt concrete and base thickness and the upper subgrade conditions encountered are summarized in Table 3 and Appendix A for each street segment measured.

We also performed the index testing consisting of grain size analysis and Atterberg Limits on selected samples representative of the conditions in that area. We also performed moisture density relationships for use in determining the soaked California Bearing Ratio (CBR) value reported at approximately 95 percent relative compaction. The soaked CBR, combined with soil classification and judgement were, used to determine the design R-Value used for pavement design. These results are presented in Table 4.

The site conditions of each segment are summarized in Table 5. In general, the road segments are primarily low volume residential roads within Turlock.

Table 2: Pavement Road Grading

Street ID[1] (Core)	Measured AC (in)	Measured AB (in)	Subgrade USCS[2]	Distress Related To Heavy Traffic Loading				Distress Related To Age, Construction, Utilities, or other factors				
				Alligator Cracks	Potholes	Rutting	Peeling & Raveling	Longitudinal Cracking	Transverse Cracking	Patching & Utility Trench	Block Cracks	Bleeding & Flushing
AS-1	2½	4	SM	√√			√√√	√	√	√√	√	
AS-2	2¾	3¾	SM	√√√	√√√		√√√	√√	√	√	√	
AS-3	1¾	4¾	SM	√√√			√√√	√	√	√	√√	
AS-4	1 ¾	8 ¼	SM	√√		√	√√√	√√	√√√	√		
AS-5	2 ½	4	SM	√√	√		√√√	√	√	√√	√√	
AS-6	2 ¼	4 ¾	SM	√√	√√√		√√√	√	√	√	√√	
AS-7	4 ½	0	SM	√			√√√	√√	√√	√√		
AS-8	3 ¼ [2]	0	SM	√√			√√√	√	√	√√√	√√	
AS-9	2 ¾	1	SM	√√√			√√√	√		√√√	√√√	√√√
BA-1	3 ½	2	ML	√√	√		√√√	√	√	√√√		
BS-1	2 ½	0	SM	√√			√√√	√√√	√√√	√√√	√	
BS-2	2 ¾	0	SM	√√√	√		√√√		√	√√√		
BS-3	4	0	SM		√		√√√	√	√	√√√		
BS-4	4 ¾	0	SM	√			√√√	√	√	√√	√√√	
CA-1	5	0	SM	√√√	√√√		√√√	√√			√√	
CA-2	6	0	SM	√√√	√√√		√√√	√√	√	√√√		
CA-3	5 ½	4 ½	SM				√√√	√√	√	√√		
FS-1	4 ½	0	SM	√√√		√	√√√			√√	√√√	
FS-2	4	0	SM									
FS-3	6	0	SM				√√√	√√√	√√√			
FS-4	7 ½	0	SM				√	√	√√√	√√		
FS-5	3 ½	5 ½	SM				√			√		
FS-6	3	3 ½	SM				√√√	√√√	√√√	√√		
OA-1	7 ¾	0	SM	√			√√√	√√	√√	√		
OA-2	7	0	SM				√√√	√	√√	√		
OA-3	7	0	SM	√√√			√√√			√√	√√√	
OA-4	2[3]	0	SM	√√√		√			√	√√√		
OA-5	3 ½	4 ½	SM				√√	√√				
OS-1	2	3 ½	ML	√√√	√√√	√	√√√	√		√√√		
OS-2	3	5	ML	√√√		√	√			√√√		
OS-3	2	3 ½	SM	√√√			√√√		√			
TB-1	2 ¾	0	SM	√√√	√√√		√√√			√	√√√	

[1] Street ID core location shown on Exploration Map
[2] 4¾ inches of concrete encountered beneath asphalt
[3] 3½ inches of concrete encountered beneath asphalt

Table 3: Existing Pavement Section, and Subsurface					
Road Name (Represented Borings)	Street Segment Range	Applicable Core ID	AC Thickness Range (in)	AB Thickness Range (in)	Generalized Subgrade Description (upper 8 to 12 in
Angelus Street	S. Soderquist Rd. to 1054 Angelus St.	AS-1	2½	4	Silty Sand
Angelus Street	1054 Angelus St. to West Ave. South	AS-2, AS-3	1¾ to 2¾	3¾ to 4¾	Silty Sand
Angelus Street	Spruce St. to West Ave. South	AS-4, AS-5, AS-6	1¾ to 2½	4 to 8¼	Silty Sand
Angelus Street	S. Orange St. to Spruce St.	AS-7	4½	0	Silty Sand
Angelus Street	Lander Ave. to S. Orange St.	AS-8, AS-9	2¾ to 3¼	0	Silty Sand
Bernell Avenue	Bethany Ave. to S. Orange St.	BA-1	3½	2	Sandy Silt
N. Beech Street	Flower St. to Park St.	BS-1	2½	0	Silty Sand
N. Beech Street	Florence St. to Flower St.	BS-2	2¾	0	Silty Sand
N. Beech Street	W. Olive Ave. to Florence St.	BS-3	4	0	Silty Sand
N. Beech Street	W. Main St. to W. Olive Ave.	BS-4	4¾	0	Silty Sand
Clifford Avenue	Flower St. to Park St.	CA-1	5	0	Silty Sand
Clifford Avenue	131 Clifford Ave. to Flower St.	CA-2	6	0	Silty Sand
Clifford Avenue	W. Main St. to 131 Clifford Ave.	CA-3	5½	4½	Silty Sand
Florence Street	N. 1st St. to N. Broadway St.	FS-6	3	3½	Silty Sand
Florence Street	N. Broadway St. to N. Laurel St.	FS-5	3½	5½	Silty Sand
Florence Street	N. Laurel St. to Grant Ave.	FS-3, FS-4	6 to 7½	0	Silty Sand
Florence Street	Grant Ave. to West Ave. North	FS-1, FS-2	4 to 4½	0	Silty Sand
W. Olive Avenue	Grant Ave. to West Ave. North	OA-1, OA-2	7 to 7¾	0	Silty Sand
W. Olive Avenue	N. Laurel St. to Grant Ave.	OA-3, OA-4	2 to 7½	2	Silty Sand
W. Olive Avenue	Lander Ave. to N. Laurel St.	OA-5	3½	4½	Silty Sand
S. Orange Street	Lewis St. to Montana Ave.	OS-3	2	3½	Silty Sand
S. Orange Street	South Ave. to Bernell Ave.	OS-1, OS-2	2 to 3	3½ to 5	Sandy Silt
The Burl	North End to Chestnut St.	TB-1	2¾	0	Silty Sand

AC – Asphalt Concrete, AB – Aggregate Base
[1]Average thickness rounded down to nearest ¼ inch

Table 4: Lab Results					
Core ID	General Description	Max Dry Density (pcf)	Optimum Moisture Content (%)	As Rec'd Moisture Content (%)	Reported CBR for Design (%)
AS-6	Brown Silty Sand	129.0	7.7	7.3	51
BS-3	Brown Silty Sand	118.5	9.8	5.3	29.5
CA-2	Brown Silty Sand	117.5	7.8	4.5	26.1
OS-2	Brown Sandy Silt	131.1	8.3	12.7	30.0
TB-1	Brown Silty Sand	119.5	7.3	6.6	28.4

Table 5: General Site Observations		
Road Name	**Segment**	**Site Observations**
Angelus Street	S. Soderquist Rd. to 1054 Angelus St.	Primarily residential two-way traffic road with curb and gutter on both sides of the street
Angelus Street	1054 Angelus St. to West Ave. South	Primarily residential two-way traffic road with curb and gutter on both sides of the street. Some areas have unpaved shoulders.
Angelus Street	Spruce St. to West Ave. South	Primarily residential two-way traffic road with curb and gutter on both sides of street.
Angelus Street	S. Orange St. to Spruce St.	Primarily residential two-way traffic road with curb and gutter primarily on the east bound lane and an unpaved shoulder on the west bound lane.
Angelus Street	Lander Ave. to S. Orange St.	Primarily residential one way traffic road with curb and gutter and some driveways exposed to soil. Some curbs were broken.
Bernell Avenue	Bethany Ave. to S. Orange St.	Primarily residential two-way traffic road with curb and gutter on both sides.
N. Beech Street	Flower St. to Park St.	Primarily residential two-way traffic road unpaved shoulders on both sides.
N. Beech Street	Florence St. to Flower St.	Primarily residential two-way traffic road with curb and gutter on both sides.
N. Beech Street	W. Olive Ave. to Florence St.	Primarily residential two-way traffic road with curb and gutter on both sides with unpaved shoulder on northbound lane near W. Olive Ave.
N. Beech Street	W. Main St. to W. Olive Ave.	Primarily residential two-way traffic road with curb and gutter on both sides.
Clifford Avenue	Flower St. to Park St.	Primarily residential two-way traffic road with curb and gutter on both sides.
Clifford Avenue	131 Clifford Ave. to Flower St.	Primarily residential two-way traffic road with curb and gutter on both sides.
Clifford Avenue	W. Main St. to131 Clifford Ave.	Primarily residential two-way traffic road with curb and gutter on both sides.
Florence Street	N. 1st St. to N. Broadway St.	Primarily commercial two-way traffic road with curb and gutter on both sides
Florence Street	N. Broadway St. to N. Laurel St.	Mixed residential/commercial two-way traffic road with curb and gutter on both sides
Florence Street	N. Laurel St. to Grant Ave.	Primarily residential two-way traffic road with curb and gutter on both sides, isolated tree damage to curbs near NE corner of Florence and N. Beech St.
Florence Street	Grant Ave. to West Ave. North	Primary residential two-way traffic road with sidewalk curb and gutter on both sides (some areas are cracking) and the east bound lane has an unpaved shoulder near West Ave.

Table 5: General Site Observations (Continued)		
Road Name	**Segment**	**Site Observations**
W. Olive Avenue	Grant Ave. to West Ave. North	Primarily residential two-way traffic road with curb and gutter on both sides except for 730 W. Olive Avenue (no curb and gutter)
W. Olive Avenue	N. Laurel St. to Grant Ave.	Primarily residential two-way traffic road with curb and gutter on both sides
W. Olive Avenue	Lander Ave. to N. Laurel St.	Primarily commercial two way traffic road with curb and gutter on both sides
S. Orange Street	Lewis St. to Montana Ave.	Primarily residential two-way traffic road with curb and gutter on both sides.
S. Orange Street	South Ave. to Bernell Ave.	Primarily residential except for school on southbound side
The Burl	North End to Chestnut St.	Primarily residential cul-de-sac with curb and gutter on all sides.

A summary of the site and subsurface conditions specific to each street segment is presented in Appendix A. The laboratory test results are presented in Appendix B.

PART 3. CONCLUSIONS

3.1. GENERAL

Based on the observations and testing performed, we conclude the presence of pavement distress observed on the street segments is based on a combination of factors such as repeated heavy vehicle traffic loading (i.e., load related) or other factors such as age, construction, and utilities. The distress observed on the streets within this area were variable and consisted of distress related to both heavy traffic loading causing isolated base failures and age/construction/utilities-related factors. Pavement treatments may consist of a variety of methods based on funding, structural capacity, and other construction considerations such as the presence of shallow utilities, material availability, and flexibility of grade changes to other fixed features on the project, etc.

Caltrans Highway Design Manual provides guidance and engineering procedures for Flexible Pavement Preservation. The generalized categories for pavement preservation include Preventative Maintenance and Capital Preventative Maintenance (CAPM). Where the distressed pavement conditions exceed the thresholds for Preventative Maintenance or CAPM, the guidance and engineering procedures flow towards Flexible Pavement Rehabilitation. Typical strategies for Preventative Maintenance, CAPM, or Pavement Rehabilitation are discussed in Sections 3.2, 3.3, and 3.4, respectively.

3.2. PREVENTATIVE MAINTENANCE

Preventative maintenance strategies are intended to extend the service life and ride quality of the pavement while it is still in relatively good condition. Depending on the treatment strategy selected, the added service life could vary from a couple of years to over 7 years. The timing of the strategies in this section are critical to being effective, thus when placed over severely distressed pavements, the preventative maintenance strategy may not provide the value intended. Typical methods used for preventative maintenance are discussed in the following sections.

3.2.1. Fog Seal

Fog Seal is a treatment rehabilitation that addresses minor surface cracks, distress for oxidation, and raveling with a single, light application of emulsified asphalt to the surface. This treatment method is usually applicable for streets with identified PCI between 70 and 100. Depending on the conditions, this treatment method also extends the life of the pavement by 2 to 4 years.

3.2.2. Slurry Seal

Slurry Seal is a treatment rehabilitation method that addresses the surface to increase skid resistance, restricting moisture intrusion, and reducing the potential from further oxidation, and raveling. It provides a uniform black appearance and is generally applicable for streets with identified PCI of 77 and greater. Depending on the conditions, this treatment method also extends the life of the pavement by 5 to 7 years. Vehicular traffic can be allowed over the slurry seal generally after 1 to 4 hours of placement.

3.2.3. Microsurfacing

Microsurfacing is a treatment rehabilitation method that addresses the surface to increase skid resistance, restricting moisture intrusion, and reducing the potential from further oxidation, and raveling. It provides a uniform black appearance and is generally applicable for streets with identified PCI of 70 and greater. Depending on the conditions, this treatment method also extends the life of the pavement by 6 to 8 years. Vehicular traffic can be allowed over the micro surfacing generally after 1 hour of placement.

3.2.4. Crack Seal

Crack Seal applies an adhesive material into cracks, generally greater than 1/8 inch thick. The crack seal reduces the infiltration of moisture into the pavement structure. It is then used in combination with an HMA overlay, chip seal, micro surfacing, or slurry seal. It is generally applicable for streets with identified PCI of between 70 and100. Depending on the conditions, this treatment method also extends the life of the pavement by 3 to 5 years. Vehicular traffic can be allowed over the crack seal after 1 hour of placement.

3.2.5. Scrub Seal

Scrub Seal is a surficial treatment process similar to a chip seal but the asphalt distributor pulls a broom sled that guide or "scrub" the emulsion into the cracks. This process ensures the road is sealed. It may then be used in combination with a fog seal, micro/slurry seal, HMA overlay, or chip seal. It is generally applicable for streets with identified PCI of between 55 and 100. Depending on the conditions, this treatment method also extends the life of the pavement by 6 to 7 years. Vehicular traffic can be allowed over the scrub crack seal after 1 hour of placement.

3.3. MINOR PAVEMENT REHABILITATION OR "CAPITAL PREVENTATIVE MAINTENANCE" (CAPM)

Minor pavement rehabilitation, or Capital Preventative Maintenance (CAPM), is a planned pavement strategy described by Caltrans as non-engineered pavement structure designs applied to moderately extensive structure stress that do not alter existing roadway geometric features. Such minor pavement rehabilitation treatments are intended to extend pavement service life about 5 to 10 years before costlier major pavement rehabilitation is needed. The strategies for this category also improve pavement ride quality and serviceability. Typical CAPM strategies may include:

3.3.1. General Overlay

This option provides a 0.25-foot HMA overlay using two lifts consisting of 0.10 foot followed by 0.15-foot HMA.

3.3.2. Partial Depth Recycling (PDR)

Partial Depth Recycling (PDR) recycles between 0.25 foot and 0.4 foot of the existing asphalt pavement and then capped with a 0.15 HMA overlay or preferably 0.15-foot rubberized hot mix asphalt (RHMA-G) overlay.

3.3.3. Mill/Cold Plane + Overlay

This option mills or cold planes the existing asphalt section down to depth of overlay prior to placing an overlay.

3.3.4. Non-Structural Options

This option considers wearing courses such as open-graded friction courses, chip seals, or thin overlays not exceeding 0.10 foot.

3.3.5. Use of pavement interlayers

Pavement interlayers incorporated with geosynthetics could be used as a moisture barrier, for reflective crack management, and reinforcement.

3.3.6. Digouts

Digouts of base failures can be performed if they do not exceed 20 percent of the project cost. Digouts are designed to provide 20 years of life by repairing the subgrade in the area desired. With this approach, the section requires a strategy resembling a major pavement rehabilitation such as conventional Asphalt Concrete over Aggegate Base (Section 3.4.1) or Deep lift Asphalt (Section 3.4.2). Following Digouts, the pavement should then be rehabilitated using an overlay as noted in Section 3.3.1.

3.4. MAJOR PAVEMENT REHABILITATION

When CAPM strategies are not utilized, pavement rehabilitation is considered. Caltrans refers to these strategies as Pavement Rehabilitation. The treatment strategies generally include design life between 20 and 40 years.

3.4.1. Conventional Asphalt Concrete over Aggregate Base

This option removes the existing pavement section and rebuilds a new pavement section consisting of hot mix asphalt over aggregate base over a compacted subgrade. When this option is considered, demolition and export of existing pavement sections must be considered to accommodate new pavement sections. This option may also be used in selective dig outs where base failures are noted. Where dig outs are performed, the vertical and horizontal interfaces prior to paving with HMA should be covered with a tack coat.

3.4.2. Full Depth Asphalt

This option removes the existing pavement section to depth and replaces with new hot mix asphalt over a compacted subgrade. When this option is considered, demolition and export of existing pavement sections must be considered to accommodate new pavement sections. This option may also be used in selective dig outs where base failures are noted. Where dig outs are performed, the vertical and horizontal interfaces prior to paving with HMA should be covered with a tack coat.

3.4.3. Full Depth Recycling with Cement (FDR-C)

This option recycles the existing pavement section and overlays with hot mix asphalt. This option is effective when the limitations for the grade profile is not as restrictive as there would be when curb and gutters are present. If this option is selected, the consider the pre-FDR-C activities such as demolition, addition of supplemental aggregate (if necessary), pulverization, and site grading required to achieve the desired grades.

3.4.4. Mill/Cold Plane + Overlay

This option involves the controlled removal of the existing asphalt surface to the desired depth or cross slope. It can be performed to the final grade desired and/or overlaid with thin lift hot mix asphalt. The existing pavement that is cold planed or micromilled can be reused as reclaimed asphalt pavements (RAP) in new hot mix asphalt. This method can also extend the life of the pavement structure by correcting smoothness issues, drainage and removing some top-down cracking and surficial distress. This treatment method is usually used in combination with HMA overlays, single or double chipseal, micro or slurry surfacing. Consideration should be given to the final grades desired to achieve the intent of the reconstruction treatment while maintaining structural capacity.

3.5. OTHER IMPROVEMENTS

The site grades should be reviewed so that the surface runoff flows positively to the appropriate drain inlet. Water should not be allowed to pond on any surface. Trees that encroach into the curb areas should be removed or relocated with the root balls backfilled with engineered fill. Curbs should be repaired where damaged by trees.

PART 4. RECOMMENDATIONS FOR FINAL DESIGN

4.1. GENERAL RECOMMENDATIONS

Based on our observations and findings, we conclude most of the street segments are significantly distressed beyond the preventative maintenance strategies presented in Section 3.2 and should, instead, consider options presented in Section 3.3 and 3.4 for Minor or Major Pavement Rehabilitation, respectively. Some segments were in generally good condition with PCI greater than 70 and were considered applicable for CAPM treatment methods.

Table 7: Recommended Pavement Treatment Strategy

Road Name	Begin Location	End Location	PCI	Recommended Treatment Strategy Type	Report Reference
Angelus Street	S. Soderquist Rd.	1054 Angelus St.	13	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3
Angelus Street	1054 Angelus St.	West Ave. South	7	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3
Angelus Street	Spruce St.	West Ave. South	29	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3
Angelus Street	S. Orange St.	Spruce St.	58	Minor Rehabilitation	3.3.3
Angelus Street	Lander Ave.	S. Orange St.	33	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3
Bernell Avenue	Bethany Ave.	S. Orange St.	31	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3
N. Beech Street	Flower St.	Park St.	12	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3
N. Beech Street	Florence St.	Flower St.	12	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3
N. Beech Street	W. Olive Ave.	Florence St.	13	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3
N. Beech Street	W. Main St.	W. Olive Ave.	3	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3
Clifford Avenue	Flower St.	Park St.	23	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3
Clifford Avenue	131 Clifford Ave.	Flower St.	28	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3
Clifford Avenue	W. Main St.	131 Clifford Ave.	74	CAPM	3.2.2, 3.2.4
Florence Street	N. 1st St.	N. Broadway St.	59	Minor Rehabilitation	3.3.3
Florence Street	N. Broadway St.	N. Laurel St.	91	CAPM	3.2.2 or do nothing
Florence Street	N. Laurel St.	Grant Ave.	65	Minor Rehabilitation	3.3.3
Florence Street	Grant Ave.	West Ave. North	19	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3
W. Olive Avenue	Grant Ave.	West Ave. North	76	CAPM	3.2.2, 3.2.4
W. Olive Avenue	N. Laurel St.	Grant Ave.	7	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3
W. Olive Avenue	Lander Ave.	N. Laurel St.	93	CAPM	3.2.2 or do nothing
S. Orange Street	Lewis St.	Montana Ave.	3	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3
S. Orange Street	South Ave.	Bernell Ave.	0	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3
The Burl	North End	Chestnut St.	4	Major Rehabilitation	3.4.1, 3.4.2, 3.4.3

4.2. PAVEMENT SECTIONS FOR MINOR REHABILITATION

When minor rehabilitation strategies are implemented on the project, they should incorporate options to overlay with new HMA and use of a geosynthetic pavement interlayer beneath the existing surface and the new overlay. This strategy is understood to utilize the existing section while extending the life. The pavement interlayer is used for reflective crack retardation. Table 8 presents the recommended mill and overlay assuming there are no grade restrictions.

When minor pavement rehabilitation strategies are considered in this section, the minimum treatment may consist of an 0.25-foot overlay in two lifts consisting of 0.10-foot followed by a 0.15-foot HMA, or preferably 0.15-foot RHMA-G overlay.

The maximum mill thickness varies based on thickness if the existing section and strives to maintain at least 1 inch (0.08-feet) of the existing section intact prior to placing the geosynthetic pavement interlayer (GPI) or stress absorbing membrane interlayer (SAMI). Table 8 presents minimum overlay at the locations shown.

4.2.1. Hot Mix Asphalt (HMA) and Rubberized Hot Mix Asphalt (RHMA-G)

When using HMA and/or RHMA-G with minor pavement rehabilitation strategies, they materials should conform to the Caltrans Standard Specifications, Section 39. The Performance Grade (PG) binders should be applicable for the Inland Valley climate regions and meet the minimum requirements for PG64-16 for dense graded HMA and Open graded HMA (when placement temperature is > 70°F). If Gap and Open Graded Rubberized HMA (RHMA) is used, PG 64-16 binder should be considered. For special cases, consult Table 632.1 of the Highway Design Manual, latest edition.

4.2.2. Geosynthetic Pavement Interlayer (GPI)

A Geosynthetic Pavement Interlayer (GPI) should be placed beneath the overlay as a moisture barrier, for reflective crack management, and reinforcement. GPI such as Solmax Petromat® MPM30 or Tensar GlasPave 25 should be used. The GPI should be placed per the manufacturer's instructions and avoid being placed on slopes exceeding 5 degrees. The GPI should also be millable.

4.2.3. Stress Absorbing Membrane Interlayer (SAMI)

A SAMI is a membrane seal that is used to retard the rate of reflection cracking in new overlays. It consists of an application of modified binder followed by a layer of aggregate, spread and rolled. An overlay is then placed over the membrane. If necessary, traffic may be allowed to operate on the SAMI prior to construction of the overlay.

Table 8: Recommended Mill and Overlay for Minor Rehabilitation Strategy							
Street Segment			Existing Measured AC, in (ft)	Existing Measured AB, in (ft)	Min Overlay Required (ft)	Max. Milling Depth (ft)	Geosynthetic Pavement Interlayer (GPI)
Angelus Street	S. Soderquist Rd.	1054 Angelus St.	2½	4	N/A	N/A	N/A
Angelus Street	1054 Angelus St.	West Ave. South	1¾ to 2¾	3¾ to 4¾	N/A	N/A	N/A
Angelus Street	Spruce St.	West Ave. South	1¾ to 2½	4 to 8¼	N/A	N/A	N/A
Angelus Street	S. Orange St.	Spruce St.	4½	0	0.25	0.25	YES
Angelus Street	Lander Ave.	S. Orange St.	2¾ to 3¼	0	0.25	0.25	YES
Bernell Avenue	Bethany Ave.	S. Orange St.	3½	2	N/A	N/A	N/A
N. Beech Street	Flower St.	Park St.	2½	0	N/A	N/A	N/A
N. Beech Street	Florence St.	Flower St.	2¾	0	N/A	N/A	N/A
N. Beech Street	W. Olive Ave.	Florence St.	4	0	N/A	N/A	N/A
N. Beech Street	W. Main St.	W. Olive Ave.	4¾	0	N/A	N/A	N/A
Clifford Avenue	Flower St.	Park St.	5	0	N/A	N/A	N/A
Clifford Avenue	131 Clifford Ave.	Flower St.	6	0	0.25	0.25	NO
Clifford Avenue	W. Main St.	131 Clifford Ave.	5½	4½	0.25	0.17	YES
Florence Street	N. 1st St.	N. Broadway St.	3	3½	0.25	0.17	YES
Florence Street	N. Broadway St.	N. Laurel St.	3½	5½	0.25	0.25	YES
Florence Street	N. Laurel St.	Grant Ave.	6 to 7½	0	0.25	0.25	YES
Florence Street	Grant Ave.	West Ave. North	4 to 4½	0	N/A	N/A	N/A
W. Olive Avenue	Grant Ave.	West Ave. North	7 to 7¾	0	0.25	0.25	YES
W. Olive Avenue	N. Laurel St.	Grant Ave.	2 to 7½	2	N/A	N/A	N/A
W. Olive Avenue	Lander Ave.	N. Laurel St.	3½	4½	0.25	0.17	YES
S. Orange Street	Lewis St.	Montana Ave.	2	3½	N/A	N/A	N/A
S. Orange Street	South Ave.	Bernell Ave.	2 to 3	3½ to 5	N/A	N/A	N/A
The Burl	North End	Chestnut St.	2¾	0	N/A	N/A	N/A

N/A – Minor Pavement Rehabilitation not applicable

4.3. PAVEMENT SECTIONS FOR MAJOR REHABILITATION

We utilized the design methodologies outlined in the March 20, 2020, edition of the Caltrans Highway Design Manual (HDM) to provide pavement design. Using the empirical method outlined in Section 630 of the HDM, we input the design R-Value correlated from soil classification, laboratory compacted CBR, and our experience of representative R-Value from nearby streets of similar soil description in the area. The empirical method provides a design life of 20 years.

Table 8: Recommended Pavement Sections for Major Pavement Rehabilitation (Based on R=55)				
Traffic Index[1]	Asphalt Concrete (in)	Class 2 Aggregate Base (in)	Full Depth Asphalt Concrete (in)	Full Depth Reclamation - Cement (in)
6 – Option 1A	3½	5	---	---
6 – Option 1B	---	---	5	---
6 – Option 1C	3½	---	---	9
7 – Option 1A	4	5	---	---
7 – Option 1B	---	---	6½	---
7 – Option 1C	4	---	---	9

[1]Traffic Indices were provided by the Design team and confirmed with the City.
[2]AC includes a safety factor of 0.2 for AC/AB and AC/FDR-C combinations and a safety factor of 0.1 for full depth asphalt.
[3]FDR-C includes a Gravel Factor, Gf, equivalent to 1.3.

TI of 6 and 7 are applicable for local streets and intersections, respectively, as discussed during previous meetings the City and other design firms for the Pavement Rehabilitation program.

4.3.1. Hot Mix Asphalt (HMA)

When using HMA for major pavement rehabilitation strategies, they materials should conform to the Caltrans Standard Specifications, Section 39. The Performance Grade (PG) binders should be applicable for the Inland Valley climate regions and meet the minimum requirements for PG64-16 for dense graded HMA and Open graded HMA (when placement temperature is > 70°F). For special cases, consult Table 632.1 of the Highway Design Manual, latest edition.

4.3.2. Aggregate Baserock (AB)

When aggregate baserock is incorporated into major pavement rehabilitation strategies, Aggregate base will conform to the Caltrans Standard Specifications, Section 26 for gradation, sand equivalent, durability index, and R-Value. Aggregate base is compacted to a minimum of 95 percent relative compaction per the ASTM D1557 method over a firm and stable subgrade.

4.3.3. Full Depth Reclamation with Cement (FDR-C)

When Full Depth Reclamation with Cement (FDR-C) is incorporated into major pavement rehabilitation strategies, consideration should be given to the pre-FDR-C activities such as demolition, addition of supplemental aggregate (if necessary), pulverization, and site grading required to achieve the desired grades.

- Conformance for design and construction of FDR-C shall comply with the Guide for Partial- and Full-Depth Pavement Recycling in California (Guideline: UCPRC-GL-2020-01, Version 2) and Section 30 of the Caltrans Standard Specifications (latest edition)
- Demolition and removal of the existing pavement section may be required to achieve the desired grades prior to pulverization and FDR processes.
- A minimum treatment depth of 9 inches is recommended.
- A minimum design strength of 300 to 600 psi is recommended.
- Supplementary aggregate is not required but should be verified during the contractor's mix design.
- Bid items for FDR-C shall include:

- Recycling (area in sy)
- Cementitious stabilizer (tons)
- Asphaltic emulsion curing seal (tons), if used
- Sand cover (tons), if used
- Mix design (lump sum, which includes work for material sampling, traffic control during material sampling, and laboratory testing).
- Supplementary Aggregate, if required in the design (tons)
- Quality Control testing (lump sum, which includes reporting)

- Maintain the compacted surface damp by lightly watering until asphaltic emulsion is applied.
- Microcrack the surface during the period from 48 to 72 hours after compaction.
- Apply diluted asphalt emulsion to the finished surface when it is damp but free of standing water. Application rate must be from 0.13 to 0.25 gal/sy.
- Apply asphaltic emulsion at a rate from 0.03 to 0.05% residual binder content immediately before placing HMA.
- Contractor should demonstrate the treatment is effective when performed adjacent to curbs that must remain in place without being damaged.
- HMA is placed following the FDR-C process.

4.3.4. Subgrade Preparation

When deeplift or base repairs are performed that expose the underlying subgrade, the upper 8 inches of pavement subgrades should be scarified, uniformly moisture conditioned to at least the optimum moisture content and recompacted to at least 95 percent relative compaction per the ASTM D1557 method. Ultimately, the subgrade must be firm, stable, and unyielding prior to placing any overlying material such as base or new asphalt.

PART 5. LIMITATIONS

We based our conclusions and recommendations based on our understanding of the proposed project development and improvements, data derived from our field explorations and laboratory testing, interpretations of available published data, and our geotechnical engineering analysis. The reported locations of the field explorations were determined by pacing from available landmarks; survey of the field explorations was not included in this scope. It is possible that actual surface and subsurface conditions can vary between points of exploration. Similarly, load conditions may vary from what we have assumed during our analysis. If this is found to be the case, we should be notified and requested to review the changes and provide modifications to our conclusions and recommendations if needed.

We prepared this report in general accordance with the generally accepted geotechnical engineering practice as it exists in the project vicinity at the time the work was performed. No warranty, express or implied, is made. This report may be used by the Client and its design consultants, for the purpose stated for this project site for up to two years from the date of this report. If construction is delayed, or if land use, or other factors modify the site and subsurface conditions, additional field work may be needed (i.e., additional borings and/or laboratory testing) and an updated report issued. We shall be released from any liability resulting from misuse of the report by the authorized party. The Client agrees to defend, indemnify, and hold harmless Siegfried from any claim or liability associated with such unauthorized use or non-compliance with the requirements outlined herein.

PART 6. REFERENCES

SIEGFRIED

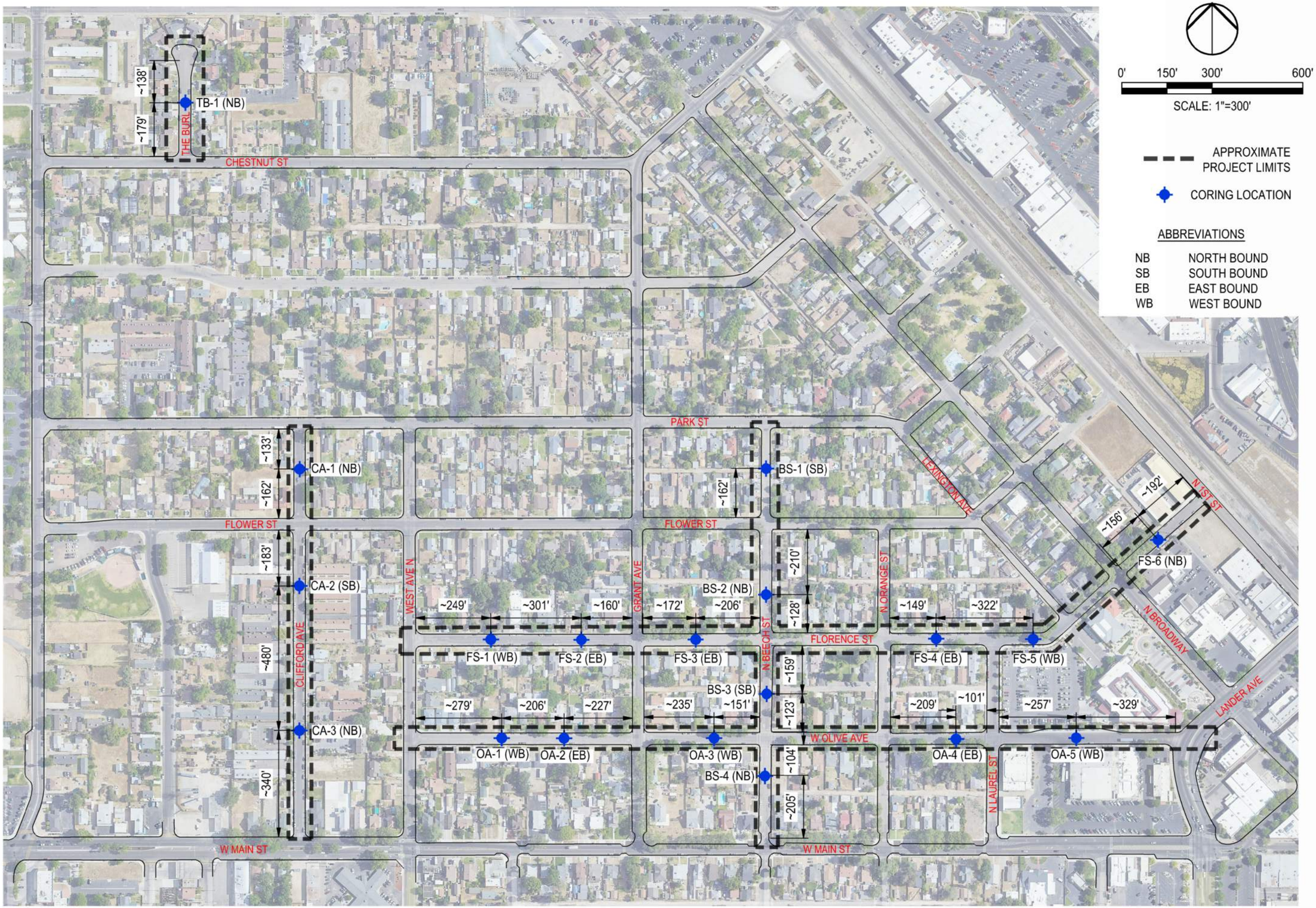
PLATES

STOCKTON
3428 Brookside Rd.
Stockton, CA 95219
t: 209.943.2021

SAN JOSE
111 N. Market St., #300
San Jose, CA 95113
t: 408.754.2021

SACRAMENTO
1164 National Ave, #20
Sacramento, CA 95834
t: 916.520.2777

MODESTO
101 Sycamore Ave, #100
Modesto, CA 95354
t: 209.762.3580



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Stockton,California 95219
209-943-2021
Fax: 209-942-0214
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- SURVEYING
- PLANNING
- ATHLETIC FACILITY DESIGN
- GEOTECHNICAL

REVISIONS
No. Date Description

PROJECT

CITY OF TURLOCK ROAD CIP TASK #2

ADDRESS

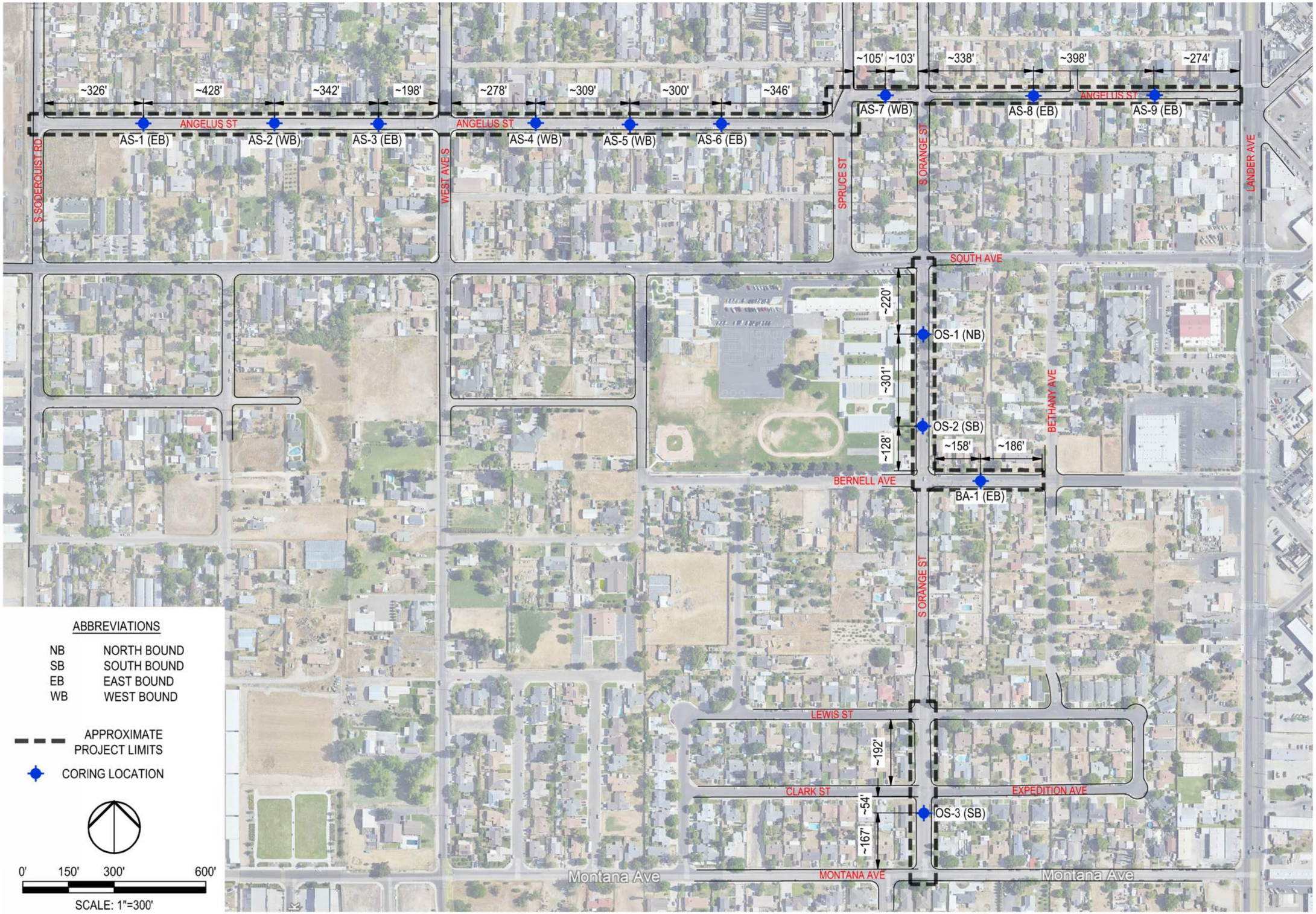
SHEET TITLE

EXPLORATION LOCATION MAP

Proj Mgr	BLQ
Drawn by	AA
Date	04/04/2024
Job No.	22157

PLATE: 2

F:\22PROJECTS\22157 CITY OF TURLOCK ROAD CIP\PLANS AND GRAPHICS\EXHIBITS\GEOTECH EXHIBIT\TASK #2\22157 – EXPLORATION LOCATION MAP.DWG 4/4/2024 8:49 AM



ABBREVIATIONS

NB	NORTH BOUND
SB	SOUTH BOUND
EB	EAST BOUND
WB	WEST BOUND

APPROXIMATE PROJECT LIMITS

CORING LOCATION

0' 150' 300' 600'

SCALE: 1"=300'

F:\22PROJECTS\22157 CITY OF TURLOCK ROAD CIP\PLANS AND GRAPHICS\EXHIBITS\GEOTECH EXHIBIT\TASK #2\22157 – EXPLORATION LOCATION MAP.DWG 4/4/2024 8:50 AM

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REVISIONS
No. Date Description

PROJECT

CITY OF TURLOCK ROAD CIP TASK #2

ADDRESS

SHEET TITLE

EXPLORATION LOCATION MAP

Proj Mgr	BLQ
Drawn by	AA
Date	04/04/2024
Job No.	22157

PLATE:

2

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APPENDIX A – STREET SEGMENT CONDITIONS

Methodology for assessing pavement distress
Street Segment Segments

STOCKTON
3428 Brookside Rd.
Stockton, CA 95219
t: 209.943.2021

SAN JOSE
111 N. Market St., #300
San Jose, CA 95113
t: 408.754.2021

SACRAMENTO
1164 National Avenue, #20
Sacramento, CA 95834
t: 916.520.2777

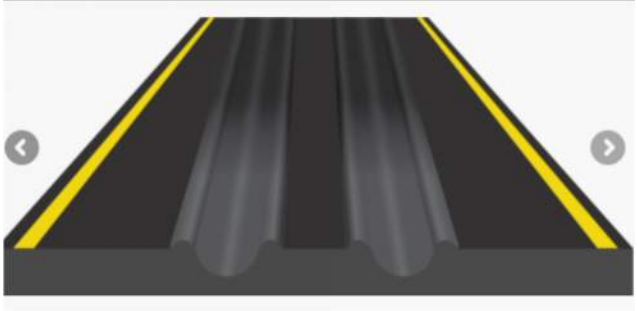
MODESTO
101 Sycamore Ave, #100
Modesto, CA 95354
t: 209.762.3580

https://rxpave.com/rxpave-resources/pavement-distress-profiles/

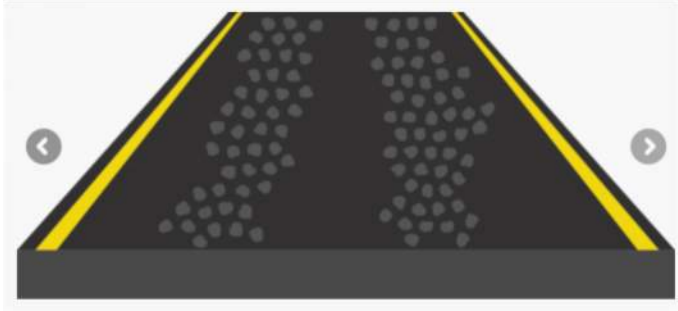
Pavement Distress Related to Heavy Traffic Loading	Description	Severity and Extent
Alligator Cracking	A series of interconnected cracks caused by fatigue failure of the HMA surface under repeated traffic loading. These longitudinal cracks connect, forming many-sided sharp-angled pieces that develop into a pattern resembling the back of an alligator or crocodile.	L: Hairline M: Spalling H: Spalling & Pumping
Potholing		
Rutting	A rut is a surface depression in the wheel path, which may also include the occurrence of pavement uplift, or shearing along the sides of a rut. Ruts are particularly evident when filled with water, such as after rainfall.	L: Rut depth ≤ 1/4" M: Rut depth 1/4" to 3/4" H: Rut depth > 3/4"
Peeling/Raveling	Raveling is the dislodging of coarse aggregate particles, usually via mechanical means (traffic loading)	L: Isolated areas, usually in wheelpaths M: Majority of wheelpaths affected H: Most of the lane is affected
Pavement Distress Related to Age, Construction, Weather, and Other factors	**Description**	**Severity and Extent**
Longitudinal Cracking	Longitudinal cracks are a type of fatigue cracking that features cracks parallel to the pavement centerline (or directions of travel) and generally divide the slab into two or three pieces.	L: 1 % to 99% of segment length M: 100% to 199% of segment length H: 200% or more of segment length
Transverse Cracking	Transverse cracks are cracks that form perpendicular to the pavement centerline (or directions of travel), usually a type of thermal cracking.	L: 1 to 4 cracks per 100' M: 5 to 9 cracks per 100' H: 10 or more cracks per 100'
Patching/Utility Trench	Also known as Asphalt Patching, a patch is an area of pavement that has been replaced with new material to repair the existing pavement. A patch is considered a defect no matter how well it is performing.	L: ≤ 5% of surface area M: 6% to 25% of surface area H: > 25% of surface area
Block Cracks	Block cracks are interconnected cracks that divide the pavement into approximately rectangular pieces. The blocks may range in size from approximately 0.3 by 0.3 m (1x1 ft) to 3 by 3 m (10x10 ft). The block cracking normally occurs over a large portion of the pavement area, but sometimes will occur only in non-traffic areas.	L: Cracks :5 1/4" wide M: Cracks over 1/4"with no spalling H: Cracks> 1/4" with spalling
Bleeding/Flusing	Bleeding (or flushing) is a film of bituminous material on the pavement surface that creates a shiny, glasslike reflecting surface that usually becomes quite sticky.	L: Patchy areas, usually in wheel paths M: Majority of wheel paths affected H: Most of the lane is affected

Examples of pavement distress from rxpave.com

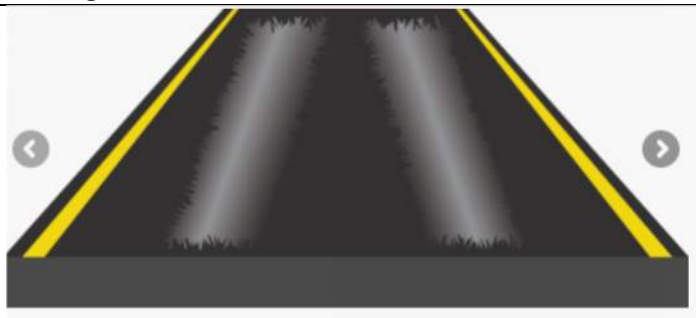
Alligator Cracking



Rutting

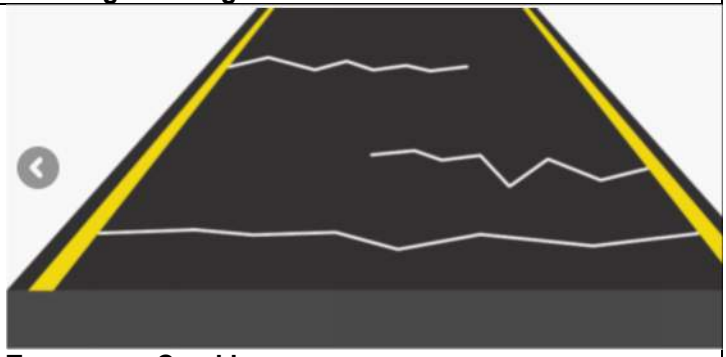


Peeling/Raveling



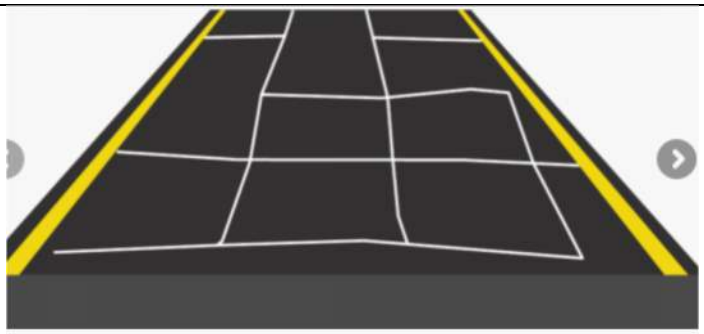
Bleeding/Flushing

Longitudinal Cracking



Transverse Cracking

Patching/Utility Trench



Block Cracks

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Pavement Rehabilitation Strategy Decision Tree

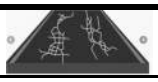
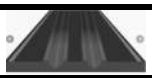
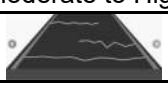
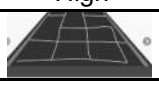
Project	City of Turlock, TO#2
Location	Turlock, California

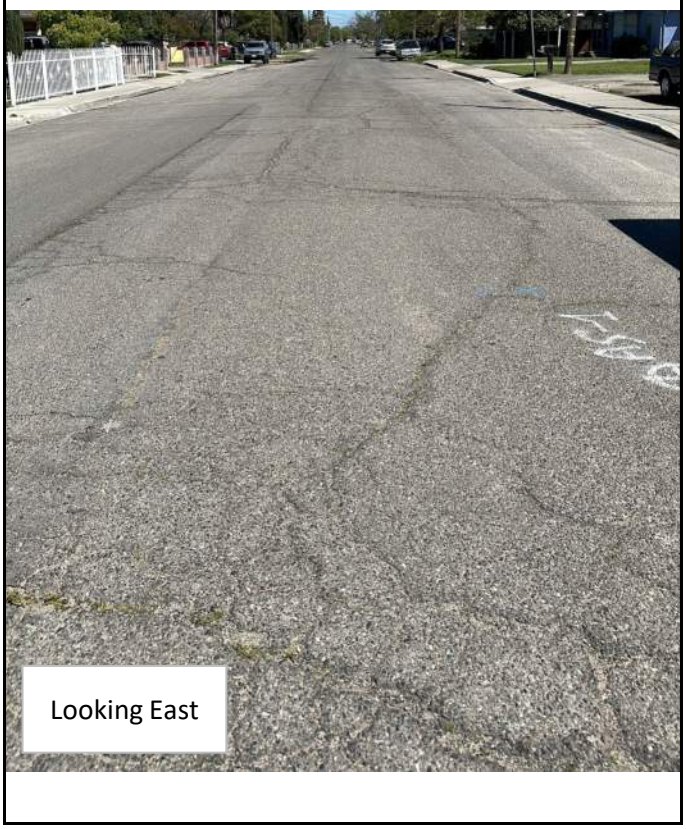
Street Name:	Angelus St	Start Segment:	N/A
Street Segment ID:	Core AS-1	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	13	*<---reported by others*	
Average AC Thickness (in):	2 1/2	Average AB Thickness (in):	4
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
Moderate to High	N/A	High	N/A	Low to Moderate
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
Low	Moderate to High	Low		



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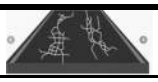
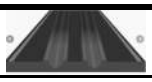
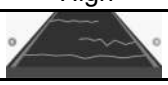
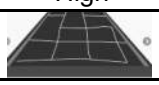
Pavement Rehabilitation Strategy Decision Tree

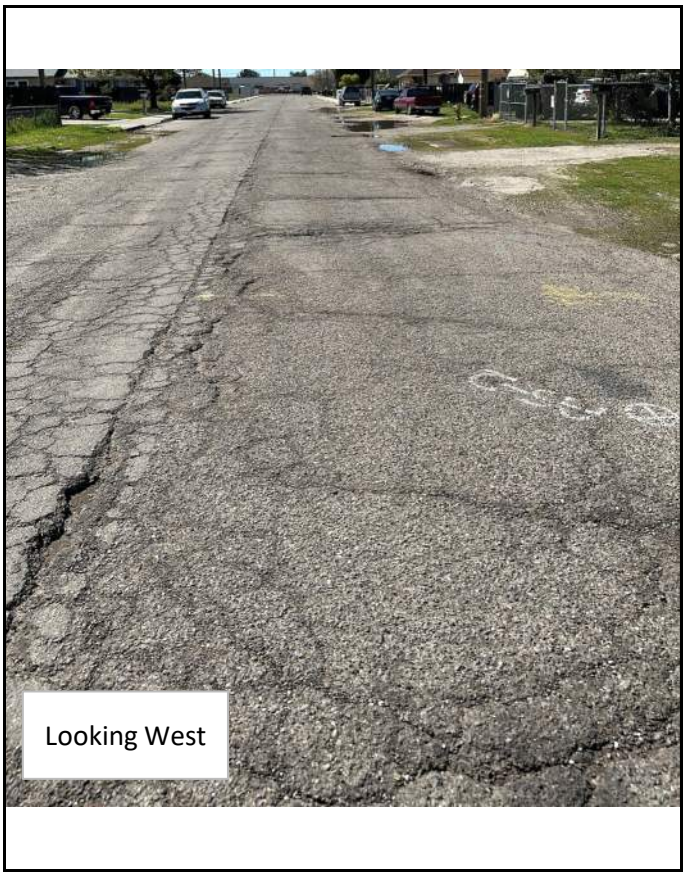
Project	City of Turlock, TO#2
Location	Turlock, California

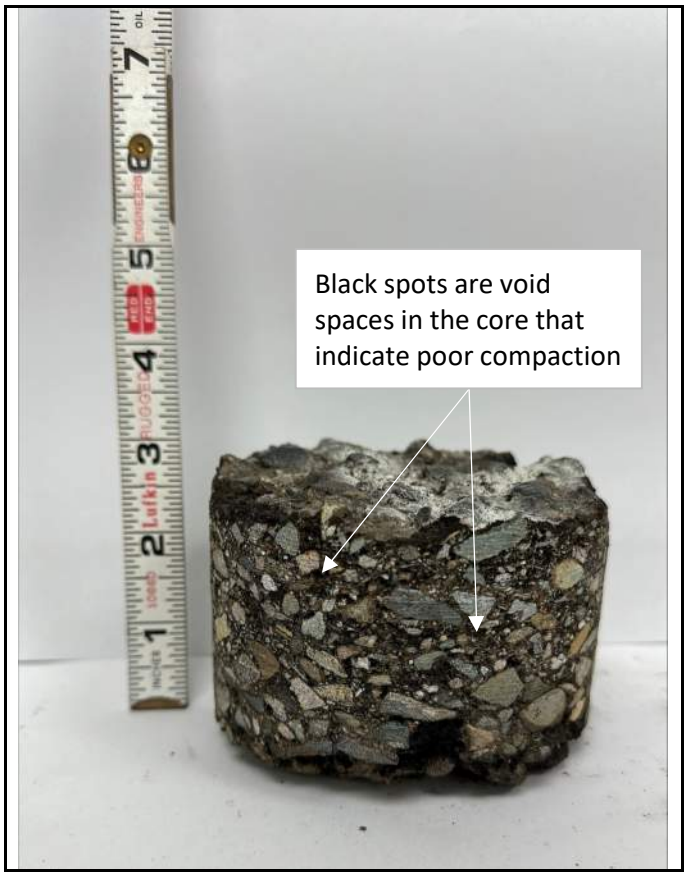
Street Name:	Angelus St	Start Segment:	N/A
Street Segment ID:	Core AS-2	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	7	*<---reported by others*	
Average AC Thickness (in):	2 3/4	Average AB Thickness (in):	3 3/4
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading					
					
	Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
	High	N/A	High	N/A	Moderate
				Potholes?	Notes
	Transverse Cracking	Patching/Utility Trench	Block Cracks	Yes, extensive	
	Low	Low	Low		





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Pavement Rehabilitation Strategy Decision Tree

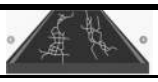
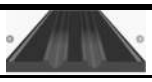
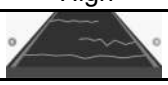
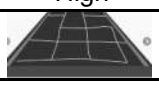
Project	City of Turlock, TO#2
Location	Turlock, California

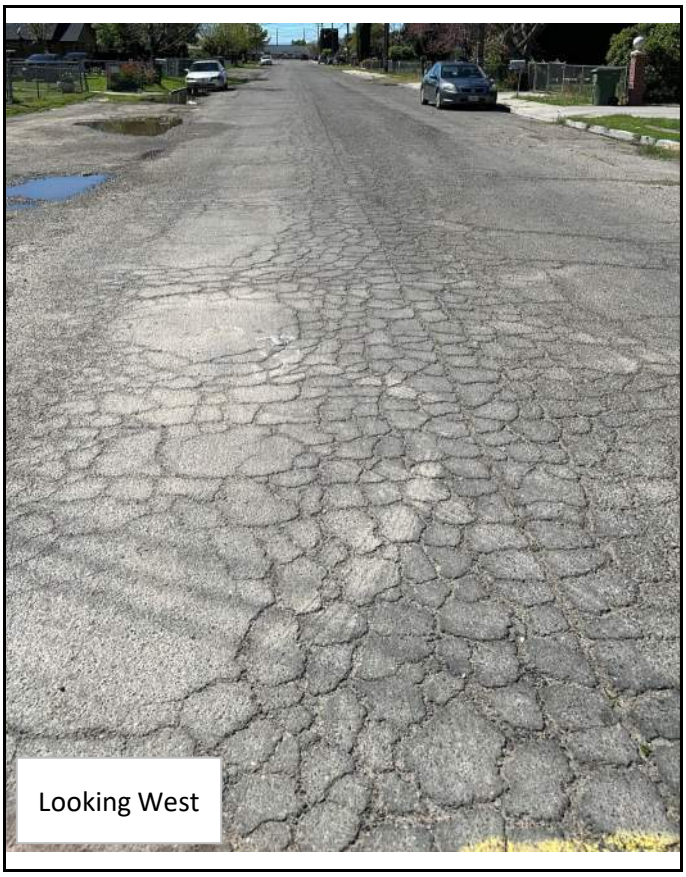
Street Name:	Angelus St	Start Segment:	N/A
Street Segment ID:	Core AS-3	End Segment:	N/A

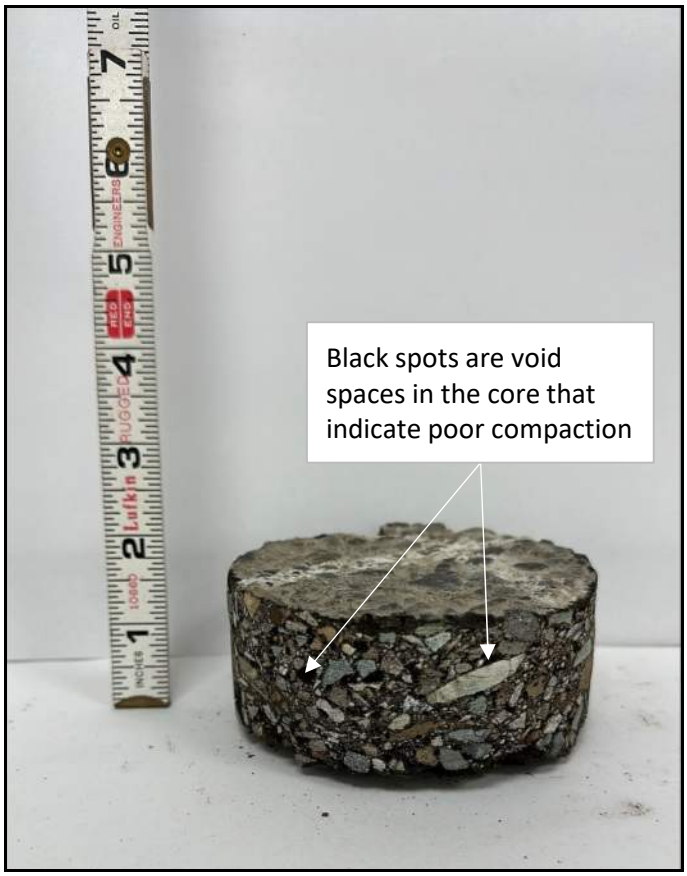
Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	7	*<---reported by others*	
Average AC Thickness (in):	1 3/4	Average AB Thickness (in):	4 3/4
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
High	N/A	High	N/A	Low
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
Low	Low	Moderate		





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Pavement Rehabilitation Strategy Decision Tree

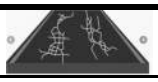
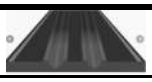
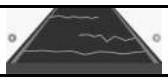
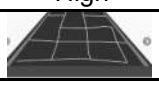
Project	City of Turlock, TO#2
Location	Turlock, California

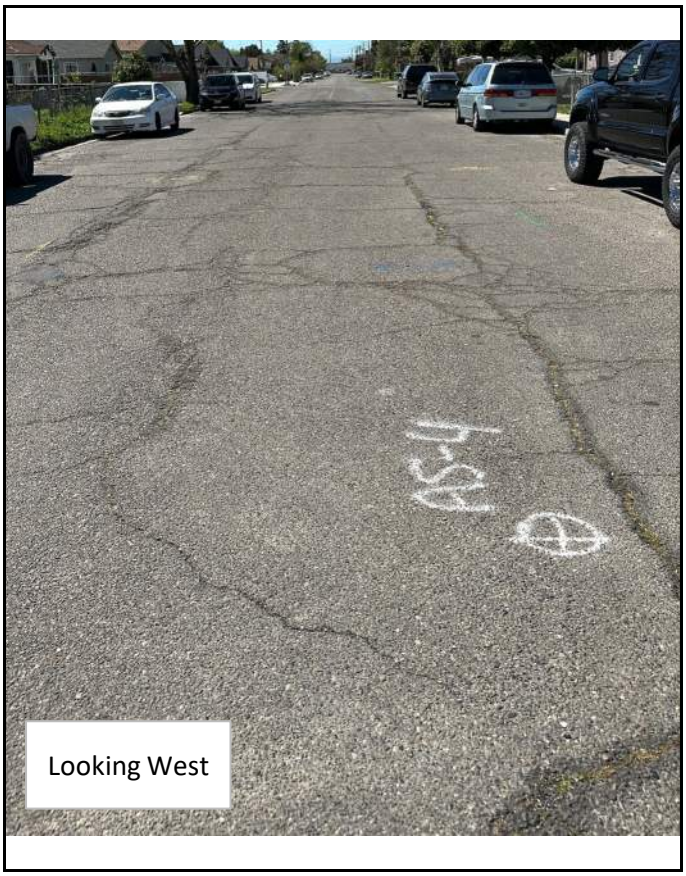
Street Name:	Angelus St	Start Segment:	N/A
Street Segment ID:	Core AS-4	End Segment:	N/A

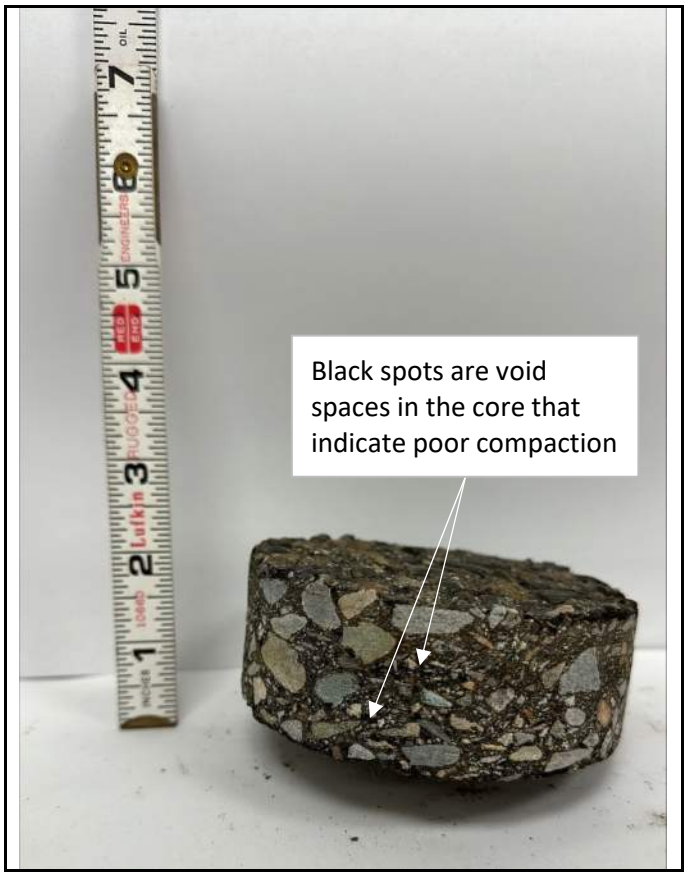
Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	29	*<---reported by others*	
Average AC Thickness (in):	1 3/4	Average AB Thickness (in):	8 1/4
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
Moderate	Low	High	N/A	Moderate
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
High	Low	N/A		





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Pavement Rehabilitation Strategy Decision Tree

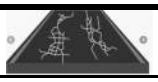
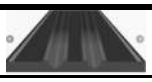
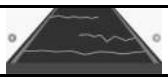
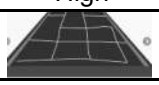
Project	City of Turlock, TO#2
Location	Turlock, California

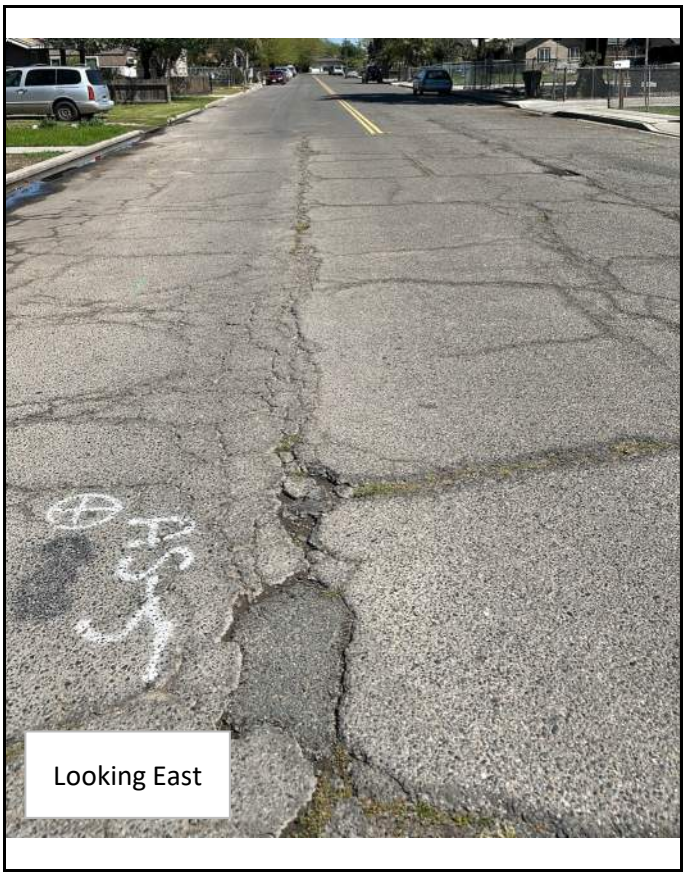
Street Name:	Angelus St	Start Segment:	N/A
Street Segment ID:	Core AS-5	End Segment:	N/A

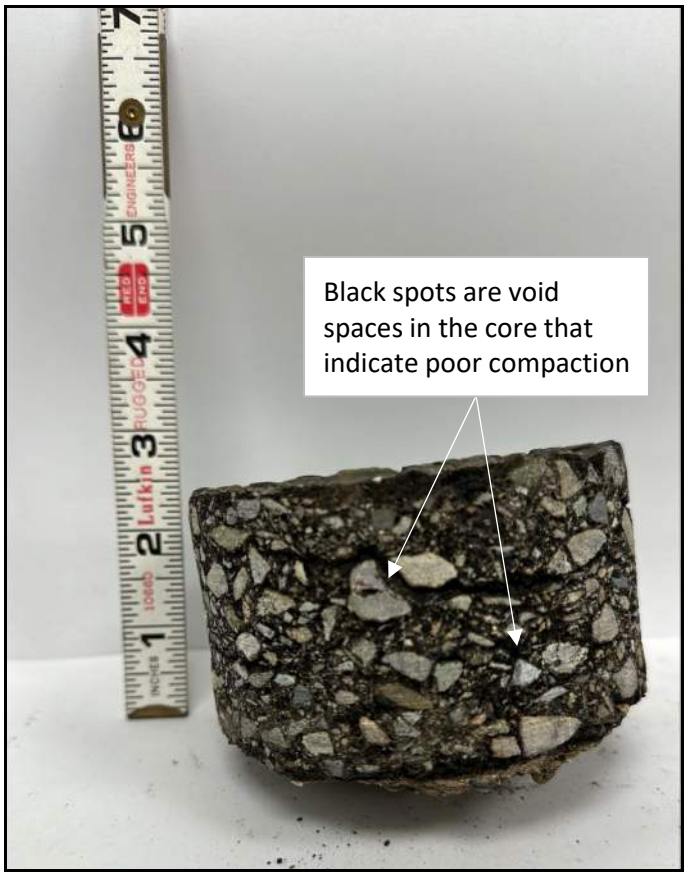
Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	29	*<---reported by others*	
Average AC Thickness (in):	2 1/2	Average AB Thickness (in):	4
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
Moderate	N/A	High	N/A	Low
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	Yes, isolated	
Low	Moderate	Moderate		





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Pavement Rehabilitation Strategy Decision Tree

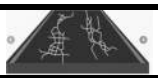
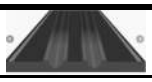
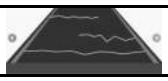
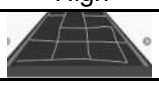
Project	City of Turlock, TO#2
Location	Turlock, California

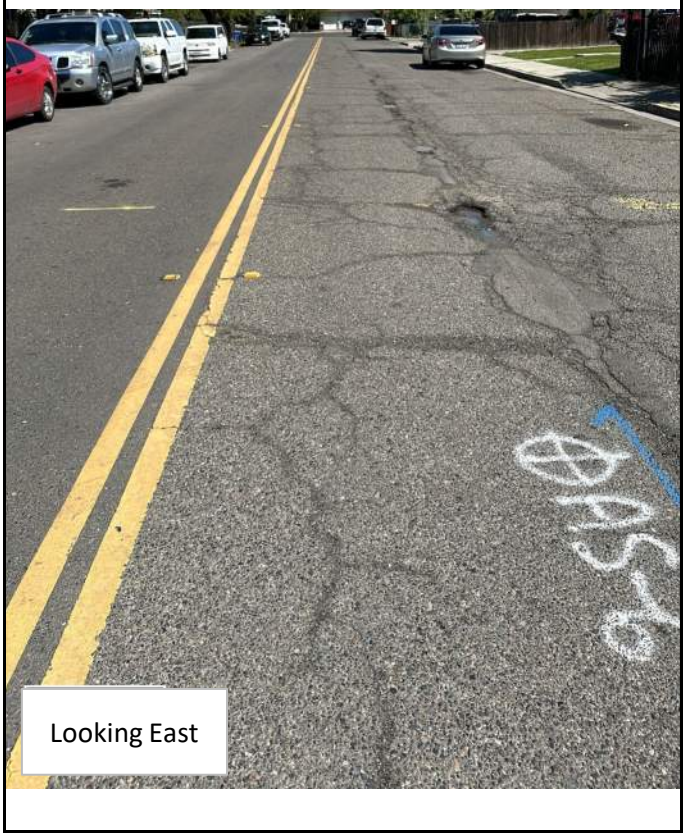
Street Name:	Angelus St	Start Segment:	N/A
Street Segment ID:	Core AS-6-1	End Segment:	N/A

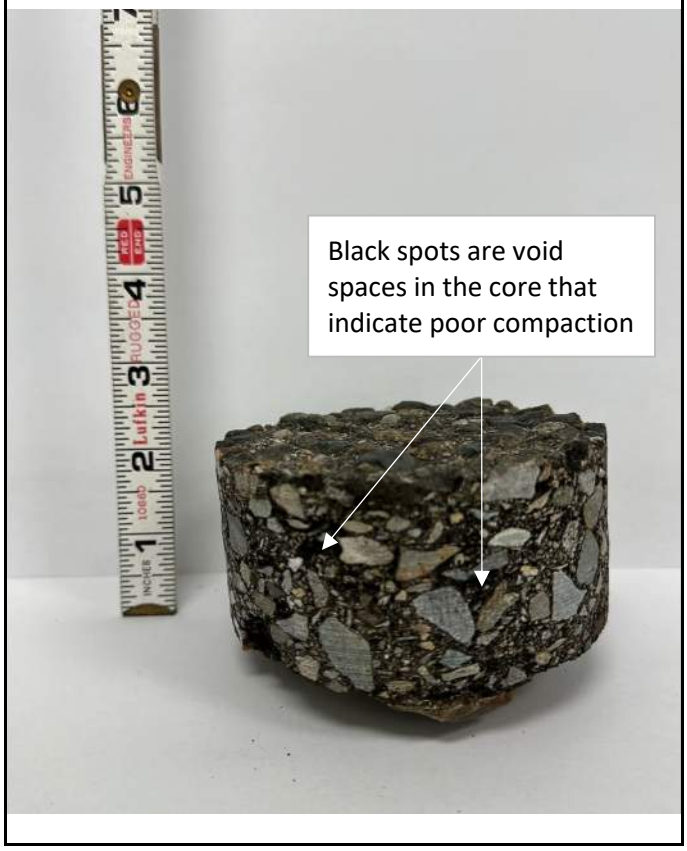
Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	29	*<---reported by others*	
Average AC Thickness (in):	2 1/4	Average AB Thickness (in):	4 3/4
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
Moderate	N/A	High	N/A	Low
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	Yes, extensive	
Low	Low	Moderate to High		





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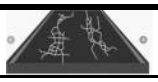
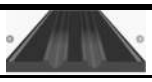
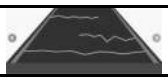
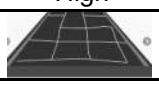
Pavement Rehabilitation Strategy Decision Tree

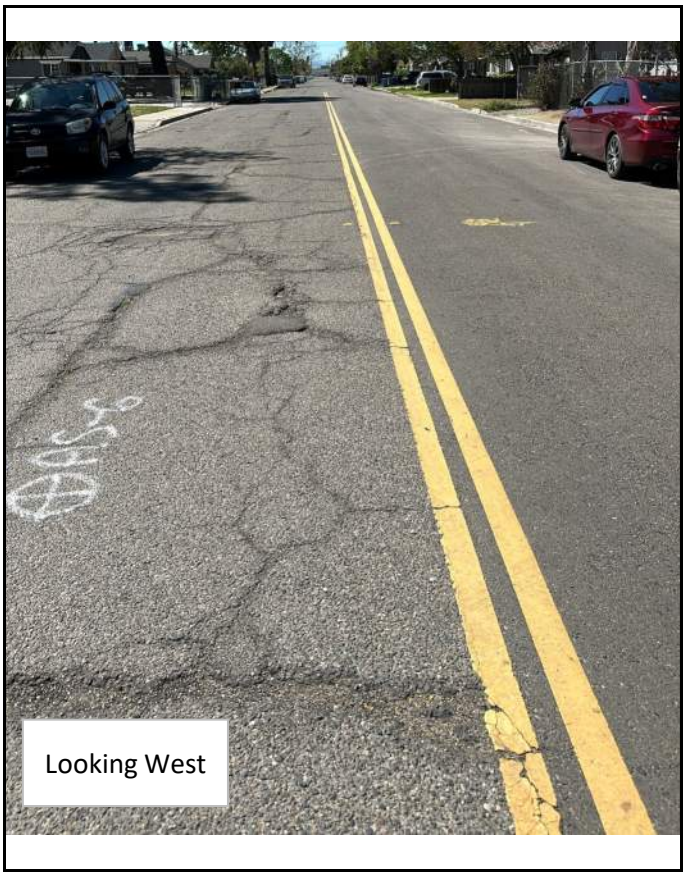
Project	City of Turlock, TO#2
Location	Turlock, California

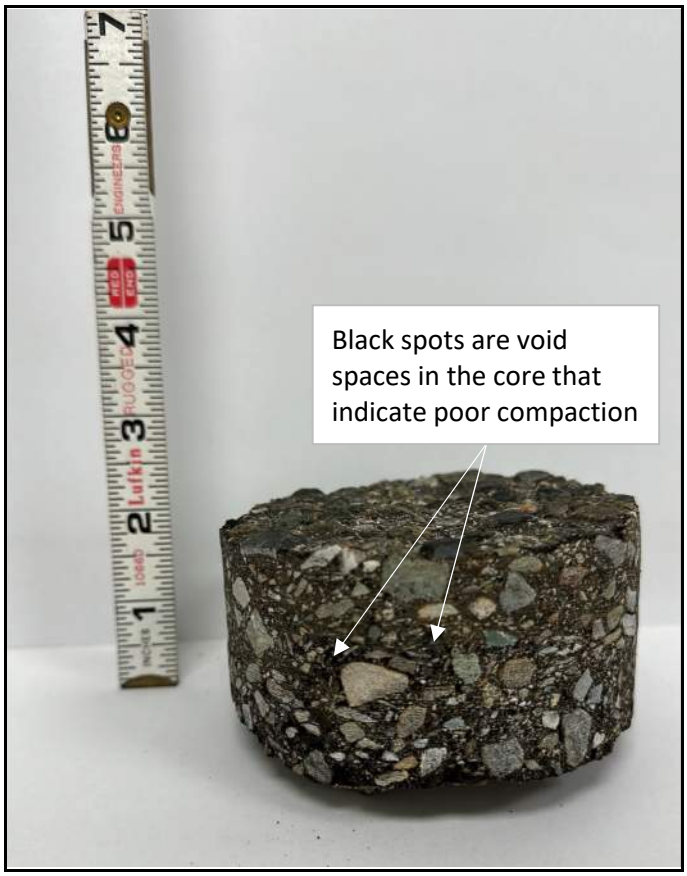
Street Name:	Angelus St	Start Segment:	N/A
Street Segment ID:	Core AS-6-2	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	29	*<---reported by others*	
Average AC Thickness (in):	2 1/4	Average AB Thickness (in):	4 3/4
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading					
					
	Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
	Moderate	N/A	High	N/A	Low
				Potholes?	Notes
	Transverse Cracking	Patching/Utility Trench	Block Cracks	Yes, extensive	
	Low	Low	Moderate to High		





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Pavement Rehabilitation Strategy Decision Tree

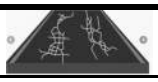
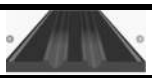
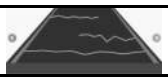
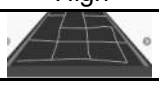
Project	City of Turlock, TO#2
Location	Turlock, California

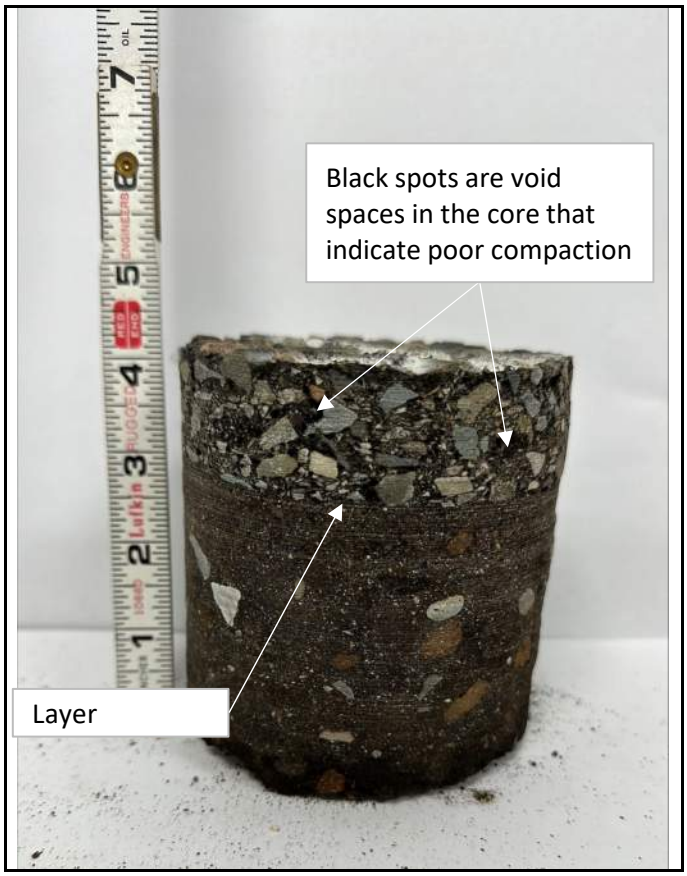
Street Name:	Angelus St	Start Segment:	N/A
Street Segment ID:	Core AS-7	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	58	*<---reported by others*	
Average AC Thickness (in):	4 1/2	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
Low to Moderate	N/A	High	N/A	Moderate to High
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
Moderate to High	Moderate	N/A		



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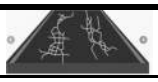
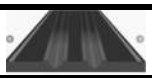
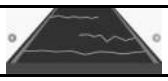
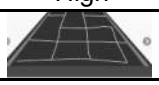
Pavement Rehabilitation Strategy Decision Tree

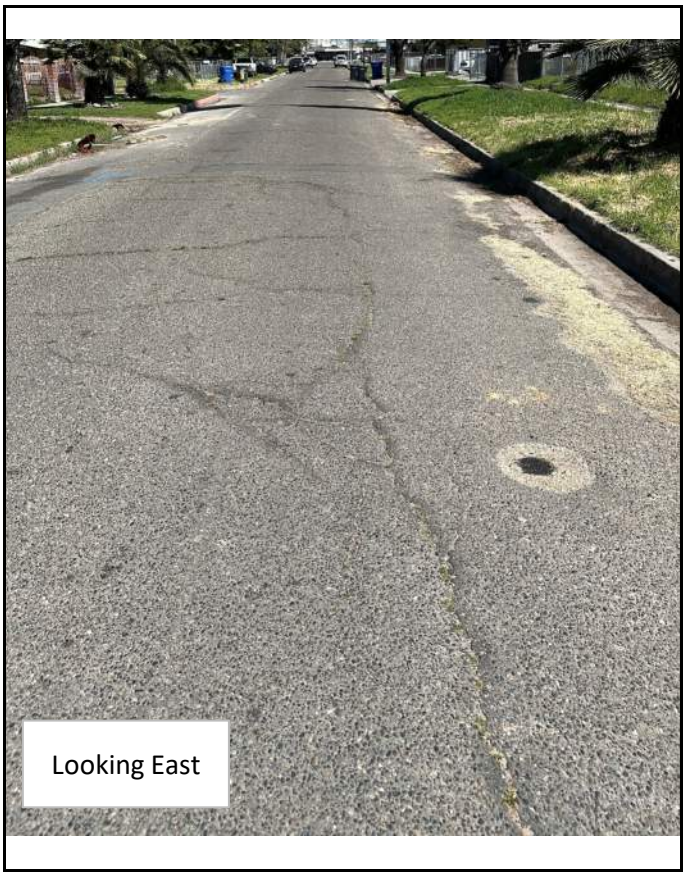
Project	City of Turlock, TO#2
Location	Turlock, California

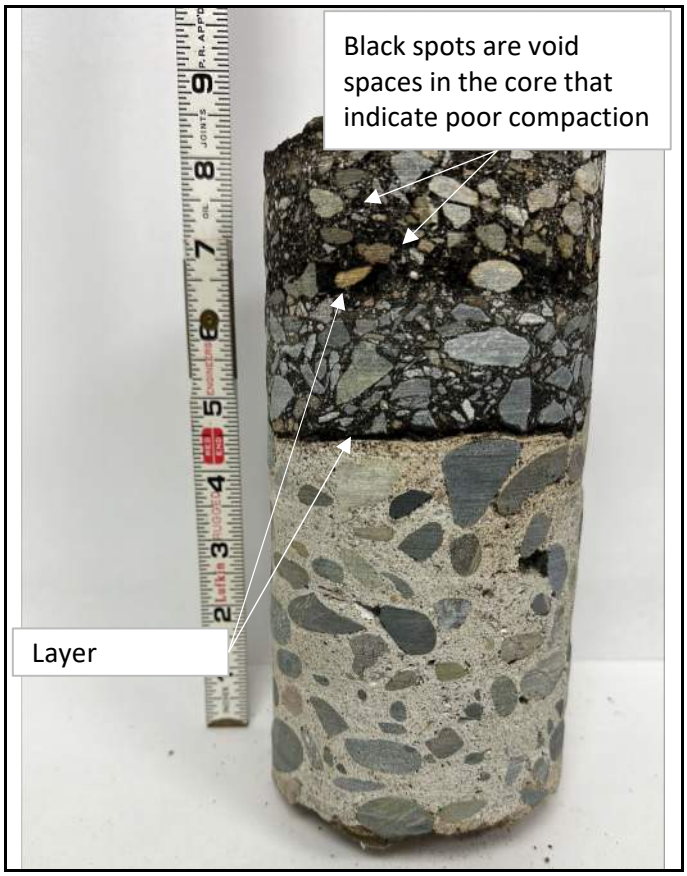
Street Name:	Angelus St	Start Segment:	N/A
Street Segment ID:	Core AS-8	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	33	*<---reported by others*	
Average AC Thickness (in):	3 1/4	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading					
					
	Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
	Moderate	N/A	High	N/A	Low to Moderate
				Potholes?	Notes
	Transverse Cracking	Patching/Utility Trench	Block Cracks	No	4 3/4" of concrete under AC
	Low to Moderate	High	Moderate		





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Pavement Rehabilitation Strategy Decision Tree

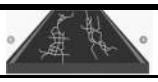
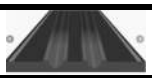
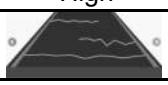
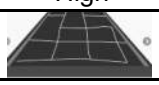
Project	City of Turlock, TO#2
Location	Turlock, California

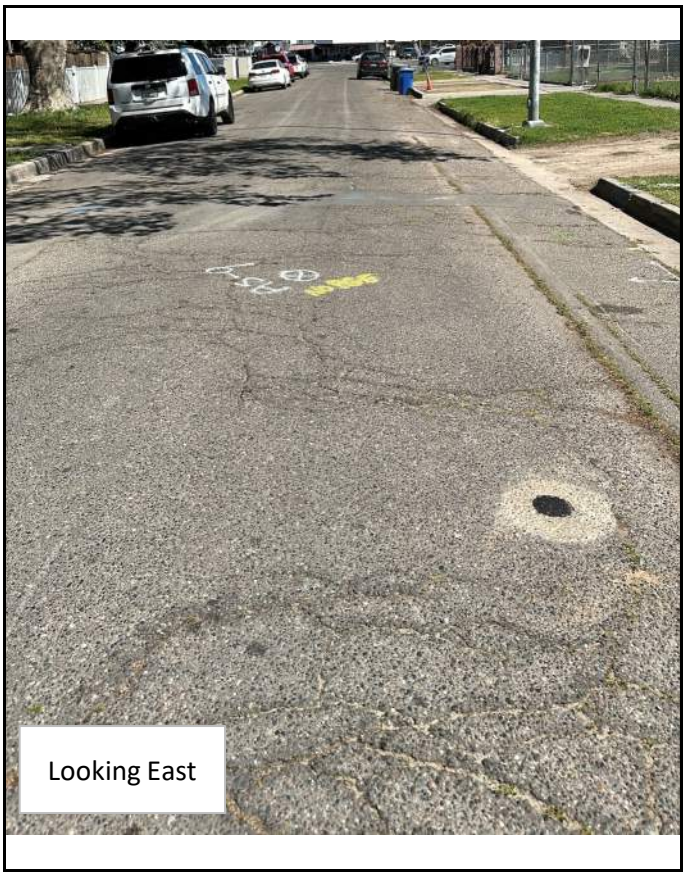
Street Name:	Angelus St	Start Segment:	N/A
Street Segment ID:	Core AS-9	End Segment:	N/A

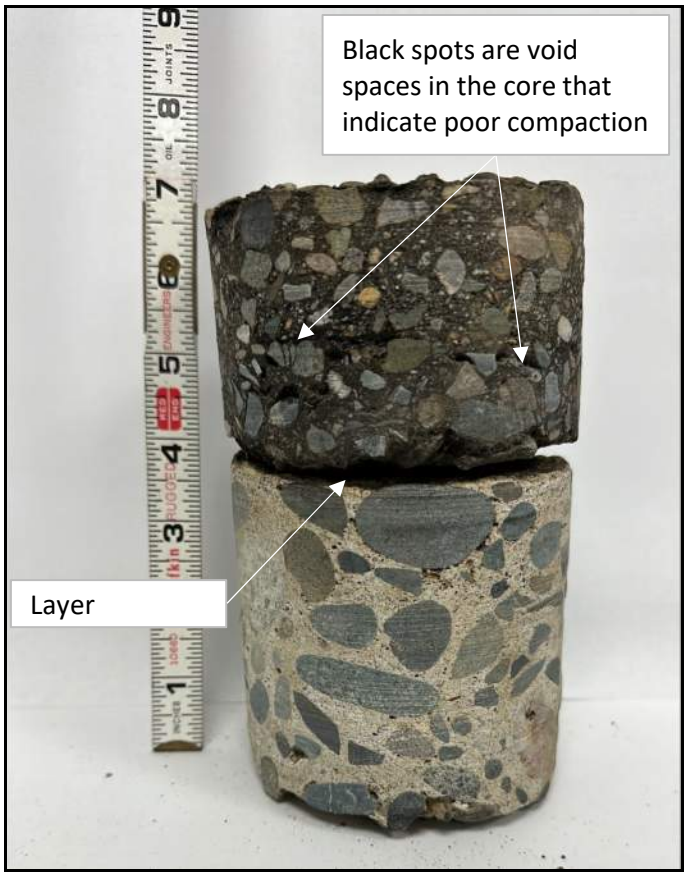
Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	33	*<---reported by others*	
Average AC Thickness (in):	2 3/4	Average AB Thickness (in):	1
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
High	N/A	High	N/A	Low to Moderate
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	No	4" of concrete under AC
N/A	High	High		





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Pavement Rehabilitation Strategy Decision Tree

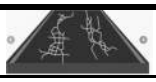
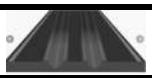
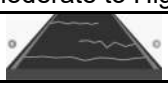
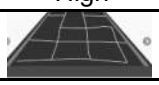
Project	City of Turlock, TO#2
Location	Turlock, California

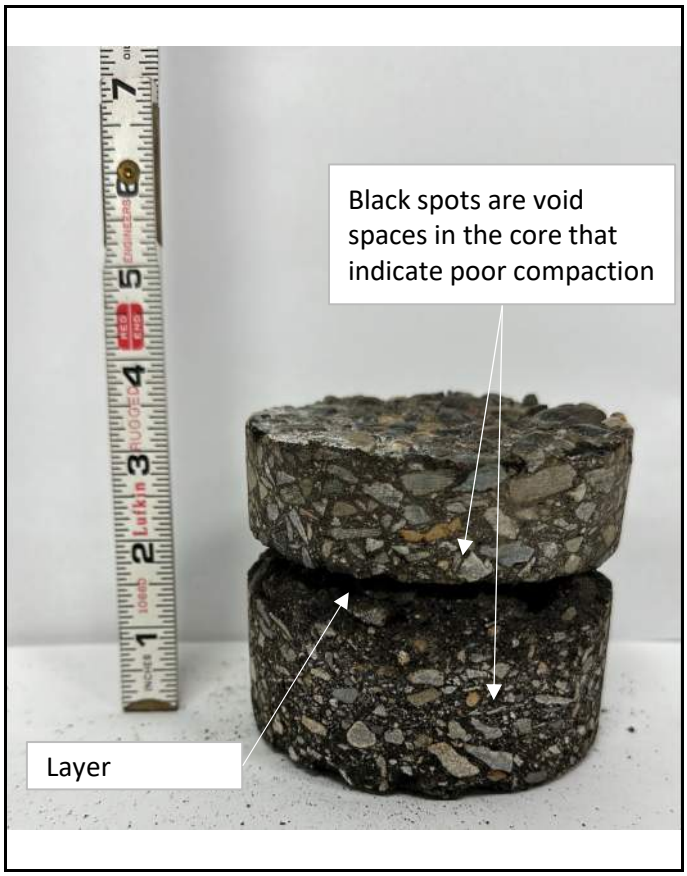
Street Name:	Bernell Ave	Start Segment:	N/A
Street Segment ID:	Core BA-1	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	31	*<---reported by others*	
Average AC Thickness (in):	3 1/2	Average AB Thickness (in):	2
Subgrade Description:	Sandy Silt	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
Moderate to High	N/A	High	N/A	Low to Moderate
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	Yes, isolated	
Low	High	N/A		



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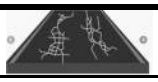
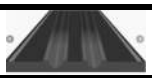
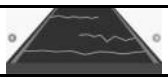
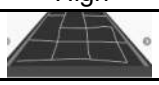
Pavement Rehabilitation Strategy Decision Tree

Project	City of Turlock, TO#2
Location	Turlock, California

Street Name:	Beech St	Start Segment:	N/A
Street Segment ID:	Core BS-1	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	12	*<---reported by others*	
Average AC Thickness (in):	2 1/2	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading					
					
	Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
	Moderate	N/A	High	N/A	High
				Potholes?	Notes
	Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
	High	High	Low		

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Pavement Rehabilitation Strategy Decision Tree

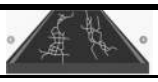
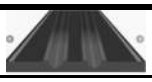
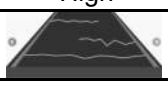
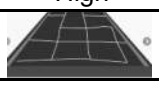
Project	City of Turlock, TO#2
Location	Turlock, California

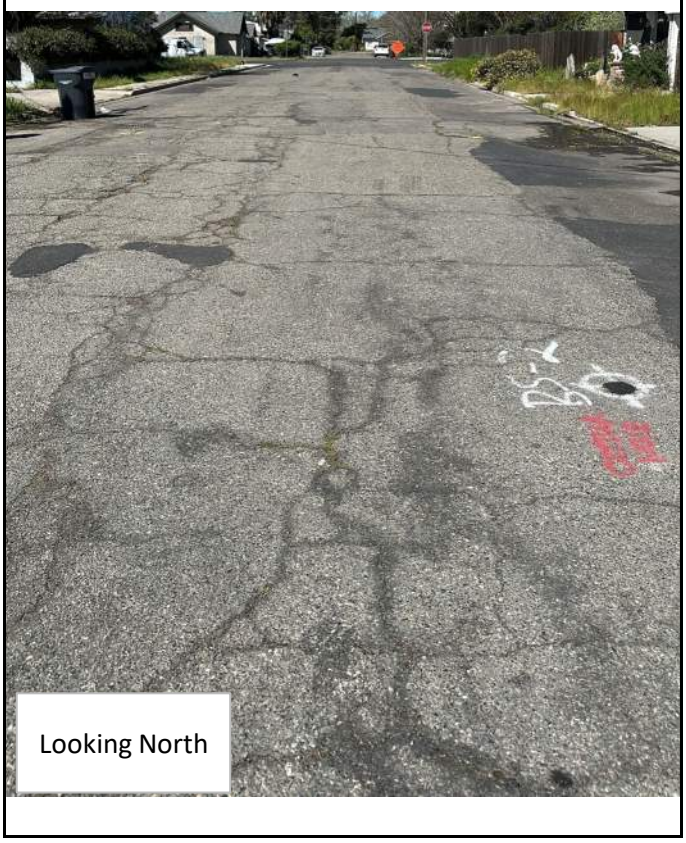
Street Name:	Beech St	Start Segment:	N/A
Street Segment ID:	Core BS-2	End Segment:	N/A

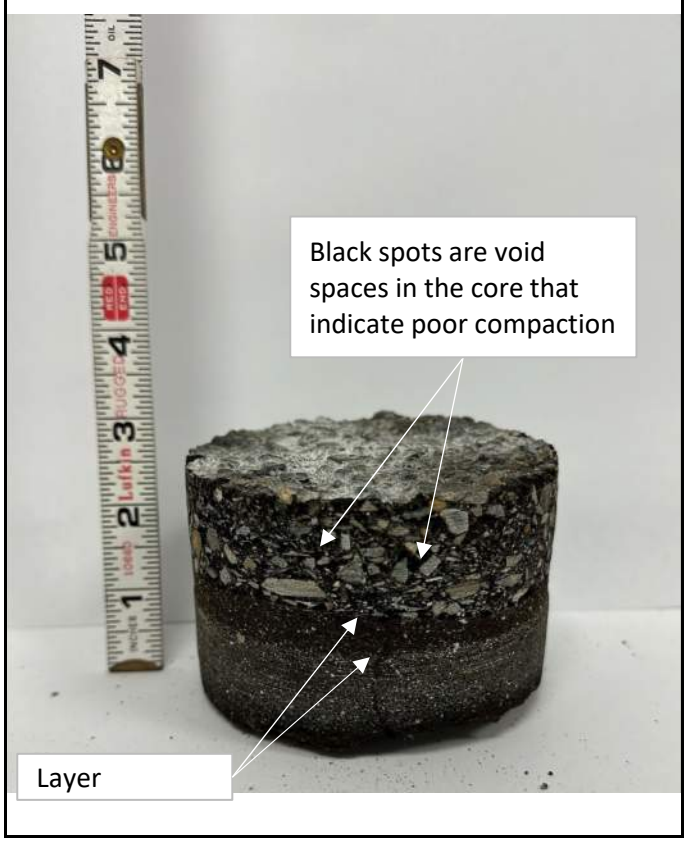
Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	12	*<---reported by others*	
Average AC Thickness (in):	2 3/4	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
High	N/A	High	N/A	N/A
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	Yes, isolated	
Low	High	N/A		





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Pavement Rehabilitation Strategy Decision Tree

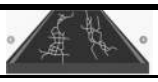
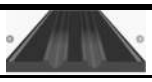
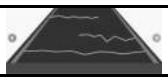
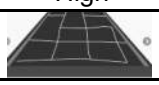
Project	City of Turlock, TO#2
Location	Turlock, California

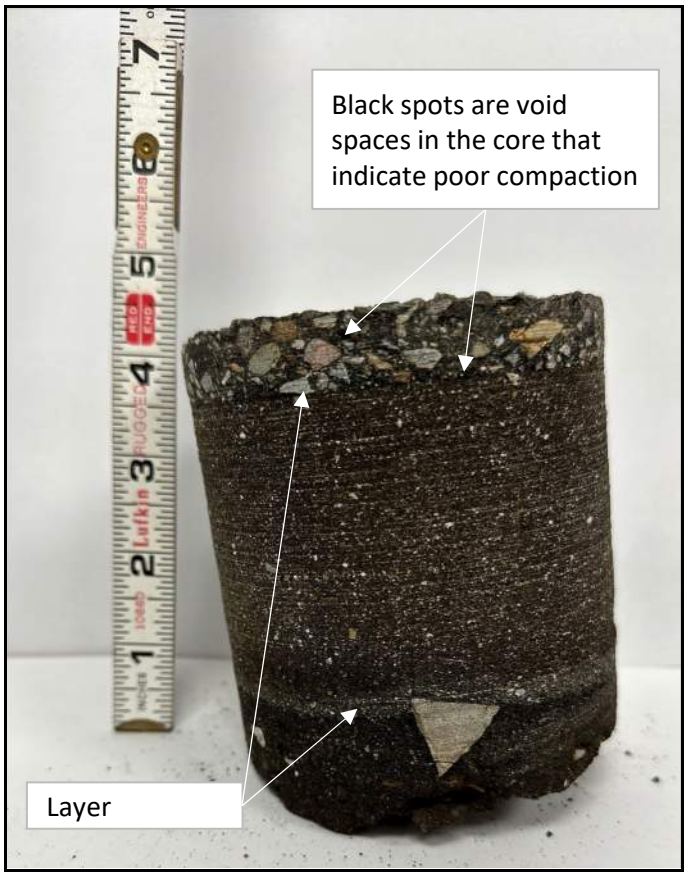
Street Name:	Beech St	Start Segment:	N/A
Street Segment ID:	Core BS-3-1	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	13	*<---reported by others*	
Average AC Thickness (in):	4	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
N/A	N/A	High	N/A	Low
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	Yes, isolated	
Low	High	N/A		



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Pavement Rehabilitation Strategy Decision Tree

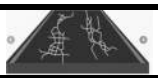
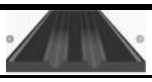
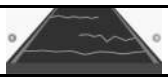
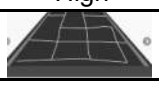
Project	City of Turlock, TO#2
Location	Turlock, California

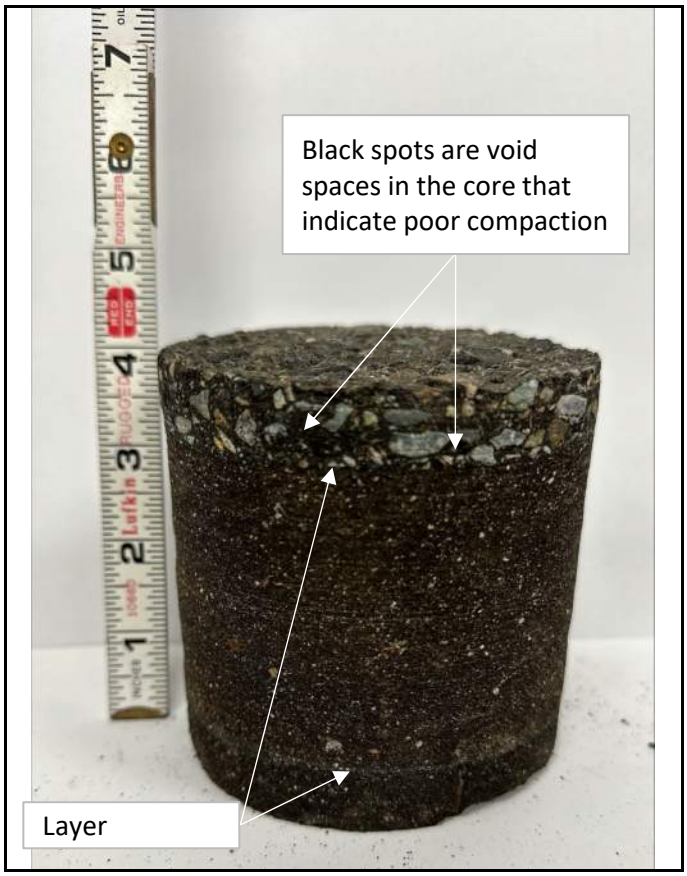
Street Name:	Beech St	Start Segment:	N/A
Street Segment ID:	Core BS-3-2	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	13	*<---reported by others*	
Average AC Thickness (in):	4	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
N/A	N/A	High	N/A	Low
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	Yes, isolated	
Low	High	N/A		



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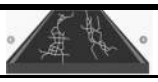
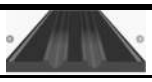
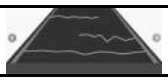
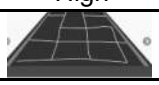
Pavement Rehabilitation Strategy Decision Tree

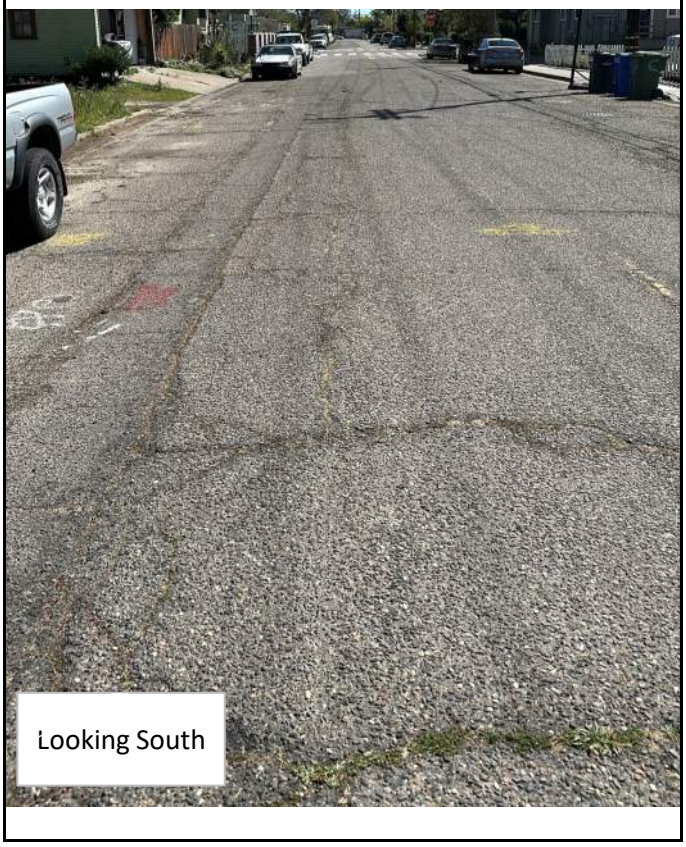
Project	City of Turlock, TO#2
Location	Turlock, California

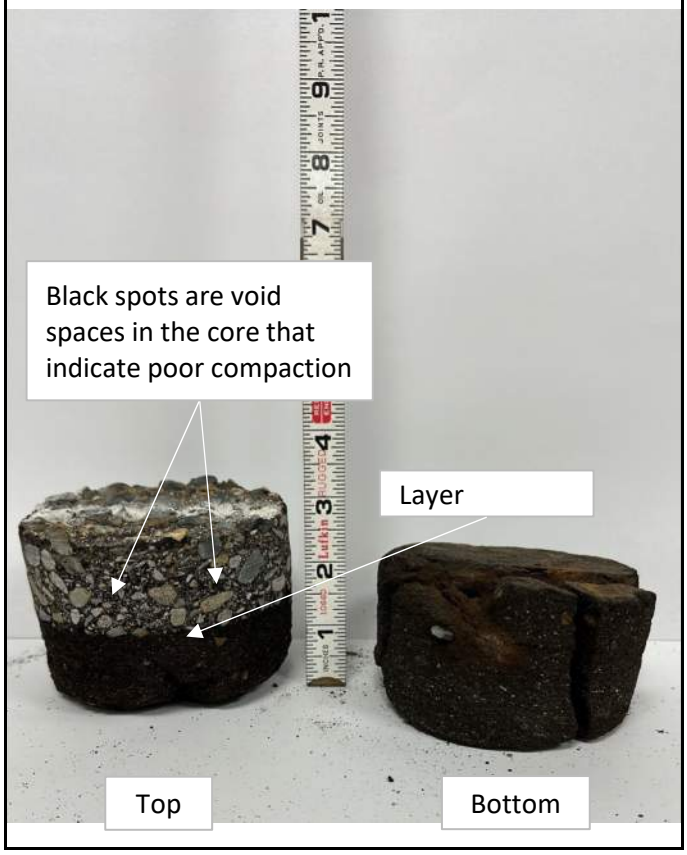
Street Name:	Beech St	Start Segment:	N/A
Street Segment ID:	Core BS-4	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	3	*<---reported by others*	
Average AC Thickness (in):	4 3/4	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading					
					
	Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
	Low to Moderate	N/A	High	N/A	Low to Moderate
				Potholes?	Notes
	Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
	Low to Moderate	Moderate	High		





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Pavement Rehabilitation Strategy Decision Tree

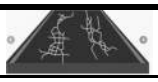
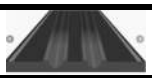
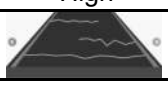
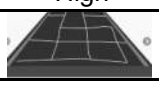
Project	City of Turlock, TO#2
Location	Turlock, California

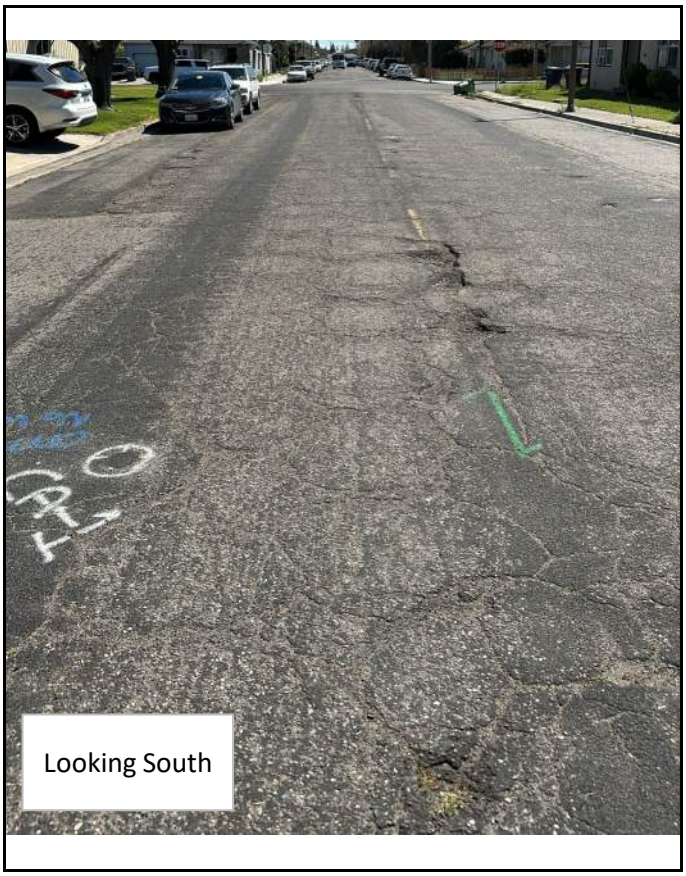
Street Name:	Clifford Ave	Start Segment:	N/A
Street Segment ID:	Core CA-1	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	23	*<---reported by others*	
Average AC Thickness (in):	5	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
High	N/A	High	N/A	Moderate
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	Yes, extensive	
N/A	N/A	Moderate		



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Pavement Rehabilitation Strategy Decision Tree

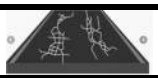
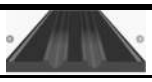
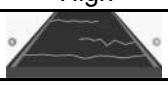
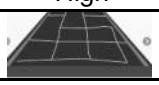
Project	City of Turlock, TO#2
Location	Turlock, California

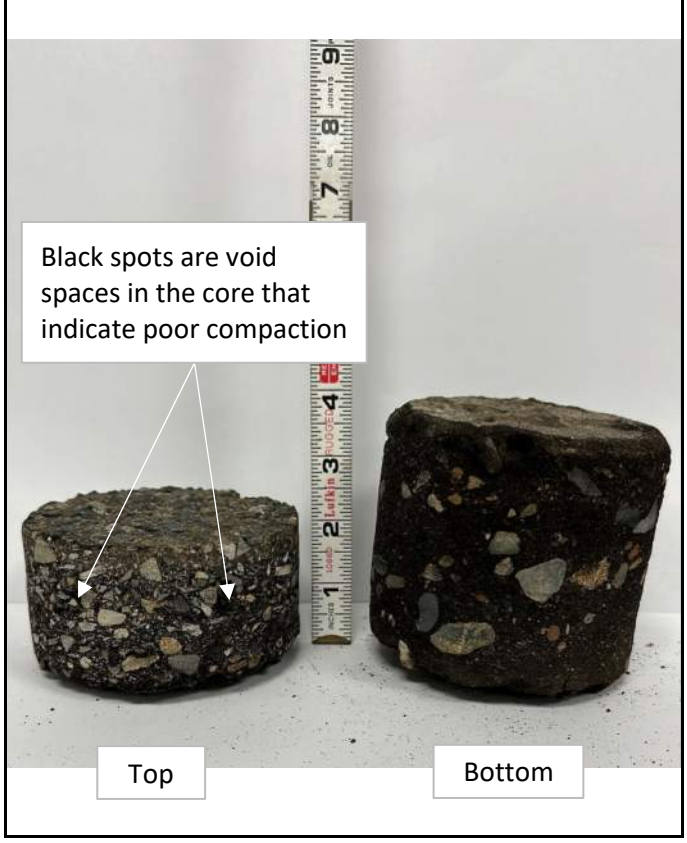
Street Name:	Clifford Ave	Start Segment:	N/A
Street Segment ID:	Core CA-2-1	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	28	*<---reported by others*	
Average AC Thickness (in):	6	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
High	N/A	High	N/A	Moderate
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	Yes, extensive	
Low	High	N/A		



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Pavement Rehabilitation Strategy Decision Tree

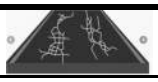
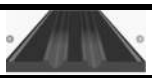
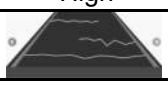
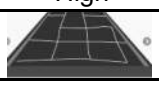
Project	City of Turlock, TO#2
Location	Turlock, California

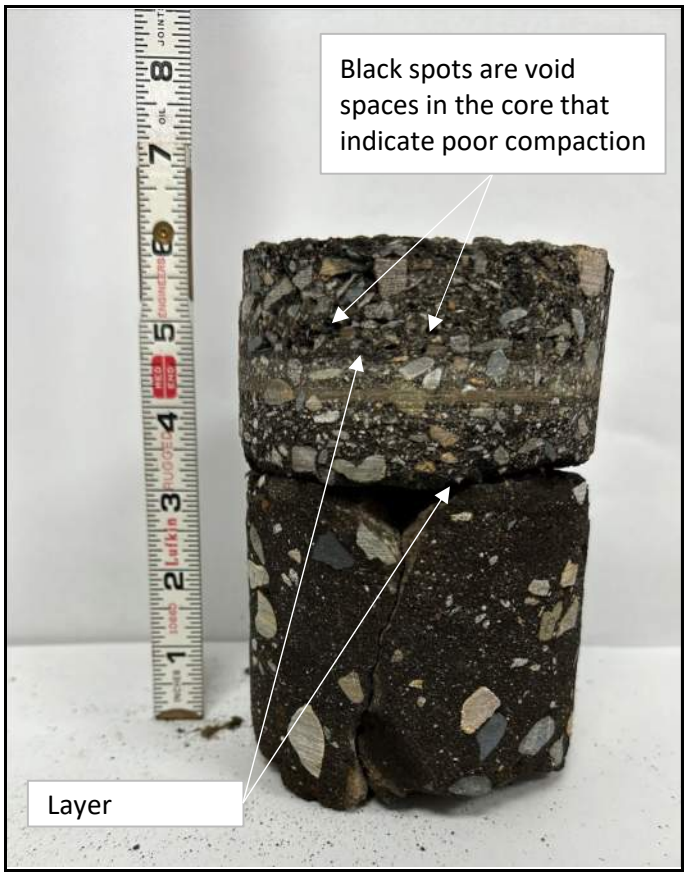
Street Name:	Clifford Ave	Start Segment:	N/A
Street Segment ID:	Core CA-2-2	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	28	*<---reported by others*	
Average AC Thickness (in):	6	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
High	N/A	High	N/A	Moderate
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	Yes, extensive	
Low	High	N/A		



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Pavement Rehabilitation Strategy Decision Tree

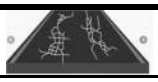
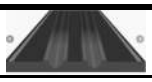
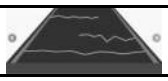
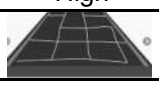
Project	City of Turlock, TO#2
Location	Turlock, California

Street Name:	Clifford Ave	Start Segment:	N/A
Street Segment ID:	Core CA-3	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	74	*<---reported by others*	
Average AC Thickness (in):	5 1/2	Average AB Thickness (in):	4 1/2
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
N/A	N/A	High	N/A	Moderate
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
Low	Moderate	N/A		

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Pavement Rehabilitation Strategy Decision Tree

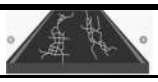
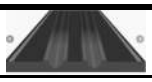
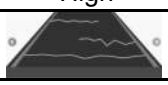
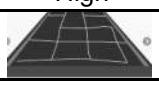
Project	City of Turlock, TO#2
Location	Turlock, California

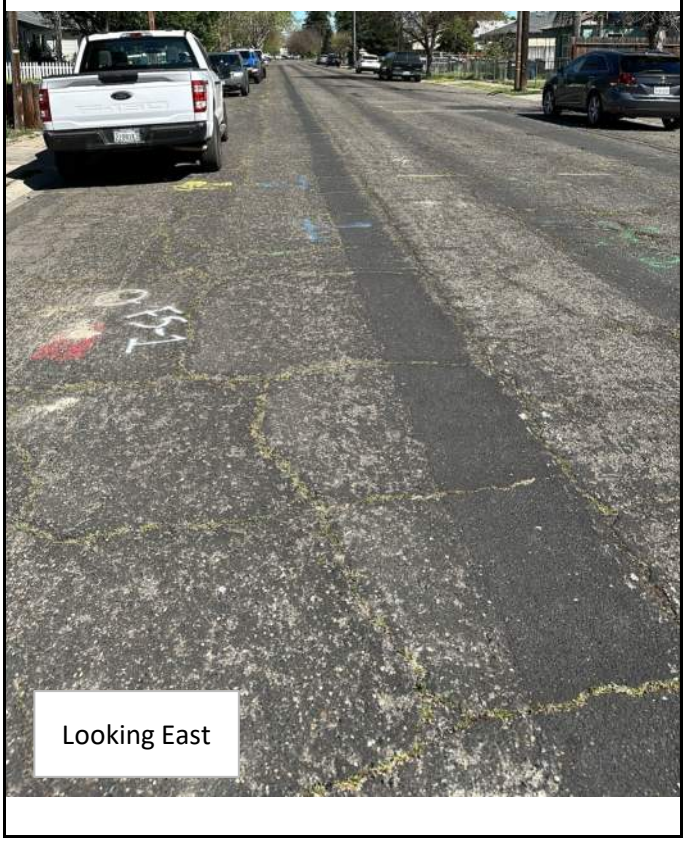
Street Name:	Florence St	Start Segment:	N/A
Street Segment ID:	Core FS-1	End Segment:	N/A

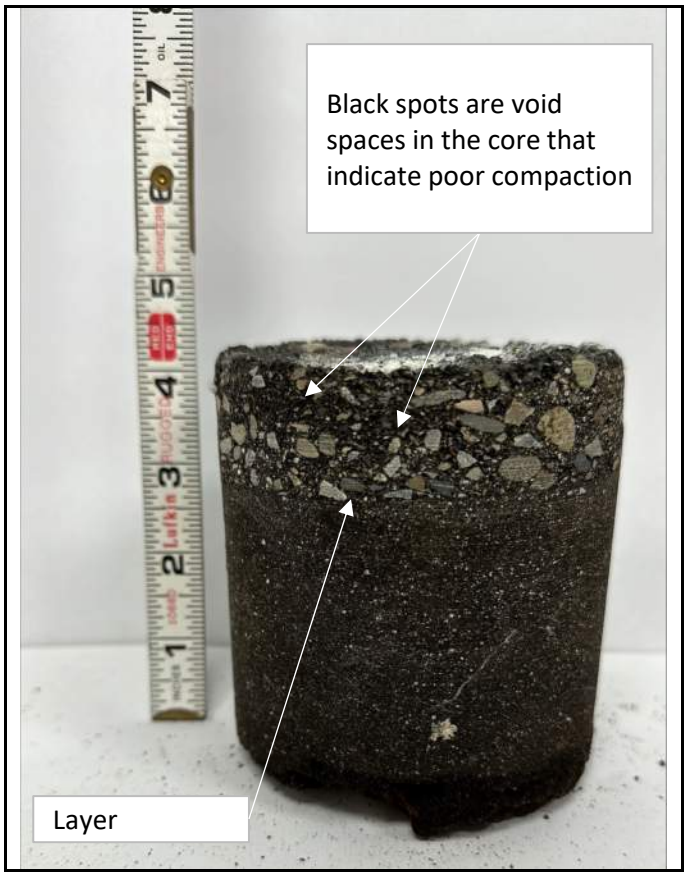
Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	19	*<---reported by others*	
Average AC Thickness (in):	4 1/2	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
High	Low	High	N/A	N/A
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
N/A	Moderate	High		





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Pavement Rehabilitation Strategy Decision Tree

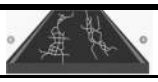
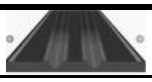
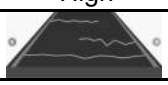
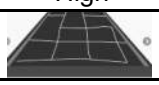
Project	City of Turlock, TO#2
Location	Turlock, California

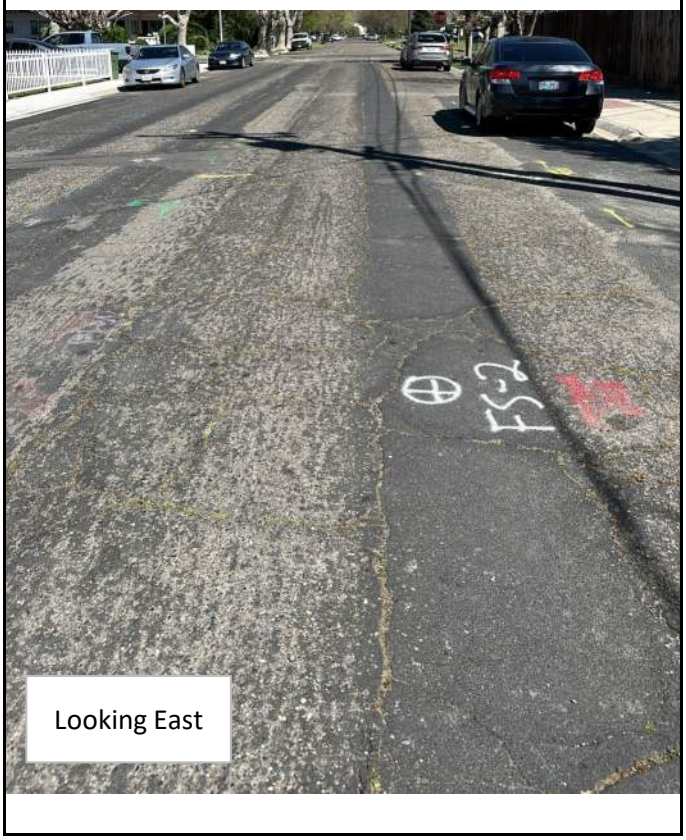
Street Name:	Florence St	Start Segment:	N/A
Street Segment ID:	Core FS-2	End Segment:	N/A

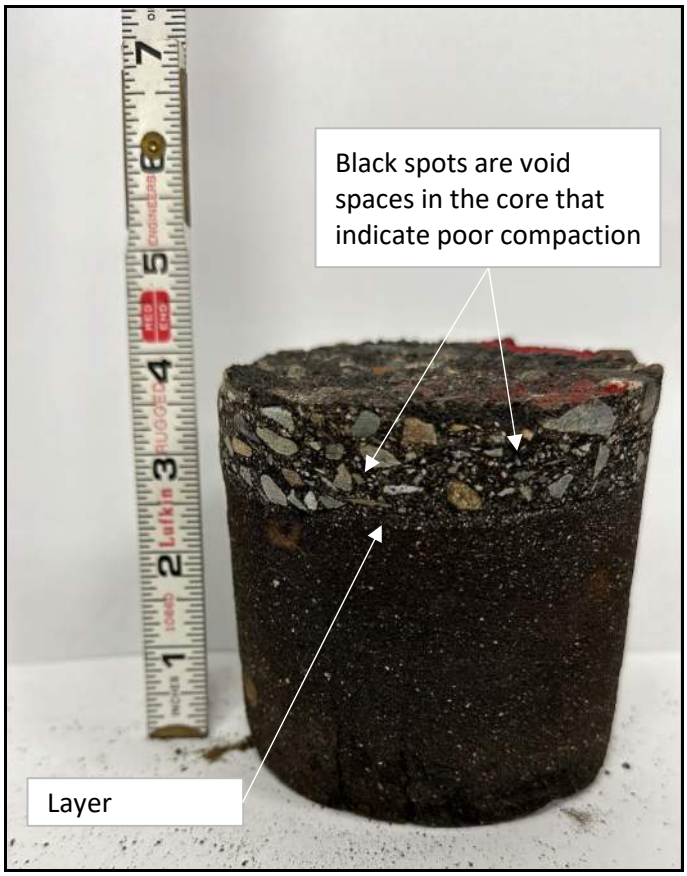
Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	19	*<---reported by others*	
Average AC Thickness (in):	4	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
High	Moderate	High	N/A	N/A
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
N/A	Moderate	High		





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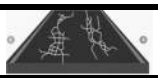
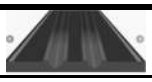
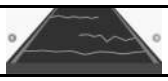
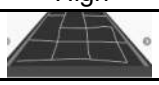
Pavement Rehabilitation Strategy Decision Tree

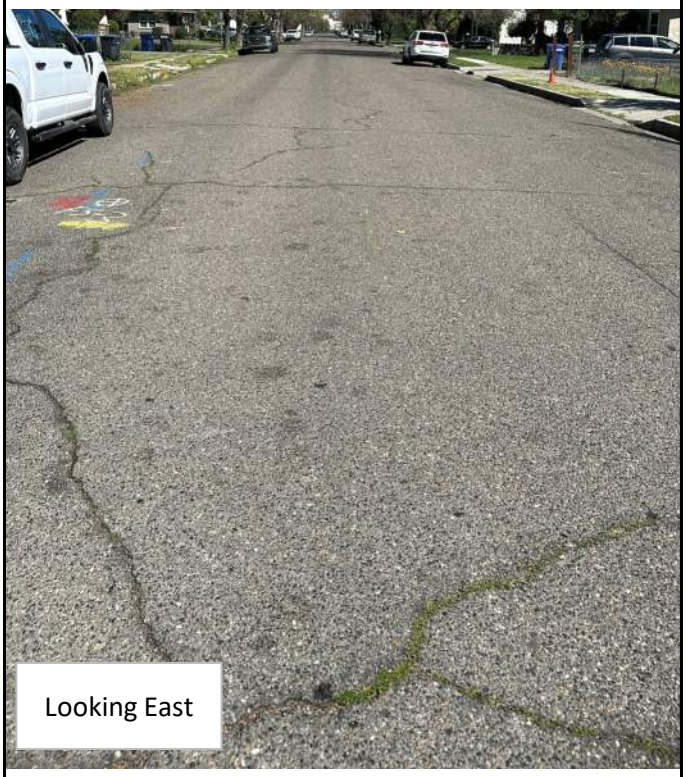
Project	City of Turlock, TO#2
Location	Turlock, California

Street Name:	Florence St	Start Segment:	N/A
Street Segment ID:	Core FS-3	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	65	*<---reported by others*	
Average AC Thickness (in):	6	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading					
					
	Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
	N/A	N/A	High	N/A	High
				Potholes?	Notes
	Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
	High	N/A	N/A		



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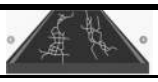
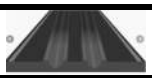
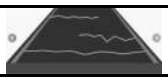
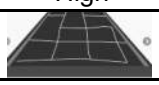
Pavement Rehabilitation Strategy Decision Tree

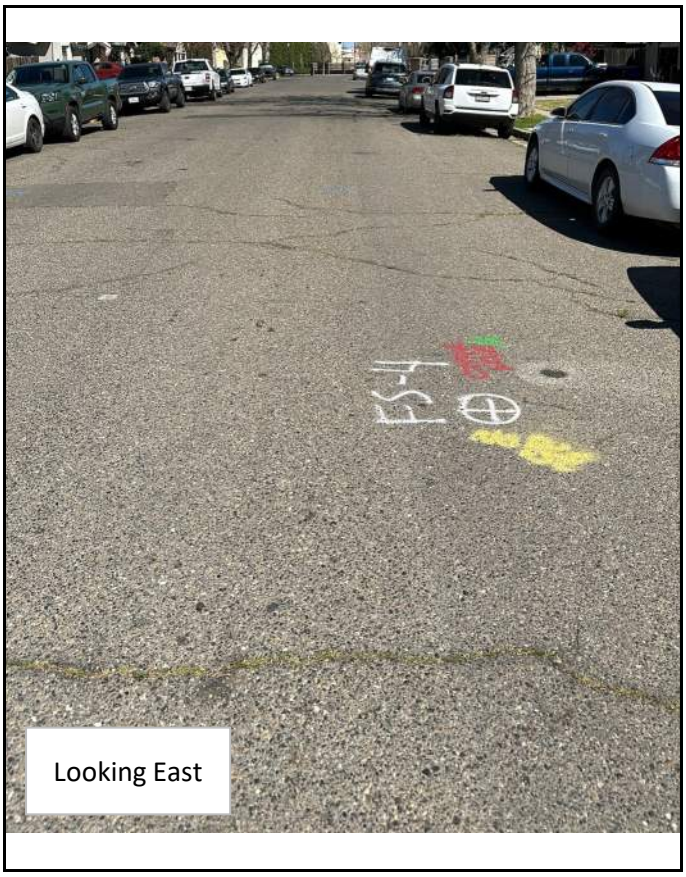
Project	City of Turlock, TO#2
Location	Turlock, California

Street Name:	Florence St	Start Segment:	N/A
Street Segment ID:	Core FS-4	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	65	*<---reported by others*	
Average AC Thickness (in):	7 1/2	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading					
					
	Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
	N/A	N/A	High	N/A	Low
				Potholes?	Notes
	Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
	High	Moderate	N/A		



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Pavement Rehabilitation Strategy Decision Tree

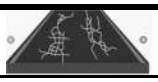
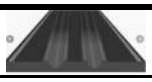
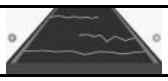
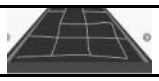
Project	City of Turlock, TO#2
Location	Turlock, California

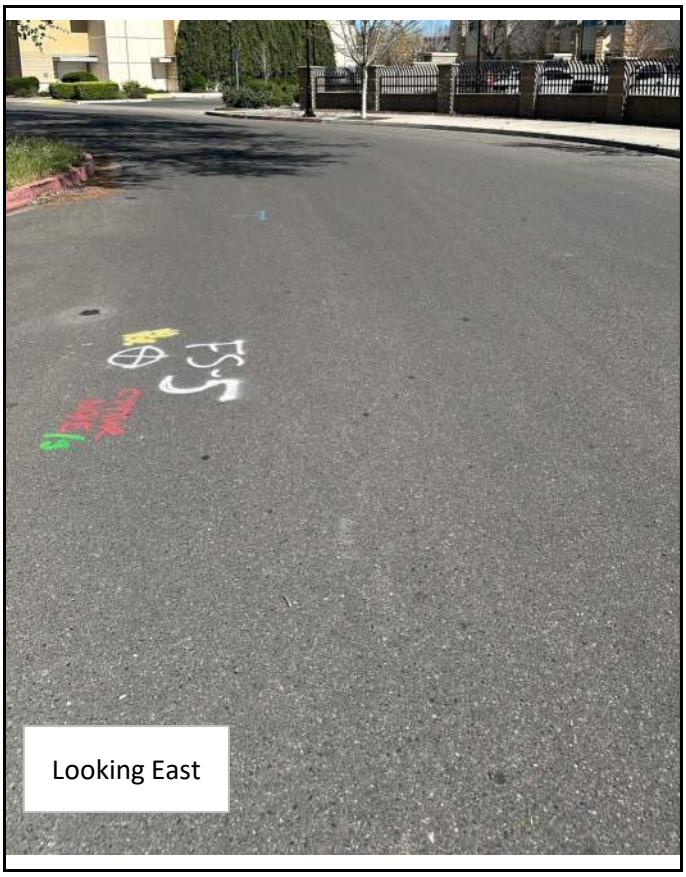
Street Name:	Florence St	Start Segment:	N/A
Street Segment ID:	Core FS-5	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	91	*<---reported by others*	
Average AC Thickness (in):	3 1/2	Average AB Thickness (in):	5 1/2
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
N/A	N/A	Low	N/A	N/A
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
N/A	Low	N/A		



https://siegfriedeng.sharepoint.com/sites/Creators_For_Planner/Shared Documents/22157-Task 2-5001 - City of Turlock CIP, Task Order 2/Field Exploration/22157 Task Order 2 - Siegfried Pavement Rehabilation.xlsx

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Pavement Rehabilitation Strategy Decision Tree

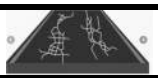
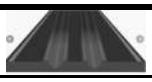
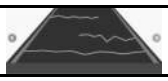
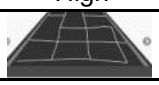
Project	City of Turlock, TO#2
Location	Turlock, California

Street Name:	Florence St	Start Segment:	N/A
Street Segment ID:	Core FS-6	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	59	*<---reported by others*	
Average AC Thickness (in):	3	Average AB Thickness (in):	3 1/2
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
N/A	N/A	High	N/A	High
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	No	Thick cracks, 4 1/2" of concrete under AC
High	Moderate to High	N/A		

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Pavement Rehabilitation Strategy Decision Tree

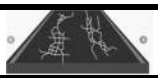
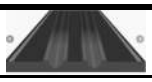
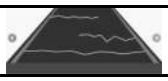
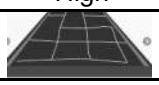
Project	City of Turlock, TO#2
Location	Turlock, California

Street Name:	Olive Ave	Start Segment:	N/A
Street Segment ID:	Core OA-1	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	76	*<---reported by others*	
Average AC Thickness (in):	7 3/4	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
Low	N/A	High	N/A	Moderate
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
Moderate to High	Low	N/A		

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Pavement Rehabilitation Strategy Decision Tree

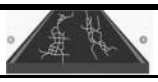
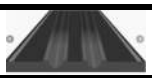
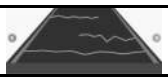
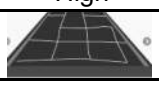
Project	City of Turlock, TO#2
Location	Turlock, California

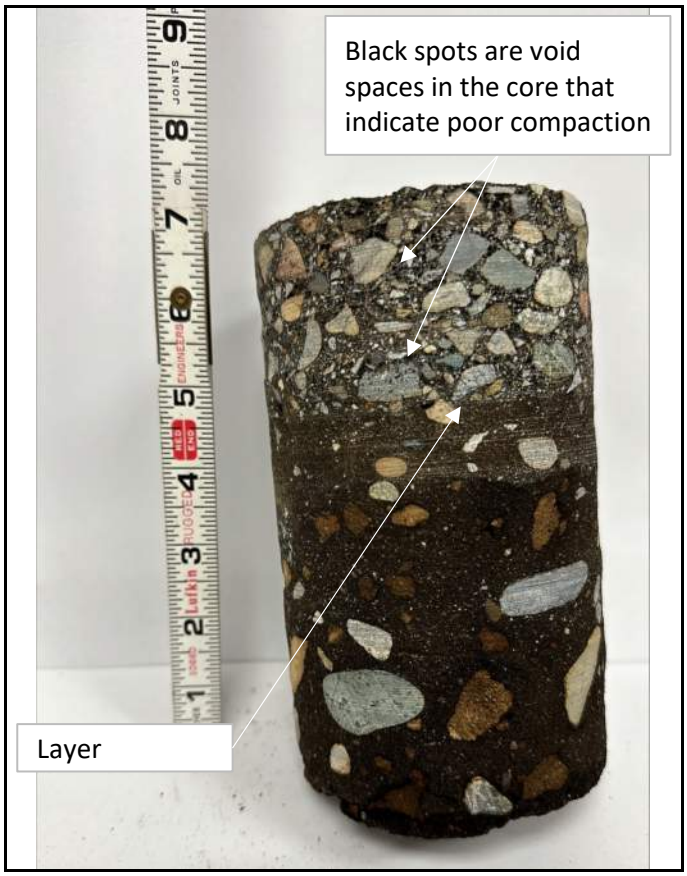
Street Name:	Olive Ave	Start Segment:	N/A
Street Segment ID:	Core OA-2	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	76	*<---reported by others*	
Average AC Thickness (in):	7	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
N/A	N/A	High	N/A	Low to Moderate
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
High	Low	N/A		



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Pavement Rehabilitation Strategy Decision Tree

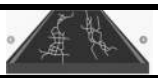
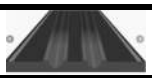
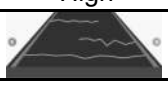
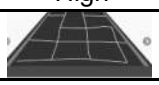
Project	City of Turlock, TO#2
Location	Turlock, California

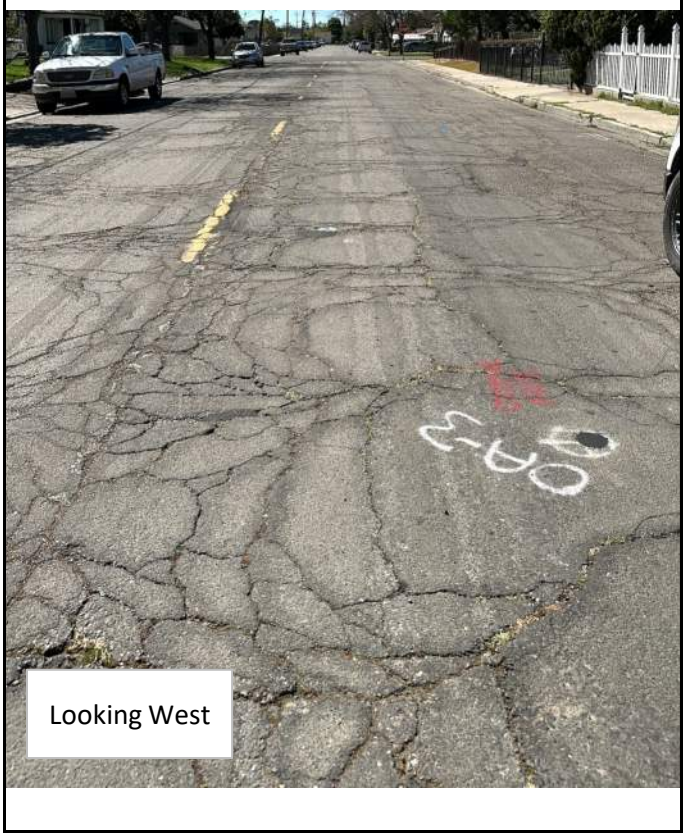
Street Name:	Olive Ave	Start Segment:	N/A
Street Segment ID:	Core OA-3	End Segment:	N/A

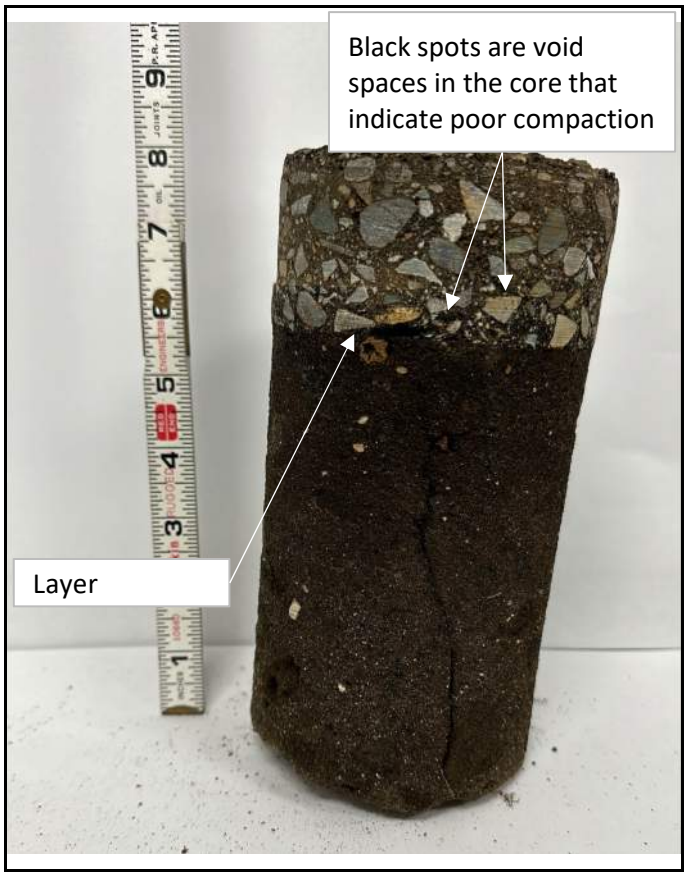
Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	7	*<---reported by others*	
Average AC Thickness (in):	7	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
High	N/A	High	N/A	N/A
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
N/A	Moderate	High		





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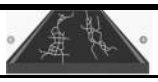
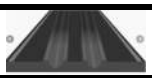
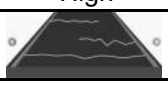
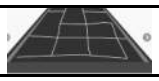
Pavement Rehabilitation Strategy Decision Tree

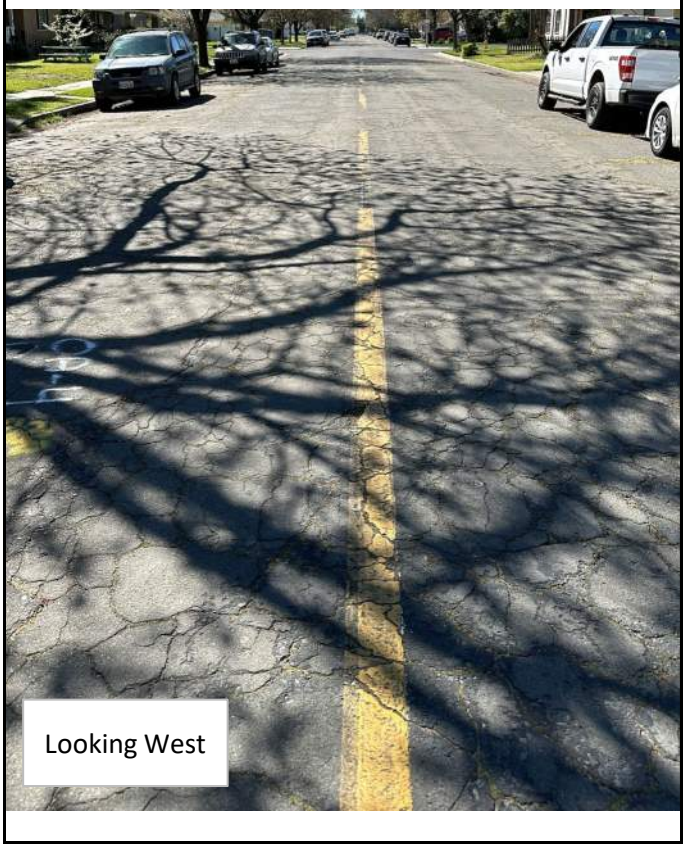
Project	City of Turlock, TO#2
Location	Turlock, California

Street Name:	Olive Ave	Start Segment:	N/A
Street Segment ID:	Core OA-4	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	7	*<---reported by others*	
Average AC Thickness (in):	2	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading					
					
	Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
	High	Low	Moderate	N/A	N/A
				Potholes?	Notes
	Transverse Cracking	Patching/Utility Trench	Block Cracks	No	3 1/2" of concrete under AC
	N/A	Low to Moderate	High		



Picture

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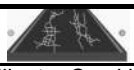
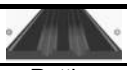
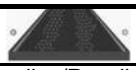
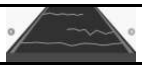
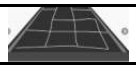
Pavement Rehabilitation Strategy Decision Tree

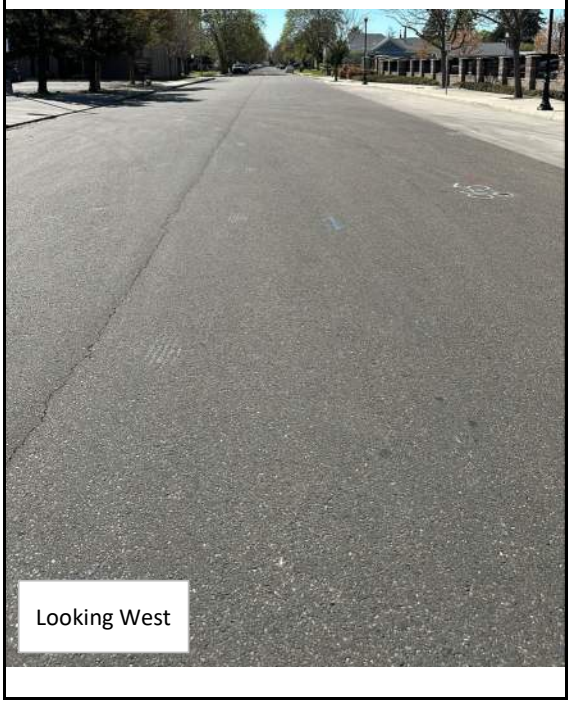
Project	City of Turlock, TO#2
Location	Turlock, California

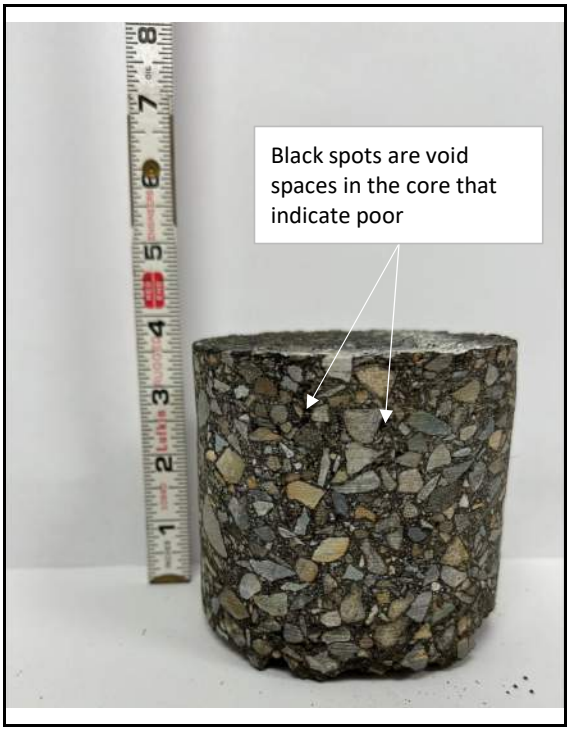
Street Name:	Olive Ave	Start Segment:	N/A
Street Segment ID:	Core OA-5	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	93	*<---reported by others*	
Average AC Thickness (in):	3 1/2	Average AB Thickness (in):	4 1/2
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading					
					
	Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
	N/A	N/A	Moderate	N/A	Moderate
				Potholes?	Notes
	Transverse Cracking	Patching/Utility Trench	Block Cracks	No	
	N/A	N/A	N/A		





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Pavement Rehabilitation Strategy Decision Tree

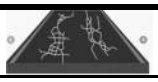
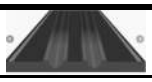
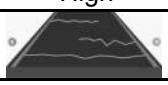
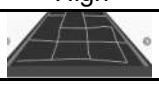
Project	City of Turlock, TO#2
Location	Turlock, California

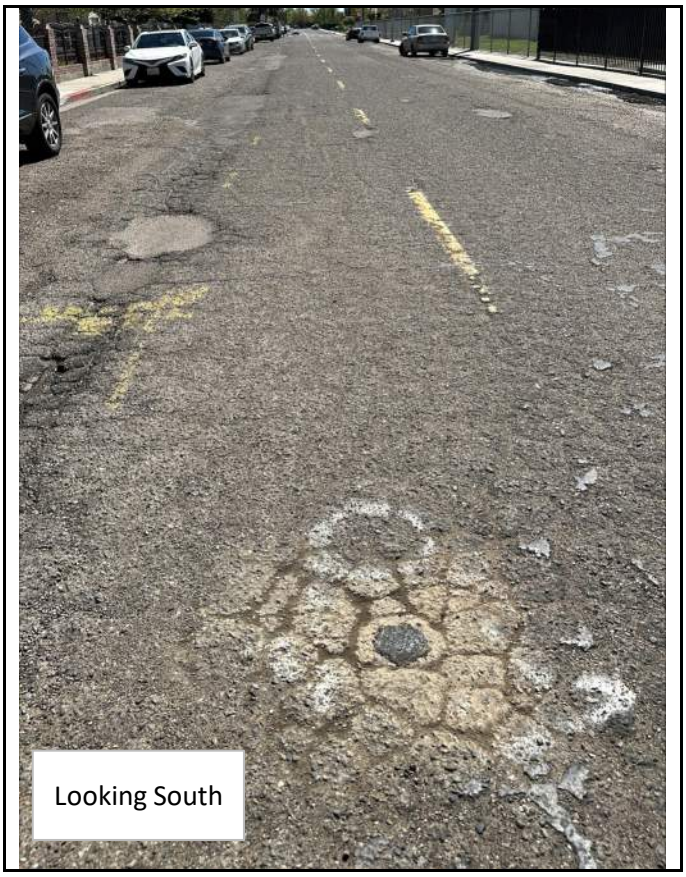
Street Name:	Orange St	Start Segment:	N/A
Street Segment ID:	Core OS-1	End Segment:	N/A

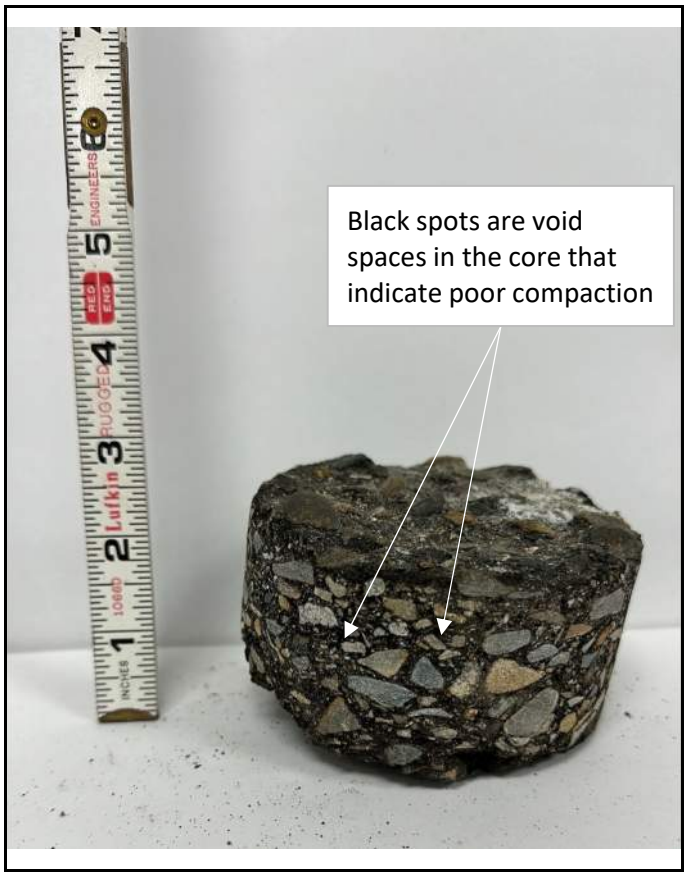
Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	0	*<---reported by others*	
Average AC Thickness (in):	2	Average AB Thickness (in):	3 1/2
Subgrade Description:	Sandy Silt	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
High	Low	High	N/A	Low
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	Yes, extensive	
N/A	High	N/A		





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Pavement Rehabilitation Strategy Decision Tree

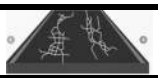
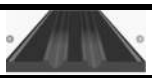
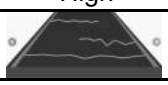
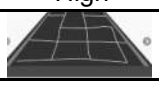
Project	City of Turlock, TO#2
Location	Turlock, California

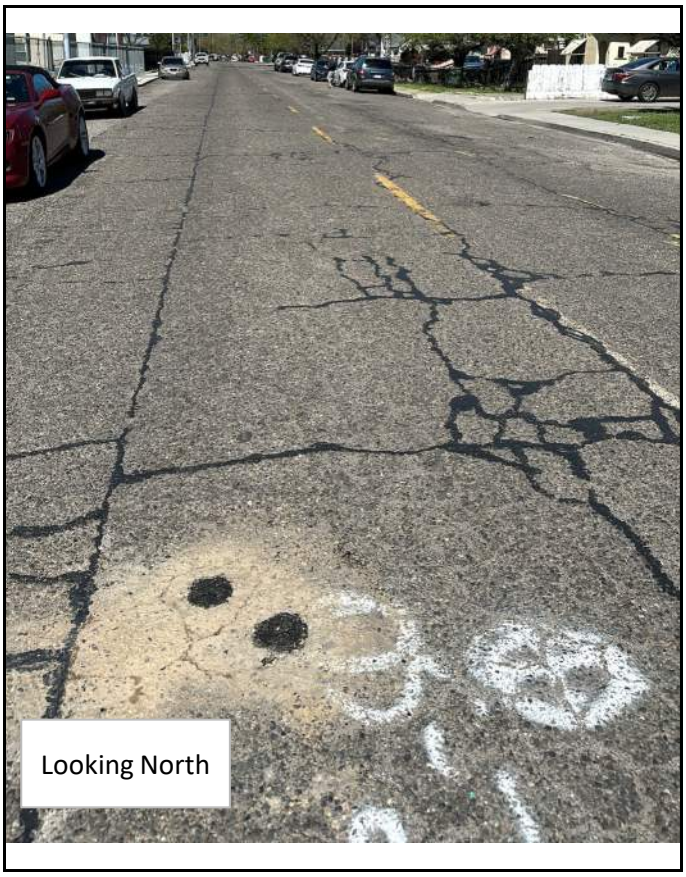
Street Name:	Orange St	Start Segment:	N/A
Street Segment ID:	Core OS-2-1	End Segment:	N/A

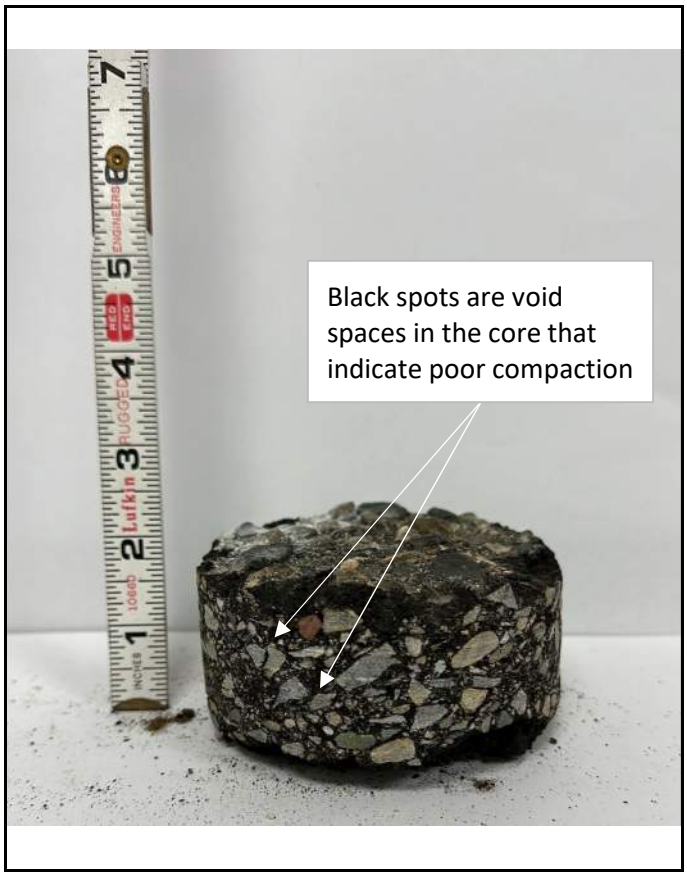
Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	0	*<---reported by others*	
Average AC Thickness (in):	3	Average AB Thickness (in):	5
Subgrade Description:	Sandy Silt	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
High	Low to Moderate	High	N/A	N/A
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	No	2" of asphalt over 1" of degraded asphalt
N/A	High	N/A		





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Pavement Rehabilitation Strategy Decision Tree

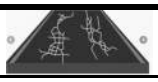
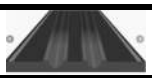
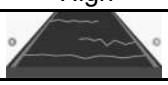
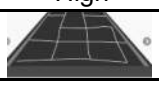
Project	City of Turlock, TO#2
Location	Turlock, California

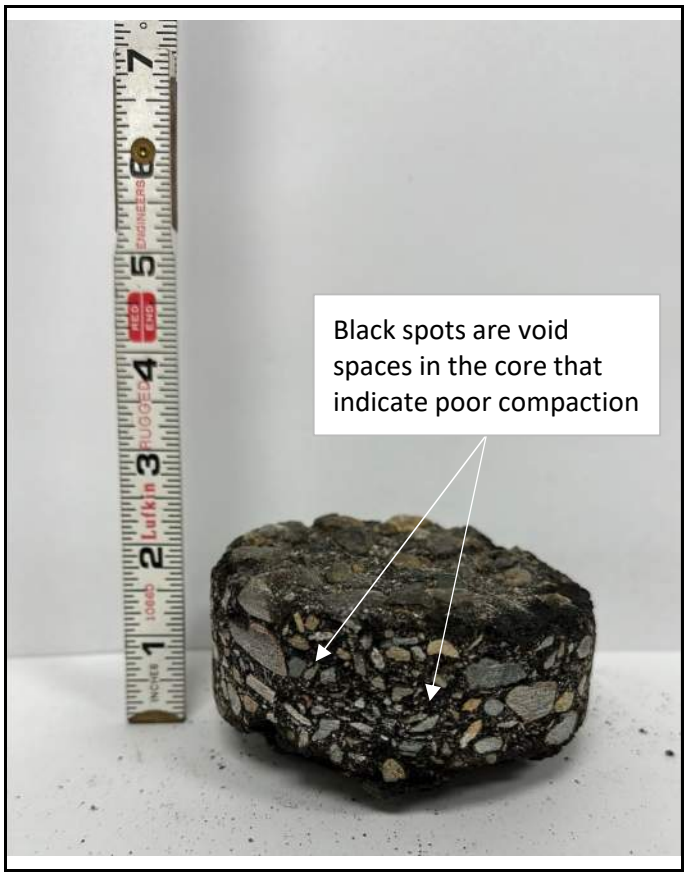
Street Name:	Orange St	Start Segment:	N/A
Street Segment ID:	Core OS-2-2	End Segment:	N/A

Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	0	*<---reported by others*	
Average AC Thickness (in):	3	Average AB Thickness (in):	5
Subgrade Description:	Sandy Silt	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
High	Low to Moderate	High	N/A	N/A
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	No	2" of asphalt over 1" of degraded asphalt
N/A	High	N/A		



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Pavement Rehabilitation Strategy Decision Tree

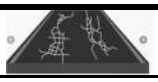
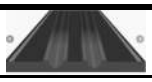
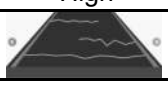
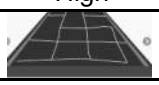
Project	City of Turlock, TO#2
Location	Turlock, California

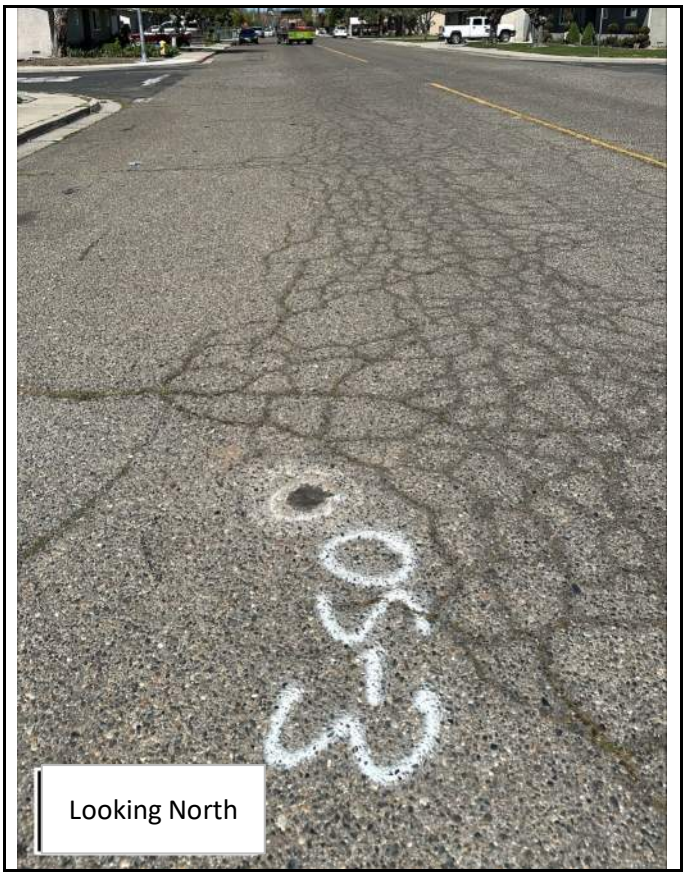
Street Name:	Orange St	Start Segment:	N/A
Street Segment ID:	Core OS-3	End Segment:	N/A

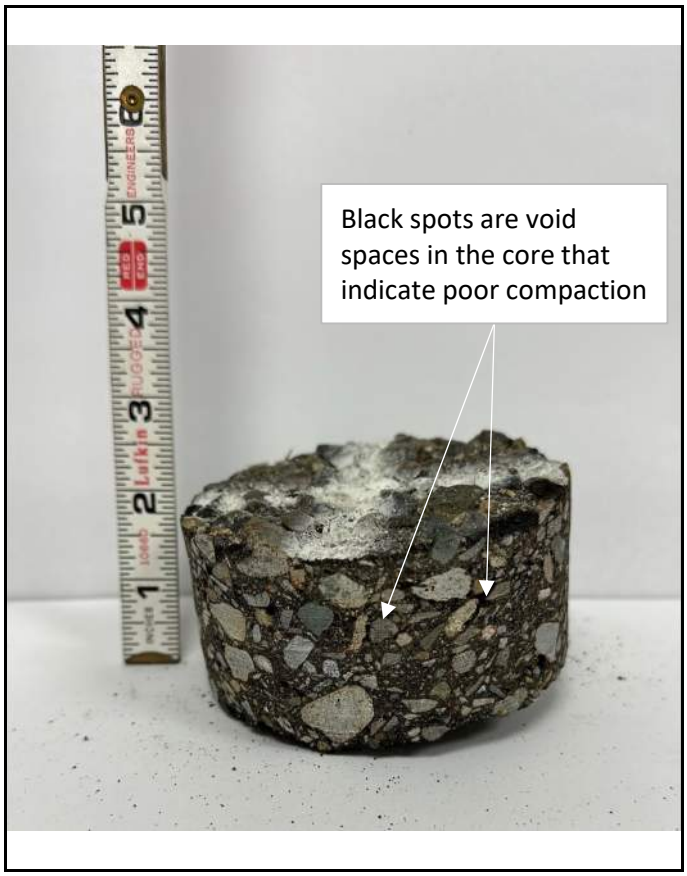
Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	3	*<---reported by others*	
Average AC Thickness (in):	2	Average AB Thickness (in):	3 1/2
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
High	N/A	High	N/A	N/A
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	Yes, isolated	
Low	N/A	N/A		





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Pavement Rehabilitation Strategy Decision Tree

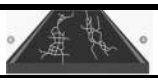
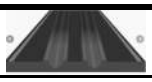
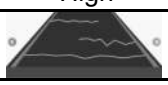
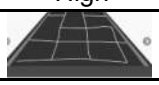
Project	City of Turlock, TO#2
Location	Turlock, California

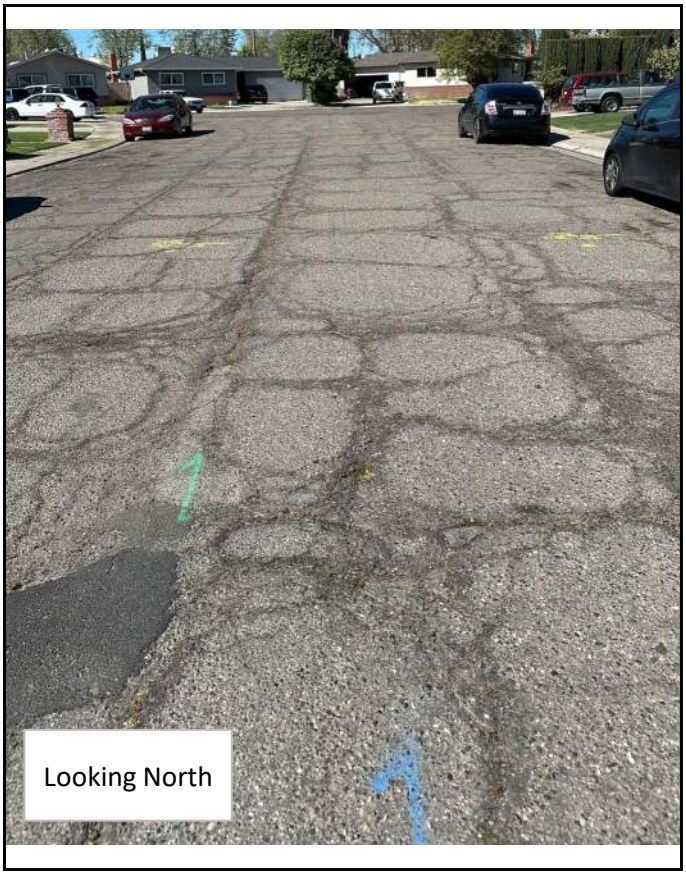
Street Name:	The Burl	Start Segment:	N/A
Street Segment ID:	Core TB-1-1	End Segment:	N/A

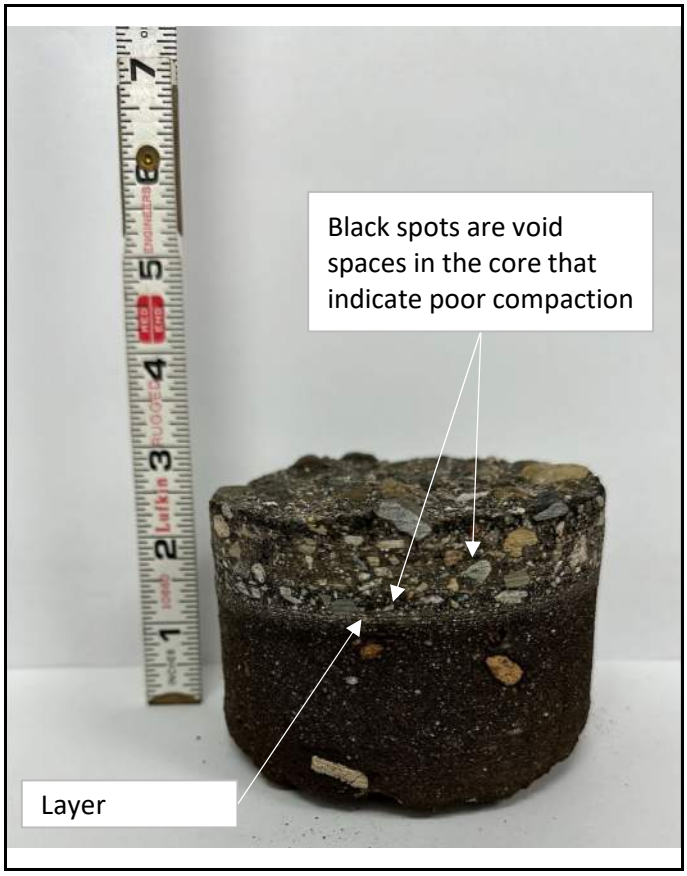
Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	4	*<---reported by others*	
Average AC Thickness (in):	2 3/4	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
High	N/A	High	N/A	N/A
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	Yes, extensive	
N/A	Low	High		





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Pavement Rehabilitation Strategy Decision Tree

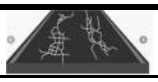
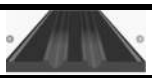
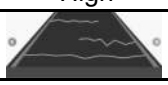
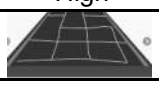
Project	City of Turlock, TO#2
Location	Turlock, California

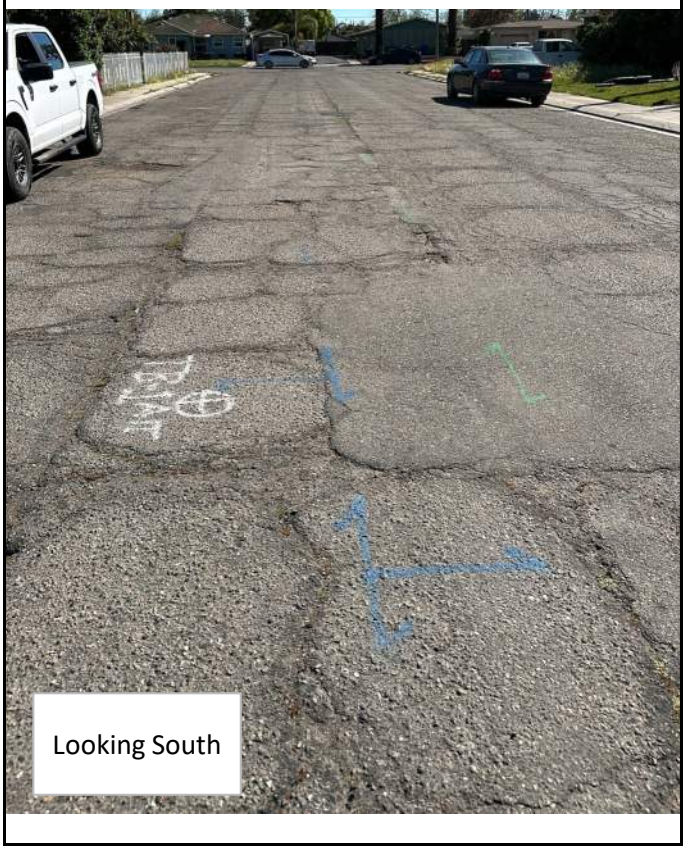
Street Name:	The Burl	Start Segment:	N/A
Street Segment ID:	Core TB-1-2	End Segment:	N/A

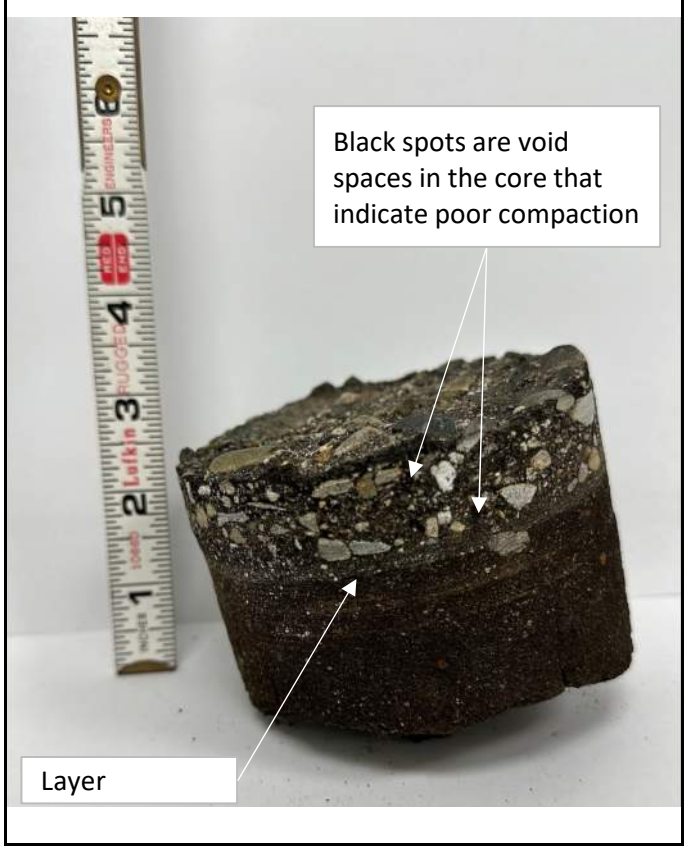
Geometry of Segment:

Length (ft):	---		
Pavement Conditon Index (PCI):	4	*<---reported by others*	
Average AC Thickness (in):	2 3/4	Average AB Thickness (in):	N/A
Subgrade Description:	Silty Sand	Subgrade Design R Value:	

Road Grading

				
Alligator Cracking	Rutting	Peeling/Raveling	Bleeding/Flushing	Longitudinal Cracking
High	N/A	High	N/A	N/A
			Potholes?	Notes
Transverse Cracking	Patching/Utility Trench	Block Cracks	Yes, extensive	
N/A	Low	High		





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APPENDIX B
LABORATORY TESTING

Laboratory testing was performed to quantify and evaluate the geotechnical characteristics of the soil samples obtained at the site. The following laboratory tests were performed on selected samples from the borings:

- Atterberg Limits (ASTM D4318)
- Particle Size Distribution (ASTM D6913)
- Moisture Density Relationships (ASTM D1557)
- California Bearing Ratio (ASTM D1883)
- Organic Content (ASTM D2974)
- Resistance “R” Value (CT301)

The results of the tests performed above are discussed in the Findings section of the report (Part 2)

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Geotechnical Materials Testing Summary

Tested in General Accordance with ASTM D1140, D2487, D2974, D4318, D6913, and D7263.

Project Name: City of Turlock Road CIP Task 2

Project Number: 22157-Task 2-5001

Project Location: Turlock, CA

					ASTM D2216	ASTM D7263		ASTM D4318		ASTM D1140/D6913			ASTM D2487	
Sample Date	Location ID	Depth Top (in)	Depth Base (in)	Color	Moisture (%)	Wet Density (pcf)	Dry Density (pcf)	Liquid Limit	Plasticity Index	Gravel (%)	Sand (%)	Fines (%)	USCS Group Symbol	USCS Description
4/2/2024	TB-1	2 3/4	36	Brown	6.1	---	---	NP	NP	1	83	16	SM	Silty Sand
3/27/2024	CA-1	5	24	Brown	7.7	---	---	NP	NP	0	82	18	SM	Silty Sand
3/27/2024	CA-2	6	36	Brown	4.5	---	---	NP	NP	0	84	16	SM	Silty Sand
3/27/2024	CA-3	10	13	Brown	6.8	---	---	NP	NP	3	75	22	SM	Silty Sand
3/26/2024	BS-1	2 1/2	24	Brown	4.9	---	---	NP	NP	3	80	17	SM	Silty Sand
3/26/2024	BS-2	2 3/4	24	Brown	7.6	---	---	NP	NP	0	73	27	SM	Silty Sand
3/26/2024	BS-3	4	36	Brown	5.1	---	---	NP	NP	0	85	15	SM	Silty Sand
3/26/2024	BS-4	4 3/4	26	Brown	5.8	---	---	NP	NP	0	83	17	SM	Silty Sand
3/26/2024	FS-1	4 1/2	37	Brown	6.1	---	---	NP	NP	0	86	14	SM	Silty Sand
3/26/2024	FS-2	4	39	Brown	5.6	---	---	NP	NP	0	82	18	SM	Silty Sand
3/26/2024	FS-3	6	24	Brown	6.7	---	---	NP	NP	0	85	15	SM	Silty Sand
3/26/2024	FS-4	7 1/2	24	Brown	4.7	---	---	NP	NP	0	79	21	SM	Silty Sand
3/26/2024	FS-5	9	24	Brown	1.9	---	---	NP	NP	2	86	12	SM	Silty Sand
3/26/2024	FS-6	11	24	Brown	4.1	---	---	NP	NP	2	85	13	SM	Silty Sand
3/26/2024	OA-1	7 3/4	24	Brown	4.4	---	---	NP	NP	0	85	15	SM	Silty Sand
3/26/2024	OA-2	7	26	Brown	7.6	---	---	NP	NP	0	82	18	SM	Silty Sand
3/26/2024	OA-3	7	26	Brown	5.1	---	---	NP	NP	0	85	15	SM	Silty Sand
3/26/2024	OA-4	5 1/2	30	Brown	4.8	---	---	NP	NP	0	81	19	SM	Silty Sand
3/26/2024	OA-5	8	25	Brown	3.7	---	---	NP	NP	1	87	12	SM	Silty Sand

STOCKTON
3428 Brookside Rd.
Stockton, CA 95219
t: 209.943.2021

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Geotechnical Materials Testing Summary

Tested in General Accordance with ASTM D1140, D2487, D2974, D4318, D6913, and D7263.

Project Name: City of Turlock Road CIP Task 2

Project Number: 22157-Task 2-5001

Project Location: Turlock, CA

					ASTM D2216	ASTM D7263		ASTM D4318		ASTM D1140/D6913			ASTM D2487	
Sample Date	Location ID	Depth Top (in)	Depth Base (in)	Color	Moisture (%)	Wet Density (pcf)	Dry Density (pcf)	Liquid Limit	Plasticity Index	Gravel (%)	Sand (%)	Fines (%)	USCS Group Symbol	USCS Description
4/2/2024	AS-1	6 1/2	28	Brown	6.6	---	---	NP	NP	3	57	40	SM	Silty Sand
4/2/2024	AS-2	6 1/2	24	Brown	6.9	---	---	NP	NP	3	63	34	SM	Silty Sand
4/2/2024	AS-3	6 1/2	24	Brown	9.4	---	---	NP	NP	1	54	45	SM	Silty Sand
4/2/2024	AS-4	10	26	Brown	8.1	---	---	NP	NP	3	61	36	SM	Silty Sand
4/2/2024	AS-5	6 1/2	24	Brown	8.3	---	---	NP	NP	5	59	36	SM	Silty Sand
4/2/2024	AS-6	7	34	Brown	7.7	---	---	NP	NP	1	63	36	SM	Silty Sand
4/1/2024	AS-7	4 1/2	26	Brown	5.2	---	---	NP	NP	0	85	15	SM	Silty Sand
4/1/2024	AS-8	8	31	Brown	5.5	---	---	NP	NP	0	76	24	SM	Silty Sand
4/1/2024	AS-9	8 1/2	32	Brown	5.9	---	---	NP	NP	0	84	16	SM	Silty Sand
4/1/2024	OS-1	5 1/2	24	Brown	9.2	---	---	NP	NP	0	43	57	ML	Sandy Silt
4/1/2024	OS-2	8	29	Brown	12.2	---	---	NP	NP	0	39	61	ML	Sandy Silt
4/1/2024	OS-3	5 1/2	28	Brown	6.3	---	---	NP	NP	0	75	25	SM	Silty Sand
4/1/2024	BA-1	5 1/2	29	Brown	10.6	---	---	NP	NP	2	43	55	ML	Sandy Silt

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CONSTRUCTION TESTING SERVICES

TESTING
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ENGINEERING

4400 Yankee Hill Road, Rocklin, CA 95677

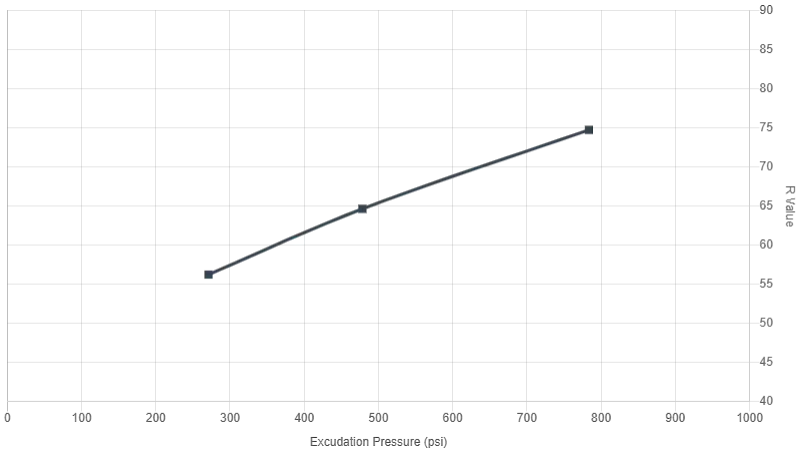
Determining the Resistance "R" Value of Treated and Untreated Bases, Subbases, and Basement Soils

Project Name: City of Turlock Road CIP Task 2 - Siegfried | **Place of Sampling :** F5-3 Bulk 6\"-24\" | **Permit # :**

Project No.:20775 | **Sampled by:** Contractor | **Report Date:** 06/18/2024

Client: Siegfried Engineering, Inc. | **Date of Sampling:** 06/14/2024 | **Lab Log No.:** 276043

Date Received:	06/14/2024	Tested by:	Cory Blue
Material Type:	Soil	Date Tested:	06/18/2024
Source:		Date Disposed:	07/18/2024
Sample ID:		Material Description:	Silty Sand



Specimen	Dry Density (pcf)	Moisture Content %)	Exudation Pressure (psi)	R Value	Expansion Pressure (psf)
A	117.7	10.2	784	75	0
B	117.6	10.8	479	65	0
C	117.6	11.3	271	56	0
R-Value at 300 psi : 57					

Remarks:
Received Sample Condition: Acceptable and/or Satisfactory

Reviewed by: Amy Reeves, Staff Engineer

06/18/2024
Date

ASTM Standards Used: CT 301

CONSTRUCTION TESTING SERVICES

TESTING
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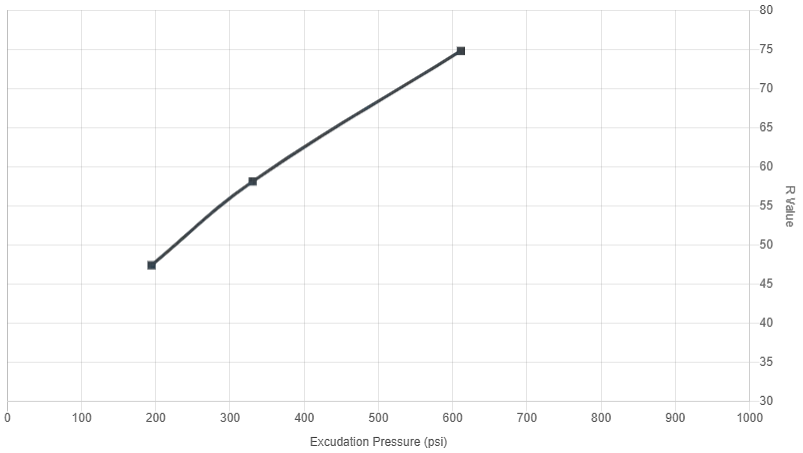
ENGINEERING

4400 Yankee Hill Road, Rocklin, CA 95677

Determining the Resistance "R" Value of Treated and Untreated Bases, Subbases, and Basement Soils

Project Name: City of Turlock Road CIP Task 2 - Siegfried	**Place of Sampling :** BA-1	**Permit # :** pending
Project No.:20775	**Sampled by:** Contractor	**Report Date:** 06/20/2024
Client: Siegfried Engineering, Inc.	**Date of Sampling:** 06/14/2024	**Lab Log No.:** 276056

Date Received:	06/14/2024	Tested by:	Cory Blue
Material Type:	Soil	Date Tested:	06/18/2024
Source:	Native	Date Disposed:	07/18/2024
Sample ID:	BA-1	Material Description:	Silt



Specimen	Dry Density (pcf)	Moisture Content %)	Exudation Pressure (psi)	R Value	Expansion Pressure (psf)
A	117.7	10.4	611	75	49
B	117.7	11.0	331	58	31
C	117.8	11.5	194	47	0
R-Value at 300 psi : 56					

Remarks:
Received Sample Condition: Acceptable and/or Satisfactory

Reviewed by: Eilish Branton, Staff Engineer

06/20/2024
Date

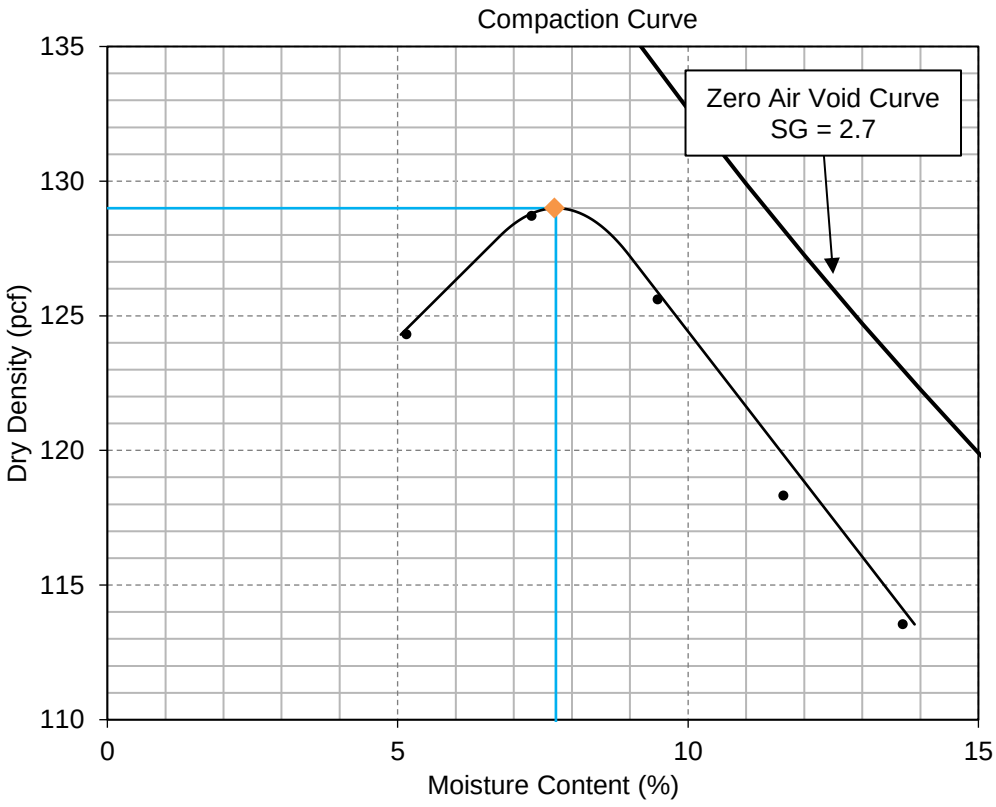
ASTM Standards Used: CT 301

SIEGFRIED

Laboratory Compaction Characteristics of Soil using Modified Effort

Test Performed in General Accordance with ASTM D1557

Project Name: City of Turlock Road CIP, Task 2
Location ID: AS-6
Sampled By: Alejandro Aguilera
Project No.: 22157-Task 2-5001
Sample ID: AS-6
Sample Date: 4/2/2024



Max Density (pcf)	Opt. Moisture (%)
129.0	7.7
Dry Density (pcf)	**Moisture Content (%)**
124.3	5.2
128.7	7.3
125.6	9.5
118.3	11.6
113.5	13.7
As Received Moisture	**Classification**
7.3	Silty Sand
Source	**Color**
Native	Brown
Remarks	

Tested by: Raymond Teel
Title: Lab Technician
Date: 4/24/2024

Reviewed by: Charley Scott, PE
Title: Senior Associate Engineer
Date: 5/6/2024

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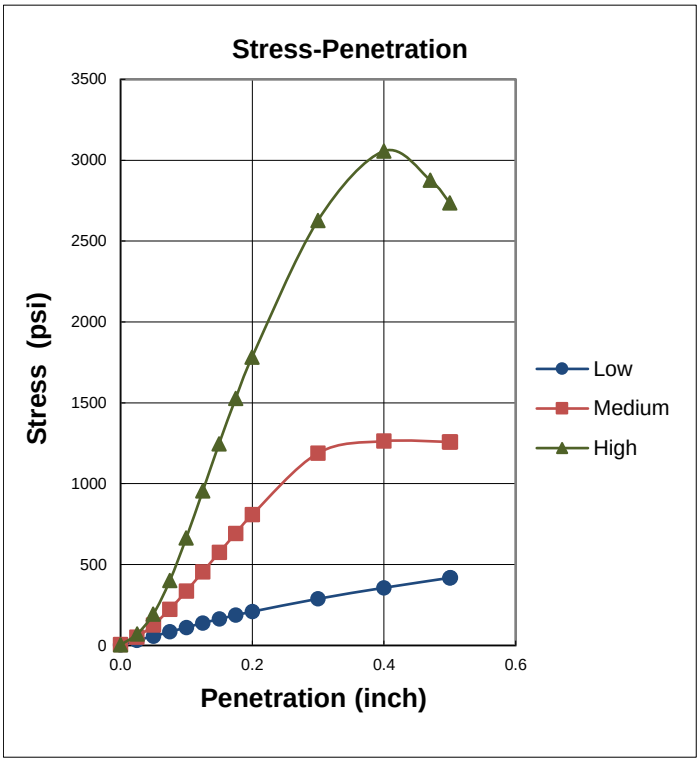
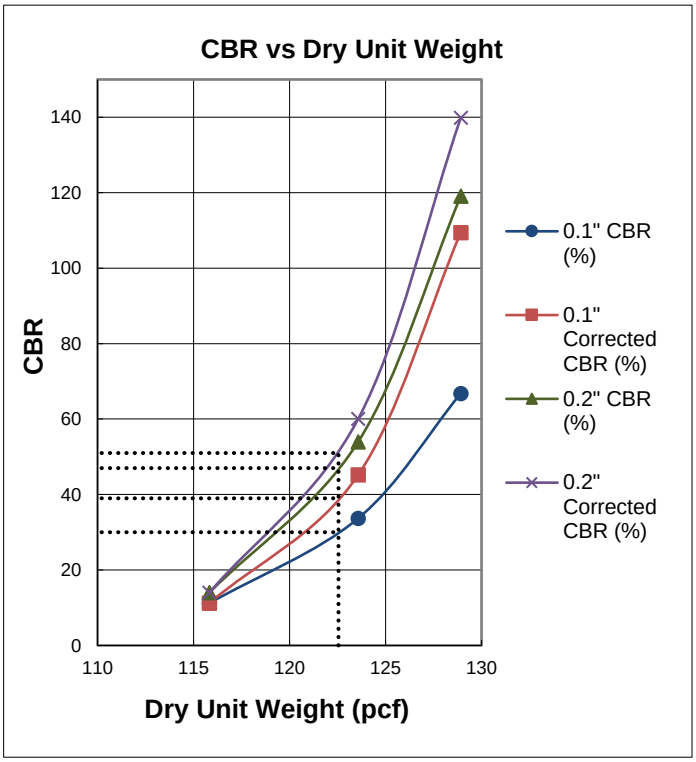
California Bearing Ratio

Test Performed in General Accordance with ASTM D1883

Project Name:	City of Turlock Road CIP, Task 2	**Client:**	City of Turlock
Project Number	22157-Task 2-5001	**Sample Location:**	AS-6
Date Sampled:	4/2/2024	**Sampled by:**	Alejandro Aguilera
Date Tested:	5/1/2024	**Description:**	Brown Silty Sand





Compacted Density (pcf)	Compacted Moisture (%)	CBR 0.10 in. (%)	CBR 0.20 in. (%)	Swell (%)	Surcharge (lbs)
115.8	7.3	11.2	13.9	0.1	10
123.6	7.3	45.2	60.0	0.1	10
128.9	7.3	109.4	139.8	0.0	10

Max Density (pcf)	Optimum Moisture (%)	Percent Compaction Desired (%)	CBR 0.10 in. (%)	CBR 0.20 in. (%)	Reported CBR for Design (%)
129	7.7	95	39.0	51.0	51.0

Tested by:	Raymond Teel	Reviewed by:	Charley Scott
Title:	Lab Technician	Title:	Senior Associate Engineer
Date:	5/6/2024	Date:	5/6/2024

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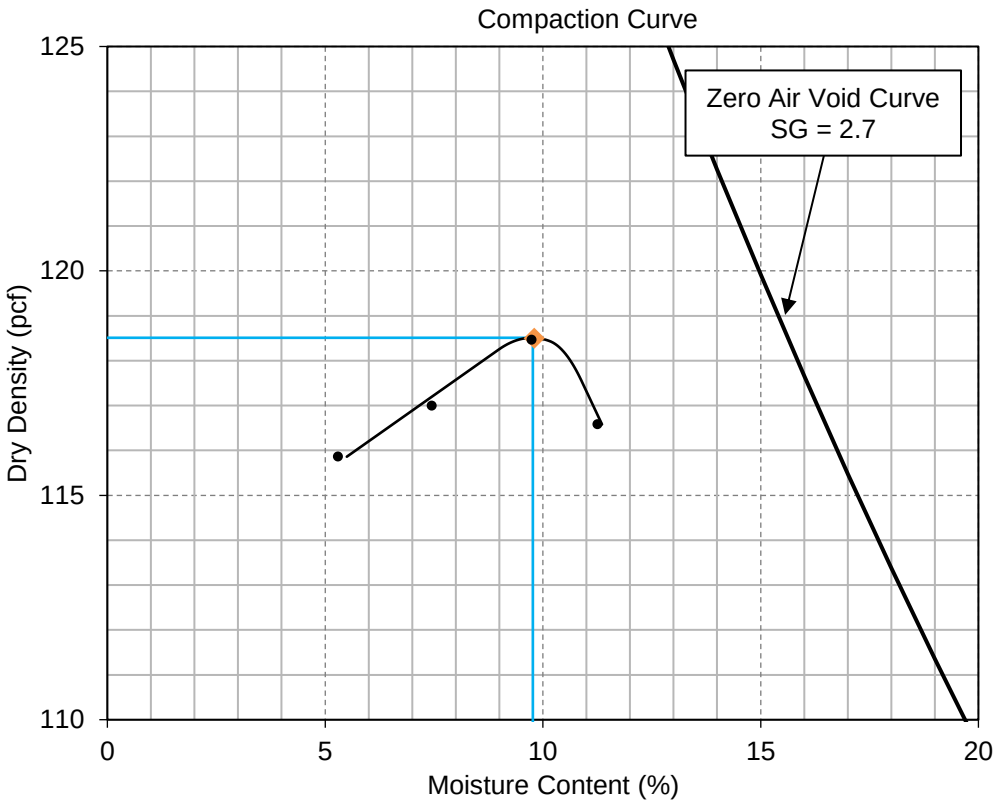
Laboratory Compaction Characteristics of Soil using Modified Effort

Test Performed in General Accordance with ASTM D1557

Project Name: City of Turlock Road CIP, Task 2
Location ID: BS-3
Sampled By: Alejandro Aguilera
Project No.: 22157-Task 2-5001
Sample ID: BS-3
Sample Date: 3/26/2024



Max Density (pcf)	Opt. Moisture (%)
118.5	9.8
Dry Density (pcf)	**Moisture Content (%)**
115.9	5.3
117.0	7.4
118.5	9.7
116.6	11.3
As Received Moisture	**Classification**
5.3	Silty Sand
Source	**Color**
Native	Brown
Remarks	

Tested by: Raymond Teel
Title: Lab Technician
Date: 4/24/2024

Reviewed by: Charley Scott, PE
Title: Senior Associate Engineer
Date: 5/6/2024

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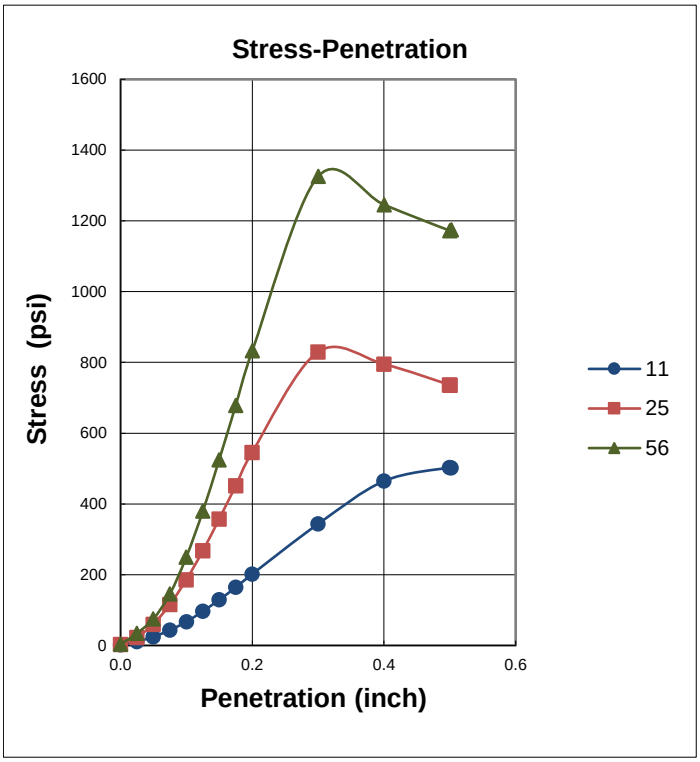
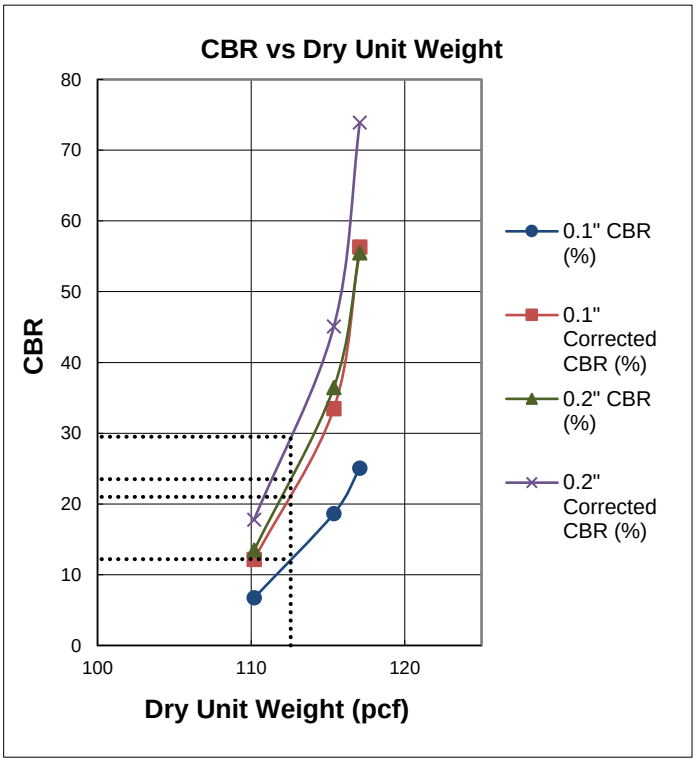
California Bearing Ratio

Test Performed in General Accordance with ASTM D1883

Project Name:	City of Turlock Road CIP, Task 2	**Client:**	City of Turlock
Project Number	22157-Task 2-5001	**Sample Location:**	BS-3
Date Sampled:	3/26/2024	**Sampled by:**	Alejandro Aguilera
Date Tested:	4/9/2024	**Description:**	Brown Silty Sand





Compacted Density (pcf)	Compacted Moisture (%)	CBR 0.10 in. (%)	CBR 0.20 in. (%)	Swell (%)	Surcharge (lbs)
110.2	10.0	12.2	17.8	0.0	10
115.4	10.0	33.5	45.1	0.0	10
117.1	10.0	56.3	73.9	0.0	10

Max Density (pcf)	Optimum Moisture (%)	Percent Compaction Desired (%)	CBR 0.10 in. (%)	CBR 0.20 in. (%)	Reported CBR for Design (%)
118.5	9.8	95	21.0	29.5	29.5

Tested by:	Raymond Teel	Reviewed by:	Charley Scott
Title:	Lab Technician	Title:	Senior Associate Engineer
Date:	5/7/2024	Date:	5/7/2024

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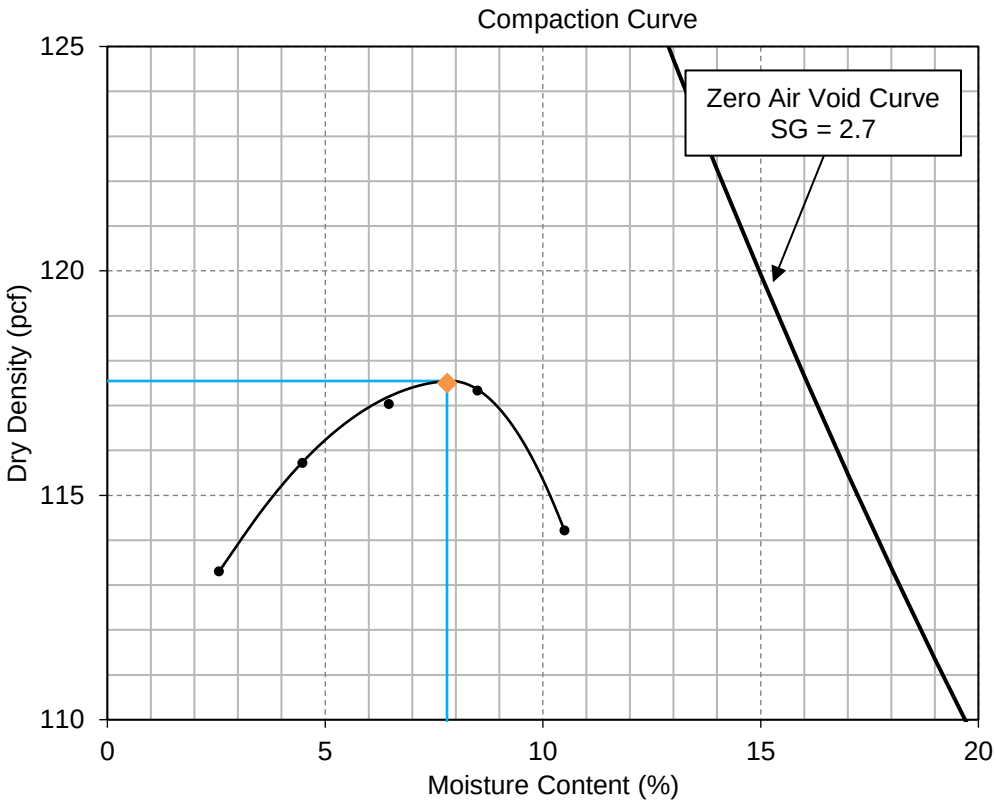
Laboratory Compaction Characteristics of Soil using Modified Effort

Test Performed in General Accordance with ASTM D1557

Project Name: City of Turlock Road CIP, Task 2
Location ID: CA-2
Sampled By: Alejandro Aguilera
Project No.: 22157-Task 2-5001
Sample ID: CA-2
Sample Date: 3/27/2024



Max Density (pcf)	Opt. Moisture (%)
117.5	7.8
Dry Density (pcf)	**Moisture Content (%)**
113.3	2.6
115.7	4.5
117.0	6.5
117.3	8.5
114.2	10.5
As Received Moisture	**Classification**
4.5	Silty Sand
Source	**Color**
Native	Brown
Remarks	

Tested by: Raymond Teel
Title: Lab Technician
Date: 4/24/2024

Reviewed by: Charley Scott, PE
Title: Senior Associate Engineer
Date: 5/6/2024

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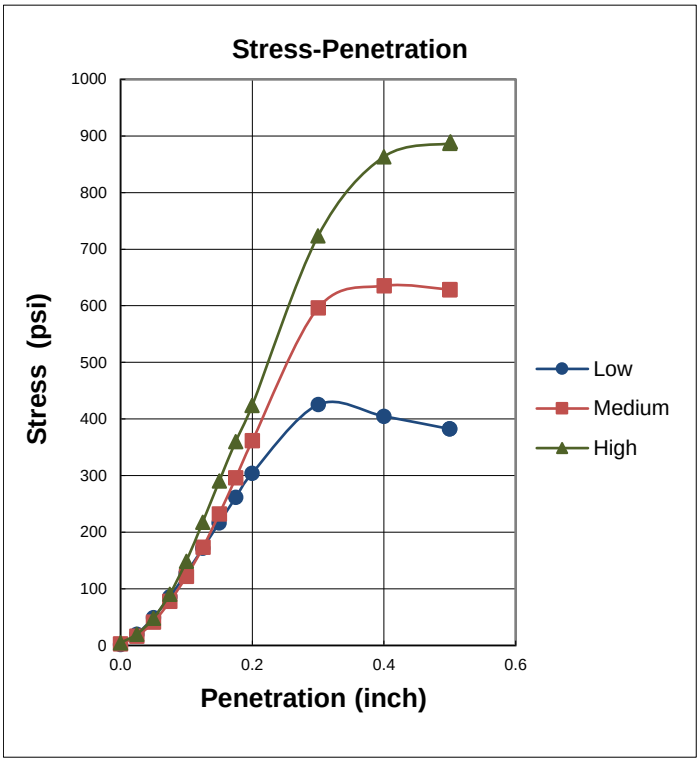
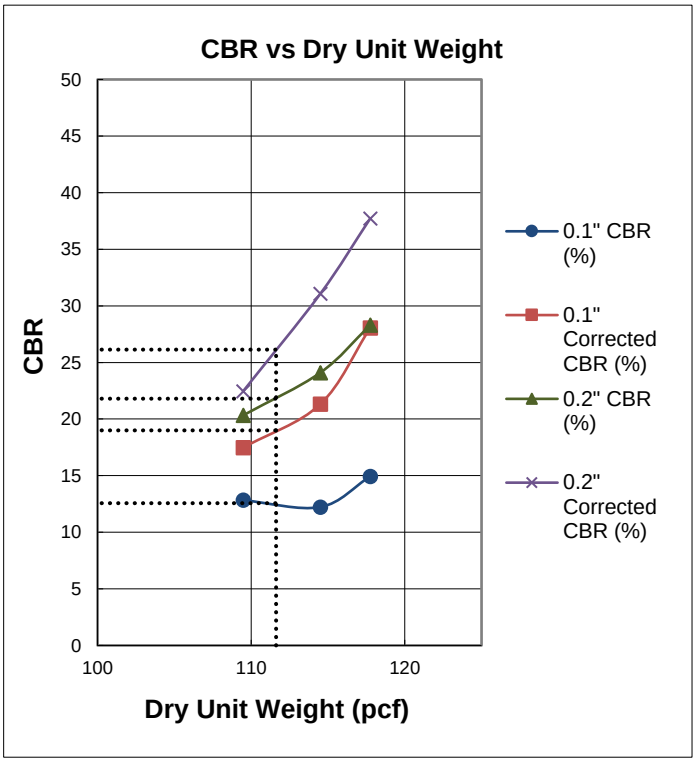
California Bearing Ratio

Test Performed in General Accordance with ASTM D1883

Project Name:	City of Turlock Road CIP, Task 2	**Client:**	City of Turlock
Project Number	22157-Task 2-5001	**Sample Location:**	CA-2
Date Sampled:	3/27/2024	**Sampled by:**	Alejandro Aguilera
Date Tested:	4/30/2024	**Description:**	Brown Silty Sand





Compacted Density (pcf)	Compacted Moisture (%)	CBR 0.10 in. (%)	CBR 0.20 in. (%)	Swell (%)	Surcharge (lbs)
109.5	8.5	17.5	22.4	0.0	10
114.5	8.5	21.3	31.1	0.0	10
117.7	8.5	28.0	37.7	0.0	10

Max Density (pcf)	Optimum Moisture (%)	Percent Compaction Desired (%)	CBR 0.10 in. (%)	CBR 0.20 in. (%)	Reported CBR for Design (%)
117.5	7.8	95	19.0	26.1	26.1

Tested by:	Raymond Teel	Reviewed by:	Charley Scott
Title:	Lab Technician	Title:	Senior Associate Engineer
Date:	5/6/2024	Date:	5/6/2024

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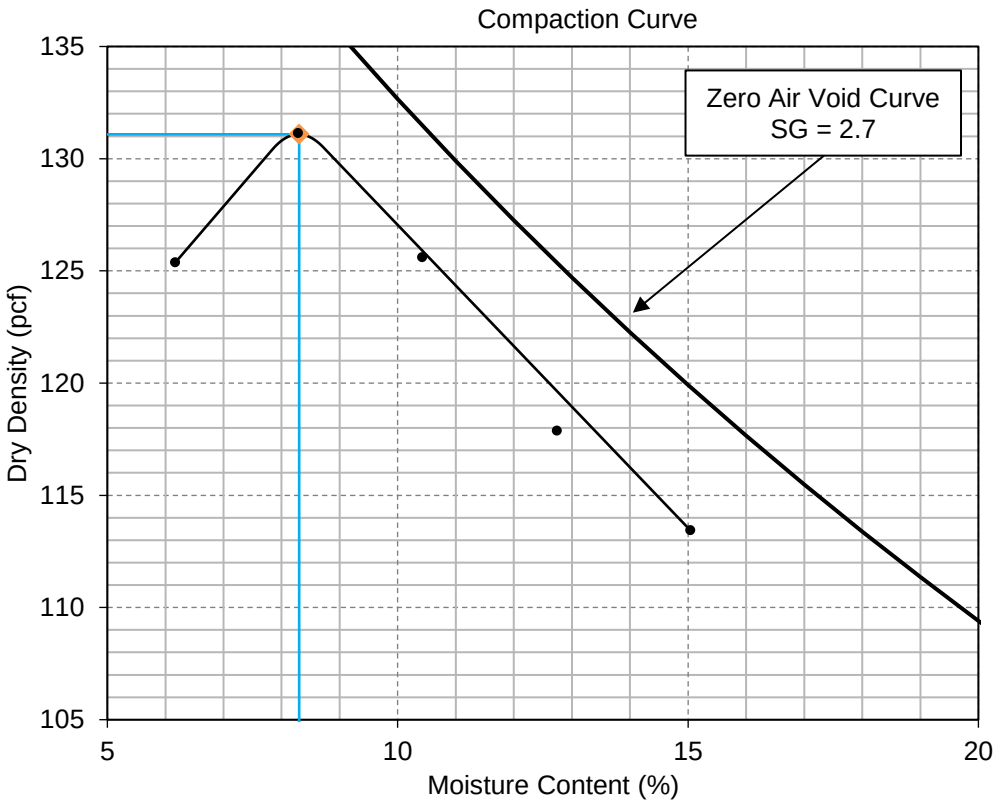
Laboratory Compaction Characteristics of Soil using Modified Effort

Test Performed in General Accordance with ASTM D1557

Project Name: City of Turlock Road CIP, Task 2
Location ID: OS-2
Sampled By: Alejandro Aguilera

Project No.: 22157-Task 2-5001
Sample ID: OS-2
Sample Date: 4/1/2024



Max Density (pcf)	Opt. Moisture (%)
131.1	8.3
Dry Density (pcf)	**Moisture Content (%)**
125.4	6.2
131.1	8.3
125.6	10.4
117.9	12.7
113.4	15.0
As Received Moisture	**Classification**
12.7	Sandy Silt
Source	**Color**
Native	Brown
Remarks	

Tested by: Raymond Teel
Title: Lab Technician
Date: 4/24/2024

Reviewed by: Charley Scott, PE
Title: Senior Associate Engineer
Date: 5/6/2024

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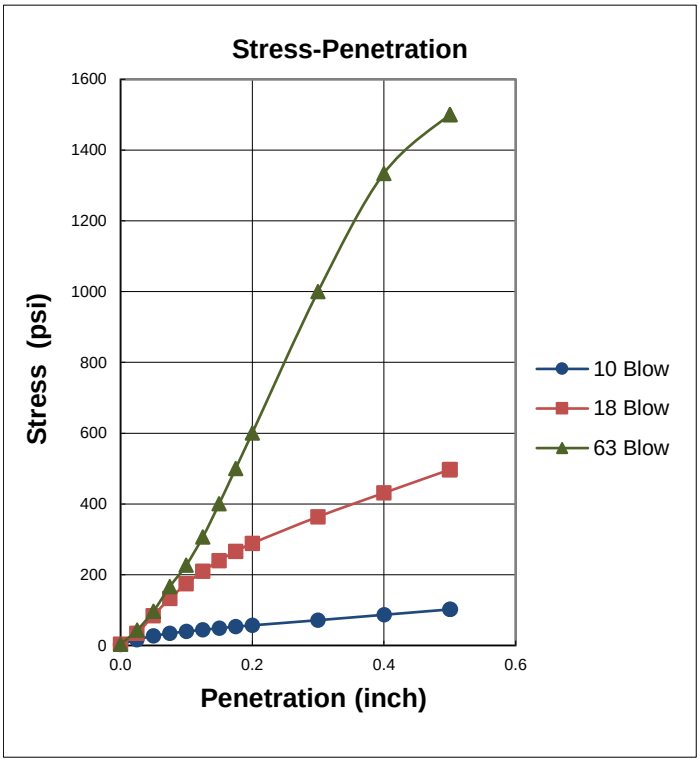
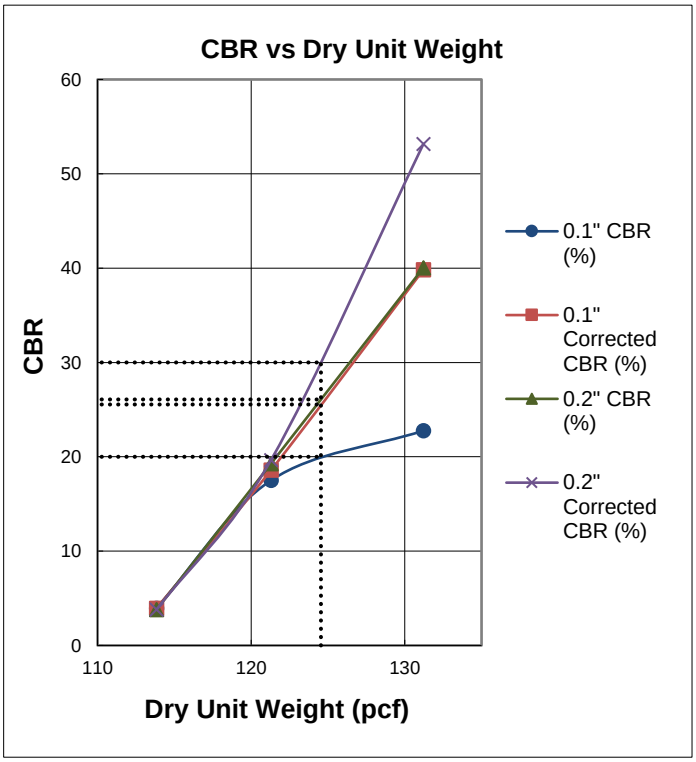
California Bearing Ratio

Test Performed in General Accordance with ASTM D1883

Project Name:	City of Turlock Road CIP, Task 2	**Client:**	City of Turlock
Project Number	22157-Task 2-5001	**Sample Location:**	Orange Street, OS-2
Date Sampled:	4/1/2024	**Sampled by:**	Alejandro Aguilera
Date Tested:	4/27/2024	**Description:**	Brown Sandy Silt





Compacted Density (pcf)	Compacted Moisture (%)	CBR 0.10 in. (%)	CBR 0.20 in. (%)	Swell (%)	Surcharge (lbs)
113.8	8.3	3.9	3.8	0.4	10
121.3	8.3	18.6	19.6	0.4	10
131.2	8.3	39.8	53.1	0.5	10

Max Density (pcf)	Optimum Moisture (%)	Percent Compaction Desired (%)	CBR 0.10 in. (%)	CBR 0.20 in. (%)	Reported CBR for Design (%)
131.1	8.3	95	25.5	30.0	30.0

Tested by:	Raymond Teel	Reviewed by:	Charley Scott
Title:	Lab Technician	Title:	Senior Associate Engineer
Date:	5/7/2024	Date:	5/7/2024

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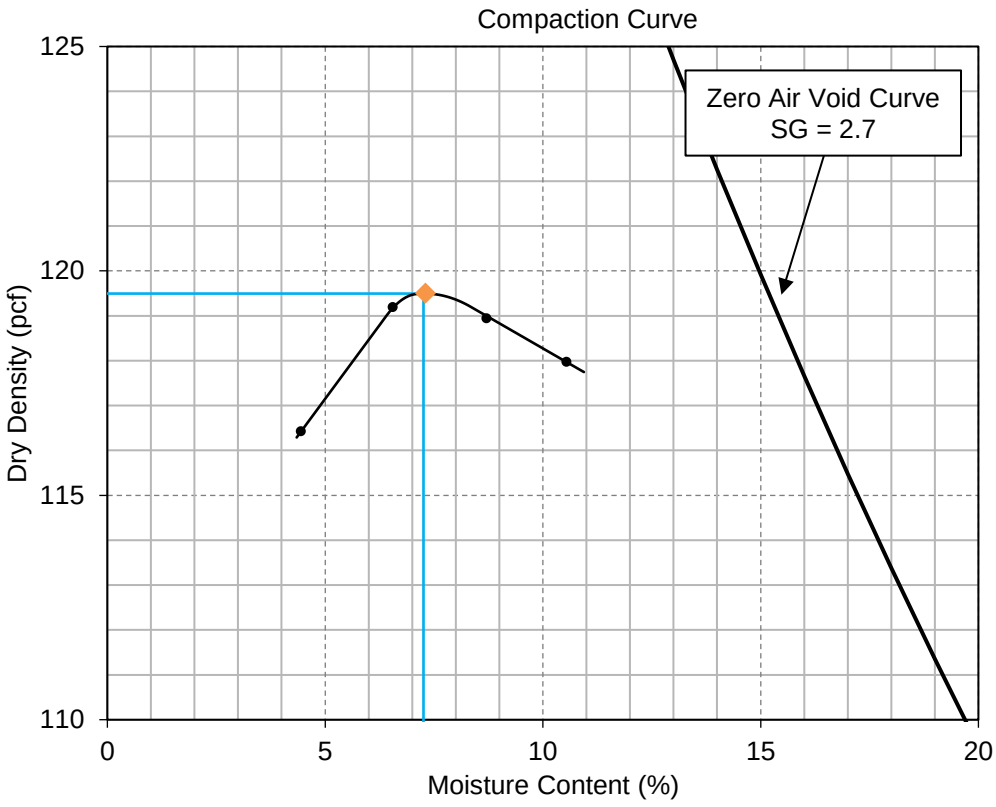
Laboratory Compaction Characteristics of Soil using Modified Effort

Test Performed in General Accordance with ASTM D1557

Project Name: City of Turlock Road CIP, Task 2
Location ID: TB-1
Sampled By: Alejandro Aguilera
Project No.: 22157-Task 2-5001
Sample ID: TB-1
Sample Date: 4/2/2024



Max Density (pcf)	Opt. Moisture (%)
119.5	7.3
Dry Density (pcf)	**Moisture Content (%)**
116.4	4.4
119.2	6.6
118.9	8.7
118.0	10.5
As Received Moisture	**Classification**
6.6	Silty Sand
Source	**Color**
Native	Brown
Remarks	

Tested by: Raymond Teel
Title: Lab Technician
Date: 4/24/2024

Reviewed by: Charley Scott, PE
Title: Senior Associate Engineer
Date: 5/6/2024

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SACRAMENTO
1164 National Drive #20
Sacramento, CA 95834
t: 916.520.2777

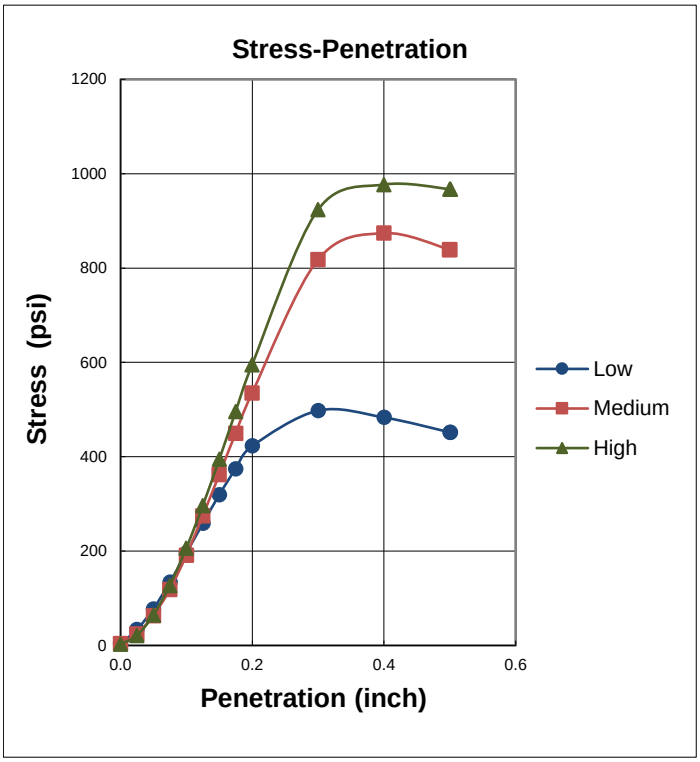
MODESTO
101 Sycamore Ave, #100
Modesto, CA 95354
t: 209.762.3580

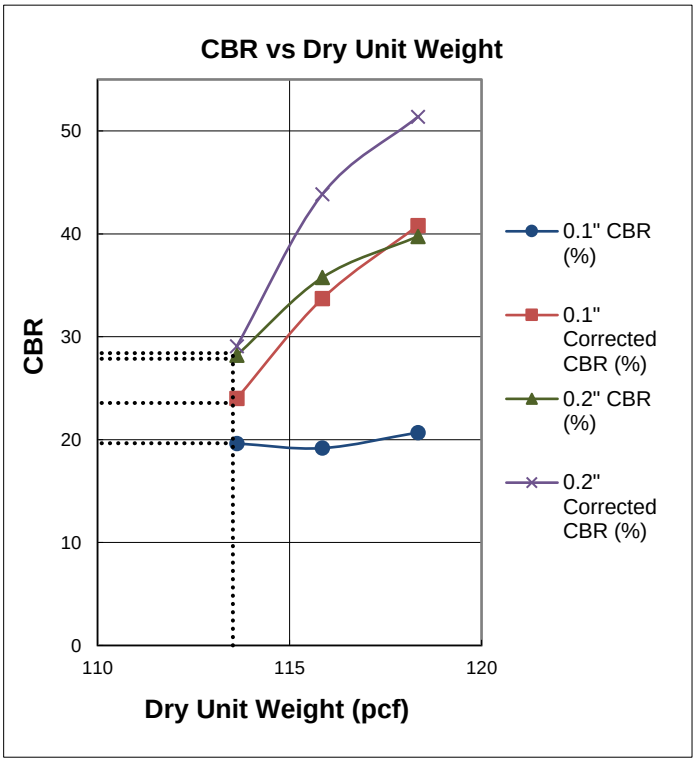
SIEGFRIED

California Bearing Ratio

Test Performed in General Accordance with ASTM D1883

Project Name:	City of Turlock Road CIP, Task 2	**Client:**	City of Turlock
Project Number	22157-Task 2-5001	**Sample Location:**	The Burl, TB-1
Date Sampled:	4/2/2024	**Sampled by:**	Alejandro Aguilera
Date Tested:	4/29/2024	**Description:**	Brown Silty Sand





Compacted Density (pcf)	Compacted Moisture (%)	CBR 0.10 in. (%)	CBR 0.20 in. (%)	Swell (%)	Surcharge (lbs)
113.6	7.5	24.0	29.1	0.1	10
115.9	7.5	33.7	43.8	0.0	10
118.3	7.5	40.8	51.4	0.0	10

Max Density (pcf)	Optimum Moisture (%)	Percent Compaction Desired (%)	CBR 0.10 in. (%)	CBR 0.20 in. (%)	Reported CBR for Design (%)
119.5	7.3	95	23.6	28.4	28.4

Tested by:	Raymond Teel	Reviewed by:	Charley Scott
Title:	Lab Technician	Title:	Senior Associate Engineer
Date:	5/7/2024	Date:	5/7/2024

STOCKTON
3428 Brookside Rd.
Stockton, CA 95219
t: 209.943.2021

SAN JOSE
111 N. Market St., #300
San Jose, CA 95113
t: 408.754.2021

SACRAMENTO
1164 National Drive #20
Sacramento, CA 95834
t: 916.520.2777

MODESTO
101 Sycamore Ave, #100
Modesto, CA 95354
t: 209.762.3580

SIEGFRIED

End of Report

STOCKTON
3428 Brookside Rd.
Stockton, CA 95219
t: 209.943.2021

SAN JOSE
111 N. Market St., #300
San Jose, CA 95113
t: 408.754.2021

SACRAMENTO
1164 National Drive, #20
Sacramento, CA 95834
t: 916.520.2777

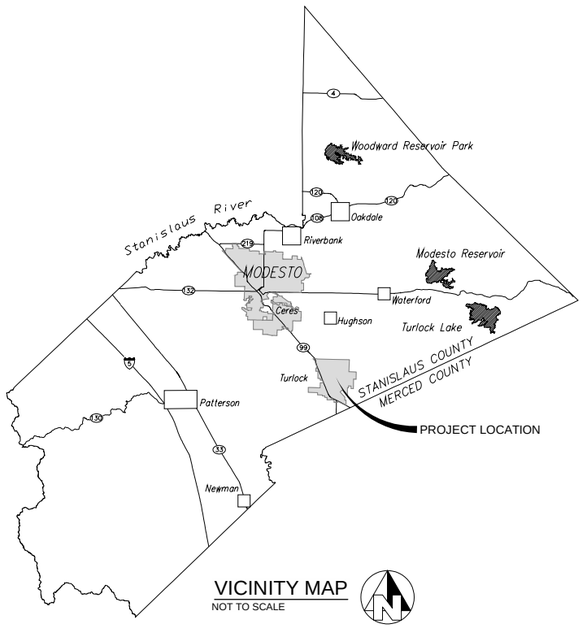
MODESTO
101 Sycamore Ave, #100
Modesto, CA 95354
t: 209.762.3580

APPENDIX B: PROJECT VICINITY MAPS FOR COORDINATION

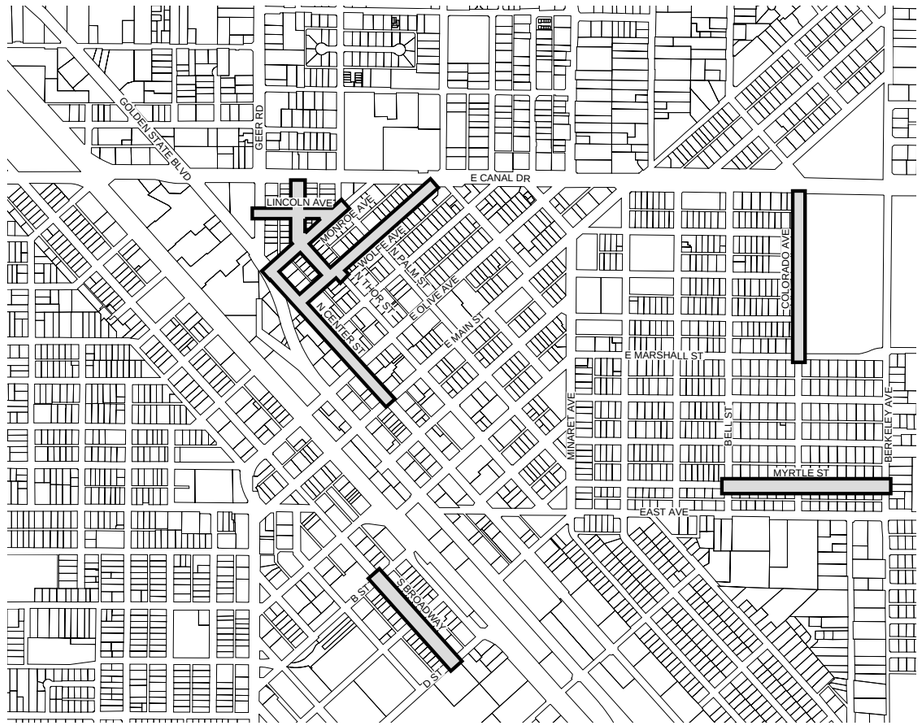
811 Know what's below. Call before you dig.

WARNING
POWER LINES OVERHEAD

ROADS PROGRAM
CONSTRUCTION PLANS FOR
ROADS PROGRAM CAPITAL IMPROVEMENT PROJECT
CITY PROJECT NO. 23-032



VICINITY MAP
NOT TO SCALE



SITE MAP
NOT TO SCALE

GENERAL NOTES

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.
3. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THESE PLANS, PROJECT SPECIFICATIONS AND CITY OF TURLOCK SPECIFICATIONS.
4. CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING FACILITIES PRIOR TO COMMENCING WORK. CALL UNDERGROUND SERVICE ALERT (USA) AT 8-1-1. CONTRACTOR SHALL MAKE ENGINEER AWARE OF ANY DISCREPANCIES.
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.
6. CITY OF TURLOCK SHALL INSPECT ALL WORK PHASES ON CONCRETE FACILITIES FOR CONFORMANCE TO CITY OF TURLOCK SPECIFICATIONS. REINFORCING SHALL NOT BE ENCASED IN CONCRETE WITHOUT PRIOR CITY OF TURLOCK INSPECTIONS. LIKEWISE, CONCRETE SHALL NOT BE COVERED WITH EARTH PRIOR TO CITY OF TURLOCK INSPECTION.
7. CONCRETE DESIGN MIX SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. ALL CONCRETE SHALL HAVE A 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI UNLESS OTHERWISE SPECIFIED.
8. ALL STEEL PIPE AND FITTINGS SHALL BE FURNISHED WITH A SHOP APPLIED HIGH SOLIDS EPOXY COATING ON THE INTERIOR AND EXTERIOR, UNLESS OTHERWISE INDICATED. ALL OTHER EXPOSED STEEL SHALL BE PAINTED WITH A PRE-TREATMENT PRIMER, AN UNDERCOAT AND A FINAL COAT OF PAINT IN ACCORDANCE WITH CITY OF TURLOCK SPECIFICATIONS.
9. ALL NUTS, BOLTS, AND WASHERS USED TO SECURE UNDERGROUND FITTINGS SHALL BE STAINLESS STEEL. AFTER INSTALLATION, ALL STEEL HARDWARE SHALL BE COATED WITH A RUST PREVENTATIVE, WRAPPED WITH 4 MIL POLYETHYLENE SHEETING, AND SECURE WITH PVC TAPE.
10. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE HEALTH AND SAFETY LAWS OF THE STATE OF CALIFORNIA AND CAL/OSHA STANDARDS.
11. TRENCH BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS AND THE GEOTECHNICAL REPORT CONTAINED IN THE SPECIFICATIONS.
12. CONTRACTOR WILL BE RESPONSIBLE FOR THE REPAIR OF ALL PIPELINE CRACKS, WHICH DEVELOP DURING CONSTRUCTION OF IMPROVEMENTS AFFECTING EXISTING FACILITIES.
13. CONCRETE VAULTS AND BOXES MAY BE PURCHASED FROM A PRECAST MANUFACTURER OR CONTRACTOR MAY CONSTRUCT THE STRUCTURES IF STRUCTURAL CALCULATIONS AND DESIGN IS APPROVED BY THE CITY OF TURLOCK AND THE ENGINEER.
14. ALL EXCESS MATERIAL AND/OR DEBRIS SHALL BE REMOVED UPON COMPLETION OF INSTALLATION.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE DUST CONTROL AT ALL TIMES.

SHEET INDEX

SHEET NO.	SEQ. SHEET NO.	DESCRIPTION
GENERAL		
G1	1	COVER SHEET
G2	2	LEGEND & ABBREVIATIONS
STREET PLAN & PROFILE		
C1	3	LINCOLN AVE STA 100+00 - 103+00
C2	4	LINCOLN AVE STA 103+00 - 106+08
C3	5	THOR ST STA 100+00 - 103+45
C4	6	THOR ST STA 200+00 - 202+75
C5	7	THOR ST 202+75 - 205+46
C6	8	MONROE AVE STA 300+00 - 304+00
C7	9	MONROE AVE STA 304+00 - 308+50
C8	10	WOLFE AVE STA 400+00 - 403+00
C9	11	WOLFE AVE STA 403+00 - 407+50
C10	12	WOLFE AVE STA 407+50 - 411+50
C11	13	WOLFE AVE STA 411+50 - 415+00
C12	14	CENTER ST STA 500+00 - 505+00
C13	15	CENTER ST STA 505+00 - 510+00
C14	16	CENTER ST STA 510+00 - 514+50
C15	17	BROADWAY ST STA 600+00 - 605+50
C16	18	BROADWAY ST STA 605+50 - 609+50
C17	19	COLORADO AVE 700+00 - 705+00
C18	20	COLORADO AVE 705+00 - 710+00
C19	21	COLORADO AVE 710+00 - 714+50
C20	22	MYRTLE AVE 800+00 - 805+00
C21	23	MYRTLE AVE 805+00 - 810+00
C22	24	MYRTLE AVE 810+00 - 813+00
DETAILS		
D1	25	STANDARD DETAILS
D2	26	STANDARD DETAILS
D3	27	CIVIL DETAILS
D4	28	SITE DETAILS
D5	29	SITE DETAILS
D6	30	SITE DETAILS
D7	31	SITE DETAILS

SHEET INDEX

SHEET NO.	SEQ. SHEET NO.	DESCRIPTION
D8	32	SITE DETAILS
D9	33	SITE DETAILS
D10	34	SITE DETAILS
D11	35	SITE DETAILS
D12	36	SITE DETAILS
D13	37	SITE DETAILS
D14	38	SITE DETAILS
D15	39	SITE DETAILS
D16	40	SITE DETAILS
D17	41	SITE DETAILS
D18	42	SITE DETAILS
D19	43	SITE DETAILS
D20	44	SITE DETAILS
D21	45	SITE DETAILS
STRIPING		
S1		
S2	47	THOR ST
S3	48	THOR ST
S4	49	MONROE AVE
S5	50	WOLFE AVE
S6	51	WOLFE AVE
S7	52	CENTER ST
S8	53	CENTER ST
S9	54	BROADWAY ST
S10	55	COLORADO AVE
S11	56	COLORADO AVE
S12	57	MYRTLE AVE
S13	58	MYRTLE AVE
UTILITY		
U1	59	Details
U2	60	Details
U3	61	Details
U4	62	Details

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 NOTES

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 29 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 OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF OWNER, ENGINEER, OR THEIR RESPECTIVE AGENTS.

THE OWNER AND ITS AGENTS' SITE RESPONSIBILITIES ARE LIMITED SOLELY TO THE ACTIVITIES OF THEIR EMPLOYEES ON SITE. THESE RESPONSIBILITIES SHALL NOT BE INFERRED BY ANY PARTY TO MEAN THAT THE OWNER OR ITS AGENTS HAVE RESPONSIBILITY FOR SITE SAFETY. SAFETY IN, ON, OR ABOUT THE SITE IS THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR ALONE. THE CONTRACTOR'S METHODS OF WORK PERFORMANCE, SUPERINTENDENCE AND THE CONTRACTOR'S EMPLOYEES, AND SEQUENCING OF CONSTRUCTION ARE ALSO THE SOLE AND EXCLUSIVE RESPONSIBILITIES OF THE CONTRACTOR ALONE.

TOPOGRAPHY NOTE

TOPOGRAPHY SHOWN WAS COLLECTED BY PROVOST & PRITCHARD CONSULTING GROUP DURING A FIELD SURVEY CONDUCTED IN JUNE OF 2023.

BOUNDARY NOTE

THE BOUNDARY/EASEMENT INFORMATION SHOWN ON THESE PLANS IS BASED UPON RECORD INFORMATION TIED TO PHYSICAL MONUMENTS, AND WAS PREPARED UNDER THE DIRECTION OF BRYAN W. BOWERS, PLS 8469.

PRIMARY BENCHMARK

THE POINT SHOWN HEREON AS POINT 2523, A FOUND MAG NAIL PROVIDED BY AN OUTSIDE SURVEY, WAS HELD FOR VERTICAL CONTROL
RECORD ELEVATION: 101.457'

APPROVALS

WILLIAM D. MORRIS, P.E., P.L.S. DATE
CITY ENGINEER
PUBLIC WORKS DEPARTMENT

CITY OF TURLOCK
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
156 S. BROADWAY, SUITE 150
(209) 668-5520

PRELIMINARY
NOT FOR CONSTRUCTION
03/15/2024

No.	REVISION	BY	DATE

FOR REVIEW ONLY

CITY OF TURLOCK
ROADS PROGRAM
PROJECT NUMBER 23-032
GENERAL
COVER SHEET

PROVOST & PRITCHARD
445 W FIR AVENUE
CLOVIS, CA 93611-9166
PHONE (559) 449-2700
FAX (559) 449-2715
www.provostandpritchard.com

DESIGN ENGINEER: ----
LICENSE NO: ----

DRAFTED BY:	CHECKED BY:
MM	AR

DATE: 03/15/2024
JOB NO: 229223002
PROJECT NO: 229223002
PHASE:

0 1" (ORIGINAL SCALE SHOWN IS ONE INCH. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS.)

SHEET G1
1 OF 64

CITY OF TURLOCK

CONSTRUCTION PLANS FOR

ROADS PROGRAM CAPITAL IMPROVEMENT 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, LEDWTIH CT

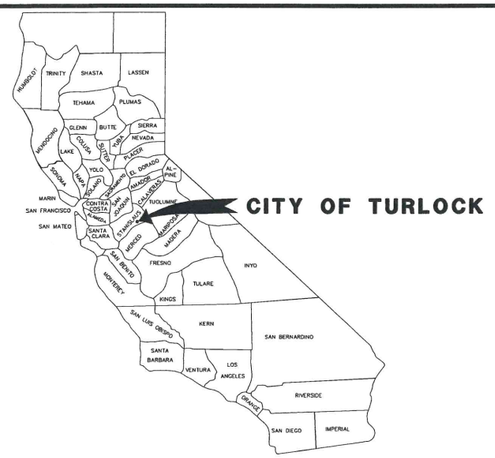
GETTYSBURG ST: DELS LN TO ANDRE LN; HUGHES CT

TAMPA ST: ANDRE LN TO NIAGRA ST

NIAGRA ST: W MONTE VISTA AVE TO REGIS ST

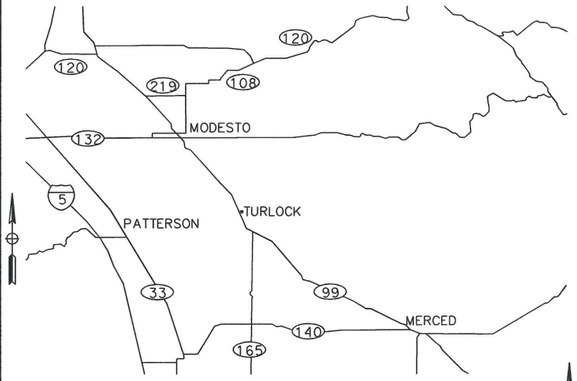
REGIST ST: NIAGRA ST TO GEER ST

SUPPLEMENTED BY CALTRANS STANDARD PLANS AND STANDARD SPECIFICATIONS DATED 2023 & CITY OF TURLOCK ENGINEERING DESIGN STANDARD SPECIFICATIONS AND DRAWINGS DATED 2016.



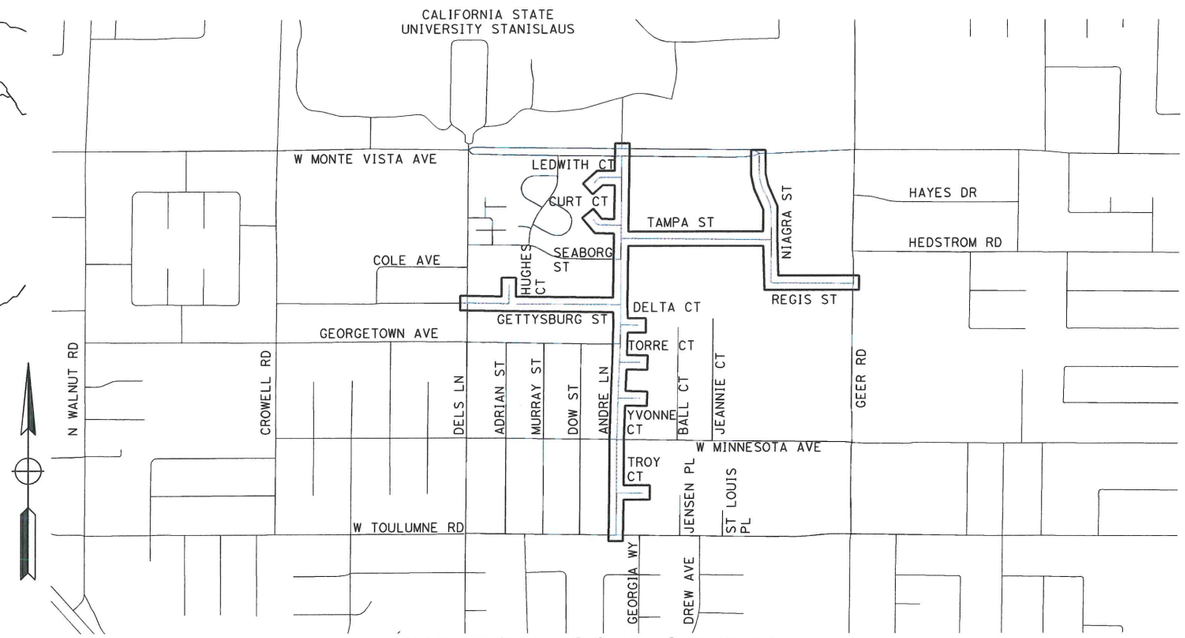
CALIFORNIA STATE MAP

NO SCALE



VICINITY MAP

NO SCALE



PROJECT LOCATION MAP

NO SCALE

SHEET INDEX

CITY OF TURLOCK APPROVAL

1/15/2025

WILLIAM D. MORRIS, P.E., P.L.S — DATE
CITY ENGINEER
MUNICIPAL SERVICES DEPARTMENT

UTILITY CONTACTS

UTILITY	CONTACT	PHONE
AT&T	JIM JELLEY	(209) 507-1689
CHARTER COMMUNICATIONS	ABRAHAM ZAMORA	(209) 633-3303
TID ELECTRICAL	DAVID PORATH	(209) 605-0945
TID IRRIGATION	TODD TROGLIN	(209) 535-1882
CITY OF TURLOCK ELETRICAL	DOYLE PERRY	(209) 678-5823
CITY OF TURLOCK STORM AND SEWER	CARLOS GUERRERO	(209) 345-2169
CITY OF TURLOCK WATER	ORLANDO GUITERREZ	(209) 740-3868
PG&E GAS	TRENT MILLSAP	(209) 561-6070

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT" (USA) AT 811 AT LEAST 2 WORKING DAYS PRIOR TO PERFORMING ANY EXCAVATION

100% PLANS

DESIGNED BY: LAPPEN E.
DRAWN BY: LAPPEN E.
CHECKED BY: BLOMQUIST D.
SCALE: AS SHOWN
DATE: 12/19/2024
JOB NO.: 23-067

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.

USA NORTH 811 Call 811 Before You Dig

SCALE

REGISTERED PROFESSIONAL ENGINEER — DANIEL THOMAS BLOMQUIST — No. 55875 — Exp. 12/31/25 — CIVIL — STATE OF CALIFORNIA

MARK THOMAS
701 UNIVERSITY AVENUE, SUITE 200
SACRAMENTO, CALIFORNIA 95825
(916) 381-9100 FAX:(916)381-9180
markthomas.com

CITY OF TURLOCK
MUNICIPAL SERVICES DEPARTMENT
156 S. BROADWAY
SUITE 150
(209) 668-5520

CITY OF TURLOCK
ROADS PROGRAM CIP
PROJECT 23-067 PACKAGE #1
TITLE SHEET

T-1

CITY OF TURLOCK

CONSTRUCTION PLANS FOR

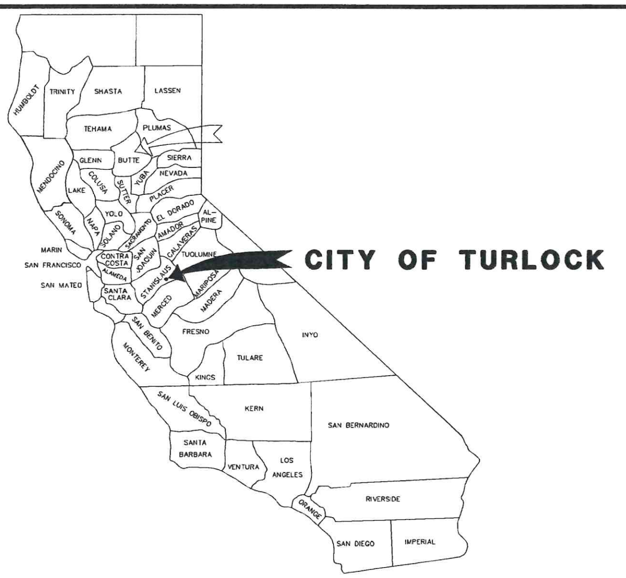
ROADS PROGRAM CAPITAL IMPROVEMENT PROJECT

CITY PROJECT NO. 23-067 PACKAGE #2

NORTH JOHNSON RD: EAST HAWKEYE AVE TO E TOULUMNE RD; HAMMOND DR, ASHLEY CT, JACKSON CT, SCONYERS CT

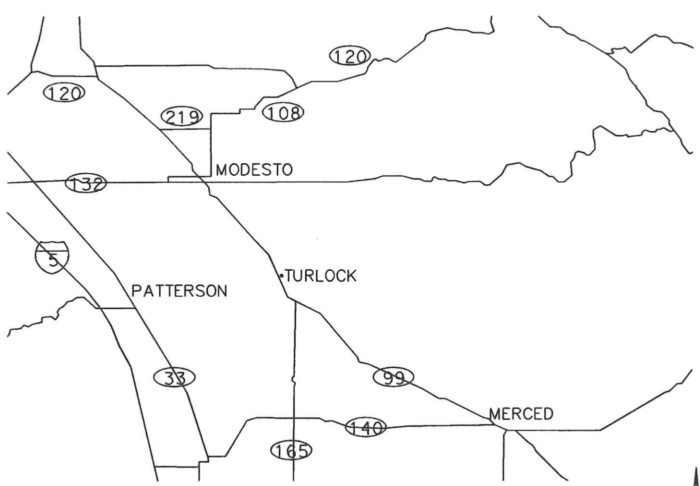
HAMMOND DR: STUART PL

SUPPLEMENTED BY CALTRANS STANDARD PLANS AND STANDARD SPECIFICATIONS DATED 2023 & CITY OF TURLOCK ENGINEERING DESIGN STANDARD SPECIFICATIONS AND DRAWINGS DATED 2016.



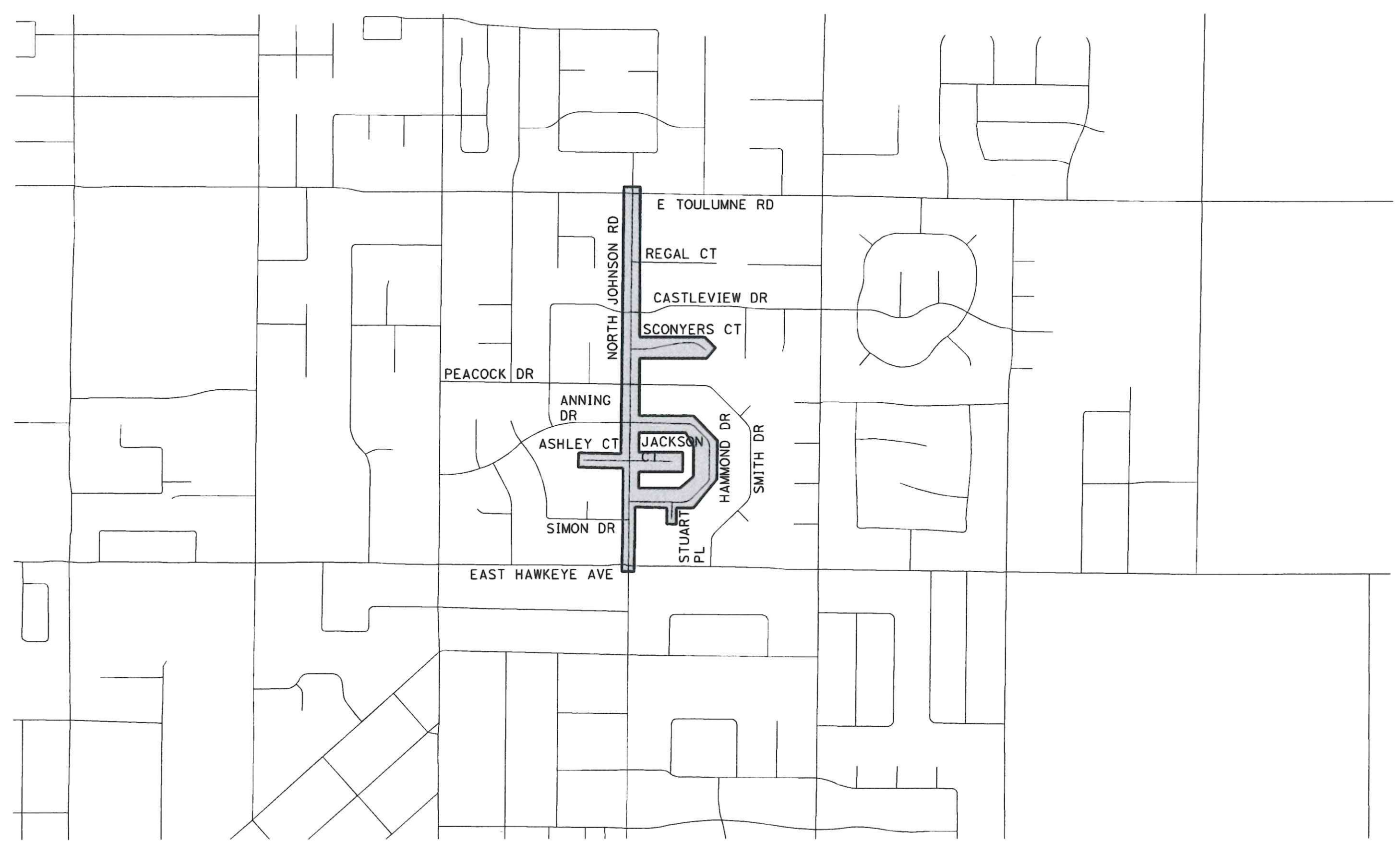
CALIFORNIA STATE MAP

NO SCALE



VICINITY MAP

NO SCALE



PROJECT LOCATION MAP

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT" (USA) AT 811 AT LEAST 2 WORKING DAYS PRIOR TO PERFORMING ANY EXCAVATION

SHEET INDEX

CITY OF TURLOCK APPROVAL

[signature] 3/13/2025

WILLIAM D. MORRIS, P.E., P.L.S — DATE
CITY ENGINEER
MUNICIPAL SERVICES DEPARTMENT

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	BILL PENNEY	(209) 883-8385
CITY OF TURLOCK ELETRICAL	DOYLE PERRY	(209) 678-5823
CITY OF TURLOCK STORM AND SEWER	CARLOS GUERRERO	(209) 345-2169
CITY OF TURLOCK WATER	ORLANDO GUITERREZ	(209) 740-3868
PG&E GAS	TRENT MILLSAP	(209) 561-6070

100% PLANS

DESIGNED BY: POORE, B.
DRAWN BY: HAYNES, C.
CHECKED BY: HORNER, C.
SCALE: NOT TO SCALE
DATE: 3/13/2025
JOB NO.: 24-00061

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.

USA NORTH 811 — Call 811 Before You Dig

SCALE

REGISTERED PROFESSIONAL ENGINEER — EDGAR A. NOREGA — No. C88896 — Exp. 6/30/25 — CIVIL — STATE OF CALIFORNIA

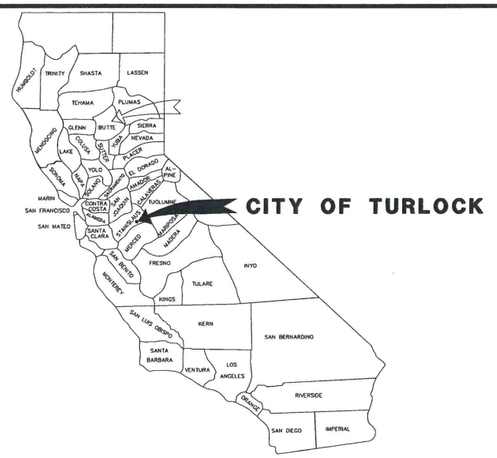
MARK THOMAS
701 UNIVERSITY AVENUE, SUITE 200
SACRAMENTO, CALIFORNIA 95825
(916) 381-9100 FAX:(916)381-9180
markthomas.com

CITY OF TURLOCK MUNICIPAL SERVICES DEPARTMENT
156 S. BROADWAY SUITE 150
(209)668-5520

CITY OF TURLOCK
ROADS PROGRAM CIP
PROJECT 23-067 PACKAGE #2
TITLE SHEET

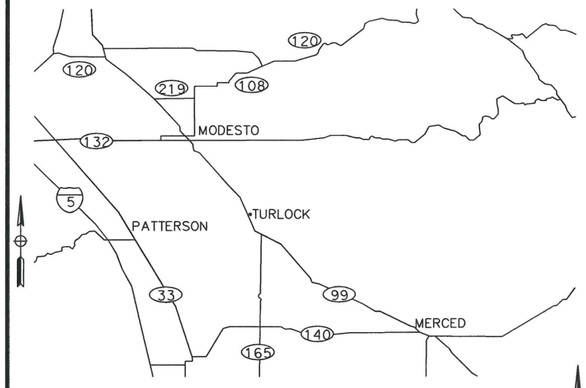
Sheet 1 of 68 Sheets

T-1



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

CITY OF TURLOCK

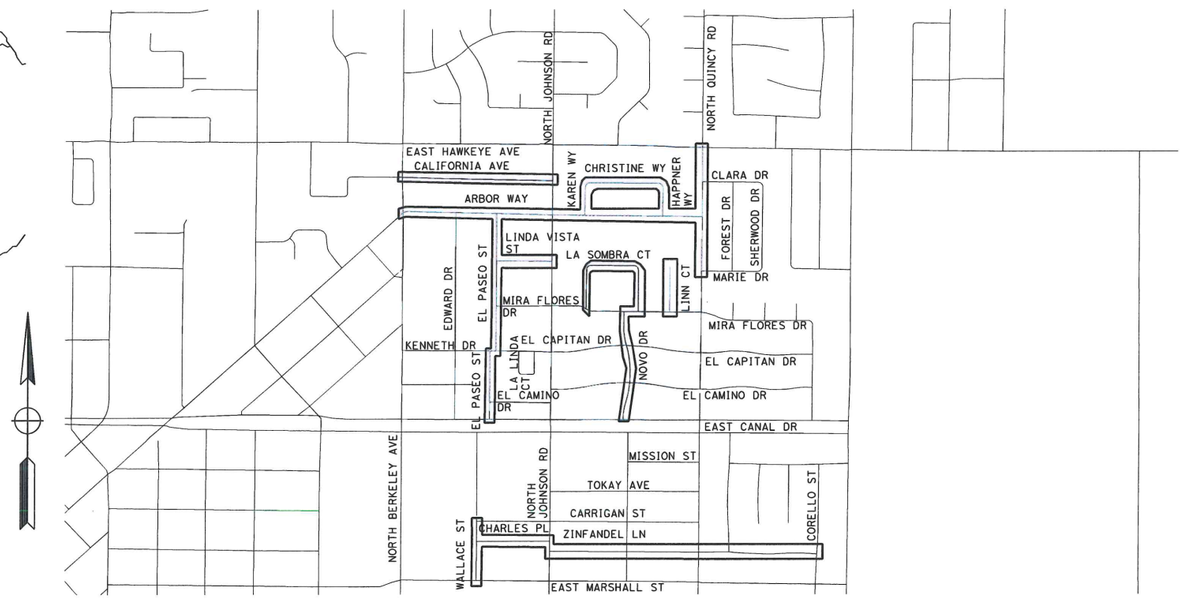
CONSTRUCTION PLANS FOR

ROADS PROGRAM CAPITAL IMPROVEMENT PROJECT

CITY PROJECT NO. 23-067 PACKAGE #3

WALLACE ST:	EAST MARSHALL ST TO CARRIGAN ST
CHARLES PL:	WALLACE ST TO NORTH JOHNSON RD
ZINFANDEL LN:	NORTH JOHNSON RD TO CORELLO ST
EL PASEO ST:	EAST CANAL DR TO ARBOR WAY: LINDA VISTA ST
ARBOR WY:	NORTH BERKELEY AVE TO NORTH QUINCY RD; KAREN WY, CHRISTINE WY, HAPPNER WY
NORTH QUINCY RD:	MARIE DR TO EAST HAWKEYE AVE
NOVO DR:	EAST CANAL DR TO MIRA FLORES DR
MIRA FLORES DR:	LA SOMBRA CT, LINN CT
CALIFORNIA AVE:	NORTH BERKELEY AVE TO NORTH JOHNSON RD

SUPPLEMENTED BY CALTRANS STANDARD PLANS
AND STANDARD SPECIFICATIONS DATED 2023
& CITY OF TURLOCK ENGINEERING DESIGN
STANDARD SPECIFICATIONS AND DRAWINGS DATED
2016.



PROJECT LOCATION MAP

100% PLANS

SHEET INDEX

CITY OF TURLOCK APPROVAL

5/5/2025

WILLIAM D. MORRIS, P.E., P.L.S — DATE
CITY ENGINEER
MUNICIPAL SERVICES DEPARTMENT

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	BILL PENNEY	(209) 883-8385
CITY OF TURLOCK ELETRICAL	DOYLE PERRY	(209) 678-5823
CITY OF TURLOCK STORM AND SEWER	CARLOS GUERRERO	(209) 345-2169
CITY OF TURLOCK WATER	ORLANDO GUITERREZ	(209) 740-3868
PG&E GAS	TRENT MILLSAP	(209) 561-6070

DESIGNED BY: POORE, B.
DRAWN BY: FRANCO, N.
CHECKED BY: NORIEGA, E.
SCALE: NOT TO SCALE
DATE: 5/05/2025
JOB NO.: 24-00061

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.

USA NORTH 811 Call 811 Before You Dig

SCALE

REGISTERED PROFESSIONAL ENGINEER — EDGARDO A. NORIEGA — No. 61456 — Exp. 6/30/25 — CIVIL — STATE OF CALIFORNIA

MARK THOMAS
701 UNIVERSITY AVENUE, SUITE 200
SACRAMENTO, CALIFORNIA 95825
(916) 381-9100 FAX:(916)381-9180
markthomas.com

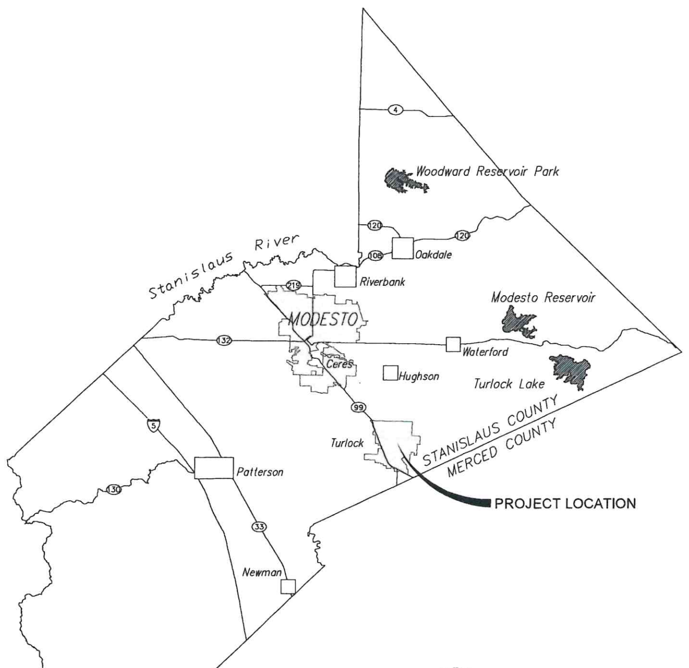
CITY OF TURLOCK
MUNICIPAL SERVICES DEPARTMENT
156 S. BROADWAY
SUITE 150
(209)668-5520

CITY OF TURLOCK
ROADS PROGRAM CIP
PROJECT 23-067 PACKAGE #3
TITLE SHEET

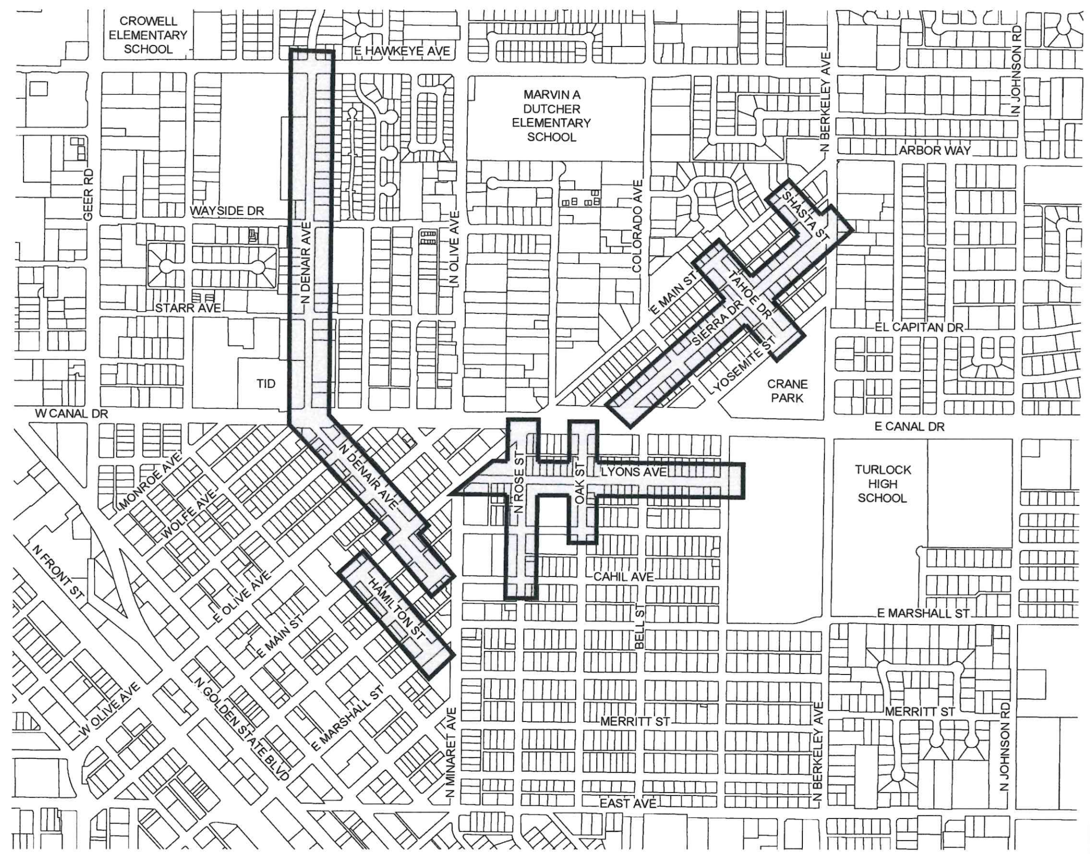
811
Know what's below.
Call before you dig.

WARNING
POWER LINES OVERHEAD

CITY OF TURLOCK
CONSTRUCTION PLANS FOR ROADS PROGRAM CAPITAL IMPROVEMENT PROJECT
CITY PROJECT NO. 23-068 PACKAGE 2



VICINITY MAP
NOT TO SCALE



SITE MAP
NOT TO SCALE

SHEET INDEX		
SHEET NO.	SEQ. SHEET NO.	DESCRIPTION
GENERAL		
G1	1	COVER SHEET
G2	2	LEGEND & ABBREVIATIONS
G3	3	CONTROL POINTS
STREET PLAN		
C1	4	HAMILTON ST STA 10+76.41 - 14+00
C2	5	HAMILTON ST STA 14+00 - 18+28.32
C3	6	DENAIR AVE STA 21+22.46 - 25+00
C4	7	DENAIR AVE STA 25+00 - 28+00
C5	8	DENAIR AVE STA 28+00 - 32+00
C6	9	DENAIR AVE STA 32+00 - 36+25
C7	10	DENAIR AVE STA 36+25 - 41+00
C8	11	DENAIR AVE STA 41+00 - 45+00
C9	12	DENAIR AVE STA 45+00 - 49+00
C10	13	DENAIR AVE STA 49+00 - 53+00
C11	14	DENAIR AVE STA 53+00 - 57+00
C12	15	DENAIR AVE STA 57+00 - 59+80
C13	16	LYONS AVE STA 80+50 - 85+00
C14	17	LYONS AVE STA 85+00 - 90+00
C15	18	LYONS AVE STA 90+00 - 95+00
C16	19	LYONS AVE STA 95+00 - 98+50
C17	20	ROSE ST STA 100+00 - 104+00
C18	21	ROSE ST STA 104+00 - 108+00
C19	22	ROSE ST STA 108+00 - 111+00
C20	23	OAK ST STA 120+00 - 124+00
C21	24	OAK ST STA 124+00 - 128+00
C22	25	SIERRA DR STA 131+50 - 135+00
C23	26	SIERRA DR STA 135+00 - 139+00
C24	27	SIERRA DR STA 139+00 - 143+00
C25	28	SIERRA DR STA 143+00 - 147+00
C26	29	SIERRA DR STA 147+00 - 151+50
C27	30	TAHOE STA 150+50 - 154+25
C28	31	TAHOE STA 154+25 - 158+00
C29	32	SHASTA STA 160+00 - 165+00
C30	33	BELL ST STA 188+00 - 192+50
DETAILS		
D1	34	STANDARD DETAILS
D2	35	STANDARD DETAILS
D3	36	STANDARD DETAILS
D4	37	STANDARD DETAILS
D5	38	CIVIL DETAILS
D6	39	CIVIL DETAILS
D7	40	SITE DETAILS
D8	41	SITE DETAILS
D9	42	SITE DETAILS
D10	43	SITE DETAILS
D11	44	SITE DETAILS
D12	45	SITE DETAILS
D13	46	SITE DETAILS
D14	47	SITE DETAILS
D15	48	SITE DETAILS
D16	49	SITE DETAILS

SHEET INDEX		
SHEET NO.	SEQ. SHEET NO.	DESCRIPTION
D17	50	SITE DETAILS
D18	51	SITE DETAILS
D19	52	SITE DETAILS
D20	53	SITE DETAILS
D21	54	SITE DETAILS
D22	55	SITE DETAILS
D23	56	SITE DETAILS
D24	57	SITE DETAILS
D25	58	SITE DETAILS
D26	59	SITE DETAILS
D27	60	SITE DETAILS
D28	61	SITE DETAILS
D29	62	SITE DETAILS
D30	63	SITE DETAILS
D31	64	SITE DETAILS
D32	65	SITE DETAILS
D33	66	SITE DETAILS
D34	67	SITE DETAILS
D35	68	SITE DETAILS
D36	69	SITE DETAILS
STORM DRAIN		
U1	70	ROSE STREET
U2	71	OAK STREET
U3	72	LYONS AVENUE
U4	73	DENAIR AVENUE
U5	74	DENAIR AVENUE
U6	75	SIERRA STREET
TRAFFIC HANDLING		
TH1	76	LEGEND
TH2	77	DETAILS
TH3	78	TRAFFIC HANDLING
TH4	79	TRAFFIC HANDLING
TH5	80	TRAFFIC HANDLING
TH6	81	TRAFFIC HANDLING
TH7	82	TRAFFIC HANDLING
TH8	83	TRAFFIC HANDLING
STRIPING		
S-1	84	HAMILTON ST STA 11+00 - 18+00
S-2	85	DENAIR AVE STA 20+50 - 28+00
S-3	86	DENAIR AVE STA 28+00 - 36+25
S-4	87	DENAIR AVE STA 36+25 - 45+00
S-5	88	DENAIR AVE STA 45+00 - 53+00
S-6	89	DENAIR AVE STA 53+00 - 59+80
S-7	90	LYONS AVE STA 80+50 - 90+00
S-8	91	LYONS AVE STA 90+00 - 98+50
S-9	92	ROSE ST STA 100+00 - 108+00
S-10	93	ROSE ST STA 108+00 - 111+00
S-11	94	OAK ST STA 120+00 - 128+00
S-12	95	SIERRA DR STA 131+50 - 139+00
S-13	96	SIERRA DR STA 139+00 - 147+00
S-14	97	SIERRA DR STA 147+00 - 151+00
S-15	98	TAHOE DR STA 150+50 - 158+00

SPECIAL NOTE

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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 29 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.

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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 OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF OWNER, ENGINEER, OR THEIR RESPECTIVE AGENTS.

THE OWNER AND ITS AGENTS' SITE RESPONSIBILITIES ARE LIMITED SOLELY TO THE ACTIVITIES OF THEIR EMPLOYEES ON SITE. THESE RESPONSIBILITIES SHALL NOT BE INFERRED BY ANY PARTY TO MEAN THAT THE OWNER OR ITS AGENTS HAVE RESPONSIBILITY FOR SITE SAFETY. SAFETY IN, ON, OR ABOUT THE SITE IS THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR ALONE. THE CONTRACTOR'S METHODS OF WORK PERFORMANCE, SUPERINTENDENCE AND THE CONTRACTOR'S EMPLOYEES, AND SEQUENCING OF CONSTRUCTION ARE ALSO THE SOLE AND EXCLUSIVE RESPONSIBILITIES OF THE CONTRACTOR ALONE.

GENERAL NOTES

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.
3. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THESE PLANS, PROJECT SPECIFICATIONS AND CITY OF TURLOCK SPECIFICATIONS.
4. CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING FACILITIES PRIOR TO COMMENCING WORK. CALL UNDERGROUND SERVICE ALERT (USA) AT 8-1-1. CONTRACTOR SHALL MAKE ENGINEER AWARE OF ANY DISCREPANCIES.
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.
6. CITY OF TURLOCK SHALL INSPECT ALL WORK PHASES ON CONCRETE FACILITIES FOR CONFORMANCE TO CITY OF TURLOCK SPECIFICATIONS. REINFORCING SHALL NOT BE ENCASED IN CONCRETE WITHOUT PRIOR CITY OF TURLOCK INSPECTIONS. LIKEWISE, CONCRETE SHALL NOT BE COVERED WITH EARTH PRIOR TO CITY OF TURLOCK INSPECTION.
7. CONCRETE DESIGN MIX SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. ALL CONCRETE SHALL HAVE A 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI UNLESS OTHERWISE SPECIFIED.
8. ALL STEEL PIPE AND FITTINGS SHALL BE FURNISHED WITH A SHOP APPLIED HIGH SOLIDS EPOXY COATING ON THE INTERIOR AND EXTERIOR, UNLESS OTHERWISE INDICATED. ALL OTHER EXPOSED STEEL SHALL BE PAINTED WITH A PRE-TREATMENT PRIMER, AN UNDERCOAT AND A FINAL COAT OF PAINT IN ACCORDANCE WITH CITY OF TURLOCK SPECIFICATIONS.
9. ALL NUTS, BOLTS, AND WASHERS USED TO SECURE UNDERGROUND FITTINGS SHALL BE STAINLESS STEEL. AFTER INSTALLATION, ALL STEEL HARDWARE SHALL BE COATED WITH A RUST PREVENTATIVE, WRAPPED WITH 4 MIL POLYETHYLENE SHEETING, AND SECURE WITH PVC TAPE.
10. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE HEALTH AND SAFETY LAWS OF THE STATE OF CALIFORNIA AND CAL/OSHA STANDARDS.
11. TRENCH BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS AND THE GEOTECHNICAL REPORT CONTAINED IN THE SPECIFICATIONS.
12. CONTRACTOR WILL BE RESPONSIBLE FOR THE REPAIR OF ALL PIPELINE CRACKS, WHICH DEVELOP DURING CONSTRUCTION OF IMPROVEMENTS AFFECTING EXISTING FACILITIES.
13. CONCRETE VAULTS AND BOXES MAY BE PURCHASED FROM A PRECAST MANUFACTURER OR CONTRACTOR MAY CONSTRUCT THE STRUCTURES IF STRUCTURAL CALCULATIONS AND DESIGN IS APPROVED BY THE CITY OF TURLOCK AND THE ENGINEER.
14. ALL EXCESS MATERIAL AND/OR DEBRIS SHALL BE REMOVED UPON COMPLETION OF INSTALLATION.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE DUST CONTROL AT ALL TIMES.

APPROVALS

WILLIAM D. MORRIS, P.E., P.L.S. — DATE
CITY ENGINEER
MUNICIPAL SERVICES DEPARTMENT

CITY OF TURLOCK INC. 1908

CITY OF TURLOCK
MUNICIPAL SERVICE DEPARTMENT
ROADS DIVISION
156 S. BROADWAY, SUITE 150
(209) 668-5520

95% PRELIMINARY
NOT FOR CONSTRUCTION
4/9/2025

No.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER — JEFFREY S. DORN — No. 76,749 — CIVIL — STATE OF CALIFORNIA

DATE SIGNED:

CITY OF TURLOCK
CONSTRUCTION PLANS FOR ROADS PROGRAM
CAPITAL IMPROVEMENT PROJECT
CITY PROJECT No. 23-068, PACKAGE 2
GENERAL

COVER SHEET

PROVOST & PRITCHARD
455 W FIR AVENUE
CLOVIS, CA 93611-9166
PHONE (559) 449-2700
FAX (559) 449-2715
www.provostandpritchard.com

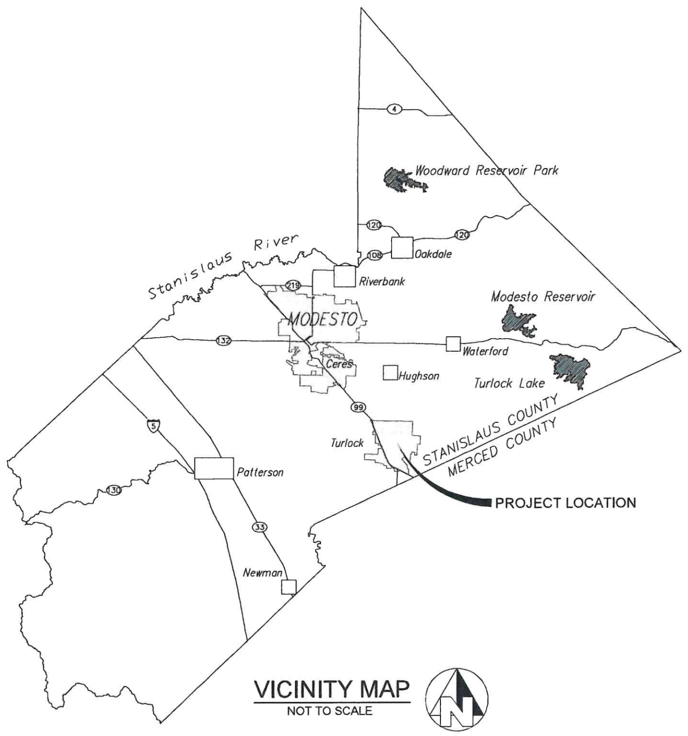
DESIGN ENGINEER: JEFF DORN
LICENSE NO: 76,749
DRAFTED BY: AR | CHECKED BY: JD
DATE: 04/09/2025
JOB NO: 229224001
PROJECT NO: 229224001
PHASE: 2
0 — 1"
ORIGINAL SCALE SHOWN IS ONE INCH. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS.

SHEET G1

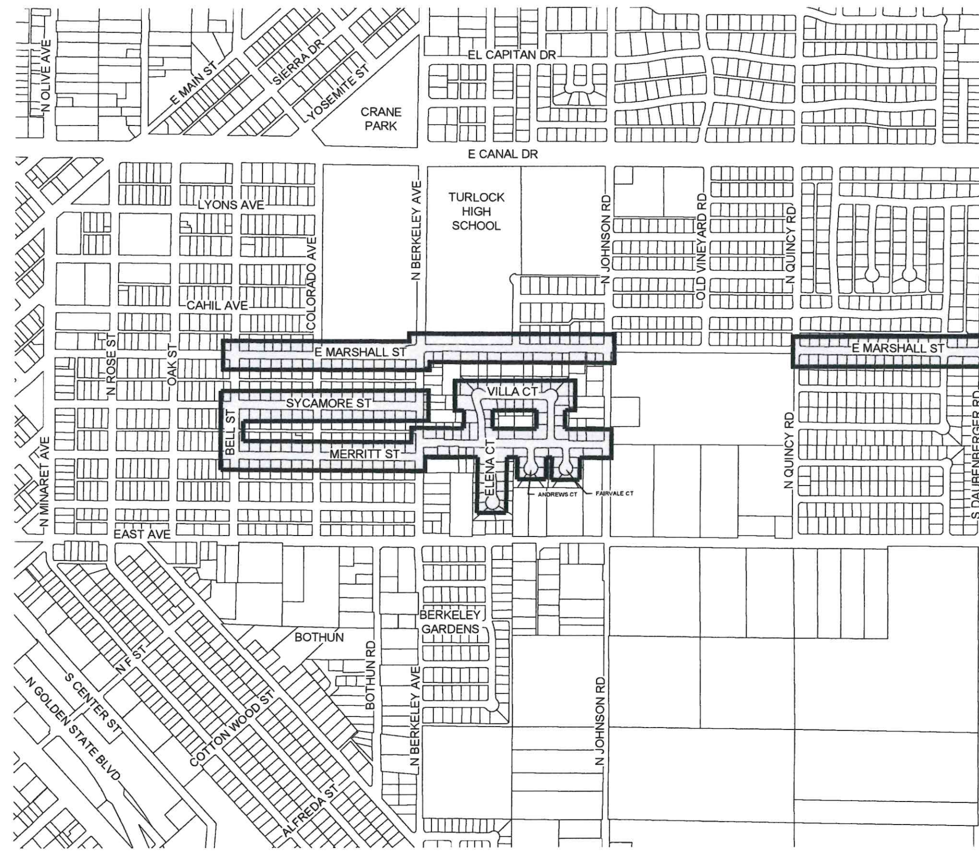
1 OF 98

4/9/2025 4:49 PM G:\Turlock_City of-2292\229224001-2024 Road Rehab\300 CAD\342 Sheet Sets\01_General\G1 COVER SHEET.dwg -Kylie Maness

CITY OF TURLOCK
CONSTRUCTION PLANS FOR ROADS PROGRAM CAPITAL IMPROVEMENT PROJECT
CITY PROJECT NO. 23-068 - PACKAGE 3



VICINITY MAP
NOT TO SCALE



SITE MAP
NOT TO SCALE

SHEET INDEX

SHEET NO.	SEQ. SHEET NO.	DESCRIPTION
GENERAL		
G1	1	COVER SHEET
G2	2	LEGEND & ABBREVIATIONS
STREET PLAN		
C1	3	MARSHALL ST STA 10+50 - 15+00
C2	4	MARSHALL ST STA 15+00 - 20+00
C3	5	MARSHALL ST STA 20+00 - 24+00
C4	6	MARSHALL ST STA 24+00 - 28+00
C5	7	MARSHALL ST STA 28+00 - 33+00
C6	8	MARSHALL ST STA 33+00 - 38+00
C7	9	MARSHALL ST STA 51+00 - 56+00
C8	10	MARSHALL ST STA 56+00 - 61+00
C9	11	MARSHALL ST STA 61+00 - 64+53
C10	12	SYCAMORE ST STA 71+00 - 76+00
C11	13	SYCAMORE ST STA 76+00 - 80+00
C12	14	SYCAMORE ST STA 80+00 - 84+20
C13	15	MERRITT ST STA 91+00 - 96+00
C14	16	MERRITT ST STA 96+00 - 100+00
C15	17	MERRITT ST STA 100+00 - 104+10
C16	18	MERRITT ST STA 104+10 - 113+00
C17	19	MERRITT ST STA113+00 - 117+00
C18	20	VILLA CT ST STA 125+00 - 132+00
C19	21	VILLA CT STA 120+00 TO 124+70 AND 135+00 TO 139+50
C20	22	ELENA CR ANDREWS CT AND FAIRVALE CT
C21	23	BELL ST STA 171+00 TO 175+00
DETAILS		
D1	24	STANDARD DETAILS
D2	25	STANDARD DETAILS
D3	26	STANDARD DETAILS
D4	27	STANDARD DETAILS
D5	28	CIVIL DETAILS
D6	29	CIVIL DETAILS
D7	30	SITE DETAILS
D8	31	SITE DETAILS
D9	32	SITE DETAILS
D10	33	SITE DETAILS
D11	34	SITE DETAILS
D12	35	SITE DETAILS
D13	36	SITE DETAILS
D14	37	SITE DETAILS

SHEET INDEX

SHEET NO.	SEQ. SHEET NO.	DESCRIPTION
D15	38	SITE DETAILS
D16	39	SITE DETAILS
D17	40	SITE DETAILS
D18	41	SITE DETAILS
D19	42	SITE DETAILS
D20	43	SITE DETAILS
D21	44	SITE DETAILS
D22	45	SITE DETAILS
D23	46	SITE DETAILS
D24	47	SITE DETAILS
D25	48	SITE DETAILS
D26	49	SITE DETAILS
D27	50	SITE DETAILS
TRAFFIC HANDLING		
TH1	51	LEGEND
TH2	52	DETAILS
TH3	53	TRAFFIC HANDLING
TH4	54	TRAFFIC HANDLING
TH5	55	TRAFFIC HANDLING
TH6	56	TRAFFIC HANDLING
TH7	57	TRAFFIC HANDLING
TH8	58	TRAFFIC HANDLING
TH9	59	TRAFFIC HANDLING
TH10	60	TRAFFIC HANDLING
STRIPING		
S-1	61	MARSHALL ST STA 10+50 - 20+00
S-2	62	MARSHALL ST STA 20+00 - 24+30
S-3	63	MARSHALL ST STA 28+00 - 38+00
S-4	64	MARSHALL ST STA 51+00 - 56+00
S-5	65	MARSHALL ST STA 61+00 - 64+53
S-6	66	SYCAMORE ST STA 71+00 - 76+00
S-7	67	SYCAMORE ST STA 76+00 - 80+00
S-8	68	MERRIT ST STA 91+00 - 100+00
S-9	69	MERRIT ST STA 100+00 - 108+00
S-10	70	MERRIT ST STA 108+00 - 117+00
S-11	71	VILLA CT STA 125+00 - 132+00
S-12	72	VILLA CT STA 120+00 - 124+70 AND 135+00 TO 139+50
S-13	73	SELENA CR ANDREWS CT AND FAIRVALE CT
S-14	74	BELL ST STA 171+00 - 175+00

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2. USED MATERIAL, REJECTS, MISFITS, OR SECONDS, ETC. ARE NOT ACCEPTABLE FOR USE ON CITY OF TURLOCK FACILITIES.
3. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THESE PLANS, PROJECT SPECIFICATIONS AND CITY OF TURLOCK SPECIFICATIONS.
4. CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING FACILITIES PRIOR TO COMMENCING WORK. CALL UNDERGROUND SERVICE ALERT (USA) AT 8-1-1. CONTRACTOR SHALL MAKE ENGINEER AWARE OF ANY DISCREPANCIES.
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.
6. CITY OF TURLOCK SHALL INSPECT ALL WORK PHASES ON CONCRETE FACILITIES FOR CONFORMANCE TO CITY OF TURLOCK SPECIFICATIONS. REINFORCING SHALL NOT BE ENCASED IN CONCRETE WITHOUT PRIOR CITY OF TURLOCK INSPECTIONS. LIKEWISE, CONCRETE SHALL NOT BE COVERED WITH EARTH PRIOR TO CITY OF TURLOCK INSPECTION.
7. CONCRETE DESIGN MIX SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. ALL CONCRETE SHALL HAVE A 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI UNLESS OTHERWISE SPECIFIED.
8. ALL STEEL PIPE AND FITTINGS SHALL BE FURNISHED WITH A SHOP APPLIED HIGH SOLIDS EPOXY COATING ON THE INTERIOR AND EXTERIOR, UNLESS OTHERWISE INDICATED. ALL OTHER EXPOSED STEEL SHALL BE PAINTED WITH A PRE-TREATMENT PRIMER, AN UNDERCOAT AND A FINAL COAT OF PAINT IN ACCORDANCE WITH CITY OF TURLOCK SPECIFICATIONS.
9. ALL NUTS, BOLTS, AND WASHERS USED TO SECURE UNDERGROUND FITTINGS SHALL BE STAINLESS STEEL. AFTER INSTALLATION, ALL STEEL HARDWARE SHALL BE COATED WITH A RUST PREVENTATIVE, WRAPPED WITH 4 MIL POLYETHYLENE SHEETING, AND SECURE WITH PVC TAPE.
10. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE HEALTH AND SAFETY LAWS OF THE STATE OF CALIFORNIA AND CAL/OSHA STANDARDS.
11. TRENCH BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS AND THE GEOTECHNICAL REPORT CONTAINED IN THE SPECIFICATIONS.
12. CONTRACTOR WILL BE RESPONSIBLE FOR THE REPAIR OF ALL PIPELINE CRACKS, WHICH DEVELOP DURING CONSTRUCTION OF IMPROVEMENTS AFFECTING EXISTING FACILITIES.
13. CONCRETE VAULTS AND BOXES MAY BE PURCHASED FROM A PRECAST MANUFACTURER OR CONTRACTOR MAY CONSTRUCT THE STRUCTURES IF STRUCTURAL CALCULATIONS AND DESIGN IS APPROVED BY THE CITY OF TURLOCK AND THE ENGINEER.
14. ALL EXCESS MATERIAL AND/OR DEBRIS SHALL BE REMOVED UPON COMPLETION OF INSTALLATION.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE DUST CONTROL AT ALL TIMES.

APPROVALS

WILLIAM D. MORRIS, P.E., P.L.S. — DATE
CITY ENGINEER
PUBLIC WORKS DEPARTMENT

CITY OF TURLOCK INC. 1908

CITY OF TURLOCK
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
156 S. BROADWAY, SUITE 150
(209) 668-5520

PRELIMINARY
NOT FOR CONSTRUCTION
OCTOBER 2024

No.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER — JEFFREY S. DORD — No. 76749 — CIVIL — STATE OF CALIFORNIA — FOR REVIEW ONLY

DATE SIGNED:

CITY OF TURLOCK
CONSTRUCTION PLANS FOR ROADS PROGRAM CAPITAL IMPROVEMENT PROJECT
CITY PROJECT No. 23-068
GENERAL

COVER SHEET

PROVOST & PRITCHARD
455 W FIR AVENUE
CLOVIS, CA 93611-9166
PHONE (559) 449-2700
FAX (559) 449-2715
www.provostandpritchard.com

DESIGN ENGINEER: JD
LICENSE NO: 76,749
DRAFTED BY: AR
CHECKED BY: JD
DATE: OCT 2024
JOB NO: 229224001
PROJECT NO: 229224001
PHASE: 3

0 — 1"
ORIGINAL SCALE SHOWN IS ONE INCH. ADJUST SCALE FOR REDUCED OR ENLARGED PLANS.

SHEET G1

STREET REHABILITATION - CITY OF TURLOCK:

TURLOCK CITY PROJECT No.: 20-002
SOUTHWEST QUADRANT ROAD REHAB

TURLOCK, CALIFORNIA

SPECIFICATIONS

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF TURLOCK ENGINEERING DIVISION AND ALL OTHER CODES OR REGULATIONS IN FORCE BY APPLICABLE GOVERNING AGENCIES.
2. WHERE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS, IT IS UNDERSTOOD THAT ONLY FIRST QUALITY WORKMANSHIP AND MATERIALS ARE TO BE USED.
3. THE CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING CONSTRUCTION, INCLUDING JOB SITE SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO WORKING HOURS.
4. THE EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY AND ARE BASED UPON INFORMATION PROVIDED BY UTILITY COMPANIES AND BY MEASUREMENT OF SURFACE FEATURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND FACILITIES AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH OCCUR DUE TO FAILURE TO LOCATE AND PRESERVE SUCH UTILITIES.
5. CAUTION: CALL BEFORE YOU DIG. CALL UNDERGROUND SERVICE ALERT (USA) PRIOR TO TRENCHING, GRADING, EXCAVATION, DRILLING, BORING, SETTING POSTS, PLANTING TREES, ETC. USA WILL PROVIDE INFORMATION OR LOCATE AND MARK ANY UNDERGROUND UTILITIES. CALL USA, TOLL FREE AT 1 (800) 227-2600.
6. CONTRACTOR SHALL LOCATE AND PRESERVE ALL FACILITES INCLUDING GAS, WATER, IRRIGATION, SEWER, POWER, STREET LIGHTS, TELEPHONE, AND OTHERS WHICH MAY BE IN THE AREA OF CONSTRUCTION. RESPECTIVE UTILITY COMPANIES SHALL BE NOTIFIED PRIOR TO COMMENCEMENT OF WORK.
7. ALL MANHOLE, LAMPHOLE, AND WATER AND GAS VALVE CASTINGS AND COVERS, UTILITY BOX FRAMES & COVERS, MONUMENT WELL COVERS, ETC. SHALL BE ADJUSTED TO FINISH GRADE BY THE PAVING CONTRACTOR AFTER STREET IMPROVEMENTS ARE COMPLETE.
8. A NO-FEE ENCROACHMENT PERMIT SHALL BE OBTAINED FROM THE CITY OF TURLOCK BEFORE BEGINNING WORK.
9. LINES AND GRADES : ALL DISTANCES AND MEASUREMENTS ARE GIVEN AND WILL BE MADE IN A HORIZONTAL PLANE. GRADES ARE GIVEN FROM THE TOP OF STAKES OR NAILS, UNLESS OTHERWISE NOTED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL STAKES AND CONTROL POINTS PROVIDED FOR PROJECT CONSTRUCTION. EXPENSES INCURRED FOR THE REPLACEMENT OF SUCH STAKES OR CONTROL POINTS SHALL BE BORN BY THE CONTRACTOR.
11. THE CONTRACTOR SHALL PROVIDE, AT HIS EXPENSE, APPROPRIATE DUST CONTROL AS REQUIRED FOR THE PREVENTION AND/OR ALLEVIATION OF DUST NUISANCE DURING THE COURSE OF PROJECT CONSTRUCTION.
13. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS PERTAINING TO HIS OPERATIONS. HE SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAG MEN OR OTHER DEVICES NECESSARY FOR PUBLIC SAFETY. THE CONTRACTOR'S ATTENTION IS CALLED TO THE REQUIREMENTS OF TITLE 8, CALIFORNIA ADMINISTRATIVE CODE, SUBCHAPTER 4, ARTICLE 6, "EXCAVATIONS, TRENCHES, EARTHWORK".
14. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF CHAPTER 9, SECTION 6705, 6706 AND 6707 OF THE STATE LABOR CODE. THE CONTRACTOR SHALL SUBMIT, FOR APPROVAL, A DETAILED PLAN SHOWING DESIGN OF ALL SHORING, BRACING, SLOPE CUTS AND OTHER PROVISIONS FOR WORKER PROTECTION IN AREAS OF EXCAVATION EXCEEDING FIVE FEET IN DEPTH. IF SUCH PLAN VARIES FROM SHORING SYSTEM STANDARDS, THE PLANS SHALL BE PREPARED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER.
15. WARNING: UNAUTHORIZED USES OR CHANGES HAWKINS & ASSOCIATES ENGINEERING WILL NOT BE RESPONSIBLE, OR LIABLE FOR UNAUTHORIZED USES OR CHANGES TO THESE PLANS AND SPECIFICATIONS. ONLY A SIGNED AND APPROVED HARD COPY OF THESE PLANS SHALL BE USED FOR CONSTRUCTION. ANY CHANGES TO THESE PLANS MUST BE IN WRITING AND APPROVED BY HAWKINS & ASSOCIATES ENGINEERING.

OVERLAY NOTES

1. CONTRACTOR SHALL PREPARE EXISTING SURFACE INCLUDING PLAINING, REMOVAL OF EXISTING STRIPING, CLEANING FOR THE INSTALLATION OF AC OVERLAY AS SHOWN WITHIN THE LIMITS OF GRINDING AS DEPICTED ON THESE PLANS.
2. ALL STRUCTURES WITHIN THE LIMITS OF THE OVERLAY (MANHOLES, VALVES, ETC.) SHALL BE ADJUSTED TO FINISH GRADE AFTER OVERLAY.
3. ALL RAISED PAVEMENT MARKERS TO BE REMOVED AND THERMOPLASTIC STRIPING WITHIN THE LIMITS OF THE OVERLAY SHALL BE GROUND AND REMOVED PRIOR TO BEGINNING THE APPLICATION OF OVERLAY.
4. TYPE A HMA CONSTRUCTION PROCESS SHALL BE STANDARD. THE AGGREGATE GRADATION SHALL BE ½": THE BINDER SHALL BE PG 64-10.
5. SECTION 39-1.12C "PROFILOGRAPH" OF THE CALTRANS STANDARD SPECIFICATIONS SHALL NOT APPLY.
6. CONTRACTOR SHALL TACK COAT ALL SURFACES TO RECEIVE HMA AND SHALL CONFORM TO THE CALTRANS STANDARD SPECIFICATIONS SECTION 39, "HOT MIX ASPHALT."

TRAFFIC SIGNAL DETECTOR LOOPS

1. ALL TRAFFIC DETECTOR LOOPS WITHIN THE PROJECT LIMITS SHALL BE REPLACED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

INDEX

CITY OF TURLOCK APPROVAL

4/18/2023

CITY ENGINEER — DATE

USA NORTH 811 Call 811 Before You Dig WWW.USANORTH811.ORG

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 ATTENETION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.

RODRICK H. HAWKINS
R.C.E. 50188

2022-07-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — RODRICK H. HAWKINS — No. 50188 — CIVIL — STATE OF CALIFORNIA

HAWKINS & ASSOCIATES ENGINEERING, INC.
436 MITCHELL ROAD
MODESTO, CA. 95354
PH: (209) 575 - 4295
FX: (209) 578 - 4295

CITY OF TURLOCK DEVELOPMENT SERVICES ENGINEERING DIVISION 156 S. BROADWAY, STE 150 (209) 668-5520

COVER SHEET

CAPITAL PROJECT NO. 20-002
SOUTHWEST QUADRANT ROAD REHABILITATION
VARIOUS LOCATIONS

VERIFY SCALE
BAR IS 1" ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAWN BY:	M.SASSER
REV. BY:	--
CH. BY:	R.HAWKINS
DATE:	2022/07/15
SCALE:	NTS
	COVER SHEET

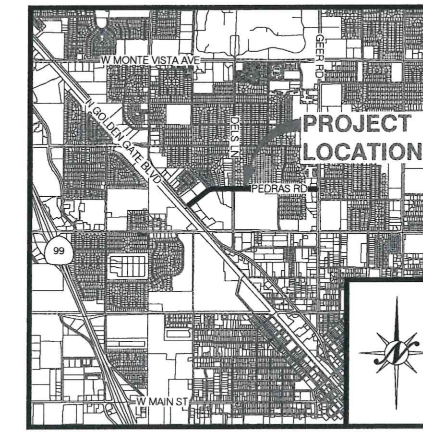
SHEET C1 OF 22

CIVIL IMPROVEMENT PLANS FOR
CITY OF TURLOCK PROJECT NO. 21-021 (099)
PEDRAS ROAD REHABILITATION
TURLOCK, CALIFORNIA

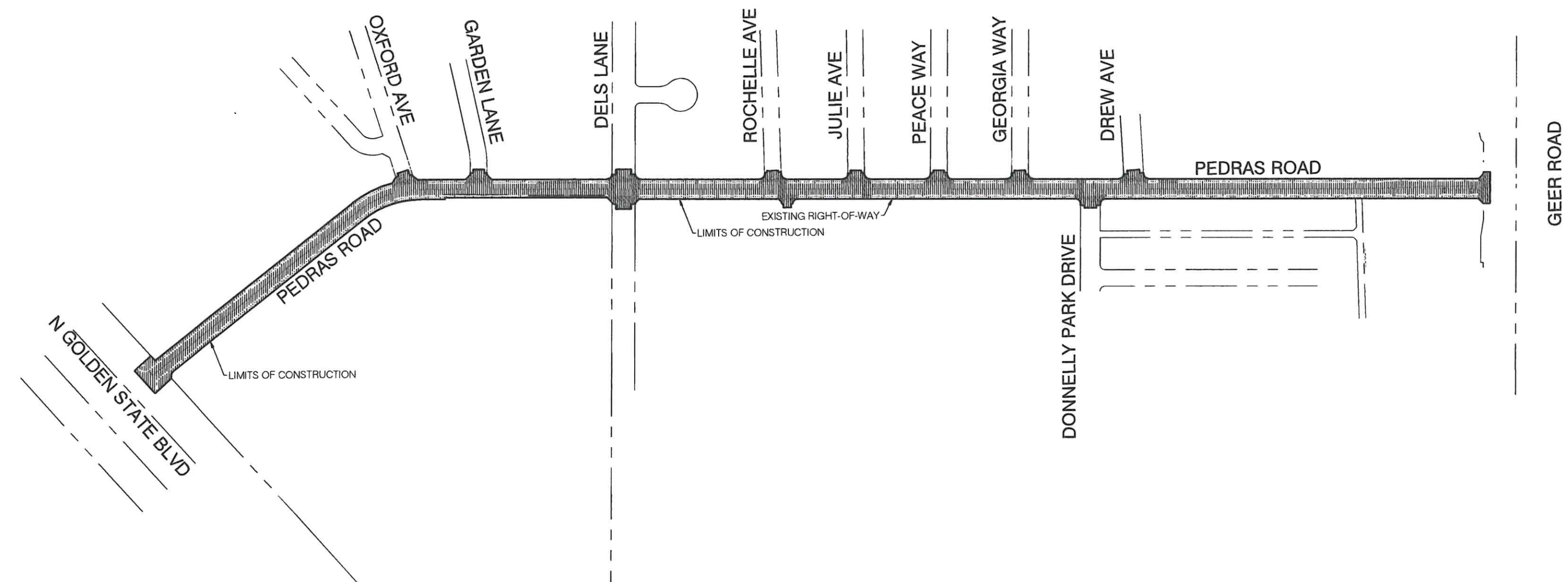
LEGEND

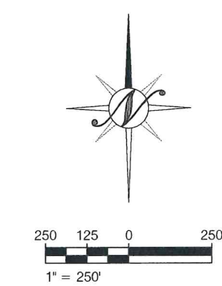
	EXISTING	PROPOSED
BOUNDARY LINE		
CENTERLINE		
RIGHT-OF-WAY		
PARCEL LINE		
MONUMENT	N/A	
SAWCUT	N/A	
CURB, GUTTER AND SIDEWALK		
EDGE OF PAVEMENT		
CONCRETE VALLEY GUTTER	N/A	
TRENCH DRAIN	N/A	
STORM DRAIN (MAIN)	Ex12"SD	12"SD
FORCE MAIN	Ex48"FM	48"FD
DRAINAGE SWALE		
STORM DRAIN MAINTENANCE HOLE	SD	SD
CURB INLET		
DRAIN INLET		
DRAIN INLET ON MAINTENANCE HOLE		
STORM DRAINAGE FILTER	N/A	
WATER (MAIN)	Ex8"W	8"W
WATER (SERVICE)	Ex8"W	8"W
WATER VALVE	WV	WV
WATER BLOW OFF VALVE	BO	BO
BACK FLOW PREVENTER	BFP	BFP
POST INDICATOR VALVE (SINGLE)	PIV	PIV
FIRE DEPARTMENT CONNECTION	FDC	FDC
FIRE HYDRANT		
FIRE SPRINKLER RISER	N/A	FSR
WATER METER	WM	WM
REDUCED PRESSURE PRINCIPLE DETECTOR ASSEMBLY	N/A	RPPA
SINGLE CHECK DETECTOR ASSEMBLY	N/A	SCDA
SERVICE STUB	N/A	
CLEANOUT		
SEWER MAINTENANCE HOLE	S	S
GREASE TRAP	N/A	
SEWER (MAIN)	Ex12"SS	12"SS
JOINT TRENCH (APPROX LOCATION)		N/A
TRANSFORMER (APPROX LOCATION)	N/A	
OVER HEAD ELECTRICAL		N/A
SERVICE POLE	SP	N/A
JOINT POLE	JP	N/A
JOINT POLE WITH LIGHT		N/A
POWER POLE	PP	N/A
TELEPHONE POLE	TP	N/A
GUY		N/A
ELECTRICAL MANHOLE		N/A
ELECTROLIER		
UTILITY BOX		
GAS LINE	G	N/A
GAS VALVE	GV	N/A
FINISH FLOOR ELEVATION (PROPOSED)	N/A	FF=0000.00
BUILDING PAD	N/A	10.0
TOP OF CURB ELEVATION	68.34 TC	68.34 TC
ORIGINAL GROUND	106.82	N/A
DIRECTION OF FLOW	3.0%	3.0%
CONTOURS	32	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	Ex48"IRR	
IRRIGATION VALVE	ICV	N/A
IRRIGATION PRESSURE MANHOLE/VENT		
SIGN		
PERCOLATION TEST LOCATION	N/A	P-X
R-VALUE SAMPLE LOCATION	N/A	RV-X
CORE SAMPLE LOCATION	PDX	N/A
KEYNOTE SYMBOL	X	X

PLOTTED: 08/04/2023 16:12 PLOTTED BY: Nlarsson
DWGNAME: F:\21-2896 Pedras Road Rehabilitation\Civil\Imp Plans\C1.1 CVR.dwg



VICINITY MAP
NTS





ABBREVIATIONS

±	PLUS OR MINUS (NOT EXACT)	DR	DRIVE	MH	MAINTENANCE HOLE	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
@	AT	DW	DRIVEWAY	MIN	MINIMUM		
AB	AGGREGATE BASE	E	EAST	N	NORTH	S	SLOPE OR SOUTH
AC	ASPHALT CONCRETE	EC	END OF CURVE	NDS	NDS INC. (MANUFACTURER)	SC	STANISLAUS COUNTY
ACC	ACCESSIBLE	EM	ELECTRIC METER	NIC	NOT INCLUDED	SCDA	SINGLE CHECK DETECTOR ASSEMBLY
ADTT	AVERAGE DAILY TRUCK TRAFFIC	ELC	ELECTROLIER	NSE	NORTHSTAR ENGINEERING		
AG	ATRIUM GRATE	ELEV	ELEVATION	NTS	NOT TO SCALE	SD	STORM DRAIN
ALT	ALTERNATE	EP	EDGE OF PAVEMENT	OC	ON CENTER	SG	SUB-GRADE
APN	ASSESSORS PARCEL NUMBER	ER	END OF RETURN	OF	OFFSET	SHT	SHEET
ASR	AUTOMATIC SPRINKLER RISER	ESMT OR EASE	EASEMENT	OG	ORIGINAL GROUND / GRADE	SIM	SIMILAR
AVE	AVENUE	EX OR EXIST	EXISTING	OHE	OVER HEAD ELECTRIC	SNS	STREET NAME SIGN
BC	BEGIN CURVE	FDC	FIRE DEPARTMENT CONNECTION	P OR PAV	PAVEMENT	ST	STREET
BDRY	BOUNDARY	FES	FLARED END SECTION	PCC	POINT OF COMPOUND CURVE OR PORTLAND CEMENT CONCRETE	STL	STEEL
BFP	BACK FLOW PREVENTOR	FF	FINISH FLOOR			STA	STATION
BK	BOOK	FG	FINISH GRADE	PG	PAGE	STD	STANDARD
BM	BENCH MARK	FH	FIRE HYDRANT	PG&E	PACIFIC GAS AND ELECTRIC	S/W OR SW	SIDEWALK
BW	BACK OF WALK	FL	FLOW LINE	PIV	PRESSURE INDICATOR VALVE	SS	SANITARY SEWER
BSL	BUILDING SETBACK LINE	FM	FORCE MAIN	PL	PROPERTY LINE	TC	TOP OF CURB
BVC	BEGIN VERTICAL CURVE	FS	FIRE SERVICE	PM	PARCEL MAP	TD	TRENCH DRAIN
CC	CONCRETE	FSR	FIRE SPRINKLER RISER	POC	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	GRATE, GRADE, OR GROUND	PRC	POINT OF REVERSE CURVATURE	TG	TOP OF GRATE
CDS	CONTINUOUS DEFLECTION SEPARATORS	GS	GROUND SHOT ELEVATION	PROF	PROFILE	THRU	THROUGH
		GS@W	GROUND SHOT AT WALL	PT	POINT	TI	TRAFFIC INDEX
CIP	CAST IRON PIPE	GV	GATE VALVE	PTDF	PRESSURE TREATED DOUGLAS FIR	TID	TURLOCK IRRIGATION DISTRICT
℄ OR CL	CENTER LINE	HORIZ	HORIZONTAL	PUE	PUBLIC UTILITY EASEMENT	TW	TOP OF WALL
CMP	CORRUGATED METAL PIPE	HP	HIGH POINT	PVC	POLYVINYL CHLORIDE PIPE	TPE	TREE PLANTING EASEMENT
CO	CLEAN OUT	HPS	HIGH PRESSURE SODIUM	RW	RECLAIMED WATER	TVC	TOP OF VERTICAL CURB
COMP.	COMPACTION	HT	HEIGHT	R/W	RIGHT-OF-WAY	TYP	TYPICAL
CONC OR CC	CONCRETE	HWY	HIGHWAY	R	RADIUS	UON	UNLESS OTHERWISE NOTED
C.O.T	CITY OF TURLOCK	ID	INSIDE DIAMETER	RC	RELATIVE COMPACTION	VERT	VERTICAL
CR	CURB RETURN	INV	INVERT	RCP	REINFORCED CONCRETE PIPE	VCP	VITRIFIED CLAY PIPE
CT.	COURT	IRR	IRRIGATION	R.D.	RELATIVE DENSITY	W	WATER OR WEST
CV	CHECK VALVE	LF	LINEAL FEET OR LINEAR FEET	RD	ROAD	WM	WATER METER
DDCV	DOUBLE DETECTOR CHECK VALVE	LN	LANE	RET	RETURN	WS	WATER SERVICE
DI	DRAIN INLET	LP	LOW POINT	RPDA	REDUCED PRESSURE DETECTOR ASSEMBLY	WY	WAY
DIA	DIAMETER	LT	LEFT			W/	WITH
DIP	DUCTILE IRON PIPE	JT	JOINT TRENCH	RV	RESISTANCE VALUE	WWF	WELDED WIRE FABRIC
(DOM)	DOMESTIC	MAX	MAXIMUM				

APPROVALS

APPROVED BY THE CITY OF TURLOCK.

[signature] 8/9/23

WILLIAM D. MORRIS, RCE 55910 — APPROVAL DATE
CITY ENGINEER

REGISTERED PROFESSIONAL ENGINEER WILLIAM D. MORRIS No. 55910 CIVIL STATE OF CALIFORNIA

PREPARED FOR

CLIENT:
CITY OF TURLOCK
156 S. BROADWAY, SUITE 150
TURLOCK, CA 92380
P: (209) 668-6021
CONTACT:
RANDALL JONES

PROJECT LOCATION

SITE ADDRESS
PEDRAS ROAD
TURLOCK, CA 95382

BENCHMARK

ELEVATION: 102.867'
BM
CITY OF TURLOCK BENCHMARK NO. 10-1-2, BRASS PLUG SE CORNER ON PEDRAS AT DONNELLY PARK DR.

SHEET INDEX

CALL BEFORE YOU DIG USA 800-227-2600

REGISTERED PROFESSIONAL ENGINEER 08/07/23 CIVIL STATE OF CALIFORNIA

NO.	REVISIONS DESCRIPTIONS	DATE	APPROVED

COVER SHEET

CIVIL IMPROVEMENT PLANS FOR
PEDRAS ROAD REHABILITATION
TURLOCK CALIFORNIA

NorthStar Engineering Group, Inc.
• CIVIL ENGINEERING • SURVEYING • PLANNING •
620 12th Street Modesto, CA 95354
(209) 524-3525 Phone (209) 524-3526 Fax

JOB #:	21-2896
DATE:	8/4/2023
SCALE:	AS SHOWN
DRAWN:	FSE/NJM
DESIGN:	CRW
CHK'D:	JPE

SHEET NUMBER

C1.1

CITY OF TURLOCK

CONSTRUCTION PLANS FOR

ROADS PROGRAM CAPITAL IMPROVEMENT PROJECT

CITY PROJECT NO. 23-031

PLAN PACKAGE 1

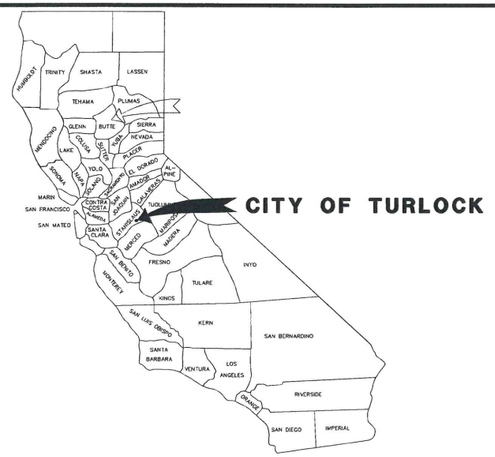
MISSION ST: N QUINCY RD TO OLD VINEYARD RD

TOKAY AVE: N QUINCY RD TO N JOHNSON RD

N QUINCY RD: E MARSHALL ST TO E CANAL DR

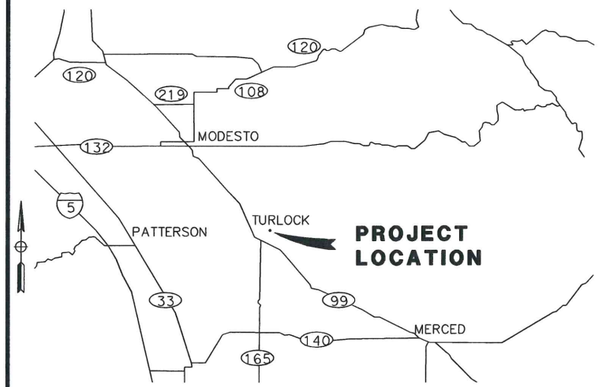
SUPPLEMENTED BY CALTRANS STANDARD PLANS AND STANDARD SPECIFICATIONS DATED 2023 & CITY OF TURLOCK ENGINEERING DESIGN STANDARD SPECIFICATIONS AND DRAWINGS DATED 2016.

SHEET INDEX



CALIFORNIA STATE MAP

NO SCALE

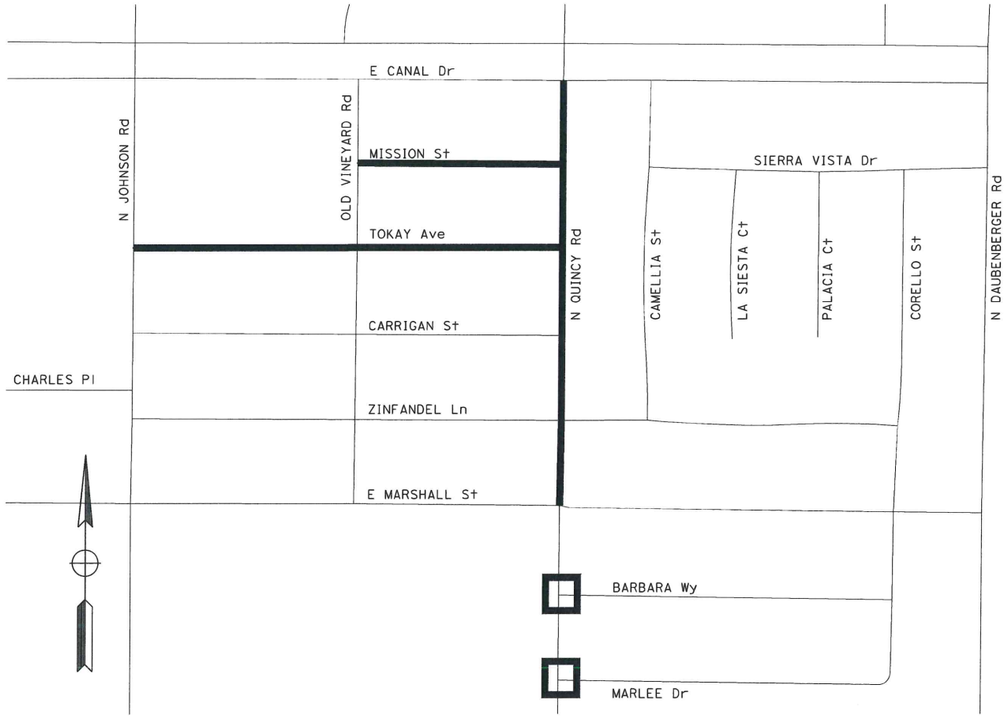


VICINITY MAP

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

CITY OF TURLOCK APPROVAL

4/2/2024

WILLIAM D. MORRIS, P.E., P.L.S — DATE
CITY ENGINEER
PUBLIC WORKS DEPARTMENT

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 ELETRICAL	DOYLE PERRY	(209) 678-5823
CITY OF TURLOCK STORM AND SEWER	CARLOS GUERRERO	(209) 345-2169
CITY OF TURLOCK WATER	ORLANDO GUITERREZ	(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:	3/26/2024
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.

USA NORTH 811 Call 811 Before You Dig

SCALE 20 0 20 40

REGISTERED PROFESSIONAL ENGINEER JONATHAN VINCENT HERNANDEZ No. 85662 Exp. 10/31/24 CIVIL STATE OF CALIFORNIA

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 INC. 1908

CITY OF TURLOCK
ROADS PROGRAM - CIP
TITLE SHEET

Sheet 1 of 54 Sheets

T-1

CITY OF TURLOCK

CONSTRUCTION PLANS FOR

ROADS PROGRAM CAPITAL IMPROVEMENT PROJECT

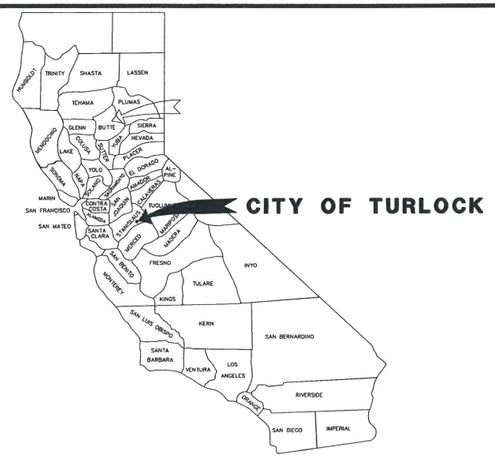
CITY PROJECT NO. 23-031

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.

SHEET INDEX



CALIFORNIA STATE MAP

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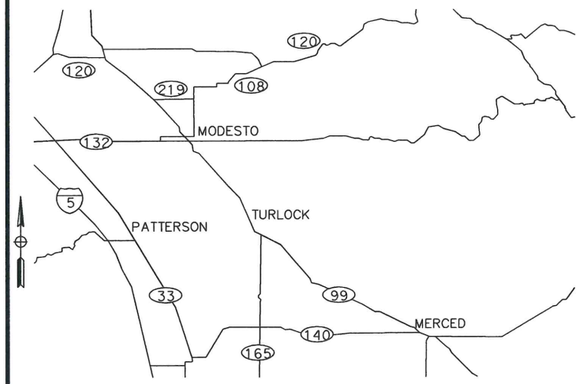
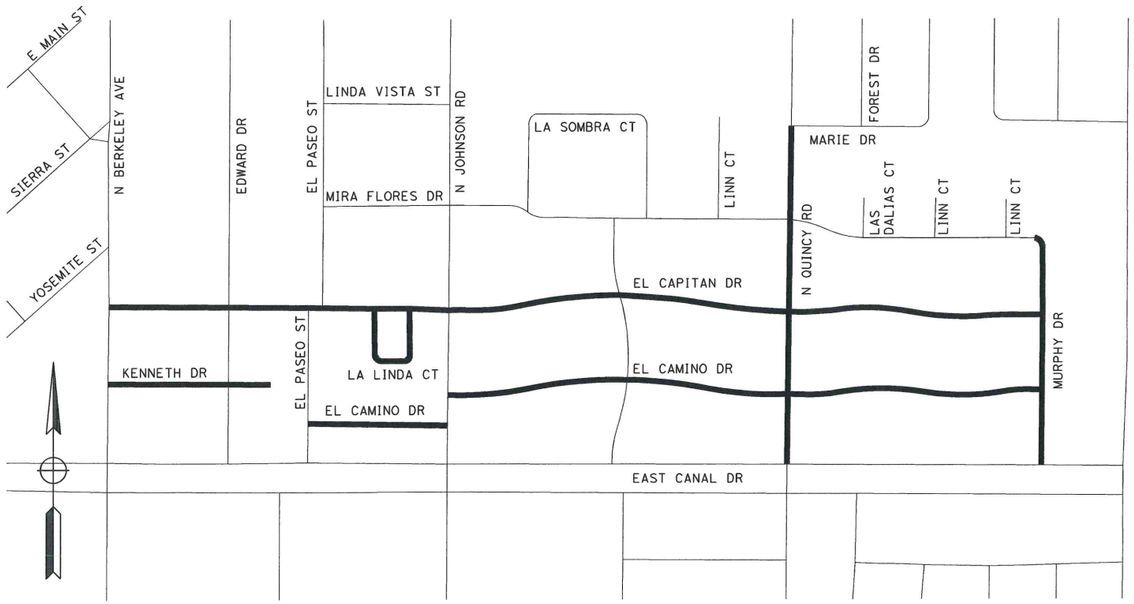


VICINITY MAP

NO SCALE



PROJECT LOCATION MAP

CITY OF TURLOCK APPROVAL

4/4/2024

WILLIAM D. MORRIS, P.E., P.L.S — DATE
CITY ENGINEER
PUBLIC WORKS DEPARTMENT

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 ELETRICAL	DOYLE PERRY	(209) 678-5823
CITY OF TURLOCK STORM AND SEWER	CARLOS GUERRERO	(209) 345-2169
CITY OF TURLOCK WATER	ORLANDO GUITERREZ	(209) 740-3868
PG&E	TRENT MILLSAP	(209) 561-6070

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT" (USA) AT 811 AT LEAST 2 WORKING DAYS PRIOR TO PERFORMING ANY EXCAVATION

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.

USA NORTH 811 Call 811 Before You Dig

SCALE 20 0 20 40

REGISTERED PROFESSIONAL ENGINEER — JONATHAN VINCENT HERNANDEZ — No. 85664 — Exp. 10/31/24 — CIVIL — STATE OF CALIFORNIA

MARK THOMAS
701 UNIVERSITY AVENUE, SUITE 200
SACRAMENTO, CALIFORNIA 95825
(916) 381-9100 FAX:(916)381-9180
markthomas.com

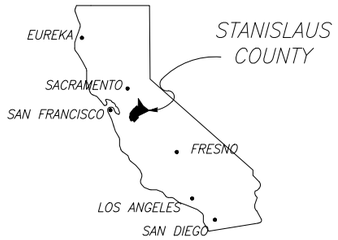
CITY OF TURLOCK
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
156 S. BROADWAY SUIT 150
(209) 668-5520

CITY OF TURLOCK INC. 1908

CITY OF TURLOCK
ROADS PROGRAM - CIP
TITLE

Sheet 1 of 107 Sheets

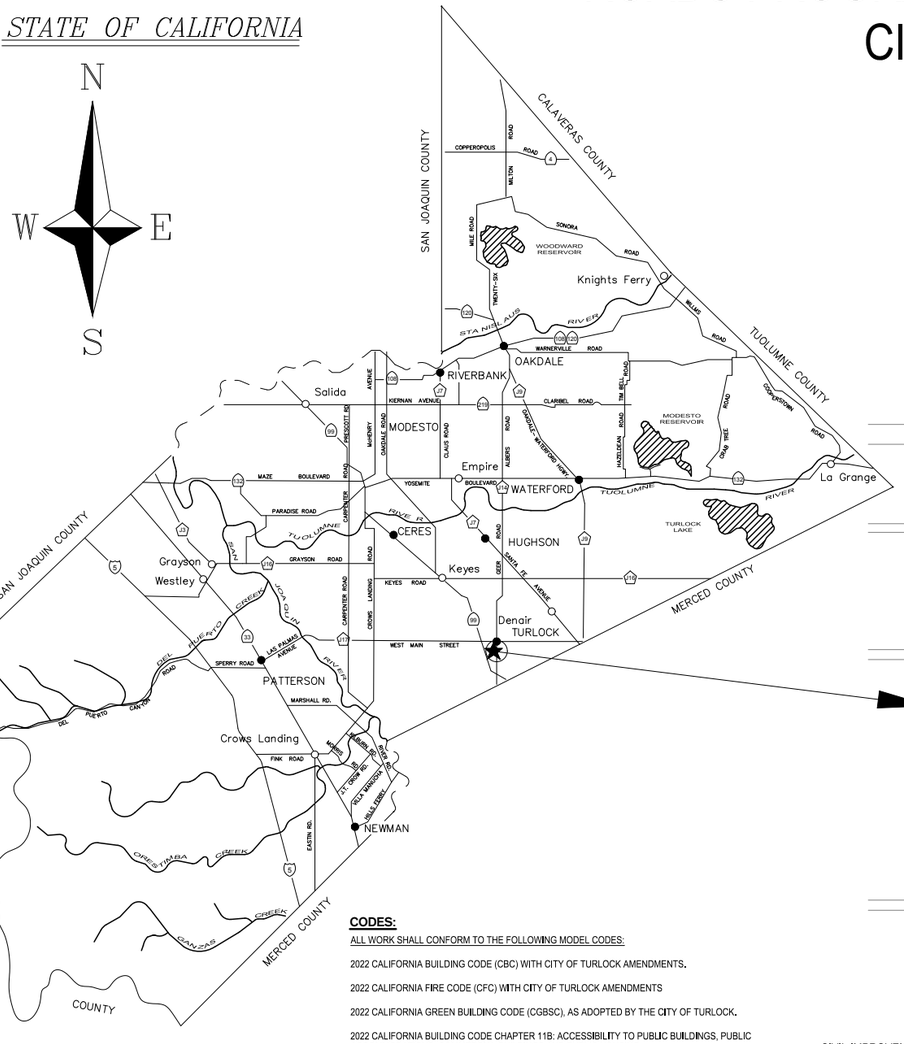
T-1



CITY OF TURLOCK

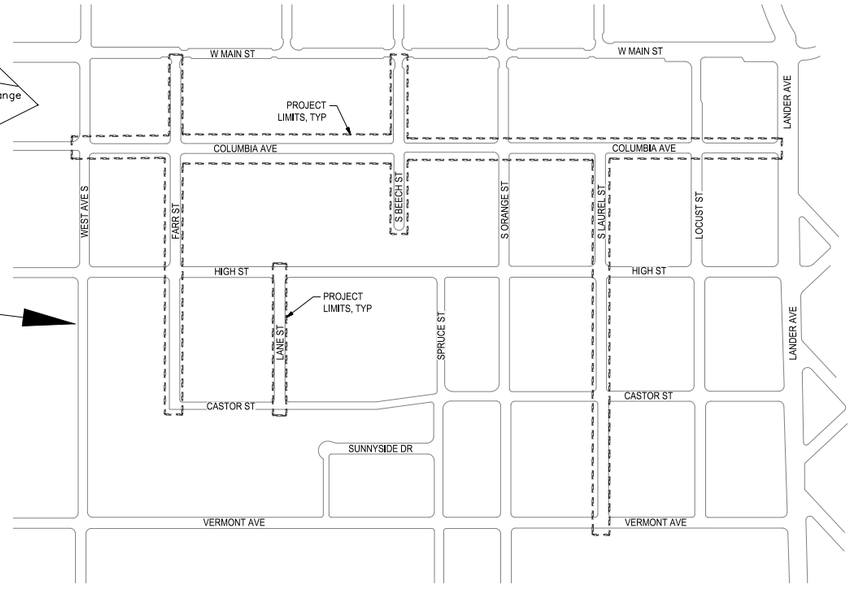
CONSTRUCTION PLANS FOR
ROADS PROGRAM CAPITAL IMPROVEMENT PROJECT
CITY PROJECT NO. 23-033

STATE OF CALIFORNIA



STANISLAUS COUNTY

NO SCALE



PROJECT LOCATION MAP

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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+14.51
10	COLUMBIA AVENUE IMPROVEMENTS - STATION 13+14.51 TO END
11	FARR STREET IMPROVEMENTS
12	LANE STREET & S. BEECH STREET IMPROVEMENTS
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14	COLUMBIA AVENUE SIGNING & STRIPING - STATION 1+00 TO 13+14.51
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29	COLUMBIA AVENUE GRADING PLAN - STATION 1+00 TO 13+14.51
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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
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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) 678-5823 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) 740-3868 ORLANDO GUTIERREZ, OGUTIERREZ@TURLOCK.CA.US

TURLOCK IRRIGATION DISTRICT (ELECTRICAL)
605-0945 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) 561-6070 TRENT MILLSAP, TWMB@PGE.COM

AT&T
(209) 507-1689 JIM JELLY, JJ2163@ATT.COM

FIRE DEPARTMENT (NON-EMERGENCY)
(209) 668-5580

POLICE DEPARTMENT (NON-EMERGENCY)
(209) 668-1200

AMBULANCE
(209) 632-2271

TURLOCK SCAVENGER
(209) 668-7274

CODES:

ALL WORK SHALL CONFORM TO THE FOLLOWING MODEL CODES:

2022 CALIFORNIA BUILDING CODE (CBC) WITH CITY OF TURLOCK AMENDMENTS.

2022 CALIFORNIA FIRE CODE (CFC) WITH CITY OF TURLOCK AMENDMENTS

2022 CALIFORNIA GREEN BUILDING CODE (CGBSC), AS ADOPTED BY THE CITY OF TURLOCK.

2022 CALIFORNIA BUILDING CODE CHAPTER 11B: ACCESSIBILITY TO PUBLIC BUILDINGS, PUBLIC ACCOMMODATIONS, COMMERCIAL BUILDINGS AND PUBLIC HOUSING

NOTE: THE CITY OF TURLOCK BUILDING DIVISION ENFORCES CBC CHAPTERS 11A AND 11B FOR DISABLED ACCESS COMPLIANCE.

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 LANE 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 VERMONT 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 — DATE
CITY ENGINEER
PUBLIC WORKS DEPARTMENT

811 Know what's below. Call before you dig.

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

REGISTERED PROFESSIONAL ENGINEER — ADAM K. MERRILL — No. 79826 — Exp. 12/31/24 — CIVIL — STATE OF CALIFORNIA

DATE SIGNED: 03/28/24

SIEGFRIED
3428 Brookside Road
Stockton, California 95219
209-943-2021
www.siegfriedeng.com
CIVIL · STRUCTURAL · LANDSCAPE ARCHITECTURE · SURVEYING · PLANNING · ATHLETIC FACILITY DESIGN

CITY OF TURLOCK PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
156 S. BROADWAY,
SUITE 150
(209) 668-5520

COVER SHEET

CAPITAL PROJECT NO. 23-033
THE CITY OF TURLOCK ROADS PROGRAM

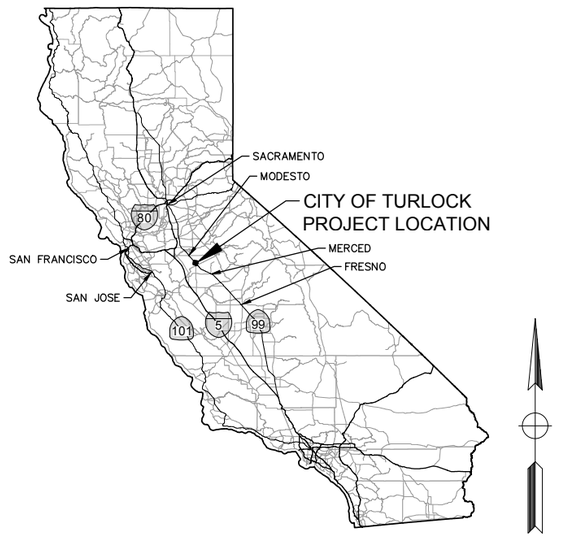
VERIFY SCALE 0 1"

DRAWN BY: JR	DRAWING NO.
REV. BY: ARM	01
CH. BY: AKM	
DATE: 3/28/2024	
SCALE: SEE SHEET	SHEET:
SEI PROJ NO: 22157	01 OF 49

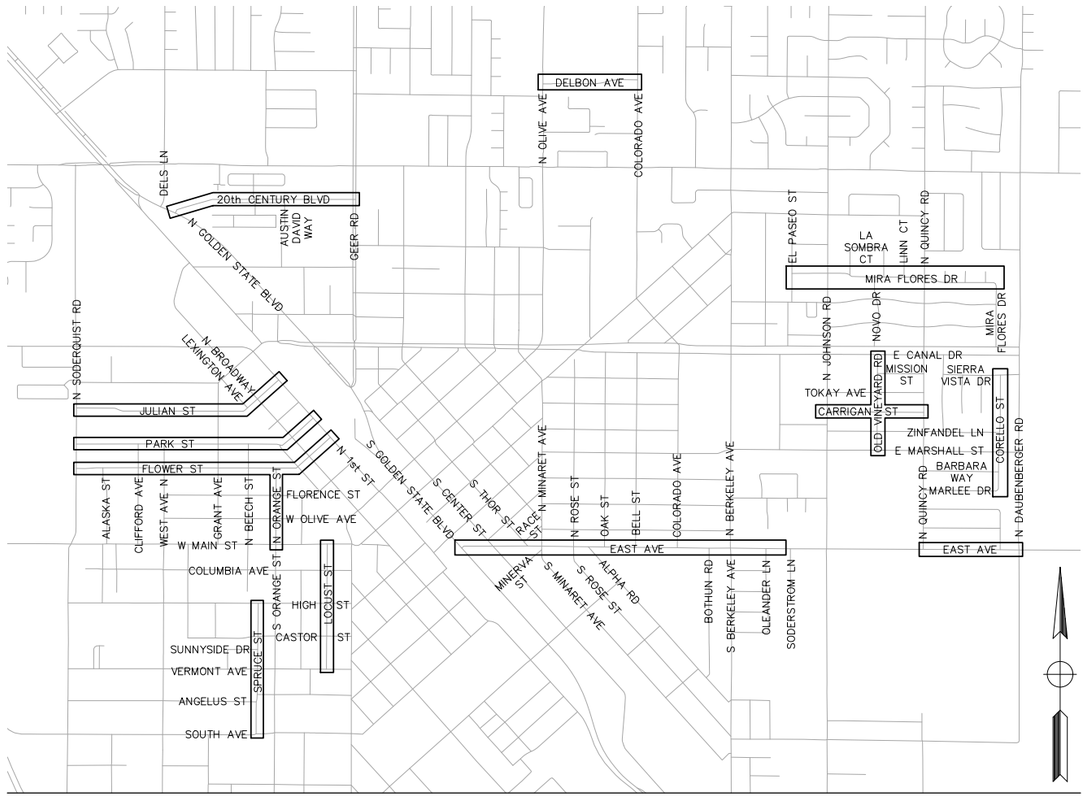
FILE: F:\22projects\22157 City of Turlock Road CIP\Plans and Graphics\Improvement Plans\22157 C-01 COVER SHEET.dwg
DATE & TIME PLOTTED: 3/28/24 7:05 AM

CITY OF TURLOCK

CAPITAL PROJECT No. 22-001
CITYWIDE STREET REHABILITATION AND IMPROVEMENT PROJECT
VARIOUS LOCATIONS
PACKAGE 1



VICINITY MAP NTS



PROJECT LOCATION MAP NTS

SHEET INDEX

CONTACTS

CITY OF TURLOCK PUBLIC WORKS
(209) 668–5484 MANUEL QUINTERO, mquintero@turlock.ca.us

CITY OF TURLOCK ELECTRICAL
(209) 678–5823 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) 740–3868 ORLANDO GUITERREZ, ogutierrez@turlock.ca.us

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(209) 633–3303 ABRAHAM ZAMORA, abraham.zamora@charter.com

PACIFIC GAS & ELECTRIC (GAS)
(209) 470–0697 DAVID LOOMIS, d1lo@pge.com

AT&T
(209) 549–5847 SHARON DINNELL, sd1568@att.com

FIRE DEPARTMENT (NON–EMERGENCY)
(209) 668–5580

POLICE DEPARTMENT (NON–EMERGENCY)
(209) 668–1200

AMBULANCE
(209) 632–2271

TURLOCK SCAVENGER
(209) 668–7274

CIVIL IMPROVEMENT LIMITS

THE CITY OF TURLOCK'S CITYWIDE STREET REHABILITATION AND IMPROVEMENT PROJECT WILL IMPROVE THE EXISTING ROADWAY SEGMENTS THROUGH VARIOUS PROCESSES AT SEVERAL LOCATIONS 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

NANDA K. GOTTIPARTHY, P.E. DATE
CONTRACT CITY ENGINEER

USA NORTH 811 Call 811 Before You Dig

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.

SULAIMAN ARAIN P.E.
LICENSE No. C78364

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SULAIMAN ARAIN No. C78364 Exp. 9/30/2023 CIVIL STATE OF CALIFORNIA

Michael Baker INTERNATIONAL
500 YGNACIO VALLEY RD
SUITE 300
WALNUT CREEK, CA 94596
(925) 906–1460

CITY OF TURLOCK INC. 1908

CITY OF TURLOCK
PUBLIC WORKS
DEPARTMENT
ENGINEERING DIVISION
156 S. BROADWAY,
SUITE 150
(209) 668–5520

COVER SHEET

CAPITAL PROJECT No. 22-001
CITYWIDE STREET REHABILITATION
AND IMPROVEMENT PROJECT

VERIFY SCALE
BAR IS 1" ON ORIGINAL DRAWING
1/4" 3/4" 1" 1/2"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAWN BY:	R. LIM
REV. BY:	
CH. BY:	S. ARAIN
DATE:	10/28/2022
SCALE:	AS SHOWN
MBI PROJECT No.	187020

DRAWING No. C-01
SHEET: 1 OF 169

22–001–P1–01–C–01.dwg
10/26/2022 4:36:47 PM

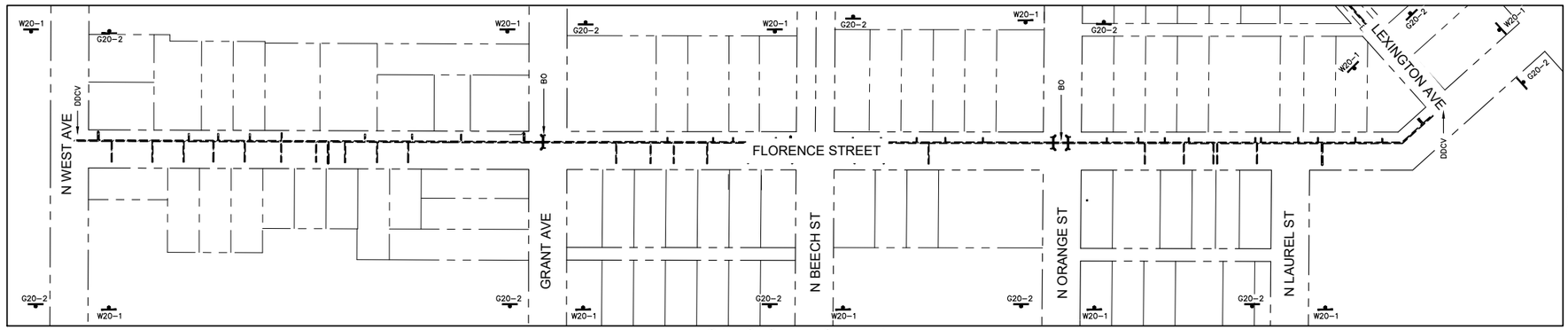
CITY OF TURLOCK

CITY PROJECT NO. 23-040

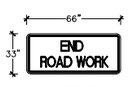
WATER LINE REPLACEMENT FOR

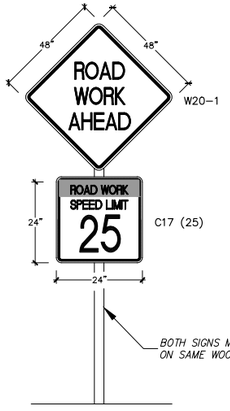
2024 ROADS PROGRAM CONSTRUCTION

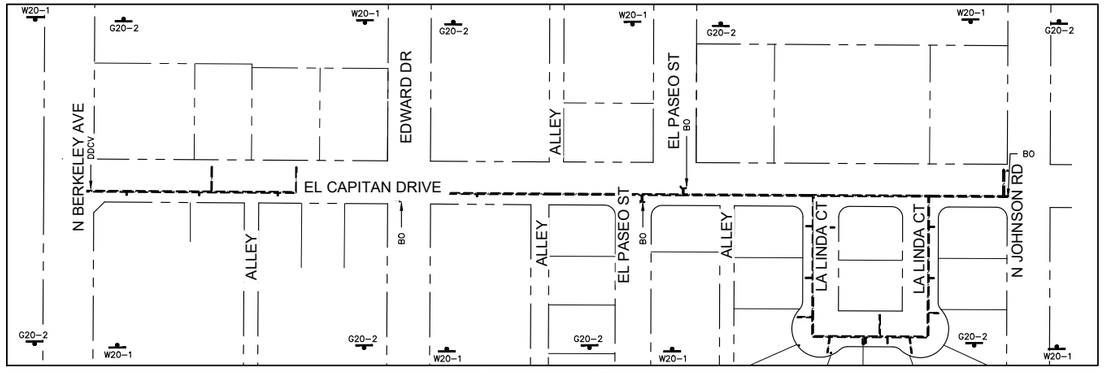
CITY OF TURLOCK, STANISLAUS COUNTY, CALIFORNIA



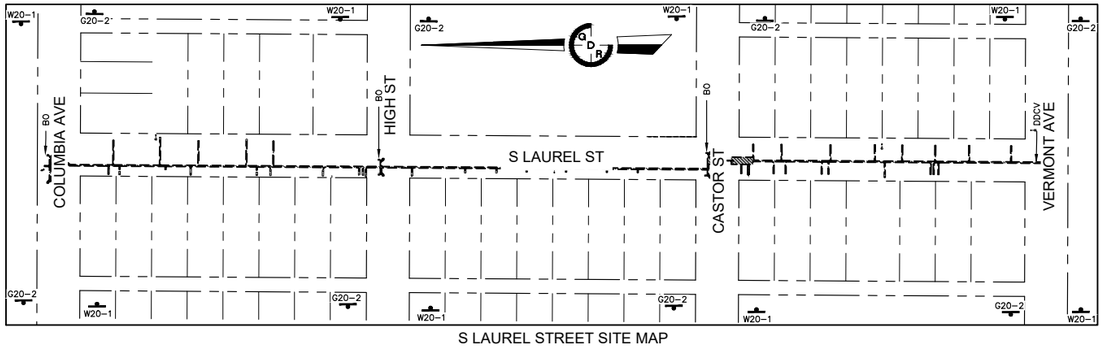
FLORENCE STREET SITE MAP



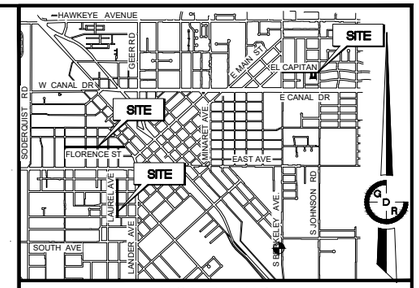




EL CAPITAN DRIVE SITE MAP

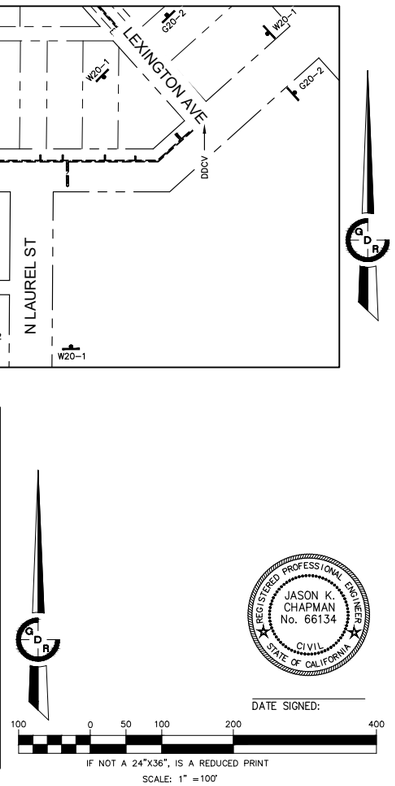


S LAUREL STREET SITE MAP



VICINITY MAP

EXISTING		PROPOSED
W	WATER LINE	W
SS	SEWER LINE	
SD	STORM DRAIN LINE	
IRR	IRRIGATION PIPE	
	WATER SERVICE	IRM
	SEWER SERVICE	
	RIGHT-OF-WAY	
	CENTER LINE	
E	ELECTRICAL	
OH	OVERHEAD	
TEL	TELEPHONE	
G	GAS LINE	
	WOOD FENCE	
	CHAIN LINK FENCE	
	CURB GUTTER & SIDEWALK	
	BLOWOFF	BO
	FIRE HYDRANT	
	VALVE	
	MANHOLE	
×98.5	ELEVATIONS	
WM	WATER METER	
	DRAIN INLET	
	CLEANOUT	
	BENCHMARK	
	SIGN	
GM	GAS METER	
	ELECTRICAL BOX	
IC	IRRIGATION CONTROLLER	
	ELECTROLIER	
PP	POWER POLE	
SP	SERVICE POLE	
	CATCH BASIN	
M	MONITORING WELL	M
MB	MAILBOX	
GV	GAS VALVE	
	GUY ANCHOR	
	MONUMENT WELL	
	TREE	
	BLUE REFLECTIVE MARKER	BB



LEGEND

AC	ASPHALTIC CONCRETE	GM	GAS METER
BB	BLUE REFLECTIVE MARKER	INV	INVERT
BM	BENCH MARK	IRR	IRRIGATION
BO	BLOWOFF	LF	LINEAR FEET
BOL	BOLLARB	MAX	MAXIMUM
BSW	BACK OF SIDEWALK	MIN	MINIMUM
C	CONCRETE	MJ	MECHANICAL JOINT
CB	CATCH BASIN	NTS	NOT TO SCALE
CL	CENTER LINE	OH	OVERHEAD
CO	CLEANOUT	PP	POWER POLE
CORP	CORPORATION	PSI	POUNDS PER SQUARE INCH
CR	CROWN	PVC	POLYVINYL CHLORIDE
CULV	CULVERT	QTY	QUANTITY
CVR	COVER	R & D	REMOVE AND DISPOSE
DDCV	DOUBLE DETECTOR CHECK VALVE	R/W	RIGHT-OF-WAY
DI	DRAIN INLET	SCH	SCHEDULE
DIA	DIAMETER	SD	STORM DRAIN
DWY	DRIVEWAY	SDMH	STORM DRAIN MANHOLE
E	ELECTRICAL	SP	SERVICE POLE
EG	EXISTING GROUND	SS	SANITARY SEWER
EP	EDGE OF PAVEMENT	SSMH	SANITARY SEWER MANHOLE
EXIST	EXISTING	SW	SIDEWALK
F & I	FURNISH AND INSTALL	TEL	TELEPHONE
FH	FIRE HYDRANT	TC	TOP OF CURB
FL	FLOW LINE	TYP	TYPICAL
G	GAS	VG	VALLEY GUTTER
GALV	GAVLANIZED	W	WATER
		WM	WATER METER

SHEET INDEX

ABBREVIATIONS

CAUTION:
UNAUTHORIZED CHANGES AND USES

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS AND THE CITY ENGINEER.

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@GDRENGR.COM

CALL BEFORE YOU DIG
USA
800-227-2600

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, GRADING, EXCAVATION, DRILLING, PIPE PUSHING, PLANTING TREES, DIGGING POST HOLES FOR FENCES, ETC.(U.S.A.) WILL SUPPLY INFORMATION OR LOCATE AND MARK ANY UNDERGROUND FACILITIES.

REVIEWED BY UTILITIES MANAGER

BY: _____ *DATE:* _____

CARLOS GUERRERO

APPROVED BY CITY OF TURLOCK

BY: _____ *DATE:* _____

WILLIAM D MORRIS, RCE 55910

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 THERE IN. 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.

DESCRIPTION	DATE	BY

CITY OF TURLOCK
WATER LINE REPLACEMENT PLANS
COVER SHEET

SCALE: AS NOTED DATE: 02/08/2024
DWG NO. 23052DSGN.dwg LAYOUT 1-CVR
DRAWN: JA
CHECKED: _____
SHEET: 1 OF 21
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APPENDIX C: QUALITY ASSURANCE PLAN 7-30-2021

QUALITY ASSURANCE PROGRAM

CITY OF TURLOCK

156 S BROADWAY ST
TURLOCK, CA 95380

Prepared By:

Stephen R. Fremming, PE
Principal Civil Engineer

LICENSED PROFESSIONAL ENGINEER
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Exp. 9/30/2022
CIVIL
STATE OF CALIFORNIA

Approved By:

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Interim Development Services Director / City Engineer

REGISTERED PROFESSIONAL ENGINEER
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Exp: 12/31/2022
CIVIL
STATE OF CALIFORNIA

Date: July 30, 2021

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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 preformed 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 testfrequencies 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 Cleanness 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 Cleanness 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 Cleanness 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 Distract 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 of 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
STRUCTURE BACKFILL (Section 19-3.02C)					
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
PERVIOUS BACKFILL MATERIAL (Section 19-3.02D)					
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
COMPACTION (Section 19-5)					
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
EMBANKMENT CONSTRUCTION (Section 19-6)					
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
GEOSYNTHETIC REINFORCED EMBANKMENT (Section 19-6.02B)					
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
BORROW MATERIAL (Section 19-7)					
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
SHOULDER BACKING (Section 19-9)					
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
LIME (Section 24-2.02)					
Various properties	See *Standard Specifications* 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
LIME TREATMENT					
DETERMINATION OF LIME APPLICATION RATE (Section 24-2.01D)					
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	
VERIFICATION OF LIME APPLICATION RATE AND STABILIZED SOIL MIXTURE (Section 24-2.01D)					
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 ± 5% of ordered application rate
Lime Application (Slurry Form)	Volumetric measurement that is then reduced to lime weight	Deter-mined over known area	Slurry holding tank	Each 40,000 sq ft, 2 per day minimum	To determine if application rate is within ± 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
VERIFICATION OF LIME APPLICATION RATE AND STABILIZED SOIL MIXTURE (Section 24-2.01D)					
Moisture Content of Mixed Stabilized Soil	California Test 226	0.25 lb each sample	Representa-tive 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	Representa-tive areas	1 every 4,000 sq yd, 1 per day minimum	Taken before compaction
MIXED STABILIZED SOIL (Sections 24-2.01 and 24-2.03)					
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
CURING SEAL-ASPHALTIC EMULSION (Section 24-1.02C)					
Various properties based on asphaltic emulsion type used	Based on asphaltic emulsion type used; see *Standard Specifications* 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
AGGREGATE SUBBASE					
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
AGGREGATE BASES					
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
CEMENT TREATED BASE Class A or Class B					
AGGREGATE					
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	
AGGREGATE Class B					
R-Value (with and without cement)	California Test 301	100 lb for aggregate qualifica-tion	Windrow or roadway	Before production	
CEMENT Type II Portland Cement					
Various properties must comply with *Standard Specifications* Section 90-1.02B(2)	See *Standard Specifications* Section 90-1.02B(2)	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
WATER					
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
WATER (Cont.)					
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
COMPLETED MIX Class A					
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
COMPLETED MIX Class 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
COMPLETED MIX Class A and Class 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
LEAN CONCRETE BASES					
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
RAPID STRENGTH CONCRETE BASE					
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	
LEAN CONCRETE BASE RAPID SETTING					
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	
CONCRETE BASE					
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
AGGREGATE					
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
AGGREGATE (Cont.)					
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
ASPHALT					
Various properties based on asphalt type used; see *Standard Specifications* Section 92	Based on asphalt type used; see *Standard Specifications* 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
COMPLETED MIX					
Asphalt Content	California Test 382	40 lb in metal containers	Plant, truck, windrow, or roadbed	1 for every 4 hours of production	
AGGREGATE					
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
AGGREGATE (Cont.)					
Cleanness Value	California Test 227				
CEMENT					
Cement, various properties; must comply with *Standard Specifications* Section 90-1.02B(2)	Must comply with *Standard Specifications* 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
WATER					
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 *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

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
WATER					
Alkalis	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

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 cleanness 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
PULVERIZED ROADBED (Section 30-2)					
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	
FULL DEPTH RECLAMATION–FOAMED ASPHALT (Section 30-3)					
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	
FULL DEPTH RECLAMATION—Cement (Section 30-4)					
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 ± 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
ASPHALTIC EMULSION AND ASPHALTIC EMULSION FOR FLUSH COAT					
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	
POLYMER MODIFIED ASPHALTIC EMULSION					
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
POLYMER MODIFIED ASPHALTIC EMULSION (Cont.)					
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
ASPHALT MODIFIER FOR ASPHALT RUBBER BINDER					
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	
CRUMB RUBBER MODIFIER FOR ASPHALT RUBBER BINDER					
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	

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Test	Test Method	Sample Size & Container Size	Sampling Location (Note 1)	Acceptance Test Frequency	Remarks
CRUMB RUBBER MODIFIER FOR ASPHALT RUBBER BINDER (Cont.)					
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				
ASPHALT RUBBER BINDER					
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
ASPHALT RUBBER BINDER (Cont.)					
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
SCREENINGS/AGGREGATE FOR CHIP SEALS					
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
SCREENINGS/AGGREGATE FOR CHIP SEALS					
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	
Cleanness Value	California Test 227	30 lb	Stockpile	Once daily	
SAND FOR FLUSH COAT					
Sieve Analysis	California Test 202	25 lb	Stockpile	Once per project	
CRACK TREATMENTS					
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
CRACK TREATMENTS (Cont.)					
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 *Standard Specifications*	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
SAND FOR CRACK TREATMENT					
Sieve Analysis	California Test 202	25 lb	Stockpile	Once per project	
SLURRY SEAL AGGREGATE					
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	
MICRO-SURFACING AGGREGATES					
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
MICRO-SURFACING AGGREGATES (Cont.)					
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
AGGREGATE: All Types of HMA						
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
AGGREGATE: All Types of HMA						
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
AGGREGATE: All Types of HMA (Cont.)						
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
ASPHALT BINDER						
Various properties based on asphalt type used (see *Standard Specifications* Section 92)	See *Standard Specifications* 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
ASPHALT RUBBER BINDER						
Asphalt Rubber Binder Properties	See *Standard Specifications* 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
ASPHALT RUBBER BINDER (Cont.)						
Base Asphalt Binder Properties	See *Standard Specifications* 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
HOT MIX ASPHALT: Type A						
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, 8½x8½x4½=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, 8½x8½x4½=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	

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Test	Test Method	Sample Size & Container Type	Sampling Location (See Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
HOT MIX ASPHALT: Type A (Cont.)						
Air Void Content	AASHTO T 269	100 lb (See Note 5) (8x8x4=10 boxes, 8½x8½x4½=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, 8½x8½x4½=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, 8½x8½x4½=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	

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Test	Test Method	Sample Size & Container Type	Sampling Location (Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
HOT MIX ASPHALT: Type A (Cont.)						
Hamburg Wheel Track	California Test 389	70 lb (See Notes 5 and 18) (8x8x4=7 boxes, 8½x8½x4½=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
Moisture Susceptibility	AASHTO T 283	140 lb (See Notes 5, 6 and 18) (8x8x4=15 boxes, 8½x8½x4½=12 boxes)	Loose mix at plant, truck, or windrow	Production start-up evaluation, 1 every 50,000 tons of paving	Production start-up evaluation, and minimum 1 random test for every 50,000 tons of paving	Test for dry strength and wet strength; not required for Minor HMA
HOT MIX ASPHALT: With RAP/RAS						
Binder Recovery	AASHTO T 164 ASTM D1856	10 lb (8x8x4=1 box, 8½x8½x4½=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	

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Test	Test Method	Sample Size & Container Type	Sampling Location (Note 1)	Sampling Frequency	Acceptance Test Frequency	Remarks
RUBBERIZED HOT MIX ASPHALT: Gap Graded						
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, 8½x8½x4½=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, 8½x8½x4½=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
RUBBERIZED HOT MIX ASPHALT: Gap Graded (Cont.)						
Air Void Content	AASHTO T 269	100 lb (See Notes 5 and 18) (8x8x4= 10 boxes, 8½x8½x4½=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, 8½x8½x4½=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, 8½x8½x4½=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
RUBBERIZED HOT MIX ASPHALT: Gap Graded (Cont.)						
Hamburg Wheel Track	California Test 389	75 lb (See Notes 5 and 18) (8x8x4=7 boxes, 8½x8½x4½=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	
Moisture Susceptibility	AASHTO T 283	75 lb (See Notes 5, 6 and 18) (8x8x4= 15 boxes, 8½x8½x4½=12 boxes)	Loose mix at plant, truck, or windrow	Production start-up evaluation, 1 every 50,000 tons of paving	Production start-up evaluation, and minimum 1 random test for every 50,000 tons of paving	Test for dry strength and wet strength
OPEN GRADED FRICTION COURSE (OGFC)						
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
OPEN GRADED FRICTION COURSE (OGFC) (Cont.)						
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
BONDED WEARING COURSE: Gap Graded (BWC-G) (See Note 7)						
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
PAVEMENT DENSITY						
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, 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
PAVEMENT SMOOTHNESS						
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
TACK COAT						
Asphalt Binder	Based on asphalt type used (see *Standard Specifi-cations* 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
TACK COAT (Cont.)						
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 *Standard Specifi-cations* 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 sublot identified in the engineer's stratified random sampling plan. Break the identified sublot 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 sublot 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 sublot. 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
CONCRETE					
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
PAVEMENT					
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
PAVEMENT (Cont.)					
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
INDIVIDUAL SLAB REPLACEMENT WITH RAPID STRENGTH CONCRETE (Section 41-9)					
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
JOINT SEALS TYPE B (Section 51-2.02C)					
Various properties; must comply with *Standard Specifications* Section 51-2.02C(2)	See *Standard Specifications* 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
JOINT SEALS Type A and Type AL (Section 51-2.02B)					
	Use Authorized Material List at: https://dot.ca.gov/programs/engineering-services/product-evaluation-program	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
AGGREGATE: Coarse Aggregate					
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%
Cleanness 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
AGGREGATE: Fine Aggregate					
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
AGGREGATE: Fine Aggregate					
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
AGGREGATE: Coarse & Fine Aggregate					
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 ≥ 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
CEMENTITIOUS MATERIALS					
Cement, various properties; must comply with *Standard Specifications* Section 90-1.02B(2)	See *Standard Specifications* Section 90-1.02B(2)	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 *Standard Specifications* Section 90-1.02B(3)	See *Standard Specifications* Section 90-1.02B(3)	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
WATER					
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
WATER (Cont.)					
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 Specifi-cations* 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
Alkalis	Must comply with *Standard Specifi-cations* 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 Specifi-cations* 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
ADMIXTURES: Air Entraining Agent					
Air entraining properties Must comply with *Standard Specifications* Section 90-1.02E	See *Standard Specifi-cations* 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
CHEMICAL ADMIXTURE: Water Reducers or Set Retarders					
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
CONCRETE for Pavement and Structures					
Shrinkage	AASHTO T 160 Modified See *Standard Specifications* Section 90-1.01D(3)	Set of three: 4x4x11¼ 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
CONCRETE Designated Compressive Strength 3600 psi or Greater					
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
CONCRETE Designated Compressive Strength 3600 psi or Greater (Cont.)					
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 *Standard Specifications* 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
CONCRETE WITH COMPRESSIVE STRENGTH LESS THAN 3,600 psi					
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
CONCRETE WITH COMPRESSIVE STRENGTH LESS THAN 3,600 psi					
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
CURING COMPOUND					
Curing Compound; must comply with *Standard Specifications* 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. Test results for tests specified in Section 90-1.01D(6) of *Standard Specifications* 2. Certification that material was tested within 12 months before use

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
CEMENTITIOUS MATERIALS					
Cement, various properties; must comply with *Standard Specifications* Section 90-1.02B(2)	See *Standard Specifications* 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 *Standard Specifications* Section 90-1.02B(3)	See *Standard Specifications* 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
ADMIXTURES: Air Entraining Agent					
Air entraining properties; must comply with *Standard Specifications* Section 90-1.02E	See *Standard Specifications* Section 90-1.02E	N/A	N/A		Must be on Authorized Materials List and certificate of compliance must accompany each shipment
CHEMICAL ADMIXTURES: Water Reducers or Set Retarders					
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
CONCRETE					
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
Com-pressive 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 *Standard Specifications* 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	
CURING COMPOUND					
Curing Compound; must comply with *Standard Specifi-cations* 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 *Standard Specifications* 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
BARBED WIRE AND WIRE MESH FENCES (Section 80-2)					
Barbed Wire, various properties; must comply with *Standard Specifications* Section 80-2.02D	ASTM A121	1 yd length	Job site	As necessary for verification if quality is questionable	
BOLTS AND HARDWARE (Section 75)					
		2 samples each diameter		Each lot	Sample and test if not previously inspected at the source
CHAIN LINK FENCES (Section 80-3)					
Wire Mesh, various properties; must comply with *Standard Specifications* 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
CONCRETE PIPE (Section 65)					
Compliance with specifications		Contact METS for instructions		Contact METS for instructions	Sample and test if not previously inspected at source
CONDUIT (Section 86-1.02B)					
Conduit, various properties; must comply with *Standard Specifications* Section 86-1.02B	See *Standard Specifications* 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
ELECTRICAL CONDUCTORS AND CABLES (Section 86-1.02F)					
Electrical conductors and cables, various properties; must comply with *Standard Specifications* Section 86-1.02F	See *Standard Specifications* Section 86	2 ft. long, include markings, 2 samples per gauge	Job site	Each lot for verification if quality is questionable	
EXPANSION JOINT FILLER					
Compliance with specifications		6 in. long, full width of sheet		Each 1,000 sq ft not less than 2 per shipment	
GEOSYNTHETICS (Section 96)					
Various properties; must comply with *Standard Specifications* Section 96	See *Standard Specifications* 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
PAINT (Section 91)					
Paint, various properties; must comply with *Standard Specifications* Section 91	See *Standard Specifications* 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
PAVEMENT MARKERS (Section 81-3)					
Pavement Markers, various properties; must comply with *Standard Specifications* Section 81-3	See *Standard Specifications* 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
PERMEABLE MATERIALS: (Section 68-2.02F)					
Durability Index	California Test 229	50 lb	Stockpile	Before use	
Sieve Analysis	California Test 202	50 lb	Stockpile	Before use,1 every day	
PERMEABLE MATERIALS: Class 3 (Section 68-2.02F)					
Crushed Faces	California Test 205	50 lb	Stockpile	Before use	
PRESTRESSED TENDON GROUT (Section 50)					
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
RAISED BARS (PRECAST)					
Compliance with specifications		1 unit or full size bar		Each lot	Sample and test if not previously inspected at the source
REINFORCING STEEL (Section 52)					
Reinforcing Steel, various properties	See *Standard Specifi-cations* 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
SLOPE PROTECTION (Section 72)					
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
SLOPE PROTECTION (Section 72) (Cont.)					
Absorption	California Test 206	75 lb	Quarry or stockpile	Before use	
Durability Index	California Test 229	75 lb	Quarry or stockpile	Before use	
STEEL PRODUCTS					
		Contact METS for instructions		Contact METS for instructions	
STRUCTURAL STEEL AND MISCELLANEOUS METAL (Sections 55 & 75)					
		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
STRUCTURAL STEEL COATINGS (Section 59)					
Paint, various properties; must comply with *Standard Specifications* Section 59	See *Standard Specifi-cations* 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
WATER-PROOFING MATERIALS (Section 54)					
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
WELDED WIRE REINFORCEMENT (Section 52-1.02C)					
Welded Wire Reinforcing Steel, must comply with *Standard Specifi-cations* 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		
Asphalt Binder Content	CT 382		Loose Mix Behind Paver Per CT 125
In-Place Density and Relative Compaction (Nuclear)	Nuclear (b)	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
	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 Neclear Density Device. Core testing required if compaction fails the neclear 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
Cleanness 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

- 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