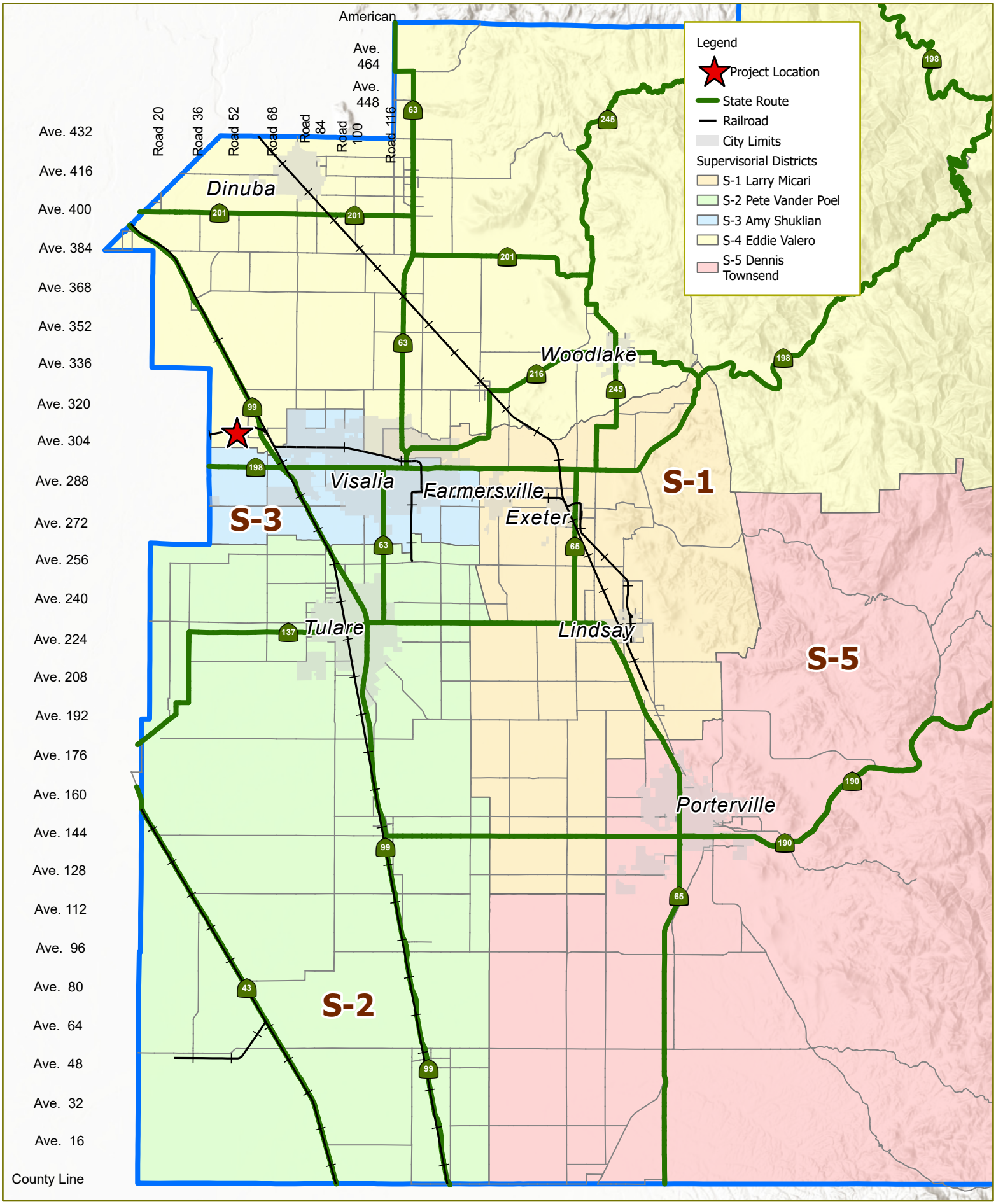
Attachment A
Vicinity Map



West Goshen Emergency Water Supply Consolidation Project
Vicinity Map

Attachment B
Notice of Exemption

NOTICE OF EXEMPTION

Fee Exempt per Government Code Section 6103

To: ☒ Governor's Office of Land Use
and Climate Innovation
1400 Tenth Street, Room 121
Sacramento, CA 95814

☒ Tulare County Clerk
Room 105, Courthouse
221 South Mooney Blvd.
Visalia, CA 93291

DATE RECEIVED FOR FILING AT TULARE COUNTY CLERK'S OFFICE

Lead Agency: County of Tulare c/o Resource Management Agency
5961 S. Mooney Blvd.
Visalia, CA 93277 (559) 624-7000
Attn: gmills@tularecounty.ca.gov *and* jwillis@tularecounty.ca.gov

Applicant(s): County of Tulare c/o Resource Management Agency
Public Works Branch
5953 South. Mooney Blvd.
Visalia, CA 93277

Project Title: West Goshen Emergency Water Supply Consolidation Project

Project Location - Specific: West Goshen, CA in Tulare County

Project Location- Section, Township, Range: Section 22 & 24, Township 18S, Range 23E

Project Location - City: NA / unincorporated community of West Goshen, CA **Project Location - County:** Tulare

Description of Nature, Purpose, and Beneficiaries of Project:
The Project consists of extending the water mains from the Cal Water Visalia Service Area into the Community of West Goshen. The Project includes installing approximately 6,500 feet of an 8-inch Polyvinyl Chloride (PVC) water main, approximately 2,200 feet of a 12-inch Ductile Iron Pipe (DIP) water main, approximately 53 metered service connections (main to meters), approximately 4,400 feet of private service lines, and approximately 20 backflow preventers and the destruction of approximately ten wells. Also, five wells that supplied seven households are currently dry. In addition, all the wells (12) that supply 27 households have exceeded the maximum contaminant level (MCL) for one or more of the following constituents: nitrate, uranium, and 1,2,3-Tricholopropane. The community is currently relying on hauled water or water from neighboring properties. The Project will provide a sustainable source of water for the Community of West Goshen during drought conditions and also provides a reliable/safe drinking source for all West Goshen residents. Further, this Project is consistent with the West Goshen Hamlet Plan 2017 (adopted via Tulare County Board of Supervisors Resolution 2017-0976, December 5, 2017) to increase water system improvement (e.g., water distribution piping, storage tank, other appurtenances) as funding becomes available. This project is supported by California Water Service Company (Cal Water); the current provider of water service following consolidation with the former West Goshen Mutual Water Company.

Exempt Status: (*check one*)

- ☐ Ministerial (Sec. 21080(b)(1); 15268);
- ☐ Declared Emergency (Sec. 21080(b)(3); 15269(a));
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- ☐ Common Sense Rule: CEQA guidelines 15061(b)(3)
- ☒ Categorical Exemption: **CEQA Guidelines Class 3 Section 15303(d) New Construction or Conversion of Small Structures**
- ☐ Statutory Exemptions: CEQA Guidelines Section 15262 Feasibility and Planning Studies

Reasons why project is exempt: The proposed project is excluded or exempt from the California Environmental Quality Act (CEQA) on the grounds that the project is consistent with Class 3 15303(d) New Construction or Conversion of Small Structures (per PRC 21080.47) as the overall intent is to provide a reliable, safe-drinking, and sustainable water supply for the community of West Goshen. In support of this determination, it is noted that the California Water Boards cites to Senate Bill 974 Public Resource Code § 21080.47 as it pertains to exemption of certain projects that consist solely of the installation, repair, or reconstruction of water infrastructure from CEQA.

Name of Public Agency Approving Project: Tulare County Resource Management Agency

Project Planner/Representative: Denise England, Grants & Resource Manager **Telephone:** (559) 624-7000

Signature: _____ Date: _____ Title: Chief Environmental Planner
Gary A. Mills

Signature: _____ Date: _____ Title: Environmental Assessment Officer
Reed Schenke, P.E. RMA Director

☒ Signed by Lead Agency Date submitted to the OPR/SCH: _____

Attachment C
Bid Documents

COUNTY OF TULARE

STATE OF CALIFORNIA

SPECIAL PROVISIONS, BID AND CONTRACT

FOR CONSTRUCTION OF

WEST GOSHEN EMERGENCY WATER SUPPLY CONSOLIDATION PROJECT

FUNDED BY:

THE BUDGET ACT OF 2021 AS AMENDED (STATS. 2022, CH. 44, § 25)

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COUNTY OF TULARE

STATE OF CALIFORNIA

SPECIAL PROVISIONS, BID AND CONTRACT

FOR CONSTRUCTION OF

WEST GOSHEN EMERGENCY WATER SUPPLY CONSOLIDATION PROJECT

FUNDED BY:

THE BUDGET ACT OF 2021 AS AMENDED (STATS. 2022, CH. 44, § 25)

APPROVED: _____ DATE: 10/22/24

Reed Schenke, P.E.
Director
Tulare County Resource Management Agency

THE SPECIAL PROVISIONS CONTAINED HEREIN HAVE BEEN PREPARED BY OR UNDER THE DIRECTION OF THE FOLLOWING REGISTERED ENGINEER:

SIGNED: _____ DATE: 10/14/2024

Claudia Sanchez, P.E.
Project Engineer
Tulare County Resource Management Agency

For use in connection with the 2024 Standard Specifications
of the Department of Transportation of the State of California

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SPECIAL NOTICES

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- See Sections 2 and 3 for Contractor's registration requirements.
- See Section 5-1.20C for CalWater approved contractor list.
- See Section 14-11.04 for Indirect Source Rule (ISR) and Dust Control Plan requirements.

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SPECIAL PROVISIONS

FOR CONSTRUCTION OF WEST GOSHEN EMERGENCY WATER SUPPLY CONSOLIDATION PROJECT

TABLE OF CONTENTS

COUNTY OF TULARE

STATE OF CALIFORNIA

NOTICE TO BIDDERS

Completed, signed, sealed Bid for the work shown on the plans entitled:

STATE OF CALIFORNIA; COUNTY OF TULARE
PROJECT PLANS FOR CONSTRUCTION OF

WEST GOSHEN EMERGENCY
WATER SUPPLY CONSOLIDATION PROJECT

will be received at the office of the Clerk of the Board of Supervisors, Administration Building, County Civic Center, 2800 West Burrel Avenue, Visalia, California, 93291, until **2:00 pm December 5, 2024**. **NOTE:** The bid opening will be opened publicly at the above listed address and will be broadcasted via Zoom video conferencing. The meeting will be accessible through the following link: https://tularecounty-ca.zoom.us/j/7497105116, the Meeting ID is **7497105116** and the passcode is **1234**. Bids may be submitted via mail, but it is the bidder's responsibility to ensure bids are received by the Clerk of the Board prior to the time listed above. Bids may also be dropped off at the above listed address.

The work to be done consists, in general, of installing water mains, metered service connections, private service lines, and backflow preventers. Other items or details not mentioned herein that are required by the plans, Standard Specifications or these Special Provisions must be performed, constructed, furnished or installed. Bidders may visit the project site.

This project is off of the Federal Highway System.

This project is a Non-Federal Aid project with an estimated project cost of approximately $2,900,000.

The contract will be awarded to the responsible bidder submitting the lowest priced responsive bid.

The Project is to be completed within thirty (30) working days from the date to be established in the NOTICE TO PROCEED. The Contract includes provisions for Liquidated Damages if the Project is not timely completed.

Prospective bid holders must be listed on the planholders list to receive electronic copies of Plans, Specifications, and Bid forms (official bid documents). To be added to the planholders list, contact the Resource Management Agency at (559) 624-7000 or through email at RMABids@tularecounty.ca.gov; Office Hours 9:00 AM – 4:30 PM Mon.-Fri. Once prospective bidders have been added to the planholders list, the official bid documents will be provided via email. There is no fee for the official bid documents. An unofficial set of Plans, Specifications, and other project information is available for download at the County's website at the following address:

https://tcgov.link/bids

FOLLOW THESE INSTRUCTIONS: Print the "Bid" Section from this Special Provisions package, from the official electronic copy obtained through the County, upon being listed on the official Plan Holder List. Complete all required forms and provide all necessary supplemental documentation. Please submit unbound/unstapled originals at the location described above.

To be considered a plan holder and to receive any addendum, bidders must obtain a set of electronic plans, specifications and Bid forms from the Resource Management Agency, and be listed on the planholders list.

Bidders must be on the planholders list for their bid to be considered responsive. All addendums, prebid meeting minutes, bid clarifications, planholders list, and relevant information will be available at the County's website as mentioned above. Addendums will also be provided to contractors on the planholders list via the information provided by the contractor on the planholders list. Bid results will be posted on the County website within two working days of the bid opening.

Technical questions should be directed in writing to the Resource Management Agency, 5961 S. Mooney Blvd, Visalia CA 93277 or at RMABids@tularecounty.ca.gov . **No questions will be accepted within five (5) working days of the bid opening (Questions must be received by 5:00 pm on Tuesday, November 26, 2024).** All questions and responses will be continuously posted on the County website.

Before submitting a bid, bidders are encouraged to carefully examine the Plans and Specifications, and related documents, visit the site of the work and fully inform themselves as to all existing conditions and limitations, and include in the bid a sum to cover the cost of all items included in the work.

A prebid meeting is scheduled for 2:00 pm on Tuesday, November 26, 2024. This meeting will be held via Zoom video conferencing. The meeting can be accessed at https://tularecounty-ca.zoom.us/j/7497105116 **, the Meeting ID is** 7497105116 **and the passcode is** 1234**. The meeting is not mandatory, but bidders are encouraged to attend. The bidder awarded the contract may need to obtain permits, licenses, or enter into other agreements to prosecute the work. Bidders are advised that, unless otherwise stated, the contract price will be full compensation for all required work and no additional compensation will be allowed. If the bidder must obtain permits, licenses, contracts or other services to prosecute the work, the bidder will pay the cost of those items and no other compensation will be paid by the County.**

Bids are required for the entire work described herein. Submit the bidder's security in the form of cash, a bidder's bond, or a certified check or cashier's check, in the amount of ten percent (10%) of the amount bid or the bid will be considered nonresponsive.

Comply with Title VI of the Civil Rights Act of 1964, and in accordance with said Act, no person on the grounds of race, color, sex or national origin, will be excluded from participation in, be denied benefits of, or be otherwise subject to discrimination under any service or activity in connection with the project.

Comply with Title VII of the Civil Rights Act of 1964, which prohibits discrimination against any employee or applicant for employment because of race, color, religion, sex or national origin.

At the time the bid is submitted, you must possess a current valid California Class (A) Contractor's license.

A contractor or subcontractor is not qualified to bid on, be listed in a Bid (subject to the requirements of Section 4104 of the Public Contract Code) or engage in the performance of any contract for this project, unless currently registered and qualified to perform public work pursuant to California Labor Code section 1725.5. 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 Sections 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Labor Code section 1725.5 at the time the contract is awarded.

This project is subject to compliance monitoring and enforcement by the California Department of Industrial Relations.

The successful bidder must provide the performance bond, payment bond, workers compensation certificate, and liability insurance policy required by the Special Provisions and contract. two million dollars ($2,000,000) liability coverage is required for this project.

Substitution of securities for any moneys withheld will be permitted pursuant to Public Contract Code section 10263. This project is subject to State contract nondiscrimination and compliance requirements pursuant to Government Code, section 12990.

Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates in the county, or counties, 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, are

on file at Resource Management Agency-Permit Center, 5961 South Mooney Boulevard, Visalia, CA 93277 and will be made available to any interested person on request. Also, the General Prevailing Wage Rates for this project, are made available on the California Department of Industrial Relations' Internet website at http://www.dir.ca.gov/DLSR/PWD. Contractor shall be responsible to post the general prevailing wage rates at a prominent place at the job site in accordance with section 7-1.02K(2) of the Caltrans Standard Specifications. Future effective general prevailing wage rates, which have been predetermined and are on file with the California Department of Industrial Relations, are referenced, but not printed in the Special Provisions.

AB 626, approved by the Governor of the State of California on September 29, 2016, created a new Public Contract Code section 9204, which specifies new procedural requirements for claims submitted by a contractor on any public works project. Please review the language of the "Public Contract Code Section 9204 Statement" in the Proposal.

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 abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially, and caller anonymity will be respected.

You are responsible for compliance by all subcontractors with Labor Code section 1776.

All bidders are invited to attend the bid opening per the link provided. The results of the bid opening will be reported to the Board of Supervisors at a scheduled meeting. The contract will be awarded in the manner and within the time periods provided in Section 3 of the Standard Specifications, Department of Transportation of the State of California, 2024 Edition, as amended by the project Special Provisions, unless the Board of Supervisors exercises its right to reject any or all bids. The Board of Supervisors reserves the right to deem any bid as non-responsive for any information crossed out from the bid packet including information completed by the manufacturer.

The Board of Supervisors reserves the right to reject any or all bids, and/or waive any informality in any bid, and/or determine in its discretion the responsibility of any bidder.

The Board of Supervisors further reserves the right to use County Forces, or to negotiate contracts, or both, to the extent authorized by the Public Contract Code.

By order of the Board of Supervisors.

JASON T. BRITT
County Administrative Officer/
Clerk, Board of Supervisors.

By Original Signed
Deputy

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SPECIAL PROVISIONS

ORGANIZATION

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

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

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

^^

DIVISION I GENERAL PROVISIONS

^^

1 GENERAL

Add to Section 1-1.01:

The work embraced herein must be done under the 2024 Standard Specifications (hereinafter referred to as the "Standard Specifications"), as amended by these Special Provisions, the 2024 Standard Plans (hereinafter referred to as the "Standard Plans"), of the Department of Transportation of the State of California, the project plans described below, and under the following Special Provisions.

For the purpose of this contract, the following terms or pronouns in place of them, used throughout the Standard Specifications and these Special Provisions and defined in Section 1, Definitions, of the Standard Specifications, are interpreted as follows:

TERM	INTERPRETATION
State	County of Tulare, when referring to the State of California, including its agencies, departments or divisions whose conduct or action is related to the work, except when used only to identify a State Form or Document.
Department or Department of Transportation, or Director	The Tulare County Board of Supervisors, except when used only to identify a State Form or, Document or when in reference to a specific Federal or State department.
Engineer	Tulare County Director of the Resource Management Agency/Director of Transportation, or designee and authorized agents acting within the scope of their authority.
County	The County of Tulare, including its agencies, departments or divisions whose conduct or action is related to the work.

TERM	INTERPRETATION
Transportation Laboratory or METS	Tulare County Resource Management Agency, except when used to identify a State form, document, or testing procedure.

The project plans for this project were approved November 5, 2024, and are entitled:

STATE OF CALIFORNIA; COUNTY OF TULARE
PROJECT PLANS FOR CONSTRUCTION OF

WEST GOSHEN EMERGENCY
WATER SUPPLY CONSOLIDATION PROJECT

The following documents will be supplied to you with the Notice to Proceed:

1. One complete set of full size (24”x36”) Project Plans
2. One complete set of half size (11”x17”) Project Plans
3. Two complete bid books including:
   3.1. Notice to Contractors
   3.2. Special Provisions
   3.3. Technical Specifications
   3.4. Bid
   3.5. Contract
4. Electronic versions of full size and half size plans and Special Provisions, Bid and Contract.

Replace "holiday" and its definition in Section 1-1.07B with:

holiday: County legal holidays and every Sunday. When a holiday falls on a Sunday, it is observed on the following Monday.

Replace “South Coast Air Quality Management District” and attributes in Section 1-1.11 with:

Reference or agency or department unit	Website	Address	Telephone no.
San Joaquin Valley Air Pollution Control District (Central)	www.valleyair.org	1990 E. Gettysburg Avenue Fresno, CA 93726-0244	(559) 230-6000

^^

2 BIDDING

Replace Section 2-1.06 with the following:

2-1.06 BID DOCUMENTS

2-1.06A General

The *Special Provisions, Bid and Contract (Bid book*) includes bid forms and certifications.

The *Bid book* and project plans may be received electronically by requesting to be added to the planholders list by contacting the Resource Management Agency at (559) 624-7000 or through email at RMABids@tularecounty.ca.gov. The unofficial Bid book and project plans can be viewed at the County's Website:

https://tcgov.link/bids

The *Bid book* includes the *Notice to Bidders*, and Special Provisions.

The unofficial *Bid book*, project plans, and any addenda to these documents may be accessed at the County Website.

2-1.06B Supplemental Project Information

The County makes supplemental information available as specified in the Special Provisions.

If an *Information Handout* or cross sections are available, you may view it at the County Website.

If other supplemental project information is available for inspection, you may view it by phoning in a request. Make your request at least 7 days before viewing. Include in your request:

1. Contract number
2. Viewing date
3. Contact information, including telephone number

As-built drawings may not show existing dimensions and conditions. Where new construction dimensions are dependent on existing dimensions, verify the field dimensions and adjust the dimensions of the work to fit the existing conditions, as approved by the Engineer.

Replace Section 2-1.10 with the following:

2-1.10 SUBCONTRACTOR LIST

On the Subcontractor List form, list each subcontractor to perform work in an amount in excess of 1/2 of 1 percent of the total bid or $10,000, whichever is greater (Pub Contract Code § 4100 et seq.).

For each subcontractor listed, the Subcontractor List form must show:

1. Business name and the location of its place of business
2. State contractor's license number
3. Department of Industrial Relations("DIR") registration number
4. Portion of work it will perform, demonstrated by:
   - 4.1. Bid item numbers for the subcontracted work
   - 4.2. Percentage of the subcontracted work for each bid item listed
   - 4.3. Description of the subcontracted work if the percentage of the bid item listed is less than 100 percent

5. One Subcontractor must be a California Water Services (Cal Water) Approved Contractor, see Section 5-1.20C.

Replace Section 2-1.33A with the following:

2-1.33A General

Print the *Bid Proposal (Bid) to the Board of Supervisors* section from this Special Provisions package and complete the forms.

Submit your forms to the Clerk of the Board of Supervisors by mail or by delivery before the bid opening time and date. The address of the Clerk of the Board of Supervisors is provided below:

2800 W Burrel Avenue, Visalia, CA 93291.

Failure to submit the forms and information as specified may result in a nonresponsive bid.

If an agent other than the authorized corporate officer or a partnership member signs the bid, file a Power of Attorney with the County either before opening bids or with the bid. Otherwise, the bid may be nonresponsive.

The County only accepts paper bid submittals in person or through mail as described in the Notice to Bidders. Place your completed forms inside a sealed paper envelope, and on the cover of the envelope, include:

1. Name of the contractor
2. Project title
3. Marked as a Bid
4. Bid opening date

Submit the enclosed Bid to the Clerk of the Board of Supervisors prior to bid opening.

Delete Section 2-1.33B Bid Form Submittal Schedules

Replace Section 2-1.34 with the following:

2-1.34 BIDDER'S SECURITY

Submit one of the following forms of bidder's security equal to at least 10 percent (10%) of the bid:

1. Cash
2. Cashier’s check
3. Certified check
4. Signed bidder's bond by an admitted surety insurer who is licensed in California

If using a bidder's bond, you must use the form in the *Bid*. Failure to do so will render your bid non-responsive.

Submit cash, cashier’s check, certified check, or bidder's bond, to the Clerk of the Board of Supervisors before the bid opening time.

Replace Section 2-1.40 with the following:

2-1.40 BID WITHDRAWAL

An authorized agent may withdraw a bid before the bid opening date and time by submitting a written bid withdrawal request at the location where the bid was submitted. Withdrawing a bid does not prevent you from submitting a new bid. After the bid opening, you cannot withdraw a bid.

^^

3 CONTRACT AWARD AND EXECUTION

Replace all of Section 3 with:

3-1.01 AWARD OF CONTRACT

The Tulare County Board of Supervisors reserves the right to reject any or all Bids, or waive any or all discrepancies or failures in a Bid. The County of Tulare also maintains Part V, Chapter 15 of its ordinance Code, "Public Works Contractor Debarment" and any entity bidding on this project who is included in the list of debarred and suspended persons pursuant to 5-15-5000 of the Tulare County Ordinance Code shall be disqualified from bidding or being awarded a contact with Tulare County pursuant to Tulare County Ordinance 5-15-4000. The decision of the Tulare County Board of Supervisors regarding the amount of a bid, or existence or treatment of a discrepancy or failure in a bid will be final. The award of the contract, if it is awarded, will be to the lowest responsive and responsible bidder whose Bid complies with all the requirements prescribed. Such award, if made, will be made within sixty (60) days after the opening of the Bid. This period may be subject to an extension for such further period as may be agreed upon in writing between the Tulare County Board of Supervisors and the bidder concerned.

All bids will be compared on the basis of the Engineer's Estimate of the quantities of work to be done.

The lowest bid shall be the lowest bid price on the base contract without consideration of the prices on the additive or deductive items.

This section does not preclude the County from adding to or deducting from the contract any of the additive or deductive items after the lowest responsible bidder has been determined.

A responsible bidder who submitted the lowest bid as determined by this section will be awarded the contract, if it is awarded.

The following failures are not waivable and will cause a bid to be considered non-responsive:

1. **Failure to sign the bid**
2. **Failure to furnish the required bid bond or equivalent as specified in 2-1.34 of the Special Provisions**
3. **Failure to include a total amount of the bid**
4. **Failure to submit a completed addenda certification statement**
5. **Failure to be listed on the planholders list**

The above list is not inclusive of all failures that the Tulare County Board of Supervisors will consider non-responsive. However, the Tulare County Board of Supervisors reserves the right to waive other types of discrepancies or failures. The Tulare County Board of Supervisors' decision or treatment regarding a bid will be final.

The contract must be signed by the successful bidder and returned together with the contract bonds and insurance certificates within **ten (10) days**, not including Saturday, Sunday or Tulare County legal holidays, after the bidder has received notice from the County that the contract is scheduled for award by the Board of Supervisors.

3-1.02 BID PROTEST PROCEDURES

Any bid protests must be in writing and received by County's Director – Public Works, Tulare County Resource Management Agency, 5961 S. Mooney Boulevard, Visalia, CA 93277, before 4:30 p.m. no later than two working days following the posting of the bid summary (the "Bid Protest Deadline") and must comply with the following requirements:

A. General. Only a bidder who has actually submitted a Bid is eligible to submit a bid protest against another bidder. Subcontractors and material suppliers are not eligible to submit bid protests. A bidder may not rely on the bid protest submitted by another bidder, but must timely pursue its own protest. A bid protest against the bids of more than one bidder will be considered as separate protests against each such bidder and will be separately considered. The protesting bidder must submit a non-refundable fee in the amount of $750.00 per protest, based upon County's reasonable costs to administer the bid protest(s). Any such fees must be submitted to County no later than the Bid Protest Deadline, unless otherwise specified. For purposes of this Bid Protest Procedure, a "working day" means a day that County is open for normal business, and excludes weekends and holidays observed by County.

B. Protest Contents. Each bid protest must contain a complete statement of the basis for the protest and all supporting documentation. Material submitted after the Bid Protest Deadline will not be considered. The protest must refer to the specific portion or portions of the Contract Documents upon which the protest is based. The protest must include the name, address, email address, and telephone number of the person representing the protesting bidder if different from the protesting bidder's.

C. Copies to Protested Bidders. A copy of the protest and all supporting documents must be concurrently transmitted by email, by or before the Bid Protest Deadline, by the protesting bidder to the protested bidder and any other bidder who has a reasonable prospect of receiving an award depending upon the outcome of the protest(s).

D. Response to Protest. The protested bidder may submit a written response to the protest, provided the response is received by County's Director – Public Works, before 4:30 p.m., within two working days after the Bid Protest Deadline or after actual receipt of the bid protest, whichever is sooner (the "Response Deadline"). The response must include all supporting documentation. Material submitted after the Response Deadline will not be considered. The response must include the name, address, email address, and telephone number of the person representing the protested bidder if different from the protested bidder's.

E. Copies to Protesting Bidder. A copy of the response and all supporting documents must be concurrently transmitted by email, by or before the Response Deadline, by the protested bidder to the protesting bidder and any other bidder who has a reasonable prospect of receiving an award depending upon the outcome of the protest.

F. Consideration of Protests. The Director – Public Works or his or her designee will inform the protesting and protested bidders in writing of the time and place that the Board of Supervisors will consider the protest(s).

G. Exclusive Remedy. The procedure and time limits set forth in this section are mandatory and are the bidder's sole and exclusive remedy in the event of a bid protest. A bidder's failure to comply with these procedures will constitute a waiver of any right to further pursue a bid protest, including filing a Government Code Claim or initiation of legal proceedings.

H. Right to Award. The County Board of Supervisors reserves the right to award the Contract to the bidder it has determined to be the responsible bidder submitting the lowest responsive bid, and to issue a notice to proceed with the Work notwithstanding any pending or continuing challenge to its determination.

3-1.03 TIED BIDS

The County breaks a tied bid with a coin toss except:

1. If a small business bidder and a non–small business bidder request preferences and the reductions result in a tied bid, the County awards the contract to the small business bidder.

3-1.04 CONTRACTOR REGISTRATION

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

3-1.05 BONDS

The awarded bidder must file with the signed contract, two bonds in the amount and for the purposes specified below. They must be surety bonds and must be issued by corporations duly and legally licensed to transact business in the State of California.

A Performance Bond must be furnished by the awarded bidder in the amount of one hundred percent (100%) of the contract price and must guarantee faithful performance of the contract and must insure the County during the life of the contract and for the term of one (1) year from the date of acceptance of the work against faulty or improper materials or workmanship that may be discovered during that time. The awarded bidder must maintain the Performance Bond at its own expense.

A Payment Bond must be furnished by the awarded bidder in the amount of one hundred percent (100%) of the contract price and must guarantee the payment in full of all claims for labor and material in accordance with the provisions of Sections 9550-9566 of the Civil Code of the State of California. The life of the Payment Bond must extend to thirty (30) days after the notice of completion is recorded. The awarded bidder must maintain the Payment Bond at its own expense.

All bonds required, whether Bid Bonds, Performance, Payment, or other Bonds, must be issued by an admitted surety insurer. All bonds must be issued by the same admitted surety insurer. **All bonds required by these specifications will neither be accepted nor approved by the County unless the bonds are in the form shown in these Special Provisions, and are underwritten by an admitted surety.**

An original or certified copy of the unrevoked appointment of an individual duly and currently designated as an attorney-in-fact for the surety must accompany the bid certifying an agent to issue the Performance Bond and the Payment Bond.

The County further reserves the right to satisfy itself as to the acceptability of the surety and the form of bonds. The bidder may be required to submit the following documents:

1. The original, or a certified copy, of the unrevoked appointment, power of attorney, bylaws, or other instrument authorizing the person who executed the bond to do so.
2. A certified copy of the certificate of authority of the insurer issued by the California Insurance Commissioner.
3. A certificate from the County Clerk that the certificate of authority has not been surrendered, revoked, canceled, annulled, or suspended, or in the event that it has, that renewed authority has been granted.
4. A financial statement of the assets and liabilities of the insurer to the end of the quarter calendar year prior to thirty (30) days next preceding the date of the execution of the bond, in the form of an officers' certificate as defined in Corporations Code section 173.

3-1.06 CONTRACTOR LICENSE

For a federal-aid contract, the Contractor must be properly licensed as a contractor from contract award through Contract acceptance (Pub Contract Code § 20103.5).

For a non-federal-aid contract:

1. The Contractor must be properly licensed as a contractor from bid opening through Contract acceptance (Bus & Prof Code § 7028.15).
2. Joint venture bidders must obtain a joint venture license before contract award (Bus & Prof Code § 7029.1).

The Contractor will have the required license until the project is completed.

3-1.08 CONTRACT EXECUTION

The successful bidder must sign the *Contract* form.

Deliver to the Engineer:

1. The signed *Contract* (digital copy acceptable). The Contract must be signed by both the company president or vice president **and** the company secretary or treasurer (the two officers of the company cannot be the same person) with the Contractors State License Board number and Federal Employer Identification Number.

2. The statutory Performance Bond pursuant to Public Contract Code section 20129 and the statutory Payment Bond pursuant to Civil Code sections 9550 through 9566, with either County Clerks certificates or copies of power of attorney.

3. Certification concerning Workers' Compensation Insurance.

4. Certificate(s) of Insurance in compliance with the requirements of these Special Provisions including general liability, automobile and workers' compensation.

5. Evidence that you possess a current, valid Contractors State License required to perform the work under this Contract. A copy of your license is sufficient.

The Engineer must receive these documents within **ten (10) days**, not including Saturday, Sunday or Tulare County legal holidays, after the bidder has received notice from the County that the contract is scheduled for award by the Board of Supervisors.

The awarded bidder's bond may be forfeited for failure to execute the contract within the time specified (Pub Contract Code 20172).

A copy of the Contract is included in the *Special Provisions, Bid Proposal, and Contract*.

^^

4 SCOPE OF WORK

Replace all references to "Department" in Section 4 Scope of Work with:

Engineer

Add following the last paragraph of Section 4-1.06B:

Except as provided for in Public Contract Code section 7102, you have no claim for damages or compensation for any delay or hindrance.

^^

5 CONTROL OF WORK

Delete the 9th Paragraph of Section 5-1.01

Delete Section 5-1.09 PARTNERING

Replace "Department" in Section 5-1.12 with:

Engineer

Replace Section 5-1.20C with:

5-1.20C CALIFORNIA WATER SERVICE RELATIONS

Contractor will conform to requirements set forth by California Water Service Visalia area as part of the project. Bid quantities for private service lines includes locations confirmed by property owners as well as property owners interested but not confirmed. Households in the project area will be able to provide confirmation during the construction phase.

Contractor must conform to the list of approved active installing contractors as provided by California Water Service. The contractor may subcontract the work to an approved subcontractor. The installation work must be performed by an approved contractor. The approved contractors list includes American Inc., Browning Contractors Inc., DCW Contractors Inc., 99 Pipeline Inc., Todd Companies, West Valley Construction, RT Nelson, ConCast Co., Rubens Pipeline, and Nelson Underground (updated 9/24/2024).

The provisions of this section shall be made a part of every subcontract executed pursuant to this contract.

Full compensation for conforming to the provisions in this section "California Water Service Relations," shall be considered as included in the contract prices paid for the various items of work involved and no additional compensation will be allowed therefor.

Replace Section 5-1.20D with:

5-1.20D KINGS COUNTY RELATIONS

Contractor must obtain an encroachment permit for work within the Kings County limits. The encroachment permit will be issued by the Kings County, after submittal and approval of the Traffic Control Plan. You shall be fully informed of the permit requirements and shall conduct work accordingly. Subcontractors will not be required to obtain an encroachment permit.

The provisions of this section shall be made a part of every subcontract executed pursuant to this contract.

Full compensation for conforming to the provisions in this section "Kings County Relations," shall be considered as included in the contract prices paid for the various items of work involved and no additional compensation will be allowed therefor.

Replace Section 5-1.24 with:

5-1.24 CONSTRUCTION SURVEYS

You must set construction stakes and markers to establish the lines and grades required for the completion of the work on the plans and as specified in the Standard Specifications and these Special Provisions and as necessary for the Engineer to check lines, grades, alignment and elevations.

All procedures, methods, and typical stake markings must be in accordance with Chapter 12, Construction Surveys, of the Caltrans "Survey Manual." Copies of the "Survey Manual" may be purchased from Caltrans Publications Unit, 1900 Royal Oaks Drive, Sacramento, California 95815, (916) 445-3520.

Staking must be performed under the direction of a licensed surveyor or registered civil engineer with the authority to perform land surveying.

Preserve stakes and marks placed. If the stakes or marks are destroyed, replace them at your own cost.

Electronic drawing files in AutoCAD format, containing 2-dimensional linework of horizontal alignments, centerlines and layout lines will be furnished to you for your use in performing construction staking. A Digital Terrain Model (DTM) will not be provided.

In using, modifying, or accessing information from the electronic files, you are responsible for confirmation, accuracy, and checking of the data from the electronic files against the data contained on the contract documents. The County and the Design Engineer hereby disclaim all responsibility from any results obtained in use of electronic files and does not guarantee any accuracy of the information. You assume full responsibility for comparing the electronic file information to the contract documents and immediately notifying the Engineer in writing of any observed discrepancies.

You understand and agree that the electronic files provided pursuant to this Contract are instruments of professional services and will remain the property of the County and will not be disseminated to others for purposes other than this project.

Because of the possibility that information and data delivered in AutoCAD format may be altered, whether inadvertently or otherwise, the County reserves the right to retain hard copy originals of all electronic files delivered to you, which originals will be referred to and will govern in the event of any inconsistency between the two.

In using the electronic information, you understand that the automated conversion of information and data from the system and format used by the Design Engineer to an alternate system or format cannot be accomplished without the possibility of introduction of inexactitudes, anomalies, and errors. In the event the electronic files provided to you in AutoCAD format is so converted, you agree to assume all risks associated therewith, and to the fullest extent permitted by law, to hold harmless and indemnify the County from and against all claims, liabilities, losses, damages, and costs, including but not limited to attorney's fees, arising there from or in connection therewith.

In using the electronic information, you recognize that changes or modifications to electronic media introduced by anyone other than the Design Engineer may result in adverse consequences, which the Design Engineer can neither predict nor control. Therefore, and in consideration of the Design Engineer's agreement to deliver its instruments of professional service in AutoCAD format, Contractor agrees, to fullest extent permitted by law, to hold harmless and indemnify the County from and against all claims, liabilities, losses, damages, and costs, including but not limited to attorney's fees, arising out of or in any way connected with the modification, misrepresentation, misuse, or reuse by others of the electronic information provided by the Design Engineer. The foregoing indemnification applies, without limitation, to any use of the electronic files on other projects.

Make all computations necessary to establish the exact position of the work from control points. All computations, survey notes, cut sheets, and other records necessary to accomplish the work must be neat, legible, and accurate. Furnish copies of such computation, notes, cut sheets, and other records to the Engineer on the same day construction stakes are set.

Upon completion of construction staking and prior to acceptance of the contract, furnish all computations, survey notes, cut sheets, and other data used to accomplish the work, to the Engineer. This information will become the property of the County.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work required for construction staking, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, is included in the contract lump sum price paid for Construction Staking.

Replace Section 5-1.27E with:

5-1.27E Change Order Bills

Maintain separate records for change order work costs.

Submit change order bills to the Engineer.

Replace Section 5-1.32 with:

5-1.32 AREAS FOR CONTRACTOR'S USE

No area is available within the contract limits for your exclusive use. However, temporary storage of equipment and materials on County property may be arranged with the Engineer. Use of work areas and other County-owned property is at your own risk. The County is not liable for damage to or loss of materials or equipment located within these areas.

Remove all equipment, materials, and rubbish from the work areas and other County-owned property you occupy and leave the areas in a presentable condition. Comply with Section 4-1.13.

You must secure, at your own expense, areas required for storage of materials and equipment or for other purposes if sufficient area is not available within the contract limits.

The County does not allow temporary residences within the County right-of-way.

Replace "Reserved" in Section 5-1.34 with:

5-1.34 UTILITIES FOR CONTRACTOR'S USE

You must make arrangements to obtain electrical power, water or compressed air or other utilities required for your operations and you must make and maintain the necessary service connections at your own expense.

Add to the last sentence of the last paragraph in Section 5-1.38:

or defects in workmanship and materials.

Replace "Contract acceptance" in the first paragraph of Section 5-1.47 with:

the date that the Tulare County Board of Supervisors approves the notice of completion.

^^

6 CONTROL OF MATERIALS

Add to the 3rd paragraph of Section 6-1.01:

Materials produced by convict labor may not be used on this project.

^^

7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

Add following the last paragraph of Section 7-1.02K(1):

Post job site notices in compliance with Title 8 California Code of Regulations section 16451

Replace 2nd paragraph in Section 7-1.02K(2) with:

The general prevailing wage rates and any applicable changes to these wage rates are available:

1. From the Department of Industrial Relations' website
2. On file at the Resource Management Agency Permit Center, 5961 South Mooney Boulevard Visalia, CA 93277, and will be made available to any interested person on request.
3. From the County Public Works website (see link in the Notice to Bidder section).

Replace Section 7-1.02K(3) with:

7-1.02K(3) Certified Payroll Records (Labor Code § 1776)

Keep accurate payroll records.

Submit a copy of your certified payroll records, weekly, including those of subcontractors. Include:

1. Each employee's:
    - 1.1. Full name
    - 1.2. Address
    - 1.3. Social security number
    - 1.4. Work classification
    - 1.5. Straight time and overtime hours worked each day and week
    - 1.6. Actual wages paid for each day to each:
        1. Journeyman
        2. Apprentice
        3. Worker
        4. Other employee you employ for the work
    - 1.7. Pay rate
    - 1.8. Itemized deductions made
    - 1.9. Check number issued
2. Apprentices and the apprentice-to-journeyman ratio

Each certified payroll record must include a Statement of Compliance form signed under penalty of perjury that declares:

1. Information contained in the payroll record is true, correct, and complete
2. Employer has complied with the requirements of Labor Code sections 1771, 1811, and 1815 for any work performed by his or her employees on the public works project
3. Wage rates paid are at least those required by the Contract

The Department allows the use of a form with identical wording as the Statement of Compliance form provided by the Department. Submit all certified payroll directly to the Department of Industrial Relations (DIR) in electronic format and to the Engineer on a weekly basis.

Submitted certified payrolls for hauling and delivering ready-mixed concrete must be accompanied by a written time record. The time record must include:

1. Truck driver's full name and address

2. Name and address of the factory or batching plant
3. Time the concrete was loaded at the factory or batching plant
4. Time the truck returned to the factory or batching plant
5. Truck driver's signature certifying under penalty of perjury that the information contained in this written time record is true and correct

Make certified payroll records available for inspection at all reasonable hours at your main office on the following basis:

1. Upon the employee's request or upon request of the employee's authorized representative, make available for inspection a certified copy of the employee's payroll record.
2. Refer the public's requests for certified payroll records to the Department. Upon the public's request, the Department makes available for inspection or furnishes copies of your certified payroll records. Do not give the public access to the records at your main office.

Make all payroll records available for inspection and copying or furnish a copy upon request of a representative of the:

1. Department
2. Division of Labor Standards Enforcement of the Department of Industrial Relations
3. Division of Apprenticeship Standards of the Department of Industrial Relations

Furnish the Department the location of the records. Include the street address, city, and county. Furnish the Department a notification of a location and address change within five (5) business days of the change.

Comply with a request for the records within ten (10) days after you receive a written request. If you do not comply within this period, the Department withholds from progress payments a one hundred dollar ($100) penalty for each day or part of a day for each worker until you comply. You are not assessed this penalty for a subcontractor's failure to comply with Labor Code section 1776.

The Department withholds from progress payments for delinquent or inadequate records (Labor Code section1771.5). If you have not submitted an adequate record by the month's 15th day for the period ending on or before the 1st of that month, the Department withholds up to 10 percent (10%) of the monthly progress estimate, exclusive of mobilization. The Department does not withhold more than ten thousand dollars $10,000 or less than one thousand dollars ($1,000).

Replace "Reserved" in section 7-1.02L(1) with:

According to Public Contract Code section 6109, with respect to subcontractors which are ineligible to perform work on public works projects according to Labor Code sections 1777.1 or 1777.7:

1. The Contractor must not allow any such subcontractor to work on this project.
2. The Contractor must repay to the County any money paid to any such subcontractor allowed to work on this project.
3. The Contractor will pay the wages of the workers of any such subcontractor allowed to work on this project.

Replace Section 7-1.05 with:

7-1.05 INDEMNIFICATION AND DEFENSE

(a) To the fullest extent permitted by law, CONTRACTOR must indemnify, defend (at CONTRACTOR'S sole cost and expense and with legal counsel approved by COUNTY, which approval may not be unreasonably withheld), protect and hold harmless COUNTY, all subsidiaries, divisions and affiliated agencies of COUNTY, and all of their representatives, partners, designees, officers, directors, employees, consultants, agents, successors and assigns, (each, an “Indemnified Party” and collectively, the "Indemnified Parties"), from and against all claims (including, without limitation, claims for bodily injury, death or damage to property), demands, obligations, damages, actions, causes of action, suits, losses, judgments, fines, penalties, liabilities, costs and expenses

(including, without limitation, attorneys' fees, disbursements and court costs, and all other professional expert or consultants' fees and costs and COUNTY general and administrative expenses) of every kind and nature whatsoever (individually, a "Claim"; collectively, "Claims") which may arise out of, pertain to, or relate (directly or indirectly) to the negligence, recklessness, or misconduct of CONTRACTOR with respect to any work performed or services provided under this Contract (including, without limitation, the acts, errors and/or omissions of CONTRACTOR, its principals, officers, agents, employees, vendors, suppliers, consultants, sub-consultants, contractors, anyone employed directly or indirectly by any of them or for whose acts they may be liable or any or all of them). CONTRACTOR'S obligation to indemnify applies unless it is finally adjudicated that the liability was caused by the sole active negligence or sole willful misconduct of an Indemnified Party. If it is finally adjudicated that liability is caused by the comparative active negligence or willful misconduct of an Indemnified Party, then CONTRACTOR'S indemnification obligation shall be reduced in proportion to the established comparative liability.

(b) The duty to defend is a separate and distinct obligation from CONTRACTOR'S duty to indemnify. CONTRACTOR shall be obligated to defend, in all legal, equitable, administrative, or special proceedings, the Indemnified Parties immediately upon tender to CONTRACTOR of the Claim in any form or at any stage of an action or proceeding, whether or not liability is established. Payment to CONTRACTOR by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party cannot be a condition precedent to enforcing the Indemnified Party's rights to indemnification under this Contract. An allegation or determination that persons other than CONTRACTOR are responsible for the Claim does not relieve CONTRACTOR from its separate and distinct obligation to defend under this section. The obligation to defend extends through final judgment, including exhaustion of any appeals. The defense obligation includes an obligation to provide independent defense counsel if CONTRACTOR asserts that liability is caused in whole or in part by the negligence or willful misconduct of an Indemnified Party. CONTRACTOR'S indemnification obligations under this Contract will survive the expiration or earlier termination of this Contract until action against the Indemnified Parties for the matter indemnified is fully and finally barred by the applicable statute of limitations or statute of repose. CONTRACTOR'S liability for indemnification under this Contract is in addition to any liability CONTRACTOR may have to COUNTY for a breach by CONTRACTOR of any of the provisions of this Contract. Under no circumstances may the insurance requirements and limits set forth in this Contract be construed to limit CONTRACTOR'S indemnification obligation or other liability under this Contract.

(c) CONTRACTOR must indemnify and hold COUNTY harmless from all loss and liability, including attorneys' fees, court costs and all other litigation expenses, for any infringement of the patent rights, copyright, trade secret or any other proprietary right or trademark, and all other intellectual property claims of any person or persons in consequence of the use by COUNTY, or any of its officers or agents, of articles or services to be supplied in the performance of this Contract.

Replace Section 7-1.06 with:

7-1.06 INSURANCE

Bidder's and their subcontractors attention are directed to the insurance requirements below. It is highly recommended that Bidders confer with their respective insurance carriers or brokers to determine in advance of bid submission the availability of insurance certificates and endorsements as prescribed and provided herein. If an apparent low bidder fails to comply strictly with the insurance requirements, that Bidder may be disqualified from award of the Contract and forfeit its Bidder's Security.

Contractor and subcontractors shall provide and maintain insurance for the duration of the warranty period against claims for injuries to persons and damage to property, which may arise from, or in connection with, performance under the Contract by the CONTRACTOR, its agents, representatives, employees or subcontractors, if applicable.

A. Minimum Scope & Limits of Insurance

1) Coverage at least as broad as Commercial General Liability, Insurance Services Office Commercial General Liability coverage occurrence form GC 00 01, with limits no less than two

million dollars ($2,000,000) per occurrence including products and completed operations, property damage, bodily injury and personal & advertising injury. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (ISO CG 25 03 or 25 04) or the general aggregate limit shall be twice the required occurrence limit.

2) Comprehensive Automobile Liability Insurance of one million dollars ($1,000,000) per occurrence for bodily injury and property damage. If the annual aggregate applies it must be no less than of two million dollars($2,000,000).
3) Workers' Compensation Insurance as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than of one million dollars ($1,000,000) per accident for bodily injury or disease.
4) Professional Liability of two million dollars ($2,000,000) per occurrence or claim for design and build.

B. Specific Provisions of the Certificate

1) The General Liability and Automobile Liability policies are to be endorsed to contain the following provisions:
    1. The County, its officers, agents, officials, employees and volunteers are to be covered as additional insureds as respects: liability arising out of work or operations performed by or on behalf of the Contractor; or automobiles owned, leased, hired or borrowed by the CONTRACTOR.
    2. For any claims related to this project, the CONTRACTOR's insurance coverage shall be primary insurance as respects the COUNTY, its officers, agents, officials, employees and volunteers. Any insurance or self-insurance maintained by the COUNTY, its officers, agents, officials, employees or volunteers shall be excess of the CONTRACTOR's insurance and shall not contribute with it.
    3. Each insurance policy required by this Contract shall be endorsed to state that coverage shall not be canceled, except after thirty (30) days prior written notice has been provided to the County.
    4. CONTRACTOR hereby agrees to waive rights of subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss. Contractor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation.
    5. If any of the required insurance is written on a claims made form, the retroactive date must be before the date of contract or the beginning of the contract work and must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the contract work.

2) The workers' compensation policy shall be endorsed with a waiver of subrogation in favor of the COUNTY for all work performed by the CONTRACTOR, its employees, agents and subcontractors. CONTRACTOR waives all rights against the COUNTY and its officers, agents, employees and volunteers for recovery of damages to the extent these damages are covered by the workers compensation and employers liability.

C. Deductibles and Self-Insured Retentions

Deductibles and self-insured retentions must be declared and any deductible or self-insured retention over one hundred thousand dollars ($100,000) shall be forwarded to the COUNTY Risk Manager for approval.

D. Acceptability of Insurance

Insurance must be placed with insurers with a current rating given by A.M. Best and Company of no less than A(-):VII and a Standard & Poor's Rating (if rated) of at least BBB and from a company approved by the Department of Insurance to conduct business in California. Any waiver of these standards is subject to approval by the County Risk Manager.

E. Verification of Coverage

Prior to approval of this Contract by the COUNTY, the CONTRACTOR shall file with the submitting department, certificates of insurance with original endorsements effecting coverage and a copy of the

declarations page from the policy in effect in a form acceptable to the COUNTY. Endorsements must be signed by persons authorized to bind coverage on behalf of the insurer. The COUNTY reserves the right to require certified copies of all required insurance policies at any time.

F. Additional Construction Insurance Requirements

1) Payment Bond: For public works projects of more than twenty-five thousand dollars ($25,000) a "payment bond" is required in the full amount of the Contract price, and shall insure to the benefit of persons performing labor or furnishing materials in connection with the work of the Contract. This bond shall be maintained in full force and effect until all work under the Contract is completed and accepted by the COUNTY, or until all claims for materials and labor have been paid, whichever is longer.
2) Performance Bond: For public works projects of more than twenty-five thousand dollars ($25,000) a "performance bond" is required in the full amount of the Contract price and shall insure the faithful performance by Contractor of all work under the Contract. It shall also insure the replacing of, or making acceptable, any defective materials or faulty workmanship.
3) Acceptability of Surety: Only California admitted sureties with current AM Best Rating of no less than VII.

^^

8 PROSECUTION AND PROGRESS

Add to Section 8-1.01:

You must procure all permits, licenses, contracts and other services needed to prosecute the work and secure staging areas, including those on private property. You must pay for all permits, licenses, contracts and other services. Payment is included in the contract price and no additional compensation will be allowed.

The number of working days allowed for completion of the work is set forth in the *Notice to Bidders* of the Standard Specifications as modified by Article XIII of the Contract. In the case of a conflict between the Standard Specifications and the Contract, the Contract prevails.

The sum to be paid as liquidated damages is set forth in section 8-1.10 of the Standard Specifications as modified by Article XIII of the Contract.

Add to Section 8-1.02A:

Any time the Engineer requests a practicable progress schedule in writing, submit the updated schedule within ten (10) working days of the Engineer's written request.

Replace section 8-1.10A with:

The County specifies liquidated damages (Pub Contract Code § 7203, Gov. Code, § 53069.85). Liquidated damages, if any, accrue starting on the first (1st) day after the expiration of the working days through the day of Contract acceptance except as specified in sections 8-1.10B and 8-1.10C.

The County withholds liquidated damages before the accrual date if the anticipated liquidated damages may exceed the value of the remaining work.

Liquidated damages for all work is set at **Two Thousand Three hundred dollars ($2,300)** per day.

^^

9 PAYMENT

Replace the 12th paragraph beginning with "For these payments, interest starts to accrue…" in Section 9-1.03 with:

For these payments, interest starts to accrue thirty (30) days after the Engineer receives acceptance from you of the progress payment amount determined by the Engineer. Acceptance of the progress payment may be in the form of an invoice matching the progress payment amount or a letter indicating that you accept the amount of the progress payment.

Add the following to Section 9-1.16A:

Submit an invoice matching the progress payment amount or a signed letter indicating that you accept the progress payment amount. The Engineer does not process a progress payment without the matching invoice or the progress payment acceptance letter. Once accepted by the Engineer, submit the invoice to the following email address: RMA-AP@tularecounty.ca.gov and include the Engineer's email as well.

Add to end of first paragraph, section 9-1.16B:

Submit a schedule of values for each lump sum item on the bid list.

Replace section 9-1.17D(1) with:

9-1.17D(1) General

If you accept the proposed final estimate or do not submit a claim statement within thirty (30) days of receiving the estimate, the Engineer furnishes the final estimate to you and the County pays the amount due within ninety (90) days. This final estimate and payment is conclusive except as specified in sections 5-1.27, 5-1.47, and 9-1.21.

If you submit a claim statement within thirty (30) days of receiving the Engineer's proposed final estimate, the Engineer furnishes a semifinal estimate to the Contractor and the Department pays the amount due within ninety (90) days. The semifinal estimate is conclusive as to the amount of work completed and the amount payable except as affected by the claims or as specified in sections 5-1.27, 5-1.47, and 9-1.21.

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DIVISION II GENERAL CONSTRUCTION

^^

10 GENERAL

Add to Section 10-1.01:

Coccidioidomycosis, also known as “Valley Fever” or “cocci”, is a disease caused by Coccidioides fungi which infect the lungs. When the fungus spores present in soil are disturbed, the spores may become airborne and can be inhaled.

You are hereby notified that the spores which cause Valley Fever are endemic to Tulare County. Activities which disturb soil or expose workers to dust, such as digging, operating earth-moving equipment, driving vehicles, and working in wind-blown areas, may increase the risk of Valley Fever in workers.

Information regarding preventing and recognizing the symptoms of Valley Fever are available from the California Department of Public Health and the California Department of Industrial Relations.

The provisions of this section are made a part of every subcontract executed pursuant to this contract.

^^

13 WATER POLLUTION CONTROL

Add the following to the last paragraph of Section 13-4.03C(1):

Before any materials are stockpiled or equipment parked / stored outside of the right of way, you must first obtain written authorization from the property owner on whose property the materials are to be stockpiled or equipment parked/stored. You must file with the Engineer said authority or a certified copy thereof together with a written release from the property owner absolving the County of Tulare from any and all responsibility in connection with the stockpiling of materials or parking/storage of equipment on said property. Before any material is stockpiled or equipment parked/stored, you must obtain written permission from the Engineer to stockpile materials or park/store equipment at the location designated in said authorization.

Failure to provide written authorization will result in the withholding of all funds due to you until said authorization is received by the County.

Obtain all permits required by all applicable regulatory agencies and comply with all applicable codes, regulations and zoning ordinances prior to establishing a storage yard for materials and/or equipment.

Provide copies of all permits acquired to the Engineer.

^^

14 ENVIRONMENTAL STEWARDSHIP

Add the following to Section 14-1.01:

In accordance with Project permits (if applicable), prior to arrival and prior to leaving the project site, all construction equipment must be inspected and cleaned of mud, plant material and other debris that may contain invasive plants and/or seeds and inspected to reduce the potential spreading of noxious weeds.

You must comply with all applicable requirements and provisions of the environmental document(s) and the permits obtained for this project.

A delay to the controlling operation due to environmental requirements will be considered a temporary suspension of work under Section 8-1.06. No contract adjustment or additional compensation will be made for delays caused by environmental requirements.

Replace Section 14-11.04 with:

14-11.04A Indirect Source Review

The San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) has reviewed the Applicability of Indirect Source Review (ISR) Rule 9510 provided by the County. It was determined that the project would not create a new paved surface that is used for the transportation of motor vehicles or any structural support thereof. Therefore, the project is not subject to Indirect Source Review requirements and related fees do not apply.

See a copy of the SJVUAPCD ISR applicability determination letter at the end of these Special Provisions for more details. Keep a copy of the letter with the construction crew on the project site at all times.

Should changes be made to the project such that the intensity exceeds the applicability threshold resulting in the project being subject to District Rule 9510, you will assist the County with preparing an Air Impact Assessment (AIA) application form for submittal no later than 30 days prior to the start of construction. The AIA form can be found in the following weblink:

http://www.valleyair.org/ISR/Documents/Transportation-ISR-Application.pdf

Additional information regarding Rule 9510 (including current rules and regulations) and all ISR forms and applications, can be found on the SJVUAPCD website at: http://www.valleyair.org/rules/currntrules/r9510.pdf ; and http://www.valleyair.org/ISR/ISRHome.htm; or by contacting SJVUAPCD ISR staff by phone (559) 230-6000.

Replace "Reserved" in Section 14-12.04 with:

14-12.04 PERMITS AND LICENSES

Comply with Section 5-1.20B.

Comply with the requirements of the permits acquired by the County for this project located elsewhere in these Special Provisions.

You must comply with all applicable SJVUAPCD regulations and requirements.

When required, obtain a Demolition Permit Release from SJVUAPCD. Nothing herein or elsewhere within these Special Provisions limits your responsibility for complying with all applicable rules and regulations. You are responsible for payment of all the fees required to obtain the Demolition Permit Release.

Comply with Section 7-1.02, Section 7-1.07, and Section 14-9.

For projects that will result in land disturbance of greater than one acre, file the Notice of Intent and pay the appropriate fee as required by the terms of General Permit No. CSA000002, for the discharge of storm water associated with construction activity.

Payment for conforming to the requirements in these permits is included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

^^

15 EXISTING FACILITIES

Replace Section 15-1.03C with:

15-1.03C Salvaging Facilities

All salvaged material from project site, with the exception of roadside signs, shall be property of the Contractor and removed from the project site.

All salvaged roadside signs from project site shall be returned to the County.

^^

DIVISION III EARTHWORK AND LANDSCAPE

^^

39 ASPHALT CONCRETE

Replace Section 39 with:

39-1.01 GENERAL

39-1.01A Summary

Section 39-1 includes general specifications for producing and placing HMA by mixing aggregate and asphalt binder at a mixing plant and spreading and compacting the HMA mixture.

Produce and place HMA Type A under the Standard Construction Process.

39-1.01B Definitions

coarse aggregate: Aggregate retained on a no. 4 sieve.

fine aggregate: Aggregate passing the no. 4 sieve.

supplemental fine aggregate: Aggregate passing the no. 30 sieve, including hydrated lime, Portland cement, and fines from dust collectors.

39-1.02 MATERIALS

39-1.02A Geosynthetic Pavement Interlayer

Geosynthetic pavement interlayer must comply with the specifications for pavement fabric, paving mat, paving grid, paving geocomposite grid, or geocomposite strip membrane.

39-1.02B Tack Coat

Tack coat must comply with the specifications for asphaltic emulsion or asphalts. Choose the type and grade.

Notify the Engineer if you dilute asphaltic emulsion with water. The weight ratio of added water to asphaltic emulsion must not exceed 1 to 1.

Measure added water either by weight or volume in compliance with section 9-1.02 or you may use water meters from water districts, cities, or counties. If you measure water by volume, apply a conversion factor to determine the correct weight.

With each dilution, submit:

1. Weight ratio of water to bituminous material in the original asphaltic emulsion
2. Weight of asphaltic emulsion before diluting
3. Weight of added water
4. Final dilution weight ratio of water to asphaltic emulsion

39-1.02C Asphalt Binder

Asphalt binder in HMA must comply with the specifications for asphalts or section 39-1.02D.

Asphalt binder in HMA Type A must be PG Grade 70-10.

Asphalt binder for geosynthetic pavement interlayer must comply with the specifications for asphalts. Choose from Grades PG 64-10, PG 64-16, or PG 70-10.

39-1.02E Aggregate

Aggregate must be clean and free from deleterious substances.

Aggregate used in HMA Type A must comply with the 3/4-inch HMA Types A and B gradation.

The specified aggregate gradation must be determined before the addition of asphalt binder and includes supplemental fine aggregate. The Department tests for aggregate grading under California Test 202, modified by California Test 105 if there is a difference in specific gravity of 0.2 or more between the coarse and fine parts of different aggregate blends.

Choose sieve size TV within each TV limit presented in the aggregate gradation tables.

The proposed aggregate gradation must be within the TV limits for the specified sieve sizes shown in the following tables:

Aggregate Gradation
(Percentage Passing)
HMA Types A and B

3/4-inch HMA Types A and B

Sieve sizes	TV limits	Allowable tolerance
1"	100	--
3/4"	90–100	TV ± 5
1/2"	70–90	TV ± 6
No. 4	45–55	TV ± 7
No. 8	32–40	TV ± 5
No. 30	12–21	TV ± 4
No. 200	2.0–7.0	TV ± 2

1/2-inch HMA Types A and B

Sieve sizes	TV limits	Allowable tolerance
3/4"	100	—
1/2"	95–99	TV ± 6
3/8"	75–95	TV ± 6
No. 4	55–66	TV ± 7
No. 8	38–49	TV ± 5
No. 30	15–27	TV ± 4
No. 200	2.0–8.0	TV ± 2

3/8-inch HMA Types A and B

Sieve sizes	TV limits	Allowable tolerance
1/2"	100	--
3/8"	95–100	TV ± 6
No. 4	58–72	TV ± 7
No. 8	34–48	TV ± 6
No. 30	18–32	TV ± 5
No. 200	2.0–9.0	TV ± 2

No. 4 HMA Types A and B

Sieve sizes	TV limits	Allowable tolerance
3/8"	100	--
No. 4	95–100	TV ± 7
No. 8	72–77	TV ± 7
No. 30	37–43	TV ± 7
No. 200	2.0–12.0	TV ± 4

Before the addition of asphalt binder, aggregate must have the values for the quality characteristics shown in the following table:

Aggregate Quality

Quality characteristic	Test method	HMA type			
		A	B	RHMA-G	OGFC
Percent of crushed particles Coarse aggregate (% min.) One fractured face Two fractured faces Fine aggregate (% min) (Passing no. 4 sieve and retained on no. 8 sieve.) One fractured face	California Test 205	 90 75 70	 25 -- 20	 -- 90 70	 90 75 90
Los Angeles Rattler (% max.) Loss at 100 rev. Loss at 500 rev.	California Test 211	 12 45	 -- 50	 12 40	 12 40
Sand equivalent (min.) [a]	California Test 217	47	42	47	--
Fine aggregate angularity (% min.) [b]	California Test 234	45	45	45	--
Flat and elongated particles (% max. by weight @ 5:1)	California Test 235	10	10	10	10

[a] Reported value must be the average of 3 tests from a single sample.

[b] The Engineer waives this specification if HMA contains less than 10 percent of non-manufactured sand by weight of total aggregate. Manufactured sand is fine aggregate produced by crushing rock or gravel.

39-1.02F Reclaimed Asphalt Pavement

You may produce HMA Type A or B, using RAP. HMA produced using RAP must comply with the specifications for HMA, except aggregate quality specifications do not apply to RAP. You may substitute RAP aggregate for a part of the virgin aggregate in HMA in a quantity not exceeding 15.0 percent of the aggregate blend.

Assign the substitution rate of RAP aggregate for virgin aggregate with the JMF submittal. The JMF must include the percent of RAP used. If you change your assigned RAP aggregate substitution rate by more than 5 percent (within the 15.0 percent limit), submit a new JMF.

Process RAP from asphalt concrete. You may process and stockpile RAP during the entire project. Prevent material contamination and segregation. Store RAP in stockpiles on smooth surfaces free of debris and organic material. Processed RAP stockpiles must be only homogeneous RAP.

39-1.03 HOT MIX ASPHALT MIX DESIGN REQUIREMENTS

39-1.03A General

The mix design process consists of performing California Test 367 and laboratory procedures on combinations of aggregate gradations and asphalt binder contents to determine the OBC and HMA mixture qualities. The results become the proposed JMF.

Use the *Contractor Hot Mix Asphalt Design Data* form to record aggregate quality and mix design data. Use the *Contractor Job Mix Formula Proposal* form to present the JMF.

Laboratories testing aggregate qualities and preparing the mix design and JMF must be qualified under the Caltrans Independent Assurance Program. Take samples under California Test 125.

The Engineer reviews the aggregate qualities, mix design, and JMF and verifies and authorizes the JMF.

You may change the JMF during production. Do not use the changed JMF until it is authorized. Except if adjusting the JMF as specified in section 39-1.03E, perform a new mix design and submit a new JMF submittal if you change any of the following:

1. Target asphalt binder percentage
2. Asphalt binder supplier

3. Combined aggregate gradation
4. Aggregate sources
5. Substitution rate for RAP aggregate of more than 5 percent
6. Any material in the JMF

39-1.03B Hot Mix Asphalt Mix Design

Perform a mix design that produces HMA with the values for the quality characteristics shown in the following table:

HMA Mix Design Requirements

Quality characteristic	Test method	HMA type		
		A	B	RHMA-G
Air void content (%)	California Test 367	4.0	4.0	Section 39-1.03B
Voids in mineral aggregate (% min.)	California Test 367			
No. 4 grading		17.0	17.0	--
3/8" grading		15.0	15.0	--
1/2" grading		14.0	14.0	18.0–23.0[a]
3/4" grading		13.0	13.0	18.0–23.0[a]
Voids filled with asphalt (%)	California Test 367			Note c
No. 4 grading		76.0–80.0	76.0–80.0	
3/8" grading		73.0–76.0	73.0–76.0	
1/2" grading		65.0–75.0	65.0–75.0	
3/4" grading		65.0–75.0	65.0–75.0	
Dust proportion	California Test 367			Note c
No. 4 and 3/8" gradings		0.9–2.0	0.9–2.0	
1/2" and 3/4" gradings		0.6–1.3	0.6–1.3	
Stabilometer value (min.) [b]	California Test 366			
No. 4 and 3/8" gradings		30	30	--
1/2" and 3/4" gradings		37	35	23

[a] Voids in mineral aggregate for RHMA-G must be within this range.
[b] California Test 304, Part 2.13.
[c] Report this value in the JMF submittal.

Report the average of 3 tests. If the range of stability for the 3 briquettes is more than 8 points, prepare new briquettes and test again. The average air void content may vary from the specified air void content by ±0.5 percent.

39-1.03C Job Mix Formula Submittal

Each JMF submittal must consist of:

1. Proposed JMF on a *Contractor Job Mix Formula Proposal* form
2. Mix design records on a *Contractor Hot Mix Asphalt Design Data* form dated within 12 months of submittal
3. JMF verification on a *Caltrans Hot Mix Asphalt Verification* form, if applicable
4. JMF renewal on a *Caltrans Production Start-Up Evaluation* form, if applicable
5. MSDS for the following:
   5.1. Asphalt binder
   5.2. Supplemental fine aggregate except fines from dust collectors
   5.3. Antistrip additives

If the Engineer requests, sample the following materials in the presence of the Engineer and place in labeled containers weighing no more than 50 lb each:

1. Coarse, fine, and supplemental fine aggregate from stockpiles, cold feed belts, or hot bins. Samples must be at least 120 lb for each coarse aggregate, 80 lb for each fine aggregate, and 10 lb for each type of supplemental fines. The Department combines these aggregate samples to comply with the JMF TVs submitted on a *Contractor Job Mix Formula Proposal* form.

2. RAP from stockpiles or RAP system. Samples must be at least 60 lb.
3. Asphalt binder from the binder supplier. Samples must be in two 1-quart cylindrical-shaped cans with open top and friction lids.

Notify the Engineer at least 2 business days before sampling materials. For aggregate and RAP, split the samples into at least 4 parts. Submit 2 parts to the Engineer and use 1 part for your testing.

39-1.03D Job Mix Formula Review

The Engineer reviews each mix design and proposed JMF within 5 business days from the complete JMF submittal. The review consists of reviewing the mix design procedures and comparing the proposed JMF with the specifications.

The Engineer may verify aggregate quality characteristics during this review period.

39-1.03E Job Mix Formula Verification

If you cannot submit a *Caltrans Hot Mix Asphalt Verification* form dated within 12 months before HMA production, the Engineer verifies the JMF.

Based on your testing and production experience, you may submit an adjusted JMF on a *Contractor Job Mix Formula Proposal* form before verification testing. JMF adjustments may include a change in the:

1. Asphalt binder content TV up to ±0.6 percent from the OBC value submitted on a *Contractor Hot Mix Asphalt Design Data* form, except for RHMA-G, do not adjust the TV for asphalt rubber binder below 7.0 percent
2. Aggregate gradation TVs within the TV limits specified in the aggregate gradation tables

For HMA Type A and Type B, the Engineer verifies the JMF from samples taken from HMA produced by the plant to be used. Notify the Engineer at least 2 business days before sampling materials.

In the Engineer's presence and from the same production run, take samples of:

1. Aggregate
2. Asphalt binder
3. RAP
4. HMA

Sample aggregate from cold feed belts or hot bins. Sample RAP from the RAP system. Sample HMA under California Test 125, except if you request and if authorized, you may sample from any of the following locations:

1. At the plant from deposited piles or windrows
2. From the truck with an automatic sampling device
3. Windrow
4. Mat behind the paver

You may sample from a different project, including a non-Department project, if you make arrangements for the Engineer to be present during sampling.

For aggregate, RAP, and HMA, split the samples into at least 4 parts and label their containers. Submit 2 split parts and keep 1 part for your testing.

The Engineer verifies each proposed JMF within 20 days of receiving all verification samples and the JMF submittal has been accepted. Verification is testing for compliance with the specifications for:

1. Aggregate quality
2. Aggregate gradation TVs within the TV limits
3. Asphalt binder content TV within the TV limit
4. HMA quality specified in the table HMA Mix Design Requirements except:
   4.1. Air void content, design value ±2.0 percent

4.2. Voids filled with asphalt, report only if an adjustment for asphalt binder content TV is less than ± 0.3 percent from OBC
4.3. Dust proportion, report only if an adjustment for asphalt binder content TV is less than ±0.3 percent from OBC

The Engineer prepares 3 briquettes from a single split sample. To verify the JMF for stability and air void content, the Engineer tests the 3 briquettes and reports the average of 3 tests. The Engineer prepares new briquettes if the range of stability for the 3 briquettes is more than 8 points.

The Engineer may use the briquettes used for stability testing to determine bulk specific gravity under California Test 308. If the same briquettes are used and the tests using bulk specific gravity fail, the Engineer prepares 3 new briquettes and determines a new bulk specific gravity.

If tests on plant-produced samples do not verify the JMF, the Engineer notifies you and you must submit a new JMF submittal or submit an adjusted JMF based on your testing. JMF adjustments may include a change in:

1. Asphalt binder content TV up to ±0.6 percent from the OBC value submitted on a *Contractor Hot Mix Asphalt Design Data* form except do not adjust the TV for asphalt rubber binder for RHMA-G below 7.0 percent
2. Aggregate gradation TVs within the TV limits specified in the aggregate gradation tables

You may adjust the JMF only once due to a failed verification test. An adjusted JMF requires a new *Contractor Job Mix Formula Proposal* form and verification of a plant-produced sample.

The Engineer reverifies the JMF if HMA production has stopped for longer than 30 days and the verified JMF is older than 12 months.

For each HMA type and aggregate size specified, the Engineer verifies at the Department's expense up to 2 proposed JMF, including a JMF adjusted after verification failure. The Engineer deducts $3,000 from payments for each verification exceeding this limit. This deduction does not apply to verifications initiated by the Engineer or if a JMF expires while HMA production is stopped longer than 30 days.

39-1.03F Job Mix Formula Renewal

You may request a JMF renewal by submitting:

1. Proposed JMF on a *Contractor Job Mix Formula Proposal* form
2. Mix design documentation on a *Contractor Hot Mix Asphalt Design Data* form used for the previously verified JMF

If the Engineer requests, sample the following materials in the presence of the Engineer and place in labeled containers weighing no more than 50 lb each:

1. Coarse, fine, and supplemental fine aggregate from stockpiles, cold feed belts, or hot bins. Samples must include at least 120 lb for each coarse aggregate, 80 lb for each fine aggregate, and 10 lb for each type of supplemental fines. The Department combines these aggregate samples to comply with the JMF TVs submitted on a *Contractor Job Mix Formula Proposal* form.
2. RAP from stockpiles or RAP system. Samples must be at least 60 lb.
3. Asphalt binder from the binder supplier. Samples must be in two 1-quart cylindrical-shaped cans with open top and friction lids.

Notify the Engineer at least 2 business days before sampling materials. For aggregate, RAP, and HMA, split samples into at least 4 parts. Submit 2 parts to the Engineer and use 1 part for your testing.

The Engineer reviews each complete JMF renewal submittal within 5 business days.

The Engineer may verify aggregate qualities during this review period.

The Engineer verifies the JMF under section 39-1.03E except:

1. Engineer retains samples until you provide test results for your part on a *Contractor Job Mix Formula Renewal* form.
2. Department tests samples of materials obtained from the HMA production unit after you submit test results that comply with the specifications for the quality characteristics in section 39-1.03E.
3. Engineer verifies each proposed JMF within 30 days of receiving verification samples.
4. You may not adjust the JMF due to a failed verification.
5. For each HMA type and aggregate gradation specified, the Engineer verifies at the Department's expense 1 proposed JMF.

If the Engineer verifies the JMF renewal, the Engineer provides you a *Caltrans Hot Mix Asphalt Verification* form.

39-1.03G Job Mix Formula Acceptance

HMA will be accepted for use on the project when:

1. Engineer's review of the JMF shows compliance with the specifications
2. Engineer verifies the JMF through start-up testing

39-1.04 CONTRACTOR QUALITY CONTROL

39-1.04A General

Establish, maintain, and change a quality control system to ensure materials and work comply with the specifications. Submit quality control test results within 24 hours of sampling.

You must identify the HMA sampling location in your QC plan. During production, take samples under California Test 125, except if you request and if authorized, sample HMA from any of the following locations:

1. At the plant from deposited piles or windrows
2. From the truck with an automatic sampling device
3. Windrow
4. Mat behind the paver

39-1.04B Prepaving Conference

Hold a prepaving conference with the Engineer at a mutually agreed time and place. Discuss methods of performing the production and paving work.

39-1.04D Aggregate

Determine the aggregate moisture content and RAP moisture content in continuous mixing plants at least twice a day during production and adjust the plant controller. Determine the RAP moisture content in batch mixing plants at least twice a day during production and adjust the plant controller.

39-1.04E Reclaimed Asphalt Pavement

Perform RAP quality control testing each day.

For Standard Construction Process – The Contractor may choose to use one of the following methods for the submission of the combined aggregate gradation:

1. Sample RAP once daily and determine the RAP aggregate gradation under California Test 367, appendix B. Results shall be submitted to the Engineer within 24 hours of sampling.
2. Use the mix design RAP values.

For Method construction Process – The combined aggregate gradations shall use the mix design RAP values.

39-1.04F Density Cores

To determine density for Standard Construction process projects, take 4- or 6-inch diameter density cores every 250 tons of hot mix asphalt placed according to part 3, “Section B, “Test site location,” of California Test Method 375, “Determining the in-place density and relative compaction of hot mix asphalt pavement using nuclear gages.” Take density cores in the Engineer's presence. Backfill and compact holes with

authorized material. Before submitting a density core, mark it with, lot, sublot and core number. Each day's cores shall be accompanied by a corresponding Tulare County HMA Density Core Submittal Form and shall be placed it in a protective container.

The above mentioned form can be found at: https://tularecounty.ca.gov/rma/rma-documents/public-works-documents/

If a density core is damaged, replace it with a density core taken within 1 foot longitudinally from the original density core. Relocate any density core located within 1 foot of a rumble strip to 1 foot transversely away from the rumble strip.

39-1.04G Briquettes

Prepare 3 briquettes for each stability and air void content determination. Report the average of 3 tests. Prepare new briquettes and test again when the range of stability for the 3 briquettes is more than 8 points.

You may use the same briquettes used for stability testing to determine bulk specific gravity under California Test 308. If you use these briquettes and tests using bulk specific gravity fail, you may prepare 3 new briquettes and determine a new bulk specific gravity.

39-1.05 ACCEPTANCE CRITERIA

HMA acceptance is specified in the sections for each HMA construction process.

Samples materials for testing under California Test 125 and the applicable test method, except samples may be taken:

1. At the plant from a truck with an automatic sampling device
2. At the plant from a deposited pile or windrow
3. From the mat behind the paver

Sampling shall be completed by certified personnel authorized by the approved Quality Control Plan, statistically based, and random.

HMA acceptance is based on:

1. Authorized JMF
2. Accepted QC plan for Standard Construction process projects
3. Compliance with the HMA acceptance tables
4. Visual inspection

The Department prepares 3 briquettes for each stability and air void content determination. The average of 3 tests is reported. If the range of stability for the 3 briquettes is more than 8 points, new briquettes are prepared and tested.

The Department may use the briquettes used for stability testing to determine bulk specific gravity under California Test 308. If the Engineer uses the same briquettes and the tests using that bulk specific gravity fail, the Engineer prepares 3 new briquettes and determines a new bulk specific gravity.

39-1.06 DISPUTE RESOLUTION

Work with the Engineer to avoid potential conflicts and to resolve disputes regarding test result discrepancies. Notify the Engineer within 5 days of receiving a test result if you dispute the test result.

If you or the Engineer dispute each other's test results, submit quality control test results and copies of paperwork including worksheets used to determine the disputed test results. An independent third party performs referee testing. Before the independent third party participates in a dispute resolution, the party must be accredited under the Caltrans Independent Assurance Program. The independent third party must be independent of the project. By mutual agreement, the independent third party is chosen from an independent, non-biased laboratory having the capabilities to perform the necessary test.

If split quality control or acceptance samples are not available, the independent third party uses any available material representing the disputed HMA for evaluation.

39-1.07 PRODUCTION START-UP EVALUATION

The Engineer evaluates HMA production and placement at production start-up.

Within the first 750 tons produced on the 1st day of HMA production, in the Engineer's presence and from the same production run, take samples of:

1. Aggregate
2. Asphalt binder
3. RAP
4. HMA

Sample aggregate from cold feed belts or hot bins. Take RAP samples from the RAP system. Sample HMA under California Test 125, except if you request and if authorized, you may sample HMA from any of the following locations:

1. At the plant from deposited piles or windrows.
2. From trucks with an automatic sampling device.
3. Windrow
4. Mat behind the paver

For aggregate, RAP, and HMA, split the samples into at least 4 parts and label their containers. Submit 2 split parts and keep 1 part.

For Standard Construction process projects, you and the Department must test the split samples and report test results within 3 business days of sampling. If you proceed before receipt of the test results, the Engineer may consider the HMA placed to be represented by these test results.

39-1.08 PRODUCTION

A lot shall be defined as material from the same mix design of the same Project.

Sublots shall be defined as material from a lot, up to but not to exceed 750 tons HMA.

Core lots shall be defined as material from a sublot, up to but not to exceed 250 tons HMA.

No sublot shall be carried over to the next day of production and paving.

39-1.08A General

Produce HMA in a batch mixing plant or a continuous mixing plant. Proportion aggregate by hot or cold feed control.

HMA plants must be Caltrans qualified. Before production, the HMA plant must have current qualification under the Caltran’s Materials Plant Quality Program.

During production, you may adjust:

1. Hot or cold feed proportion controls for virgin aggregate and RAP
2. Set point for asphalt binder content

39-1.08B Mixing

Mix HMA ingredients into a homogeneous mixture of coated aggregates.

Asphalt binder must be from 275 to 375 degrees F when mixed with aggregate.

Asphalt rubber binder must be from 350 to 425 degrees F when mixed with aggregate.

When mixed with asphalt binder, aggregate must not be more than 325 degrees F. These aggregate temperature specifications do not apply if you use RAP.

HMA with or without RAP must not be more than 325 degrees F.

39-1.09 SUBGRADE, TACK COAT, AND GEOSYNTHETIC PAVEMENT INTERLAYER

39-1.09A General

Prepare subgrade or apply tack coat to surfaces receiving HMA. If specified, place geosynthetic pavement interlayer over a coat of asphalt binder.

39-1.09B Subgrade

Subgrade to receive HMA must comply with the compaction and elevation tolerance specifications in the sections for the material involved. Subgrade must be free of loose and extraneous material. If HMA is paved on existing base or pavement, remove loose paving particles, dirt, and other extraneous material by any means including flushing and sweeping.

39-1.09C Tack Coat

Apply tack coat:

1. To existing pavement, including planed surfaces
2. Between HMA layers
3. To vertical surfaces of:
   3.1. Curbs
   3.2. Gutters
   3.3. Construction joints
4. Outside of the limits of geosynthetic pavement interlayer between new and existing HMA layers.

Before placing HMA, apply tack coat in 1 application. The application rate must meet the minimum residual rate specified for the underlying surface conditions shown in the following tables:

Tack Coat Application Rates for HMA Type A, Type B, and RHMA-G

HMA overlay over:	Minimum residual rates (gal/sq yd)		
	CSS1/CSS1h, SS1/SS1h and QS1h/CQS1h asphaltic emulsion	CRS1/CRS2, RS1/RS2 and QS1/CQS1 asphaltic emulsion	Asphalt binder and PMRS2/PMCRS2 and PMRS2h/PMCRS2h asphaltic emulsion
New HMA (between layers)	0.02	0.03	0.02
PCC and existing HMA (AC) surfaces	0.03	0.04	0.03
Planed PCC and HMA (AC) surfaces	0.05	0.06	0.04

Tack Coat Application Rates for OGFC

OGFC over:	Minimum residual rates (gal/sq yd)		
	CSS1/CSS1h, SS1/SS1h and QS1h/CQS1h asphaltic emulsion	CRS1/CRS2, RS1/RS2 and QS1/CQS1 asphaltic emulsion	Asphalt binder and PMRS2/PMCRS2 and PMRS2h/PMCRS2h asphaltic emulsion
New HMA	0.03	0.04	0.03
PCC and existing HMA (AC) surfaces	0.05	0.06	0.04
Planed PCC and HMA (AC) surfaces	0.06	0.07	0.05

If you dilute asphaltic emulsion, mix until homogeneous before application.

For vertical surfaces, apply a residual tack coat rate that will thoroughly coat the vertical face without running off.

If you request and if authorized, you may:

1. Change tack coat rates
2. Omit tack coat between layers of new HMA during the same work shift if:
   2.1. No dust, dirt, or extraneous material is present
   2.2. Surface is at least 140 degrees F

Immediately in advance of placing HMA, apply additional tack coat to damaged areas or where loose or extraneous material is removed.

Close areas receiving tack coat to traffic. Do not track tack coat onto pavement surfaces beyond the job site.

Asphalt binder tack coat must be from 285 to 350 degrees F when applied and shall “break” prior to asphalt placement.

Payment for Tack Coat shall be based on minimum residual application rates, as specified in the above tables, and total tonnage shall be based on the Engineer’s calculations.

39-1.09D Geosynthetic Pavement Interlayer

Place geosynthetic pavement interlayer under the manufacturer's instruction.

Before placing the geosynthetic pavement interlayer and asphalt binder:

1. Repair cracks 1/4 inch and wider, spalls, and holes in the pavement. These repairs are change order work.
2. Clean the pavement of loose and extraneous material.

Immediately before placing the interlayer, apply 0.25 ± 0.03 gal of asphalt binder per square yard of interlayer or until the fabric is saturated. Apply asphalt binder the width of the geosynthetic pavement interlayer plus 3 inches on each side. At interlayer overlaps, apply asphalt binder on the lower interlayer the same overlap distance as the upper interlayer.

Asphalt binder must be from 285 to 350 degrees F and below the minimum melting point of the geosynthetic pavement interlayer when applied.

Align and place the interlayer with no folds that result in a triple thickness, except that triple thickness layers less than 1 inch in width may remain if less than 1/2 inch in height. Folds that result in a triple layer greater than a 1 inch width must be slit and overlapped in a double thickness at least 2 inches in width.

The minimum HMA thickness over the interlayer must be 0.12 foot thick, including conform tapers. Do not place the interlayer on a wet or frozen surface.

Overlap the interlayer borders from 2 to 4 inches. In the direction of paving, overlap the following roll with the preceding roll at any break.

You may use rolling equipment to correct distortions or wrinkles in the interlayer.

If asphalt binder tracked onto the interlayer or brought to the surface by construction equipment causes interlayer displacement, cover it with a small quantity of HMA.

Before placing HMA on the interlayer, do not expose the interlayer to:

1. Traffic, except for crossings under traffic control, and only after you place a small HMA quantity
2. Sharp turns from construction equipment
3. Damaging elements

Pave HMA on the interlayer during the same work shift.

39-1.10 SPREADING AND COMPACTING EQUIPMENT

Paving equipment for spreading must be:

1. Self-propelled
2. Mechanical
3. Equipped with a screed or strike-off assembly that can distribute HMA the full width of a traffic lane
4. Equipped with a full-width compacting device
5. Equipped with automatic screed controls and sensing devices that control the thickness, longitudinal grade, and transverse screed slope

Install and maintain grade and slope references.

The screed must produce a uniform HMA surface texture without tearing, shoving, or gouging.

The paver must not leave marks such as ridges and indentations, unless you can eliminate them by rolling.

Rollers must be equipped with a system that prevents HMA from sticking to the wheels. You may use a parting agent that does not damage the HMA or impede the bonding of layers.

In areas inaccessible to spreading and compacting equipment:

1. Spread the HMA by any means to obtain the specified lines, grades, and cross sections.
2. Use a pneumatic tamper, plate compactor, or equivalent to achieve thorough compaction.

Edge of pavement treatment shall be per the 2018 Standard Plan P75, Case B where tapered safety edge is 30 degrees plus or minus 10 degrees. Tapered safety edge shall be extruded, densified edge of uniform grade and consistency as produced with Carlson brand safety attachment. An equivalent extruded, tapered safety edge will be accepted and approved by the County upon performing an acceptable trial example or demonstration.

39-1.11 TRANSPORTING, SPREADING, AND COMPACTING

Do not pave HMA on wet pavement or a frozen surface.

You may deposit HMA in a windrow and load it in the paver if:

1. Paver is equipped with a hopper that automatically feeds the screed
2. Loading equipment can pick up the windrowed material and deposit it in the paver hopper without damaging base material
3. Activities for deposit, pickup, loading, and paving are continuous
4. HMA temperature in the windrow does not fall below 260 degrees F

You may pave HMA in 1 or more layers on areas less than 5 feet wide and outside the traveled way, including shoulders. You may use mechanical equipment other than a paver for these areas. The equipment must produce uniform smoothness and texture.

HMA handled, spread, or windrowed must not stain the finished surface of any improvement or existing facility, including pavement.

Do not use petroleum products such as kerosene or diesel fuel to release HMA from trucks, spreaders, or compactors.

HMA must be free of:

1. Segregation
2. Coarse or fine aggregate pockets
3. Hardened lumps

Longitudinal joints in the top layer must match specified lane edges. Alternate the longitudinal joint offsets in the lower layers at least 0.5 foot from each side of the specified lane edges. You may request other longitudinal joint placement patterns.

Until the adjoining through lane's top layer has been paved, do not pave the top layer of:

1. Shoulders

2. Tapers
3. Transitions
4. Road connections
5. Driveways
6. Curve widenings
7. Chain control lanes
8. Turnouts
9. Turn pockets

If the number of lanes changes, pave each through lane's top layer before paving a tapering lane's top layer. Simultaneous to paving a through lane's top layer, you may pave an adjoining area's top layer, including shoulders. Do not operate spreading equipment on any area's top layer until completing final compaction.

If leveling with HMA is specified, fill and level irregularities and ruts with HMA before spreading HMA over the base, existing surfaces, or bridge decks. You may use mechanical equipment other than a paver for these areas. The equipment must produce uniform smoothness and texture. HMA used to change an existing surface's cross slope or profile is not paid for as HMA (leveling).

If placing HMA against the edge of existing pavement, sawcut or grind the pavement straight and vertical along the joint and remove extraneous material.

Rolling must leave the completed surface compacted and smooth without tearing, cracking, or shoving. Complete finish rolling activities before the pavement surface temperature is:

1. Below 150 degrees F for HMA with unmodified binder
2. Below 140 degrees F for HMA with modified binder
3. Below 200 degrees F for RHMA-G

If a vibratory roller is used as a finish roller, turn the vibrator off.

Do not allow traffic on new HMA pavement until its mid-depth temperature is below 160 degrees F.

If you request and if authorized, you may cool HMA Type A and Type B with water when rolling activities are complete. Apply water under section 17-3.

39-1.12 SMOOTHNESS

39-1.12A General

Determine HMA smoothness with a profilograph and a straightedge.

If concrete pavement is placed on HMA:

1. Cold plane the HMA finished surface to within specified tolerances if it is higher than the grade ordered.
2. Remove and replace HMA if the finished surface is lower than 0.05 foot below the grade ordered.

39-1.12B Straightedge

The top layer of HMA pavement must not vary from the lower edge of a 12-foot straightedge:

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

39-1.12C Profilograph

For the top layer of HMA Type A pavement, determine the PI_0 and must-grinds under California Test 526. Take 2 profiles within each traffic lane, 3 feet from and parallel with the edge of each lane.

A must-grind is a deviation of 0.3 inch or more in a length of 25 feet. You must correct must-grinds.

Profile the pavement in the Engineer's presence.

On tangents and horizontal curves with a centerline radius of curvature of 2,000 feet, the PI_0 must be at most 3 inches per 0.1-mile section.

On horizontal curves with a centerline radius of curvature from 1,000 to 2,000 feet, including pavement within the superelevation transitions, the PI_0 must be at most 6 inches per 0.1-mile section.

Before the Engineer accepts HMA pavement for smoothness, submit final profilograms.

Submit 1 copy of profile information in Microsoft Excel and 1 copy of longitudinal pavement profiles in ".erd" format or other ProVAL compatible format to the Resident Engineer.

The following HMA pavement areas do not require a PI_0. You must measure these areas with a 12-foot straightedge and determine must-grinds with a profilograph:

1. New HMA with a total thickness less than 0.25 foot
2. HMA sections of city or county streets and roads, turn lanes, and collector lanes less than 1,500 feet in length

The following HMA pavement areas do not require a PI_0 and you must measure them with a 12-foot straightedge:

1. Horizontal curves with a centerline radius of curvature less than 1,000 feet, including pavement within the superelevation transitions of those curves
2. Within 12 feet of a transverse joint separating the pavement from:
   2.1. Existing pavement not constructed under the same project
   2.2. A bridge deck or approach slab
3. Exit ramp termini, truck weigh stations, and weigh-in-motion areas
4. If steep grades and superelevation rates greater than 6 percent are present:
   4.1. Ramps
   4.2. Connectors
5. Turn lanes
6. Areas within 15 feet of manholes or drainage transitions
7. Acceleration and deceleration lanes for at-grade intersections
8. Shoulders and miscellaneous areas
9. HMA pavement within 3 feet from and parallel to the construction joints formed between curbs, gutters, or existing pavement

39-1.12D Smoothness Correction

If the top layer of HMA Type A, Type B, or RHMA-G pavement does not comply with the smoothness specifications, grind the pavement to within specified tolerances, remove and replace it, or place an overlay of HMA. Do not start corrective work until your choice of methods is authorized by the Resident Engineer.

Remove and replace areas of OGFC not in compliance with the must-grind and straightedge specifications, except you may grind OGFC for correcting smoothness:

1. At transverse joints separating the OGFC from pavement not constructed under the same project
2. Within 12 feet of a transverse joint separating the OGFC from a bridge deck or approach slab

Corrected HMA pavement areas must be uniform rectangles with edges:

1. Parallel to the nearest HMA pavement edge or lane line
2. Perpendicular to the pavement centerline

Measure the corrected HMA pavement surface with a profilograph and a 12-foot straightedge and correct the pavement to within specified tolerances. If a must-grind area or straightedged pavement cannot be corrected to within specified tolerances, remove and replace the pavement.

On areas ground but not overlaid with OGFC, apply fog seal coat under section 37-2.

39-1.13 HOT MIX ASPHALT ON BRIDGE DECKS

Produce and place HMA on bridge decks under the Method construction process.

Aggregate must comply with: 1/2-inch & 3/4–inch HMA Types A gradations.

If authorized, aggregate may comply with the no. 4 HMA Types A and B gradation for a section or taper at a bridge end that is less than 1 inch in total depth.

If a concrete expansion dam is to be placed at a bridge deck expansion joint, tape oil-resistant construction paper to the deck over the area to be covered by the dam before placing the tack coat and HMA across the joint.

Do not leave a vertical joint more than 0.15 foot high between adjacent lanes open to traffic.

The tack coat application rate must be the minimum residual rate specified in section 39-1.09C. For HMA placed on a deck seal, use the minimum residual rate specified for a PCC underlying surface.

HMA placed on a deck seal must be placed in at least 2 approximately equal layers. The 1st layer must be at least 1 inch thick after compaction. Protect the deck seal throughout all operations.

For placement of the 1st HMA layer on a deck seal:

1. Comply with the HMA application temperature recommended by the deck seal manufacturer.
2. Deliver and place HMA using equipment with pneumatic tires or rubber-faced wheels. Do not operate other vehicles or equipment on the bare deck seal.
3. Deposit HMA on the deck seal in such a way that the deck seal is not damaged. Do not windrow the HMA material on the bridge deck seal.
4. Place HMA in a downhill direction on bridge decks with grades over 2 percent.
5. Spreading equipment need not be self-propelled.

39-1.14 MISCELLANEOUS AREAS AND DIKES

The following specifications in section 39 do not apply to miscellaneous areas and dikes:

1. HMA construction process
2. HMA mix design requirements
3. Contractor quality control
4. Production start-up evaluation

Miscellaneous areas are outside the traveled way and include:

1. Median areas not including inside shoulders
2. Island areas
3. Sidewalks
4. Gutters
5. Gutter flares
6. Ditches
7. Overside drains
8. Aprons at the ends of drainage structures

Spread miscellaneous areas in 1 layer and compact to the specified lines and grades.

For miscellaneous areas and dikes:

1. Do not submit a JMF.
2. Choose the 3/8-inch or 1/2-inch HMA Type A and Type B aggregate gradations.
3. Minimum asphalt binder content must be 6.8 percent for 3/8-inch aggregate and 6.0 percent for 1/2-inch aggregate. If you request and if authorized, you may reduce the minimum asphalt binder content.
4. Choose asphalt binder Grade PG 70-10 or the same grade specified for HMA.

39-1.15 MINOR HOT MIX ASPHALT

39-1.15A GENERAL

39-1.15A(1) Summary

The following specifications in section 39 do not apply to minor HMA:

1. HMA construction process
2. HMA mix design requirements
3. Contractor quality control
4. Production start-up evaluation

39-1.15A(2) Definitions

Reserved

39-1.15A(3) Submittals

Reserved

39-1.15A(4) Quality Control and Assurance

Reserved

39-1.15B MATERIALS

The minimum asphalt binder content must be 6.8 percent for 3/8-inch aggregate gradation and 6.0 percent for 1/2-inch aggregate gradation.

Choose asphalt binder Grade PG 64-10, PG 64-16, or PG 70-10.

If you request and if authorized, you may reduce the minimum asphalt binder content.

Choose the 3/8-inch or 1/2-inch HMA Type A aggregate gradation.

39-1.15C CONSTRUCTION

Produce HMA at a central mixing plant.

Choose any method and equipment to spread and compact.

The surface must be:

1. Textured uniformly
2. Compacted firmly
3. Without depressions, humps, and irregularities

Smoothness specifications do not apply.

39-1.30 PAYMENT

Section 39-1.30 includes specifications for HMA payment. The weight of each HMA mixture designated in the Bid Item List must be the combined mixture weight.

If recorded batch weights are printed automatically, the bid item for HMA is measured by using the printed batch weights, provided:

1. Total aggregate and supplemental fine aggregate weight per batch is printed. If supplemental fine aggregate is weighed cumulatively with the aggregate, the total aggregate batch weight must include the supplemental fine aggregate weight.
2. Total asphalt binder weight per batch is printed.
3. Each truckload's zero tolerance weight is printed before weighing the 1st batch and after weighing the last batch.
4. Time, date, mix number, load number, and truck identification is correlated with a load slip.

5. Copy of the recorded batch weights is certified by a licensed weighmaster and submitted to the Engineer.

If tack coat, asphalt binder, and asphaltic emulsion are paid with separate contract items, their contract items are measured under section 92 or section 94.

The Department does not adjust the unit price for an increase or decrease in the tack coat quantity. Section 9-1.06 does not apply to tack coat.

Place hot mix asphalt dike of the type specified is measured along the completed length.

Place hot mix asphalt (miscellaneous areas) is measured as the in-place compacted area.

HMA dike is paid for as place hot mix asphalt dike of the type specified in the Bid Item List and by weight for hot mix asphalt.

HMA specified to be placed in miscellaneous areas is paid for as place hot mix asphalt (miscellaneous area) and by weight for hot mix asphalt.

If minor hot mix asphalt is paid by area, it is measured from the dimensions shown; final quantities shall reflect field adjustments made by the Resident Engineer.

Payment for tack coat for minor HMA is included in payment for minor hot mix asphalt or the bid item that requires minor HMA.

Geosynthetic pavement interlayer is measured for the actual pavement area covered.

The Contractor shall, at their expense retain a third-party testing laboratory as described in Section 39-1.06 to complete the testing necessary to prove material suitability. No costs shall be borne by the County as a result of this additional testing unless written approval is provided by the Resident Engineer prior to testing.

39-2 STANDARD CONSTRUCTION PROCESS

39-2.01 GENERAL

Section 39-2 includes specifications for HMA produced and constructed under the Standard construction process.

39-2.02 CONTRACTOR QUALITY CONTROL

39-2.02A Quality Control Plan

Establish, implement, and maintain a Quality Control (QC) Plan for HMA production and placement. The QC plan must describe the organization and procedures you will use to:

1. Control the quality characteristics
2. Determine when corrective actions are needed (action limits)
3. Implement corrective actions

When you submit the proposed JMF, submit the proposed QC plan. You and the Engineer must discuss the QC plan during the prepaving conference.

The QC plan must address the elements affecting HMA quality including:

1. Aggregate
2. Asphalt binder
3. Additives
4. Production
5. Paving

The Engineer reviews each QC plan within 5 business days from the submittal. Do not produce HMA until the Engineer authorizes the QC plan.

39-2.02B Quality Control Testing

Perform sampling and testing at the specified frequency for the quality characteristics shown in the following table:

Minimum Quality Control—Standard Construction Process

Quality characteristic	Test method	Minimum sampling and testing frequency	HMA type			
			A	B	RHMA-G	OGFC
Aggregate gradation[a]	California Test 202	1 per 750 tons and any remaining part	JMF ± Tolerance[b]	JMF ± Tolerance[b]	JMF ± Tolerance[b]	JMF ± Tolerance[b]
Sand equivalent (min)[c]	California Test 217		47	42	47	--
Asphalt binder content (%)	California Test 379 or 382		JMF ± 0.45	JMF ± 0.45	JMF ± 0.50	JMF ± 0.50
HMA moisture content (%, max)	California Test 226 or 370	1 per 2,500 tons but not less than 1 per paving day	1.0	1.0	1.0	1.0
Percent of maximum theoretical density (%)[d, e]	QC plan	2 per business day (min.)	91–97	91–97	91–97	--
Stabilometer value (min)[c, f]	California Test 366	One per 4,000 tons or 2 per 5 business days, whichever is greater				
No. 4 and 3/8" gradings			30	30	--	--
1/2" and 3/4" gradings			37	35	23	--
Air void content (%)[c, g]	California Test 367		4 ± 2	4 ± 2	TV ± 2	--
Aggregate moisture content at continuous mixing plants and RAP moisture content at continuous mixing plants and batch mixing plants[h]	California Test 226 or 370	2 per day during production	--	--	--	--
Percent of crushed particles coarse aggregate (%, min)	California Test 205	As designated in the QC plan. At least once per project				
One fractured face			90	25	--	90
Two fractured faces			75	--	90	75
Fine aggregate (%, min) (Passing no. 4 sieve and retained on no. 8 sieve.) One fractured face			70	20	70	90
Los Angeles Rattler (%, max)	California Test 211					
Loss at 100 rev.			12	--	12	12
Loss at 500 rev.			45	50	40	40

Flat and elongated particles (%, max by weight @ 5:1)	California Test 235		Report only	Report only	Report only	Report only
Fine aggregate angularity (%, min)	California Test 234		45	45	45	--
Voids filled with asphalt (%)[i] No. 4 grading 3/8" grading 1/2" grading 3/4" grading	California Test 367		 76.0–80.0 73.0–76.0 65.0–75.0 65.0–75.0	 76.0–80.0 73.0–76.0 65.0–75.0 65.0–75.0	Report only	--
Voids in mineral aggregate (% min)[i] No. 4 grading 3/8" grading 1/2" grading 3/4" grading	California Test 367		 17.0 15.0 14.0 13.0	 17.0 15.0 14.0 13.0	 -- -- 18.0–23.0 [j] 18.0–23.0 [j]	--
Dust proportion [i] No. 4 and 3/8" gradings 1/2" and 3/4" gradings	California Test 367		0.9–2.0 0.6–1.3	0.9–2.0 0.6–1.3	Report only	--
Smoothness	Section 39-1.12	--	12-foot straight-edge, must grind, and PI_0	12-foot straight-edge, must grind, and PI_0	12-foot straight-edge, must grind, and PI_0	12-foot straight-edge, must grind, and PI_0
Asphalt rubber binder viscosity @ 350 °F, centipoises	Section 39-1.02D	Section 39-1.04C	--	--	1,500–4,000	1,500–4,000
Asphalt modifier	Section 39-1.02D	Section 39-1.04C	--	--	Section 39-1.02D	Section 39-1.02D
CRM	Section 39-1.02D	Section 39-1.04C	--	--	Section 39-1.02D	Section 39-1.02D

[a] Determine combined aggregate gradation containing RAP under California Test 367.
[b] The tolerances must comply with the allowable tolerances in section 39-1.02E.
[c] Report the average of 3 tests from a single split sample.
[d] Required for HMA Type A, Type B, and RHMA-G if the specified paved thickness is at least 0.15 foot.
[e] Determine maximum theoretical density (California Test 309) at the frequency specified for Test Maximum Density under California Test 375, Part 5.D.
[f] California Test 304, Part 2.13.
[g] Determine the bulk specific gravity of each lab-compacted briquette under California Test 308, Method A, and theoretical maximum specific gravity under California Test 309.
[h] For adjusting the plant controller at the HMA plant.
[i] Report only if the adjustment for the asphalt binder content TV is less than or equal to ±0.3 percent from OBC value submitted on a *Contractor Hot Mix Asphalt Design Data* form.
[j] Voids in mineral aggregate for RHMA-G must be within this range.

For any single quality characteristic except smoothness, if 2 consecutive quality control test results do not comply with the action limits or specifications:

1. Stop production.
2. Notify the Engineer.
3. Take corrective action.
4. Demonstrate compliance with the specifications before resuming production and placement.

39-2.03 ACCEPTANCE CRITERIA

39-2.03A Testing

The Department samples for acceptance testing and tests for the quality characteristics shown in the following table:

HMA Acceptance—Standard Construction Process

Quality characteristic				Test method	HMA type			
					A	B	RHMA-G	OGFC
Aggregate gradation [a]				California Test 202	JMF ± tolerance [c]	JMF ± tolerance [c]	JMF ± tolerance [c]	JMF ± tolerance [c]
Sieve	3/4"	1/2"	3/8"					
1/2"	X [b]							
3/8"		X						
No. 4			X					
No. 8	X	X	X					
No. 200	X	X	X					
Sand equivalent (min) [d]				California Test 217	47	42	47	--
Asphalt binder content (%)				California Test 379 or 382	JMF ± 0.45	JMF ± 0.45	JMF ± 0.50	JMF ± 0.50
HMA moisture content (%, max)				California Test 226 or 370	1.0	1.0	1.0	1.0
Percent of maximum theoretical density (%) [e, f]				California Test 375	91–97	91–97	91–97	--
Stabilometer value (min)[d,g]				California Test 366				
No. 4 and 3/8" gradings					30	30	--	--
1/2" and 3/4" gradings					37	35	23	--
Air void content (%) [d, h]				California Test 367	4 ± 2	4 ± 2	TV ± 2	--
Percent of crushed particles				California Test 205				
Coarse aggregate (%, min)								
One fractured face					90	25	--	90
Two fractured faces					75	--	90	75
Fine aggregate (%, min) (Passing no. 4 sieve and retained on no. 8 sieve.)								
One fractured face					70	20	70	90
Los Angeles Rattler (%, max)				California Test 211				
Loss at 100 rev.					12	--	12	12
Loss at 500 rev.					45	50	40	40
Fine aggregate angularity (%, min)				California Test 234	45	45	45	--
Flat and elongated particles (%, max by weight @ 5:1)				California Test 235	Report only	Report only	Report only	Report only
Voids filled with asphalt (%) [i]				California Test 367				
No. 4 grading					76.0–80.0	76.0–80.0		
3/8" grading					73.0–76.0	73.0–76.0	Report only	--
1/2" grading					65.0–75.0	65.0–75.0		
3/4" grading					65.0–75.0	65.0–75.0		
Voids in mineral aggregate (% min) [i]				California Test 367				
No. 4 grading					17.0	17.0	--	--
3/8" grading					15.0	15.0	--	
1/2" grading					14.0	14.0	18.0–23.0 [j]	
3/4" grading					13.0	13.0	18.0–23.0 [j]	
Dust proportion [i]				California Test 367				
No. 4 and 3/8" gradings					0.9–2.0	0.9–2.0	Report only	--
1/2" and 3/4" gradings					0.6–1.3	0.6–1.3		

Smoothness	Section 39-1.12	12-foot straight-edge, must grind, and PI_0	12-foot straight-edge, must grind, and PI_0	12-foot straight-edge, must grind, and PI_0	12-foot straight-edge and must grind
Asphalt binder	Various	Section 92	Section 92	Section 92	Section 92
Asphalt rubber binder	Various	--	--	Section 92-1.01D(2) and section 39-1.02D	Section 92-1.01D(2) and section 39-1.02D
Asphalt modifier	Various	--	--	Section 39-1.02D	Section 39-1.02D
CRM	Various	--	--	Section 39-1.02D	Section 39-1.02D

[a] The Engineer determines combined aggregate gradations containing RAP under California Test 367.
[b] "X" denotes the sieves the Engineer tests for the specified aggregate gradation.
[c] The tolerances must comply with the allowable tolerances in section 39-1.02E.
[d] The Engineer reports the average of 3 tests from a single split sample.
[e] The Engineer determines percent of maximum theoretical density if the specified paved thickness is at least 0.15 foot under California Test 375, except the Engineer uses:

1. California Test 308, Method A, to determine in-place density of each density core instead of using the nuclear gauge in Part 4, "Determining In-Place Density By The Nuclear Density Device."
2. California Test 309 to determine maximum theoretical density instead of calculating test maximum density in Part 5, "Determining Test Maximum Density."

[f] The Engineer determines maximum theoretical density (California Test 309) at the frequency specified for Test Maximum Density under California Test 375, Part 5.D.
[g] California Test 304, Part 2.13.
[h] The Engineer determines the bulk specific gravity of each lab-compacted briquette under California Test 308, Method A, and theoretical maximum specific gravity under California Test 309.
[i] Report only if the adjustment for the asphalt binder content TV is less than or equal to ±0.3 percent from the OBC value submitted on a *Contractor Hot Mix Asphalt Design Data* form.
[j] Voids in mineral aggregate for RHMA-G must be within this range.

Quality Assurance testing frequencies shall comply with the Tulare County Quality Assurance Program.

For any single quality characteristic except smoothness, if test results do not comply with the specifications:

1. Stop production.
2. Take corrective action.
3. Take samples and split each sample into 4 parts in the Engineer's presence. Test 1 part for compliance with the specifications and submit 2 parts to the Engineer. The Department tests 1 part for compliance with the specifications and reserves and stores 1 parts.
4. Demonstrate compliance with the specifications before resuming production and placement.

The Department tests the density core you take from each 250 tons of HMA production. One additional core is taken and filed as a dispute core with the County. The Department determines the percent of maximum theoretical density for each density core by determining the density core's density and dividing by the maximum theoretical density.

If the specified total paved thickness is at least 0.15 foot and any layer is less than 0.15 foot, the Department determines the percent of maximum theoretical density from density cores taken from the final layer measured the full depth of the total paved HMA thickness.

Cores shall be taken from individual lifts provided they measure 0.15 foot or more in thickness.
*Cores shall be taken prior to allowing traffic on the new pavement.

Cores shall be labeled per Section 39-1.04F

Randomly select core locations for every 250 tons of hot mix asphalt placed according to Part 3, "Section B, "Test Site Location," of California Test 375, "Determining the In-Place Density and Relative Compaction of Hot Mix Asphalt Pavement Using Nuclear Gages."

For percent of maximum theoretical density, the Engineer determines a deduction for each test result outside the specifications using the reduced payment factors shown in the following table:

Reduced Payment Factors for Percent of Maximum Theoretical Density

HMA Type A and B and RHMA-G percent of maximum theoretical density	Reduced payment factor	HMA Type A and B and RHMA-G percent of maximum theoretical density	Reduced payment factor
91.0	0.0000	97.0	0.0000
90.9	0.0125	97.1	0.0125
90.8	0.0250	97.2	0.0250
90.7	0.0375	97.3	0.0375
90.6	0.0500	97.4	0.0500
90.5	0.0625	97.5	0.0625
90.4	0.0750	97.6	0.0750
90.3	0.0875	97.7	0.0875
90.2	0.1000	97.8	0.1000
90.1	0.1125	97.9	0.1125
90.0	0.1250	98.0	0.1250
89.9	0.1375	98.1	0.1375
89.8	0.1500	98.2	0.1500
89.7	0.1625	98.3	0.1625
89.6	0.1750	98.4	0.1750
89.5	0.1875	98.5	0.1875
89.4	0.2000	98.6	0.2000
89.3	0.2125	98.7	0.2125
89.2	0.2250	98.8	0.2250
89.1	0.2375	98.9	0.2375
89.0	0.2500	99.0	0.2500
< 89.0	Remove and replace	> 99.0	Remove and replace

39-2.04 TRANSPORTING, SPREADING, AND COMPACTING

Trucks trailers and beds shall be clean and free of debris prior to loading of asphalt materials. Do not use petroleum based products such as: kerosene, diesel fuel or cutback material to clean or coat the interior of the trailers and beds. Any trucks found to be out of specification may be rejected by the RE or their designated personnel at the Contractor's expense.

Do not use petroleum based products such as kerosene, diesel fuel or cutback materials to release HMA from placement and compaction equipment.

Do not pave HMA on wet pavement or a frozen surface.

You may deposit HMA in a windrow and load it in the paver if:

1. Paver is equipped with a hopper that automatically feeds the screed
2. Loading equipment can pick up the windrowed material and deposit it in the paver hopper without damaging base material
3. Activities for deposit, pickup, loading, and paving are continuous
4. HMA temperature in the windrow does not fall below 260 degrees F

HMA handled, spread, or windrowed must not stain the finished surface of any improvement, including pavement.

HMA must be free of:

1. Segregation
2. Coarse or fine aggregate pockets
3. Hardened lumps

Longitudinal joints in the top layer must match specified lane edges. Alternate the longitudinal joint offsets in the lower layers at least 0.5 foot from each side of the specified lane edges. You may request other longitudinal joint placement patterns.

Until the adjoining through lane's top layer has been paved, do not pave the top layer of:

1. Shoulders
2. Tapers
3. Transitions
4. Road connections
5. Driveways
6. Curve widenings
7. Chain control lanes
8. Turnouts
9. Turn pockets

If the number of lanes changes, pave each through lane's top layer before paving a tapering lane's top layer. Simultaneous to paving a through lane's top layer, you may pave an adjoining area's top layer, including shoulders. Do not operate spreading equipment on any area's top layer until completing final compaction.

If leveling with HMA is specified, fill and level irregularities and ruts with HMA before spreading HMA over the base, existing surfaces, or bridge decks. You may use mechanical equipment other than a paver for these areas. The equipment must produce uniform smoothness and texture. HMA used to change an existing surface's cross slope or profile is not paid for as HMA (leveling).

If placing HMA against the edge of existing pavement, sawcut or grind the pavement straight and vertical along the joint and remove extraneous material.

Pave HMA in maximum 0.25-foot thick compacted layers.

If the surface to be paved is both in sunlight and shade, pavement surface temperatures must be taken in the shade.

Spread HMA Type A and Type B at the atmospheric and surface temperatures shown in the following table:

Minimum Atmospheric and Surface Temperatures

Compacted layer thickness, feet	Atmospheric, °F		Surface, °F	
	Unmodified asphalt binder	Modified asphalt binder[a]	Unmodified asphalt binder	Modified asphalt binder[a]
< 0.15	55	50	60	55
0.15–0.25	45	45	50	50

[a] Except asphalt rubber binder.

Each paver spreading HMA must be followed by 3 rollers as follows:

1. One vibratory roller specifically designed to compact HMA. The roller must be capable of at least 2,500 vibrations per minute and must be equipped with amplitude and frequency controls. The roller's gross static weight must be at least 7.5 tons.

2. One oscillating type pneumatic-tired roller at least 4 feet wide. Pneumatic tires must be of equal size, diameter, type, and ply. The tires must be inflated to 60 psi minimum and maintained so that the air pressure does not vary more than 5 psi.
3. One steel-tired, 2-axle tandem roller. The roller's gross static weight must be at least 7.5 tons.

Each roller must have a separate operator. Rollers must be self-propelled and reversible.

If a vibratory roller is used as a finish roller, turn the vibrator off.

If the asphalt binder for HMA Type A and Type B is unmodified asphalt binder, complete:

1. First coverage of breakdown compaction before the surface temperature drops below 250 degrees F
2. Breakdown and intermediate compaction before the surface temperature drops below 200 degrees F
3. Finish compaction before the surface temperature drops below 150 degrees F

If the asphalt binder for HMA Type A and Type B is modified asphalt binder, complete:

1. First coverage of breakdown compaction before the surface temperature drops below 240 degrees F
2. Breakdown and intermediate compaction before the surface temperature drops below 180 degrees F
3. Finish compaction before the surface temperature drops below 140 degrees F

Rolling must leave the completed surface compacted and smooth without tearing, cracking, or shoving.

Do not allow traffic on new HMA pavement until its mid-depth temperature is below 160 degrees F and QC coring has been completed by the Contractor’s Laboratory.

If you request and if authorized, you may cool HMA Type A with water when rolling activities are complete. Apply water under section 17-3.

The Contractor shall be responsible for obtaining the specified in-place density and surface finish.

39-3 EXISTING ASPHALT CONCRETE

39-3.01 GENERAL

39-3.01A General

Section 39-3.01 includes general specifications for performing work on existing asphalt concrete facilities.

Work performed on existing asphalt concrete facilities must comply with section 15.

39-3.01B Materials

Not Used

39-3.01C Construction

Before removing a portion of an asphalt concrete facility, make a 2-inch deep saw cut to a true line along the limits of the removal area.

39-3.01D Payment

Not Used

39-3.02 REPLACE ASPHALT CONCRETE SURFACING

39-3.02A General

Section 39-3.02 includes specifications for replacing asphalt concrete surfacing

39-3.02B Materials

HMA to be used for replacing asphalt concrete surfacing must comply with Type A HMA as specified in section 39-2.

The grade of asphalt binder must be PG 64-10.

Tack coat must comply with section 39-1.02B.

39-3.02C Construction

Where replace asphalt concrete surfacing is shown, remove the full depth of the existing asphalt concrete surfacing and replace with HMA. The Engineer determines the exact limits of asphalt concrete surfacing to be replaced.

Replace asphalt concrete in a lane before the lane is specified to be opened to traffic.

Before removing asphalt concrete, outline the replacement area and cut neat lines with a saw or grind to full depth of the existing asphalt concrete. Do not damage asphalt concrete and base remaining in place.

If you excavate the base beyond the specified plane, replace it with HMA.

Do not use a material transfer vehicle for replacing asphalt concrete surfacing.

Before placing HMA, apply a tack coat as specified in section 39-1.09C.

Place HMA using method compaction as specified in section 39-2.

39-3.02D Payment

The payment quantity for replace asphalt concrete surfacing is the volume determined from the dimensions shown.

39-3.03 REMOVE ASPHALT CONCRETE DIKES

39-3.03A General

Section 39-3.03 applies to removing asphalt concrete dikes outside the limits of excavation.

39-3.03B Materials

Not Used

39-3.03C Construction

Reserved

39-3.03D Payment

Not Used

39-3.04 COLD PLANING ASPHALT CONCRETE PAVEMENT

39-3.04A General

Section 39-3.04 includes specifications for cold planning asphalt concrete pavement.

Cold planning asphalt concrete pavement includes the removal of pavement markers, traffic stripes, and pavement markings within the area of cold planning.

39-3.04B Materials

HMA for temporary tapers must be of the same quality that is used for the HMA overlay or comply with the specifications for minor HMA in section 39-1.15.

39-3.04C Construction

39-3.04C(1) General

Do not use a heating device to soften the pavement.

The cold planing machine must be:

1. Equipped with a cutter head width that matches the planing width unless a wider cutter head is authorized.
2. Equipped with automatic controls for the longitudinal grade and transverse slope of the cutter head and:
   2.1. If a ski device is used, it must be at least 30 feet long, rigid, and a 1-piece unit. The entire length must be used in activating the sensor.
   2.2. If referencing from existing pavement, the cold planing machine must be controlled by a self-contained grade reference system. The system must be used at or near the centerline of the roadway. On the adjacent pass with the cold planing machine, a joint-matching shoe may be used.
3. Equipped to effectively control dust generated by the planing operation
4. Operated such that no fumes or smoke is produced.

Replace broken, missing, or worn machine teeth.

If you do not complete placing the HMA surfacing before opening the area to traffic, you must:

1. Construct a temporary HMA taper to the level of the existing pavement.
2. Place HMA during the next work shift.
3. Submit a corrective action plan that shows you will complete cold planing and placement of HMA in the same work shift. Do not restart cold planing activities until the corrective action plan is authorized.

39-3.04C(2) Grade Control and Surface Smoothness

Install and maintain grade and transverse slope references.

The final cut must result in a neat and uniform surface.

The completed surface of the planed pavement must not vary more than 0.02 foot when measured with a 12-foot straightedge parallel with the centerline. With the straightedge at right angles to the centerline, the transverse slope of the planed surface must not vary more than 0.03 foot.

Where lanes are open to traffic, the drop-off of between adjacent lanes must not be more than 0.15 foot.

39-3.04C(3) Planed Material

Remove cold planed material concurrently with planing activities such that the removal does not lag more than 50 feet behind the planer.

39-3.04C(4) Temporary HMA Tapers

If a drop-off between the existing pavement and the planed area at transverse joints cannot be avoided before opening to traffic, construct a temporary HMA taper. The HMA temporary taper must be:

1. Placed to the level of the existing pavement and tapered on a slope of 30:1 (horizontal:vertical) or flatter to the level of the planed area
2. Compacted by any method that will produce a smooth riding surface

Completely remove temporary tapers before placing permanent surfacing.

39-3.04D Payment

Not Used

39-3.05 REMOVE BASE AND SURFACING

39-3.05A General

Section 39-3.05 includes specifications for removing base and asphalt concrete surfacing.

39-3.05B Materials

Not Used

39-3.05C Construction

Where base and surfacing are described to be removed, remove base and surfacing to a depth of at least 6 inches below the grade of the existing surfacing. Backfill resulting holes and depressions with embankment material under section 19.

39-3.05D Payment

The payment quantity for remove base and surfacing is the volume determined from the dimensions shown.

39-3.06–39-3.08 RESERVED

^^

CALTRANS STANDARD PLANS

2024 EDITION

STANDARD PLANS LIST

Project Plans to be supplemented with applicable 2024 Caltrans Standard Plans including updates made by the following Revised Standard Plans (RSPs):

ABBREVIATIONS, LINES, SYMBOLS AND LEGEND

A3A	Abbreviations (Sheet 1 of 3)
A3B	Abbreviations (Sheet 2 of 3)
A3C	Abbreviations (Sheet 3 of 3)
A10A	Lines and Symbols (Sheet 1 of 5)
A10B	Lines and Symbols (Sheet 2 of 5)
A10C	Lines and Symbols (Sheet 3 of 5)
A10D	Lines and Symbols (Sheet 4 of 5)
A10E	Lines and Symbols (Sheet 5 of 5)

PAVEMENT MARKERS, TRAFFIC LINES, AND PAVEMENT MARKINGS

A24D	Pavement Markings – Word
A24F	Pavement Markings – Crosswalks

APPLICABILITY OF INDIRECT SOURCE RULE (ISR)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

SOLID WASTE DISPOSAL AND RECYCLING REPORT

CEM-4401 (REV 01/2018)

1

Project Name		Type of Work	Ongoing Report ☐	Final Annual Report ☐
Contract Number	Co/Rte/PM	Report for Calendar Year _____ [Note: Separate reports needed for each calendar year]		
Contractor Name		Phone Number	Fax	
Street Address		City, State, Zip		

Contractor Certification: I certify under penalty of perjury that the information provided in this form is complete and accurate.

Signature	Print Name and Title	Date of Report

2

***NOTE: Earth and rock material must not be reported as either waste material diverted from or disposed of in landfills.**

NAME AND LOCATION OF RECYCLING OR DISPOSAL FACILITY (OR ENTER "REUSED" FOR MATERIALS GENERATED AND REUSED ON THIS JOB)	CHECK IF LANDFILL	CHECK IF RECYCLER	TYPE OF MATERIAL (Enter a letter for each type on a separate line): A = Asphalt Concrete; C = Concrete; M = Metal; D = Mixed Debris; W = Wood/Cleared Vegetation; O = Other [Please Describe][I] ***See note above**	TYPE OF ACTIVITY (Enter one activity per line) 1 = Source - Separated Materials Recycling 2 = On-Site Reuse 3 = Mixed Debris Recycling 4 = Reuse of Salvageable Items 5 = Disposal at Landfill or Transfer to Station 6 = Other [Please Describe][II]	AMOUNT TAKEN TO LANDFILL (TONS)	AMOUNT DIVERTED FROM LANDFILLS TO A RECYCLING FACILITY (TONS)	AMOUNT GENERATED AND THEN REUSED ON THIS JOB (TONS)

[I] Describe Material:

[II] Describe the Activity:

3

I have reviewed the information submitted in this report for completeness.

Resident Engineer's Name (Please Print)	Phone Number
Signature	Date

COPY DISTRIBUTION: Original - Resident Engineer Copy - District Construction Office Copy - District Recycling Coordinator (http://www.dot.ca.gov/design/lap/landscape-design/recon/dist_recyc_coord.html)

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For alternate format information, contact the Forms Management Unit at (916) 445-1233, TTY 711, or write to Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

PERMITS

- **Kings County**

  – Encroachment Permit

COUNTY OF TULARE

STATE OF CALIFORNIA

_____

BID PROPOSAL (BID) TO THE BOARD OF SUPERVISORS

FOR CONSTRUCTING: WEST GOSHEN EMERGENCY WATER SUPPLY CONSOLIDATION PROJECT

Name of Bidder _____

Telephone Number _____

Business Mailing Address _____

Place of Business _____

TO THE BOARD OF SUPERVISORS OF THE COUNTY OF TULARE:

The undersigned, as bidder, declares that the only persons or parties interested in this Bid as principals are those named herein, that this Bid is made without collusion with any other person, firm or corporation; that the bidder has carefully examined the location of the proposed work and the annexed proposed form of contract; and the bidder proposes and agrees if this Bid is accepted, that the bidder will contract with the County of Tulare, in the form of the copy of the contract annexed hereto, to provide all necessary machinery, tools, apparatus and other means of construction, and to do all the work and furnish all the material specified in the contract, in the manner and time therein prescribed, and according to the requirements of the Engineer as therein set forth, and the bidder will take in full payment therefore the following unit prices, to wit:

TULARE COUNTY RESOURCE MANAGEMENT AGENCY

WEST GOSHEN EMERGENCY WATER SUPPLY CONSOLIDATION PROJECT
Base Bid

No.	Items with Unit Price Written in Words	Unit	Quantity	Unit Price	Amount
1	Mobilization, Demobilization, and Cleanup _____per lump sum	LS	1		
2	Utility Locating and Potholing _____per lump sum	LS	1		
3	Traffic Control _____per lump sum	LS	1		
4	12" Ductile Iron Pipeline _____per linear feet	LF	4,895		
5	8" PVC Pipeline _____per linear feet	LF	3,510		
6	8" CMLC Steel Piping _____per linear feet	LF	290		
7	16" x 1/4" Wall Steel Casing _____per linear feet	LF	200		
8	6" Fire Hydrant Assembly _____per each	EA	15		
9	12" Gate Valve Assembly with valve casing and cover _____per each	EA	12		
10	8" Gate Valve Assembly with valve casing and cover _____per each	EA	9		
11	2" Air Release Valve Assembly _____per each	EA	4		
12	2" Blow-off Assembly _____per each	EA	1		

No.	Items with Unit Price Written in Words	Unit	Quantity	Unit Price	Amount
13	4" Blow-off Assembly _____per each	EA	3		
14	1" Meters _____per each	EA	57		
15	1" Service Assembly - Short Service _____per each	EA	10		
16	1" Service Assembly - Long Service _____per each	EA	8		
17	2" Service Assembly - Short Service Manifold _____per each	EA	10		
18	2" Service Assembly - Long Service Manifold _____per each	EA	7		
19	Point of Connection to Existing Main - Detail A _____per each	EA	1		
20	Point of Connection to Existing Main - Detail B _____per each	EA	3		
21	Private Service Lines Beyond Meter - 1" Poly _____per linear feet	LF	585		
22	Private Service Lines Beyond Meter - 2" Poly _____per linear feet	LF	12,430		
23	Furnish and Install 1" Backflow Preventers _____per each	EA	57		
24	Pressure Testing and Disinfection _____per lump sum	LS	1		
25	Pavement Sawcutting _____per linear feet	LF	420		

No.	Items with Unit Price Written in Words	Unit	Quantity	Unit Price	Amount
26	Pavement Restoration _____per square feet	SF	1,050		
27	Pavement Striping _____per lump sum	LS	1		
28	Driveway Restoration _____per square feet	SF	750		
29	Construction Staking _____per lump sum	LS	1		

TOTAL Base Bid (In words and numbers) _____

_____

In case of a discrepancy between words and figures, the words prevail. In case of a discrepancy between unit prices and total set forth for a unit basis item, the unit price prevails, except as provided in (a) or (b), as follows:

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

(b) (Decimal Errors) If the product of the entered unit 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 percentagewise the unit price or item total in the County's estimate of cost.

If both the unit price and the item total are unreadable or otherwise unclear, or are omitted, the bid may be deemed non-responsive. Likewise if the item total for a lump sum item is unreadable or otherwise unclear, or is omitted, the bid may be deemed non-responsive unless the project being bid has only a single item and a clear, readable total bid is provided.

Symbols such as commas and dollar signs will be ignored and have no mathematical significance in establishing any unit price or item total or lump sums. Written unit prices, item totals and lump sums will be interpreted according to the number of digits and, if applicable, decimal placements. Cents symbols also have no significance in establishing any unit price or item total since all such figures are assumed to be expressed in dollars and/or decimal fractions of a dollar. Bids on lump sum items are item totals only; if any unit price for a lump sum item is included in a bid and it differs from the item total, the item total prevails.

The foregoing provisions for the resolution of specific discrepancies cannot be so comprehensive as to cover every omission, inconsistency, error or other irregularity which may occur in a bid. **Any situation not specifically provided for will be determined in the discretion of the Board of Supervisors, and such discretion will be exercised in the manner deemed by the Board of Supervisors to best carry out its duty to award only to the lowest responsive, responsible bidder. The decision of the Board of Supervisors respecting the amount of a bid, or the existence or treatment of a discrepancy in a bid is final.**

If this Bid is accepted and the undersigned is awarded the Contract, given notice of the award and presented with the Contract for signature as provided in the Special Provisions, and fails to sign and deliver the Contract to the Clerk of the Board of Supervisors, within the time and manner required under the Special Provisions, together with all required insurance certificates, bonds, powers of attorney, certificate of authority, insurance rating, financial statements, proofs of licensing, and any other documents required by the Special Provisions to be filed with the signed Contract, then the Board of Supervisors may, in its sole discretion, determine that the bidder has abandoned its bid, whereupon the Board's acceptance of this Bid is deemed frustrated, and such bid security as may accompany this Bid shall become due and owing to the County of Tulare as liquidated damages.

Accompanying this Bid is a _____ for

$_____. (Insert the words “Cash”, "Cashier’s Check", "Certified Check" or “Bidders Bond", as the case may be, and an amount equal to at least ten percent (10%) of the total bid).

The undersigned understands that the Board of Supervisors retains the option to reject any or all bids.

Further, as part of the Bid, the Contractor provides the following information and representations:

ADDENDA CERTIFICATION STATEMENT

This Bid is submitted with respect to the changes in the contract documents included in Addendum

Number(s) _____.

Name of Contractor _____

Warning. If an addendum or addenda have been issued by the County and not noted as being received by the bidder, then this Bid will be rejected.

The above Addenda Certification Statement is part of the Bid. Signing the Bid on the signature portion thereof shall also constitute signature of this Addenda Certification Statement.

BIDDER DISQUALIFICATION QUESTIONNAIRE

In accordance with Public Contract Code Section 10162, the Bidder hereby completes, under penalty of perjury, the following questionnaire:

> Has the bidder, or any officer of the bidder, or any employee who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

Yes _____No _____

If the answer is yes, explain the circumstances in the following space:

Note: The above Questionnaire and Statement are part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature under penalty of perjury of this Questionnaire and Statement.

- - - - - - - -

PUBLIC CONTRACT CODE SECTION 9204 STATEMENT

AB 626, approved by the Governor of the State of California on September 29, 2016, created a new Public Contract Code section 9204, which specifies new procedural requirements for claims submitted by a contractor on any public works project.

The full text of the current legislation is set forth below:

§ 9204. Legislative findings and declarations regarding timely and complete payment of contractors for public works projects; claims process

(a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.

(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.

(c) For purposes of this section:

(1) “Claim” means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

(A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.

(B) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.

(C) Payment of an amount that is disputed by the public entity.

(2) “Contractor” means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.

(3)(A) “Public entity” means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.

(B) “Public entity” shall not include the following:

(i) The Department of Water Resources as to any project under the jurisdiction of that department.

(ii) The Department of Transportation as to any project under the jurisdiction of that department.

(iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.

(iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.

(v) The Military Department as to any project under the jurisdiction of that department.

(vi) The Department of General Services as to all other projects.

(vii) The High-Speed Rail Authority.

(4) “Public works project” means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.

(5) “Subcontractor” means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.

(d)(1)(A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.

(B) The claimant shall furnish reasonable documentation to support the claim.

(C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.

(2)(A) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity 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 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 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 to applicable procedures outside this section.

(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on their own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.

(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

(g) This section applies to contracts entered into on or after January 1, 2017.

(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

(i) This section shall remain in effect only until January 1, 2027, and as of that date is repealed, unless a later enacted statute that is enacted before January 1, 2027, deletes or extends that date.

BIDDER DISQUALIFICATION ACKNOWLEDGMENT

In accordance with Public Contract Code section 10232, the Contractor hereby states under penalty of perjury that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two-year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

Note: The above Questionnaire and Statement are a part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature, under penalty of perjury, of this Questionnaire and Statement.

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

BIDDER DISQUALIFICATION QUESTIONNAIRE

In conformance with Public Contract Code section 10285.1 (Chapter 376, Stats. 1985), the bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder has ___ , has not ___ been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code section 1101, with any public entity, as defined in Public Contract Code section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

Note: The bidder must place a check mark after "has" or "has not" in one of the blank spaces provided. The above Statement is part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Statement. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

NON-COLLUSION AFFIDAVIT

(Title 23 United States Code Section 112 and
Public Contract Code Section 7106)

NON-COLLUSION DECLARATION TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

The undersigned declares:

I am the _____of_____, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and

correct and that this declaration is executed on _____ [date],

at _____[city], _____[state]

_____.
(Signature)

(THE BIDDER'S EXECUTION ON THE SIGNATURE PORTION OF THIS BID SHALL ALSO CONSTITUTE AN ENDORSEMENT AND EXECUTION OF THOSE CERTIFICATIONS WHICH ARE A PART OF THIS BID)

EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION

The bidder_____, proposed

subcontractor _____, hereby certifies that

he has _____, has not _____ , participated in a previous contract or subcontract subject to the equal opportunity clauses, as required by Executive Orders 10925, 11114, or 11246, and that, where required, he has filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of $10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b) (1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

Signing this Bid on the signature portion thereof shall also constitute signing this certificate.

DEBARMENT AND SUSPENSION CERTIFICATION

TITLE 2, CODE OF FEDERAL REGULATIONS, PART 180

The bidder, under penalty of perjury, certifies that, except as noted below, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, manager:

- is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency;
- has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal agency within the past 3 years;
- does not have a proposed debarment pending; and
- has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years; and
- has not been suspended or debarred by Tulare County pursuant to Part V, Chapter 15 of the Tulare County Ordinance Code.

If there are any exceptions to this certification, insert the exceptions in the following space.

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Notes: Providing false information may result in criminal prosecution or administrative sanctions. The above certification is part of the Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Certification.

SUBCONTRACTOR LIST

In accordance with the provisions of Section 2-1.10 of the Standard Specifications, Public Contract Code section 4104, and Labor Code section 1771 et seq., each bidder must list below the name and location of place of business of each subcontractor who will perform a portion of the contract work in an amount in excess of one-half of one percent of the total bid or ten thousand dollars ($10,000), whichever is greater, as well as the subcontractor's Department of Industrial Relations' ("DIR") registration number, and State contractor's license number. In each instance, describe the nature and extent of the work to be sublet. On the Subcontractor List (next page), you must submit each subcontracted bid item number and corresponding percentage with your bid. **Failure to submit a properly completed Subcontractor List form may result in a nonresponsive bid**. Note: (1) pursuant to Public Contract Code section 4104(a)(2), an inadvertent error in listing the California contractor license number provided pursuant to this paragraph is not grounds for filing a bid protest or grounds for considering the bid non-responsive if the corrected contractor's license number is submitted to the County by the prime contractor within twenty-four (24) hours after the bid opening and provided the corrected contractor's license number corresponds to the submitted name and location for that subcontractor; (2) pursuant to Labor Code section 1771.1(c), an inadvertent error in listing a subcontractor who is not registered with the DIR in a Bid, is not grounds for filing a bid protest or grounds for considering the bid non-responsive, provided that any of the following apply:

(1) The subcontractor is registered prior to the bid opening.

(2) Within twenty-four (24) hours after the bid opening, the subcontractor is registered and has paid the penalty registration fee specified in subparagraph (E) of paragraph (2) of subdivision (a) of Labor Code section 1725.5.

The General Contractor to whom the contract is awarded will not be permitted, without the written consent of the Tulare County Director of the Resource Management Agency or designee, to substitute any person as subcontractor in place of the subcontractor designated in the original bid, or to permit any subcontract to be assigned or transferred, or to allow it to be performed by anyone other than the original subcontractor. Consent to the substitution of another person as subcontractor is only permitted in accordance with Public Contract Code section 4107.

The failure of the Contractor to specify a subcontractor for any portion of the contract work in excess of one-half of one percent of the total contract price is deemed to indicate that the Contractor intends to perform such portion himself. The subletting or subcontracting of work for which no subcontractor was designated in the original bid and which is in excess of one-half of one percent of the total contract price, will be allowed only in accordance with Public Contract Code section 4109.

Subcontractor Information				**Work Portion**		
Name	**Address**	**Lic. No.**	**DIR Registration No.**	**Bid Item No.**	**Description**	**% of Bid Item**
				a)		
				b)		
				c)		
				d)		
				a)		
				b)		
				c)		
				d)		
				a)		
				b)		
				c)		
				d)		
				a)		
				b)		
				c)		
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				d)		
				a)		
				b)		
				c)		
				d)		
				a)		
				b)		
				c)		
				d)		

Further, as part of this Bid, the contractor agrees to the terms, and supplies the information required in the attached "Bidders Bond" or other security instruments (if such bond or instrument is required). Such Bond or instrument is considered part of the bid.

The names of all persons interested in the foregoing Bid 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, vice-president, secretary, and treasurer thereof; if a co-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 names in full.

_____

_____

_____

Licensed in conformance with an act providing for the registration of Contractors,

License No. _____ Classification(s) _____

Federal Employer Identification Number By my signature on this bid I certify, under penalty of perjury under the laws of the State of California, that the foregoing questionnaire and statements of Public Contract Code sections 10162, 10232 and 10285.1 are true and correct and that the bidder has complied with the requirements of Section 8103 of the Fair Employment and Housing Commission Regulations (Chapter 5, Title 2 of the California Administrative Code). By my signature on this Bid, I further certify, under penalty of perjury under the laws of the State of California and the United States of America, that the Noncollusion Affidavit required by title 23 United States Code section 112 and Public Contract Code section 7106; and the title 2 Code of Federal Regulations part 180 Debarment and Suspension Certification, are true and correct.

Date:_____ _____

_____

_____
Signature of bidder

NOTE: If bidder is a corporation, the legal name of the corporation is 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 partner or partners authorized to sign contracts on behalf of the co-partnership; and if bidder is an individual, his or her signature must be placed above. If signature is by an agent, other than an officer of the corporation or a member of a partnership, a Power of Attorney must be on file with the Board of Supervisors prior to opening bids or submitted with the bid; otherwise, the bid will be disregarded as non-responsive and unauthorized.

Business Address _____

Place of Business _____

Date:_____

COUNTY OF TULARE
STATE OF CALIFORNIA

BIDDER'S BOND

KNOW ALL MEN BY THESE PRESENT:

That we_____

_____

_____, AS PRINCIPAL, and

_____

_____

_____ as SURETY,

are held and firmly bound unto the County of Tulare, hereinafter called the Obligee, in the sum of TEN PERCENT (10%) OF THE TOTAL AMOUNT OF THE BID of the Principal above named, submitted by said Principal to the Board of Supervisors, County of Tulare, 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 of $_____

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has submitted the above-mentioned bid to the Board of Supervisors, County of Tulare, for certain construction specifically described as follows, for which bids are to be opened at Visalia, California, on _____, _____, for construction of WEST GOSHEN EMERGENCY WATER SUPPLY CONSOLIDATION PROJECT.

NOW, THEREFORE, if the aforesaid Principal is awarded the Contract, given the required notice of award and presented with the Contract for signature and, within the time and manner required under the Special Provisions, executes and files it with the Clerk of the Board of Supervisors in the prescribed form and in accordance with the bid, together with all insurance certificates, bonds, powers of attorney, certificates of authority and financial statements, proofs of licensing, and any other documents required by the Special Provisions to be filed with the executed Contract, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect.

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 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 _____, _____.

_____(SEAL)
_____(SEAL)
_____(SEAL)
Principal

_____(SEAL)
_____(SEAL)
_____(SEAL)
Surety

Note - Signature of those executing for the surety must be properly acknowledged or notarized.

COUNTY OF TULARE

STATE OF CALIFORNIA

CONTRACT

THIS CONTRACT, entered into as of this _____ day of _____, by and between the COUNTY OF TULARE, a political subdivision of the State of California hereinafter referred to as "County", and _____, hereinafter referred to as "Contractor", and hereinafter mutually as “the Parties”;

W I T N E S S E T H:

WHEREAS, County desires to carry out a project of constructing of WEST GOSHEN EMERGENCY WATER SUPPLY CONSOLIDATION PROJECT, (hereinafter referred to as the "Work") in Tulare County.

WHEREAS, Contractor currently holds a Class (A) license from the State of California and must maintain the license from contract award through Contract acceptance (Public Contract Code § 20103.5) and is willing and able to perform the Work on the terms and conditions set forth herein.

WHEREAS, County publicly opens and reads bids at the time and place shown on the *Notice to Bidders*.

WHEREAS, County has offered this project through the statutorily prescribed bidding process, and through such process awarded this Contract to the lowest responsible and responsive bidder.

WHEREAS, should bid rigging, bidder collusion, and other fraudulent activities occur, Contractor must call the U.S. Department of Transportation (DOT) toll-free hotline number (800) 424-9071. The service is available twenty-four (24) hours a day, seven (7) days a week and is confidential and anonymous. The hotline is part of the DOT’s effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General.

NOW, THEREFORE, BE IT AGREED as follows:

ARTICLE I. For and in consideration of the terms, conditions and covenants hereinafter contained, Contractor will, at its own cost and expense, do all the work and furnish all the materials, except such work or material, if any, which the terms herein specifically provide will be furnished by County, necessary to construct and complete in good workmanlike and substantial manner and to the satisfaction of County's Assistant Director of Public Works or designee, of installing water mains, metered service connections, private service lines, and backflow preventers.

Contractor will furnish such work and material in accordance with the terms and conditions set forth in County's Special Provisions (hereinafter referred to as the "Special Provisions") issued for this contract and project, which Special Provisions are incorporated herein by reference as if set out in full. Further, Contractor will furnish such work and material in accordance with the Standard Specifications dated 2024 (hereinafter referred to as the "Standard Specifications") and the Standard Plans dated 2024 (hereinafter referred to as the "Standard Plans"), issued by the Department of Transportation of the State of California, and the project plans described below, which the accepted Bid Proposal (Bid) to the Board of Supervisors by the Contractor, including all statements, bonds, and certificates required to be summited thereunder, Standard Specifications, Standard Plans, and project plans are incorporated herein by reference as if set out in full.

The project plans for this project were approved November 5, 2024 and are entitled:

STATE OF CALIFORNIA; COUNTY OF TULARE
PROJECT PLANS FOR CONSTRUCTION OF

WEST GOSHEN EMERGENCY
WATER SUPPLY CONSOLIDATION PROJECT

ARTICLE II. Contractor agrees to receive and accept the following prices as full compensation from County, for furnishing all materials, for doing all the work contemplated and embraced in this Contract, for all costs, losses, or damages arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its acceptance by the Board of Supervisors of the County of Tulare, and for all risks of every description connected with the work; also for all expenses incurred by or in consequence of the suspension or discontinuance of work and for well and faithfully completing the work, and the whole thereof in the manner and according to the Contract Documents as defined in Article XI, and the requirements of the Engineer under them, and in accordance with the bid of Contractor, the terms, conditions, and representations of which bid are incorporated herein by reference as if set out in full:

Item No.	Items with unit price written in words	Unit of Measure	Estimated Quantity	Unit Price	Amount

(ITEMS IN CONTRACT WILL BE THE SAME AS THOSE IN THE BID)

ARTICLE III. Contractor will be licensed as required by law and will be in compliance with the regulations of the Contractors' State License Board. Contractor will possess a Class __(A)__ license from Contract award through Contract acceptance (Public Contract Code §20103.5). Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board, 9835 Goethe Road, Sacramento, California. Mailing Address: P.O. Box 26000, Sacramento, California 95826. Contractor will also comply with the licensing requirements specified in the "Notice to Bidders" which is specifically incorporated herein by this reference as if set out in full.

ARTICLE IV. Contractor agrees to comply with the prevailing wage laws as set forth in Labor Code sections 1770-1780 unless an applicable federal labor law imposes a higher wage or stricter requirement, in which case the higher wage or stricter requirement will apply, and Contractor agrees to be responsible for the compliance by all subcontractors with Labor Code section 1776 in accordance with Public Contract Code section 6109, with respect to subcontractors which are ineligible to perform work on public works projects pursuant to Labor Code section 1777.1 or 1777.7:

1. The Contractor must not allow any such subcontractor to work on this project.

2. Contractor will repay to County any money paid to any such subcontractor allowed to work on this project.

3. Contractor will pay the wages of the workers of any such subcontractor allowed to work on this project.

The general prevailing wage rates and any applicable changes to these wage rates are available:

1. From the Department of Industrial Relations' website

2. On file at the Resource Management Agency Permit Center, 5961 South Mooney Boulevard, Visalia, Ca 93277, which will be made available to any interested person on request.

3. From the County Public Works website (see link in the Notice to Bidder section).

Contractor must post the general prevailing wage rates at a prominent place at each job site in accordance to section 7-1.02K(2) of the Caltrans Standard Specifications and Labor Code section 1773.2.

ARTICLE V. County does hereby engage Contractor as an independent contractor to provide the materials and to do the work according to the terms and conditions herein contained and referred to, for the prices aforesaid, and hereby contracts to pay the same at the time, in the manner and upon the conditions in the Special Provisions which are a part of this contract. The Parties agree that the Contractor and any of its agents, employees, or officers cannot be considered agents, employees, or officers of the County.

ARTICLE VI. Contractor will neither sell, assign, transfer, convey or encumber this Contract or any right or interest therein or thereunder, or suffer or permit any such sale, assignment, transfer, conveyance or encumbrance to occur by operation of law, without the prior written consent of County.

ARTICLE VII. This Contract may only be amended or modified, as permitted by the Public Contract Code, by written consent to such amendment or modification by each party.

ARTICLE VIII. The termination provisions of the Standard Specifications are incorporated by reference.

ARTICLE IX. Any and all notices or other matters required or permitted by this Contract or by law to be served on, given to, or delivered to either party hereto shall be in writing and shall be deemed duly served, given or delivered when personally delivered to the party to whom addressed, or in lieu of such personal service, when deposited in the United States mail, certified return receipt requested, addressed as follows:

Engineer: Hernan Beltran, P.E.
Chief Engineer
Resources Management Agency
County of Tulare
5961 South Mooney Boulevard
Visalia, CA 93277

Contractor: _____
_____
_____
_____

ARTICLE X. Before approval of a Contract by County, Contractor must file with the Clerk of the Board of Supervisors evidence of insurance as set forth in 7-1.06 of the Special Conditions which outlines the minimum scope, specifications, and limits of insurance required under this Contract. Additional insured endorsements required as outlined below cannot be used to reduce limits available to County as an additional insured from Contractor 's full policy limits. Insurance policies cannot be used to limit liability or to limit the indemnification provisions and requirements of this Contract as set forth in Section 7-1.05 of the Special Provisions or act in any way to reduce the policy coverage and limits available from the insurer(s). If Contractor fails to maintain or renew coverage, or to provide evidence of renewal, then County may consider that failure a material breach of this Contract. County may also withhold any payment otherwise due to Contractor for failure to provide evidence of renewal until Contractor provides such evidence.

ARTICLE XI. The Complete Contract between the parties consists of this Contract, Notice to Bidders, the Special Provisions, the 2024 Caltrans Standard Specifications, the project plans, the 2024 Caltrans Standard Plans, the Technical Specifications, all Addenda, and the accepted Bid to the Board of Supervisors by the Contractor, including all statements, bonds, and certificates required to be submitted thereunder. Any prior agreements, promises, negotiations, or representations not expressly set forth in the Complete Contract are of no force or effect.

ARTICLE XII. Should there be any conflict between the terms of this Contract and the Bid of the Contractor, then this Contract shall control and nothing herein shall be considered as an acceptance of any conflicting terms.

ARTICLE XIII. In lieu of the attorney's notice of approval provided for in Section 8-1.04 of the Standard Specifications, the Engineer will deliver a written Notice to Proceed to the Contractor following execution of the Contract on behalf of the Board of Supervisors. Contractor will begin

work within fifteen (15) calendar days from the date the Notice to Proceed is issued, in full compliance with said Section 8-1.04 of the Standard Specifications.

Complete all work within thirty (30) working days beginning on the fifteenth (15th) calendar day after the date shown on the Notice to Proceed. Contractor agrees to pay as liquidated damages and not as a penalty, the amount established pursuant to Section 8-1.10A of the Special Provisions, County and Contractor agree that if the Work is not completed within the Contract Time, then County's damages would be extremely difficult or impracticable to determine and that the amount specified is a reasonable estimate of the reasonable sum for such damages. Liquidated damages for all work is set at Two Thousand Three hundred dollars ($2,300) per day, for each and every calendar days' delay in finishing the work in excess of the number of working days prescribed above. County may deduct any liquidated damages due from Contractor from any amounts otherwise due to Contractor under the Contract Documents. This provision does not limit any right or remedy of County in the event of any other default of Contractor other than failing to complete the Work within the Contract Time.

ARTICLE XIV. This Contract reflects the contributions of both parties and accordingly the provisions of Civil Code section 1654 do not apply to address and interpret any uncertainty.

ARTICLE XV. Unless specifically set forth, the parties to this Contract do not intend to provide any other party with any benefit or enforceable legal or equitable right or remedy.

ARTICLE XVI. This Contract shall be interpreted and governed under the laws of the State of California without reference to California conflicts of law principles. The parties agree that this contract is made in and will be performed in Tulare County, California.

ARTICLE XVII. The failure of either party to insist on strict compliance with any provision of this Contract is not considered a waiver of any right to do so, whether for that breach or any subsequent breach. The acceptance by either party of either performance or payment shall not be considered to be a waiver of any preceding breach of the Contract by the other party.

ARTICLE XVIII. The Recitals and the Exhibits to this Contract are fully incorporated into and are integral parts of this Contract.

ARTICLE XIX. This Contract is subject to all applicable laws and regulations. If any provision of this Contract is found by any court or other legal authority, or is agreed by the parties, to be in conflict with any code or regulation governing its subject, the conflicting provision shall be considered null and void. If the effect of nullifying any conflicting provision is such that a material benefit of the Contract to either party is lost, the Contract may be terminated at the option of the affected party. In all other cases the remainder of the Contract shall continue in full force and effect.

ARTICLE XX. Each party will execute any additional documents and perform any further acts which may be reasonably required to effect the purposes of this Contract.

ARTICLE XXI. DISPUTES AND DISPUTE RESOLUTION.

(A) **Informal Negotiations.** The Parties shall make their best efforts to informally resolve disputes that arise out of or relate to this Contract. To foster a spirit of cooperation and efficiency in the administration of this Contract, disputes between the Parties shall first be subjected to a good faith negotiations process as follows:

(1) The aggrieved Party shall give the other Party, as soon as possible after the event giving rise to the concern, written notice setting forth, with specificity, the issues to be resolved. Notice shall be provided consistent with the terms of the Contract. Said notice shall suggest a date, time and place for the negotiations session. The Parties may jointly decide to meet at another time and place; provided, however, the Parties agree that such negotiations session shall commence within fifteen (15) calendar days after the date that the original notice was given to the applicable Party, unless the Parties agree that there is good cause to extend this time limit.

(2) The Parties agree that the negotiations session(s), including proceedings or discussions concerning the proposed negotiations session(s), are to be considered confidential settlement

negotiations for the purpose of all state and federal rules protecting disclosures made during such conferences from later discovery or use in evidence. All conduct, statements, promises, offers, views and opinions, oral or written, made during a negotiations session by any Party or a Party's agent, employee, or attorney shall be deemed to be confidential and shall not be subject to discovery or admissible for any purpose, including impeachment, in any litigation or other proceeding, including mediation and non-binding arbitration, involving the Parties; provided, however, that evidence otherwise subject to discovery or otherwise admissible is not excluded from discovery or admission into evidence simply as a result of it having been used in connection with the negotiations session(s).

(3) Absent mutual consent of the Parties, if a noticed negotiations session fails to commence within the fifteen (15) calendar day period, or if a reasonable attempt to schedule or reschedule the negotiations session has not been made within those fifteen (15) calendar days, then the negotiations obligation imposed under this Section shall be deemed to have been satisfied and the Parties shall be free to pursue their rights and remedies under this Section 22, unless the reason for such failure to convene a negotiations session is the refusal of the Party asserting a claim to participate in the negotiations session, in which event said claim will be deemed to have been waived.

(4) If the dispute is not resolved to the satisfaction of the Parties within thirty (30) calendar days after the first negotiations session, then upon the written request of either Party (a "Mediation Request"), the dispute may be submitted to non-binding mediation in accordance with this Article.

(B) **Mediation**. If a dispute arising out of or relating to this Contract is not resolved through the above-described negotiations process, then within thirty (30) days after notice is provided through a Mediation Request, the Parties shall participate in non-binding mediation administered by a mediator to help mediate and settle the dispute as soon as practicable. The mediation shall proceed as follows:

(1) The mediation shall be held at a mutually agreeable location within Tulare County, California.

(2) The Parties shall mutually select the mediator, but in case of disagreement, then the Parties will select the mediator by lot from among two nominations provided by each Party.

(3) The mediator shall meet with and hear presentations by the Parties as soon as practicable after appointment.

(4) Mediation will be conducted consistent with California Evidence Code Sections 1115-1128. The mediator shall owe a professional duty to both Parties, and shall be barred from testifying in any litigation concerning any information obtained or disclosed in the course of the mediation.

(5) Each side shall bear its own costs and attorneys' fees, and one-half of all fees and expenses of the mediator.

(6) Unless otherwise agreed upon by the Parties in writing, the mediation shall be completed within thirty (30) days of the selection of the mediator.

(7) The Parties agree that the mediation, including proceedings or discussions concerning the mediation, is to be considered a confidential settlement negotiation for the purpose of all state and federal rules protecting disclosures made during such conferences from later discovery or use in evidence. All conduct, statements, promises, offers, views and opinions, oral or written, made during the mediation by any Party or a Party's agent, employee, or attorney shall be deemed to be confidential and shall not be subject to discovery or admissible for any purpose, including impeachment, in any litigation or other proceeding, including and non-binding arbitration, involving the Parties; provided, however, that evidence otherwise subject to discovery or admissible is not excluded from discovery or admission into evidence simply as a result of it having been used in connection with the mediation.

(8) The mediator's decision shall not be binding on or admissible against either Party. If mediation fails to resolve the dispute, then either Party may pursue litigation to resolve the dispute.

ARTICLE XXII. Contractor acknowledges that this Contract is subject to filing obligations pursuant to Unemployment Insurance Code section 1088.8. Accordingly, County has an obligation to file a report with the Employment Development Department, which report will include the Contractor's full name, social security number, address, the date this contract was executed, the total amount of the contract, the contract's expiration date or whether it is ongoing. Contractor agrees to cooperate with County to make such information available and to complete DE Form 542. Failure to provide the required information may, at County's option, prevent approval of this Contract, or be grounds for termination by County.

ARTICLE XXIII. This Contract represents the entire Contract between Contractor, and County as to its subject matter and no prior oral or written understanding shall be of any force or effect. No part of this Contract may be modified without the written consent of both parties.

ARTICLE XXIV. Contractor expressly understands and agrees that County is dependent upon certain Federal and/or State and/or local funding to pay the services provided in this Contract. If such Federal and/or State and/or local funding is discontinued and/or reduced, County has the right to terminate the Contract. In either event, County shall provide Contractor with at least thirty (30) days prior written notice of such termination.

ARTICLE XXV. Quality Assurance - The County uses a Quality Assurance Program (QAP) to ensure a material is produced to comply with the Contract. Contractor may examine the records and reports of tests the County and/or the Materials Testing Consultant performs, if available.

Schedule work to allow time for QAP review and compliance.

ARTICLE XXVI. The Parties may sign this Contract in counterparts, each of which shall be deemed an original and all of which taken together form one and the same agreement. A signed copy or signed counterpart of this Agreement delivered by facsimile, email, or other means of electronic transmission shall be deemed to have the same legal effect as delivery of a signed original or signed copy of this Contract.

ARTICLE XXVII. The Parties may sign this Contract by any means of manual or electronic signatures. The Parties agree that the electronic signature of a Party, whether digital or encrypted, is intended to authenticate this Contract and to have the same force and effect as a manual signature. For purposes of this Contract, the term "electronic signature" means any electronic sound, symbol, or process attached to or logically associated with this Contract and executed and adopted by a Party with the intent to sign this Contract, including facsimile, portable document format, or email electronic signatures, pursuant to the California Uniform Electronic Transactions Act (Cal. Civ. Code §§ 1633.1 to 1633.17), as it may be amended from time to time

IN WITNESS WHEREOF, the parties to these presents have hereunto set their hand the year and date first above written.

"County"

BOARD OF SUPERVISORS
COUNTY OF TULARE
STATE OF CALIFORNIA

By _____
Chair of the Board
of Supervisors

Attest: Jason T. Britt, County Administrative Officer/
Clerk of the Board of Supervisors

By _____
Deputy Clerk

Dated _____
APPROVED AS TO FORM,
County Counsel

By _____
Deputy County Counsel

Matter No. _____

"Contractor"

By _____

Title _____

By _____

Title _____

Pursuant to Corporations Code section 313, County policy requires that contracts with a corporation shall be signed by both (1) the chairman of the Board of Directors, the president or any vice-president (or another officer having general, operational responsibilities), and (2) the secretary, any assistant secretary, the chief financial officer, or any assistant treasurer (or another officer having recordkeeping or financial responsibilities), unless the contract is accompanied by a certified copy of a resolution of the corporation's Board of Directors authorizing the execution of the contract. Similarly, pursuant to California Corporations Code section 17703.01, County policy requires that contracts with a Limited Liability Company be signed by at least two managers, unless the contract is accompanied by a certified copy of the articles of organization stating that the LLC is managed by only one manager.

Licensed in accordance with an act
providing for the registration of contractors.

License No. _____

Federal Employer Identification

Number _____

STATUTORY PERFORMANCE BOND PURSUANT TO

California Public Contract Code
Section 20129

KNOW ALL MEN BY THESE PRESENTS:

That _____ (Hereinafter called the Principal), as Principal and _____, a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____, (hereinafter called the Surety), as Surety, are held and firmly bound unto the County of Tulare, (hereinafter called the Obligee) in the amount of _____ ($ _____), for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written Contract with the Obligee, dated the __th day of _____, _____ for construction of WEST GOSHEN EMERGENCY WATER SUPPLY CONSOLIDATION PROJECT which Contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THE OBLIGATION IS SUCH, that if said Principal shall faithfully perform and fulfill all the undertakings, covenants, terms, and conditions of said Contract during the original term of the Contract and any extension thereof, with or without notice to the Surety, and during the life of any guarantee required under the contract, and shall also perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized extensions or modifications of said contract that may hereafter be made, notice of said extensions or modifications to the Surety being hereby waived; then the above obligation shall be void. Otherwise, said obligation shall remain in full force and effect.

Whenever Obligee declares Principal to be in default under the Contract, then the Surety will remedy the default pursuant to the Contract, or will promptly do one of the following, at the Obligee's option:

(1) Undertake through its agents or independent contractors reasonably acceptable to the Obligee, to complete the Project in accordance with all terms and conditions in the Contract, including without limitation, all obligations with respect to payments, warranties, guarantees, and liquidated damages, and with no requirement for a "take-over" or similar agreement"; or

(2) Permit the Obligee to complete the Project in any manner consistent with California law and reimburse the Obligee for all costs it incurs in completing the Project, and in correcting, repairing, or replacing any defects in materials, equipment or workmanship, which do not conform to the Contract.

Surety expressly agrees that the Obligee may reject any contractor or subcontractor that Surety may propose in fulfillment of its obligations in the event of default by the Principal. Surety will not utilize Principal in completing the Project or accept a bid from the Principal for completion of the Work if the Obligee, when declaring the Principal in default, notifies Surety of the Obligee's objection to Principal's further participation in the completion of the Project.

Surety's obligations hereunder are independent of the obligations of any other surety for the performance of the construction work on this Project, and suit may be brought against Surety and such other sureties, jointly and severally, or against any one or more of them, or against less than all of them without impairing the Obligee's rights against the others.

No right of action will accrue on this bond to or for the use of any person or corporation other than the Obligee or its successors or assigns. If Obligee sues upon this bond, then Surety will pay reasonable attorney's fees and costs incurred by the Obligee in such suit, irrespective of the amount of this bond.

Witness our hands this _____ day of _____, _____.

_____
Principal Seal

_____
By

_____
Surety Seal

_____
By

_____
Agency of Record

Note: Bond surety must be admitted to transact surety insurance in the State of California.

STATUTORY PAYMENT BOND PURSUANT TO

California Civil Code
Sections 9550 through 9566

KNOW ALL MEN BY THESE PRESENTS:

That, _____.(hereinafter called the Principal), as Principal, and _____ a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____, (hereinafter called the Surety), as Surety, are held and firmly bound unto the County of Tulare (hereinafter called the Obligee), in the amount of _____ ($_____), for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the __th day of _____, _____ for construction of WEST GOSHEN EMERGENCY WATER SUPPLY CONSOLIDATION PROJECT, to which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, its heirs, executors, administrators, successors, or assigns, or subcontractor, shall fail to pay any person or persons named in Civil Code section 9100; or fail to pay for any materials, provisions, or other supplies, 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 work or labor thereon of any kind; or shall fail to deduct, withhold, and pay over to the Employment Development Department, any amounts required to be deducted, withheld, and paid over by Unemployment Insurance Code section 13020 with respect to work and labor thereon of any kind, then said Surety will pay for the same, in an amount not exceeding the amount herein above set forth, and in the event suit is brought upon this bond, also will pay such reasonable attorneys' fees as shall be fixed by the court, awarded and taxed as provided in California Civil Code section 9550 et. seq.

This bond shall inure to the benefit of any person named in California Civil Code section 9100 giving such person or his/her assigns a right of action in any suit brought upon this bond.

It is further stipulated and agreed that the Surety of this bond shall not be exonerated or released from the obligation of the bond by any change, extension of time for performance, addition, alteration or modification in, to, or of any contract, plans, or specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described; or pertaining or relating to the furnishing of labor, materials, or equipment therefor; nor by any change or modification of any terms of payment or extension of time for payment pertaining or relating to any scheme or work of improvement herein above described; nor by any rescission or attempted rescission of the contract, agreement or bond; nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond; nor by any fraud practiced by any person other than the claimant seeking to recover on the bond; and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given; and under no circumstances shall the Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the Obligee and the Principal or on the part of any obligee named in such bond; that the sole condition of recovery shall be that the claimant is a person described in California

Civil Code section 9100, and who has not been paid the full amount of his or her claim; and that the Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned.

Witness our hands this _____ day of_____, _____.

_____
Principal Seal

_____
By

_____
Surety Seal

_____
By

_____
Agency of Record

_____
Agency Address

Note: Bond surety must be admitted to transact surety insurance in the State of California

CERTIFICATION CONCERNING WORKERS' COMPENSATION INSURANCE

STATE OF CALIFORNIA)
) SS
COUNTY OF TULARE)

I am aware of the provisions of Labor Code section 3700 which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Contract.

Date_____

_____
CONTRACTOR

CONSTRUCTION OF WEST GOSHEN EMERGENCY WATER SUPPLY CONSOLIDATION PROJECT

CONTRACT DOCUMENT CHECKLIST

The Contractor must deliver to the County with the Contract the following items:

1. The signed Contract (digital copy acceptable). The Contract must be signed by both the company president or vice president **and** the company secretary or treasurer (the two officers of the company cannot be the same person) with the Contractors State License Board number and Federal Employer Identification Number.

2. The Statutory Performance Bond Pursuant to California Public Contract Code section 20129 and the Statutory Payment Bond Pursuant to California Civil Code Sections 9550 through 9566 (forms included herein), with either County Clerk's certificates or copies of power of attorney.

3. Certification Concerning Workers' Compensation Insurance.

4. Certificate(s) of Insurance in compliance with the requirements of section 7-1.06 of the Special Provisions including general liability, automobile and workers' compensation (a sample form is included).

5. Evidence that the Contractor possesses a current, valid Contractors State License required to perform the work under this Contract. A copy of the Contractor's license is sufficient.

CALIFORNIA WATER SERVICE

NEW BUSINESS CONSOLIDATION PROJECT
WEST GOSHEN EMERGENCY WATER SUPPLY CONSOLIDATION PROJECT

GENERAL NOTES:

1. Inspection of all materials and installation for pipeline, hydrants and services must be made by California Water Service. Telephone: (559) 624–1650 at least 48 hours before starting work on water facilities.
2. Contact Underground Service Alert at (800) 642–2444 at least 48 hours prior to the commencement of this project.
3. Place a continuous wire and strip of detector tape over all pipe and extend up into all valve boxes. Tracer wire is required on all pipe.
4. For details of typical thrust block installation, see latest revision of drawing CW–435.
5. Protect underground flexible couplings, bare steel, MJxMJ sleeves, and all bolts (including stainless steel) as follows:
   a. The entire area of the fitting must be dry and free of dust, dirt, and other foreign matter. Rust or other foreign matter must be removed by scraping or wire brushing. Wiping with a dry clean cloth may be necessary to remove the particles from brush cleaning. Any oil or grease must be removed by using a low residue, volatile petroleum solvent before application of grease and wrapping.
   b. The exposed area should be coated with a heavy coating of Metalguard 301 grease by the glove method to a thickness of at least 1/4".
   c. Firmly wrap the entire grease area with one layer, half lapped of a woven glass filament mesh (Res or Bit Wrap, 4" wide).
   d. Apply a second layer of Metalguard 301 grease on top of the glass filament by the glove method to a thickness of at least 1/4".
   e. Firmly wrap the entire grease area with a second layer, half lapped of the woven glass filament mesh.
   f. Cover the entire mesh wrapped area of the fitting with a third and final coating at least 1/4" thick of Metalguard 301 grease by the glove method.
   g. Firmly apply 2 layers of polywrap, half lapped over all areas of the coated and wrapped fitting. Backfilling may follow immediately after this wrapping.
6. No valve covers or meter boxes are to lie in sidewalks, cross gutter, curb or driveways. Each service should also be located to provide protection to the meter box from auto traffic and parking.
7. The exact location of each service to be determined at the time of installation to avoid conflicts with other utilities. Therefore, the number of long, short and split services may vary. Preferred CWS location to be staked and installed by contractor. Any relocations after installation will be at contractor's expense.
8. Services shall be installed at least 10 feet horizontally from sewer laterals and at least 4 feet horizontally from any storm drain structure.
9. Location of blow–off in new street area will terminate where street improvement ends.
10. Services installed across street area will need import backfill when government agency's compaction requirements cannot be met with native backfill.
11. It is the responsibility of the contractor to verify the exact location and depth of all existing and proposed facilities prior to water main installation.
12. The list of materials for this project is for CWS estimating and reference purposes only and is not intended as a full take–off of material required.
13. This water plan design is based on incomplete and unapproved improvement plans. Therefore, sewers, storm drains and street grading conflicts may occur.
14. Contractor to ensure air in the pipeline is removed using existing outlets, such as fire hydrants and blowoffs. Contractor is responsible for installing air releases if existing outlets are insufficient.
15. Facilities separation:
   A. Water main shall be installed at least 10 feet horizontally from and one foot vertically above any parallel pipeline conveying sewage (untreated, primary, or secondary), disinfected secondary recycled water, or hazardous fluids. Center a full nominal laying length of pipe at crossings.
   B. Water main shall be installed at least 4 feet horizontally from and one foot vertically above any pipeline conveying tertiary recycled water or storm drainage.
   C. At crossings, water main shall be constructed no less than 45–degrees to and at least one foot vertically above any pipelines indicated in A and B above.
   D. No connection joints shall be made in the water main within eight (8) horizontal feet of crossing any pipelines indicated in A and B above.
   E. Water main shall not be installed within 100 horizontal feet of any sanitary landfill, wastewater disposal pond, or hazardous waste disposal site.
   F. Water main shall not be installed within 25 horizontal feet of any cesspool, septic tank, sewage leach field, seepage pit, underground hazardous material storage tank, or groundwater recharge project site.
   G. Water main, fire hydrants, fire services and meter boxes shall be installed at least 5 feet horizontally from any dry utilities and structures.

   The minimum separation distances set forth in this section shall be measured from the nearest outside edge of each pipe barrel.
16. All work shall comply with Cal Water specifications for materials, installation, disinfection and dechlorination per latest revision drawing CW–832.
17. Trench backfill and paving shall conform to trench section details and all governing agency requirements.
18. Any easements and rights–of–way which may be necessary or reasonably appropriate for the extension will be conveyed or caused to be conveyed by the applicant.
19. ⓞ = Indicates fire hydrant (Visalia)

    Limits of CWS ownership for each hydrant:
    1 – 6 Inch Fire Hydrant (See Below)
    1 – 6 Inch Outlet Tee PO, DI
    1 – 6 Inch Gate Valve PO
    3 – 6 Inch Restraint PO Gaskets
    1 – Valve Casing & Cover Assembly
    +/– 10 Feet of 6 Inch Ductile Iron Pipe
    1 – 6x42 Inch Fire Hydrant Bury FLGxMJ
    1 – 6x12 Inch Fire Hydrant Extension
    1 – Set 3/4" x 3–1/2" ∯304 SS Bolts & Nuts, and Gaskets for Hydrant
    1 – Set 3/4" x 3–1/2" SS Bolts & Nuts, and Gaskets for Hydrant Break–off

    Polywrap Tubing, PVC Tape, Line Guard and Misc. Coating Material.

    IF FIELD CONDITIONS OR FIRE PROTECTION AGENCY REQUIRE AN ALTERNATIVE INSTALLATION, THE OUTLET TEE AND GATE VALVE MAY BE REPLACED WITH:
    1 – 6 Inch Outlet Tee POxFLG, DI
    1 – 6 Inch Gate Valve FLGxPO
    1 – 6 Inch Gasket for Flanged Joint
    1 – Set 3/4" x 3–1/2" ∯304 SS Bolts & Nuts, and Gaskets

FIRE HYDRANT:

Residential: CLOW 950 2–1/2 & 4–1/2
Commercial: CLOW 960 (2) 2–1/2 & 4–1/2

(The fire chief will make the final choice of fire hydrant head with Cal Water approval.)

A break–off check valve may be required if specified by district personnel. Use Clow Model LB400, hydrant guard or approved equal.

PROJECT SPECIFIC NOTES

20. Use PVC 1°± deflection and 5°± deflection with high deflection couplings to achieve proper radius for curves and proper angles for ells. Do not deflect pipe at fittings.

21. Approximate location for point of connection from service lateral to house is shown on plans. Point of Connection to existing plumbing shall be field verified. Connection to existing spigots and on–site piping to also be field verified and shall be connected to the service lateral by contractor.

PROJECT SPECIFIC NOTES CONT'D

22. CWS limits of ownership and responsibility shall terminate at the end of each meter before the BFP and within the public right–of–way. All future costs of all testing, repair, or replacement will be borne by the customer/property owner.

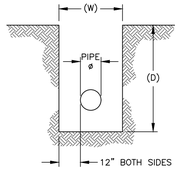
23. Pressure losses and low pressure may be experienced for long service runs. it shall be the responsibility of the property owner to provide the necessary appurtenances to provide adequate pressure at the property.

24. All gates/fences shall be protected in place. All service laterals shall be bored under existing fences/gates. Location of service laterals shall be installed per plan unless determined otherwise in the field.

25. All hydrant heads and all ARV enclosures to be painted yellow for visibility. Color type and coating shall be approved by CWS.

26. All existing striping impacted by improvements shall be restored by the contractor.

27. The contractor shall field verify the final placement of the on–site water laterals so that there are no conflicts with any vegetation or trees.



TRENCH NOTES FOR TIE–IN:

TRENCH WIDTH (W) SHALL BE ONE PIPE DIAMETER PLUS 12" ON EACH SIDE OF THE PIPE. (E.G. A 6" OR 8" MAIN REQUIRES A 30" TRENCH).

TRENCH LENGTH (L) SHALL BE 14' (MIN). (10' FOR TIE–IN PLUS 2' EXPOSURE OF EXISTING AND NEW MAINS).

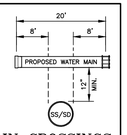
TRENCH DEPTH (D) SHALL BE 12" (MIN) BELOW BOTTOM OF MAIN.

CONTRACTOR SHALL PROVIDE TRENCH SHORING PER OSHA STANDARDS.

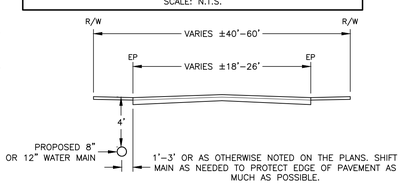
CONTRACTOR SHALL BE RESPONSIBLE FOR EMBEDMENT BACKFILL, TRENCH BACKFILL, COMPACTION TO REQUIREMENTS, AND FINAL PAVEMENT RESTORATION.

CROSSING (TYPICAL)

- USE SOLID STICK OF PIPE CENTERED.
- NO CONNECTION JOINTS SHALL BE MADE IN THE WATER MAIN WITHIN EIGHT (8) HORIZONTAL FEET OF THE CROSSING.
- MINIMUM ONE FOOT (1') VERTICAL SEPARATION BETWEEN TOP/BOTTOM OF MAIN AND TOP/BOTTOM OF SS/SD.
- MINIMUM 2.5' OF COVER TO ALSO BE MAINTAINED IF CROSSING ABOVE UTILITY.

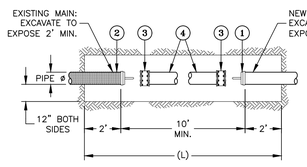


TYP. SEWER & STORM DRAIN CROSSINGS
SCALE: N.T.S.



TYPICAL STREET CROSS SECTION
N.T.S.

NOTE: IF UNFORESEEN CIRCUMSTANCES OR FIELD CONDITIONS ARISE THAT REQUIRE ALTERNATE OR ADDITIONAL MATERIALS FOR THE TIE–IN TO THE EXISTING SYSTEM, THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THIS MATERIAL TO THE COMPANY TO COMPLETE THE TIE–IN.



TIE–IN DETAIL "A"
N.T.S.

1. CONTRACTOR SHALL INSTALL NEW MAIN AND ADJUST FROM NOMINAL LINE AND GRADE TO MATCH EXISTING FACILITIES AT THIS LOCATION. THE CONTRACTOR SHALL INSTALL A TEMPORARY CAP AND BLOWOFF AT THIS LOCATION.

CALIFORNIA WATER SERVICE WILL TIE THE NEW MAIN FROM THIS LOCATION.

2. EXISTING MAIN, 12" DUCTILE IRON PIPE

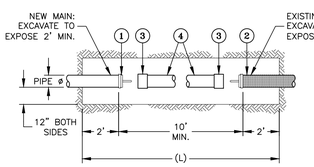
THE CONTRACTOR SHALL PROVIDE CALIFORNIA WATER SERVICE WITH THE FOLLOWING MATERIALS FOR THE TIE–IN AT AVENUE 308.

3. 1 – 12" SOLID SLEEVE MJ, 10" SLEEVE (2 TOTAL)

4. 10' – 12" DUCTILE IRON PIPE

NOTE: IN ADDITION, THE CONTRACTOR SHALL PROVIDE: MISC.MATERIAL AND EXCAVATION EQUIPMENT (I.E. EXCAVATOR/BACKHOE) REQUIRED TO COMPLETE THE TIE–IN SUCH AS, BUT NOT LIMITED TO: PROTECTION COATING MATERIAL FOR PIPE & FITTINGS, LINEGUARD TAPE, CONCRETE FOR THRUST BLOCKS, EMBEDMENT BACKFILL AROUND AND OVER THE PIPE, FINAL BACKFILL TO MEET COMPACTION REQUIREMENTS, PAVEMENT REPLACEMENT AND EQUIPMENT NECESSARY TO FACILITATE THE TIE–IN INCLUDING BUT NOT LIMITED TO EXCAVATION & DE–WATERING.

NOTE: IF UNFORESEEN CIRCUMSTANCES OR FIELD CONDITIONS ARISE THAT REQUIRE ALTERNATE OR ADDITIONAL MATERIALS FOR THE TIE–IN TO THE EXISTING SYSTEM, THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THIS MATERIAL TO THE COMPANY TO COMPLETE THE TIE–IN.



TIE–IN DETAIL "B" AT (3) LOCATIONS
N.T.S.

1. CONTRACTOR SHALL INSTALL NEW MAIN AND ADJUST FROM NOMINAL LINE AND GRADE TO MATCH EXISTING FACILITIES AT THIS LOCATION. THE CONTRACTOR SHALL INSTALL A TEMPORARY CAP AND BLOWOFF AT THIS LOCATION.

CALIFORNIA WATER SERVICE WILL TIE THE NEW MAIN FROM THIS LOCATION.

2. EXISTING MAIN, 8" PVC C–900 PIPE

THE CONTRACTOR SHALL PROVIDE CALIFORNIA WATER SERVICE WITH THE FOLLOWING MATERIALS FOR THE TIE–IN IT WILL MAKE AT ROAD 52 AT (2) LOCATIONS AND MARKHAM ROAD.

3. 1 – 8" "CERTAINTEED" PVC CLOSURE COUPLING (2 TOTAL)

4. 10' – 8" PVC C–900 PIPE

NOTE: IN ADDITION, THE CONTRACTOR SHALL PROVIDE: MISC.MATERIAL AND EXCAVATION EQUIPMENT (I.E. EXCAVATOR/BACKHOE) REQUIRED TO COMPLETE THE TIE–IN SUCH AS, BUT NOT LIMITED TO: PROTECTION COATING MATERIAL FOR PIPE & FITTINGS, LINEGUARD TAPE, CONCRETE FOR THRUST BLOCKS, EMBEDMENT BACKFILL AROUND AND OVER THE PIPE, FINAL BACKFILL TO MEET COMPACTION REQUIREMENTS, PAVEMENT REPLACEMENT AND EQUIPMENT NECESSARY TO FACILITATE THE TIE–IN INCLUDING BUT NOT LIMITED TO EXCAVATION & DE–WATERING.

DRAWING INDEX

CONSOLIDATION AGREEMENT NOTES

- FUNDED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES UNDER THE SMALL COMMUNITY DROUGHT RELIEF PROGRAM
- EXECUTED AGREEMENT: 4600015101

SURVEY NOTES

- THE INFORMATION SHOWN HEREON WAS GATHERED BY A FIELD SURVEY PERFORMED BY BLAIR, CHURCH & FLYNN IN JUNE, 2023.
- TOPOGRAPHIC SURVEY IS BASED ON THE CALIFORNIA COORDINATE SYSTEM (CCS) NAD83, ZONE #4. CNPT #13 COORDINATES ARE GRID COORDINATES. DISTANCES ARE GROUND DISTANCES IN U.S. SURVEY FEET. MULTIPLY BY A FACTOR OF 0.999945070393 ABOUT CNPT #13 TO OBTAIN GRID DISTANCES.

SITE BENCHMARK

- ALL ELEVATIONS ARE BASED ON NAVD88 AND DERIVED FROM AN AVERAGED GPS OBSERVATION UTILIZING THE LEICA SMARTNET NETWORK.TULARE COUNTY BENCHMARK, INDEX #10579, FND. BRAS CAP LABELED "D68–308". RECORELEVATION: 282.012' NVGD29, 284.722' NAVD88 WAS COLLECTED AS BCF #10606, EL: 278.08' NAVD88. TO CONVERT TOPOGRAPHY ELEVATIONS TO MATCH TULARE COUNTY NVGD29 DATUM ADD 3.93' TO ELEVATIONS. TO CONVERT TOPOGRAPHY ELEVATIONS TO MATCH TULARE COUNTY NAVD88 DATUM ADD 6.64' TO ELEVATIONS.

HATCHING LEGEND

PROPOSED PRIVATE EASEMENT BETWEEN LANDOWNERS FOR SERVICE LATERAL

APPROXIMATE DRIVEWAY LOCATION

SERVICE CONNECTIONS

NOTE:
"OPTIONAL PARCELS" NOTED BELOW SHALL BE VERIFIED BY THE COUNTY OF TULARE PRIOR TO THE INSTALLATION OF THE METER. ALL EASEMENTS INCLUDING EASEMENTS FOR ANY"OPTIONAL PARCELS" SHALL BE IN PLACE PRIOR TO INSTALLING SERVICE LATERALS. ALL PARCELS TO BE CONFIRMED BY THE COUNTY OF TULARE.

CONFIRMED PARCELS(APN)

073–150–018, 073–150–017, 073–150–003, 073–150–015, 073–150–016, 073–150–005, 073–150–006, 073–150–007, 073–150–010, 073–022–009, 073–022–008, 073–022–007, 073–050–002, 073–050–001, 073–050–009, 073–050–003, 073–040–036, 073–060–029, 073–060–028, 073–060–027, 073–050–012, 073–050–014.

OPTIONAL PARCELS(APN)

073–150–009, 073–050–007, 073–050–006, 073–060–025, 073–050–010, 073–060–037, 073–060–030, 073–060–034.

APPROVED BY: DATE:

LARRY MICARI, CHAIR
COUNTY OF TULARE BOARD OF SUPERVISORS

APPROVED BY: DATE: 10/22/24

REED SCHENKE, P.E., DIRECTOR
COUNTY OF TULARE BOARD OF SUPERVISORS

PIPELINE CROSSING INFORMATION

AT WATER MAIN CROSSINGS IN CONFLICT WITH OTHER FACILITIES: When the water main is in conflict with existing facilities or proposed facilities that require more than a 2 foot adjustment from the nominal 4 feet of cover, a fabricated steel cement mortar lined and cement mortar coated offset will be installed at the crossing per CWS standards.

* DENOTES CL&C OFFSET & PIPE REQUIRED

①* FINISHED GRADE ELEV. = 262.4
48" IRR. CULVERT(CANAL) INVERT ELEV. = 256.2
INSTALL 16" STEEL CASING UNDER 48" IRR. CULVERT.
w/ 11.2' COVER w/ 8" CL&C STEEL PIPE. PC. MK. "X", PER DETAIL "F". SEE PROFILE A–A

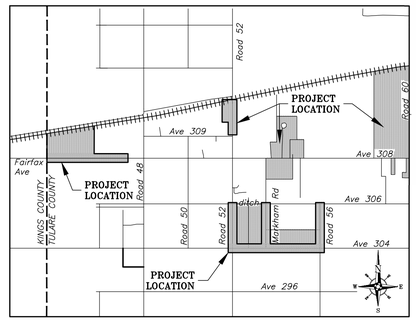
②* FINISHED GRADE ELEV. = 264.6
48" IRR. CULVERT(CANAL) INVERT ELEV. = 258.0
INSTALL 16" STEEL CASING UNDER 48" IRR. CULVERT.
w/ 11.2' COVER w/ 8" CL&C STEEL PIPE. PC. MK. "X", PER DETAIL "F". SEE PROFILE A–A

Ⓔ FINISHED GRADE ELEV. = VERIFY
ELECTRICAL/COMMUNICATION LINE INVERT ELEV. = VERIFY
INSTALL 8" PVC w/ 2.5' MIN. COVER & 1' MIN. SEPARATION OR UNDER w/ 4' COVER & 1' MIN. SEPARATION.

LEGEND:

-/-/-/-/-/- TO BE ABANDONED
GAS GAS LINE
T(P) TELECOMMUNICATIONS LINE
FO FIBER OPTIC
OE OVERHEAD ELEC. LINES
E ELECTRIC LINE
COMM COMMUNICATION LINE
WATER LINE
CENTER LINE
PROPERTY LINE/ ROW
EASEMENT (PROPOSED)
EASEMENT (EXISTING)
RETAINING WALL
APN = ASSESSORS PARCEL NUMBER
= CATCH BASIN
FL = FLOW LINE
EOP = EDGE OF PAVEMENT
Ⓔ = ELECTRICAL MANHOLE
SD = STORM DRAIN MANHOLE
S = SEWER MANHOLE
T = TELECOM MANHOLE
= TEE
= ELBOW, 45°
= ELBOW, 90°
= BLOWOFF (PROPOSED)
= BLOWOFF (EXISTING)
= GATE VALVE (PROPOSED)
= GATE VALVE (EXISTING)
= REDUCER (PROPOSED)
= REDUCER (EXISTING)
= SOLID PLUG
= FIRE HYDRANT (PROPOSED)
= FIRE HYDRANT (EXISTING)
= BUTTERFLY VALVE
= CHECK VALVE
= FLEX CPLG.
WM = WATER METER (PROPOSED)
WM = WATER METER (EXISTING)

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



VICINITY MAP
Not to Scale

BILL OF MATERIALS

12" MAIN

4895'–12" DUCTILE IRON PIPE
5385'–LINEGUARD TAPE
5385'–TRACER WIRE #12AWG SOLID COPPER W/45 MILS HMWPE INSULATION
7343'–POLYWRAP TUBING F/12" PIPE
85'–POLYWRAP TUBING F/DI FITTINGS
61– RLS PVC TAPE (100' ROLL)
2–12"x8" TEE PO
12–12" GATE VALVE PO
12–VALVE CASING & COVER ASSY
3–4" BLOWOFF ASSY
28–12" RINGS F/PO FITTINGS
2–8" RINGS F/PO FITTINGS

(1) TIE–IN MATERIALS PER DETAIL "A"

8" MAIN

3510'–8" PVC C900 PIPE
3861'–LINEGUARD TAPE
3861'–TRACER WIRE #12AWG SOLID COPPER W/45 MILS HMWPE INSULATION
9–8" GATE VALVE PO
9–VALVE CASING & COVER ASSY
1–2" BLOWOFF ASSY
18–8" RINGS F/PO FITTINGS

(3) TIE–IN MATERIALS PER DETAIL "B"

SERVICES

10–1" SHORT SERVICE W/ 1" METER
073–150–017(2), 073–150–016, 073–150–007, 073–150–009, 073–050–012, 073–040–036, 073–060–025, 073–060–027, 073–060–037
8–1" LONG SERVICE W/ 1" METER
073–022–007, 073–050–010, 073–050–009, 073–050–001, 073–050–002, 073–050–006, 073–050–003, 073–060–030
7–2"LONG SERVICE W/ 1" METER(MANIFOLD)
073–022–008 – (2) METERS
073–022–008 – (2) METERS
073–022–009 – (4) METERS
073–022–009 – (3) METERS
073–040–036 – (2) METERS
073–040–034 – (2) METERS
073–050–009 – (2) METERS
10–2" SHORT SERVICE W/ 1" METER(MANIFOLD)
073–150–018 – (3) METERS
073–150–003 – (2) METERS
073–150–015 – (2) METERS
073–150–005 – (3) METERS
073–150–006 – (2) METERS
073–150–007 – (2) METERS
073–150–010 – (2) METERS
073–050–007 – (2) METERS
073–060–028/029 – (2) METERS
073–050–014 – (2) METERS
57–1" BACKFLOW PREVENTION DEVICE(CWS APPROVED)
585'–1" POLY PIPE
12430'–2" POLY PIPE

TYPICAL MATERIALS PER DWG. CW–555, CW–436(1" & 2")

PLEASE CONTACT CAL WATER DISTRICT REPRESENTATIVE AND LOCAL CROSS–CONNECTION SPECIALIST TO ENSURE THAT ALL SERVICES ARE IN COMPLIANCE WITH CROSS–CONNECTION CONTROL REGULATIONS SET FORTH IN CPUC RULE 16 AND SWRCB CROSS–CONNECTION CONTROL POLICY HANDBOOK.

FIRE HYDRANTS

15–6" FIRE HYDRANTS W/ BREAK–OFF CHECK VALVE
8–12"x6" TEE PO w/ RESTRAINT GASKETS
7–8"x6" TEE PO w/ RESTRAINT GASKETS
15–90° PO w/ RESTRAINT GASKETS (FIELD VERIFY LOCATIONS)

SEE NOTE #19 F/TYPICAL MATERIALS

CL&C OFFSETS & PIPES

4–8" CL&C SINGLE OFFSET, PC. MK. "X" PER DWG. CWT–579
220–8" CL&C PIPE, 22 FT. SECTION, PC. MK. "X1" PER DETAIL "F"
4–9.05"x8.63" FLEX COUPLINGS, 10" SLEEVE

BORE & CASE

200'–16" STEEL CASING, 1/4" WALL
20–PIPE INSULATORS FOR 10.13" OD PIPE BY 15.5" ID CASING PER BORE AND CASE, DETAIL "H" NOTE 1
12–8.63"D×4"W" STEEL BUTT STRAP PER DETAILS "D & E"
4–2" 2" COMBINATION ARV & ASSEMBLY PER DETAIL "U"

WHEN ASSEMBLING A PVC C–900 PIPE TO AN IRON FITTING (PUSH–ON OR MECHANICAL JOINT). REMOVE ALL BUT 1/4 INCH OF THE FACTORY MADE BEVEL FROM THE SPIGOT END OF THE PIPE PRIOR TO INSTALLATION.

SUMMARY

4895'± – 12" DUCTILE IRON PIPE
3510'± – 8" PVC C900 PIPE
10 – 1" SHORT SERVICE W/ 1" METER
8 – 1" LONG SERVICE W/ 1" METER
7 – 2" LONG SERVICE W/ 1" METER MANIFOLD
10 – 2" SHORT SERVICE W/ 1" METER MANIFOLD
58 – CONNECTIONS TO LIVING UNIT(INCLUDES CONNECTION TO EX. SPIGOT/PIPING)
57 – CWS APPROVED BFP's
585'± – 1" POLY PIPE
12430'± – 2" POLY PIPE
15 – 6" FIRE HYDRANT
4 – 8" CL&C SINGLE OFFSET PC. MK. "X"
10 – 8" CL&C PIPE, 22 FT SECTION, PC. MK. "X1"
200' – 16" DIA. STEEL CASING
4 – 2" COMBINATION ARV AND ASSEM. PER DETAIL "U"
1 – TIE–IN TO EX. 12" MAIN PER DETAIL "A"
3 – TIE–IN TO EX. 8" MAIN PER DETAIL "B"
AS REQ'D – TRENCH RESTORATION
AS REQ'D – CONCRETE DRIVEWAY RESTORATION
AS REQ'D – DIRT DRIVEWAY RESTORATION

ENGINEERING

CALIFORNIA WATER SERVICE

DEPARTMENT

REVISIONS:

	DATE:	INIT.
DISTRIBUTION MAP	X	
PLAT SHEET	X	
SYSTEM SCHEMATIC		
STATION SCHEMATIC		

PLAT SHEET NO.:
25–17, 25–18, 25–19
25–20, 26–19

SCALE:
N/A

DRAWN BY:
E. JACOBSEN

DESIGNED BY:
C. ROSETE

TECH REVIEW: DATE:

CHECKED BY: DATE:
10-22-2024

APPROVED BY: DATE:
10-22-2024

REGISTERED PROFESSIONAL ENGINEER
PATRICK CASSIDY KATJASS
No. C91673
CIVIL
STATE OF CALIFORNIA

TITLE:
NEW BUSINESS CONSOLIDATION PROJECT
WEST GOSHEN EMERGENCY WATER SUPPLY CONSOLIDATION

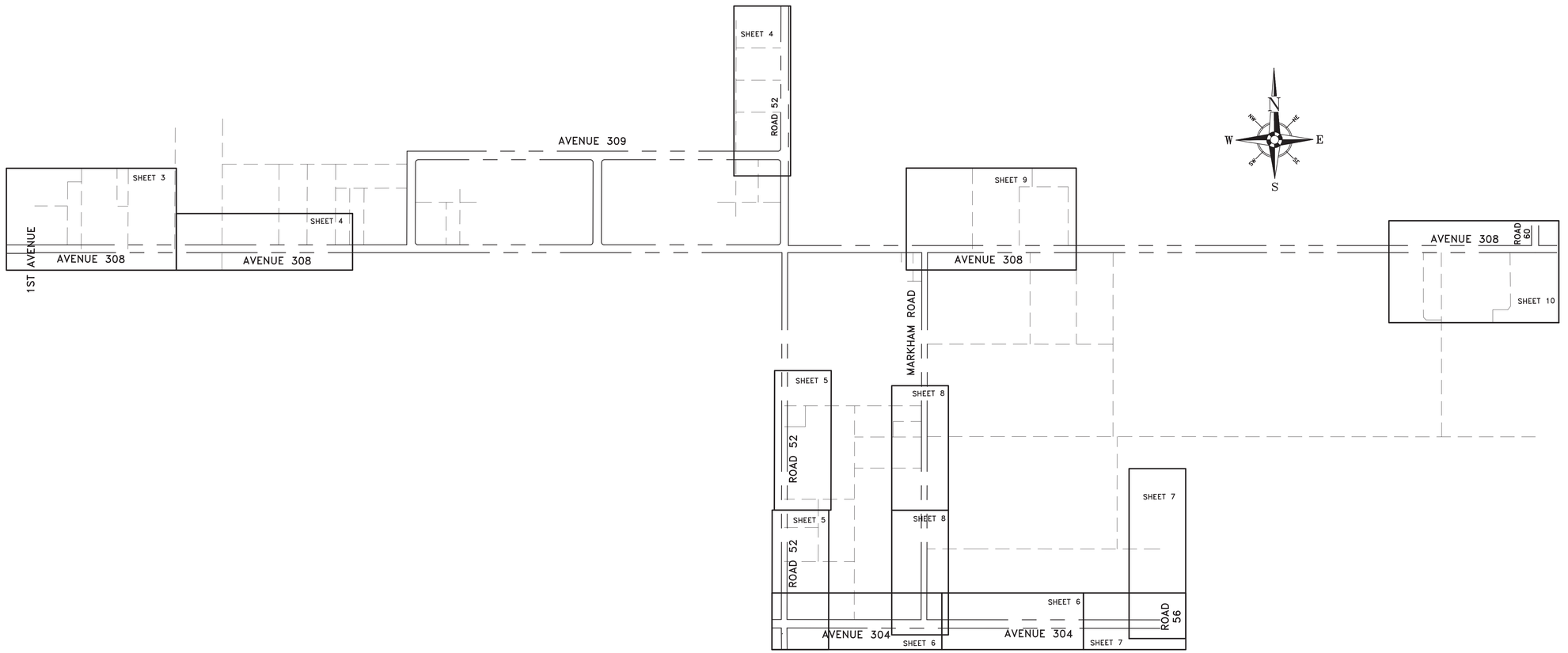
DISTRICT:
VISALIA

DATE:

PROJECT ID.:
131661

DRAWING NO.:
VIS–6533

SHT 1 OF 14



KEY MAP

SCALE: 1" = 400'

ENGINEERING

DEPARTMENT

REVISIONS:

	DATE:	INIT.
DISTRIBUTION MAP	X	
PLAT SHEET	X	
SYSTEM SCHEMATIC		
STATION SCHEMATIC		

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25-20, 26-19

SCALE:
1"=400'

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SHT 2 OF 14

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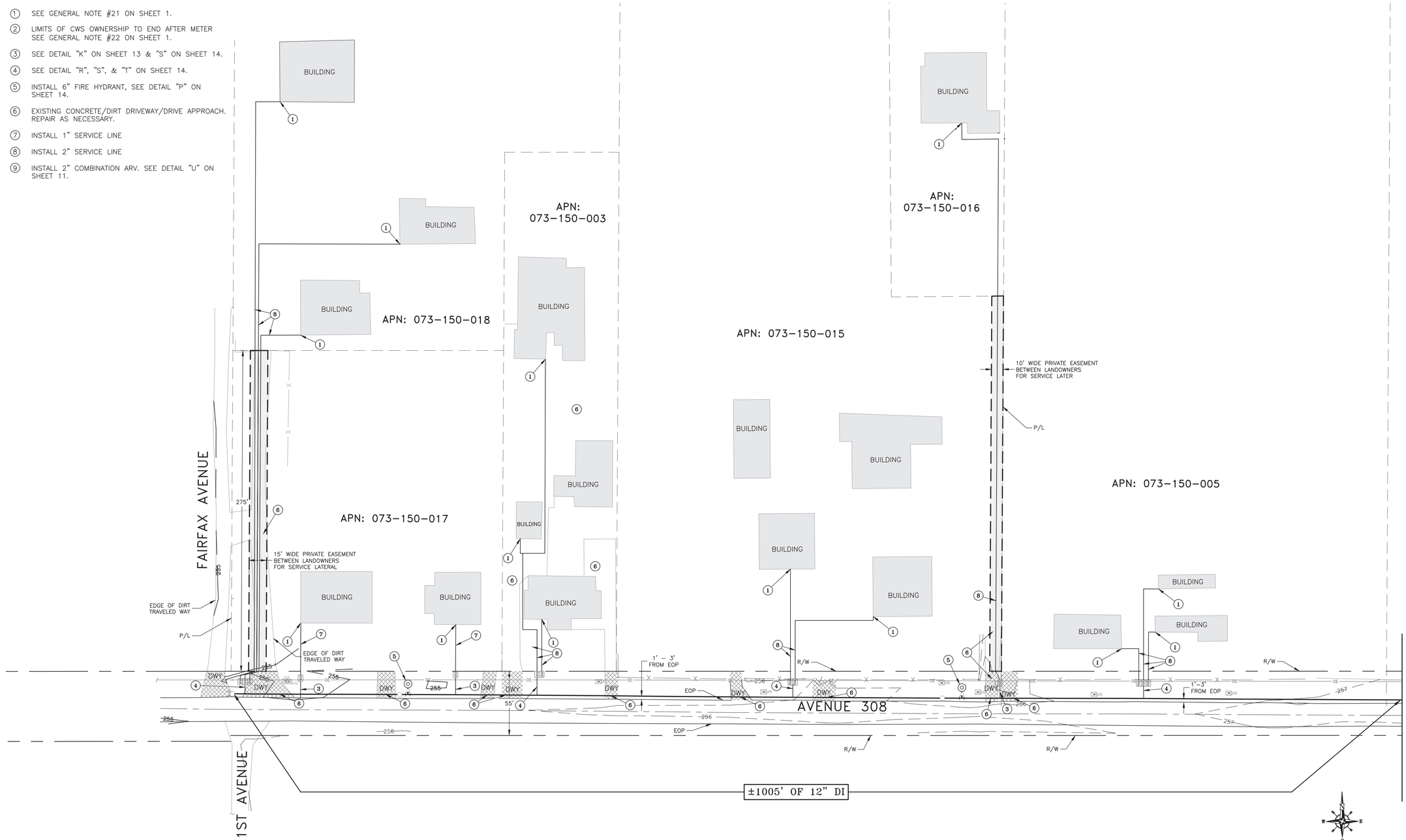
4. SEE DETAIL "R", "S", & "T" ON SHEET 14.
5. INSTALL 6" FIRE HYDRANT, SEE DETAIL "P" ON SHEET 14.
6. EXISTING CONCRETE/DIRT DRIVEWAY/DRIVE APPROACH. REPAIR AS NECESSARY.
7. INSTALL 1" SERVICE LINE
8. INSTALL 2" SERVICE LINE
9. INSTALL 2" COMBINATION ARV. SEE DETAIL "U" ON SHEET 11.



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CALIFORNIA WATER SERVICE

DEPARTMENT

REVISIONS:

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DISTRIBUTION MAP	X	
PLAT SHEET	X	
SYSTEM SCHEMATIC		
STATION SCHEMATIC		

PLAT SHEET NO.: 25-17, 25-18, 25-19 25-20, 26-19

SCALE: 1" = 40'

DRAWN BY: E. JACOBSEN

DESIGNED BY: C. ROSETE

TECH REVIEW: DATE:

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APPROVED BY: DATE:

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SHT 3 OF 14

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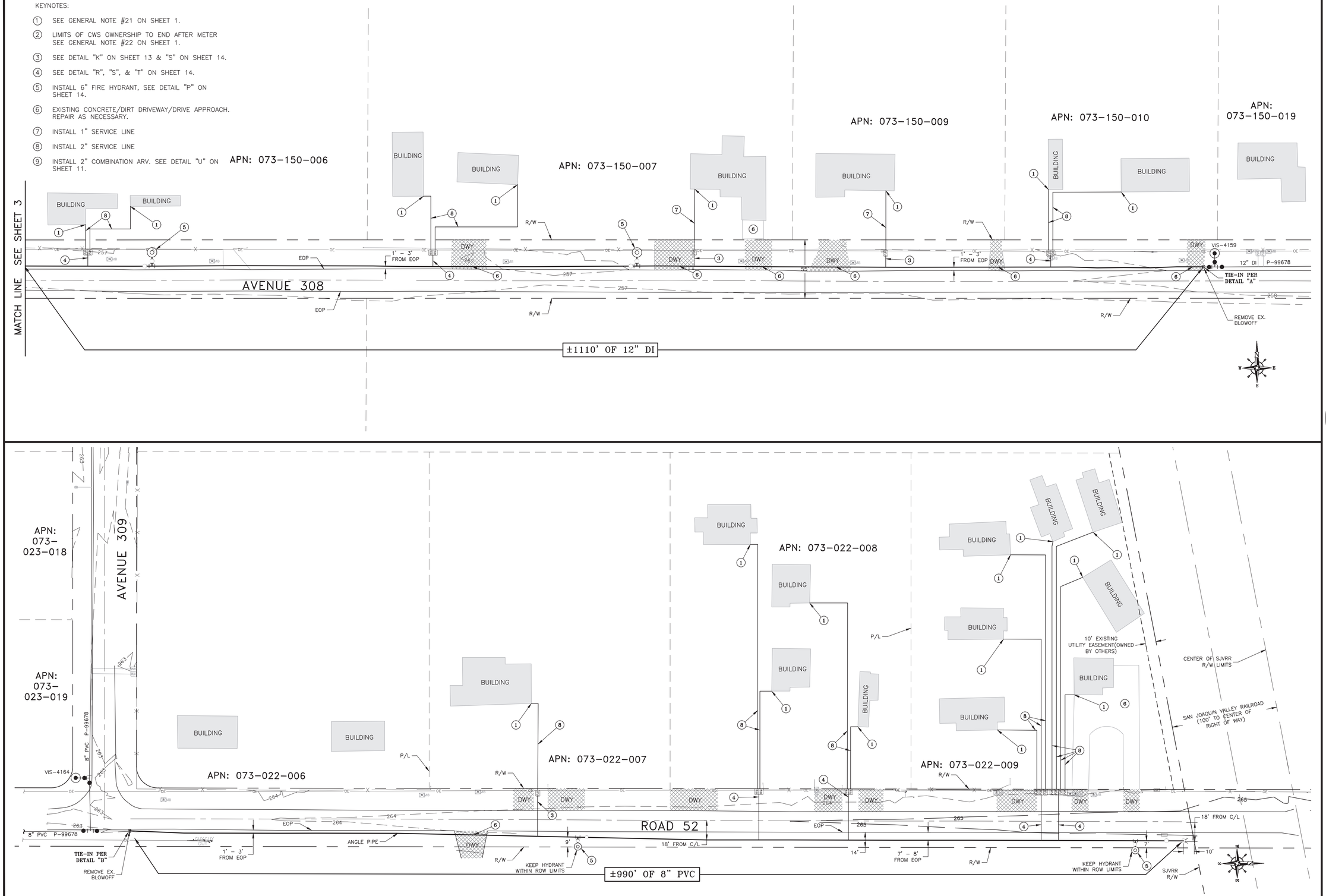

ENGINEERING

DEPARTMENT

REVISIONS:

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PLAT SHEET	X	
SYSTEM SCHEMATIC		
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25-20, 26-19

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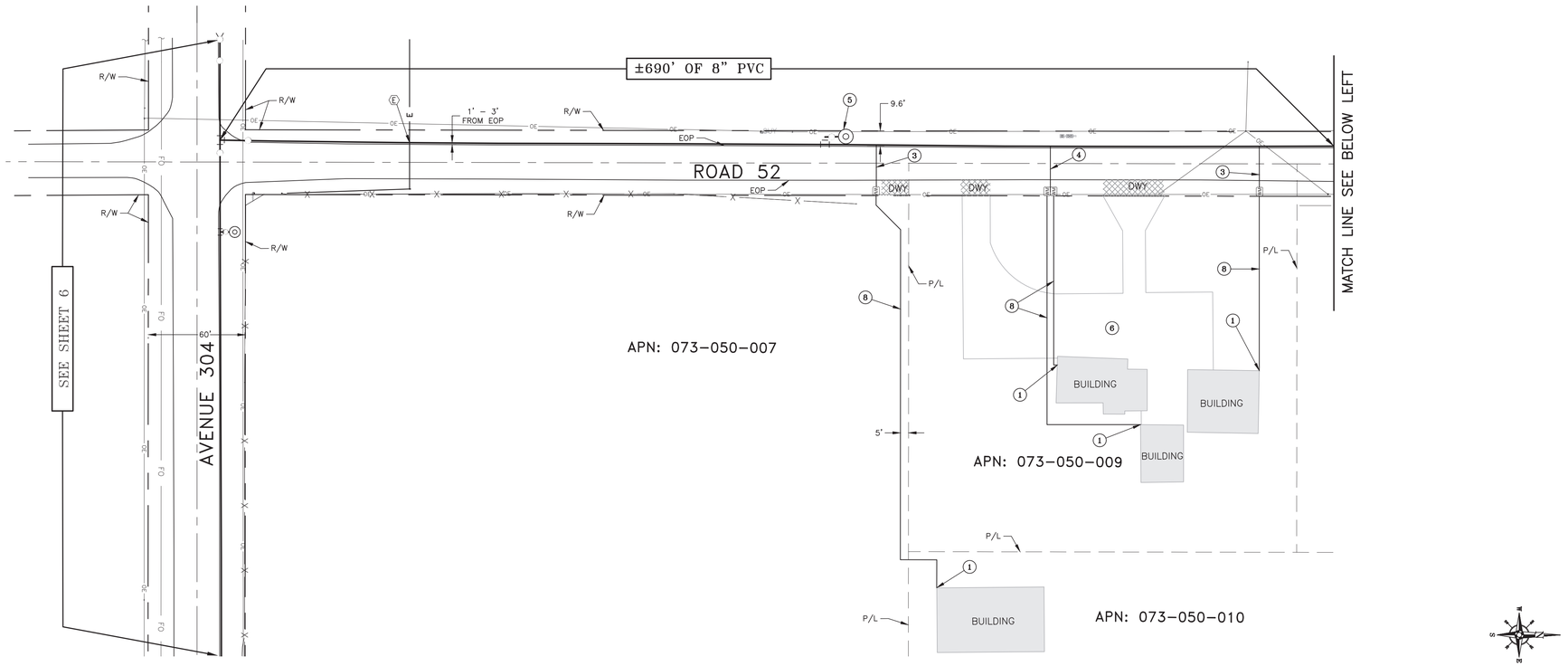

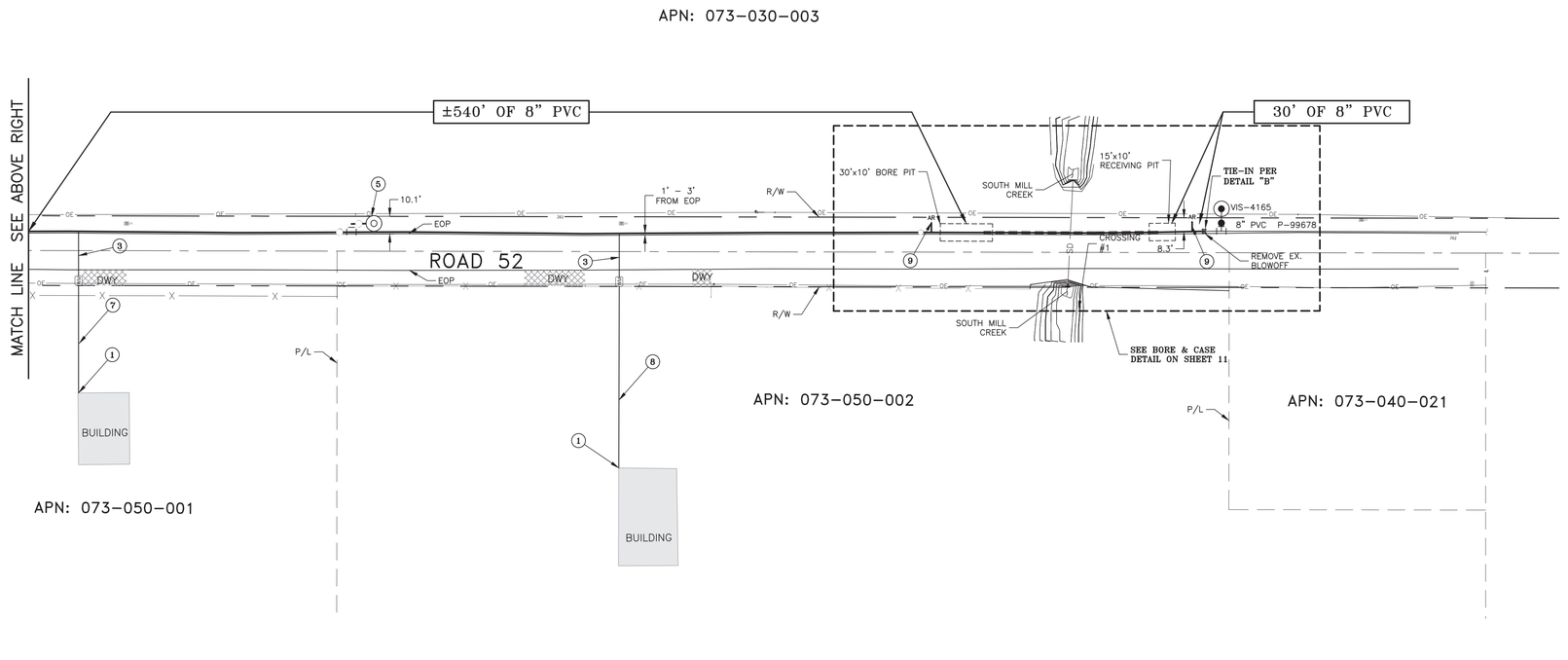

ENGINEERING

CALIFORNIA WATER SERVICE

DEPARTMENT

REVISIONS:

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DISTRIBUTION MAP	X	
PLAT SHEET	X	
SYSTEM SCHEMATIC		
STATION SCHEMATIC		

PLAT SHEET NO.:
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25-20, 26-19

SCALE:
1" = 40'

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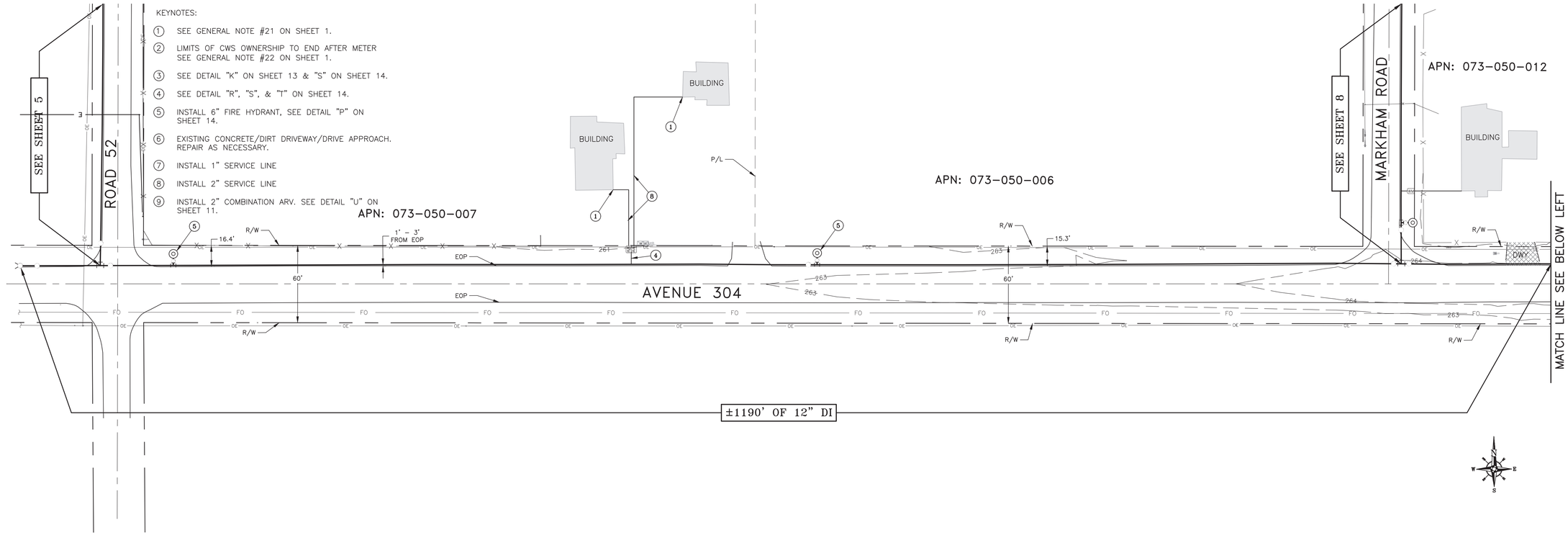

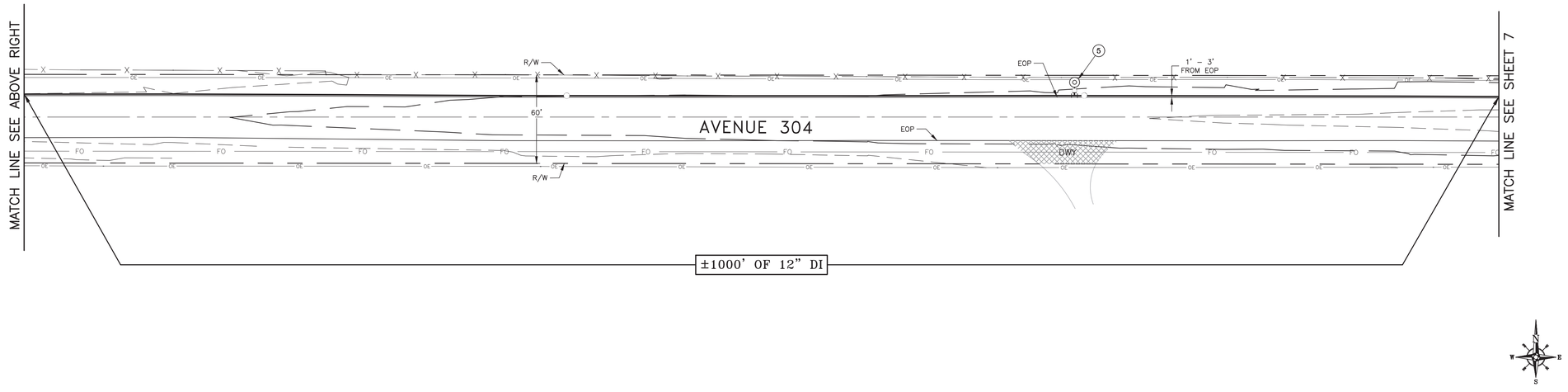

ENGINEERING

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SHT 6 OF 14

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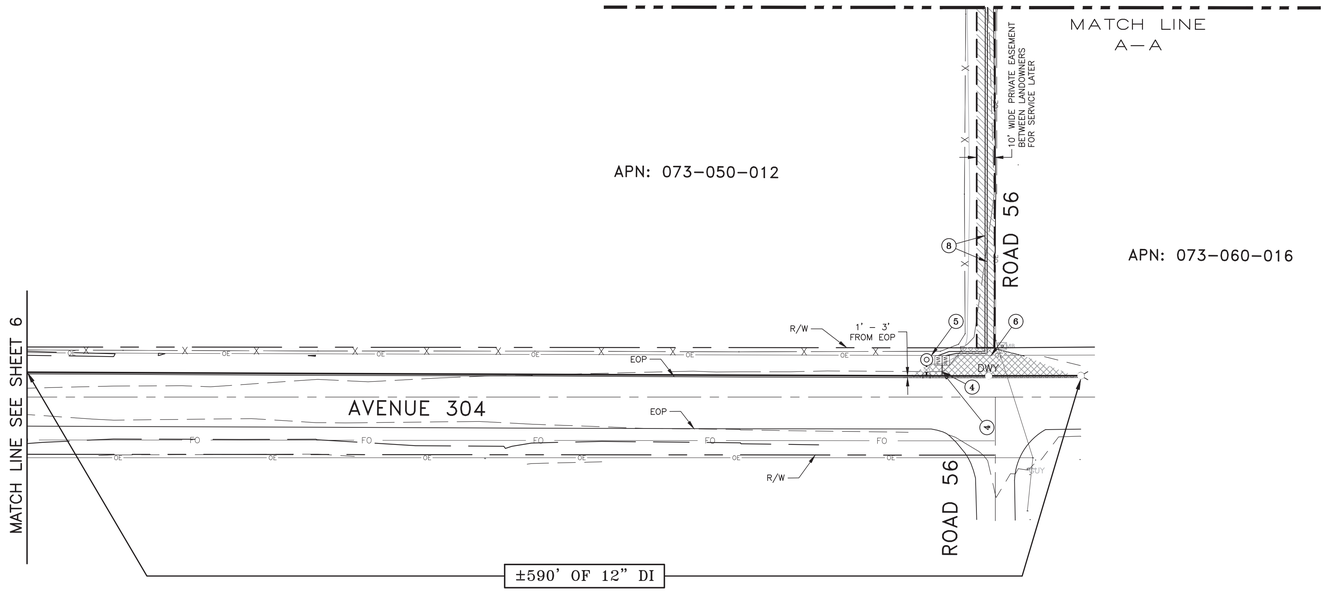

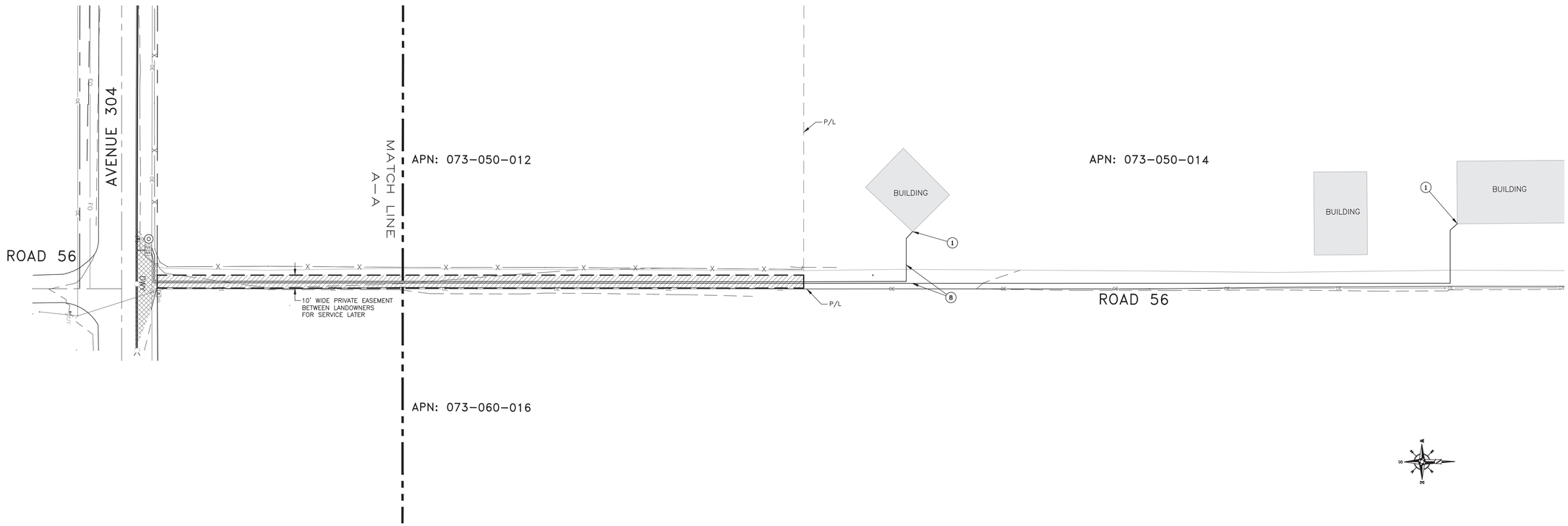

ENGINEERING

CALIFORNIA WATER SERVICE

DEPARTMENT

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SYSTEM SCHEMATIC		
STATION SCHEMATIC		

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SHT 7 OF 14

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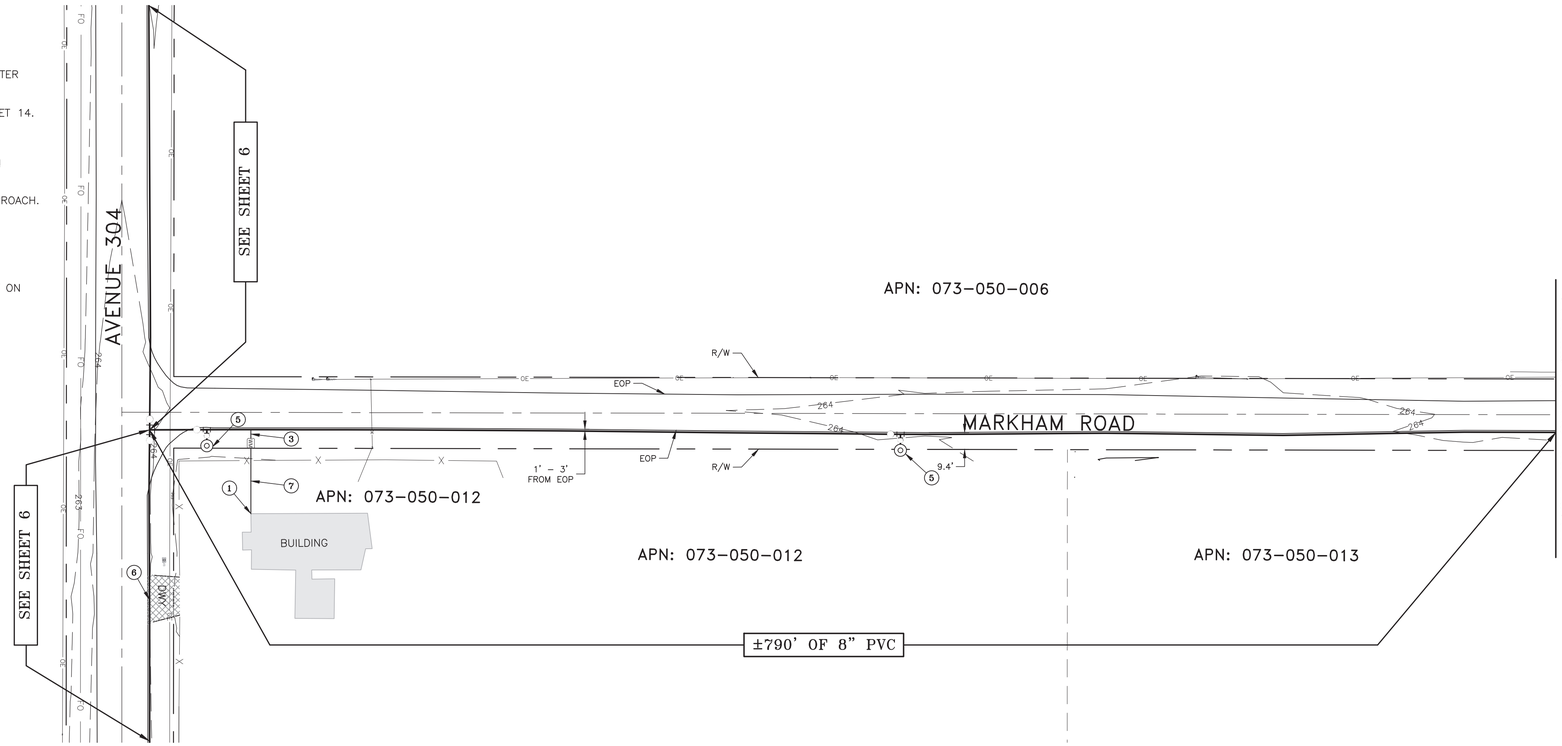

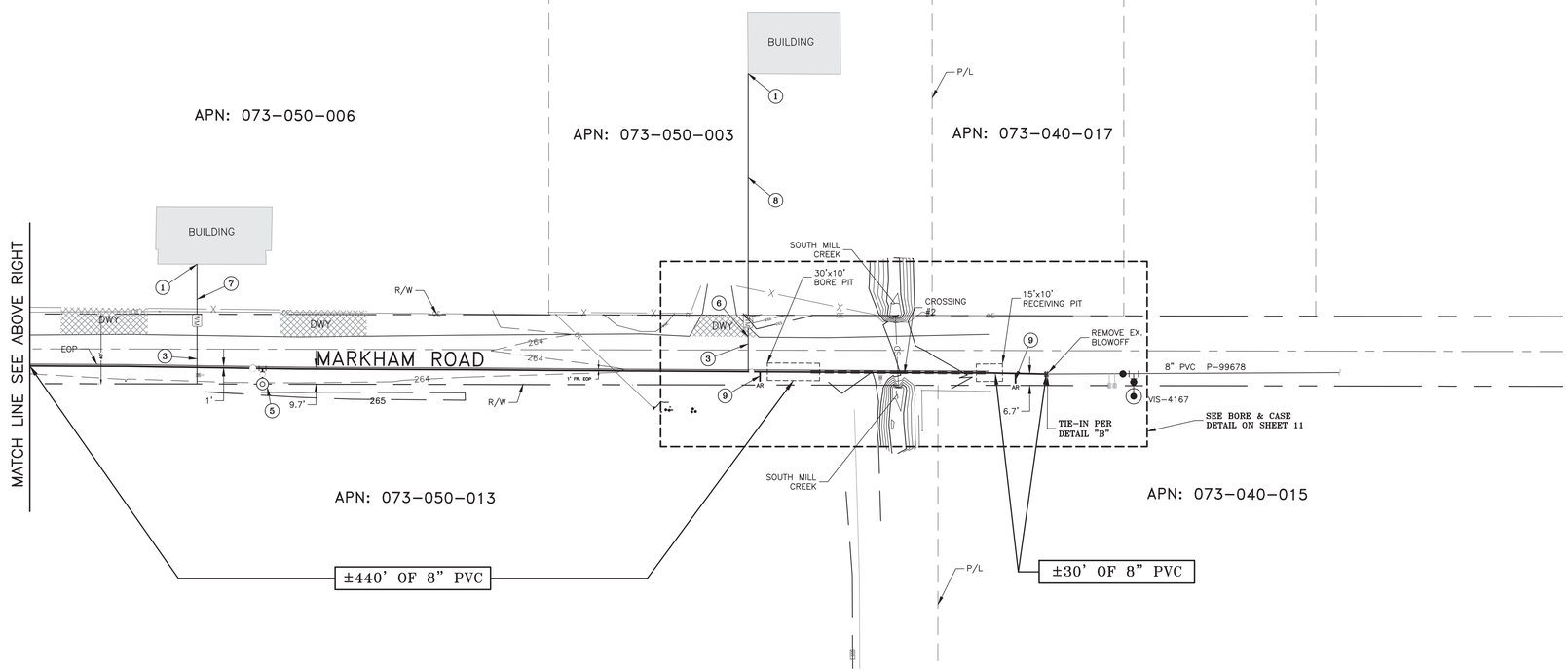

ENGINEERING

CALIFORNIA WATER SERVICE

DEPARTMENT

REVISIONS:

	DATE:	INIT.
DISTRIBUTION MAP	[X]	
PLAT SHEET	[X]	
SYSTEM SCHEMATIC	[ ]	
STATION SCHEMATIC	[ ]	

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SCALE:
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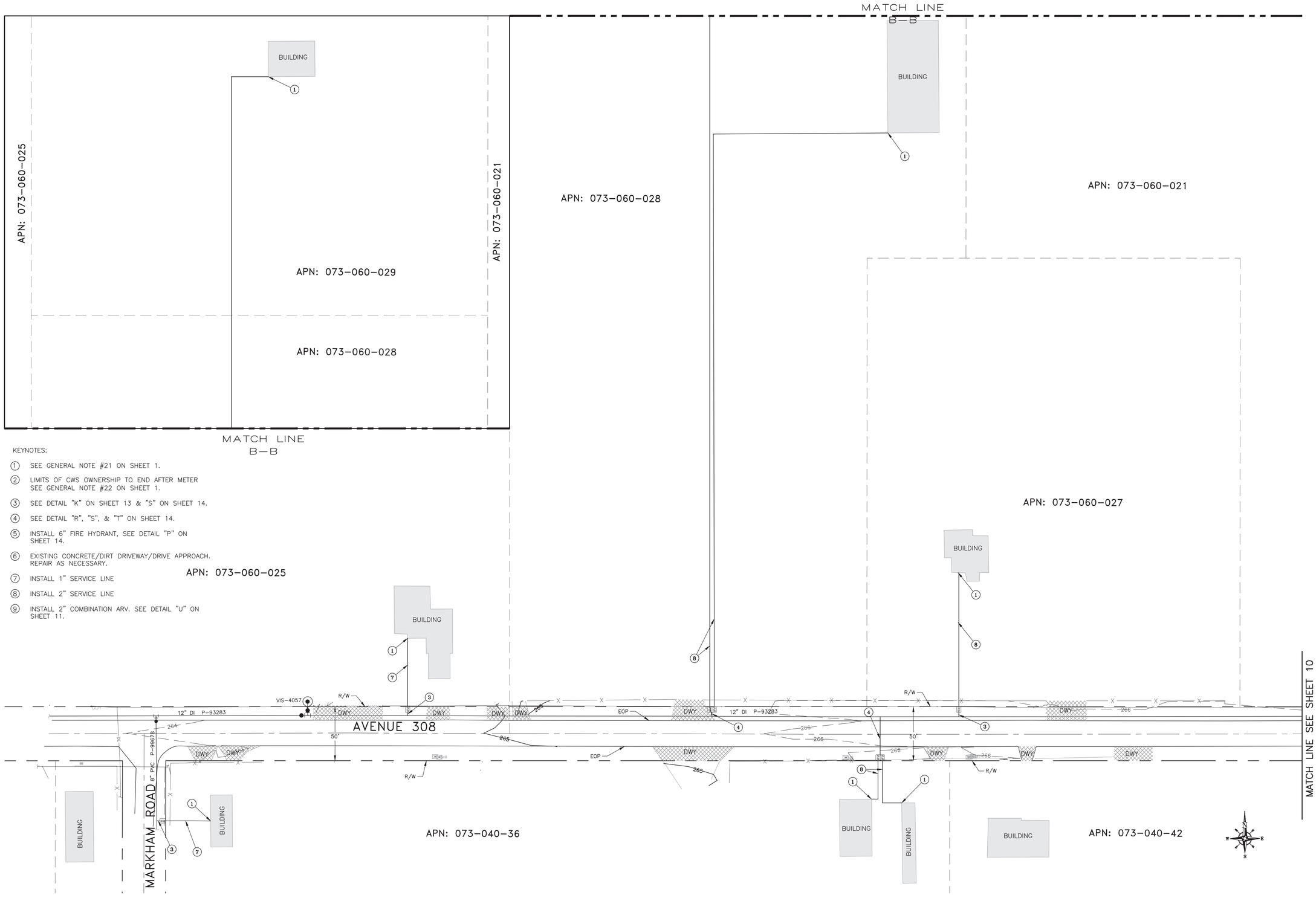
SHT 8 OF 14



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ENGINEERING

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25–20, 26–19

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SHT 9 OF 14

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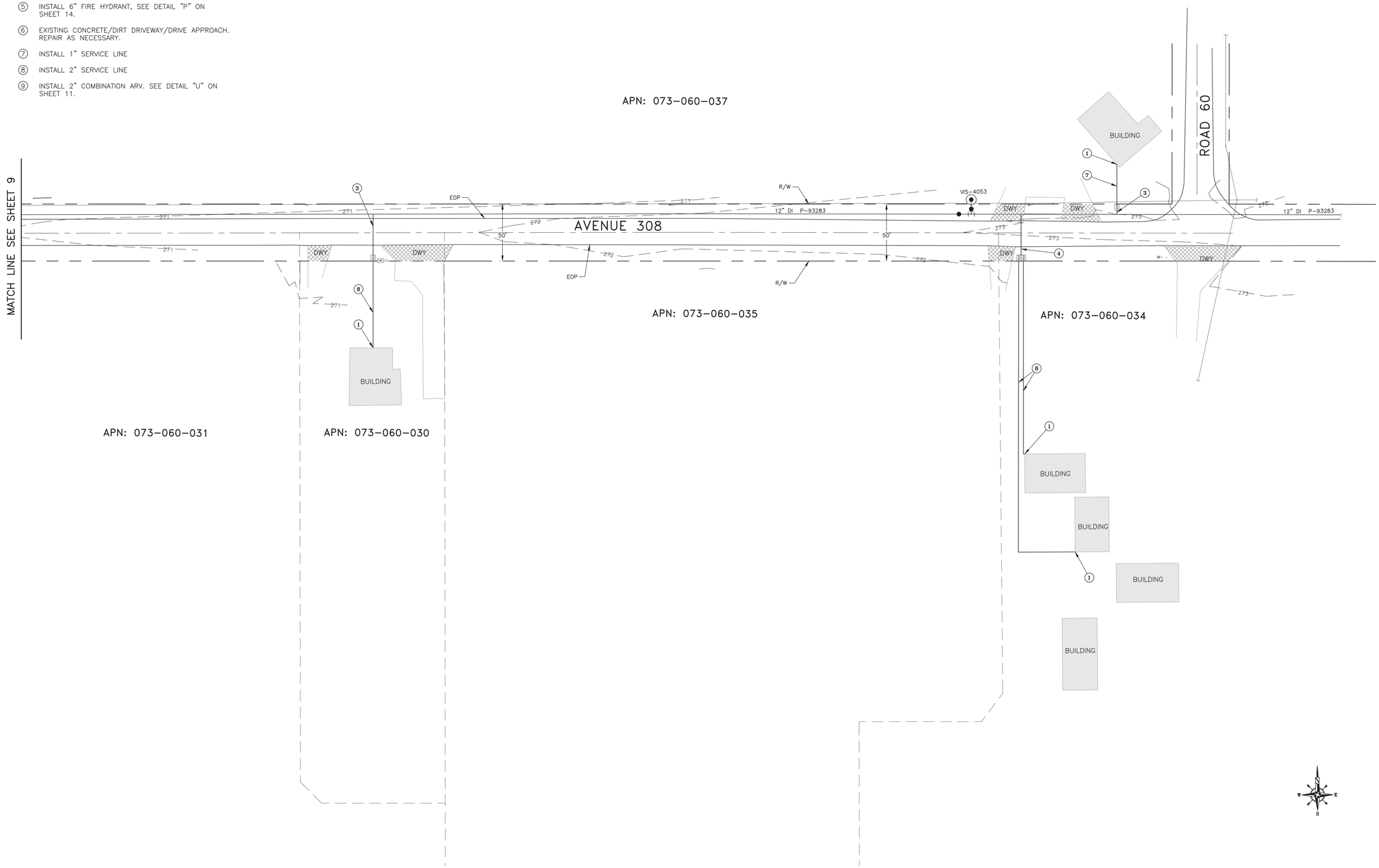

ENGINEERING

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DISTRIBUTION MAP	X	
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25-17, 25-18, 25-19
25-20, 26-19

SCALE:
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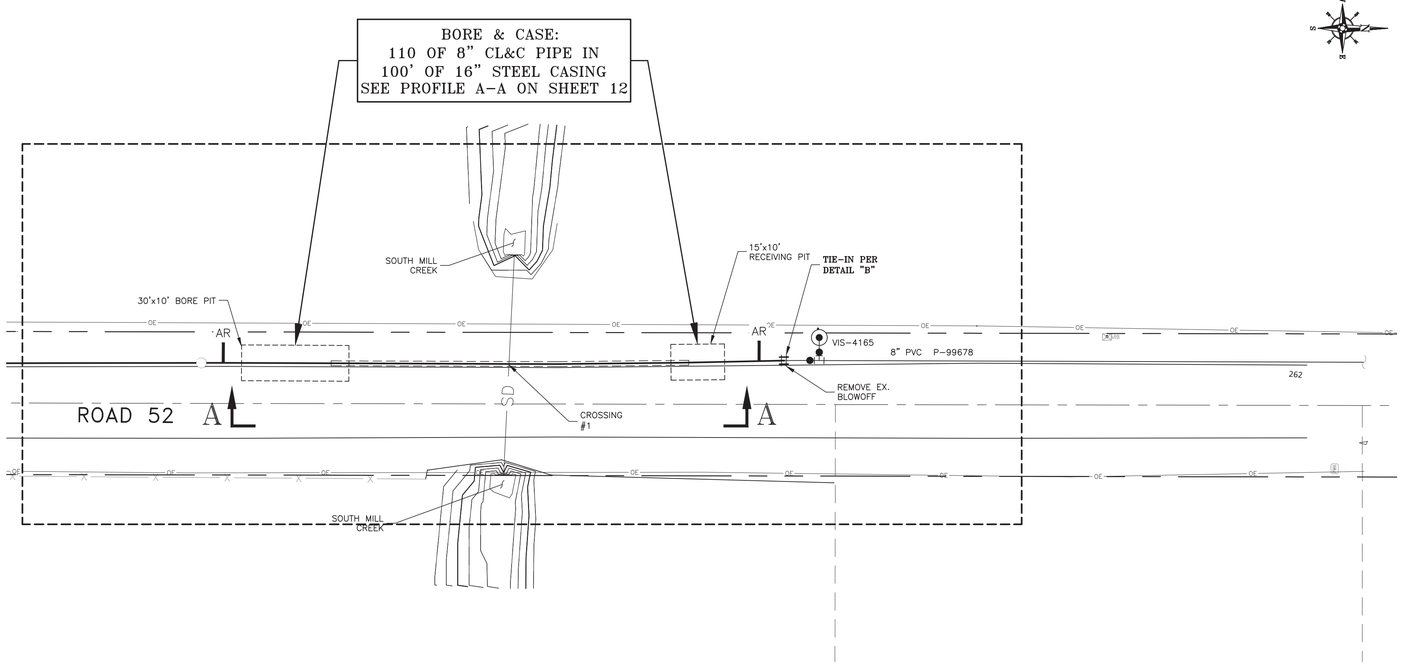
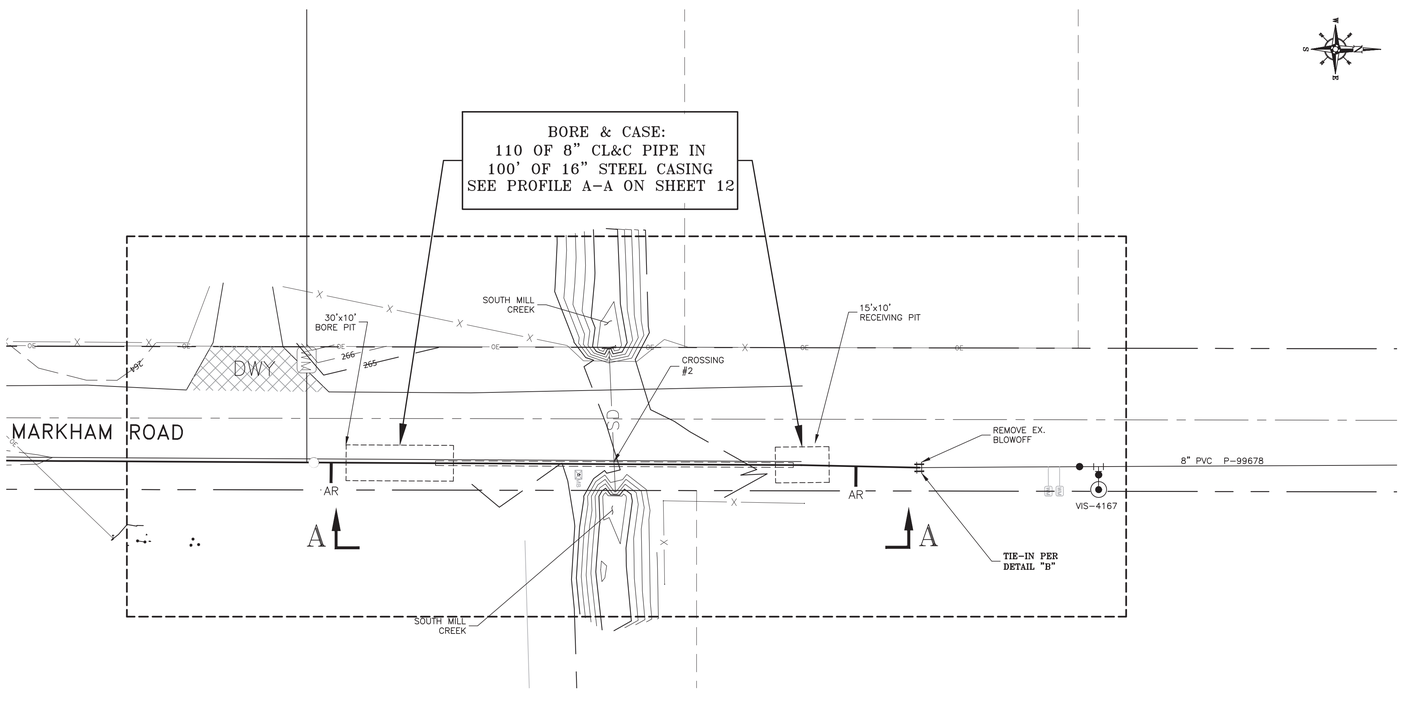
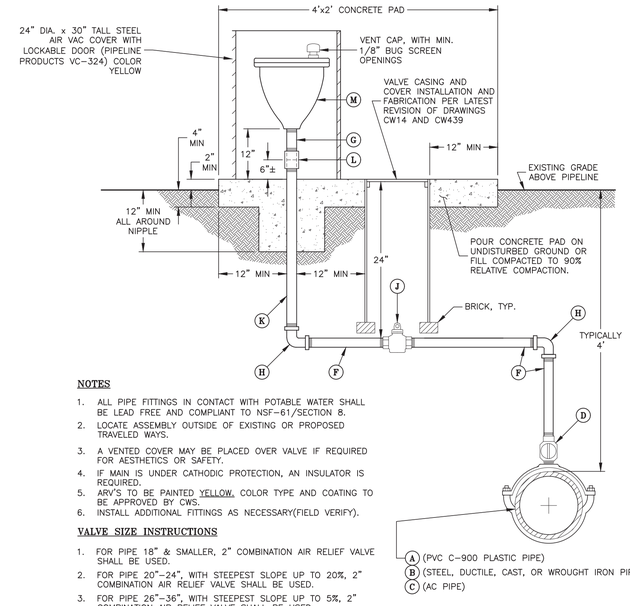
SHT 10 OF 14







NOTES

1. ALL PIPE FITTINGS IN CONTACT WITH POTABLE WATER SHALL BE LEAD FREE AND COMPLIANT TO NSF-61/SECTION 8.
2. LOCATE ASSEMBLY OUTSIDE OF EXISTING OR PROPOSED TRAVELED WAYS.
3. A VENTED COVER MAY BE PLACED OVER VALVE IF REQUIRED FOR AESTHETICS OR SAFETY.
4. IF MAIN IS UNDER CATHODIC PROTECTION, AN INSULATOR IS REQUIRED.
5. ARV'S TO BE PAINTED YELLOW. COLOR TYPE AND COATING TO BE APPROVED BY CWS.
6. INSTALL ADDITIONAL FITTINGS AS NECESSARY(FIELD VERIFY).

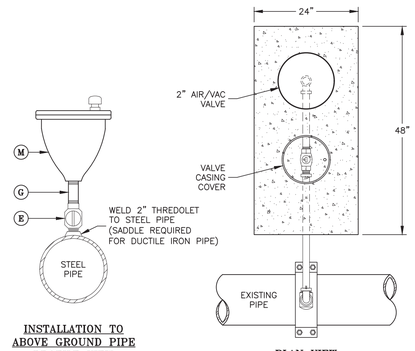
VALVE SIZE INSTRUCTIONS

1. FOR PIPE 18" & SMALLER, 2" COMBINATION AIR RELIEF VALVE SHALL BE USED.
2. FOR PIPE 20"-24", WITH STEEPEST SLOPE UP TO 20%, 2" COMBINATION AIR RELIEF VALVE SHALL BE USED.
3. FOR PIPE 26"-36", WITH STEEPEST SLOPE UP TO 5%, 2" COMBINATION AIR RELIEF VALVE SHALL BE USED.
4. FOR PIPE WITH DIAMETER AND SLOPE OUTSIDE THE ABOVE RANGE, CWS ENGINEERING DEPARTMENT SHALL SIZE THE COMBINATION AIR RELIEF VALVE BASED ON AVAILABLE DATA.

OPTIONS

INSTALL 2" COPPER TUBING, TYPE K SOFT, INSTEAD OF PE WHEN CWS REPRESENTATIVE DETERMINES THAT CONDITIONS ARE UNFAVORABLE TO PE.

INSTALLATION TO BELOW GROUND PIPE PROFILE VIEW
N.T.S.



INSTALLATION TO ABOVE GROUND PIPE PROFILE VIEW
N.T.S.

PLAN VIEW
N.T.S.

PARTS LIST (BELOW GROUND INSTALLATION)		
ITEM	QTY.	DESCRIPTION
A	1	SERVICE SADDLE, ALL BRASS, MUELLER H-13400 SERIES, A.Y. McDONALD 3805/3809 SERIES, ROMAC 202B SERIES
B		SERVICE SADDLE, DUCTILE IRON BODY, MUELLER DR 2A SERIES, FORD F202 SERIES, SMITH-BLAIR 313 SERIES, AROMAC 202U SERIES, A.Y. McDONALD 4825A
C		SERVICE SADDLE, BRASS BODY, MUELLER BR2B SERIES, FORD 202B SERIES, A.Y. McDONALD 3825 SERIES, CAMBRIDGE BRASS 810 SERIES
D	1	2" CORPORATION STOP, AWWA CCxF.I.P., MUELLER B-20045N; FORD FB1600-7-NL, A.Y. McDONALD 731488, CAMBRIDGE BRASS 301NL-A7F7,
F	3	2" x 24" NIPPLE BRASS, LEAD FREE (ADJUST LENGTH OF NIPPLES ACCORDINGLY OR USE 2" HDPE (IPS, C901, PE 4710, PC 200, SIDR7) FOR LONG RUNS
G	1	2" x 6" NIPPLE LEAD FREE BRASS (ADJUST LENGTH OF NIPPLES ACCORDINGLY)
H	2	2" ELL 90°, F.I.P. x F.I.P.
J	1	2" BALL VALVE LEAD FREE, F.I.P. THREAD BOTH ENDS, 360 DEGREE ROTATION, MUELLER B-20283N-3, FORD B11-777-R-NL OR A.Y. McDONALD 76101
K	1	2" x 30" NIPPLE, LEAD FREE BRASS
L	1	2" LEAD FREE BRASS COUPLING OR INSULATOR COUPLING SEE NOTE #5
M	1	2" APCO COMBINATION AIR VALVE MODEL 145C, OPERATING PRESSURE 80 PSI, WITH MUSHROOM VENT CAP INCLUDING BUG SCREEN WITH MIN. 1/8" OPENINGS.

PARTS LIST (ABOVE GROUND INSTALLATION)		
ITEM	QTY.	DESCRIPTION
B	1	SERVICE SADDLE, DUCTILE IRON BODY, MUELLER DR 2A SERIES, FORD F202 SERIES, SMITH-BLAIR 313 SERIES, APAC 102 SERIES, A.Y. McDONALD 4825A
E	1	2" BALL VALVE, F.I.P. x M.I.P. MUELLER B-20285N, FORD B81-77-NL, A.Y. McDONALD 76109
G	1	2" x 6" NIPPLE LEAD FREE BRASS (ADJUST LENGTH OF NIPPLES ACCORDINGLY)
M	1	2" APCO COMBINATION AIR VALVE MODEL 145C, OPERATING PRESSURE 80 PSI, WITH MUSHROOM VENT CAP INCLUDING BUG SCREEN WITH MIN. 1/8" OPENINGS.

DETAIL "U"
CW 950-R3 - 2" COMBINATION AIR RELIEF VALVE ASSEMBLY
N.T.S.

ENGINEERING

DEPARTMENT

REVISIONS:

	DATE:	INIT.
DISTRIBUTION MAP	X	
PLAT SHEET	X	
SYSTEM SCHEMATIC		
STATION SCHEMATIC		

PLAT SHEET NO.:
25-17, 25-18, 25-19
25-20, 26-19

SCALE:
1" = 40'

DRAWN BY:
E. JACOBSEN

DESIGNED BY:
C. ROSETE

TECH REVIEW: DATE:

CHECKED BY: DATE:

APPROVED BY: DATE:

REGISTERED PROFESSIONAL ENGINEER
PATRICK CASSIDY KALTASS
No. C91673
CIVIL
STATE OF CALIFORNIA

TITLE:
NEW BUSINESS CONSOLIDATION PROJECT
WEST GOSHEN EMERGENCY WATER
SUPPLY CONSOLIDATION

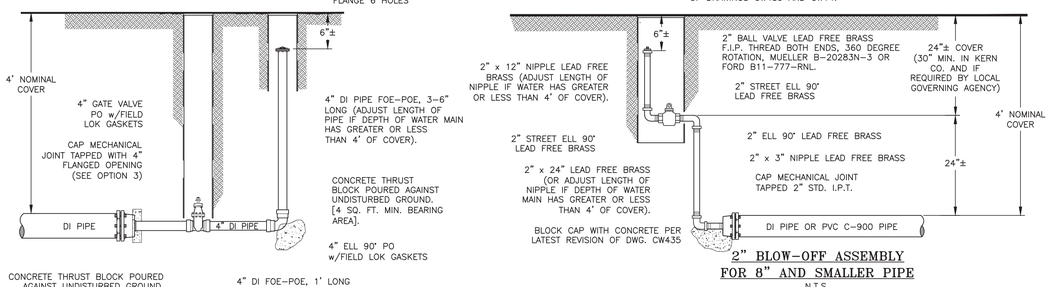
DISTRICT:
VISALIA

DATE:

PROJECT ID.:
131661

DRAWING NO.:
VIS-6533

SHT 11 OF 14



4" BLOW–OFF ASSEMBLY FOR 12" TO 16" PIPE

N.T.S.

2" BLOW–OFF ASSEMBLY FOR 8" AND SMALLER PIPE

N.T.S.

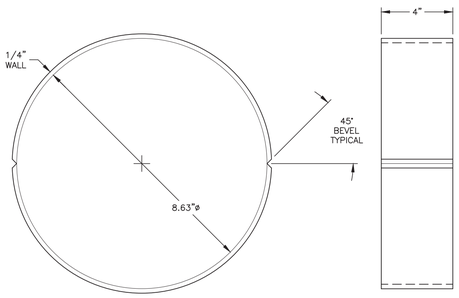
NOTE:
1. ALL PIPE FITTINGS IN CONTACT WITH WATER SHALL BE LEAD FREE (<0.25% LEAD) AND COMPLIANT TO NSF–61/SECTION 8.

OPTIONS: THESE OPTIONS MAY BE REQUIRED BY CWS CO. AT THEIR DISCRETION.

1. FOR 2" BLOW OFFS LOCATED OUTSIDE TRAVELED WAYS OR WHERE STREET RECONSTRUCTION IS NOT A CONCERN, THE BALL VALVE MAY BE PLACED CLOSER TO FINISHED GRADE (+/–12") WITH SHORTER OR NO PERMANENT RISER. SWING JOINT (ONE STREET ELL) MAY BE ADDED AS AN OFFSET TO PROPERLY LOCATE THE BALL VALVE.
2. IN LIEU OF NOTCHING VALVE CASING FOR 2" PIPE, CASING MAY BE SET ON BRICKS OR PRESSURE TREATED LUMBER SO CASING IS JUST ABOVE 2" PIPE.
3. IN LIEU OF CAP WITH FLANGED OPENING FOR 12" PIPE, 12" x 4" REDUCER PO WITH FIELD LOK GASKETS MAY BE USED.

DETAIL "C"
1" AIR RELEASE VALVE ASSEMBLY

N.T.S.

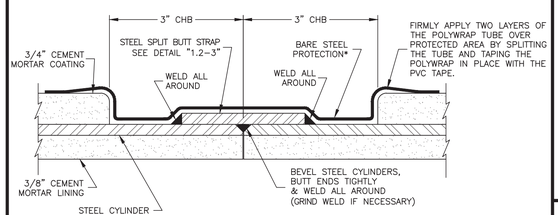


NOTE:
STEEL SPLIT BUTT STRAP FOR 8.63" OD STEEL PIPE

DD 1.2–3

DETAIL "D"
STEEL SPLIT BUTT STRAP

N.T.S.



SEE GENERAL NOTE #5 FOR FULL DESCRIPTION OF PROTECTION NOTES

WELDING NOTES:

1. ALL WELDING TO BE DONE PER AWWA C206 WHICH REFERENCES AWS D1.1 WELDERS AND WELDING OPERATORS TO BE QUALIFIED BY TESTS AS PRESCRIBED BY AWS D1.1.
2. FILLET WELDS TO BE THE MAXIMUM SIZE ALLOWED BY AWS D1.1 SECTION 2.4.2.9.
3. GROOVE WELDS TO BE SIZED PER AWS D1.1 FIGURE 3.3.

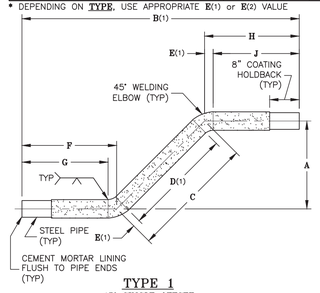
DD 1.2–2

DETAIL "E"
COATING DETAIL
BELOW GROUND BUTT STRAPS

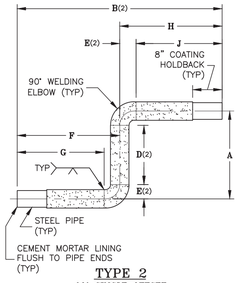
N.T.S.

PIECE MARKED	TYPE (1 or 2)	QTY	A	B(1) F+A+H	B(2) F+H	C A/.707	D(1) C–2E(1)	D(2) A–2E(2)	F	*G F–E	H	*J H–E
X	1	4	8.3'	13.3'	_	11.7'	10.3'	_	2'	1.3'	3.0'	2.6'

* DEPENDING ON TYPE, USE APPROPRIATE E(1) or E(2) VALUE



TYPE 1
45° SINGLE OFFSET



TYPE 2
90° SINGLE OFFSET

NOTES:

1. STEEL CYLINDER PER A.S.A. WITH ASTM A53 TEST PRESSURE AND ASTM A36 PHYSICAL PROPERTIES.
2. COATING SHALL BE REINFORCED WITH 14 GAUGE WIRE MESH OR 14 GAUGE WIRE SPIRALLY WOUND IN CENTER OF COATING PER LATEST REVISION OF AWWA STANDARD C205.
3. WELDING FITTINGS SHALL BE ASTM A234 GRADE B.
4. STEEL PIPE WITH 25.75" OD SHALL BE MANUFACTURED & TESTED PER LATEST REVISION OF AWWA STANDARD C200.

PIECE MARKED	PIPE STEEL CYL. (OD)	PIPE SCHED.	CML	CMC	ELBOW SCHED.	ELBOW 45° ELBOW E(1)	ELBOW 90° ELBOW E(2)
	6.63"	40	3/8"	3/4"	40	3.75"	6.0"
X	8.63"	20	3/8"	3/4"	40	5.00"	8.0"
	10.75"	20	1/2"	3/4"	40	6.25"	10.0"
	12.75"	20	1/2"	3/4"	.375"	7.50"	12.0"
	14.0"	10	1/2"	3/4"	30	8.75"	14.0"
	16.0"	10	1/2"	3/4"	30	10.00"	16.0"
	18.0"	10	1/2"	3/4"	.375"	11.25"	18.0"
	20.0"	10	1/2"	3/4"	20	12.50"	20.0"
	25.75"	.25"	1/2"	3/4"	.375"	**	**

** FABRICATE MITER WELDED ELBOW PER AWWA C–208
CML = CEMENT MORTAR LINING
CMC = CEMENT MORTAR COATING

CWT 579R5

DETAIL "F"
CEMENT MORTAR LINED & COATED STEEL SINGLE OFFSET WITH 45° & 90° ELBOWS

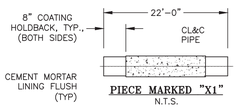
PIECE "MARKED"	QTY	PIPE STEEL CYL. (OD)	PIPE SCH.	CML	CMC
–	–	6.63"	40	3/8"	3/4"
X1	10	8.63"	20	3/8"	3/4"
–	–	10.75"	20	1/2"	3/4"
–	–	12.75"	20	1/2"	3/4"
–	–	14.0"	10	1/2"	3/4"
–	–	16.0"	10	1/2"	3/4"
–	–	18.0"	10	1/2"	3/4"
–	–	20.0"	10	1/2"	3/4"

CEMENT MORTAR LINING, CML
CEMENT MORTAR COATING, CMC

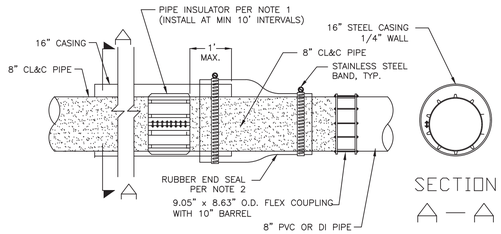
DD 1.1–6

DETAIL "G"
CL&C FABRICATION DETAIL

N.T.S.



PIECE MARKED "X1"
N.T.S.

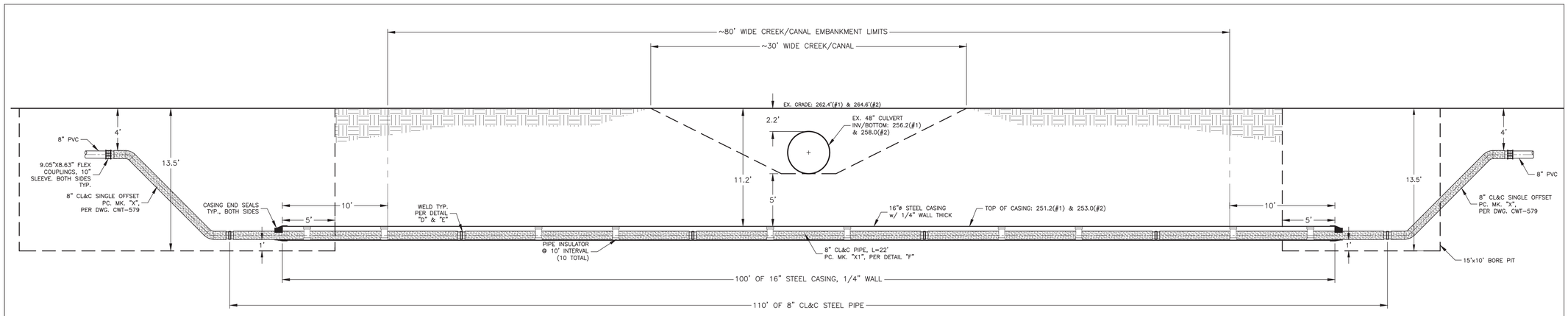


PIPE SUPPORTS IN CONDUIT

NOTES

1. PIPE INSULATORS TO BE FOR 10.13" O.D. PIPE BY 15.5" I.D. CASING, WITH 8" WIDE STAINLESS STEEL BANDS AND PHENOLIC OR GLASS REINFORCED PLASTIC SKIDS. MANUFACTURED BY CALPICO INC. (MODEL M–8), P.S.I. INC. (S8G–2), OR A.P.S. INC (MODEL SS).
2. CASING END SEAL TO CL&C PIPE TO BE SYNTHETIC RUBBER (MIN. 1/8" THICKNESS) WITH STAINLESS STEEL BANDS AND CLAMPS. MANUFACTURED BY CALPICO INC. (MODEL C OR W), P.S.I. INC. (MODEL C OR W), OR A.P.S. INC (MODEL AC OR AW).
3. CL&C STEEL CYLINDER TO BE 8.63" O.D. ASA SCHEDULE 10 WITH ASTM A53 TEST PRESSURE AND ASTM A36 PHYSICAL PROPERTIES.
4. CL&C PIPE SHALL BE LINED AND COATED WITH CEMENT MORTAR PER LATEST REVISION OF AWWA C205. COATING SHALL BE 3/4" THICK WITH AN 8" HOLDBACK FROM PIPE ENDS AND REINFORCED WITH 14 GAUGE WIRE MESH OR SPIRALLY WOUND WIRE IN CENTER OF COATING. LINING SHALL BE 1/2" THICK, FLUSH TO ENDS.
5. FULL WATER TIGHT WELD REQUIRED AT JOINTS OF CONDUIT.
6. PROTECT UNDERGROUND FLEXIBLE COUPLINGS, BARE STEEL, MJxMJ SLEEVES AND BOLTS AS FOLLOWS:
   A. THE ENTIRE AREA OF FITTING SHOULD BE DRY AND FREE OF DUST, DIRT OR OTHER FOREIGN MATTER. RUST OF OTHER FOREIGN MATERIAL SHOULD BE REMOVED BY SCRAPING OR WIRE BRUSHING. WIPING WITH A DRY CLEAN CLOTH MAY BE NECESSARY TO REMOVE PARTICLES FROM BRUSH CLEANING. ANY OIL GREASE MUST BE REMOVED USING A LOW RESIDUE VOLATILE PETROLEUM SOLVENT BEFORE APPLICATION OF GREASE AND WRAPPING.
   B. THE EXPOSED AREA SHOULD BE COATED WITH A HEAVY COATING OF METALGUARD #301 GREASE BY THE GLOVE METHOD TO A THICKNESS OF AT LEAST 1/4 INCH.
   C. FIRMLY WRAP THE ENTIRE GREASE AREA WITH AT LEAST TWO LAYERS HALF LAPPED OF A WOVEN GLASS FILAMENT MESH (RES OR BIT WRAP, 4 INCH WIDE). APPLY GREASE BETWEEN EACH LAYER DURING WRAPPING, WORKING THE GREASE INTO THE MESH OPENINGS.
   D. COVER THE ENTIRE MESH WRAPPED AREA OF FITTING WITH AT LEAST 1/4 INCH THICK OF METALGUARD #301 GREASE BY THE GLOVE METHOD.
   E. FIRMLY APPLY TWO LAYERS OF THE POLYWRAP TUBE OVER PROTECTED AREA BY SPLITTING THE TUBE AND TAPING THE POLYWRAP IN PLACE WITH THE PVC TAPE.
   F. BACKFILLING MAY FOLLOW IMMEDIATELY AFTER THE POLYWRAP TUBE IS TAPED CLOSE.

DETAIL "H"
BORE & CASE
8" C.L.&C PIPE TO 8" PVC OR DUCTILE IRON



PROFILE A–A
CROSSING #1 & #2

N.T.S.

ENGINEERING

CALIFORNIA WATER SERVICE

DEPARTMENT

REVISIONS:

	DATE:	INIT.
DISTRIBUTION MAP	X	
PLAT SHEET	X	
SYSTEM SCHEMATIC		
STATION SCHEMATIC		

PLAT SHEET NO.:
25–17, 25–18, 25–19
25–20, 26–19

SCALE:
N/A

DRAWN BY:
E. JACOBSEN

DESIGNED BY:
C. ROSETE

TECH REVIEW: DATE:

CHECKED BY: DATE:

APPROVED BY: DATE:

REGISTERED PROFESSIONAL ENGINEER
PATRICK CASSIDY KALTASS
No. C91673
CIVIL
STATE OF CALIFORNIA

TITLE:
NEW BUSINESS CONSOLIDATION PROJECT
WEST GOSHEN EMERGENCY WATER SUPPLY CONSOLIDATION

DISTRICT:
VISALIA

DATE:

PROJECT ID.:
131661

DRAWING NO.:
VIS–6533

SHT 12 OF 14

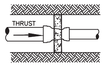
THRUST BLOCK SCHEDULE

PIPE SIZE	FITTING	TYPE OF SOIL: SOFT CLAY (1000 P.S.F.) MIN. BEARING AREA (SQ. FT.)	SOFT CLAY DIMENSION (FEET) A	SOFT CLAY DIMENSION (FEET) B	SAND (2000 P.S.F.) MIN. BEARING AREA (SQ. FT.)	SAND DIMENSION (FEET) A	SAND DIMENSION (FEET) B	ROCK (3000 P.S.F.) MIN. BEARING AREA (SQ. FT.)	ROCK DIMENSION (FEET) A	ROCK DIMENSION (FEET) B
6"	PLUG, CAP	6	3	2	3	2	1.5	2	2	1
	90° ELL	8	3.2	2.5	4.1	2.7	1.5	3	2	1.5
	45° ELL	4.4	2.2	2	2.3	1.5	1.5	1.5	1.5	1
	22 1/2° ELL	2.3	1.5	1.5	1	1	1	1	1	1
	TEE W/ 6"OUTLET	6	3	2	3	2	1.5	2	2	1
8"	PLUG, CAP	10	4	2.5	5	2.5	2	3.3	2.2	1.5
	90° ELL	14	4	3.5	7	2.8	2.5	5	2.5	2
	45° ELL	7.5	3	2.5	3.8	2	1.9	2.6	1.7	1.5
	22 1/2° ELL	4	2	2	2	2	1	1.5	1.5	1
	TEE W/8"OUTLET	10	4	2.5	5	2.5	2	3.3	2.2	1.5
12"	PLUG, CAP	24	6	4	12	4	3	7.5	3	2.5
	90° ELL	32.5	6.5	5	16.1	4.6	3.5	10.8	3.6	3
	45° ELL	17.5	5	3.5	8.8	3.5	2.5	6	3	2
	22 1/2° ELL	9	3.6	2.5	4.6	2.3	2	3	2	1.5
	TEE W/12"OUTLET	24	6	4	12	4	3	7.5	3	2.5
14"	PLUG, CAP	31.5	6.3	5	15.8	4.5	3.5	10.5	3.5	3
	90° ELL	44.4	7.4	6	22	5.5	4	14.7	4.2	3.5
	45° ELL	24	6	4	12	4	3	8.1	3	2.7
	22 1/2° ELL	12	4	3	6	3	2	4	2	2
	TEE W/ 14"OUTLET	31.5	6.3	5	15.8	4.5	3.5	10.5	3.5	3
16"	PLUG, CAP	40.7	7.4	5.5	20	5	4	13.5	4.5	3
	90° ELL	56	8	7	28.8	6.4	4.5	20	5	4
	45° ELL	31	6.2	5	15.8	4.5	3.5	10.5	3.5	3
	22 1/2° ELL	15.8	4.5	3.5	7.8	3	2.6	5.2	2.6	2
	TEE W/ 16"OUTLET	40.7	7.4	5.5	20	5	4	13.5	4.5	3
18"	PLUG, CAP	52	8	6.5	26.4	6.6	4	17.5	5	3.5
	90° ELL	75	10	7.5	37	7.4	5	24.8	6.2	4
	45° ELL	40.7	7.4	5.5	20	5	4	14	4	3
	22 1/2° ELL	20	5	4	10.5	3.5	3	6.9	3	2.3
	TEE W/ 18"OUTLET	52	8	6.5	26.4	6.6	4	17.5	5	3.5

NOTE:
1. THRUST BLOCKS DESIGNED FOR A MAXIMUM OF 150 PSI WATER PRESSURE
2. ALL CONCRETE SHALL CONTAIN 6 SACKS OF CEMENT PER CUBIC YARD.
3. THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED SOIL.
4. KEEP ALL CONCRETE CLEAR OF THE JOINTS ON ALL FITTINGS.
5. FORMS ARE REQUIRED ON ALL THRUST BLOCKS AND TO BE SUPPLIED BY CONTRACTOR. ALL FITTINGS TO BE WRAPPED WITH POLYETHELENE PRIOR TO POURING THRUST BLOCKS.

TEE & SOLID PLUG

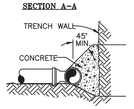
NOTE:
SEE PLANS FOR SIZE & DETAIL OF CONCRETE BLOCK WHEN REQUIRED FOR REDUCER.



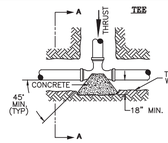
REDUCER

90° ELL

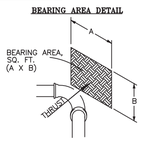
SECTION A-A



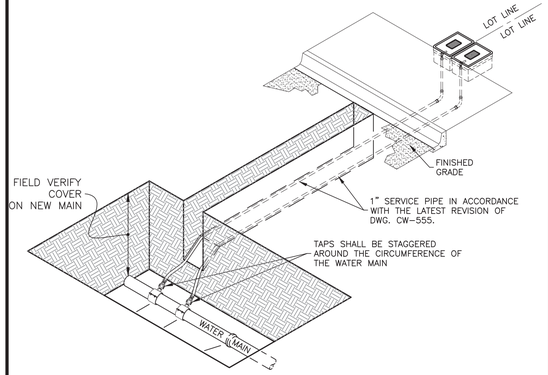
TEE



BEARING AREA DETAIL

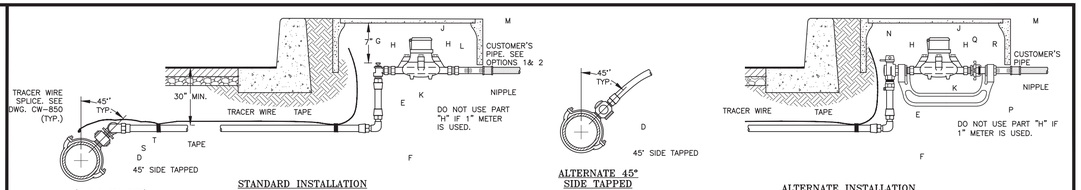


DETAIL "I"
CW-435 R4 - TYPICAL THRUST BLOCK INSTALLATION
N.T.S.



NOTE:
ALL LONG SIDE 1" SERVICES SHALL BE PLACED IN A COMMON TRENCH, EXCEPT WHEN THE METER BOXES ARE NOT LOCATED SIDE BY SIDE AT THE PROPERTY LINE. (DOES NOT APPLY IN LIVERMORE, SALINAS AND STOCKTON)

DETAIL "J"
CW-837 R4 - TWO LONG SIDE SERVICES IN COMMON TRENCH
N.T.S.



STANDARD INSTALLATION

ALTERNATE 45° SIDE TAPPED CONNECTION

ALTERNATE INSTALLATION

SIDE VIEW METER BOX

FRONT VIEW METER BOX

WHEN REQUIRED BY CWS COMPANY, PLACE BRICKS ON TWO SIDES OF METER BOX FOR SUPPORT (OR 2" x 4" PRESSURE TREATED LUMBER)

BADGER E-SERIES ULTRASONIC			
MODEL	SIZE	LENGTH	MAX FLOW
G2	5/8"x3/4"	7-1/2"	30 gpm
G2	1"	10-3/4"	62 gpm

BADGER RECORDALL DISC			
MODEL	SIZE	LENGTH	MAX FLOW
25	5/8"x3/4"	7-1/2"	25 gpm
55	1"	10-3/4"	40 gpm
70	1"	10-3/4"	50 gpm

NOTES:

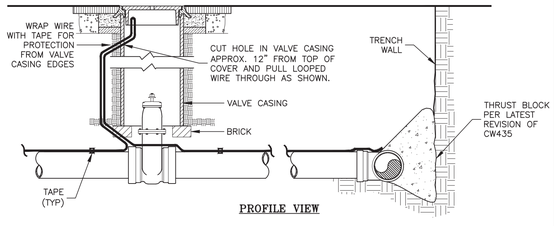
1. ALL PE PLASTIC PIPE REQUIRES TRACER WIRE TAPED TO PE PIPE AND EXTENDED INTO METER BOX PER LATEST REVISION OF DWG. CW-850 AND AS SPECIFIED IN CWS CO. MATERIAL SPECIFICATIONS DWG. CW-832.
2. SADDLES ARE REQUIRED ON ALL PVC C-900, AC, STEEL, OR WROUGHT IRON PIPE.
3. INSERT **STIFFNERS** SHALL BE USED ON ALL PE PIPE WITH **COMPRESSION CONNECTIONS**.
4. WHEN USING MUELLER INSTA-TITE, BEVEL THE PE PIPE WITH MUELLER'S BEVELING TOOL PER MANUFACTURER'S SPECIFICATIONS.
5. RESPONSIBILITY FOR SERVICE MAINTENANCE BY CWS CO. ENDS AT DOWNSTREAM METER COUPLING (OR LEFT TO DISTRICT'S DISCRETION).
6. ALL PIPE FITTINGS IN CONTACT WITH WATER SHALL BE LEAD FREE (< 0.25% LEAD) AND COMPLIANT TO NSF-61/SECTION 8.
7. FOR SERVICES AND METER BOXES LOCATED DIRECTLY ABOVE MAIN, THE TAP SHALL BE INSTALL AT 0° AT THE TOP OF THE MAIN.

OPTIONS: THESE OPTIONS MAY BE REQUIRED BY CWS CO.

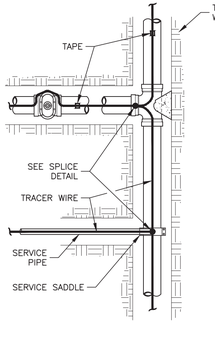
1. EXTEND CUSTOMER'S PIPING ±12" BEYOND METER BOX WITH TWO 12" NIPPLES & TWO 90° ELLS, BRASS (OR GALVANIZED IF PREFERRED BY CWS). SEE NOTE 5.
2. INSTALL BALL VALVE DOWNSTREAM FROM METER WHEN CUSTOMER'S PIPING IS UPHILL FROM METER OR CUSTOMER'S VALVE IS A GREAT DISTANCE FROM METER.
3. WHEN REQUIRED BY CWS COMPANY, PLACE BRICKS ON TWO SIDES OF METER BOX FOR SUPPORT (OR 2" x 4" PRESSURE TREATED LUMBER)
4. AT THE DIRECTIVE OF CWS REPRESENTATIVE, **COMPRESSION FITTINGS** MAY BE USED IN LIEU OF LEAD-FREE SOLDER JOINT COPPER FITTINGS. INSTALLATION OF A SOLDERED FITTINGS SHALL CONFORM TO THE LATEST REVISION OF ASTM B828. ALL MATERIAL USED FOR SOLDERING SHALL BE LEAD-FREE.

DETAIL "K"
CW-555 R15 - STANDARD 1" SERVICE CONNECTION FOR 5/8" x 3/4" METER AND 1" METER
N.T.S.

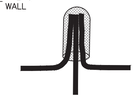
PART LETTER	PART NAME	PART SIZE	MUELLER INSTA-TITE/ MUELLER PACK-JOINT	FORD ULTRA-TITE/ FORD PACK JOINT	A.Y. McDONALD	CAMBRIDGE BRASS	SMITH-BLAIR	ROMAC
A	SERVICE SADDLE ALL BRONZE	NOMINAL MAIN SIZE x 1" CC	H-13400 SERIES	------	3805/3809 SERIES	------	------	202B SERIES
B	SERVICE SADDLE DUCTILE IRON	NOMINAL MAIN SIZE x 1" CC	DR 2A SERIES	F202 SERIES	4825A SERIES	------	313 SERIES	202U SERIES
C	SERVICE SADDLE ALL BRONZE	NOMINAL MAIN SIZE x 1" CC	BR 2B SERIES	202B SERIES	3825 SERIES	810 SERIES	------	------
D	CORPORATION STOP (BALL)	1" CC x 1" MFG. F/PE IPS	B-2996N + H15456N	FB1001-4-U-ANWT-NL /FB1001-4-NL/ FB400-4NL	74701B-33-1" 7312BB-1" + 74754-3H-1" 74701B-3M-1"	301NL-A4PE4 301NL-A4M4	------	------
E	1" PIPE	1" PE PLASTIC PIPE IPS	HIGH DENSITY POLYETHYLENE PIPE, IRON PIPE SIZE, AWWA STANDARD C901, PE 4710, PC 200, SIDR7					------
F	1" 90° ELBOW	1" MFG F/PE	H-15464N		74761-3Q-1" 74761-3H-1"	105NL-PE4PE4	------	------
G	ANGLE METER STOP (BALL)	1" F/PE IPS x 1" METER SWIVEL NUT	B-24266N/E-24259N	BA63-444W-U-AWT-NL /BA63-444W-NL	74602B-33-1" 74602B-3M-1"	210NL-PE4T4	------	------
H	METER ADAPTER	1" METER TO 5/8" x 3/4" METER	H-10879N	A24-NL	710J24	440NL-N4R2	------	------
J	METER	BY CWS COMPANY, METER PER BADGER ULTRASONIC AND RECORDALL TABLES LISTED ON THIS SHEET. NEW SERVICE LINE INSTALLS MUST BE 1" METER. 5/8" x 3/4" FOR METER REPLACEMENT ONLY.						
K	METER SPACER	CONTRACTOR SHALL INSTALL SCH. 80 PVC NIPPLE IN PLACE OF METER: 1-1/4" DIAMETER, 11" LONG WITH PIT						
L	METER COUPLING	1" METER SWIVEL NUT x M.I.P.	H-10890N	C38-44-2-625-NL	74624	417NL-T4M4	------	------
M	METER BOX	12" x 20" x 12" - BROOKS #37 BOX W/ CAST IRON COVER OR CHRISTY #812 BOX W/ CAST IRON COVER. IF OUTSIDE FULL TRAFFIC AREAS, USE CHRISTY FL12 BOX W/ SYN12S LID. CWS OPTION: 1-PIECE COVER FL120 OR ARMORCAST A6000485 BOX W/ A6000484OD COVER & DROP-IN LID A6000487. CWS OPTION: 1-PIECE COVER A6000484						
N	ANGLE BALL VALVE	1" PEP x 1" LOCKNUT	H-15426N+B-24378N/ E-15429N+B-24278N	BA96-444W-U-AWT-NL /BA96-444W-NL	------	------	------	------
P	IRON YOKE PIECE	------	H-5040	Y504P	14-4,14-4P	460,461	------	------
Q	EXPANSION CONNECTION	------	H-14234N	EC-4-NL	714-4EHG	430NL-4	------	------
R	YOKE COUPLING	LOCKNUT x FIP	H-14219N	C91-44-NL	74754Y	117NL-SR4F4	------	------
S	1" 90° ELBOW	1" FIP THREAD X FIP THREAD	H-15541N	------	74761F	------	------	------
T	1" 90° ELBOW	1" MIP THREAD X PEP	------	LB6-44-NL, LB5-44-NL	74779M-(30/ 33/34/55)	------	------	------



PROFILE VIEW



PLAN VIEW


SPLICE DETAIL FOR CUT WIRES

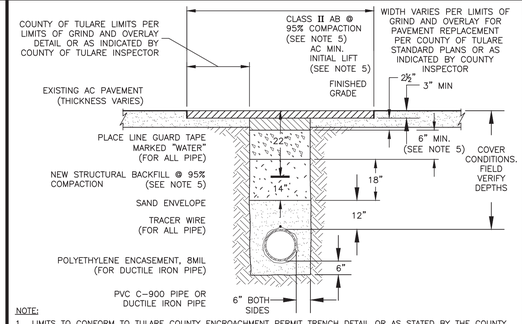
STEPS:
1. STRIP 1" OF INSULATION FROM END OF EACH WIRE.
2. TWIST WIRES TOGETHER WITH PLIERS.
3. PLACE SPLICE CAP OVER TWISTED WIRES AND CRIMP WITH CRIMPING TOOL.
4. BEND CRIMP FLAT WITH WIRE.
5. WRAP SPLICED CONNECTION WITH RUBBER MOLDING TAPE, COMPLETELY COVERING BARE WIRE.

-OR-

USE WATERTIGHT DIRECT BURY TWIST-ON ENCLOSURES OR APPROVED EQUAL AND INSTALL PER MANUFACTURER'S INSTRUCTIONS.

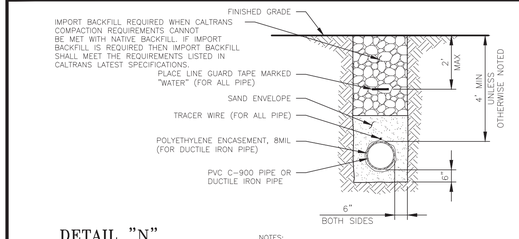
NOTES:
1. CONTRACTOR SHALL USE CARE TO PREVENT DAMAGE TO TRACER WIRE DURING INSTALLATION.
2. ALL WIRE SHALL BE SOLID COPPER WITH 45 MILS OF HIGH MOLECULAR WEIGHT POLYETHYLENE (HMWPE) INSULATION, UL LISTED, RATED FOR DIRECT BURIAL MINIMUM SIZE AWG 12. COLOR BLUE FOR POTABLE WATER AND PURPLE FOR RECLAIMED WATER.
3. TRACER WIRES SHALL BE INTER-CONNECTED AT TEES, CROSSES, PE SERVICES, AND CUT WIRES WITH SPLICE CONNECTORS.
4. ENOUGH SLACK OF TRACER WIRE SHALL BE EXTENDED INTO VALVE CASING AND METER BOX FOR FUTURE ACCESS. LOOPED WIRE SHALL BE PULLED INTO VALVE CASING AS SHOWN ON "PROFILE VIEW" ABOVE. TRACER WIRE SHALL BE TAPED TO BLOW OFF ASSEMBLY AT DEAD ENDS AND TO ANGLE METER STOP AT END OF SERVICE CONNECTIONS.
5. CONTINUITY TESTS SHALL BE CONDUCTED WHEN REQUIRED BY A CAL WATER REPRESENTATIVE.
6. TRACER WIRE SHALL BE REQUIRED ON ALL MAINS.

DETAIL "L"
850-R4 STANDARD INSTALLATION DETAILS FOR TRACER WIRE ON MAINS
N.T.S.



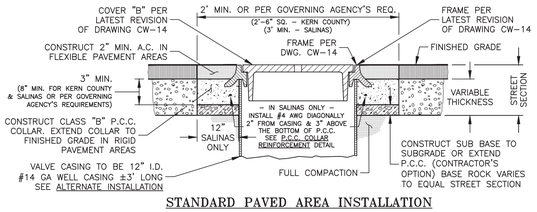
NOTE:
1. LIMITS TO CONFORM TO TULARE COUNTY ENCROACHMENT PERMIT TRENCH DETAIL OR AS STATED BY THE COUNTY OF TULARE FIELD INSPECTOR.
2. ALL VALVE CASINGS AND COVERS SHALL BE RAISED TO FINISHED GRADE AFTER PERMANENT PAVEMENT HAS BEEN PLACED.
3. SAW CUT TRENCH SECTION, FILL AND PLACE IN LIFTS THAT CONFORM TO COUNTY OF TULARE STANDARD PLANS AND DETAILS, ENCROACHMENT PERMIT AND COUNTY OF TULARE INSPECTOR.
4. LIMITS OF GRIND AND OVERLAY FOR PAVEMENT REPLACEMENT PER COUNTY OF TULARE STANDARD PLANS, ENCROACHMENT PERMIT AND PER COUNTY OF TULARE INSPECTOR.
5. LOCAL AGENCY STANDARDS SHALL APPLY FOR ALL PAVEMENT REPAIRS.

DETAIL "M"
1.3-5 TRENCH CROSS SECTION (PAVED)
N.T.S.



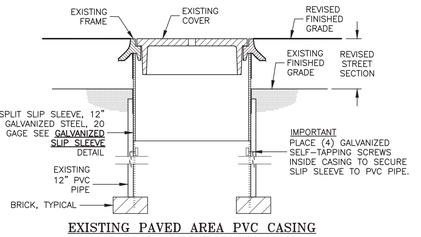
DETAIL "N"
1.3-3 TRENCH CROSS SECTION
N.T.S.

NOTES:
1. ALL EXCESS SPOIL "IN TRACT" IS TO REMAIN TRENCHSIDE AND ALL EXCESS SPOIL "OFF TRACT" IS TO BE REMOVED.
2. ALL VALVE CASINGS AND COVERS SHALL BE RAISED TO FINISHED GRADE AFTER PERMANENT PAVEMENT HAS BEEN PLACED.

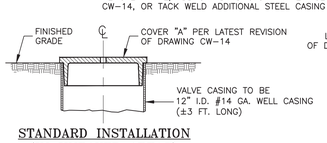


STANDARD PAVED AREA INSTALLATION
N.T.S.

NOTE:
TO EXTEND AN EXISTING STANDARD PAVED INSTALLATION: REMOVE FRAME, ADD STANDARD CAST FRAME RISER PER LATEST REVISION OF DRAWING CW-14, OR TACK WELD ADDITIONAL STEEL CASING AS REQUIRED, REPLACE FRAME.

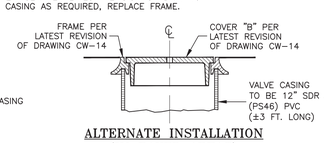


EXISTING PAVED AREA PVC CASING AND SLIP SLEEVE EXTENSION



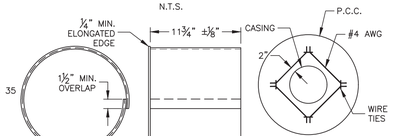
STANDARD INSTALLATION (IN UNPAVED AREAS)

NOTE:
TO EXTEND AN EXISTING STANDARD UNPAVED INSTALLATION: REMOVE COVER, TACK WELD ADDITIONAL STEEL CASING AS REQUIRED, AND REPLACE COVER.

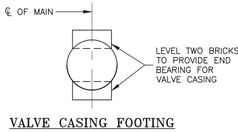


ALTERNATE INSTALLATION (IN PAVED AREAS)

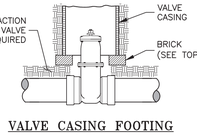
NOTE:
TO EXTEND PVC CASING IN PAVED AREA: SEE EXISTING PAVED AREA PVC CASING AND SLIP SLEEVE EXTENSION DETAIL.



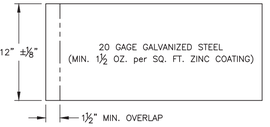
P.C.C. COLLAR REINFORCEMENT (SALINAS ONLY)
N.T.S.



VALVE CASING FOOTING TOP VIEW
N.T.S.



VALVE CASING FOOTING SIDE VIEW
N.T.S.



GALVANIZED SLIP SLEEVE
N.T.S.

DETAIL "O"
CW 439-R6 - VALVE CASING, COVER, AND FRAME INSTALLATION DETAILS
N.T.S.

ENGINEERING

CALIFORNIA WATER SERVICE

DEPARTMENT

REVISIONS:

	DATE:	INIT.
DISTRIBUTION MAP	X	
PLAT SHEET	X	
SYSTEM SCHEMATIC		
STATION SCHEMATIC		

PLAT SHEET NO.:
25-17, 25-18, 25-19
25-20, 26-19

SCALE:
N/A

DRAWN BY:
E. JACOBSEN

DESIGNED BY:
C. ROSETE

TECH REVIEW: DATE:

CHECKED BY: DATE:

APPROVED BY: DATE:

REGISTERED PROFESSIONAL ENGINEER
PATRICK CASSIDY KALTASS
No. C91673
CIVIL
STATE OF CALIFORNIA

TITLE:
NEW BUSINESS CONSOLIDATION PROJECT
WEST GOSHEN EMERGENCY WATER SUPPLY CONSOLIDATION

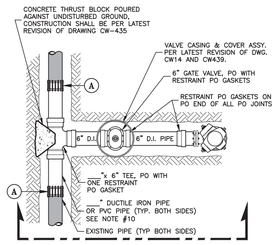
DISTRICT:
VISALIA

DATE:

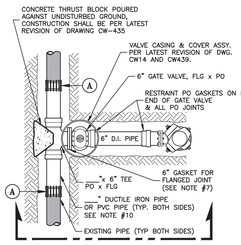
PROJECT ID.:
131661

DRAWING NO.:
VIS-6533

SHT 13 OF 14



STANDARD INSTALLATION
N.T.S.

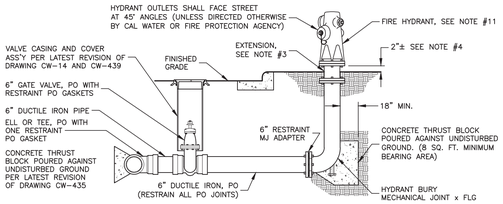


ALTERNATE INSTALLATION
N.T.S.

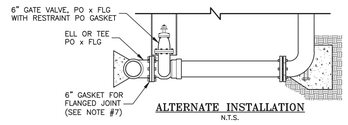
CROSS OUT INSTALLATION NOT USED

ITEM (A) MATERIALS:

TIE-INS FROM D.I. TO D.I. OR PVC C-900 OR ACME (<10" DIA.) USE SOLID SLEEVE, MJ TIE-INS FROM D.I. TO C.I. USE SOLID SLEEVE, MJ DUAL PURPOSE TIE-INS FROM PVC C-900 TO PVC C-900 USE "CERTAINTEED" PVC CLOSURE COUPLING	TIE-INS FROM D.I. TO ACRB (ASBESTOS CEMENT ROUGH BARREL) USE ACRB x DI FLEX. COUPLING (10" SLEEVE IF STEEL) OR (STANDARD SLEEVE IF DUCTILE IRON)	TIE-INS FROM D.I. TO OD STEEL USE OD STEEL x DI FLEX. COUPLING (10" SLEEVE IF STEEL) OR (STANDARD SLEEVE IF DUCTILE IRON)	TIE-INS FROM D.I. TO STD STEEL USE STD x DI FLEX. COUPLING (10" SLEEVE IF STEEL) OR (STANDARD SLEEVE IF DUCTILE IRON)



STANDARD INSTALLATION
N.T.S.



ALTERNATE INSTALLATION
N.T.S.

CROSS OUT INSTALLATION NOT USED

NOTES:

1. Fire hydrant installation shall comply with Cal Water specifications.
2. The fire chief will make the final choice of fire hydrant head with Cal Water approval.
3. A hydrant extension may be required to adjust for finished grade.
4. For wet barrel hydrants this dimension is from finished grade to bury's flange or extension's flange when an extension is required.
5. Push-on, flanged fitting joints, and/or threaded-flanged risers may be required in certain fire protection districts. Verify with Cal Water representative all fire hydrant material prior to the installation.
6. Fire hydrant barricades shall be required when a vertical or rolled curb does not exist, or when the fire hydrant needs to be protected from moving vehicles, per latest revision of drawing CW-822.
7. All machine bolts and nuts shall be 304 stainless steel, except for break-off bolts.
8. A 90° elbow with restrained push on joints may be required for the fire hydrant installation when space is limited and the hydrant lead must run parallel to the main or the location of the fire hydrant requires the bend.
9. Protect all underground bolts and nuts per Cal Water standard coating specification.
10. Normally, this piece will be ductile iron. However, PVC C-900 may be used if existing main is PVC C-900.
11. For water systems with working pressure greater than 200 psi, Clow Model 980/985 shall be used with 8" inlet only. (See Note #2)

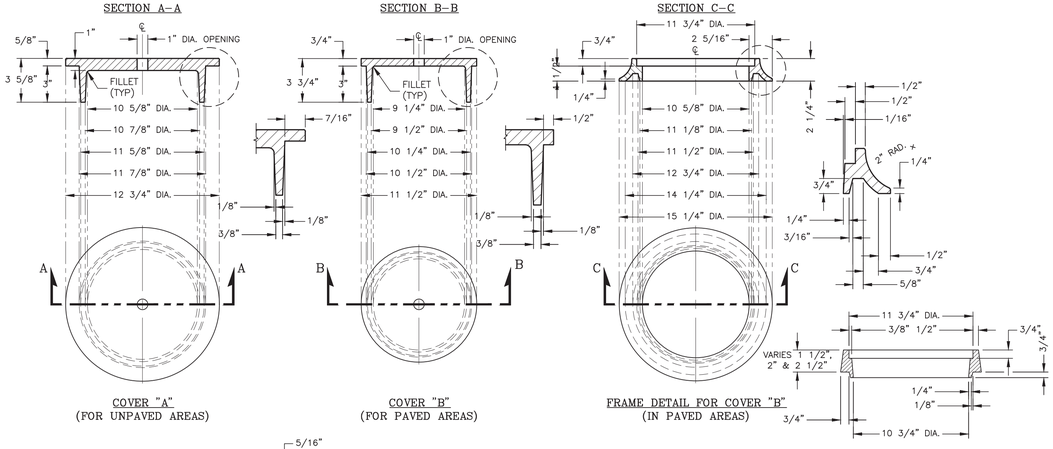
NOTES (cont'd):

12. Where possible and to reduce safety hazard upon shearing of hydrant head, locate hydrants as far as possible from overhead power lines to reduce water flow/overhead power line contact or consider installing hydrant check valve. Note, initial hydrant placement and any hydrant location changes require Fire Department approval.
13. A break-off check valve may be required in slope terrain and in close proximity to sensitive creeks or as specified by district personnel. Use Clow Model LB 400, hydrant guard or approved equal.

QTY	SIZE	DESCRIPTION:
		SLEEVE SOLID MJ STRAIGHT
		SLEEVE SOLID MJ DUAL PURPOSE
		FLEX COUPLING WITH 10" SLEEVE
		PIPE DI, PO (FOR TIE-IN)
		PIPE DI, PO (FOR HYDRANT RUN)
		PVC C-900 PIPE (FOR TIE-IN)
		TEE PO, DI
		TEE PO x FLG, DI
		ELL 90° PO, DI
		GATE VALVE PO
		GATE VALVE PO x FLG
		VALVE CASING & COVER ASSEMBLY
		RESTRAINT PO GASKET
		RESTRAINT MJ ADAPTER
		GASKET FOR FLANGED JOINT
		3/4" x 3-1/2" SS BOLTS AND NUTS
		HYDRANT BURY FLG x MJ
		FIRE HYDRANT EXTENSION
		BREAK-OFF CHECK VALVE
		POLYWRAP TUBING 8 MIL WITH PVC TAPE
		SACKS CONCRETE THRUST BLOCK MATERIAL
		BIT WRAP & #301 GREASE
		LINE GUARD TAPE

CWF 380-VIS

DETAIL "P"
TYPICAL FIRE HYDRANT INSTALLATION

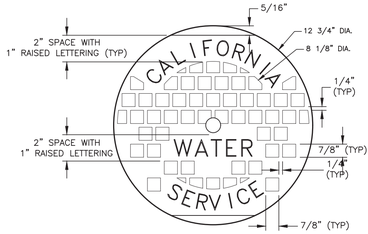


COVER "A"
(FOR UNPAVED AREAS)

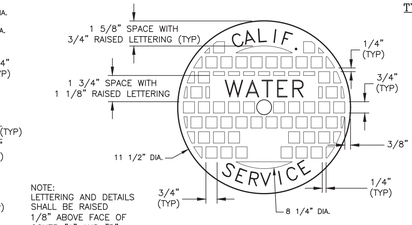
COVER "B"
(FOR PAVED AREAS)

FRAME DETAIL FOR COVER "B"
(IN PAVED AREAS)

TYPICAL CENTER SECTION OF FRAME RISER
(FOR PAVED AREAS)



TOP VIEW OF COVER "A"



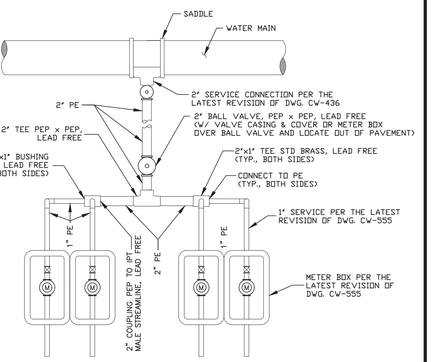
NOTE:
LETTERING AND DETAILS SHALL BE RAISED 1/8" ABOVE FACE OF COVER "A" AND "B".

TOP VIEW OF COVER "B"

NOTES:
1. FRAME, COVER AND CASING EXTENSIONS TO BE OF GOOD QUALITY DOMESTIC CAST IRON, FREE FROM FLAWS AND BLOW HOLES, AND OF SUFFICIENT STRENGTH TO RESIST BREAKAGE BY STREET TRAFFIC.
2. CASTINGS TO BE TRUE, AND IF NECESSARY TO BE TRIMMED ON EMERY WHEEL TO PREVENT ROCKING OF COVER IN ANY POSITION IN THE FRAME.
3. SEE LATEST REVISION OF DRAWING CW-439 FOR VALVE COVER, CASING, AND FRAME INSTALLATION DETAILS.
4. COVER "A" DOES NOT HAVE MATCHING CAST FRAME

CW 14-R6

DETAIL "Q"
VALVE COVER AND FRAME FABRICATION DETAILS FOR PAVED AND UNPAVED AREAS



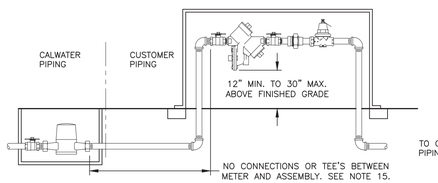
FOUR (OR LESS) 1" SERVICES

NOTES:

1. ALL SERVICE MATERIALS SHALL COMPLY WITH LATEST REVISIONS OF CW-555.CW-436 AND CWS MATERIAL SPECIFICATIONS.
2. ALTERNATE SERVICE FITTINGS FROM THOSE LISTED ABOVE MAY BE USED IF APPROVED BY CAL WATER REPRESENTATIVE.
3. 2" SERVICE LINE CAN BE SPLIT TO A MAXIMUM OF 4-1" SERVICES. MANIFOLDS CAN BE MADE INTO 4, 3, OR 2 SERVICE UNITS.
4. ALL PIPE FITTINGS IN CONTACT WITH POTABLE WATER SHALL BE LEAD FREE (<0.25% LEAD) AND COMPLIANT TO LATEST REVISION OF NSF-61/SECTION 8.

CW 906R2

DETAIL "R"
TYPICAL FOUR UNIT SERVICE MANIFOLD

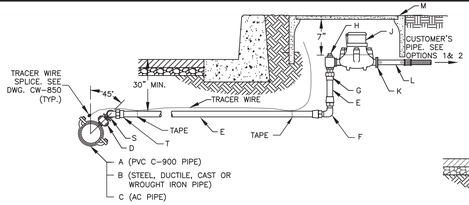


BACKFLOW PREVENTION ASSEMBLY
STANDARD INSTALLATION INSTRUCTIONS

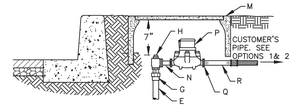
1. A backflow prevention assembly is considered customer plumbing. Cal Water assumes no liability and makes no warranty regarding performance of any backflow prevention assembly.
2. Backflow prevention assembly shall be only those approved for use by the State Water Resources Control Board. Backflow prevention assembly and all piping used for potable water service must be lead free (<0.25% lead). Dedicated irrigation and fire suppression services may continue to use approved low lead components.
3. Any deviation from the installation specifications described herein must receive Cal Water approval prior to installation.
4. Backflow prevention assembly shall be installed on the consumer's property, immediately after the meter, in the orientation in which it was evaluated and approved. If backflow prevention assembly is not placed immediately after the meter, then proposed location needs to be approved by Cal Water. In addition, 4" concrete cap and/or sleeve shall be placed around the pipe connecting the meter and the assembly. Vertical clearance to finished grade and obstructions shall be between 12 and 30 inches. A minimum 18" horizontal clearance must be provided for testing and maintenance. Installation shall comply with all local ordinances regarding permits and property line setback requirements.
5. No outlets, tees, taps, by-pass, swing joints, or other connections, temporary or permanent, shall be installed between the water meter and the backflow prevention assembly. Pressure reducing valves and unions (not part of the backflow prevention assembly) may be installed upstream of the backflow prevention assembly; however, in no case shall there be a union located both upstream and downstream of the assembly.
6. Alternate installation locations or arrangements shall be reviewed and approved by Cal Water prior to installation.
7. Any plumbing modification to any part of the backflow prevention assembly will render the assembly "unapproved". Unapproved assemblies will result in disruption of water service and will require replacement with an approved assembly at customer's expense.
8. Installation of a backflow prevention assembly creates a closed water system. Cal Water recommends installation of thermal expansion protection as required by the California Plumbing Code.
9. Where necessary the backflow prevention assembly should be protected from vehicle damage.
10. In freeze prone areas, a protective enclosure is recommended. Enclosure must have adequate drainage in accordance with Cal Water requirements.
11. Water services which cannot be turned off for short durations should have backflow prevention assemblies installed in parallel.
12. Under no circumstances are the backflow prevention assembly's test ports be used for anything other than testing (i.e. no garden hose connections, tubing, irrigation timers, etc.)
13. The relief port located at the bottom of the backflow prevention assembly must be kept free of all obstructions at all times.
14. It is the customer's responsibility to ensure that the backflow prevention assembly is kept in good working order at all times, to have the assembly tested annually and after repairs, according to Cal Water requirements. Failure to perform required testing or keep the backflow prevention assembly in good working order will result in disruption of water service.
15. Contact your local Cal Water office to schedule a final inspection PRIOR to backfilling any exposed piping. Re-excavation may be required if trenches are backfilled prior to inspection by Cal Water.

CW 1002R4

DETAIL "S"
REDUCE PRESSURE PRINCIPLE ASSEMBLY FOR 2" AND SMALLER DOMESTIC/IRRIGATION SERVICES



2" SERVICE WITH 2" METER



2" SERVICE WITH 1-1/2" METER

NOTES:
1. 2" SERVICE SHALL BE INSTALLED FOR ALL 1-1/2" METERS.
2. A SADDLE SHALL BE USED FOR ALL 2" SERVICES.
3. ALL PE PLASTIC PIPE REQUIRES TRACER WIRE TAPED TO PE PIPE AND EXTENDED INTO METER BOX PER LATEST REVISION OF DWG. CW-850 AND AS SPECIFIED IN CWS CO. MATERIAL SPECIFICATIONS DWG. CW-832.
4. INSERT **STIFFNERS** SHALL BE USED ON ALL PE PIPE WITH **CONNECTIONS**.
5. RESPONSIBILITY FOR SERVICE MAINTENANCE BY CWS CO. ENDS AT DOWNSTREAM METER COUPLING (OR LEFT TO DISTRICT'S DISCRETION).
6. ALL PIPE FITTINGS IN CONTACT WITH DRINKING WATER SHALL BE LEAD FREE (< 0.25% LEAD) AND COMPLIANT TO NSF-61/SECTION 8.
7. FOR SERVICES AND METER BOXES LOCATED DIRECTLY ABOVE MAIN, THE TAP SHALL BE INSTALLED AT 0° AT THE TOP OF THE MAIN.

OPTIONS: THESE OPTIONS MAY BE REQUIRED BY CWS CO.

1. EXTEND CUSTOMER'S PIPING ±12" BEYOND METER BOX WITH TWO 12" NIPPLES & TWO 90° ELLS, BRASS (OR GALVANIZED IF PREFERRED BY CWS). SEE NOTE 3.
2. INSTALL BALL VALVE DOWNSTREAM FROM METER WHEN CUSTOMER'S PIPING IS UPHILL FROM METER OR CUSTOMER'S VALVE IS A GREAT DISTANCE FROM METER.
3. INSTALL 2" COPPER TUBING, TYPE K SOFT, INSTEAD OF PE WHEN CWS REPRESENTATIVE DETERMINES THAT CONDITIONS ARE UNFAVORABLE TO PE. REFER TO THE LATEST REVISION OF DWG# CW-1020.
4. WHEN REQUIRED BY CWS COMPANY, PLACE BRICKS ON TWO SIDES OF METER BOX FOR SUPPORT (OR 2" x 4" PRESSURE TREATED LUMBER)

DETAIL "T"
CW-436 R11 - 2" SERVICE CONNECTION POLYETHYLENE INSTALL (PE)
N.T.S.

PART LETTER	PART NAME	MUELLER	FORD	A.Y. McDONALD	CAMBRIDGE BRASS	SMITH-BLAIR	ROMAC
A	SERVICE SADDLE, ALL BRASS WITH 2" AWWA CC THREAD	H-13400	------	3805 SERIES/ 3809 SERIES	------	------	202B SERIES
B	SERVICE SADDLE, DUCTILE IRON BODY, DOUBLE STEEL STRAP WITH 2" AWWA CC THREAD	DR2A	F202 SERIES	4825A	------	313 SERIES	202U SERIES
C	SERVICE SADDLE, BRASS BODY, DOUBLE BRONZE STRAP WITH 2" AWWA CC THREAD	BR2B	202B SERIES	3825 SERIES	810 SERIES	------	------
D	2" CORPORATION STOP - AWWA CC THREAD X MIP	B-2996N	FB400-7-NL	73128B	301NL-A7M7	------	------
E	2" PIPE	HIGH DENSITY POLYETHYLENE PIPE, IRON PIPE SIZE, AWWA STANDARD C901, PE 4710, PC 200, SIDR7					
F	2" 90° ELL COUPLING - PEP X PEP	------	L66-77-IDR7-NL	74761-33	105NL-PE7PE7	------	------
G	2" STRAIGHT COUPLING - PEP X MIP	E-15429N	C86-77-IDR7-NL	74753-33	117NL-PE7M7/ 117NL-U7M7	------	------
H	2" BALL ANGLE METER VALVE - F.I.P. X METER FLANGE - FULL PORT	B-24286N-3	BFA13-777W-NL	74604B	210NL-F7MF7	------	------
J	2" METER	(BY CWS COMPANY) LENGTH 17" NOTE: DEVELOPER'S CONTRACTOR SHALL INSTALL SPACER IN PLACE OF METER PER CWS CO'S DIRECTION					
K	2" METER FLANGE - FLG. X F.I.P.; BRONZE WITH FULL FACE GASKET AND #304 STAINLESS STEEL BOLTS & NUTS	H-10129HN	CF31-77-NL	7610F	421NL-7S/S	------	------
L	2" NIPPLE	LEAD FREE BRASS (SEE NOTE 6)					
M	METER BOX	BROOKS CONCRETE #65 BOX W/ #65S CONCRETE COVER & LID OR CHRISTY CONCRETE B65 BOX W/ B65E CONCRETE COVER & LID NOTE: CAST IRON COVERS REQUIRED IN TRAFFIC AREAS					
N	ADAPTER - 2" METER FLG. X 1-1/2" MET FLG.	------	A67-NL	710J67	------	------	------
P	1-1/2" METER	(BY CWS COMPANY) LENGTH 13" NOTE: DEVELOPER'S CONTRACTOR SHALL INSTALL SPACER IN PLACE OF METER PER CWS CO'S DIRECTION					
Q	1-1/2" METER FLANGE - FLG. X F.I.P.; BRONZE WITH FULL FACE GASKET AND #304 STAINLESS STEEL BOLTS & NUTS	H-10129HN	CF31-66-NL	7610F	421NL-6S/S	------	------
R	1-1/2" NIPPLE	LEAD FREE BRASS (SEE NOTE 6)					
S	2" 90° ELL, LEAD FREE BRASS - FIP X FIP	H-15541N	------	------	------	------	------
T	2" 90° ELL COUPLING - MIP X PEP	------	L86-77-IDR7-NL	74779M-33	------	------	------

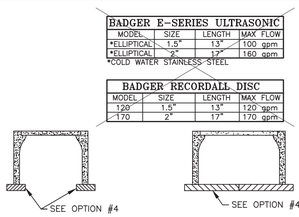
BADGER E-SERIES ULTRASONIC

MODEL	SIZE	LENGTH	MAX FLOW
*ELLIPTICAL	1.5"	13"	100 gpm
*ELLIPTICAL	2"	12"	160 gpm

*COLD WATER STAINLESS STEEL

BADGER RECORDALL DISC

MODEL	SIZE	LENGTH	MAX FLOW
120	1.5"	13"	120 gpm
170	2"	17"	170 gpm



FRONT VIEW METER BOX

SIDE VIEW METER BOX

ENGINEERING
CALIFORNIA WATER SERVICE
DEPARTMENT

REVISIONS:

	DATE:	INIT.
DISTRIBUTION MAP		
PLAT SHEET		
SYSTEM SCHEMATIC		
STATION SCHEMATIC		

PLAT SHEET NO.:
25-17, 25-18, 25-19
25-20, 26-19

SCALE:
N/A

DRAWN BY:
E. JACOBSEN

DESIGNED BY:
C. ROSETE

TECH REVIEW: DATE:

CHECKED BY: DATE:

APPROVED BY: DATE:

REGISTERED PROFESSIONAL ENGINEER
PATRICK CASSIDY KALTASS
No. C91673
CIVIL
STATE OF CALIFORNIA

TITLE:
NEW BUSINESS CONSOLIDATION PROJECT
WEST GOSHEN EMERGENCY WATER SUPPLY CONSOLIDATION

DISTRICT:
VISALIA

DATE:

PROJECT ID.:
131661

DRAWING NO.:
VIS-6533

SHT 14 OF 14

SPECIFICATIONS FOR MATERIAL

All materials in contact with drinking water shall conform to NSF 61 standards unless specified otherwise. All chemicals used in new main installations shall conform to NSF 60 standards.

Ductile Iron (DI) Pipe: All DI pipe shall comply with the latest revision of AWWA Standard C151 and shall be cement mortar lined in conformance with the latest revision of AWWA Standard C104. All DI Pipe shall be Pressure Class 350 for all sizes from 6" to 12" unless specified otherwise and shall be furnished with polyethylene encasement complying with the latest revision of AWWA Standard C105. All DI pipe shall be manufactured by McWane Ductile (McWane), U.S. Pipe, or American Ductile Iron Pipe (American).

DI Pipe with Push-on Joints: All DI pipe shall have Push-on Joint ends complete with gasket unless specified otherwise on the drawings.

DI Pipe with Restrained Push-on Joints: If specified on the drawings; for pipe sizes 6" to 12", Tyton Joint ® DI pipe manufactured by McWane or U.S. Pipe shall be restrained with Field Lok 350 ® or Sure Stop 350 ® gaskets. All DI pipe greater than 12" shall be TR Flex ® DI pipe by U.S. Pipe or McWane or Flex-Ring by American unless specified otherwise on the drawings.

DI Pipe with Flanged Joints: All DI Flanged pipe shall have Class 125 Flanges unless specified otherwise on the drawings. Gaskets for Flanged Joints shall be Flange-Tyte® Gaskets by U.S. Pipe, or American Toruseal Flange Gasket by American.

Polyvinyl Chloride (PVC) Pipe: All PVC pipe shall be Class 235, DR 18, unless otherwise specified and shall comply with the latest revision of AWWA Standard C-900 for all sizes from 4" to 12". PVC pipe shall have ductile-iron pipe equivalent outside diameter dimensions. All PVC pipe shall be manufactured by J M Eagle, Diamond Plastic Corp., Vinyl Tech, CertainTeed (by Westlake Piping & Fittings), & North American Pipe Co. (by Westlake Pipe & Fittings).

PVC Pipe with Push-on Joints: All PVC pipe shall have Push-on Joint ends complete with gasket unless specified otherwise on the drawings.

PVC Certa-Lok® Restrained Joint Pipe: All PVC Certa-Lok® Restrained Joint pipe shall be manufactured by CertainTeed (by Westlake Piping & Fittings). Certa-Lok® shall comply with the latest revision of AWWA Standard C-900/C-905. Pipe is made to ductile-iron pipe equivalent outside diameter dimensions (DI OD), Class 235, DR 18 in 20' laying lengths, with twin gasket Certa-Lok® couplings, nylon splines, and rubber rings.

Fusible PVC Pipe: All Fusible PVC pipe shall be manufactured by Underground Solutions (by Aegion). Fusible PVC Pipe shall comply with the latest revision of AWWA Standard C900/C905. Pipe shall be Class 235, DR 18 unless specified otherwise on the drawings.

Cement Mortar Lined and Cement Mortar Coated Steel Pipe (CL&C): All cement mortar lined and coated steel pipe shall be fabricated from steel cylinder ASA schedule as indicated on the drawing, with ASTM A53 test pressure and ASTM A36 physical properties. Cement mortar protective coating shall be 3/4" for all pipe sizes. The lining shall be 1/2" for 12" and larger pipe and 3/8" for 6" and 8" pipe, and conform to the latest revision of AWWA C205 and NSF/ANSI 61 Standard. Cement Mortar Coating shall be reinforced with 14 gauge wire mesh or spirally wound wire in center of coating. All CL&C steel pipe required for the water main installation shall be as specified on the drawings. CL&C Pipe may be sourced from Southland Pipe or JIFCO, Inc.

Steel (Stl) Pipe: All Steel pipe shall comply with the latest revision of AWWA Standard C200. The size and pressure class for all steel pipe shall be as specified on the drawings.

Polyethylene (PE) Pipe: This section is for PE pipe for sizes 4" and larger and shall only be used when specified on the drawings. All PE pipe shall be high density polyethylene (HDPE) complying with the latest revision of AWWA Standard C906 and PPI PE 4710. PE pipe shall conform to the outside diameter for the ductile-iron sizing system (DI OD) in Table 4 of the latest revision of AWWA C906. For water main where working pressure is less than 100 PSI, DR 14.5 shall be used. For working pressure between 100 and 160 PSI, DR 11 shall be used. All PE pipe shall conform to NSF Standard #14 and #61. All PE pipe shall either be blue or have blue printing on it to designate its use as a potable water pipeline. HDPE pipe shall be DriscoPlex ® manufactured by Chevron Phillips Chemical.

Pipe Fittings: All fittings shall be as specified on the drawings and shall be Ductile Iron complying with the latest revision of AWWA Standard C153 for push-on and mechanical joints fittings and C110 for flanged fittings. All fittings shall either be cement mortar lined in conformance with the latest revision of AWWA Standard C104 or coated with fusion-bonded epoxy inside and outside in conformance with the latest revision of AWWA Standard C116. All fittings shall be manufactured by U.S. Pipe, Tyler Union (by McWane), Sigma Corp., Star Pipe, or SIP Industries.

Restrained Mechanical Joint (MJ) Adapters and Flanged Adapters: All restrained adapters shall conform to the latest revision of AWWA C111 and C110 for flanged adapters and AWWA C111 and C153 for MJ adapters. All restrained MJ and flanged adapters shall be manufactured by EBAA Iron, Sigma Corp, or Romac Industries, Inc.

Gate Valves: All gate valves shall meet or exceed the latest revision of AWWA Standard C515 for reduced wall, resilient-seated gate valves (or C509 for resilient-seated gate valves) and shall be provided with left hand to open, ductile iron (or cast iron) body with epoxy coating inside and outside complying with the latest revision of AWWA Standard C550, nut operated non-rising stem with 2" square operating nut, two O-ring stem seals above the thrust collar and one below, O-ring gaskets and 304 stainless steel bolts and nuts on bonnet and stuffing box and EPDM rubber encapsulated wedge. All gate valves shall be manufactured by Mueller Company (PRATT), M & H Valve & Fitting Co., Kennedy Valve Co., Clow Valve Co., American Flow Control, American AVK Co., or U.S. Pipe. Two inch and smaller gate valves shall be Class 125 with standard thread, bronze with wheel, and be manufactured by Milwaukee (No. 105) or Nibco.

Butterfly Valves: Butterfly valves may be used for valves greater than 12" nominal size. All butterfly valves shall comply with the latest revision of AWWA Standard C504 and shall be provided with EPDM "V-type" packing, left hand to open, nut operated with 2" square operating nuts, ductile iron body, stainless steel shaft, resilient seat and heavy duty actuator. All butterfly valves shall be manufactured by Mueller Company (PRATT), M & H Valve & Fitting Co., or Kennedy Valve Co.

Control Valves: All control valves shall be manufactured by Cla-Val Company. Model number, body construction, and flange drilling shall be as specified on the drawings. The drawing may indicate that the control valve will be supplied by California Water Service Company. All valves shall have factory set controls or pilots as specified on the drawings. All control or pilot piping shall be copper with bronze fittings. Vaults for control valves shall be as specified on the drawings.

Check Valves: Unless specified otherwise, all check valves shall be swing type with spring and lever and shall comply with the latest revision of AWWA Standard C508. The Valves shall have Class 125 flanged ends unless shown otherwise on the drawings. Check valves shall be manufactured by Mueller Company (PRATT), Clow Valve Co., M&H Valve & Fitting Co., or Kennedy Valve Co.

Valves for Tapping: All gate valves for tapping purposes shall be Resilient Seat Type valves. The valve for tapping shall be manufactured by Mueller Company (PRATT), Kennedy Valve Co. or Clow Valve Co.

Tapping Sleeves: All tapping sleeves shall be all stainless steel including flange and shall only be used when specified on the drawings. Tapping sleeves shall be JCM Industries Model 432, Mueller Company Model H304, Smith-Blair (by Xylem) 662-663 or Ford Meter Box style FTSS.

Valve Casings and Covers: All valve casings and covers shall be fabricated as shown on the latest revision of drawing CW-14 as applicable.

2" Ball Valves: Two-inch ball valves shall be as shown on the drawing and shall be manufactured by Mueller Company, Ford Meter Box Company, A.Y. McDonald, Cambridge Brass or Milwaukee Valve.

Blow Off Assemblies: All materials for blow off assemblies shall be as shown on the latest revision of drawing CW-122.

Service Materials: All 1" and 2" service material specifications except copper tubing and plastic PE pipe shall be as shown on the latest revision of drawings CW-555, CW-436, CW-1020 or CW-1029 which includes alternate manufacturers. All service material specifications for services larger than 2" shall be as specified on the plan and/or as specified on the latest revision of the CW drawing for that size service.

Saddles: All saddles shall be as specified on the latest revision of the applicable size service standard drawing: 1" (CW-555/CW-1029) and 2" (CW-436/CW-1020). Saddles are excluded from the low lead requirement by the Assembly Bill 1953, and thus need not conform to NSF 61 standards.

Solder: All solder shall be lead free.

Copper Tubing: All copper tubing shall conform to the latest revision of ASTM Specification B88, SDR9 and be Type K soft.

Polyethylene (PE) Service Pipe: All PE plastic pipe for services shall comply with the latest revision of ASTM D2239 with a Standard Code Designation of PE 4710. Dimensions and tolerance of pipe shall be as specified in Table 3 of the latest revision of AWWA Standard C901 for PC 200 SIDR7. This is a high-density polyethylene plastic pipe conforming to the inside-diameter dimensions of iron pipe sizes and having a 2500 psi pressure rating.

Meter Boxes: All meter boxes for 1" services and 2" services shall be as specified on the latest revision of drawings CW-555, CW-436, CW-1020 or CW-1029. All meter boxes for services larger than 2" shall be as specified on the plans and/or as specified on the latest revision of the CW drawing for that size service. All meter boxes for 1" services and 2" services shall be supported by placing bricks or 2"X 4" pressure treated lumber under two sides of the base of the meter box.

Vaults: Vaults for appurtenances other than meters (such as Check Valves or Control Valves) shall be as specified on the drawings.

Machine Bolts: All steel bolts and nuts used for flanged fittings, flexible couplings, or other bolted appurtenances shall be 304 stainless steel or 316 stainless steel. Ductile iron bolts are acceptable when the appurtenance is made of ductile iron and comes with option of ductile iron bolts, such as mechanical joint fittings. Anti-gaul lubricant shall be used with stainless steel bolts & nuts (except factory supplied bolts on Hymax couplings which come pre-coated).

PVC High Deflection Couplings: All PVC high deflection couplings shall conform to the latest revision of AWWA C-900 and shall be manufactured by CertainTeed (by Westlake Piping and Fittings).

PVC Closure Couplings: All PVC closure couplings shall conform to the latest revision of AWWA C-900 and shall be manufactured by CertainTeed (by Westlake Piping and Fittings).

Transition/Flexible Couplings: All Transition/Flexible Coupling shall comply with the latest revision of AWWA Standard C219 and shall be furnished with gaskets. California Water Service Company may require flexible couplings to be epoxy coated if soil conditions are determined to be corrosive. If the flexible coupling is steel, the sleeve must be a minimum of 10 inches long. If the flexible coupling is ductile iron then a standard sleeve length may be used unless the drawing specifies otherwise. Flexible Couplings shall be Quantum Wide Range Coupling by Smith-Blair (by Xylem), FC2A by Ford Meter Box Company, Hymax by Mueller Company, or Extended Range Coupling by Romac Industries, Inc. The Extended Range & Quantum Wide Range couplings can be used to accommodate a wider range of outer diameter for the same nominal size pipes. The Alpha Joint Restraint Coupling by Romac Industries, Inc. can be used when restraint is specified on the plans.

Solid Sleeves: All solid sleeves shall be made of ductile iron and shall be manufactured by Tyler Pipe or Tyler Union (by McWane).

Tracer Wire: Tracer wire shall be minimum #12 AWG solid copper wire with 45 mils of high molecular weight polyethylene (HMWPE) insulation, UL Listed, rated for direct burial, color blue and installed with all pipe including PVC, polyethylene and ductile iron pipe. For installation details see the latest revision of drawing CW-850. Tracer Wire may be sourced from Agave Wire LTD, Northtown Company or United Copper Industries.

Fire Hydrants: All fire hydrants shall be as specified on the district specific drawing (CWF-380) or as approved by CWS district personnel. For typical Fire Hydrant details see drawing CW-380.

Fire Hydrant Burys: All fire hydrant burys shall be manufactured from Ductile Iron to ASTM A536 Standards and have a minimum working pressure rating of 200 PSI. Burys shall be manufactured by Clow Valve Co., South Bay Foundry, Sigma Corp., or Star Pipe.

Fire Hydrant Check Valves: All fire hydrant check valves shall be Clow LB400 by Clow Valve Co. or HG2 by Hydrant Guard.

SPECIFICATIONS FOR INSTALLATION OF DUCTILE IRON AND POLYVINYL CHLORIDE (PVC) PRESSURE PIPE AND APPURTENANCES

Permits: All specification sheets, city/county or other environmental permits necessary for the installation of facilities must be obtained by California Water Service Company and be on the job site prior to and during construction.

Compliance with all the Rules and Regulations of the California Occupational Safety and Health Act (CAL OSHA), Public Law 91-596, the "Williams' Steiger Occupational Safety and Health Act of 1970", is required on this project. The work practices for all pipe shall be in accordance with the latest revision of the American Water Works Association Publication C-206 Standard for Field Welding of Steel Water Pipe, C-600 Standard for Installation of Ductile Iron Mains and their Appurtenances, C-602 Standard for Cement-Mortar Lining of Water Pipelines in Place, C-604 Standard for Installation of Steel Water Pipe, C-605 Standard for underground installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water, M23 Manual of Water Supply Practices for PVC Pipe-Design and Installation and M55 Manual of Water Supply Practices for PE Pipe - Design and Installation. "Fusible PVC Pipe" shall be installed per manufacturer's recommendations.

Please note direct discharge of highly chlorinated water to the environment is expressly prohibited. Refer to "Specifications for Dechlorination of Flushed Water" for more information. The Contractor shall comply with environmental laws and regulations as set forth by all federal, state and local agencies.

Materials: All materials installed for the facilities to be constructed by the Contractor must comply with the drawings and "Specifications for Material". No materials are to be supplied or furnished by California Water Service Company ("Company") unless specifically indicated on the plans for special installations. All materials must be on the job site and inspected prior to start of construction. Any pipe, valve, or appurtenance whether installed or not, which in the opinion of the Company, does not meet the requirements of these specifications or otherwise found unfit, shall be rejected as being unfit, and shall be immediately removed from the job site.

Line and Grade: The horizontal and vertical alignment for installation of the pipe shall be established in the field by the Contractor in accordance with the plans and specifications. Location of water facilities including finished grades and elevations shall be staked with offsets on site by the Contractor prior to start of construction. Final elevations of installed facilities, meter boxes, valve covers, hydrants, etc. shall be signed off by the Company's representative prior to acceptance of facilities.

Cover: Under normal conditions all mains shall be covered to a depth of four feet below the finished grade over the pipeline, unless specified otherwise on the plans. Prior approval must be obtained from the Company to install mains with greater or less than four feet of cover.

Separation between Water Mains and Non-potable pipelines or other Facilities: Water mains shall be at least 10 feet horizontally from and one foot vertically above, any parallel pipeline conveying sewage (untreated, primary, or secondary), disinfected secondary recycled water, and hazardous fluids, unless specified otherwise on the plans. Water mains shall be installed at least 4 feet horizontally from, and one foot vertically above, any parallel pipeline conveying tertiary recycled water or storm drainage. At crossings, water main shall be constructed no less than 45-degrees to and at least one foot above any pipeline indicated above. No connection joints shall be made in the water main within eight horizontal feet of the fluid pipeline. Water main shall not be installed within 100 horizontal feet of any sanitary landfill, wastewater disposal pond, or hazardous waste disposal site, or within 25 horizontal feet of the nearest edge of any cesspool, septic tank, sewage leach field, seepage pit, underground hazardous material storage tank, or groundwater recharge project. The State of California Department of Public Health Title 22 Article 4 Section 64572 "Water Main Separation" shall be followed when installations cannot meet the "Basic Separation Standards". A minimum vertical clearance of twelve (12) inches shall be maintained between the water main and all foreign structures, and a minimum horizontal clearance of five (5) feet shall be maintained between water mains and other utilities including structures, piles, pier, etc. not mentioned above unless otherwise indicated on the plans or approved by the Company. Refer to "Pipeline Crossing Information" shown on the plans for information of water main installations crossing other proposed or existing facilities. The Company's approval must be obtained prior to making any changes from the plans. This includes changing grade or alignment to avoid structures, other pipes, manholes, or any other fixed objects which may be encountered during installation. Per the Company's standards, changes in cover over the pipeline may require the installation of a fabricated cement mortar lined and coated steel offset.

Workmanship: The pipe shall be installed to a true line and grade except on curves where ductile iron pipe may be installed with joint deflections between adjacent lengths of pipe not to exceed 3 degrees for ductile iron pipe sizes 6", 8", and 12". PVC pipe shall not be deflected at joints for horizontal or vertical deflection. No joint deflection shall be allowed in joints between fittings and pipe. PVC High Deflection Couplings made by CertainTeed (by Westlake Pipe & Fittings) shall be used with PVC C-900 between adjacent lengths of pipe to obtain up to 5 degrees deflection at the joint when required.

When assembling a PVC pipe to an iron fitting, valve, or appurtenance (push-on), remove all but 1/4 inch of the factory-made bevel from the spigot end of the pipe. Bottom the pipe in the bell of the iron fitting.

Field-cut lengths of PVC and DI pipe may be used for making connections to valves, fittings, appurtenances, and closures where necessary. The cutting and beveling of the pipe for inserting into the bell shall be done by the use of a square cutting tool approved by the Company and manufactured for this purpose, without damage to the pipe. The bevel of the pipe shall be the same as required for the fitting.

Trench Bottom: The bottom of the trench shall be smooth and free from pieces of rock or other material that would tend to scratch, puncture or break the pipe or damage the polyethylene encasement used on ductile iron pipe. If rocks or stones are encountered, they shall be removed to a depth of six inches below bottom of trench and the void filled with material tamped to grade. A six-inch layer of sand shall be placed in the trench bottom to provide a firm, stable, and uniform support for the full length of the pipe, except at the joints where bell holes shall be dug two inches below the surface so that the pipe will not be supported by the joint. Under no circumstances shall the bell hole undermine the support for the fittings or valves.

Valves and other various fittings may be required to be supported by a concrete cradle if it is determined by the Company that the bedding in the trench bottom cannot be properly compacted to provide adequate support.

When an unstable subgrade condition is encountered that could provide inadequate pipe support, the Company shall require additional trench depth to be excavated, refilled and compacted with suitable foundation material.

No water main or appurtenance shall be laid in water, or when, in the opinion of the Company, the trench conditions or the weather are unsuitable for construction. Any water main which has been submerged shall be removed from the trench and be relaid. The trench shall be dewatered whenever running or standing water occurs in the trench bottom and the removal shall continue until the pipe has been installed and the backfill has been placed to a sufficient height to prevent the pipe from being submerged in water.

IMPORTANT: All trench excavations shall be in accordance with the Rules and Regulations of the California Occupational Safety and Health Act (CAL OSHA). This includes all necessary shoring determined by either the depth of trench and/or soil conditions.

Pipe and Appurtenances Handling: All water main and appurtenances shall be carefully lowered into the trench by means of padded slings, hooks, pipe tongs, or other suitable equipment consistent with safety, in such a manner to prevent damage to the exterior and interior pipe or appurtenance surfaces. Under no circumstances shall any material be dropped or dumped into the trench. Any foreign material inside the pipe shall be removed and the interior of the pipe kept clean during installation. All water mains and appurtenance with damaged exterior or interior surfaces shall not be installed.

During installation, the open ends of the pipe shall be plugged or completely wrapped at night or when no work is in progress at that point to prevent entrance of trench water, animals, or other foreign matter.

On all pipe, a continuous strip of tracer wire (per material specification) shall be taped to the top exterior surface of the pipe per the latest revision of drawing CW-850. Tracer wire splices using appropriate connectors are required at all locations where the wire is cut.

A polyethylene encasement shall be installed over ductile iron pipe, fittings, and appurtenances per latest revision of AWWA Standard C105 Polyethylene Encasement for Ductile Iron Piping and per the plans and specifications, or as requested and directed by the authorized Company's representatives. If specified on plans, V-Bio Enhanced Polyethylene Encasement by U.S. Pipe may be used to protect against highly corrosive soils.

Note: Ductile iron fittings and appurtenances installed on PVC C-900 main shall require polyethylene encasement with a 2-foot overlap onto the PVC main. This overlap shall be secured to main per the latest revision of AWWA Standard C105.

Rubber Ring Joints for PVC C-900 and Ductile Iron Pipe: Push-on type rubber ring joints with rubber rings for integral bell ends shall be joined as follows: The ring groove, bell socket and plain end should be wiped clean. Insert the gasket making sure that it faces the proper direction and that it is correctly seated. The plain end shall be beveled and free of any sharp or ragged edges which may damage or dislodge the gasket. Lubricate the entire outside end of the pipe including the pipe bevel, also lubricate the exposed portion of the rubber ring gasket in the bell (See "pipe joint lubricant" below). Push the plain end into the bell by hand or with the use of a bar and block until it is appropriately seated per pipe manufacturer's recommendations, keeping the joint straight while pushing. Construction machinery shall not be used to push the pipe into a pipe bell end or a fitting bell end. After assembly, the resulting position of the rubber ring shall be checked with a feeler gauge.

If "Field Lok" or "Sure-Stop" gaskets are specified on the plans, the gaskets shall be installed in accordance with the manufacturer's recommendations.

If "TR FLEX", or "Flex-Ring" restrained joint system is specified on the plans, the joint assembly shall be installed in accordance with the manufacturer's recommendations.

If PVC "Certa-Lok" Restrained Joint Pipe is specified on the plans, the joint assembly shall be installed in accordance with the manufacturer's recommendations.

Pipe Joint Lubricant: Pipe joint lubricant shall be as specified by the pipe manufacturer and shall be NSF approved for use in potable water systems.

Mechanical Joints: Mechanical joints shall be joined as follows: The socket and plain end should be wiped clean and any excess coating in the bell should be removed. The plain end, bell socket, and gasket should be washed with a soap solution or lubricant furnished with the gaskets to improve the seating of the gasket in the socket and to help the various parts slide together along the pipe. Place the gland on the plain end with the lip extension toward the plain end of the pipe, followed by the gasket with the narrow edge of the gasket toward the end of the pipe. Insert the pipe into the socket and press the gasket firmly and evenly into the gasket recess. Keep the joint straight during the assembly. Push the gland toward the socket and center it around the pipe with the gland lip against the gasket. Insert bolts and hand tighten nuts. Partially tighten the bottom bolt first; then the top bolt; next the bolts at either side, and finally the remaining bolts. Repeat this process until all bolts are torqued to a value between 75 and 90 ft-lbs.

If restrained mechanical joint adapters are specified on the plans, the adapter assembly shall be installed in accordance with the manufacturer's recommendations.

Underground Protection: All flexible couplings, bare steel, MJ x MJ sleeves, and all bolts (including stainless steel) shall be protected as follows:

The entire area of the fitting should be dry and free of dust, dirt or other foreign matter. Rust or other foreign material should be removed by scraping or wire brushing. Wiping with dry clean cloth may be necessary to remove particles from brush cleaning. Any oil or grease must be removed using a low residue volatile petroleum solvent before application of grease and wrapping.

The exposed area should be coated with a heavy coating of Metal Guard #301 or Corrosion Guard CG15 grease by the glove method to a thickness of at least ¼".

The entire grease area should be firmly wrapped with at least two layers, half lapped, of a woven glass filament mesh (Res or Bit Wrap, 4" wide). Metal Guard #301 or Corrosion Guard CG15 grease with a minimum of ¼" thickness should be applied between each layer during wrapping, working the grease into mesh openings.

The entire mesh wrapped area of the fitting should be covered with a third and final coating of at least ¼" thick of Metal Guard #301 or Corrosion Guard CG15 grease by the glove method.

Two layers of polywrap, half lapped, should be firmly applied over all areas of the coated and wrapped fittings. Backfilling may follow immediately after this wrapping.

Thrust Blocks: Concrete thrust blocks shall be provided for all fittings to prevent movement when the main is under pressure. This includes tees, ells, reducers, caps and plugs. Forms are required and are to be provided by the Contractor. These forms shall be smooth, mortar tight and of sufficient strength to maintain shape during the placing of the concrete. All concrete thrust blocks shall be constructed per the latest revision of drawing CW-435 or as specified in the drawings.

Embedment Backfill: The embedment backfill is 6 inches of sand bedding below the pipe and 12 inches of sand backfill above the pipe (see sand definition below). Care must be taken to compact the sand backfill material solidly around and under the pipe. Small tampers and vibrators are allowed for compacting near the pipe and over the pipe after a minimum of 6 inches of sand backfill has been placed over the pipe. Flooding, jetting or puddling may be employed for compaction in the first lift although great care must be taken to prevent drainage or flotation of the pipeline. Apply only enough water to give complete saturation. Erosion of support at the pipe sides and bottom by water jetting must be prevented. Rocks or hard lumps are not permitted in the embedment backfill or final backfill.

Sand is defined as material free from organic matter and clay with a sieve gradation by weight as follows:

Sieve Size	% Passing Sieve
3/8"	100
No. 4	95-100
No. 200	0-5

Final Backfill: In areas where required, the permanent pavement and temporary pavement replacement must comply with specifications of the local governing authorities. All backfill above the sand embedment backfill must meet compaction requirements of the local governing agency. All pavement broken shall be replaced in strict accordance with the requirements of the local authorities, or lacking local requirements, in accordance with the latest revision of drawing CW-236.

Other Facilities: All existing facilities, such as but not limited to sewers, storm, gas mains, water mains, telephone conduits, and power or telephone poles which may be located close to trench operations must be protected by the Contractor. If any of these facilities are damaged by the Contractor, repairs shall be made to the satisfaction of the interested parties at the Contractor's expense.

Valve Casings and Covers: A valve casing with cover shall be installed for each gate valve, butterfly valve, blow off assembly or when specified on the plans per the latest revision of drawing CW-439. The valve cover and frame for valves in paved and unpaved areas shall be per the latest revision of drawing CW-14. The valve cover frame shall be set in a ring of concrete a minimum of 24" in diameter and three inches thick or per local governing agency's standards whichever is greater. All valve casing covers must be placed flush with the finished grade of the surrounding area.

Blow Off Assemblies: A blow off assembly as shown on the latest revision of drawing CW-122 shall be installed for each dead end capped main. The assembly is to include a valve casing and cover.

Services and Meter Boxes: Services and meter boxes shall be installed as shown on the latest revision of drawings CW-555 for CW-1029 for 1" services, CW-436 orCW-1020 for 2" services, and for larger than 2" services as designated on the plans and/or the latest revision of the CW drawing for that size service. The 1" and 2" service pipe shall be installed at a depth of 30" or more from finished grade over the service pipe and in no event shall the depth be less than 18". The Contractor must get prior approval from the Company to install service pipe with less than 30" of cover.

All meter box locations must be approved by the Company and the boxes must be installed flush with finished grade of the surrounding area at the meter box cover. The meter boxes for 1" and 2" services shall be supported by placing 2"x4" treated lumber or bricks on two sides of the meter box's base. Avoid postal and street pedestals, driveways, trees/bushes, fencing, sewer lines, and other utilities.

Saddles and saddle tapping are required for all service connections made on PVC pipe. When making this type of connection, proper equipment must be used which attaches to the corporation stop permitting the cutting tool to be fed through the corporation stop to cut a hole in the pipe. It is important that the cutting tool be a sharp shell type (hole) cutter which will retain the coupon and be designed to accommodate walls as heavy as DR 14. The shell cutter shall be lubricated on the outside only and not on the inside of the cutter with a recommended lubricant. Do not drill a hole in the PVC pipe with a twist drill or auger bit.

Direct tapping machines for service connections on ductile iron pipe must be approved by the Company prior to direct tapping ductile iron mains. Plastic PE pipe is to be cold flared to match recessed fittings or is to have outside end bevels for Insta-Tite fittings. Forming tool for bevels shall be Mueller's beveling tool number H10817 or approved equal. Stiffeners shall be used on all PE pipe with compression connections.

Connection to Existing System:
The Contractor shall furnish to the Company the necessary fittings, valves, pipe, and joint material required to connect the new mains to the existing system.

The Contractor must adjust from the nominal line and grade to match the existing facilities.

The Contractor is to complete the piping and maintain the specified clearance from existing main as shown on the drawings. The Contractor shall make the excavation for the tie-in. The trench shall be left in a safe condition for the Contractor to complete the connections. If the trench is considered unsafe for workers, the Company may require the Contractor to return and adequately excavate for the tie-ins at the Contractor's expense. After the Company has inspected the connection, the Contractor shall install concrete thrust blocks, install valve casings and covers, and backfill the excavation. The Contractor shall then replace any pavement that was cut for the excavation.

The Company reserves the right to perform the tie-ins to the existing system if they desire. In this situation, the Contractor will not be paid for the tie-ins as bid.

Pressure Test: Prior to any testing, at least seven days should elapse after the last concrete thrust block was poured if Type I portland cement was used and three days if high-early-strength Type III portland cement was used. A preliminary pressure test shall be carried out by filling the mains with water and allowing them to stand under regular system pressure for a period of at least twenty-four hours. After completion of the preliminary test, the Contractor shall make a hydrostatic test by raising the pressure in the main to 50 pounds per square inch above the normal static pressure at the point of observation with a minimum test pressure of 150 pounds per square inch. A calibrated pressure chart recorder and a water meter shall be provided by the Company. The hydrostatic test shall not be conducted without a Company's representative present. The pressure that the test is started at shall be maintained for a minimum of four hours. The test shall start and finish at the same pressure. If there is a pressure drop, the Contractor shall pump more water into the main through the water meter to bring the main back to its starting pressure. The leakage is the calculated volume of water pumped into the main through the meter. The leakage shall be measured accurately during the test period to determine that the leakage rate does not exceed the values shown in Table IA for ductile iron pipe and Table IB for PVC C-900 pipe. There shall be no leakage, zero gallons per four hours test period at test pressure for the portion of pipeline that is steel pipe CL&C with welded joints, HDPE pipe with fused joints, and fusible PVC pipe. An air test may be used as an alternate method on the steel pipe CL&C welded sections. Test pressure to be held for a four-hour duration, with no volumetric loss during test period. A calibrated pressure chart recorder will be provided by the Company. The necessary taps, connecting pipe, and valve fittings shall be provided by the Contractor. Any leaks or failures that develop during the test shall be repaired by the Contractor immediately.

If the mains fail to meet the requirements of the hydrostatic test, the Contractor shall, at his expense, make repairs to reduce the leakage. The repair work shall be continued until a satisfactory test is made.

Disinfection of Mains: All mains that are installed by the Contractor shall be disinfected by the Contractor in accordance with the "Specifications for Disinfection of New Mains."

Inspection: The Company reserves the right of access to the work at all times for the purpose of inspecting and the Contractor shall permit the Company's representative to make an inspection at any time. The Contractor shall notify the Company's local manager at least 48 hours prior to any work being started at the project site. The Company will normally provide no more than 2 inspections per day during normal working hours. The trench must be left open until the Company has inspected the new installation and approved that portion of trench to be covered. If the trench is covered prior to the Company's inspection, the Contractor will be required to uncover the trench at the Contractor's expense.

Protection: The Contractor shall at all times provide suitable and adequate danger signals and barricades. If necessary, the Contractor shall also provide temporary bridges across the trench to permit free ingress and egress to and from private driveways or traveled roads or streets. No street shall be closed unless a permit has been obtained from the appropriate authority.

Specifications and Drawings: Specifications and drawings shall be taken together, and anything shown on the drawings and not covered by the specifications or covered by the specifications and not shown on the drawings shall be considered as though it were covered by both specifications and drawings. Any points of disagreement should be referred to the Company's representative as soon as possible to resolve any possible misunderstandings.

Clean Up: Upon completion of the work, the Contractor shall remove all rubbish and waste materials resulting from the Contractor's operations and leave the ground along the route of the pipeline in a neat and clean condition. The Contractor shall be responsible for the removal of all excess spoil from the trench excavations, the Company shall not accept any responsibility.

Guarantee of Workmanship: Notwithstanding Owner's acceptance of the new facilities, the Contractor shall guarantee all of his workmanship for a period of one calendar year from and after acceptance of the work by the Owner. The Contractor shall repair and make good any defects or imperfections in the work at his sole cost and expense. If deficiencies develop during the Guarantee calendar year, such as but not limited to: leaks in the pipeline or appurtenances, settlement of trenches, or deteriorating pavement due to faulty or imperfect workmanship, the owner retains the right of making repairs and the Contractor is responsible for the cost of said repairs.

TABLE IA

ALLOWABLE LEAKAGE PER 1000 FT. OF DUCTILE IRON PIPELINE

Average Test Pressure	Nominal Pipe Diameter - inches							
	6	8	10	12	14	16	18	24
(PSI)	GALLONS PER HOUR (GPH)*							
200	0.57	0.76	0.96	1.15	1.34	1.53	1.72	2.29
175	0.54	0.72	0.89	1.07	1.25	1.43	1.61	2.15
150	0.5	0.66	0.83	.99	1.16	1.32	1.49	1.99

* If the pipeline under test contains sections for various diameters, the allowable leakage will be the sum of the computed leakage for each size.

TABLE 1B

ALLOWABLE LEAKAGE PER 1000 FT. OF PVC C-900 PIPELINE

Average Test Pressure	Nominal Pipe Diameter - inches		
	6	8	12
(PSI)	GALLONS PER HOUR (GPH)*		
200	.57	0.76	1.15
150	.50	0.66	.99

* If the pipeline under test contains sections for various diameters, the allowable leakage will be the sum of the computed leakage for each size. For example, Allowable Leak for 500' of 8" PVC under test pressure = 500'/1000' x 0.66 GPH x 4 Hour = 1.32 Gallons

SPECIFICATIONS FOR DISINFECTION OF NEW MAINS BASED ON THE PROCEDURES OUTLINED IN THE LATEST REVISION OF ANSI/AWWA C651

GENERAL INSTRUCTIONS:

1. Precautions shall be taken to prevent soiling of pipe, fittings, valves and other materials. Pipe and fittings shall be stored so as not to accumulate mud or water, and all other materials shall be stored in a clean, dry location. Particular care shall be taken to keep rubber gaskets and pipe ends clean, dry, and out of the sun to avoid degradation of materials.

2. All pipe shall be free of foreign materials and debris before lowering the pipe into the trench. If dirt or debris enters the pipe, the interior surface of the pipe shall be cleaned and swabbed with a minimum of 12.5% sodium hypochlorite prior to lowering the pipe into the trench.

3. If at any time chemical contamination occurs (e.g. hydraulic oil, gasoline, diesel, etc), the pipe sections exposed to the contamination shall be replaced and not used for potable water applications.

4. When the main is left unattended for any length of time, the ends shall be plugged or completely wrapped to prevent the entrance of water, foreign material or small animals.

5. Loading of new mains: A reduced pressure principle (RP) backflow prevention assembly (USC approved and lead-free compliant) is required to be installed in line with the domestic supply on all new main installations to prevent any heavily chlorinated and/or potentially contaminated water from entering the distribution system. The RP must be sized appropriately to factor pressure loss through the assembly while still meeting adequate flushing velocity greater than or equal to 3.0 ft/sec. If it is anticipated that scouring velocity of 3.0 ft/sec cannot be achieved, flushing at the maximum flow rate possible for a minimum 3 total pipeline installation volumes is required.

The installing contractor is responsible to provide and test the backflow prevention assembly upon initial installation and each time it is relocated per Title 17 Article 2, Section 7605 (d). Prior to loading a new main with potable water and/or liquid sodium hypochlorite, a passing test report must be provided to California Water Service Company's ("Company") Inspector who will maintain a record and document the make and model number, serial number, and most recent test date of the backflow prevention assembly on the New Main Disinfection Report in non-erasable ink or pen writing.

6. Apply the NSF-60 approved hypochlorite solution or tablets, using one of the methods described under "Chlorination Methods."

7. The Company's Inspector is to measure the chlorine concentration to ensure that a minimum 25 ppm concentration has been applied (not to exceed 200 ppm). The initial reading must be documented on the New Main Disinfection Report in non-erasable ink or pen writing. Samples with a high chlorine concentration must be analyzed with a high range total chlorine test kit. Hach Model Number CN-21P or equivalent may be used for the initial dosage test. The chlorine test kit must use non-expired reagents and shall be verified on a periodic basis prior to field use.

8. The Company's inspector is to obtain the temperature reading at the time of loading, and document on the New Main Disinfection Report in non-erasable ink or pen writing. Allow heavily chlorinated water to stand therein for a contact period of at least twenty-four (24) hours. If the water temperature is less than 41°F (5°C), the water shall remain in the pipe for at least forty-eight (48) hours. The Company's Inspector is to measure the chlorine residual after the appropriate contact period.

When using the chlorine tablet method, there must be a detectable (≥0.2 ppm) free chlorine residual at the end of the required hold time.

When using hypochlorite solution method, the free chlorine residual must be at least 10 ppm at the end of the required hold time. If the chlorine concentration has dropped to less than 10 ppm, then the mains must be thoroughly flushed and re-loaded, superchlorinated by the continuous feed method, and the required contact period shall be repeated due to the high chlorine demand. Equipment used to superchlorinate by the continuous feed method will be provided by the installing contractor.

9. The Company's Inspector must measure or obtain upstream distribution system chlorine residual, which will be used for comparison after flushing. The main must be flushed thoroughly at all available blow offs and hydrants. (See Specifications for Dechlorination of Flushed Water). After flushing, the chlorine residual coming out of the new main must match the chlorine residual entering the new main, indicating that adequate flushing has been performed. The contractor should re-install the caps/plugs back on the blow off assembly to prevent debris from entering the blow off after flushing. The Company's Inspector must document the final chlorine residual on the New Main Disinfection Report in non-erasable ink or pen writing.

10. After chlorine contact time has been met and satisfactory chlorine residual is observed, the Company's representative will collect two consecutive bacteriological sample sets at a minimum of 16 to 30 hours apart and have them analyzed for Total coliform, E.coli, and heterotrophic plate count (HPC).

The samples should be taken from a combination of a blow off illustrated in the latest revision of drawing CW-638, a sampling station illustrated in the latest revision of drawing CW-914 or a service located near the end of the chlorinated section. All sample taps must be evaluated for the potential for contamination, cross-connections, or other factors that may result in non-representative sampling. The hose bib sampling device is recommended for any sample collected from a service hose bib.

In accordance with the latest revision of AWWA standard C651, samples shall be collected at least every 1,200 ft., at the end of the installed pipeline, and at each branch or dead-end.

All Total coliform, E.coli, and HPC results must be documented on the New Main Disinfection Report in non-erasable ink or pen writing. A copy of the laboratory results must also be attached to the New Main Disinfection Report.

11. If the bacteriological tests are positive, or if the HPC results are greater than 500 CFU/ml, further flushing and confirmation samples will be necessary. Any positive follow-up sample tests or HPC>500 CFU/ml requires the Contractor to thoroughly flush, re-load, and superchlorinate the new main by the continuous feed method. Repeat Steps 9-10. All sample results (original and confirmation) must be documented in the appropriate location on the New Main Disinfection Report in non-erasable ink or pen writing. The Water Quality department must be notified if the bacteriological and HPC results continue to show positive results.

12. The Company's Inspector and Supervisor will complete, sign, and submit the New Main Disinfection Report to the Water Quality Program Manager (WQPM) for review and approval. Approval will be based on two sets of sample results that are absent of total coliform, E.coli, HPC less than 500 CFU/ml, and a final chlorine residual that is representative of background residual in the distribution system. Refer to the New Main Disinfection Policy for additional details. The WQPM will sign and approve the Report if the main is determined acceptable to be placed into service based on the above criteria.

13. Before a tie-in is performed, the inside surface of all materials such as the tee, pipe nipples, couplings, and tapping sleeve must be swabbed with NSF 60 approved12.5% sodium hypochlorite solution, in accordance with the latest revision of AWWA Standard C651 .

14. After the final tie-in has been completed, a bacteriological sample must be collected downstream of the tie-in point to ensure no contamination is introduced during the tie-in work. All sample taps must be evaluated for the potential for cross-contamination, cross connections, or other factors that may result in non-representative sampling. The hose bib sampling device is recommended for any sample collected from a service hose bib. Where possible, the downstream isolation valve shall be left in the closed position until sample results indicate the tie-in did not introduce contamination.

15. Documentation including the New Main Disinfection Report, laboratory results, and backflow prevention assembly test report details shall be placed in the project folder for record keeping purposes.

Chlorination Methods:

Safety Notes: Chlorine tablets and solutions should be handled with care, as they are dangerous to the eyes, irritating to the skin, and will damage shoes and clothing. Minimize your exposure by reading and having the M.S.D.S. available should an emergency occur. Follow the guidelines for protecting yourself, asking your supervisor when in doubt and by erring on the safe side by using respirators, protective clothing and other protective equipment.

Method No. 1 - Calcium hypochlorite Tablet Method
This method works well for short jobs and for small diameter pipe of any kind. This method cannot be used where trench water has entered the main. The main cannot be flushed prior to disinfection, so the method requires that the pipe be kept clean during laying.

Use Dow Corning 732 Sealant or equivalent (NSF 61 approved) to fasten the required number of 5-gram calcium hypochlorite tablets (See Tables II) to the top and at the upstream end of each length of pipe, including branch lines and Cement lined and Coated Steel (CL&C) offsets. At least one tablet shall be placed in each hydrant branch as well as any other plumbed appurtenances. Tablets must be NSF 60 approved and have 65% free chlorine. The tablets may be fastened to the pipe before it is placed in the trench provided the top of pipe is marked to avoid the possibility that the pipe may be rotated.

Tablets should be removed at the end of the day, when pipe is not installed in the ground the same day tablets are applied. Reuse those tablets in the following days if still intact. This is to prevent moisture from reducing the amount of chlorine available for disinfection.

When using flexible couplings, apply NSF 60 approved sodium hypochlorite with a spray bottle method in the annular space between the coupling and the pipe.

Fill the pipe very slowly with potable water at a velocity of no more than 1ft/sec to eliminate air pockets and ensure calcium hypochlorite tablets do not become detached from the interior pipe surface and proceed as outlined under Step 7 in the "General Instructions".

TABLE II

Number of 5-gram Calcium Hypochlorite tablets Specified for Disinfection of at least 25 ppm

Length of Section	DIAMETERS 4"	6"	8"	10"	12"	14"	16"	18"
	# of tabs	# of tabs	# of tabs	# of tabs	# of tabs	# of tabs	# of tabs	# of tabs
≤13'	1	1	1	2	3	4	4	6
18'	1	1	2	3	4	5	6	7
20'	1	1	2	3	4	5	7	8
30'	1	2	3	4	6	8	10	12
40'	1	2	4	5	7	10	13	16

Method No. 2 - Continuous Feed Method with 12.5% Liquid Chlorine (Sodium hypochlorite)
This method is general in scope and must be used when it is necessary to re-chlorinate an existing main, and it may also be used on new mains.

This method consists of introducing a 12.5% chlorine solution into water which is being used to fill water main. The 12.5% chlorine solution must be NSF 60 approved and can be purchased through several vendors.

Procedure:

1. Calculate the total volume (ounces or gallons) of 12.5% hypochlorite solution needed, based on the pipe diameter and section length (See Table III and the example below Table III.)

2. Choose a suitable filling rate and determine the time required to fill the water main from Table IV.

3. Calculate the 12.5% hypochlorite dose rate using the results from 1 and 2 above. Using the examples below Table III & Table IV, the dose rate would be: 0.8 gal/52.0 min.=0.015 gal/min. or 100 ounces/52.0 min.=2 ounces/min for a 1000ft section of 8 inch diameter pipe being filled at flow rate of 50 gpm .

4. It is recommended to use chemical feed pump designed to introduce the 12.5% hypochlorite solution into the main at a constant rate. The feed pump and method must be approved by the Company prior to loading the main. Adjust the feed pump to the dose rate. Introduce the solution through a corporation cock, blow off, or service connection at or ahead of the inlet end of the water main to be disinfected.

5. After flushing the main thoroughly, adjust the filling rate by measuring the time required to fill a five-gallon or other suitable container.

6. Begin introducing the 12.5% hypochlorite solution into the main, and continue until a chlorine residual test on a sample taken from the discharge end of the main shows at least 25 ppm chlorine.

7. Close the filling valve or blow off, and stop introducing hypochlorite solution. Disconnect and flush the feed pump and equipment thoroughly with fresh water.

8. Proceed as outlined under Step 7 in the "General Instructions."

TABLE III

12.5% Liquid Hypochlorite Method of Main Chlorination
Amount of 12.5% Liquid Hypochlorite (ounces)
Specified for Disinfection of at least 25 ppm

Length of Section	DIAMETERS 4"		6"		8"		10"		12"		14"		16"		18"	
	Amount in oz	ppm	Amount in oz	ppm	Amount in oz	ppm	Amount in oz	ppm	Amount in oz	ppm	Amount in oz	ppm	Amount in oz	ppm	Amount in oz	ppm
18'	1	83	1	37	2	42	2	27	6	28	8	27	10	26	13	29
20'	1	75	1	33	2	37	3	36	6	25	9	31	11	28	14	26
30'	1	50	2	44	2	25	4	32	9	28	13	28	16	25	21	27
40'	1	37	2	33	3	28	5	30	12	25	17	27	22	26	27	26

Table III is used to calculate the total ounces of 12.5% hypochlorite required to produce water with a free chlorine concentration of at least 25 ppm in the main.
For example: A 20 ft. section of 8-inch pipe needs 2 ounces; so for 1000 ft. (50-20 ft. sections), 50 x 2 = 100 ounces.
100/128 ounces/gal. = 0.8 gal.

TABLE IV

	DIAMETER OF PIPE BEING DISINFECTED (INCHES) 4	6	8	10	12	14	16	18	20
(GPM)	TIME REQUIRED TO FILL 100 FEET OF PIPE (MINUTES)								
10	6.5	14.7	26.1	40.8	58.8	---	---	---	---
20	3.3	7.3	13.0	20.4	29.4	---	---	---	---
35	1.9	4.2	7.5	11.7	16.8	---	---	---	---
50	---	2.9	5.2	8.2	11.8	15.0	20.9	---	---
75	---	2.0	3.5	5.5	7.9	10.7	14.0	---	---
100	---	---	2.6	4.1	5.9	8.0	10.4	13.2	16.3

Table IV is used to estimate the time required to fill the pipe with chlorinated water. For example: A flow rate of 50 gpm will fill 1000 feet of 8-inch pipe in 10 x 5.2 = 52.0 minutes.

SPECIFICATIONS FOR DECHLORINATION OF FLUSHED WATER

Safety Notes: While it is unlikely that these procedures will produce a hazardous reaction, employees should proceed with caution when working with calcium thiosulfate or Vita-D-Chlor (Ascorbic Acid). Minimize your exposure by reading and having the M.S.D.S. available should an emergency occur. Follow the guidelines for protecting yourself, asking your supervisor when in doubt and by erring on the safe side by using respirators, protective clothing and other personal protective equipment.

1. The discharge/disposal of all chlorinated water generated from the procedures in the "Specifications for Disinfection of New Mains" shall be the Contractor's responsibility. The Contractor shall comply with all federal, state and local discharge/disposal requirements for chlorinated water including but not limited to the list below:
A. At a minimum, the Contractor must meet a total chlorine residual of the 0.01mg/l in the discharge water.
B. The Contractor shall use Best Management Practices to control erosion and sediment from entering receiving water body.
C. At a minimum, the Contractor must document the discharge using Cal Water BMP Discharge form.
D. If Cal Water has obtained a NPDES permit for this activity, the Contractor will be notified about the permit requirements. The Contractor will then be responsible to meet the discharge requirements.

2. If dechlorination of the water is required, then the chlorinated water that is discharged to a storm drain shall be dechlorinated by water industry accepted methods. The dechlorinated water will be tested for chlorine residual to verify that no detectable amount of free chlorine is present. This testing will take place from the onset of discharging the water and at frequent intervals throughout the dewatering of the pipe. The Contractor shall notify the local agency to inform them of planned discharge events.

3. Determine the chlorine concentration of the water to be flushed. If the water to be flushed contains a detectable level of chlorine, then that water must be dechlorinated as follows:

Please note: The use of the dechlorinating agent Captor (30% calcium thiosulfate) or Vita-D-Chlor (Ascorbic Acid Tablets) is recommended by the Company. Calcium thiosulfate and Vita-D-Chlor tablets are less hazardous than other chemicals, and will not deoxygenate the water when marginally over-applied. Gross over-application of any dechlorinating agent is unacceptable because of its potential to deoxygenate a receiving water body. THE USE OF ANOTHER DECHLORINATING AGENT MUST BE APPROVED BY THE COMPANY.

A. Captor Solution Manufacturing Recommendation:

a) Prepare a Captor solution for water containing the following chlorine residuals:

i. Less than 1 mg/L: add 2 cups of Captor to 25 gallons of water. This will dechlorinate 25,000 gallons of water with a chlorine residual of 1mg/L or less.
ii. 2.1 to 50+ mg/L: Use straight 30% Captor solution.

b) Calculate the volume of the new main in gallons as follows:

(Length of pipe)(Diameter of pipe)(Diameter of pipe)(0.785)(7.48 gal./ft.3)
ft. ft. ft.

c) Calculate the volume of the 30% Captor needed to dechlorinate 1 to 50 mg/L chlorine residuals for the volume calculated in b:

(Vol. of pipe)(Chlorine concentration)(1.45)
gal mg/L
(300,000 mg/L Captor)

B. Vita-D-Chlor Manufacturing Recommendation:

a) Calculate the pounds of Vita-D-Chlor to be placed in dechlorinating device as follows:

(Diameter of pipe) (Diameter of pipe) (Chlorine Concentration) (Length of pipe)
inches inches mg/L ft
1,112,300

C. Application of dechlorinating solution: Refer to Cal Water's Best Management Practices (BMP) Guidance on examples to apply dechlorinating agent. Cal Water's BMP Guidance Manual is available to the Contractor for reference upon request.

4. Using Cal Water's BMP Discharge Form, check all discharged water quality parameters indicated on the discharge form at the storm drain inlet after the discharged water has passed through all implemented BMPs for pollution control (i.e. Dechlorination, sediment controls, erosion controls). Cal Water's BMP Discharge form is available upon request.

5. Best Management Practices must be used when discharging water into a storm drain. This includes use of sediment control BMPs (i.e. gravel bags around storm drains inlets) and erosion control BMPs (i.e. straw wattles, etc).

6. The installing contractor shall follow the water quality objectives stated below.

pH = 6.5 to 8.5
Total Chlorine Residual = < 0.01mg/L (Per EH&S BMP manual)

Turbidity - Turbidity limitations are dependent on the natural turbidities of the receiving water bodies.

Receiving Water Background	Incremental Increase
Dry Creek	50 NTU
< 50 NTU	5 NTU
50-100 NTU	10 NTU
> 100 NTU	10% of background

Temperature - Temperature limitations are dependent on the natural temperature of the receiving water bodies. The receiving water body temperature cannot be increased by more than 5° F.

ENGINEERING DEPARTMENT

REVISIONS:
R8- Update Specs
D.LE 04/08/2024

DATE: INIT.
DISTRIBUTION MAP
PLAT SHEET
SYSTEM SCHEMATIC
STATION SCHEMATIC

PLAT SHEET NO.:

SCALE: N.T.S.

DRAWN BY: L. PERALTA/ D. LE

DESIGNED BY:

TECH REVIEW: DATE:

CHECKED BY: DATE:

APPROVED BY: DATE: 4/19/24

TITLE:
CALIFORNIA WATER SERVICE
SPECIFICATIONS FOR INSTALLATION OF DUCTILE IRON AND POLYVINYL CHLORIDE (PVC) PRESSURE PIPE AND APPURTENANCES
SPECIFICATIONS FOR MATERIALS,
DISINFECTION AND DECHLORINATION OF NEW MAINS

DISTRICT: ALL

DATE: 04/19/2024

PROJECT ID.:

DRAWING NO.: CW-863-R8

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