2022 Streets Rehabilitation Project



BID PACKET

Project PWP-00120
May 25, 2023

CITY OF FORT BRAGG

Incorporated August 5, 1889
416 N. Franklin St.
Fort Bragg, CA 95437
Phone: (707) 961-2823
Fax: (707) 961-2802
http://city.fortbragg.com

COVER LETTER TO PROSPECTIVE BIDDERS

Dear Prospective Bidder:

Enclosed is a complete bid package for the project entitled **2022 Streets Rehabilitation Project, Project No. PWP-00120**. This bid package includes the following:

Volume 1 – Bid Forms

Notice Inviting Bids
Access, Indemnity, and Release Agreement
Instructions to Bidders
Summary
Submittals
Geotechnical Data and Existing Conditions
Bid Form
Bid Bond
Bidder Registration Form
Statement of Qualifications
Non-Collusion Affidavit
Bidder Certifications
Substitution Request Form

Volume 2 – Contract Documents
Contract Check List
Contract, Part 1
Contract, Part 2 – General Provisions
Contract, Part 3 – Special Provisions
Performance Bond
Payment Bond
Maintenance Bond
Certificates of Insurance and Endorsements

Escrow for Security Deposit Agreement

Volume 3 – Technical Specifications and Project Plans

Technical Specifications
Appendix A: Limited Geotechnical Investigation 2022 Streets Rehab Project

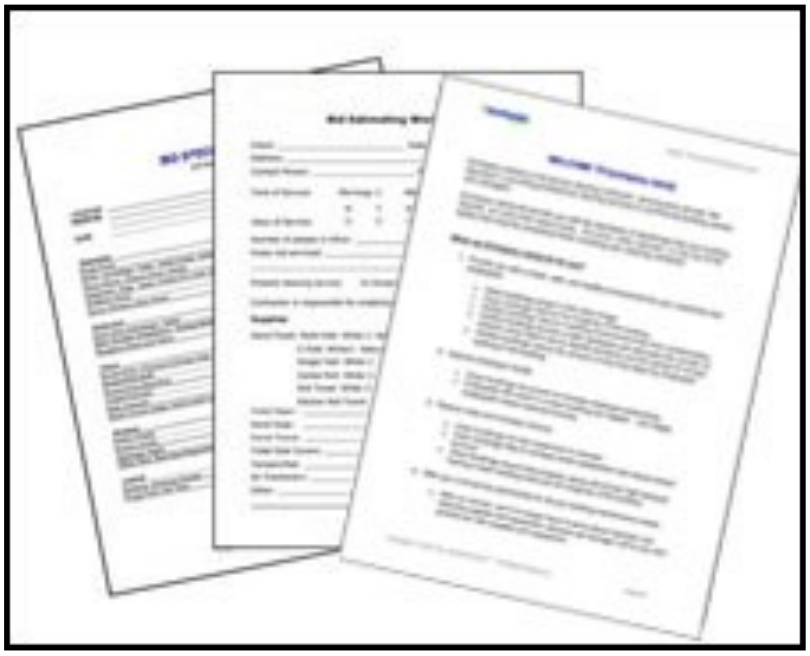
The project work is generally described as the rehabilitation of pavement of up to eight (8) streets throughout the City, including approximately 3.5 miles of street striping on 7 additional streets, several sections of sidewalk (curb, gutter, and ADA curb ramp) installation, and rehabilitation of the specialty stamped crosswalks in the downtown business district as further described in the bid package.

Sealed completed bids must be received by the City Clerk, or a designee, at the place specified in the Notice Inviting Bids prior to the date and time specified in the Notice Inviting Bids. Any bids that are late according to the official time kept by the City will be returned unopened. Bids that do not conform to the requirements specified in the bid package may be rejected.

Questions regarding the bid package should be directed in writing as soon as possible (but no later than five working days prior to the opening of bids) to:

CITY OF FORT BRAGG
Attn: Chantell O'Neal
Assistant Director of Engineering
416 North Franklin Street
Fort Bragg, California 95437
Phone: 707-961-2823 ext.133
Fax: 707-961-2802
coneal@fortbragg.com

VOLUME 1



BID FORMS

NOTICE INVITING BIDS

ARTICLE 1 - INVITATION TO BID

1.01 Notice Inviting Bids: Notice is hereby given that sealed bids will be received by the City Clerk of the City of Fort Bragg ("City"), 416 North Franklin Street, Fort Bragg, California 95437 on or before 2:00 pm PDT, on June 29, 2023 for the following public work:

CITY OF FORT BRAGG
2022 STREETS REHABILIATION PROJECT
PWP-00120
SEVERAL LOCATIONS WITHIN CITY LIMITS

Bids will be opened and read publicly at 2:00 pm, on Thursday, June 29, 2023 via Zoom video conference:
Join Zoom Meeting:
https://us06web.zoom.us/j/83722208290?pwd=NnpsVGNZRTIGSTIXM1BMZWQyUGdMdz09
Meeting ID: 837 2220 8290
Passcode: 890492
Virtual or in-person participation is welcome.

1.02 Project Description: The project work is generally described as the rehabilitation of pavement of up to eight (8) streets throughout the City, including approximately 3.5 miles of street striping on 7 additional streets, several sections of sidewalk (curb, gutter, and ADA curb ramp) installation, and rehabilitation of the specialty stamped crosswalks in the downtown business district as further described in the bid package. Work shall be completed within a max of 109 working days (base bid within 70 working days, alternative 1 within 24 working days, and alternative 2 for 15 working days) from the date when Contract Time commences to run.

1.03 Engineer's Estimate. The Engineer's Opinion of Probable Costs is approximately $2,662,410 base bid, or $3,351,824 with Alternates 1 & 2 included.

1.04 Procurement of Bidding Documents: Bidding Documents contain the full description of the Work. Bidders may examine a complete hard-copy set of the Bidding Documents at the Fort Bragg City Hall, located at 416 North Franklin Street, Fort Bragg, California 95437. For on-line viewing of current bid postings and Project details, go to https://city.fortbragg.com. Bidders may obtain electronic Bidding Documents at no cost by contacting Chantell O'Neal, at (707) 961-2823 Ext.133, or emailing coneal@fortbragg.com on or after May 25, 2023. There will be a $168.25 non-refundable charge for each printed bid package, electronic copies are distributed at no cost.

1.05 Instructions: Bidders shall refer to Instructions to Bidders for required documents and items to be submitted at the date and time as set forth in Paragraph 1.01 above.

1.06 Pre-Bid Meeting and Site Visit: The City will conduct a **non-mandatory** Pre-Bid Meeting and Site Visit at 2:00 pm on Monday, June 12, 2023 at City Hall, 416 N. Franklin Street, Fort Bragg CA 95437. The Pre-Bid Meeting and Site Visit will last approximately one and a half (1.5) hours.

1.07 Bid Preparation Cost: Bidders are solely responsible for the cost of preparing their Bids.

1.08 Reservation of Rights: City specifically reserves the right, in its sole discretion, to reject any or all Bids, to re-bid, or to waive inconsequential defects in bidding not involving time, price or quality of the work. City may reject any and all Bids and waive any minor irregularities in the Bids.

ARTICLE 2 - LEGAL REQUIREMENTS

2.01 Required Contractor's License(s):

A. A California class "A" contractor's license is required to bid this contract. Joint ventures must secure a joint venture license prior to award of this Contract.

2.02 Required Contractor and Subcontractor Registration

A. City shall accept Bids only from Bidders that (along with all Subcontractors listed in Subcontractors List) are currently registered with the Department of Industrial Relations ("DIR") and qualified to perform public work pursuant to Labor Code Section 1725.5.

B. Subject to Labor Code Sections 1771.1(c) and (d), any Bid not complying with paragraph 2.01A above shall be returned and not considered; provided that if Bidder is a joint venture (Business & Professions Code Section 7029.1).

2.03 Bid Alternates:

A. Bid alternates are identified as follows:
Alternate 1: Pine Street & Harold Street, Harold Street & Redwood Avenue, E. Oak Street, S. Harold Street & S. Lincoln Street, Harold Street.
Alternate 2: Azalea Circle, and Penitenti Way.

B. The determination of lowest bid shall be based upon: Base contract bid plus those alternates specifically identified above as being used for the purpose of determining lowest bid.

2.04 ***[SECTION REMOVED]***

2.05 **Substitution of Securities:** City will permit the successful bidder to substitute securities for any retention monies withheld to ensure performance of the contract, as set forth in Escrow Agreement for Security Deposits in Lieu of Retention and incorporated herein in full by this reference, in accordance with Public Contract Code Section 22300.

2.06 **Prevailing Wage Laws:** The successful Bidder must comply with all prevailing wage laws applicable to the Project, and related requirements contained in the Contract Documents. Copies of the general prevailing rates of per diem wages for each craft, classification, or type of worker needed to execute the Contract, as determined by Director of the State of California Department of Industrial Relations, are on file at the City's Public Works Department, may be obtained from the California Department of Industrial Relations website (http://www.dir.ca.gov/OPRL/dprewagedetermination.htm) and are deemed included in the Bidding Documents. Upon request, City will make available copies to any interested party. Also, the successful Bidder shall post the applicable prevailing wage rates at the Site.

2.07 **Prevailing Wage Monitoring:** This Project is subject to prevailing wage compliance monitoring and enforcement by the Department of Industrial Relations.

City of Fort Bragg

Dated: _____ By: _____
Cristal Muñoz
Acting City Clerk

PUBLISH DATES: May 25, 2023

ACCESS, INDEMNITY AND RELEASE AGREEMENT

Dated:_____

POTENTIAL CONTRACTOR: _____

CITY: CITY OF FORT BRAGG

SITE: Up to 15 City Streets

PROJECT: 2022 Streets Rehabilitation Project- The rehabilitation of pavement for up to eight (8) streets throughout the City, includes approximately 3.5 miles of street striping on 7 additional streets, several sections of sidewalk (curb, gutter, and ADA curb ramp) installation, and rehabilitation of the specialty stamped crosswalks in the downtown district.

In consideration of the above-referenced City's permitting the undersigned potential Contractor (**Contractor**) to have access to, and to conduct investigations, tests and/or inspections on the Site (**access**), and effective upon such access, Contractor hereby agrees as follows:

1.01 To the greatest extent permitted by law including, without limitation, Civil Code Section 2782, Contractor hereby releases, and shall defend, indemnify, and hold harmless City, and its officers, employees, consultants, representatives, and agents, and all other parties having any other interest in the Site, against any claim or liability, including attorney's fees, arising from or relating to any Site-related access, investigation, test, inspection and/or other activity conducted by Contractor or any of Contractor's officers, employees, consultants, representatives, and/or agents, except for claims or liability arising out of the sole negligence, active negligence, or willful misconduct of City or any released and indemnified party.

1.02 Contractor hereby waives the provisions of Civil Code Section 1542, which provides as follows:

> A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor.

1.03 Contractor shall repair any damage to the Site or adjacent property resulting from activities authorized hereunder, and comply with and be subject to all other requirements and obligations described or referenced in Geotechnical Data and Existing Conditions.

1.04 Attached hereto (or to be delivered separately before Contractor's visit to the Site) is a certificate for general liability insurance satisfying Contract Documents requirements.

1.05 Although this Access, Indemnity and Release Agreement is not a Contract Document (see Agreement), it shall be fully effective and binding regardless of whether Contractor submits a Bid for the subject Project, is awarded a contract for the Project, or otherwise.

CONTRACTOR: _____

By: _____ By: _____
Signature Signature

Its: _____ Its: _____
Title (If Corporation: Chairman, President or Vice President)

Title (If Corporation: Secretary, Assistant Secretary, Chief Financial Officer or Assistant Treasurer)

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INSTRUCTIONS TO BIDDERS

Bids are requested by City, for a general construction contract, or work described in general, as set forth in the Notice Inviting Bids in accordance with the following additional terms.

ARTICLE 1 - PROCEDURES FOR SUBMISSION OF BIDS

1.01 Pre-Bid Conference and Site Visit

A. City will conduct a **Non-Mandatory** Pre-Bid Meeting and Site Visit at the date, time and location indicated in Notice Inviting Bids, to consider such matters as Bidders may request and perform a Site Visit immediately following, at the Site. Bidders may attend Pre-Bid Meeting and Site Visit and sign an attendance roster.

B. The Site Visit may be the Bidders' only opportunity to investigate conditions at the Site. Other Pre-Bid Site Visits may be scheduled at City's sole discretion, depending on staff availability.

C. City will issue Summary Notes of the Pre-Bid Conference, which shall constitute the sole and exclusive record and statement of the results of the Pre-Bid Conference. The Summary Notes issued by City are not Contract Documents.

1.02 Pre-Bid Investigations

A. Prior to submission of Bid, Bidder must conduct a careful examination of Bidding Documents and understand the nature, extent, and location of Work to be performed. Refer to the General Conditions Document on required pre-bid investigations.

B. Any Bidder wishing to investigate subsurface conditions or otherwise conduct invasive investigations, explorations, test, or studies at this Site before bidding, shall schedule such examinations with City by providing City at least seven (7) days advanced written notice. Additionally, any such Bidder must deliver an executed Access, Indemnity and Release Agreement ("Release") and provide an insurance certificate as described therein by noon of the day prior to the site examination. Bidders who intend only to observe Site conditions and not conduct such examinations are not required to provide an executed Release or an insurance certificate.

C. Bidders may examine any available existing conditions information (e.g., record documents, specifications, studies, drawings of previous work), as well as applicable environmental assessment information (if any) regarding the Project, by giving City reasonable advanced notice. City will make copies available for a fee. A Bidder must give five (5) days advanced notice if copies are desired.

1.03 Bidder Questions and Answers

A. Bidders must direct all questions about the meaning or intent of Bidding Documents to City in writing. Interpretations or clarifications considered necessary by City in response to such questions will be issued by written Addenda mailed, emailed, or delivered to all parties recorded by City as having received Bidding Documents. City may not answer questions received less than **5 Days** prior to the date for opening Bids.

B. Only questions answered by formal written Addenda will be binding. Any other interpretations or clarifications will be without legal effect, and Bidders shall not rely on oral statements.

1.04 Addenda

A. Addenda may also be issued to modify the Bidding Documents as deemed advisable by City. Addenda shall be acknowledged by number in the Bid Form and shall be part of the Contract Documents. A complete listing of Addenda may be secured from City.

ARTICLE 2 - RECEIPT OF BIDS

2.01 Date and Time

A. Sealed Bids will be received by the City until the date and time indicated in the Notice Inviting Bids. All Bid envelopes will be time-stamped to reflect their submittal time. City shall reject all Bids received after the specified time and will return such Bids to Bidders unopened. Bidders must submit Bids in accordance with this Instructions to Bidders Document.

2.02 Bid Submission

A. City will receive Bids in opaque sealed envelopes, containing the required items described herein under Section 2.03, Required Contents of "Bid Submittals."

B. Bidders should mark their Bid envelopes using their name, address, identifying information and project number indicated in Notice Inviting Bids.

2.03 Required Contents of "Bid Submittals"

A. Bid Form. Bidders must submit Bids on the City's Bid Form. Bidders must complete all Bid items and supply all information required by Bid documents and specifications.

B. Bond Accompanying Bid. Bidders must submit a completed Bond Accompanying Bid document (surety bond), cash, cashier's check or certified check (certified without qualification and drawn on a solvent bank of the State of California or a National Bank doing business in the State of California) in an amount not less than 10% of the base Bid, payable to City of Fort Bragg.

C. Bidder Registration Form. Bidders must submit a completed Bidder Registration Form.

D. Subcontractors List. Bidders must submit a Subcontractors List. The Subcontractors List must include the names, location, place of business, and other information required therein, for all subcontractors who will perform any portion of work, including labor, rendering of service, or specially fabricating and installing a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in excess of one half of one percent (0.5%) of the total Bid amount. Any violation of this requirement may result in a Bid being deemed non-responsive and not being considered.

E. Statement of Qualifications for Construction Work. Bidder must submit a Statement of Qualifications for Construction Work.

F. Non-Collusion Affidavit. Bidders must submit a completed Non-Collusion Affidavit.

G. Bidder Certifications. Bidders must submit a completed Bidder Certification.

ARTICLE 3 - BID OPENING AND EVALUATION

3.01 Determination of Apparent Low Bidder

A. City will open each Bidder's Envelopes at the time and place indicated in the Notice Inviting Bids, initially evaluate them for responsiveness, and determine an Apparent Low Bidder as specified herein.

B. Apparent Low Bid will be determined solely on the Total Bid Price based on terms contained in the Notice Inviting Bids and the Bid Form, or as set forth in Paragraph 2.03 of the Notice Inviting Bids. All Bidders are required to submit Bids on all Bid items (including any alternates).

C. For the Apparent Low Bidder only, City will evaluate the Apparent Low Bidder for responsiveness to the requirements of the Statement of Qualifications for Construction Work form and for Responsibility.

D. If Apparent Low Bidder is determined to be non-responsive or non-responsible, then City may proceed to the next Apparent Low Bidder's Bid pursuant to any procedures determined in its reasonable discretion, and proceed for all purposes as if this Apparent Low Bidder were the original Apparent Low Bidder.

3.02 Evaluation of Bids

A. Bids must be full, complete, clearly written and using the required forms. Bidders shall make any change in the Bid by crossing out the original entry, entering and initialing the new entry. Bidder's failure to submit all required documents strictly as required entitles City to reject the Bid as non-responsive. All Bidders must submit Bids containing each of the fully executed documents supplied in these bid documents **[Including pages 1-17 to 1-42]**, descried in 2.03 Required Contents of "Bid Submittals".

B. In evaluating Bids, City will consider Bidders' qualifications, whether or not the Bids comply with the prescribed requirements, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

C. City may conduct reasonable investigations and reference checks of Bidder and other persons and organizations as City deems necessary to assist in the evaluation of any Bid and to establish Bidder's responsibility, qualifications, financial ability, and capability to perform the Work in accordance with the Contract Documents to City's satisfaction within the prescribed time. Submission of a Bid constitutes Bidder's consent to the foregoing.

D. City shall have the right to consider information provided by sources other than Bidder. City shall also have the right to communicate directly with Bidder's surety regarding Bidder's bonds.

E. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between written words and figures will be resolved in favor of the words.

F. Bids shall be deemed to include the written responses of the Bidder to any questions or requests for information of City made as part of Bid evaluation process after submission of Bid.

3.03 Reservation of Rights

A. City reserves the right to:

1. Reject any or all nonconforming, non-responsive, unbalanced, or conditional Bids, and
2. Reject the Bid of any Bidder as non-responsive as a result of any error or omission in the Bid, and
3. Reject the Bid of any Bidder if City believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive, the Bidder is unqualified or of doubtful financial ability, or fails to meet any other pertinent standard or criteria established by City.

B. For purposes of this paragraph, an "unbalanced Bid" is one having nominal prices for some Bid items and enhanced prices for other Bid items.

C. City may retain Bid securities and Bid bonds of other than the Apparent Low Bidder for a period of 120 Days after award or full execution of the Contract, whichever first occurs.

D. City may waive any informalities or minor irregularities in the Bids.

E. City also reserves the right, in its discretion, to reject any or all Bids and to re-Bid the Project.

3.04 Required Contractor and Subcontractor Registration

A. City shall accept Bids only from Bidders that (along with all Subcontractors listed in the Subcontractors List) are currently registered with the Department of Industrial Relations and qualified to perform public work pursuant to Labor Code Section 1725.5.

B. Subject to Labor Code Sections 1771.1(c) and (d), any Bid not complying with paragraph 3.04.A above, shall be returned and not considered; provided that if Bidder is a joint venture (Business & Professions Code Section 7029.1) or if federal funds are involved in the Contract (Labor Code Section 1771.1(a)), City may accept a non-complying Bid provided that Bidder and all listed Subcontractors are registered at the time of Contract award.

ARTICLE 4 - MANDATORY BID PROTEST PROCEDURES

4.01 Submission of Written Bid Protest

A. Any Bid protest in connection with the construction contract or work described in general in the Notice Inviting Bids must be submitted in writing to the **City Clerk, City of Fort Bragg, 416 North Franklin Street, Fort Bragg, California 95437**, before **3:30 p.m.** of the fifth Business Day following the Bid opening.

B. The initial protest document must contain a complete statement of the basis for the protest.

C. The protest must refer to the specific portion of the document that forms the basis for the protest.

D. The protest must include the name, address, and telephone number of the person representing the protesting party.

E. Only Bidders who the City otherwise determines are responsive and responsible are eligible to protest a Bid; protests from any other Bidder will not be considered. In order to determine whether a protesting Bidder is responsive and responsible, City may evaluate all information contained in any protesting Bidder's Bid, and conduct the same investigation and evaluation as City is entitled to take regarding an Apparent Low Bidder.

F. The party filing the protest must concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest that may be adversely affected by the outcome of the protest. Such parties shall include all other Bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.

4.02 Exclusive Remedy

A. The procedure and time limits set forth in this Article 4 are mandatory and are Bidder's sole and exclusive remedy in the event of Bid protest. Bidder's failure to comply with these procedures shall

constitute a waiver of any right to further pursue the Bid protest, including filing a Government Code Claim or other legal proceedings. A Bidder may not rely on a protest submitted by another Bidder, but must timely pursue its own protest.

ARTICLE 5 - AWARD AND EXECUTION OF CONTRACT

5.01 Notice of Award and Submittal of Executed Contract Documents

A. If Contract is to be awarded, it will be awarded to the lowest responsible responsive Bidder. City will issue a Notice of Award. Such Award, if made, will be made within ninety (90) days after the opening of the Bid Proposals.

B. Successful Bidder must execute and submit to City the "Required Contract Documents and Proof of Insurance" set forth below, by 5:00 p.m. of the tenth (10th) working Day following the Notice of Award.

5.02 Required Contract Documents and Proof of Insurance

A. Agreement, fully executed by successful Bidder. Submit two originals, each bearing an original, notarized signature on the signature page.

B. Construction Performance Bond, fully executed by successful Bidder and surety, in the amount set forth in that document. Submit one original.

C. Construction Labor and Material Payment Bond, fully executed by successful Bidder and surety, in the amount set forth in that document. Submit one original.

D. Insurance Certificates and Endorsements, required by Supplementary Conditions—Insurance. Submit one original set.

E. Any other items identified by City in its Notice of Award.

5.03 Failure to Execute and Deliver Documents

A. If Bidder to whom the Contract is awarded, within the period described in the Instructions to Bidders, fails or neglects to execute and deliver all required Contract Documents and file all required bonds, insurance certificates, and other documents, City may, in its sole discretion, rescind the award, recover on Bidder's surety bond, or deposit Bidder's cashier's check or certified check for collection, and retain the proceeds thereof as liquidated damages for Bidder's failure to enter into the Contract Documents. Bidder agrees that calculating the damages City may suffer as a result of Bidder's failure to execute and deliver all required Contract Documents would be extremely difficult and impractical and that the amount of Bidder's required Bid security shall be the agreed and presumed amount of City's damages.

B. Upon Bidder's failure to timely deliver all required Contract Documents as set forth herein, City may determine the next Apparent Low Bidder and proceed accordingly.

ARTICLE 6 - GENERAL CONDITIONS AND REQUIREMENTS

6.01 Modification of Commencement of Work

A. City expressly reserves the right to modify the date for the Commencement of Work under the Contract and to independently perform and complete work related to Project. City accepts no responsibility to Contractor for any delays attributed to its need to complete independent work at the Site.

B. City shall have the right to communicate directly with Apparent Low Bidder's proposed performance bond surety, to confirm the performance bond. City may elect to extend the time to receive faithful performance and labor and material payment bonds.

6.02 Conformed Project Manual

A. Following Award of Contract, City may prepare a conformed Project Manual reflecting Addenda issued during bidding, which will, failing objection, constitute the approved Project Manual.

6.03 Payment Bond

A. If the Project described in the Notice Inviting Bids involves an expenditure in excess of twenty-five thousand dollars ($25,000), the successful Bidder must file a payment bond with and approved by City prior to entering upon the performance of the Work, in accordance with Civil Code Section 9550, *et seq*.

6.04 Wage Rates

A. Copies of the general prevailing rates of per diem wages for each craft, classification, or type of worker needed to execute the Contract, as determined by Director of the State of California

Department of Industrial Relations, are on file at the City's Public Works Department and may be obtained from the California Department of Industrial Relations website (https://www.dir.ca.gov/Public-Works/Prevailing-Wage.html) and are deemed included in the Bidding Documents. Upon request, City will make available copies to any interested party. Also, Contractor shall post the applicable prevailing wage rates at the Site.

6.05 Withdrawal of Bids

A. Bidders may withdraw their Bids at any time prior to the Bid opening time fixed in the Instructions to Bidders, only by written request for the withdrawal of Bid filed with City at the **City Clerk's office located at 416 North Franklin Street, Fort Bragg, California**. Bidder or its duly authorized representative shall execute request to withdraw Bid.

6.06 Ineligible Contractors and Subcontractors

A. City will reject a Bid from a Bidder who is ineligible to bid or work on, or be awarded, a public works project pursuant to Labor Code Section 1777.1 or 1777.7. Bidders and the Contractor who is awarded the project contract shall not utilize, or allow work by, any subcontractor who is ineligible to bid or work on, or be awarded, a public works project pursuant to Labor Code Section 1777.1 or 1777.7. (See Public Contract Code Section 6109.) The California Division of Labor Standards Enforcement publishes a list of debarred contractors and subcontractors on the Internet at www.dir.ca.gov/DLSE/debar.html.

6.07 Public Records Act Requests

A. In accordance with the California Public Records Act, City will make available to the public Bidder's Statement of Qualifications ("SOQ"), correspondence and written questions submitted during the Bid period, all Bid submissions opened in accordance with the procedures set forth herein, and all subsequent Bid evaluation information. All submissions not opened will remain sealed and shall be returned to the submitter. Except as otherwise required by law, City will not disclose trade secrets or proprietary financial information submitted by Bidders that has been designated as confidential by Bidder (including, without limitation, the SOQ). Any such trade secrets or proprietary financial information that Bidder believes should be exempted from disclosure shall be specifically identified and marked as such. Blanket-type identification by designating whole pages or sections shall not be permitted and shall be invalid. The specific confidential information must be clearly identified as such.

B. Upon a request for records regarding this Bid, City will notify the Bidder involved, within ten Days from receipt of the request, when the records will be made available for inspection. If the Bidder timely identifies any "proprietary, trade secret, or confidential commercial or financial" information that Bidder determines is not subject to public disclosure, and requests that City refuse to comply with the records request, Bidder will, at its sole expense, take all appropriate legal action and defend City's refusal to produce the information in all forums; otherwise City will make such information available to the extent required by applicable law, without restriction.

C. Information disclosed in the Statement of Qualifications and the attendant opened submissions are the property of City unless Bidder makes specific reference to data that is considered proprietary. Subject to the requirements in the Public Records Act, reasonable efforts will be made to prevent the disclosure of information except on a need-to-know basis during the evaluation process.

6.08 Substitutions

A. Bidders must base their Bids on products and systems specified in Contract Documents or listed by name in Addenda. City will consider substitution requests only for "or equal items."

Bidders wanting to use "or equal" item(s)" may submit a Substitution Request Form no later than thirty-five (35) Days after Notice of Award. To assess "or equal" acceptability of product or system, request(s) for substitution must contain the information required in the Substitution Request Form. Insufficient information will be grounds for City to reject the substitution. City will, within a reasonable time, after having received a request for substitution, issue in writing its decision as to whether the proposed substitution is an "or equal" item compatible to City systems, durability, and quality. City's decision shall be conclusive as to all Bidders.

Prior to bid, requests for substitution will not be considered unless the Substitution Request Form is received at least seven (7) Days prior to Bid day. Substitutions approved before Bid day will be listed in Addenda and become part of the Contract Documents.

As a limitation on Bidder's privilege to request substitution of “or equal” items, City has found that certain items are designated as City standards and certain items are designated to match existing items in use on a particular public improvement either completed or in the course of completion or are available from one source. As to such items, City will not permit substitution. Such items (if any) are described in Notice Inviting Bids.

SUMMARY

PART 1 - GENERAL

1.01 Work Covered by Contract Documents

A. The Work of this Contract comprises construction of all the Work indicated, described in the Specifications, or otherwise required by the Contract Documents. Unless provided otherwise in the Contract Documents, all risk of loss to Work covered by Contract Documents shall rest with Contractor until Final Acceptance of the Work. Cost of maintenance of systems and equipment prior to Final Acceptance will be considered as included in prices Bid and no direct or additional payment will be made therefore.

B. For all Bid items, furnish and install all Work, including connections to existing systems, indicated and described in Specifications and all other Contract Documents. Work and requirements applicable to each individual Bid item, or unit of Work, shall be deemed incorporated into the description of each Bid item (whether Lump Sum or Unit Price). Any Bid item may be deleted from the Work and Contract Sum, in total or in part, prior to or after award of Contract without compensation in any form or adjustment of other Bid items or prices therefore.

C. Allowance Work shall be done as Change Orders and as specified in the Modification Procedures section of this Document. Identify Allowance Items (from Bid Form) on the Progress Schedules and on Applications for Payment. The Amount given on the Bid Form under each Allowance Item is the sum of money set aside for each Allowance Item. These amounts shall be included in the Contract Sum on the Bid Form. If the cost of Work done under any Allowance Item is less than the amount given on the Bid Form under that Allowance Item, the Contract Sum shall be reduced by the difference between the amount given in the Bid Form and the cost of Work actually done.

1.02 Work Sequence

A. Construct Work in stages and at times to accommodate City operation requirements during the construction period; coordinate construction schedule and operations with City.

1.03 Cooperation of Contractor and Coordination with Other Work

A. Coordinate with City and any City forces, or other contractors and forces, as required by the General Conditions.

1.04 Partial Occupancy/Utilization Requirements

A. Allow City to take possession of and use any completed or partially completed portion of the Work during the progress of the Work as soon as is possible without interference to the Work.

B. Possession, use of Work, and placement and installation of equipment by City shall not in any way evidence the completion of the Work or any part of it.

C. Contractor shall not be held responsible for damage to the occupied part of the Work resulting from City occupancy.

D. Make available, in areas occupied, on a 24 hour per day and 7 day per week basis if required, any utility services, heating, and cooling in condition to be put in operation at the time of occupancy.

1. Responsibility for operation and maintenance of said equipment shall remain with Contractor.
2. Make, and City shall certify, an itemized list of each piece of equipment so operated with the date operation commences.
3. Itemized list noted above shall be basis for commencement of warranty period for equipment.
4. City shall pay for utility cost arising out of occupancy by City during construction.

E. Use and occupancy by City prior to acceptance of Work does not relieve Contractor of its responsibility to maintain insurance and bonds required under the Contract until entire Work is completed and accepted by City.

F. Prior to date of Final Acceptance of the Work by City, all necessary repairs or renewals in Work or part thereof so used, not due to ordinary wear and tear, but due to Defective materials or workmanship or to operations of Contractor, shall be made at expense of Contractor, as required in the General Conditions.

G. Use by City of Work or part thereof as contemplated by this Section of the General Requirements shall in no case be construed as constituting acceptance of Work or any part thereof. Such use

shall neither relieve Contractor of any responsibilities under Contract, nor act as waiver by City of any of the conditions thereof.

1.05 Contractor Use of Site

A. Confine operations at Site to areas permitted by Contract Documents, permits, ordinances, and laws. Do not unreasonably encumber Site with materials or equipment.

B. Assume full responsibility for protection and safekeeping of products stored on premises. Move any stored products that interfere with operations of City or other contractor.

C. Coordinate parking, storage, staging, and Work areas with City. City will provide a storage area for Contractor's equipment and materials. Do not store construction materials in the dripline of any tree.

D. Prior to commencement of Work or excavation, Contractor and City shall jointly survey the area adjacent to the Project area making permanent note and record of such existing damage such as cracks, sags or other similar damage. This record shall serve as a basis for determination of subsequent damage to structures, conditions or other existing improvements due to Contractor's operations. All parties making the survey shall sign the official record of existing damage. Cracks, sags or damage of any nature to the adjacent Project area, not noted in the original survey but subsequently noted, shall be reported immediately to City.

E. The Contractor shall follow all County and City ordinances in force during the duration of this Contract.

F. It is essential that the Contractor perform the Work with as little interference and disturbance as possible to the surrounding neighborhood.

G. When suspect materials, outside the scope of Work, are encountered during the Work or restoration process, the Contractor shall immediately contact the Project Manager for evaluation and approval of the methods for dealing with the material.

SUBMITTALS

PART 1 – GENERAL

1.01 SUMMARY

A. Section includes description of requirements and procedures for submittals.

1.02 SCHEDULE OF SUBMITTALS

A. Contractor shall prepare for City's review and acceptance prior to commencement of work on the Site, for purposes of contract administration, a schedule of submittals (also referred to as a submittal register) required to complete the Work, prepared by Contractor and accepted by City for contract administration. Schedule of submittals shall include, for each submittal: the specification or drawing reference requiring the submittal, if applicable; the material, item, or process for which the submittal is required; the submittal number and identifying title of the submittal; the Contractor's anticipated submission date and the approval need date.

B. Contractor shall update monthly the schedule of submittals to reflect actual submission and acceptance dates for submittals. Review by City of schedule of submittals does not excuse Contractor of obligation to supply, schedule and coordinate all submittals required by the Contract Documents.

1.03 CONTRACTOR TO SUBMIT SHOP DRAWINGS, PRODUCT DATA AND SUBMITTALS

A. Contractor shall review for compliance with Contract Documents, approve and submit to City Shop Drawings, Product Data, Samples and similar submittals required by Contract Documents.

B. Contractor shall schedule and submit concurrently submittals covering component items forming a system or items that are interrelated. Contractor shall include certifications to be submitted with the pertinent drawings at the same time.

C. Contractor shall coordinate scheduling, sequencing, preparing and processing of all submittals with performance of work so that work will not be delayed by submittal processing.

D. Submittals shall specifically identify any Work depicted that does not conform to the Contract Documents.

1.04 CITY REVIEW OF SHOP DRAWINGS, PRODUCT DATA AND SUBMITTALS

A. After review by City of each Submittal, material will be returned to Contractor with actions defined as follows:

1. NO EXCEPTIONS TAKEN - Accepted subject to its compatibility with general design concept of the Work, future Submittals and additional partial Submittals for any portions of the Work not covered in this Submittal. Does not constitute acceptance or deletion of specified or required items not shown on the Submittal.
2. MAKE CORRECTIONS NOTED (NO RESUBMISSIONS REQUIRED) - Same as item 1 above, except that minor corrections as noted shall be made by Contractor.
3. REVISE AS NOTED AND RESUBMIT - Rejected because of major inconsistencies or errors that shall be resolved or corrected by Contractor prior to subsequent review by City.
4. REJECTED - RESUBMIT - Submitted material does not conform to Drawings and/or Specifications in major respect, i.e.: wrong size, model, capacity, or material.

B. City's review will not constitute acceptance by City of any responsibility for the accuracy, coordination, or completeness of the Submittals. Accuracy, coordination, and completeness of Submittals shall be Contractor's sole and exclusive responsibility including responsibility to back-check comments, corrections, and modifications from City's review before fabrication. Contractor, Subcontractors, or suppliers may prepare Submittals. Contractor submission of any Submittal is a representation that Contractor has confirmed that the Submittal meets requirements of Contract Documents including, without limitation, conforming to structural space and access conditions at point of installation. City's review will be only to assess if the items covered by the Submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as indicated by the Contract Documents. City's review of Submittal, method of Work, or information regarding materials and equipment Contractor proposes to furnish shall not relieve Contractor of responsibility for errors therein and shall not be regarded as assumption of risks or liability by City, or any officer or employee thereof. Contractor shall have no claim under Contract Documents on account of failure or partial failure or inefficiency or insufficiency of any plan or method of Work or material and

equipment so accepted. City's review shall be considered to mean merely that City has no objection to Contractor using, upon Contractor's own full responsibility, plan or method of Work proposed, or furnishing materials and equipment proposed.

C. Unless otherwise specified, City's review will not extend to the means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

D. Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the City has reviewed respective Submittal and the Work described in the Submittal is authorized to proceed in accordance with paragraphs 1.04.A.1 or 2, above. Otherwise, any such Work is at Contractor's sole risk for removal and replacement, at City's sole discretion, and at Contractor's sole expense.

GEOTECHNICAL DATA AND EXISTING CONDITIONS

ARTICLE 1 - REPORTS AND INFORMATION ON EXISTING CONDITIONS

1.01 Inspection of Reports

A. City, its consultants, and prior contractors may have collected documents providing a general description of the Site and conditions of the Work. These documents may consist of geotechnical reports for and around the Site, contracts, contract specifications, tenant improvement contracts, as-built drawings, utility drawings, information regarding Underground Facilities, and hazardous material surveys or information (collectively, Existing Conditions Data).

B. Bidders may inspect Geotechnical and Existing Conditions Data. These documents are listed in Summary of Work and are available for review at the address identified therein. Copies may be obtained for the cost of reproduction and handling upon Bidder's payment for the costs.

C. Existing Conditions Data is for information purposes only and does not describe labor, materials or equipment furnished by Contractor, but rather, information regarding conditions of the work. Such Existing Conditions Data is not a Contract Document.

ARTICLE 2 - USE OF EXISTING CONDITIONS DATA

2.01 Above-Ground Existing Conditions

A. City makes no warranty or representation of existing aboveground conditions, as-built conditions, or other aboveground actual conditions verifiable by reasonable independent investigation. These conditions are verifiable by Bidder by the performance of its own independent investigation that Bidder must perform prior to bidding and Bidder must not rely on the information supplied by City regarding such existing conditions.

B. Bidder represents and agrees that in submitting its Bid, it is not relying on any information regarding above-ground existing conditions supplied by City.

2.02 Underground Facilities

A. Information supplied regarding existing Underground Facilities at or contiguous to the Site is based on information furnished to City by others (e.g., the builders of such Underground Facilities or others).

B. City assumes responsibility for only the general accuracy, completeness or thoroughness of information regarding Underground Facilities that are owned by City. This express assumption of responsibility applies only if Bidder has conducted the independent investigation required of it under the General Conditions of the Contract and discrepancies were not apparent. Bidder is solely responsible for any interpretation or conclusion drawn from this information. City is not responsible for information regarding Underground Facilities that are owned by others.

2.03 Hazardous Materials Surveys

A. Bidders may rely on this data and information for general accuracy regarding the locations of potentially hazardous materials. City does not warrant and makes no representation regarding the completeness or thoroughness of any data or information regarding existing conditions or hazardous materials including, without limitation, quantities, characteristics, volumes, or associated structural features. Bidder represents and agrees that in submitting a Bid it is not relying on any such data, information or deductions.

B. Data and information regarding the locations of hazardous materials are not part of Contract Documents.

2.04 Geotechnical Data

A. Bidder may rely upon the general accuracy of the "technical data" contained in the geotechnical reports and drawings identified above, but only insofar as it relates to subsurface conditions, provided Bidder has conducted the independent investigation required of it and discrepancies were not apparent.

B. The term "technical data" shall include actual reported depths, reported quantities, reported soil types, reported soil conditions, and reported material, equipment, or structures that were encountered during subsurface exploration. The term "technical data" does not include, and Bidder may not rely upon, any other data, interpretations, opinions or information shown or indicated in such drawings or reports that otherwise relate to subsurface conditions or described structures. The term "technical data" shall not include the location of Underground Facilities.

C. Bidder may not rely on the completeness of reports and drawings for the purposes of bidding or construction. Bidder is solely responsible for any interpretation or conclusion drawn from any "technical data" or any other data, interpretations, opinions, or information contained in supplied geotechnical data.

2.05 Representations

A. Except as expressly set forth herein, City does not warrant, and makes no representation regarding, the accuracy or thoroughness of any geotechnical and existing conditions data.

B. Bidder represents and agrees that in submitting its Bid, it is not relying on any geotechnical and existing conditions data supplied by City, except as specifically set forth herein.

ARTICLE 3 - INVESTIGATIONS

3.01 Required Investigations

A. Before submitting a Bid, each Bidder shall be responsible to obtain such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site or otherwise, which may affect cost, progress, performance or furnishing of Work or which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Bidder and safety precautions and programs incident thereto or which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of Contract Documents.

B. Bidders shall advise City in writing during the Bid period of any questions, suppositions, inferences or deductions Bidders may have for City's review and response.

C. City has provided time in the period prior to bidding for Bidder to perform these investigations.

3.02 Access to Site for Investigations

A. During the Pre-Bid Site Visit(s), City will provide each Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies, as each Bidder deems necessary for submission of a Bid, provided that invasive testing will be permitted only to the extent provided in the Instructions to Bidders, and provided that each Bidder seeking access to conduct such investigations provides a signed Access, Indemnity and Release Agreement. Bidders must fill all holes and clean up and restore the Site to its former conditions upon completion of such explorations, investigations, tests, and studies. Such investigations may be performed only under the provisions of these Instructions to Bidders and the General Conditions of the Contract including, without limitation, proof of insurance and obligation to indemnify against claims arising from such investigation work. Each Bidder shall supply all equipment required to perform any investigations as each Bidder deems necessary. City has the right to limit the number of pieces of machinery operating at any one time due to safety concerns or in order to protect or maintain the Site from potential damage or interruption to general operational activities.

BID FORM
TO THE CITY OF FORT BRAGG

THIS BID IS SUBMITTED BY:

_____
(Firm/Company Name)

Re: **2022 Streets Rehabilitation Project, PWP-00120** at Fort Bragg, California.

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with the **CITY OF FORT BRAGG** in the form included in the Contract Documents (Agreement), to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Sum and within the Contract Time indicated in this Bid and in accordance with all other terms and conditions of the Contract Documents.
2. Bidder accepts all of the terms and conditions of the Contract Documents, Notice Inviting Bids, and Instructions to Bidders, including, without limitation, those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for 60 Days after the day of Bid opening, unless there is a bid protest, then 90 days after the day of bid opening.
3. In submitting this Bid, Bidder represents that Bidder has examined all of the Contract Documents, performed all necessary Pre-Bid investigations, attended the mandatory Pre-Bid Meeting, if any, received the Pre-Bid Meeting Summary Notes (if any), and received the following Addenda:

Addendum Number	Addendum Date	Signature of Bidder

4. Based on the foregoing, Bidder proposes and agrees to fully perform the Work within the time stated and in strict accordance with the Contract Documents for the following sums of money listed in the following Schedule of Bid Prices.

SCHEDULE OF BID PRICES

All Bid items, including lump sums, unit prices and alternates (if any), must be filled in completely. Bid items are described in Summary of Work. Quote in figures only, unless words are specifically requested.

2022 STREETS REHAB PROJECT

CITY OF FORT BRAGG

BASE BID SCHEDULE

Item NO.	Item Description	Quantity	Unit	Unit Price	Amount
1	Traffic Control Plan	LS	LS		
2	Stormwater Pollution Prevention Plan	LS	LS		
3	Construction Staking	LS	LS		
4	Remove Base and Surfacing	44,805	SF		
5	Class 2 Aggregate Base	713	CY		
6	Hot Mix Asphalt (Type A)	3,149	TON		
7	Cold Plane	41,439	SF		
8	4" Digout	8,666	SF		
9	6" Digout	33,995	SF		
10	Unsuitable Material Excavation & Backfill (Contingency)	50	CY		
11	Cold Plane Asphalt Concrete (Conform Grind)	1,948	SF		
12	Slurry Seal (Type II)	347,640	SF		
13	Stamped HMA	292	SF		
14	Detectable Warning Surface	243	SF		
15	Adjust Utility to Grade	38	EA		
16	Reset Traffic Loops	9	EA		
17	Concrete Curb & Gutter	346	LF		
18	Concrete Sidewalk	1,795	SF		
19	Remove Drain Inlet	2	EA		
20	Drain Inlet	2	EA		
21	30” Nyloplast Drain Basin	4	EA		
22	12" HDPE SD Pipe	7	LF		
23	24" HDPE SD Pipe	708	LF		
24	Remove & Replace Water Bar	1	EA		
25	Remove SD Pipe	18	LF		

26	Relocate Fire Hydrant	1	EA		
27	Relocate Roadside Sign	4	EA		
28	Roadside Sign	12	EA		
29	Curb Paint	176	LF		
30	Pavement Paint	8,630	SF		
31	Traffic Stripe	56,849	LF		
32	Pavement Marking	16,480	SF		
33	Remove Traffic Stripe	23,686	LF		
34	Remove Pavement Marking	20,325	SF		
35	FH Pavement Marker	39	EA		
36	Monument Preservation	LS	LS		
37	Mobilization	LS	LS		

TOTAL BASE BID PRICE:

_____

(Indicate Bid Price in Dollar Figures)

_____

(Indicate Bid Price in Words)

_____

(Indicate Bid Price in Words)

2022 STREETS REHAB PROJECT
CITY OF FORT BRAGG
BID ALTERNATE 1 : BID SCHEDULE

Item NO.	Item Description	Quantity	Unit	Unit Price	Amount
1	Traffic Control Plan	LS	LS		
2	Stormwater Pollution Prevention Plan	LS	LS		
3	Construction Staking	LS	LS		
4	Remove Base and Surfacing	5,960	SF		
5	Class 2 Aggregate Base	77	CY		
6	Hot Mix Asphalt (Type A)	64	TON		
9	6” Digout	260	SF		
13	Detectable Warning Surface	175	SF		
14	Adjust Utility to Grade	6	EA		
16	Concrete Curb & Gutter	402	LF		
17	Concrete Sidewalk	2,576	SF		
19	Remove Drain Inlet	3	EA		
20	Drain Inlet	3	EA		
21	30” Nyloplast Drain Basin	2	EA		
27	Relocate Roadside Sign	4	EA		
28	Roadside Sign	4	EA		
29	Curb Paint	112	LF		
31	Traffic Stripe	12,151	LF		
32	Pavement Marking	4,105	SF		
33	Remove Traffic Stripe	12,151	LF		
34	Remove Pavement Marking	4,105	SF		
35	Fire Hydrant Pavement Marker	6	EA		
37	Mobilization	LS	LS		
38	Relocate Fence	1	EA		

TOTAL ALTERNATIVE 1 BID AMOUNT:

_____

(Indicate Bid Price in Dollar Figures)

_____

(Indicate Bid Price in Words)

_____

(Indicate Bid Price in Words)

2022 STREETS REHAB PROJECT CITY OF FORT BRAGG BID ALTERNATE 2 : BID SCHEDULE					
Item NO.	**Item Description**	**Quantity**	**Unit**	**Unit Price**	**Amount**
1	Traffic Control Plan	LS	LS		
2	Stormwater Pollution Prevention Plan	LS	LS		
3	Construction Staking	LS	LS		
4	Remove Base and Surfacing	27,777	SF		
5	Class 2 Aggregate Base	356	CY		
6	Hot Mix Asphalt (Type A)	431	TON		
11	Cold Plane Asphalt Concrete (Conform Grind)	153	SF		
14	Detectable Warning Surface	64	SF		
15	Adjust Utility to Grade	3	EA		
17	Concrete Curb & Gutter	138	LF		
18	Concrete Sidewalk	527	SF		
27	Relocate Roadside Sign	3	EA		
32	Pavement Marking	154	SF		
34	Remove Pavement Marking	154	SF		
35	Fire Hydrant Pavement Marker	2	EA		
36	Monument Preservation	LS	LS		
37	Mobilization	LS	LS		
38	Concrete Driveway Conform	141	SF		

TOTAL ALTERNATIVE 2 BID AMOUNT:

_____

(Indicate Bid Price in Dollar Figures)

_____

(Indicate Bid Price in Words)

_____

(Indicate Bid Price in Words)

TOTAL BID PRICE INCLUDING BASE BID AND ALTERNATES:

_____

(Indicate Bid Price in Dollar Figures)

_____

(Indicate Bid Price in Words)

_____

(Indicate Bid Price in Words)

1. The undersigned acknowledges that the Apparent Low Bidder will be determined as provided in Notice to Bidders and Instructions to Bidders.
2. Subcontractors for work are listed in Subcontractors List, submitted herewith.
3. The undersigned Bidder understands that City reserves the right to reject this Bid.
4. If written notice of the acceptance of this Bid, hereinafter referred to as Notice of Award, is mailed or delivered to the undersigned Bidder within the time described in Paragraph 2 of this Document or at any other time thereafter before it is withdrawn, the undersigned Bidder will execute and deliver the documents required by Instructions to Bidders within the times specified therein.
5. Notice of Award or request for additional information may be addressed to the undersigned Bidder at the address set forth below.
6. The undersigned Bidder herewith encloses cash, a cashier's check, or certified check of or on a responsible bank in the United States, or a corporate surety bond furnished by a surety authorized to do a surety business in the State of California, in form specified in the Instructions to Bidders, in the amount of ten percent (10%) of the Total Bid Price and made payable to the **CITY OF FORT BRAGG**.
7. The undersigned Bidder agrees to commence Work under the Contract Documents on the date established in the Agreement's General Conditions and to complete all Work within the time specified in the Agreement.
8. The undersigned Bidder agrees that, in accordance with the General Conditions, liquidated damages for failure to complete all Work in the Contract within the time specified in the Agreement shall be as set forth therein.

IMPORTANT NOTICE: If Bidder or other interested person is a corporation, give the legal name of the corporation, state where incorporated, and names of president and secretary thereof; if a partnership, give name of the firm and names of all individual co-partners composing the firm; if Bidder or other interested person is an individual, give first and last names in full.

NAME OF BIDDER: _____

is licensed in accordance with an act for the registration of Contractors, with license number:

_____ Expiration date: _____.

I certify (or declare) under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

_____

(Signature of Bidder)

Date of Bid: _____

(Date)

Business Address: _____

_____

_____

Email Address: _____

NOTE: If Bidder is a corporation, set forth the legal name of the corporation together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If Bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership.

_____ _____
(Place of Incorporation, if Applicable) (Principal)

_____
(Principal)

_____
(Principal)

Contractor's Representative(s): _____
(Name/Title/Email)

_____
(Name/Title/Email)

_____
(Name/Title/Email)

Officers Authorized to Sign Contracts _____
(Name/Title/Email)

_____
(Name/Title/Email)

_____
(Name/Title/Email)

Telephone Number(s): _____
(Area Code) (Number)

_____
(Area Code) (Number)

Authorized Representative Email: _____

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BOND ACCOMPANYING BID

KNOW ALL PERSONS BY THESE PRESENTS:

That the undersigned

_____
(Name of Contractor)

as Principal and the undersigned as Surety are held and firmly bound unto **CITY OF FORT BRAGG, a California Municipal Corporation** ("City"), as obligee, in the penal sum of **(Dollar Amount In Words)** _____ Dollars **($_____)** lawful money of the United States of America being at least ten percent (10%) of the aggregate amount of said Principal's base Bid, for the payment of which, well and truly to be made, we bind ourselves, our successors, executors, administrators, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Principal is submitting a Bid for City Contract Number **PWP-00120**, **2022 Streets Rehabilitation Project** at **Fort Bragg [several locations within City limits].**

THE CONDITION OF THIS OBLIGATION IS SUCH that if the Bid submitted by the said Principal be accepted and the Contract be awarded to said Principal and said Principal shall within the required periods enter into the Contract so awarded and provide the required Construction Performance Bond, Construction Labor and Material Payment Bond, insurance certificates, and all other endorsements, forms, and documents required under Instructions to Bidders, then this obligation shall be void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the above parties have executed this instrument this _____ day of _____, 2023**.**

(Corporate Seal) By _____
Principal

By _____
Surety

(Corporate Seal) By _____
Attorney in Fact

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BIDDER REGISTRATION FORM

INDEPENDENT CONTRACTOR REGISTRATION

Contractor's License # _____

Date: _____ Fed Tax I.D. # _____

Contractor's DIR Registration # _____

Full Corporate Name of Company: _____

Street Address: _____

_____

Mailing Address: _____

_____

Phone: _____ Fax: _____

Name of Principal Contact: _____

Email Address: _____

Type of Business:
_____ Sole Proprietor _____ Partnership
_____ Non-Profit 501(c)(3) _____ Corporation
_____ other (please explain:_____)

INSURANCE (Complete all items listed below that are applicable and/or are required by Supplementary Conditions – Insurance and Indemnification)

Workers' Compensation:

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

General Liability:

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: $ _____

A.M. Best Rating: _____

Automobile Liability:

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: $ _____

A.M. Best Rating: _____

All-Risk Course of Construction:

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: $ _____

A.M. Best Rating: _____

BIDDER CERTIFIES, UNDER PENALTY OF PERJURY, THAT THE FOREGOING INFORMATION IS CURRENT AND ACCURATE AND AUTHORIZES CITY, AND ITS AGENTS AND REPRESENTATIVES TO OBTAIN A CREDIT REPORT AND/OR VERIFY ANY OF THE ABOVE INFORMATION.

BIDDER: _____
(COMPANY NAME)

By: _____ _____
NAME TITLE

By: _____ _____
SIGNATURE DATE

SUBCONTRACTORS LIST

[See Instructions to Bidders paragraph 2.03.D]

Subcontractor Name and Business Location	Description of Work	Subcontract Amount	Subcontractor License No.	DIR Registration Number	DBE?
					__Yes __No
					__Yes __No
					__Yes __No
					__Yes __No
					__Yes __No
					__Yes __No
					__Yes __No
					__Yes __No

(Bidder to attach additional sheets if necessary)

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STATEMENT OF QUALIFICATIONS INSTRUCTIONS

ARTICLE 1 – GENERAL INFORMATION

1.01 Minimum Bidder Qualifications

A. Bidders must be duly licensed, pursuant to the license requirements in Notice Inviting Bids, Paragraph 2.01, and in accordance with the California Business & Professions Code §§7006, *et seq.*, and have a history of work performance sufficient to meet the requirements of a responsible bidder in the Public Contract Code Section 1103.

B. Bidders must have three (3) years' experience as a continuously operating entity engaged in the performance of similar work.

1.02 Measurement

A. Bidder's compliance with the minimum qualification requirements will be measured by Bidder's experience as an operating entity and also by the experience of the supervisory personnel who will have responsible charge of the various major components of the Work.

B. If Bidder subcontracts portions of the Work, City, in its determination of whether the minimum qualification requirements have been met, may consider the qualifications of the Subcontractor's supervisory personnel.

C. The qualifications of the Key Personnel are to be submitted with the Statement of Qualifications (SOQ), by providing the information described herein.

1.03 Other Requirements

A. Bidder's attention is called to the following minimum requirements for a Bidder to be found responsible to perform the Work:

1. Building Capacity. Ability to secure, in accordance with the Contract documents, the required forms of Construction Performance Bond and Construction Labor and Material Payment Bond. Ability to obtain required insurance with coverage values that meet minimum requirements.
2. Subcontracting Prior Experience. Satisfactory experience on public works, including without limitation, no history of default termination, excessively delayed completion or excessive defective work.
3. Projects Public Experience. Evidence that Bidder and its team, including without limitation its Subcontractors (hereafter, including Bidder if Bidder performs such Work itself, "designated Subcontractor(s)"), have the human and physical resources of sufficient quantity and quality to perform the Work under Contract documents in a timely and Specification-compliant manner, to include:
    a. Construction and management organizations with sufficient personnel and requisite disciplines, licenses, skills, experience, and equipment for the Project.
    b. Minimum licensing requirements including evidence of a valid California contractor's license for the Bidder and evidence of requisite licenses for Key Personnel of Bidder or any designated Subcontractor(s).
    c. Sufficiency of proposed quality assurance plan to meet the requirements of the Contract documents.
    d. Bidder's safety record.
    e. A field organization with skills, experience, and equipment sufficient to perform all on-Site work and necessary scheduling.
    f. Expertise of Key Personnel to accomplish the duties and responsibilities required to perform the Work under Contract documents. Minimum experience requirements of Key Personnel including the completion of three projects of similar nature and complexity and having two years of experience on projects of similar nature and complexity.
    g. Bidder shall expressly indicate which, if any, of the foregoing designated Subcontractor(s)' functions it will perform itself.

ARTICLE 2 – REQUIRED CONTENTS OF SOQ SUBMISSION

2.01 Transmittal Letter

A. The Transmittal Letter shall name the proposed prime contractor, its legal structure (i.e., corporation, partnership, limited partnership, joint venture). If a joint venture or partnership is

proposed, Bidder shall identify partner and/or member of the joint venture and their roles and responsibilities.

2.02 Submittals

A. Completed Questionnaires**.** Bidder shall include a completed Statement of Qualification Questionnaire in the following form.

B. Surety Letter re: Capability to Provide Required Performance and Payment Bonds. Bidder shall include a letter from a surety duly licensed to do business in the State of California, having a financial rating from A.M. Best Company of **[A-, VIII or A-, V]** or better, that the surety has agreed to provide Bidder with the required performance and payment bonds in accordance with the requirements set forth in the Construction Performance Bond and Construction Labor and Material Payment Bond documents, each in the penal sum of the Contractor's bid when submitted. City shall have the right to verify with the surety that the surety, based upon the Bid prices, will issue the required bonds under the conditions stated.

C. Insurer Letter re: Capability to Provide the Required Insurance. Bidder shall provide a letter from an insurance underwriter, having a financial rating reasonably acceptable to City, confirming that the insurer will provide Bidder the required coverages and amounts specified in the Contract Documents.

D. License: Evidence of a valid contractor's license and required licenses of all licensees of persons who are Key Personnel necessary to perform the Work.

E. Litigation History. Description of litigation history involving the Contractor in a professional capacity for the past three years including names of involved parties, nature of dispute, and disposition.

2.03 Format

A. The SOQ shall be clear and concise to enable management-oriented personnel to make a thorough evaluation and arrive at a sound determination as to whether the SOQ meets City's requirements. To this end, the SOQ should be as specific, detailed and complete as to demonstrate clearly and fully that the Bidder has a thorough understanding of and has demonstrated knowledge of the requirements to perform the Work (or applicable portion thereof).

B. Any explanation requested by a Bidder regarding the meaning or interpretation of the SOQ must be requested in writing and with sufficient time allowed for a reply to reach Bidder before the submission of its SOQ. Oral explanations or instructions will not be binding. Any information provided to any prospective Bidder concerning this SOQ document will be furnished to all prospective Bidders as an Addendum to the Bidding Documents.

[NEXT PAGE - STATEMENT OF QUALIFICATIONS QUESTIONNAIRE]

STATEMENT OF QUALIFICATIONS QUESTIONNAIRE

Bidders shall complete the entire Statement of Qualifications Questionnaire and submit it in accordance with the Instructions to Bidders and Statement of Qualifications Instructions. Failure to complete the questionnaire or inclusion of any false statement(s) shall be ground for immediate disqualification.

CONTACT INFORMATION

Company Name: _____

City of Company: _____

Contact Person: _____

Address: _____

Phone: _____ Fax: _____

Email: _____

PART A: GENERAL INFORMATION

1. Does Bidder possess a valid and current California Contractor's license for the work proposed?	Yes ___ No ___
2. Does Bidder have the minimum liability insurance coverage required in the Insurance and Indemnification document?	Yes ___ No ___
3. Has Bidder's Contractor's License been revoked at any time within the last five years?	Yes ___ No ___
4. Has Bidder been "default terminated" by any City (other than for convenience), or has a Surety completed a contract for Bidder within the last five years?	Yes ___ No ___
5. Has Bidder been convicted more than twice for failure to pay prevailing wages in the last three years?	Yes ___ No ___
6. Are Bidder and all listed subcontractors registered and qualified with the Department of Industrial Relations pursuant to Labor Code Section 1725.5?	Yes ___ No ___

Bidder may be disqualified if any answer to questions 1, 2, or 6 is No.
Bidder may be disqualified if any answer to questions 3, 4, or 5 is Yes.

PART B: SAFETY, PREVAILING WAGE, DISPUTES AND BONDS

(SAFETY)

Has Cal/OHSA, Federal OSHA, the EPA or any Air Quality Management Agency cited Bidder in the past five years? If yes, attach description of each citation.

Yes _____ No _____

(PREVAILING WAGE PROVISIONS)

Has Bidder been fined, penalized or otherwise found to have violated any prevailing wage or labor code provision? If yes, attach description of each occurrence.

Yes _____ No _____

(LICENSE PROVISIONS)

Has Bidder changed names or license numbers in the past five years? If so, please state reason for change.

Yes _____ No _____ Reason:_____

_____

(DISPUTES)

In the past five years, has Bidder on any project that Bidder performed construction services made any written claim against any City for additional compensation or additional time, that the City disputed, exceeding on a per project basis an aggregate amount of $100,000 or 10% of the original contract sum? If yes, attach description of each instance including details of total claim(s) amount, resolution description including amount, and City's name and phone number.

Yes _____ No _____

In the past five years, has any City on any project that Bidder performed construction services asserted any written claim against Bidder for delay, defective work, warranty work, back charges and/or offsets, that the Bidder disputed, exceeding on a per project basis, an aggregate amount of $100,000 or 10% of the original contract sum? If yes, attach description of each instance including details of total claim(s) amount, resolution description including amount, and City's name and phone number.

Yes _____ No _____

(BONDING)

Bonding Capacity – Provide documentation from Bidder's surety identifying the following:

Name of bonding company/surety: _____

Name of Surety Agent: _____

Surety Agent address: _____

Surety Agent phone number: _____

Is surety a California-admitted surety? Yes _____ No _____

Is surety listed in the current edition of the California Department of the Treasury's Listing of approved sureties? Yes _____ No _____

List surety's A.M. Best Rating: _____

What is Bidder's total bonding capacity? _____

What percent does Bidder pay for bonds? _____

PART C: EXPERIENCE OF PRIME CONTRACTOR

The nature of this Project requires prior similar experience for the firm and the Key Personnel assigned.

Summarize similar project experience below and provide the detailed project information requested:

Prime Contractor
List three (3) projects of similar size and scope to the Work of the Contract, completed in the past, and indicate who were the superintendent, project manager and scheduler. NOTE: This listing will be used to assess compliance with the stated minimum qualifications in Paragraph 2.01 of the Notice Inviting Bids.

Project Name/Description	Construction Cost ($)	Address	Contact Person & Phone Number

Key Personnel
List Key Personnel that will be assigned to the Work of the current Project and their experience/training with the projects listed above:

Project Manager: _____

Project Superintendent: _____

Project Scheduler: _____

Recent Projects
Provide information about three (3) of Bidder's most currently completed projects. Names and references must be current and verifiable. NOTE: This listing will be used to assess compliance with the stated minimum qualifications in Paragraph 1.01 of the Instructions. If a separate sheet is used, it must contain all of the following information:

1. Project Name: _____

   Location: _____

   City: _____

   City Contact (name and phone): _____

   Architect/Engineer: _____

   Architect/Engineer Contact (name and phone number): _____

   Const. Mgr. or Project Mgr. (name and phone number): _____

   Description of Project, Scope of Work Performed: _____

   _____

   Total Construction Cost: _____

   Total Change Order Amount: _____

   Did Change Orders exceed 10% of original contract sum? _____ If yes, please explain on separate sheet.

   Original Scheduled Date of Completion: _____

   Time Extensions Granted (number of Days): _____

   Actual Date of Completion: _____

   Number of Stop Notices filed by Subcontractors or Suppliers: _____

2. Project Name: _____

   Location: _____

   City: _____

   City Contact (name and phone): _____

   Architect/Engineer: _____

   Architect/Engineer Contact (name and phone number): _____

Const. Mgr. or Project Mgr. (name and phone number):_____

Description of Project, Scope of Work Performed: _____

_____

Total Construction Cost: _____

Total Change Order Amount: _____

Did Change Orders exceed 10% of original contract sum? _____ If yes, please explain on separate sheet.

Original Scheduled Date of Completion: _____

Time Extensions Granted (number of Days): _____

Actual Date of Completion: _____

Number of Stop Notices filed by Subcontractors or Suppliers: _____

3. Project Name: _____

Location: _____

City: _____

City Contact (name and phone): _____

Architect/Engineer: _____

Architect/Engineer Contact (name and phone number): _____

Const. Mgr. or Project Mgr. (name and phone number): _____

Description of Project, Scope of Work Performed: _____

_____

Total Construction Cost: _____

Total Change Order Amount:_____

Did Change Orders exceed 10% of original contract sum? _____ If yes, please explain on separate sheet.

Original Scheduled Date of Completion: _____

Time Extensions Granted (number of Days): _____

Actual Date of Completion: _____

Number of Stop Notices filed by Subcontractors or Suppliers: _____

PART D: FINANCIAL INFORMATION

1. Has Bidder ever reorganized under the protection of bankruptcy laws?
   Yes _____ No _____ If yes, please state when _____

2. If Bidder has had the general liability carrier identified in the Bidder Registration and Safety Experience Form for less than five years, please provide additional information below for balance of the last five years:

   Agency Name: _____

   Contact Name: _____

   Phone Number _____

   Carrier: _____ A.M. Best Rating: _____

   Carrier: _____ A.M. Best Rating: _____

   Carrier: _____ A.M. Best Rating: _____

3. Has Bidder ever had insurance terminated by a carrier? Yes _____ No _____
   If yes, explain on a separate signed sheet marked with correlating cross-reference to this paragraph of the questionnaire.

Bidder hereby declares under penalty of perjury that all the information provided in this questionnaire is true and correct.

_____
SIGNATURE

_____
TITLE

NON-COLLUSION AFFIDAVIT
PUBLIC CONTRACT CODE §7106

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

STATE OF CALIFORNIA)
) ss.
COUNTY OF _____)

_____, being first duly sworn,
(Name of Principal of Bidder)

deposes and says that he or she is the _____
(Office or Title of Affiant)

of _____, the party
(Name of Bidder)
making the foregoing Bid, that the Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not collusive or sham; that Bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham Bid, and has not directly or indirectly colluded, conspired, connived or agreed with any bidder or anyone else to put in a sham Bid, or that anyone shall refrain from bidding, and that the Bidder has not in any manner, directly or indirectly, sought by agreement, communication or conference with anyone to fix the Bid price of Bidder or any other bidder, or to fix any overhead, profit or cost element of the Bid price, or of that of any other bidder, or to secure any advantage against City, or anyone interested in the proposed contract; that all statements contained in the Bid are true; and further, that Bidder has not, directly or indirectly, submitted its Bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, Bid depository, or to any member or agent thereof to effectuate a collusive or sham Bid.

Executed under penalty of perjury under the laws of the State of California:

_____
(Name of Bidder)

_____
(Signature of Principal)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
) ss.
County of _____)

Subscribed and sworn to (or affirmed) before me this _____ day of _____, 2023 by

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

(Seal) _____

Signature of Notary Public

NOTE: If Bidder is a partnership or a joint venture, this affidavit must be signed and sworn to by every member of the partnership or venture.

NOTE: If Bidder [including any partner or venturer of a partnership or joint venture] is a corporation, this affidavit must be signed by the Chairman, President, or Vice President and by the Secretary, Assistant Secretary, Chief Financial Officer, or Assistant Treasurer.

NOTE: If Bidder's affidavit on this form is made outside the State of California, the official position of the person taking such affidavit shall be certified according to law.

BIDDER CERTIFICATIONS

TO BE EXECUTED BY ALL BIDDERS AND SUBMITTED WITH BID

The undersigned Bidder certifies to City as set forth in Articles 1 through 8 below:

ARTICLE 1 – STATEMENT OF CONVICTIONS

By my signature hereunder, I hereby swear, under penalty of perjury, that no more than one final, unappealable finding of contempt of court by a Federal Court has been issued against Bidder within the past two years because of failure to comply with an order of a Federal Court or to comply with an order of the National Labor Relations Board.

ARTICLE 2 - CERTIFICATION OF WORKER'S COMPENSATION INSURANCE

By my signature hereunder, as the Contractor, I certify that I am aware of the Labor Code Section 3700, which requires every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this Contract.

ARTICLE 3 - CERTIFICATION OF PREVAILING WAGE RATES AND RECORDS

By my signature hereunder, as the Contractor, I certify that I am aware of Labor Code Section 1773, which requires the payment of prevailing wage on public projects. Contractor and any subcontractors under the Contractor shall comply with Labor Code Section 1776 regarding wage records, and with Labor Code Section 1777.5 regarding the employment and training of apprentices. Contractor is responsible to ensure compliance by any and all subcontractors performing work under this Contract.

ARTICLE 4 - CERTIFICATION OF COMPLIANCE WITH PUBLIC WORKS CHAPTER OF LABOR CODE

By my signature hereunder, as the Contractor, I certify that I am aware of Labor Code Sections 1777.1 and 1777.7 Code, and Contractor and Subcontractors are eligible to bid and work on public works projects.

ARTICLE 5 - CERTIFICATION OF NON-DISCRIMINATION

By my signature hereunder, as the Contractor, I certify that there will be no discrimination in employment with regard to race, color, religion, gender, sexual orientation, age or national origin; that all federal, state, and local directives and executive orders regarding non-discrimination in employment will be complied with; and that the principal of equal opportunity in employment will be demonstrated positively and aggressively.

ARTICLE 6 - CERTIFICATION OF NON-DISQUALIFICATION

By my signature hereunder, as the Contractor, I swear, under penalty of perjury, that the below indicated Bidder, any officer of Bidder, or any employee of Bidder who has a proprietary interest in such Bidder, has never 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 safety regulation, except as indicated on the separate sheet attached hereto entitled "Previous Disqualifications." If a statement of "Previous Disqualifications" is attached, please explain the circumstances.

ARTICLE 7 - CERTIFICATION OF ADEQUACY OF CONTRACT AMOUNT

By my signature hereunder, as the Contractor, pursuant to Labor Code Section 2810(a), I certify that, if awarded the Contract based on the undersigned's Bid, the Contract will include funds sufficient to allow the Contractor to comply with all applicable local, state, and federal laws or regulations governing the labor or services to be provided. I understand that City will be relying on this certification if it awards the Contract to the undersigned.

ARTICLE 8 - CERTIFICATION REGARDING DIR CONTRACTOR / SUBCONTRACTOR REGISTRATION

By my signature hereunder, as the Contractor, I certify that Contractor, and all Subcontractors listed on the Subcontractors List are the subject of current and active contractor registrations pursuant to Division 2, Part 7, Chapter 1 (commencing with section 1720) of the California Labor Code. Contractor's registration number is _____ **[please complete]**. Subcontractors' registration numbers are as indicated in the Subcontractors List.

BIDDER: _____
(Name of Bidder)

Date: _____ By: _____
(Signature)

Name: _____
(Print Name)

Its: _____
(Title)

SUBSTITUTION REQUEST FORM

To: **CITY OF FORT BRAGG**

PROJECT: **City Project No:**	**Contractor:**

Substitution Request By:	Firm:

Transmittal Record	**Attn:**	**Firm:**	**Date Sent:**	**Date Rec'd:**	**Date Due:**
Contractor to City					
Contractor to Architect					
City / Architect to Consultant					
Architect to City Representative					
City Representative to Contractor					

We hereby submit for your consideration the following product instead of the specified item for the Project:

Section / Drawing	**Article**	**Specified Item**
Proposed Substitution:		

We have (a) attached manufacturer's literature, including complete technical data and laboratory test results, if applicable, (b) attached an explanation of why proposed substitution is a true equivalent to specified item, (c) included complete information on changes to Contract Documents that the proposed substitution will require for its proper installation, and (d) filled in the blanks below:

Contractor to complete the questions that follow and certify to the accuracy of all answers:

A.	Does the substitution affect dimensions shown on Drawings? Yes __ / No __. If No, please explain proposed mitigation and why substitution is equivalent to originally specified item:
B.	Will the undersigned pay for changes to the building design, including engineering and detailing costs caused by the requested substitution? Yes __ / No __. If No, please state reasons explaining why substitution is equivalent to originally specified item:
C.	What effect does the substitution have on other trades? No effect: __ / Some effect __. If substitution will affect other trades, please explain the effect and why substitution is equivalent to originally specified item:
D.	Will substitution cause change to Project Schedule, or to critical delivery dates? Add? Shorten? If the substitution will add to schedule dates or affect critical activities, please explain why substitution is equivalent to originally specified item:
E.	Please describe differences between proposed substitution and specified item. Please explain and identify any and all differences, and please explain why substitution is equivalent to originally specified item:
F.	What is the Cost Differential to Contractor in original specified item and proposed substitution including all mark-ups? [If substitution requested during bid period, skip this question.]
G.	Are Manufacturer's guarantees for the proposed item the same as for item specified? Yes ____; No____. If No, please explain why substitution is equivalent to originally specified item:

H.	Does Contractor accept full responsibility for delays caused by redesign of other items of the Work necessitated by substitution? Yes __ / No __. If No, please state reasons and explain why substitution is equivalent to originally specified item:
I.	Does Contractor state that the function, appearance and quality are equivalent or superior to the specified item? Yes __ / No __. If No, please explain why substitution is equivalent to originally specified item:

We certify that the function, appearance, and quality of the proposed substitution are equivalent or superior to those of the specified item, except as we may specifically state otherwise in this request.

Submitted by:_____ Signature: _____

Firm:_____ Date: _____

Address:_____ Phone/ Fax: _____

Remarks:_____

Consultant Response:	**City Representative Response:**
o Accepted	o Accepted
o Not Accepted	o Not Accepted
o Accepted As Noted	o Accepted As Noted
o Received Too Late	o Received Too Late
Remarks:_____	**Remarks:**_____
_____	_____
By:_____	**By:**_____

VOLUME 2



CONTRACT DOCUMENTS

CITY OF FORT BRAGG
416 N. Franklin Street
Fort Bragg, California 95437

CONTRACT CHECK LIST

Complete, accurate, executed copies of the following documents must be submitted to the CITY OF FORT BRAGG in accordance with the bid package issued by the City for the 2022 STREETS REHABILITATION PROJECT, Project No. PWP-00120 within ten (10) working days of receiving written notice of award of the project. The bidder's security of any successful bidder that fails to do so will be forfeited to the City.

_____ Contract Check List

_____ Contract, Part 1

_____ Contract, Part 2 – General Provisions

_____ Contract, Part 3 – Special Provisions

_____ Performance Bond

_____ Payment Bond

_____ Maintenance Bond

_____ Certificates of Insurance and Endorsements

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CITY OF FORT BRAGG
416 Franklin Street
Fort Bragg, California 95437

CONTRACT, PART 1

The CITY OF FORT BRAGG, 416 N. Franklin Street, Fort Bragg, California 95437 ("City") enters into this Contract, dated _____, 2023, for reference purposes only, with **[Name and Address of Contractor]** ("Contractor").

RECITALS

A. NOTICE INVITING BIDS. The City gave notice inviting bids to be submitted by **June 29, 2023** for the **2022 Streets Rehabilitation Project** ("Project") by published notice and/or posting in accordance with California Public Contract Code Section 20164 and other applicable law.

B. BID OPENING. On June 29th, 2023, at 2:00 PM City representatives opened the bids for the Project and read the bids aloud.

C. PROJECT AWARD. On July 10th, 2023, the City Council awarded the Project to the Contractor and directed City staff to send the Contractor written notice of award of the project. The City Council conditioned award of the project on the Contractor's providing executed copies of all documents specified in the contract check list included in the bid package within ten (10) working days of receiving written notice of award of the project.

D. REQUIRED DOCUMENTS. The Contractor has provided the City executed copies of all documents specified in the contract check list included in the bid package within ten (10) working days of receiving written notice of award.

E. INVESTIGATION AND VERIFICATION OF SITE CONDITIONS. The Contractor warrants that it has conducted all necessary pre-bid investigations and other obligations, and agrees that it shall not be entitled to Change Orders (time or compensation) due to any information, error, inconsistency, omission, or conditions that Contractor should have known as a part of this Work. Contractor shall be responsible for the resultant losses, including, without limitation, the cost of correcting Defective Work. In executing this Contract, Contractor shall rely on the results of its own independent investigation and shall not rely on City-supplied information regarding above ground conditions and as-built conditions, and Contractor shall accept full responsibility for its verification work sufficient to complete the Work as intended.

CONTRACT TERMS

The City and the Contractor agree as follows:

1. THE WORK. The Contractor shall furnish all equipment, tools, apparatus, facilities, material labor, and skill necessary to perform and complete in a good and workmanlike manner the **2022 Streets Rehabilitation Project** ("Work") as shown in the Technical Specifications and Project Plans in accordance with the Contract Documents and

applicable law.

2. LOCATION OF WORK

The Work will be performed at the following location: Up to 15 City Streets.

3. TIME FOR COMPLETION. The Contractor must complete the Work in accordance with the Contract Documents within One Hundred Nine (109) working days from the date specified in the City's Notice to Proceed ("Time for Completion").

4. REMEDIES FOR FAILURE TO TIMELY COMPLETE THE WORK. If the Contractor fails to fully perform the Work in accordance with the Contract Documents by the Time for Completion, as such time may be amended by change order or other modification to this Contract in accordance with its terms, and/or if the Contractor fails, by the Time for Completion, to fully perform all of the Contractor's obligations under this Contract that have accrued by the Time for Completion, the Contractor will become liable to the City for all resulting loss and damage in accordance with the Contract Documents and applicable law. The City's remedies for the Contractor's failure to perform include, but are not limited to, assessment of liquidated damages of $1000 per day in accordance with California Government Code Section 53069.85 and the Contract Documents, and/or obtaining or providing for substitute performance in accordance with the Contract Documents.

5. CONTRACT PRICE AND PAYMENT. As full compensation in consideration of completion of the Work in accordance with the Contract Documents and in consideration of the fulfillment of all of the Contractor's obligations under the Contract Documents, the City will pay the Contractor in lawful money of the United States the total price of $_____ (the "Contract Price") as specified in the Contractor's completed Bid Schedule dated _____, and attached to and incorporated in this Contract. Payment to the Contractor under this Contract will be for Work actually performed in accordance with the Contract Documents and will be made in accordance with the requirements of the Contract Documents and applicable law. The City will have no obligation to pay the Contractor any amount in excess of the Contract Price unless this Contract is first modified in accordance with its terms. The City's obligation to pay the Contractor under this Contract is subject to and may be offset by charges that may apply to the Contractor under this Contract. Such charges include but are not limited to, charges for liquidated damages and/or substitute performance in accordance with the Contract Documents.

The Contract Sum is all inclusive and includes all Work; all federal, state, and local taxes on materials and equipment, and labor furnished by Contractor, its subcontractors, subconsultants, architects, engineers, and" vendors or otherwise arising out of Contractor's performance of the Work, including any increases in any such taxes during the term of this Agreement; and any duties, fees, and royalties imposed with respect to any materials and equipment, labor or services. The taxes covered hereby include (but are not limited to) occupational, sales, use, excise, unemployment, FICA, and income taxes, customs, duties, and any and all other taxes on any item or service that is part of the Work, whether such taxes are normally included in the price of such item or service or are normally stated separately. Notwithstanding the foregoing, each

party shall bear such state or local inventory, real property, personal property or fixtures taxes as may be properly assessed against it by applicable taxing authorities.

6. PREVAILING WAGES. In accordance with California Labor Code Section 1771, not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the Work is to be performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work fixed as provided in the California Labor Code must be paid to all workers engaged in performing the Work. In accordance with California Labor Code Section 1770 et seq., the Director of Industrial Relations has determined the general prevailing wage per diem rates for the locality in which the Work is to be performed. In accordance with California Labor Code Section 1773, the City has obtained the general prevailing rate of per diem wages and the general rate for holiday and overtime work in the locality in which the Work is to be performed for each craft, classification or type of worker needed to perform the project. In accordance with California Labor Code Section 1773.2, copies of the prevailing rate of per diem wages are on file at the City Public Works Department and will be made available on request. Throughout the performance of the Work the Contractor must comply with all provisions of the Contract Documents and all applicable laws and regulations that apply to wages earned in performance of the Work.

6.1. Contractor acknowledges and agrees that it shall comply with the requirements of California Public Contracts Code sections 2600 et seq., in its entirety and, in particular, those sections related to Skilled and Trained Workforce. By its execution of this agreement Contractor certifies and warrants that it is aware of the requirement of California Public Contracts Code section 2600 et seq. and its requirements as to a Skilled and Trained Workforce.

7. THE CONTRACT DOCUMENTS. This Contract consists of the following documents ("Contract Documents"), all of which are incorporated into and made a part of this Contract as if set forth in full. In the event of a conflict between or among the Contract Documents, precedence will be in the following order:

7.1 This Part 1 of the Contract and change orders and other amendments to this Contract signed by authorized representatives of the City and the Contractor.

7.2 The General Provisions, Part 2 of the Contract, and change orders and other amendments to the General Provisions signed by authorized representatives of the City and the Contractor.

7.3 The Special Provisions, Part 3 of the Contract, addenda to the Special Provisions signed by authorized representatives of the City and issued prior to bid opening, Equal Product Proposals accepted by the City and signed by authorized representatives prior to bid opening, and change orders and other amendments to the Special Provisions signed by authorized representatives of the City and the Contractor.

7.4 The Technical Specifications, addenda to the Technical Specifications signed by authorized representatives of the City and issued prior to bid opening, Equal Product Proposals accepted by the City and signed by authorized City representatives prior to bid opening, and change orders and other amendments to the Technical Specifications signed by authorized representatives of the City and the Contractor.

7.5 The Project Plans, addenda to the Project Plans signed by authorized representatives of the City and issued prior to bid opening, Equal Product Proposals accepted by the City and signed by authorized City representatives prior to bid opening, and change orders and other amendments to the Project Plans signed by authorized representatives of the City and the Contractor.

7.6 Notice Inviting Bids

7.7 Instructions to Bidders

7.8 The successful bidder's completed Proposal Cover Page and Bid Schedule

7.9 The successful bidder's completed Contractor License Information

7.10 The successful bidder's completed List of Proposed Subcontractors

7.11 The successful bidder's Workers Compensation Insurance Certification

7.12 The successful bidder's completed Non-collusion Affidavit

7.13 The successful bidder's Debarment Certification

7.14 The successful bidder's completed Certificates of Insurance and Endorsements

7.15 The successful bidder's executed Performance Bond

7.16 The successful bidder's executed Payment Bond

7.17 The Maintenance Bond form included in the bid package that the Contractor must execute prior to release of final payment under the Contract

7.18 The successful bidder's Qualification Statement, if any

7.19 The successful bidder's signed Signature Form

8. PROVISIONS INCORPORATED BY REFERENCE. Provisions or parts of provisions that are incorporated by reference and not set forth at length in any of the Contract Documents will only form a part of this Contract to the extent the Contract Documents expressly make such provisions or parts of provisions a part of this Contract. For example, published public works agreement provisions, such as those of the State of California Department of Transportation Standard Specifications (known as the Standard Specifications) are only a part of this Contract to the extent expressly incorporated in the Contract by section number. When such published provisions are made a part of this Contract, references in the published provisions to other entities, such as the State, the Agency, or similar references, will be deemed references to the City as the context of this Contract may require.

9. INTERPRETATION OF CONTRACT DOCUMENTS. Any question concerning the intent or meaning of any provision of the Contract Documents, including, but not limited to, the Technical Specifications or Project Plans, must be submitted to the Public Works Director, or his/her designee, for issuance of an interpretation and/or decision by the authorized Public Works Director in accordance with the requirements of the Contract Documents. Interpretations or decisions by any other person concerning the Contract Documents will not be binding on the City. The decision of the Public Works Director, or his/her designee, shall be final.

10. ASSIGNMENT PROHIBITED. The Contractor may not assign part or all of this Contract, or any monies due or to become due under this Contract, or any other right or interest of the Contractor under this Contract, or delegate any obligation or duty of the Contractor under this Contract without the prior written approval of an official authorized to bind the City and an authorized representative of Contractor's surety or sureties. Any such purported assignment or delegation without such written approval on behalf of the City and the Contractor's sureties will be void and a material breach of this Contract subject to all available remedies under this Contract and at law and equity.

11. CONTRACTOR'S LICENSE CERTIFICATION. By signing this Contract the Contractor certifies that the Contractor holds a valid Type A license issued by the California State Contractors Licensing Board, and that the Contractor understands that failure to maintain its license in good standing throughout the performance of the Work may result in discipline and/or other penalties pursuant to the California Business and Professions Code, and may constitute a material breach of this Contract subject to all available remedies under this Contract and at law and equity.

12. SEVERABILITY. If any term or provision or portion of a term or provision of this Contract is declared invalid or unenforceable by any court of lawful jurisdiction, then the remaining terms and provisions or portions of terms or provisions will not be affected thereby and will remain in full force and effect.

13. PROJECT REPRESENTATIVES

13.1 The City has designated Chantell O'Neal as its Construction Project Manager to act as its Representative in all matters relating to the Contract. If Project Manager is an employee of City, Project Manager is the beneficiary of all Contractor obligations to the City including, without limitation, all releases and indemnities.

Project Manager shall have final authority over all matters pertaining to the Contract and shall have sole authority to modify the Contract on behalf of the City, to accept work, and to make decisions or actions binding on the City, and shall have sole signature authority on behalf of the City.

The City may assign all or part of the Project Manager's rights, responsibilities and duties to a construction manager or other City representative.

13.2 The Contractor has designated _____ as its Project Manager to act as Contractor's Representative in all matters relating to the Contract. The

Contractor's Project Manager shall have final authority over all matters pertaining to the Contract and shall have sole authority to modify the Contract on behalf of the Contractor and to make decisions or actions binding on the Contractor, and shall have sole signature authority on behalf of the Contractor.

Executed on _____, by

CONTRACTOR

_____
By: _____
Title: _____

[Attach Notary Acknowledgment Page]

CITY

_____
By: Peggy Ducey
Title: City Manager

ATTEST:

By:_____
Cristal Muñoz
Acting City Clerk

APPROVED AS TO FORM:

By: _____
Keith F. Collins
City Attorney

CITY OF FORT BRAGG
416 Franklin Street
Fort Bragg, California 95437

CONTRACT, PART 2

GENERAL PROVISIONS

1. DEFINITIONS

The following terms as used in any agreement of which these General Provisions are a part are defined as follows:

1.1 **Architect or Engineer**: The person or persons so specified on the title sheet of the Technical Specifications and/or Project Plans.

1.2 **ASTM**: American Society for Testing and Materials, latest edition.

1.3 **Bid Package**: All of the documents listed as comprising the entire Bid Package as specified in the Instructions to Bidders and representing the full set of documents made available to bidders on the Project.

1.4 **Caltrans Standard Specifications**: Caltrans construction manual entitled, "State of California, Department of Transportation, Standard Specifications," latest edition.

1.5 **City**: CITY OF FORT BRAGG.

1.6 **Construction Project Manager**: The City's authorized representative for administration and overall management of the Project contract and Work. The Construction Manager is the official point of contact between the City, the Architect and/or Engineer, and the Contractor.

1.7 **Contract**: The agreement between the City and Contractor concerning the Project, as evidenced by and comprised of the Contract Documents.

1.8 **Contract Documents**: All documents identified in Section 7 of Part 1 of the Contract.

1.9 **Contractor**: The successful bidder for the Project and party to the Project agreement with the City as specified in the Project agreement.

1.10 **Days**: Unless otherwise specified in the Contract Documents, Days mean working days.

1.11 **Project**: The **2022 Streets Rehabilitation Project** as described in the Technical Specifications and Project Plans.

1.12 **Project Inspector**: The party or parties charged by the City with inspecting the Work for compliance with the requirements of the Contract Documents and applicable laws and regulations. The Project Inspector acts under the

direction of the City and shall coordinate with the Construction Manager and Architect as directed by the City in accordance with the Contract Documents.

1.13 **Project Plans**: The primarily graphic detailed requirements concerning the Project contained in Volume 3 of the Bid Package and any addenda to the Project Plans signed by authorized City representatives and issued prior to bid opening, Equal Product Proposals accepted by the City and signed by authorized City representatives prior to bid opening, and change orders and other amendments to the Project Plans signed by authorized representatives of the City and the Contractor in accordance with the requirements of the Contract Documents.

1.14 **Subcontractor**: A person, firm or corporation that is obligated as a party to a contract with the Contractor to perform part of the Project work. For purposes of these General Provisions Subcontractors include, but are not limited to, those that are obligated as parties to a contract with the Contractor to specially fabricate and install a portion of the Project Work according to the Technical Specifications and/or Project Plans.

1.15 **Technical Specifications**: The detailed Project requirements contained in Volume 3 of the Bid Package and any addenda to the Technical Specifications signed by authorized City representatives and issued prior to bid opening, Equal Product Proposals accepted by the City and signed by authorized City representatives prior to bid opening, and change orders and other amendments to the Technical Specifications signed by authorized representatives of the City and the Contractor in accordance with the requirements of the Contract Documents.

1.16 **Time for Completion**: The Time for Completion is the time by which the Work must be completed, as defined in the Contract, Part 1, or as modified in a writing, executed by the City and Contractor.

1.17 **Work**: The furnishing of all equipment, tools, apparatus, facilities, material, labor and skill necessary to perform and complete in a good and workmanlike manner the Project as shown in the Technical Specifications and Project Plans in accordance with the Contract Documents and applicable law.

1.18 **Written Notice**: Will be deemed to have been duly served for purposes of these General Provisions and any agreement of which they are a part if delivered in person to the individual or to a member of the firm or to any office of the corporation for whom the notice is intended, or if sent by registered or certified mail to the last known business address known to the party giving notice. Unless otherwise specified in the Contract Documents, the last known address of the Contractor shall be that listed in the Contractor's completed Proposal Cover Page and Bid Schedule.

2. PLANS AND SPECIFICATIONS

2.1 Documents Furnished by City. The City will furnish to the Contractor, free of charge, one (1) set of reproducible Project Plans and two (2) sets of prints of the Project Plans and Technical Specifications for execution of the Work. Throughout the performance of the Work the Contractor must keep one copy of the Project Plans and Technical Specifications in good order and available for review by the Construction Manager, the Engineer, the Architect, and any other City contractors or representatives.

2.2 Ownership of Documents Furnished by City. All documents furnished by the City, including, but not limited to, the Technical Specifications, Project Plans, and any copies, are the property of the City. Documents furnished by the City may not to be used on any other work. All documents furnished by the City must be returned to City upon completion of the Work.

2.3 Technical Specifications and Project Plans.

2.3.1 The Technical Specifications and Project Plans are complementary and intended to mutually describe the Work necessary to complete the Project in accordance with the Contract Documents.

2.3.2 In general, the Project Plans indicate dimensions, position and kind of construction, and the Technical Specifications indicate qualities and methods. Any Work indicated on the Project Plans and not mentioned in the Technical Specifications or vice versa must be furnished as though fully set forth in both. Work that is not particularly detailed, marked or specified shall be the same as similar Work that is detailed, marked or specified. The Contractor must furnish items necessary for the operation of equipment depicted in the Project Plans or specified in the Technical Specifications that are suitable to allow such equipment to function properly at no extra charge.

2.3.3 Contractor shall perform reasonably implied parts of Work as "incidental work" although absent from Drawings and Specifications. Incidental work includes any work not shown on Drawings or described in Specifications that is necessary or normally or customarily required as a part of the Work shown on Drawings or described in Specifications. Incidental work includes any work necessary or required to make each installation satisfactory, legally operable, functional, and consistent with the intent of Drawings and Specifications or the requirements of Contract Documents. Contractor shall perform incidental work without extra cost to City. Incidental work shall be treated as if fully described in Specifications and shown on

Drawings, and the expense of incidental work shall be included in price Bid and Contract Sum.

2.3.4 Before undertaking each portion of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures shown in the Contract Documents and all applicable field measurements. Contractor shall be responsible for any errors that might have been avoided by such comparison. The Contractor must notify the Construction Manager and the Architect in writing as soon as possible of any apparent errors or inconsistencies, including, but not limited to, typographical or notational errors in the Project Plans, Technical Specifications, and/or in work done by others affecting the Work. The Construction Manager will issue written instructions concerning any such apparent errors, inconsistencies, or clarifications with reasonable promptness and these shall be binding on the Contractor. If Contractor believes that a written response, clarification or interpretation justifies an adjustment in the Contract Sum or Contract Time, Contractor shall give City prompt written notice. If the parties are unable to agree to the amount or extent of the adjustment, if any, then Contractor shall perform the Work in conformance with City's response, clarification, or interpretation and may make a written claim for the adjustment as provided in Section 11. If the Contractor proceeds with Work impacted by apparent errors or inconsistencies without instructions from the Construction Manager, the Contractor shall do so at its sole risk and shall have all of the obligations and the City shall have all of the rights and remedies specified in Section 11 concerning any resulting damage or defect.

2.3.5 The General Provisions apply with equal force to all of the Work, including extra work authorized by the Construction Manager in accordance with the Contract Documents. The Contractor must submit any required shop diagrams and/or drawings by the times and in the quantities indicated in the Technical Specifications. Any such shop diagrams and/or drawings must show completely the Work to be done, expanding on the Project Plans concerning details not previously shown, field conditions and the condition of the Work. Architect or Engineer review of such shop diagrams and/or drawings will concern conformance with the requirements of the Contract Documents only. The Architect or Engineer assumes no responsibility for the correctness or accuracy of the dimensions or any other contents of any shop diagrams and/or drawings submitted by the Contractor. The Contractor must check all dimensions at the Work site. Shop diagrams and/or drawings must be clearly marked with the name of the Project and the name of the Contractor, subcontractor or supplier making the submittal, and must be stamped and signed by the Contractor and submitted under a signed transmittal letter from the Contractor

certifying that all dimensions have been checked at the Work site. These requirements are mandatory. The Architect or Engineer will not review shop diagrams and/or drawings that do not satisfy these requirements. The Contractor will be responsible for any and all discrepancies between dimensions of the actual Project site and/or Work and those shown on shop diagram and/or drawings submitted by the Contractor, and for any other errors contained in or resulting from such shop diagrams and/or drawings, including, but not limited to, errors in material and/or equipment quantities and any resulting errors, delays or additional cost in the performance of the Work. The Contractor will have all of the obligations and the City will have all of the rights and remedies that are specified in Section 11 concerning any discrepancies or errors in shop diagrams and/or drawings submitted by the Contractor, and concerning any resulting errors, delays or additional costs in the performance of the Work.

3. CONTROL OF WORK AND MATERIAL

3.1 Construction Manager's Status. The Construction Manager will administer the Project in accordance with the Contract Documents. After execution of the agreement and issuance of the Notice to Proceed, all correspondence and/or instructions concerning the Project between the Contractor and/or City shall be forwarded through the Construction Manager. Except as otherwise provided in the Contract Documents, the Construction Manager will not be responsible for and will not have control or charge of construction means, methods, techniques, or procedures or for safety precautions in connection with the Work. The Construction Manager, however, will have authority to reject materials and/or workmanship that do not conform to the requirements of the Contract Documents. The Construction Manager will also have the authority to require inspection or testing of the Work.

3.2 Architect or Engineer's Status. The Architect or Engineer will advise the Construction Manager concerning decisions on all claims of the Contractor and all other matters relating to the execution and progress of the Work or the interpretation of the Contract Documents. The Architect or Engineer will also advise the Construction Manger concerning Work that does not conform to the Contract Documents. Whenever, in the Architect's or Engineer's opinion, it is necessary or advisable in accordance with the Contract Documents, the Architect or Engineer may recommend to the Construction Manager inspection or testing of the Work, whether or not such Work is then fabricated, installed or completed.

3.3 Inspection and Testing of Work and Material.

3.3.1 The City, the Construction Manager, the Architect or Engineer and their representatives will have access to the Work at all times wherever it is

in preparation or progress. The Contractor must provide proper facilities for such access and for inspection.

3.3.2 The Contractor must inspect all materials as delivered and promptly return all defective materials without waiting for their rejection by the Construction Manager or Architect or Engineer.

3.3.3 If the Construction Manager, the Technical Specifications, or any laws, ordinances, or any public authority require any Work to be tested or approved, the Contractor must give the Construction Manager timely notice of the Contractor's readiness for inspection. Inspections will be promptly made, and where practicable, at the source of supply. Any work subject to such testing that is covered up without timely notice to the Construction Manager or without the approval or consent of the Construction Manager must, if required by the Construction Manager, be uncovered for examination at the Contractor's expense. The Contractor will have all of the obligations and the City will have all of the rights and remedies that are specified in Section 11 concerning any work subject to testing that is covered up without timely notice to the Construction Manager and that is not uncovered for examination at the Contractor's Expense if required by the Construction Manager.

3.3.4 Tests of materials or qualification tests required by the Contract Documents must be made in accordance with the Technical Specifications and the requirements of the California Building Standards Code as adopted by the City and other applicable law. Copies of all testing reports shall be distributed as required in the Technical Specifications.

3.3.5 The City or its representatives may order re-examination of questioned Work. If ordered to do so, the Contractor must uncover such Work. If such Work is found to be according to the Contract Documents, the City shall pay the cost of uncovering and restoring the Work, unless such Work was subject to testing and covered up without timely notice to or approval of the Construction Manager. If re-examined Work is found not in accordance with the Contract Documents, the Contractor must pay the cost of uncovering and restoring the Work. The Contractor will have all of the obligations and the City will have all of the rights and remedies that are specified in Section 11 concerning any re-examined Work not in accordance with the Contract Documents that the Contractor fails to uncover and restore at the Contractor's expense.

3.3.6 The Contractor must replace or correct without charge any material or workmanship found not to conform to the requirements of the Contract Documents, unless the City consents to accept such material or workmanship with an appropriate adjustment in the Contract Price. The Contractor must promptly segregate and remove non-conforming

material from the Work site. The Contractor will have all of the obligations and the City will have all of the rights and remedies that are specified in Section 11 concerning any failure by the Contractor to replace or correct without charge any material or workmanship that does not conform to the requirements of the Contract Documents and that the City has not consented to accept.

3.4 Samples Furnished by the Contractor. The Contractor must furnish all samples for approval as directed in sufficient time to permit the Architect or Engineer to examine, approve and select samples before they are required by the progress of the Work. Portions of the Work for which samples are required and for which the Architect or Engineer has selected samples must be in accordance with such approved samples. Samples must be sent prepaid to the office of the Construction Manager or to such place as the Construction Manager may direct.

3.5 Materials and Substitutions.

3.5.1 Materials used for the Work must be new and of the quality specified. When not particularly specified, materials must be the best of their class or kind. The Contractor must, if required, submit satisfactory evidence as to the kind and quality of materials.

3.5.2 If the Contractor submitted complete information to the Public Works Department for products proposed as equals in accordance with the Bid Package, and the City approved such products proposed as equals in writing, the Contractor may either furnish such products approved as equals, or furnish the products listed by manufacturer name, brand or model number in the Technical Specifications or Project Plans. The City retains the right, in its sole discretion, to accept or reject any other proposed substitution. To be considered, proposals concerning products proposed as equals must include sufficient information to permit the City to determine whether the products proposed as equals will satisfy the same performance requirements as products listed by manufacturer's name, brand or model number. Such performance requirements may include, but are not limited to, size, strength, function, appearance, ease of maintenance and repair, and useful life requirements. If the City does not accept a proposed substitution, the Contractor must furnish the product specified in the Technical Specifications or Project Plans for the Contract Price, regardless of whether the product is specified by manufacturer's name, brand or model number, or otherwise.

3.5.3. During the performance of the Work, all materials must be neatly stacked, properly protected from the weather and other adverse impacts, and placed so as to avoid interference with efficient progress of the Work, with other activities of the City, or with the use of existing

City facilities by the public. All materials must be delivered so as to ensure efficient and uninterrupted progress of the Work. Materials must be stored so as to cause no obstruction and so as to prevent overloading of any portion of the Work. The Contractor will be responsible for damage or loss of materials delivered to and/or stored at the Work site due to weather or other causes. The Contractor must promptly remove from the Work site all materials rejected by the City or its representatives as failing to conform to the requirements of the Contract Documents, whether such non-conforming materials have been incorporated in the Work or not. If the City or its representatives so direct, the Contractor must promptly replace and re-execute Work performed by the Contractor and order the replacement and re-execution of Work performed by subcontractors using non-conforming materials with materials that satisfy the requirements of the Contract Documents without expense to the City. The Contractor will bear the expense of making good all Work destroyed or damaged by such removal. The Contractor will have all of the obligations and the City will have all of the rights and remedies that are specified in Section 11 concerning any failure by the Contractor to replace or re-execute Work using non-conforming materials, and/or to make good all work destroyed or damaged by such removal and/or execution.

3.6 Maintenance and Examination of Records. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Contract Modifications, Change Orders, Work Directives, Force Account orders, and written interpretations and clarifications in good order and annotated to show all as-built changes made during construction. These Project Record Documents, together with all approved Samples and a counterpart of all approved Shop Drawings, shall be maintained and available to the City for reference. Upon completion of the Work, Contractor shall deliver to the City, the Project Record Documents, Samples and Shop Drawings and as-built drawings.

Throughout Contractor's performance of the Work of the Project, Contractor shall maintain construction records to include: shop drawings; product data/material data sheets; samples; submittals; purchases; materials; equipment; inspections; applicable handbooks; applicable codes and standards; maintenance and operating manuals and instructions; RFI Log; Submittal Log; other related documents and revisions which arise out of the Construction Contracts. Contractor shall maintain records of principal building layout lines, elevations for the bottom of footings, floor levels, and key site elevations (certified by a qualified surveyor or professional engineer). Contractor shall make all records available to the City. At the completion of the Project, Contractor shall deliver all such records to the City to have a complete set of record as-built drawings.

The City may examine and audit at no additional cost to the City all books, estimates, records, contracts, documents, bid documents, bid cost data, subcontract job cost reports and other Project related data of the Contractor, subcontractors engaged in performance of the Work, and suppliers providing supplies, equipment and other materials required for the Work, including computations and projections related to bidding, negotiating, pricing or performing the Work or contract modifications and other materials concerning the Work, including, but not limited to, Contractor daily logs, in order to evaluate the accuracy, completeness, and currency of cost, pricing, scheduling and any other project related data. The Contractor will make available all such Project related data at all reasonable times for examination, audit, or reproduction at the Contractor's business office at or near the Work site, and at any other location where such Project related data may be kept until three years after final payment under the Agreement. Pursuant to California Government Code Section 8546.7, if the amount of public funds to be expended is in excess of $10,000, this Contract shall be subject to the examination and audit of the State Auditor, at the request of the City, or as part of any audit of the City, for a period of three (3) years after final payment under the Agreement.

3.7 Advertising. No advertising signs of any kind may be displayed on the Work site, or on fences, offices or elsewhere adjacent to the Work site, except those "SB1 Tax Dollars at Work Signs".

3.8 Project Schedule. Prior to the pre-construction meeting, the Contractor shall submit a baseline schedule showing each task of Work, including, as required by the City, equipment procurement and delivery (Contractor and City supplied), activities with Subcontractors and suppliers, major submittal reviews, commissioning of systems, use of major equipment on site, and necessary interface with the City and third parties. The baseline schedule shall include the sequence of each task, the number of days required to complete each task, and the critical path controlling the completion of the entire Work. The schedule shall allow for the completion of the entire Work within the Time for Completion.

3.8.1 City Review of Schedule. The City may review the Contractor's submitted schedule and may note any exceptions. The Contractor shall correct any exceptions noted by the City within five (5) working days of being notified of the exceptions.

3.8.2 Update of Schedule. After submission of a schedule to which the City has taken no exceptions, the Contractor shall submit an updated schedule on a biweekly basis until completion of the Work. The updated schedule shall show the progress of Work as of the date specified in the updated schedule. Contractor shall provide the City with an electronic copy of each updated schedule.

3.8.3 Float. The baseline schedule and all later submitted schedules shall show early and late completion dates for each task. The number of days between these dates shall be designated as "Float." The Float shall be designated to the Project and shall be available to both the City and the Contractor as needed to complete the Work in accordance with the Contract.

3.8.4 Failure to Submit Schedule. If the Contractor fails to submit the schedule within the time period specified in this section or submit a schedule to which the City has taken uncorrected exceptions, the City may withhold payments to the Contractor until such schedules are submitted and/or corrected in accordance with the Contract documents.

3.8.5 Responsibility for Schedule. The Contractor will be solely and exclusively responsible for creating the schedule and properly updating it. The City may note exceptions to any schedule submitted by the Contractor. However, the Contractor will be solely responsible for determining the proper method of addressing such exceptions, and the City's review of the schedule will not create scheduling obligations for the City.

3.8.6 Contractor's baseline schedule and progress schedules shall be in the form of a CPM (arrow) diagram. Contractor shall provide the City with native format electronic schedules and hard copies of the baseline schedule, schedule updates, and look ahead schedules. All electronic and hard copies of the schedule that Contractor provides to the City shall indicate the critical path of the Work (in red) and shall show a logical progression of the Work through completion within Contract Time.

3.8.7 The City has no obligation to accept an early completion date.

3.8.8 The City may request a recovery schedule should Contractor fall 21 or more Days behind any schedule milestone, which schedule shall show Contractor's plan and resources committed to retain Contract completion dates. The recovery schedule shall show the intended critical path. If the City requests, Contractor shall also: secure and demonstrate appropriate subcontractor and supplier consent to the recovery schedule; and submit a written plan and narrative explaining on trade flow and construction flow changes and man-hour loading assumptions for major Work activities and/or subcontractors.

3.8.9 If the Contractor requests an extension of the Time for Completion, it shall submit the request in a writing that provides information justifying the request and stating the extent of the adjustment requested for each specific change or alleged delay. The writing shall include this narrative and a schedule diagram depicting how the changed Work or other

impact affects other schedule activities. The schedule diagram shall show how Contractor proposes to incorporate the changed Work or other impact in the schedule and how it impacts the current schedule impact or critical path or otherwise. Any requests of an extension of the Time for Completion stemming from an alleged project delay shall be made within five (5) days of the commencement of the alleged delay, explain the reason for delay, include the anticipated length of the delay, and contain a narrative justifying the extension, in addition to the other information and schedules required by this section.

3.9 Construction Staking. All Work done under this Contract must be in conformance with the Project Plans and staked by the Engineer in the field. The Contractor must inform the Engineer, forty-eight (48) hours in advance, of the time and places at which he or she wishes to do work, in order that lines and grades may be furnished and necessary measurements for record and payment made, with the minimum of inconvenience to the Engineer and delay to the Contractor.

3.10 Materials Testing. Materials will be tested by the CITY OF FORT BRAGG or its authorized agent, following State of California Test Methods. Statistical testing may not be used. All individual samples must meet the specified test results. Each material used must meet the specified requirements.

The Contractor must request and coordinate all testing. All tests must occur in the presence of the Project Inspector. The City will, at its sole discretion, have the right to reject any and/or all test results that do not meet this requirement, and to order a retest in the presence of the Project Inspector. The costs for all retests so ordered will be the responsibility of the Contractor. The cost of all retests will be charged to the Contractor at the actual cost plus 30 percent, with a minimum charge of $150.00 per test to cover staff and administrative costs.

Sampling and testing will comply with Chapter 6 of the Caltrans Construction Manual, at a minimum. Where conditions vary, the City may perform additional testing. Cost for testing of materials offered in lieu of the specified materials will be the responsibility of the Contractor. Cost for R-value tests when required by the Standard Specifications will be the responsibility of the Contractor.

Testing will only be performed on normal City working days between the hours of 8:00 a.m. and 4:00 p.m. unless other arrangements are made in advance. Tests performed outside of these hours may be subject to increased charges.

The Contractor must request all tests in writing a minimum of two (2) working days in advance of the time desired. A minimum of one working day must be allowed for compilation and reporting of data and test results after tests have

been performed. No subsequent layer of material may be placed until a passing test is obtained and acknowledged by the City.

Concrete and asphalt may be supplied only from suppliers approved and certified by the State Department of Transportation. Proposed mix designs for all concrete and asphalt concrete to be placed within the CITY OF FORT BRAGG must be provided to and approved by the City, prior to placement.

The Contractor must coordinate with the City concerning any additional testing as required.

4. CHANGES IN WORK

4.1 City Directed Change Orders. The City may at any time during the progress of the Work direct any amendments to the Work or any of the Contract Documents, including, but not limited to the Technical Specifications, or Project Plans. Such amendments will in no way void the agreement, but may be applied to amend the Contract Price or Time for Completion, if such amendments affect the Contract Price, the Project schedule, or any other provision of the Contract Documents based on a fair and reasonable valuation of the amendment in accordance with this Section 4.

4.2 Writing Requirement. Change orders and other amendments to the Technical Specifications, the Project Plans, or other Contract Documents may be made only by a writing executed by authorized representatives of the City and the Contractor.

4.3 Contractor Proposed Change Orders. Unless the Construction Manager otherwise authorizes or the City and the Contractor otherwise agree, change order proposals submitted by the Contractor must be submitted to the Construction Manager no later than the time of the proposed change.

4.4 All Change Orders. All change order proposals must be submitted on completed Change Order forms provided by the City. All such change order proposals must itemize all cost impacts of the proposed change order and include a total price for that change order and the amended Contract Price that would become effective upon execution of the change order. All change order proposals must specify any change in the Project schedule, or in any project milestone including, but not limited to, the Time for Completion, under the change order, and must provide information justifying the requested change in the Time for Completion. It is understood that change orders that do not specify a change in any milestone, including, but not limited to, the Time for Completion, will be accomplished by the Time for Completion then in effect.

4.5 Change Order Pricing. Change order pricing will be governed by the following:

4.5.1 Unit prices specified in the Contract Documents will apply to cost impacts involving items for which the Contract Documents specify unit prices.

4.5.2 Cost impacts involving items for which no unit prices are specified will be calculated by adding the itemized actual direct cost that would be added or reduced under the change order and an allowance for indirect costs in accordance with this Section. Itemization for direct costs for required labor must include the classifications of labor required, the total hours required for each classification, the hourly rate for each classification and other labor related costs such as liability and workers compensation insurance, social security, retirement and unemployment insurance. All other cost impacts for which no unit prices are specified must be itemized as appropriate, including the cost of tools, vehicles, phones and other equipment, and the cost of all required materials or supplies. Indirect costs added under a change order may not exceed an allowance of fifteen (15) percent of the total of combined Contractor and subcontractor direct costs added under the change order. Such allowance covers Contractor overhead and profit under the change order and includes the cost of insurance in addition to that required pursuant to Section 8.8, bond premiums, superintendent labor, clerical labor, home office expenses, worksite office expenses, and utility costs under the change order. Such costs may not be itemized as direct costs under a change order. Indirect costs deducted under a change order will be calculated in exactly the same way as indirect costs added under a change order, except indirect costs deducted under a change order may not exceed an allowance of seven and a half (7.5) percent of the total of combined Contractor and subcontractor direct costs deducted under the change order.

4.6 Liability Under Unapproved Change Orders. The Contractor shall be solely responsible for any and all losses, costs, or liabilities of any kind incurred by the Contractor, any subcontractor engaged in the performance of the Work, any party supplying material or equipment for the Work or any third party that are incurred pursuant to Contractor-proposed change orders prior to issuance of an approved change order executed in accordance with this Section 4. The Contractor will have all of the obligations and the City will have all of the rights and remedies that are specified in Section 11 concerning any work or resulting losses, costs, or liabilities pursuant to a Contractor proposed change order before issuance of an approved change order executed in accordance with this Section 4.

4.7 Changes Subject to Contract Documents. Any changes in the Work and/or the Contract Documents pursuant to change orders and any other amendments issued in accordance with the Contract Documents, including

this Section 4, will in all respects be subject to all provisions of the Contract Documents, including, but not limited to, the Technical Specifications and the Project Plans, except as modified by such change orders or amendments.

4.8 Change Order Disputes.

4.8.1 Disputed City Directed Change Orders. If the Contractor disputes a City directed change order following a reasonable effort by the City and the Contractor to resolve the dispute including, at a minimum, a meeting between appropriate representatives of the Contractor and the City, the Contractor must commence performing the Work consistent with the disputed change order within five (5) working days of the last meeting between representatives of the Contractor and the City to resolve the dispute, or within the time specified in the disputed City directed change order, whichever is later. In performing Work consistent with a disputed City-directed change order pursuant to this provision the Contractor will have all of the Contractor's rights concerning claims pursuant to the Contract Documents and applicable law.

4.8.2 Disputed Contractor Proposed Change Orders. If the City disputes a Contractor proposed change order, the City and the Contractor will use reasonable efforts to resolve the dispute including, at a minimum, holding a meeting between appropriate representatives of the Contractor and the City. Regardless of and throughout any such efforts to resolve the dispute the Contractor must continue performing the Work irrespective of and unmodified by the disputed change order. In continuing to perform the Work, the Contractor will retain all of the Contractor's rights under contract or law pertaining to resolution of disputes and protests between contracting parties. Disputes between the City and the Contractor concerning any Contractor-proposed change order or other amendment do not excuse the Contractor's obligation to perform the Work in accordance with the Contract Documents excluding such Contractor-proposed change order or other amendment by the Time for Completion or waive any other Project milestone or other requirement of the Contract Documents.

4.9 Change in Time for Completion. The Time for Completion may only be changed through a Change Order, and all time limits stated in the Contract Documents are to mean that time is of the essence. Contractor shall not be entitled time extension for impacts that consume Float, but do not impact the critical path. Time extensions will not be granted unless substantiated by the Critical Path Method (CPM) Schedule, and then not until the CPM float becomes zero. If contractor fails to submit documentation requesting and justifying a change in Time for Completion consistent with the Contract Documents, the Contractor shall be deemed to have agreed that there is no

extension of time and that Contractor has irrevocably waived its rights to any change in the Time for Completion. Contractor initiated change orders shall address any impacts on the Time for Completion when first submitted to the City. Contractor shall submit any request for change in the Time for Completion and all supporting information and documentation required by the Contract Documents within seven (7) working days of receipt of a City-directed Change Order.

5. TRENCHING AND UTILITIES

5.1 Contractor to Locate Underground Facilities. During construction, Contractor shall comply with Government Code Sections 4216 to 4216.9, and in particular Section 4216.2 which provides, in part: "Except in an emergency, every person planning to conduct any excavation shall contact the appropriate regional notification center at least two working days, but no more than 14 calendar days, prior to commencing that excavation, if the excavation will be conducted in an area which is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the excavator, and, if practical, the excavator shall delineate with white paint or other suitable markings the area to be excavated. The regional notification center shall provide an inquiry identification number to the person who contacts the center and shall notify any member, if known, who has a subsurface installation in the area of the proposed excavation."

Contractor shall contact Underground Service Alert (USA), and schedule the Work to allow ample time for the center to notify its members and, if necessary, for any member to field locate and mark its facilities. Contractor is charged with knowledge of all subsurface conditions reflected in USA records. Prior to commencing excavation or trenching work, Contractor shall provide the City with copies of all USA records secured by Contractor. Contractor shall advise the City of any conflict between information in the Contract Documents, Drawings, independent investigations, and that provided by USA records. Contractor's excavation shall be subject to and comply with the Contract Documents.

Contractor shall also investigate the existence of existing service laterals, appurtenances or other types of utilities, indicated by the presence of an underground transmission main or other visible facilities, such as buildings, manholes, new asphalt, meters and junction boxes, on or adjacent to the Site, even if not shown or indicated in existing conditions data, Contract Documents, or USA records, or discovered during Contractor's pre- or post-bid investigation. Contractor shall immediately secure all such available information and notify the City and the utility City, in writing, of its discovery.

5.2 Excavation More Than Four Feet Deep. In accordance with California Public Contract Code Section 7104, if the Work involves excavation more than four feet deep the Contractor must promptly notify the City in writing before

disturbing: any material that the Contractor believes may be hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II or Class III disposal site in accordance with provisions of existing law; any subsurface or latent physical conditions at the Work site differing from those indicated; or any unknown physical conditions at the Work site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents. The City will promptly investigate any such conditions for which notice is given. If the City finds that the conditions do materially differ, or involve hazardous waste, and would cause a decrease or increase in the cost or time of performance of the Work, the City will issue a change order pursuant to Section 4 of these General Provisions. If a dispute arises between the City and the Contractor concerning whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the cost or time of performance, the Contractor will not be excused from any completion date provided in the Contract Documents, but shall proceed with all Work to be performed. The Contractor will retain all rights under contract or law pertaining to resolution of disputes and protests between contracting parties.

5.3 Excavation of Five Feet or More. In accordance with California Labor Code Section 6705, contractors performing contracts exceeding $25,000 in cost and involving excavation five or more feet deep must submit for the City's acceptance, prior to excavation, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during excavation. If the plan varies from the shoring system standards, it must be prepared by a registered civil or structural engineer.

5.4 Utility Relocation Costs.

5.4.1 In accordance with California Government Code Section 4215, the City assumes the responsibility for the timely removal, relocation or protection of existing main or trunkline utility facilities located on the Work site if such utilities are not identified by the City in the Technical Specifications and/or Project Plans. The City will compensate the Contractor for the costs of locating, repairing damage not due to the Contractor's failure to exercise reasonable care, and removing or relocating existing main or trunkline utility facilities located at the Work site and not identified with reasonable accuracy in the Technical Specifications and/or Project Plans. The City will also compensate the Contractor for the cost of equipment on the Project necessarily idled during such work. The Contractor will not be assessed liquidated damages for Work completion delays caused by the City's failure to provide for removal or relocation of such main or trunkline utility facilities.

5.4.2 Nothing in this provision or the Contract Documents will be deemed to require the City to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the Work site can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the Work site; provided, however, that nothing in this provision or the Contract Documents shall relieve the City from identifying main or trunklines in the Technical Specifications and/or Project Plans.

5.4.3. Nothing in this provision or the Contract Documents will preclude the City from pursuing any appropriate remedy against the utility for delays which are the responsibility of the utility.

5.4.4 Nothing in this provision or the Contract Documents will be construed to relieve the utility from any obligation as required either by law or by contract to pay the cost of removal or relocation of existing utility facilities.

5.4.5 If the Contractor while performing the Work discovers utility facilities not identified by the City in the Technical Specifications and/or Project Plans, the Contractor must immediately notify the City and utility in writing.

5.4.6 Either the City or the utility, whichever owns existing main or trunkline utility facilities located on the Work site, shall have sole discretion to effect repairs or relocation work or to permit the Contractor to perform such repairs or relocation work at a reasonable price.

5.5 Concealed or Unknown Conditions.

5.5.1 If either of the following conditions is encountered at Site when digging trenches or other excavations that extend deeper than four feet below the surface, Contractor shall promptly give a written Notice of Differing Site Conditions to the City before conditions are disturbed, except in an emergency, and in no event later than seven (7) calendar days after first observance of:

5.5.1.1 Subsurface or Latent physical conditions which differ materially from those indicated in the Contract Documents; or

5.5.1.2 Unknown physical conditions of an unusual nature or which differ materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents.

5.5.2 In response to Contractor's Notice of Differing Site Conditions under this Section, the City will investigate the identified conditions, and if they differ materially and cause increase or decrease in Contractor's

cost of, or time required for, performance of any part of the Work, the City will negotiate the appropriate change order following the procedures set forth in the Contract Documents. If the City determines that physical conditions at the Project are not latent or are not materially different from those indicated in Contract Documents or that no change in terms of the Contract Documents is justified, the City will so notify Contractor in writing, stating reasons (with Contractor retaining all rights under the Contract Documents).

5.5.3 Contractor shall not be entitled to any adjustment in the Contract Sum or Contract Time regarding claimed latent or materially different Project conditions (whether above or below grade) if Contractor knew or should have known of the existence of such conditions at the time Contractor submitted its Bid, failed to give proper notice, or relied upon information, conclusions, opinions or deductions of the kind that the Contract Documents preclude reliance upon.

5.5.4 Regarding Underground Facilities, Contractor shall be allowed an increase in the Contract Sum or an extension of the Time for Completion, or both, to the extent that they are attributable to the existence of any Underground Facility that is owned and was built by the City only where the Underground Facility:

5.5.4.1 Was not shown or indicated in the Contract Documents or in the information supplied for bidding purposes or in information on file at USA; and;

5.5.4.2 Contractor did not know of it; and

5.5.4.3 Contractor could not reasonably have been expected to be aware of it or to have anticipated it from the information available. (For example, if surface conditions such as pavement repairs, valve covers, or other markings, indicate the presence of an Underground Facility, then an increase in the Contract Sum or an extension of the Time for Completion will not be due, even if the Underground Facility was not indicated in the Contract Documents, in the information supplied to Contractor for bidding purposes, in information on file at USA, or otherwise reasonably available to Contractor.)

5.6 Contractor shall bear the risk that Underground Facilities not owned or built by the City may differ in nature or locations shown in information made available by the City for bidding purposes, in information on file at USA, or otherwise reasonably available to Contractor. Underground Facilities are inherent in construction involving digging of trenches or other excavations on City's Project, and Contractor is to apply its skill and industry to verify the information available.

5.7 Contractor's compensation for claimed latent or materially different Project conditions shall be limited to the actual, reasonable, incremental increase in cost of that portion of the Work, resulting from the claimed Latent or materially different Site conditions. Such calculation shall take into account the estimated value of that portion of the Work and the actual value of that portion of the Work, using for guidance Contractor's or its subcontractor's bid amount and actual amounts incurred for that portion of the Work and the reasonable expectation (if any) of differing or difficult site conditions in the Work area based on the available records and locale of the Work. For example, if Contractor excavates in an area unexpected, then such costs would be recoverable entirely; while if Contractor extends an existing excavation, then such costs would be recoverable if the resulting excavation costs in that work area exceeded the reasonable expectations therefor.

6. PROJECT FACILITIES

6.1 Work Site Offices. Any Work site office facilities used by the Contractor and/or its privities must conform to all applicable codes, ordinances and regulations. The cost of such Work site office facilities shall be paid from and included in the Contract Price.

6.2 City Rights of Access and Ownership. The City and its authorized representatives will at all reasonable times while such office facilities are located at the Work site (including, at a minimum, all times during which the Work is performed), have access to any such Work site office facilities used by the Contractor and/or its privities. With respect to the right of access of the City and its authorized representatives, neither the Contractor nor its privities shall have a reasonable expectation of privacy pursuant to the Fourth Amendment to the United States Constitution or other applicable law concerning such Work site office facilities used by the Contractor and/or its privities. Without exception, any and all Project related materials located at such Work site facilities will be deemed at all times to be City property subject to inspection and copying by the City and its authorized representatives at all reasonable times while such facilities are located at the Work site (including, at a minimum, all times during which the Work is performed). Any interference by the Contractor or its privities with the City's rights of access and/or Ownership pursuant to this Section 6 will constitute a material breach of the Agreement subject to any and all remedies available pursuant to the Contract Documents and at law and equity.

7. PROSECUTION AND PROGRESS OF THE WORK

7.1 Liquidated Damages. Time is of the essence in the Agreement. The City and the Contractor agree that it will be difficult and/or impossible to determine the actual damage which the City will sustain in the event of the Contractor's failure to fully perform the Work or to fully perform all of the Contractor's obligations that have accrued pursuant to the Agreement by the Time for

Completion. Accordingly, the City and the Contractor agree in accordance with California Government Code Section 53069.85 that the Contractor will forfeit and pay to the City liquidated damages in the sum of $1000 per day for each and every calendar day completion of the Work and/or performance of all of the Contractor's obligations that have accrued pursuant to the Agreement is delayed beyond the Time for Completion. The City and the Contractor further agree in accordance with California Government Code Section 53069.85 that the liquidated damages sum specified in this provision is not manifestly unreasonable under the circumstances existing at the time the Agreement was made, and that the City may deduct liquidated damages sums in accordance with this provision from any payments due or that may become due the Contractor under the Agreement.

7.2 No Damage for Avoidable Delays. All delays in the Work that might have been avoided by the exercise of care, prudence, foresight and diligence of the Contractor or any privities of the Contractor will be deemed avoidable delays. Delays in the Work that may be unavoidable but that do not necessarily affect other portions of the Work or prevent completion of all Work within the Time for Completion, including, but not limited to, reasonable delays in Engineer approval of shop drawings, placement of construction survey stakes, measurements and inspection, and such interruption as may occur in prosecution of the Work due to reasonable interference of other contractors of the City, will be deemed avoidable delays. The Contractor will not be awarded a change in the Project schedule, the Time for Completion, and/or additional compensation in excess of the contract price for avoidable delays.

7.3 Unavoidable Delays. All delays in the Work that result from causes beyond the control of the Contractor and that the Contractor could not have avoided through exercise of care, prudence, foresight, and diligence will be deemed unavoidable delays. Orders issued by the City changing the amount of Work to be done, the quantity of materials to be furnished, or the manner in which the work is to be prosecuted, and unforeseen delays in the prosecution of the Work due to causes beyond the Contractor's control, such as strikes, lockouts, labor disturbances, fires, epidemics, earthquakes, acts of God, neglect by utility owners or other contractors that are not privities of the Contractor will be deemed unavoidable delays to the extent they actually delay the Contractor's completion of the Work. The Contractor will be awarded a change in the Project schedule, the Time for Completion, and/or additional compensation in excess of the Contract Price for unavoidable delays to the extent such delays actually delay the Contractor's completion of the Work and/or result in the Contractor incurring additional costs in excess of the Contract Price.

7.4 No Damage for Contractor Caused Delay. Contractor shall not be entitled to additional compensation for extended field or home office overhead, field supervision, costs of capital, interest, escalation charges, acceleration costs or other impacts for any delays to the extent such delays are caused by the

failure of the Contractor or any subcontractor or other entity engaged in performance of the Work to perform the Work in accordance with the Contract Documents.

7.5 No Damage for Other Delay. Contractor will not be entitled to damages for delay to the Work caused by the following, which the City and Contractor agree will be deemed for purposes of California Public Contract Code Section 7102 either not caused by the City, and/or within the contemplation of the City and the Contractor, and/or reasonable under the circumstances:

7.5.1 Exercise of the City's right to sequence the Work in a manner that would avoid disruption to the City and other contractors based on: the failure of the Contractor or any subcontractor or other entity engaged in the performance of the Work to perform the Work in accordance with the Contract Documents, enforcement by the City or any other governmental agency of competent jurisdiction of any government act or regulation, or enforcement by the City of any provisions of the Agreement.

7.5.2 Requests for clarification or information concerning the Contract Documents or proposed change orders or modifications to the Contract Documents, including extensive and/or numerous such requests for clarification or information or proposed change orders or modifications, provided such clarifications or information or proposed change orders or modifications are processed by the City or its representatives in a reasonable time in accordance with the Contract Documents.

7.6 Delays Caused by the City and/or Its Privities. Delay caused by the City and/or other Contractors of the City will be deemed unavoidable delays. Either the City or the Contractor may propose a change in the Time for Completion for delays that are purported to be caused by the City and/or its privities and that are not reasonable under the circumstances involved and/or that are not within the contemplation of the City and the Contractor. Such proposed changes in the Time for Completion will constitute change order proposals subject to Section 4. In accordance with Section 4, the City and the Contractor may agree upon pricing for the cost impacts, if any, resulting from such delays. If such pricing is in anticipation of cost impacts that may, but have not yet occurred, the City will be obligated to pay the Contractor for such anticipated impacts in accordance with the Agreement and any applicable, approved change orders only to the extent the Contractor actually incurs the anticipated cost impacts. Notwithstanding anything to the contrary in Section 4, the City and the Contractor may agree to a daily rate or cap or lump sum that will apply to the cost impacts, if any, resulting from delay purportedly caused by the City and/or its privities subject to this provision. However, if such daily rate or cap or lump sum is in anticipation of cost impacts that have not yet occurred, the City will be obligated to pay such daily rate or cap or lump sum only to the extent the Contractor actually incurs such cost impacts.

7.7 Weather Delays. Extensions of the Time for Completion will not be allowed for normal, adverse weather conditions that are consistent with historical weather data of the National Oceanographic and Atmospheric Administration of the U.S. Department of Commerce for the record station that is nearest or most applicable to the Work site. The Contractor should understand that normal adverse weather conditions are to be expected and plan the Work accordingly, such as by incorporating into the Project schedule, normal adverse weather delays as reflected in historical data of the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce for the weather station most applicable to the Work site. Extensions of the Time for Completion for delays due to adverse weather will be allowed only if the number of adverse weather days far exceeds the historical data. No extensions of the Time for Completion will be granted for normal, adverse weather conditions or for adverse weather conditions that merely result in delays that do not or would not, themselves, result in failure to complete the Work by the Time for Completion.

7.8 Delay Claims. Within five (5) days of the beginning of any delay, Contractor shall notify the City in writing, by submitting a notice of delay that shall describe the anticipated delays resulting from the delay event in question. Whenever the Contractor claims a delay for which the Time for Completion may be extended, the Contractor must request an extension of time within five (5) days of submitting its notice of delay. The request must be in writing in the form of a change order and describe in detail the cause for the delay, and, if possible, the foreseeable extent of the delay. The City will determine all claims and adjustments in the Time for Completion. No claim for an adjustment in the Time for Completion will be valid and such claim will be waived if not submitted in accordance with the requirements of this Section and Section 4.9. In cases of substantial compliance with the notice timing requirements of this Section (but not to exceed twenty-one (21) days from the beginning of the delay event), City may in its sole discretion recognize a claim for delay accompanied with the proper documentation and justification, provided the Contractor also shows good faith and a manifest lack of prejudice to the City from the late notice.

7.9 Contractor Coordination of the Work.

7.9.1 The City reserves the right to do other work in connection with or in the vicinity of the Project by contract or otherwise, and Contractor shall at all times conduct the Work so as to impose no hardship on the City, others engaged in the Work or other contractors working at the Work site. The Contractor will adjust, correct and coordinate the Work with the work of others so that no delays result in the Work or other work at or near the Work site.

7.9.2 If any part of the Work depends for proper execution or results upon the work of the City or any other contractor, the Contractor will, before

proceeding with such Work, promptly report to the City any apparent discrepancies or defects in such other Work. Failure of the Contractor to promptly report any apparent discrepancy or defect will be deemed an acceptance of the City's or other contractor's Work as fit and proper.

7.9.3 The Contractor will anticipate the relations of the various trades to the progress of the Work and will ensure that required anchorage or blocking is furnished and set at proper times. Anchorage and blocking necessary for each trade shall be part of the Work except where stated otherwise.

7.9.4 The Contractor will provide proper facilities at all times for access of the City, the Construction Manager, Architect or Engineer, and other authorized City representatives to conveniently examine and inspect the Work.

8. CONTRACTOR RESPONSIBILITIES

8.1. Eligibility. By executing the Agreement, the Contractor certifies that the Contractor is not ineligible to perform work on public works projects pursuant to California Labor Code Sections 1777.1 or 1777.7. In accordance with California Public Contract Code Section 6109(a), contractors who are ineligible to perform work on public works projects pursuant to California Labor Code Sections 1777.1 or 1777.7 may neither bid on, be awarded or perform the Work. To the fullest extent permitted by law, the Contractor shall hold harmless and indemnify the City from and against any and all damages, costs, and liability arising from or as a consequence of any violation of Public Contract Code Section 6109.

8.2 Non Discrimination. During the performance of this Contract, Contractor will not discriminate against any employee or subcontractor of the Contractor or applicant for employment because of race, religion, creed, color, national origin, gender, sexual orientation, or age. Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, religion, creed, color, national origin, gender, sexual orientation, or age.

Contractor acknowledges that Contractor, and all subcontractors hired by Contractor to perform services under this Agreement, are aware of and understand the Immigration Reform and Control Act ("IRCA"). Contractor is and shall remain in compliance with the IRCA and shall ensure that any subcontractors hired by Contractor to perform services under this Agreement are in compliance with the IRCA. In addition, Contractor agrees to indemnify, defend and hold harmless City, its agents, officers and employees, from any liability, damages or causes of action arising out of or relating to any claims that Contractor's employees, or employees of any subcontractor hired by Contractor, are not authorized to work in the United States for Contractor or its

subcontractor and/or any other claims based upon alleged IRCA violations committed by Contractor or Contractor's subcontractors.

8.3 Supervision of the Work. The Contractor will be solely responsible for the performance of the Work, including portions of the Work to be performed by subcontractors. The Contractor is charged with ensuring that all orders or instructions from the City, Construction Manager or Architect are disseminated to and followed by all subcontractors engaged in performance of the Work. The Contractor will supervise the Work using the Contractor's best skill and attention. At any time during the progress of the Work, the City, the Construction Manager, or the Architect may require the Contractor and/or subcontractors engaged in performance of the Work to attend a project meeting and the Contractor will attend, and ensure the attendance of any subcontractors whose attendance is required by the City and/or advisable in light of the matters to be addressed at the meeting.

8.4 Contractor's Superintendent. The Contractor will keep on the Work, throughout its progress, a competent superintendent and any necessary assistants, all satisfactory to the City. The superintendent may not be changed without the consent of the City. The superintendent will represent the Contractor and all directions given by the City to the superintendent will bind the Contractor in accordance with the Agreement. Superintendent time included in Contractor's completed bid schedule and/or in approved change orders, if any, must be included in Contractor's approved overhead rate and may not be charged as a direct cost.

8.5 Competent Employees. The Contractor must at all times enforce strict discipline and good order among the Contractor's employees and may not employ on the Project any unfit person or anyone not skilled in the Work assigned, or anyone incompetent or unfit for the duties of that person. When the City determines that a Contractor employee does not satisfy the requirements of this provision, upon notice from the City, the Contractor must ensure that employee performs no further Work and is no longer present at the Work site. Any such Contractor employee may not again be employed on the Project without City approval.

8.6 Items Necessary for Proper Completion of the Work. Except as otherwise noted in the Contract Documents, the Contractor will provide and pay for all labor, materials, equipment, permits, fees, licenses, facilities and services necessary for the proper execution and timely completion of the Work in accordance with the Contract Documents.

8.7 Construction Reports. The Contractor must submit daily construction reports detailing the daily progress of the Work to the Construction Manager on a weekly basis.

8.8 Subcontracting. The Contractor must perform with his or her own organization, a value of work amounting to not less than fifty percent (50%) of

the Contract amount, except that the bid amount for subcontracted "Specialty Items" so designated in the Special Provisions may be eliminated from the Contract amount and not considered as sub-contracted for the purposes of calculating the value of work to be performed by the Contractor. For the purposes of determining the value of work to be performed by the Contractor pursuant to this provision, materials, equipment, incidentals, etc., shall be considered to have been purchased by the Contractor or Subcontractor that is to install them. Where a portion of an item is subcontracted, the value of work subcontracted will be based on the estimated cost of such portion of the subcontracted item, as determined from information submitted by the Contractor, subject to approval by the Engineer.

8.8.1 By executing the Contract, the Contractor certifies that no subcontractor included on the list of proposed subcontractors submitted with the Contractor's bid is ineligible to perform work on public works projects pursuant to California Labor Code Sections 1777.1 or 1777.7. In accordance with California Public Contract Code Section 6109(a), subcontractors who are ineligible to perform work on public works projects pursuant to California Labor Code Sections 1777.1 or 1777.7 may neither bid on, be awarded or perform as a subcontractor on the Work. In accordance with California Public Contract Code Section 6109(b), any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. The Contractor will ensure that no debarred subcontractor receives any public money for performing the Work, and any public money that may have been paid to a debarred subcontractor for the Work is returned to the City. The Contractor will be responsible for payment of wages to workers of a debarred subcontractor who has been allowed to perform the Work.

8.8.2 The Agreement and the performance of the Work are subject to the requirements of the Subletting and Subcontracting Fair Practices Act codified at California Public Contract Code Section 4100 et seq. If the Contractor fails to specify a subcontractor or specifies more than one subcontractor for the same portion of the Work in excess of one-half of one percent of the Contractor's total bid, the Contractor agrees that the Contractor is fully qualified to perform that portion of the Work with the Contractor's own forces, and that the Contractor will perform that portion of the Work with the Contractor's own forces. If after award of the Agreement the Contractor subcontracts, except as provided for in California Public Contract Code Sections 4107 or 4109, any such portion of the Work, the Contractor will be subject to the penalties set forth in California Public Contract Code Sections 4110 and 4111, including cancellation of the Agreement, assessment of a penalty of up to 10 percent of the amount of the subcontract, and disciplinary action by the Contractors State License Board.

8.8.3. No contractual relationship exists between the City and any subcontractor engaged in performance of the Work.

8.8.4 Incorporation of Contract Documents. The Contractor must incorporate the Contract Documents in each contract with a subcontractor engaged in the performance of the Work including the indemnity and insurance requirements to the extent they apply to the scope of the subcontractor's work. The Contractor shall be solely responsible for any delay or additional costs incurred as a result of its failure to provide adequate or accurate project information to a subcontractor that results in improper submittals and/or work, or time or other impacts is the sole responsibility of the Contractor. The Contractor will have all of the obligations and the City will have all of the remedies that are specified in Section 11.

8.8.5 Subcontractor agrees to be bound to General Contractor and City in the same manner and to the same extent as General Contractor is bound to City under the Contract Documents. Subcontractor further agrees to include the same requirements and provisions of this agreement, including the indemnity and insurance requirements, with any Sub-subcontractor to the extent they apply to the scope of the Sub-subcontractor's work. A copy of the City's Contract Document Indemnity and Insurance provisions will be furnished to the Subcontractor upon request. The Contractor shall require all subcontractors to provide a valid certificate of insurance with the required endorsements included in the agreement prior to commencement of any work and General Contractor will provide proof of compliance to the City.

8.8.6 Coordination of Subcontract Work: The Contractor is responsible for scheduling the Work of subcontractors so as to avoid delay or injury to either Work or materials.

8.9 Insurance.

8.9.1 All required insurance shall be provided in the form of "occurrence"-type policies underwritten by admitted insurers in the State of California with a rating of A or better from the current year Best Rating Guide. All policies must be issued at the expense of the Contractor and must be maintained at the Contractor's expense throughout the performance of the Work.

8.9.2 The Contractor and any subcontractors engaged in performance of the Work must secure payment of workers compensation in accordance with California Labor Code Section 3700 and other applicable law. The Contractor must verify that all Subcontractors comply with this requirement.

8.9.3 Within ten (10) working days following notice of award the Contractor must submit to the City along with executed copies of all other documents specified in the Contract Check List certificates of insurance and endorsements evidencing that the Contractor has in effect and will maintain throughout the performance of the Work the following kinds and amounts of insurance:

8.9.3.1 Worker's Compensation Insurance. Workers Compensation and Employers Liability insurance as required by any applicable law, regulation or statute, including the provisions of Division IV of the Labor Code of the State of California, and any act or acts amending it. Worker's Compensation insurance must be for Statutory Limits and must cover the full liability of the Contractor. The Contractor's Employer's Liability Insurance must be in an amount no less than $1,000,000.00 per occurrence. The insurance must be endorsed to waive all rights of subrogation against City and its officials, officers, employees, and volunteers for loss arising from or related to the work performed under this agreement.

8.9.3.2 Commercial General Liability and Automobile Liability Insurance. Coverage for liability because of Bodily Injury and Property Damage including, but not limited to the following coverage:

- Completed Operations and Products Liability
- Bodily Injury
- Personal Injury
- Broad Form Property Damage Liability
- Contractual Liability insuring the obligations assumed by the Contractor under the Contract Documents
- Automobile Liability, including owned, non-owned and hired automobiles
- Coverage for the XCU hazards of Explosion, Collapse and Underground Hazards

8.9.3.3 Commercial General Liability Self-Insured Retentions:

- All self-insured retentions (SIR) must be disclosed to City for approval and shall not reduce the limits of liability.
- Policies containing any self-insured retention (SIR) provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named insured or the City.

- The City reserves the right to obtain a full certified copy of any insurance policy and endorsements. Failure to exercise this right shall not constitute a waiver of right to exercise later.

8.9.3.4 Commercial Umbrella Policy. The limits of insurance required in these Contract Documents may be satisfied by a combination of primary and umbrella or excess insurance. Any umbrella or excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of City (if agreed to in a written contract or agreement) before the City's own Insurance or self-insurance shall be called upon to protect it as a named insured.

8.9.4 The Additional Insured coverage under the Contractor's policy shall be "primary and non-contributory" and will not seek contribution from the City's insurance or self-insurance and shall be at least as broad as CG 20 01 04 13.

8.9.5 The limits of the insurance required above will be at least:

Comprehensive General Liability

Bodily Injury Liability	$2,000,000	each occurrence
	$4,000,000	each aggregate
Property Damage Liability	$2,000,000	each occurrence
	$4,000,000	each aggregate

Comprehensive Automobile Liability

Bodily Injury Liability	$2,000,000	each person
	$2,000,000	each occurrence
Property Damage Liability	$2,000,000	each occurrence

8.9.6 For each insurance policy required under the Agreement except for the required workers compensation insurance policy, the Contractor must provide endorsements that add the City, its officials, officers, employees, agents and volunteers as an additional insured ("Additional Insured"). Such endorsements must: provide that the insurance required to be furnished by the Contractor will be primary as regards the City, and that the City's insurance will be excess of and not contribute to the insurance required to be furnished by the Contractor; that the City will receive 30 day written notice of any reduction or cancellation of such insurance required to be furnished by the Contractor; and include a severability of interest clause acceptable to

the City. Said endorsement shall be at least as broad as Insurance Services Office form number CG2010 (Ed. 11/85).

8.9.7 It shall be a requirement under these Contract Documents that any available insurance proceeds broader than or in excess of the specified minimum insurance coverage requirements and/or limits shall be available to the Additional Insured. Furthermore, the requirements for coverage and limits shall be (1) the minimum coverage and limits specified in this Agreement; or (2) the broader coverage and maximum limits of coverage of any insurance policy or proceeds available to the named insured; whichever is greater.

8.9.8 Contractor shall maintain insurance as required by these Contract Documents to the fullest amount allowed by law and shall maintain insurance for a minimum of five years following the completion of this project. In the event contractor fails to obtain or maintain completed operations coverage as required by this Agreement, the City at its sole discretion may purchase the coverage required and the cost will be paid by Contractor.

8.10 Indemnities.

8.10.1 The Contractor will take all responsibility for the Work, and will bear all losses and damages directly or indirectly resulting to the Contractor, any subcontractors engaged in performance of the Work, the City, its officials, officers, employees, agents, volunteers and consultants, and to third parties on account of the performance or character of the Work, unforeseen difficulties, accidents, or occurrences of other causes arising out of the Contractor's execution of the Work or of any subcontractor engaged in performance of the Work. To the fullest extent permitted by law the Contractor will indemnify, defend and hold harmless the City, its officials, officers, employees, agents, volunteers and consultants from and against any or all loss, liability, expense, claims, costs (including costs of defense and consultants' costs), suits, and damages of every kind, nature and description (including, but not limited to, penalties resulting from exposure to hazards in violation of the California Labor Code and bodily injury or death) directly or indirectly arising from the Contractor's performance of the Work, failure to perform the Work, or condition of the Work that is caused in whole or in part by any act or omission of Contractor, its subcontractors, or anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, resulting from any cause whatsoever, save for liability for any loss, damage, or expense arising out of the City's sole negligence or willful misconduct.

8.10.2 The Contractor will indemnify, defend and hold harmless the City, the City's officials, officers, employees, volunteers, agents and the Construction Manager and Architect for all liability on account of any patent rights, copyrights, trade names or other intellectual property rights that may apply to the Contractor's performance of the Work. The Contractor will pay all royalties or other charges as a result of intellectual property rights that may apply to methods, types of construction, processes, materials, or equipment used in the performance of the Work, and will furnish written assurance satisfactory to the City that any such charges have been paid.

8.10.3 The Contractor assumes all liability for any accident or accidents resulting to any person or property as a result of inadequate protective devices for the prevention of accidents in connection with the performance of the Work. The Contractor will indemnify, defend, and hold harmless the City and its officials, officers, employees, agents, volunteers and consultants from such liability.

8.10.4 Approval of the Contractor's certificates of insurance and/or endorsements does not relieve the Contractor of liability under this Section 8.9. The Contractor will defend, with legal counsel reasonably acceptable to the City, any action or actions filed in connection with any Claims and will pay all related costs and expenses, including attorney's fees incurred. The Contractor will promptly pay any judgment rendered against the City, its officials, officers, employees, agents, volunteers or consultants for any Claims. In the event the City, its officials, officers, employees, agents, volunteers or consultants is made a party to any action or proceeding filed or prosecuted against Contractor for any Claims, Contractor agrees to pay the City, its officials, officers, employees, agents, volunteers and consultants any and all costs and expenses incurred in such action or proceeding, including but not limited to, reasonable attorneys' fees.

8.10.5 Subject to the requirements of Section 5 of the General Provisions, the Contractor will indemnify, hold harmless and defend, with legal counsel reasonably acceptable to the City, the City and its officials, officers, employees, agents and volunteers from and against any and all claims related to damage to surface or underground facilities caused by the Contractor or any of the Contractor's privities or agents.

8.10.6 The Contractor will indemnify, hold harmless and defend, with legal counsel reasonably acceptable to the City, the City and its officials, officers, employees, agents and volunteers from and against any and all claims, including any fines or other penalties, related to failure of the Contractor and/or privities or agents of the Contractor

to comply with the requirements of the General Permit, or to implement the Stormwater Pollution Prevention Plan ("SWPPP") in accordance with provision 12 of the Special Provisions. The City may withhold from amounts due or that may become due to the Contractor under this Contract amounts that equal or are estimated to equal the amount of claims, including fines, resulting from failure of the Contractor and/or privities or agents of the Contractor to comply with the requirements of the General Permit, or to implement the SWPPP in accordance with provision 12 of the Special Provisions.

8.10.7 In accordance with California Civil Code Section 2782(a), nothing in the Contract will be construed to indemnify the City for its sole negligence, willful misconduct, or for defects in design furnished by the City. By execution of the Contract Documents the Contractor acknowledges and agrees that the Contractor has read and understands the insurance and indemnity requirements of the Contract Documents, which are material elements of consideration.

8.10.8 The defense and indemnification obligations of these Contract Documents are undertaken in addition to, and shall not in any way be limited by, the insurance obligations contained in these Contract Documents.

8.10.9 Contractor/Subcontractor's responsibility for such defense and indemnity obligations shall survive the termination or completion of these Contract Documents for the full period of time allowed by law.

8.10.10 If Contractor fails to perform any of the foregoing defense and indemnity obligations, the City may defend itself and back-charge the Contractor for the City's costs and fees (including attorneys' and consultants' fees), and damages and withhold such sums from progress payments or other Contract monies which may become due.

8.11 Licenses/Permits. The Contractor must, without additional expense to the City, obtain all licenses, permits and other approvals required for the performance of the Work.

8.12 California Labor Code Requirements.

8.12.1 In accordance with California Labor Code Section 1771.1, this Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations (DIR). The Contractor and subcontractors engaged in performance of the Work must comply with Labor Code Section 1771.1.

8.12.2 In accordance with California Labor Code Section 1810, eight (8) hours of labor in performance of the Work shall constitute a legal day's work under the Agreement.

8.12.3 In accordance with California Labor Code Section 1811, the time of service of any worker employed in performance of the Work is limited to eight hours during any one calendar day, and forty hours during any one calendar week, except in accordance with California Labor Code Section 1815, which provides that work in excess of eight hours during any one calendar day and forty hours during any one calendar week is permitted upon compensation for all hours worked in excess of eight hours during any one calendar day and forty hours during any one calendar week at not less than one-and-one-half times the basic rate of pay.

8.12.4 The Contractor and its subcontractors will forfeit as a penalty to the City $25 for each worker employed in the performance of the Work for each calendar day during which the worker is required or permitted to work more than eight (8) hours in any one calendar day, or more than forty (40) hours in any one calendar week, in violation of the provisions of California Labor Code Section 1810 et seq.

8.12.5 In accordance with California Labor Code Section 1773.2, the City has determined the general prevailing wages in the locality in which the Work is to be performed for each craft or type of work needed to be as published by the State of California Department of Industrial Relations, Division of Labor Statistics and Research, a copy of which is on file in the Public Works Department and shall be made available on request. The Contractor and subcontractors engaged in the performance of the Work shall pay no less than these rates to all persons engaged in performance of the Work.

8.12.6 In accordance with California Labor Code Section 1775, the Contractor and any subcontractors engaged in performance of the Work must comply with Labor Code Section 1775 which establishes a penalty of up to $200 per day for each worker engaged in the performance of the Work that the Contractor or any subcontractor pays less than the specified prevailing wage. The amount of such penalty shall be determined by the Labor Commissioner. The Contractor or subcontractor shall pay the difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate. If a subcontractor worker engaged in performance of the Work is not paid the general prevailing per diem wages by the subcontractor, the Contractor is not liable for any penalties therefor unless the Contractor had knowledge of that failure

or unless the Contractor fails to comply with all of the following requirements:

8.12.6.1 The contract executed between the Contractor and the subcontractor for the performance of part of the Work must include a copy of the provisions of California Labor Code Sections 1771, 1775, 1776, 1777.5, 1813, and 1815.

8.12.6.2 The Contractor must monitor payment of the specified general prevailing rate of per diem wages by the subcontractor by periodic review of the subcontractor's certified payroll records.

8.12.6.3 Upon becoming aware of a subcontractor's failure to pay the specified prevailing rate of wages, the Contractor must diligently take corrective action to halt or rectify the failure, including, but not limited to, retaining sufficient funds due the subcontractor for performance of the Work.

8.12.6.4 Prior to making final payment to the subcontractor, the Contractor must obtain an affidavit signed under penalty of perjury from the subcontractor that the subcontractor has paid the specified general prevailing rate of per diem wages to employees engaged in the performance of the Work and any amounts due pursuant to California Labor Code Section 1813.

8.12.7 In accordance with California Labor Code Section 1776, the Contractor and each subcontractor engaged in performance of the Work, must keep accurate payroll records showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed in performance of the Work. Each payroll record must contain or be verified by a written declaration that it is made under penalty of perjury, stating that the information contained in the payroll record is true and correct and that the employer has complied with the requirements of Sections 1771, 1811, and 1815 for any work performed by the employer's employees on the public works project. The payroll records required pursuant to California Labor Code Section 1776 must be certified and must be available for inspection by the City and its authorized representatives, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations and must otherwise be available for inspection in accordance with California Labor Code Section 1776.

8.12.8 In accordance with California Labor Code Section 1777.5, the Contractor, on behalf of the Contractor and any subcontractors engaged in performance of the Work, will be responsible for ensuring compliance with California Labor Code Section 1777.5 governing employment and payment of apprentices on public works contracts.

8.12.9 In case it becomes necessary for the Contractor or any subcontractor engaged in performance of the Work to employ on the Work any person in a trade or occupation (except executive, supervisory, administrative, clerical, or other non-manual workers as such) for which no minimum wage rate has been determined by the Director of the Department of Industrial Relations, the Contractor must pay the minimum rate of wages specified therein for the classification which most nearly corresponds to Work to be performed by that person. The minimum rate thus furnished will be applicable as a minimum for such trade or occupation from the time of the initial employment of the person affected and during the continuance of such employment.

8.13 Laws and Ordinances. The Contractor and all subcontractors engaged in the performance of the Work must conform to the following specific rules and regulations as well as all other laws, ordinances, rules and regulations that apply to the Work. Nothing in the Technical Specifications or Project Plans is to be construed to permit Work not conforming to these codes:

- National Electrical Safety Code, U. S. Department of Commerce
- National Board of Fire Underwriters' Regulations
- California Building Standards Code as adopted by the City
- California Plumbing Code as amended by applicable local ordinances for plumbing, sewage disposal and health requirements.
- California Mechanical Code as amended by applicable local ordinances for all construction work.
- California Administrative Code Titles 15, 19 and 24 (with California amendments), and Americans with Disabilities Act (ADA) accessibility guidelines, whichever is more stringent.
- Manual of Accident Prevention in Construction, latest edition, published by A.G.C. of America
- Industrial Accident Commission's Safety Orders, State of California
- Regulations of the State Fire Marshall (Title 19, California Code of Regulation) and Applicable Local Fire Safety Codes
- Labor Code of the State of California - Division 2, Part 7, Public Works and Public Agencies
- Federal, state, and local air pollution control laws and regulations applicable to the Contractor and/or Work

8.14 Guaranty. The Contractor guarantees all of the Work for one year from the date the City accepts the Work. Upon receiving written notice of a need for

repairs which are directly attributable to defective materials or workmanship the Contractor must make good any defects arising or discovered in any part of the Work by diligently commencing the necessary repairs within seven (7) days from the date of notice from the City. If the Contractor fails to make good any defects in the Work in accordance with this provision, in addition to any other available remedy under the contract or at law or equity, the City may make good or have made good such defects in the Work and deduct the cost from amounts that may be due or become due the Contractor, and/or call on the Contractor's maintenance bond for the cost of making good such defects and for the City's reasonable legal costs, if any, of recovering against the bond. The Contractor shall remain responsible for repairing any Work found to be defective regardless of when such defect is discovered by the City.

Where defective or rejected Work and any damage caused thereby has been corrected, removed, or replaced by the Contractor pursuant to this section, the guarantee period with respect to that Work shall be extended for an additional period of one year after such correction, removal, or replacement has been satisfactorily completed.

8.15 Safety.

8.15.1 In accordance with generally accepted construction practices and applicable law, the Contractor will be solely and completely responsible for conditions of the Work site, including safety of all persons and property during performance of the Work. This requirement will apply continuously and not be limited to normal working hours. For purposes of California Labor Code Section 6400 and related provisions of law, the Contractor and the Contractor's privities and any other entities engaged in the performance of the Work will be "employers" responsible for furnishing employment and a place of employment that is safe and healthful for the employees, if any, of such entities engaged in the performance of the Work. Neither the City nor its officials, officers, employees, agents, volunteers or consultants will be "employers" pursuant to California Labor Code Section 6400 and related provisions of law with respect to the Contractor, the Contractor's privities or other entities engaged in the performance of the Work. The Contractor agrees that neither the City, the Construction Manager, the Architect, nor the Engineer will be responsible for having hazards corrected and/or removed at the Work site. The Contractor agrees that the City will not be responsible for taking steps to protect the Contractor's employees from such hazards, or for instructing the Contractor's employees to recognize such hazards or to avoid the associated dangers. The Contractor agrees with respect to the Work and the Work site, the Contractor will be responsible for not creating hazards and for having hazards corrected and/or removed, for taking appropriate, feasible steps to protect the

Contractor's employees from such hazards and that the Contractor has instructed and/or will instruct its employees to recognize such hazards and how to avoid the associated dangers.

8.15.2 Review and inspection by the City, the Construction Manager, the Architect or Engineer, and/or other representatives of the City of the Contractor's performance of the Work will not constitute review of the adequacy of the Contractor's safety measures in, on, or near the Work site. Such reviews and inspections do not relieve the Contractor of any of the Contractor's obligations under the Contract Documents and applicable law to ensure that the Work site is maintained and the Work is performed in a safe manner.

8.15.3 The Contractor will be solely responsible for the implementation and maintenance of safety programs to ensure that the Work site is maintained and the Work is performed in a safe manner in accordance with the Contract Documents and applicable law.

8.15.4 Within ten (10) working days following notice of award the Contractor must submit to the City a copy of the Contractor's Safety Plan.

8.15.5 The Contractor must furnish and place proper guards and systems for the prevention of accidents, including, but not limited to, those systems required pursuant to Title 8, Section 1670 et seq. of the California Code of Regulations concerning safety belts and nets. The Contractor must provide and maintain any other necessary systems or devices required to secure safety of life or property at the Work site in accordance with accepted standards of the industry and applicable law. The Contractor must maintain during all night hours sufficient lights to prevent accident or damage to life or property.

8.16 Assignment of Unfair Business Practice Claims. In accordance with California Public Contract Code Section 7103.5, the Contractor and any subcontractors offer and agree to assign to the City all rights, title, and interest in and to all causes of action the Contractor or any subcontractors may have under Section 4 of the Clayton Act (15 U.S.C. § 15) or under the Cartwright Act (Chapter 2 (commencing with § 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services or materials pursuant to this contract. This assignment shall be made and become effective at the time the City tenders final payment to the Contractor, without further acknowledgement by the parties.

8.17 Contractor shall be responsible for properly notifying residents and property owners impacted by this project in accordance with City standards. Specific notification procedures vary with the type of work and shall be coordinated with the City before work begins. The City will furnish a list of impacted property owners.

8.18 Contractor shall use paper products and printing and writing paper that meets Federal Trade Commission recyclability standards as defined in 16 CFR 260.12.

9. MEASUREMENT AND PAYMENT

9.1 F.O.B. All shipments must be F.O.B. destination to the Work site and/or other sites indicated in the Contract Documents. The Contract Price is all-inclusive (including sales tax). There shall be no additional compensation paid for containers, packing, unpacking, drayage or insurance.

9.2 Payment

9.2.1 On or about the first day of each calendar month the Contractor will submit to the Construction Manager a verified application for payment and schedule of values supported by a statement showing all materials actually installed during the preceding month and the cost of labor actually expended in the performance of the Work. **Billing must be received on a monthly basis, at a minimum.** Unless otherwise provided in the Contract Documents, no allowances or payments will be made for material or equipment not placed at the Work site.

9.2.2 To be eligible for payment the Contractor's applications for payment must include certified payroll reports prepared in accordance with California Labor Code Section 1776 and the Agreement for each employee of the Contractor and any subcontractors engaged in the performance of the Work during the preceding months, applications for payment will not be processed without certified payroll reports.

9.2.3 In accordance with California Public Contract Code Section 20104.50, the City will review applications for payment as soon as practicable after receipt. Any application or part of an application that is determined to be improper will be returned to the Contractor as soon as practicable, but no later than seven (7) days after receipt by the City, along with a written description of the reasons why the application is improper. The Contractor's failure to submit a schedule in the time specified in Section 3.8, or its submission of a schedule to which the City has taken any uncorrected exception, shall serve as a basis for returning an application for payment in its entirety.

9.2.4 Unless the Contractor has elected to post securities in lieu of retention in accordance with California Public Contract Code Section 22300 and the Agreement, and the Contractor and the City have executed an escrow agreement in accordance with the Public Contract Code and the Agreement, the City will make progress payments to the Contractor in accordance with applicable law in the amount of ninety-five (95) percent of the value of the labor actually performed and the material incorporated in the Work as specified in Contractor's verified application

for payment upon approval by the City's authorized representative(s). Payment of progress payments will not be construed as acceptance of the Work performed. If the Contractor has elected to post securities in lieu of retention in accordance with Public Contract Code Section 22300 and the Agreement and the Contractor and the City have executed an escrow agreement in accordance with the Public Contract Code and the Agreement, the City will make payments to the Contractor or the Contractor's escrow agent in accordance with such escrow agreement.

9.2.5 The City will pay the Contractor's final invoice in accordance with applicable law and this Section 9 following acceptance of the Work provided that:

9.2.5.1 The Contractor has furnished evidence satisfactory to the City that all claims for labor and material have been paid, or the time for filing valid stop notices has passed and no stop notices have been filed, or all stop notices filed have been released by valid release or release bond acceptable to the City.

9.2.5.2 No claim has been presented to the City by any person based upon any acts or omissions of the Contractor or any subcontractor engaged in the performance of the Work.

9.2.5.3 No other claim or dispute exists under the Agreement or applicable law concerning payment of the Contractor's final invoice and/or release of the Agreement retention.

9.2.5.4 The Contractor has filed with the City the Maintenance Bond provided in the Contract Documents with duly notarized signatures of an authorized representative of the Contractor and an attorney-in-fact of an admitted surety insurer acceptable to the City and such Maintenance Bond binds the Contractor as Principal and the Surety in accordance with its terms in the amount of 10% of the final Contract Price.

9.2.6 In accordance with California Public Contract Code Section 20104.50, if the City fails to make a progress payment within thirty (30) days of receipt of an undisputed, properly submitted application for payment, the City will pay the Contractor interest equivalent to the legal rate set forth in subdivision (a) of California Code of Civil Procedure Section 685.010. The number of days available to the City to make a payment without incurring an interest obligation pursuant to this provision and California Public Contract Code Section 20104.50 will be reduced by the number of days, if any, by which the City has delayed return of an application for payment beyond the seven day return requirement set forth in Section 9.2.5.

9.3 Non-Allowable Direct Charges. The following costs are not allowable direct charges under the Agreement. The following costs may only be paid under the Agreement, if at all, as part of any allowance for contractor overhead and/or profit established under the Agreement.

9.3.1 Labor costs in excess of applicable prevailing wages pursuant to the Agreement and applicable law, liability and workers compensation insurance, social security, retirement and unemployment insurance and other employee compensation and benefits pursuant to bona fide compensation plans in effect at the time specified for the opening of Project bids for contractor and subcontractor employees engaged in the performance of the Work or in excess of the labor costs specified in Section 4.5 of this Contract in the case of cost impacts involving items for which the Contract Documents do not specify prices and for which no lump sum amount has been approved by the City. However, in no event will allowable direct labor charges under the agreement include employee bonuses, employee vehicles or vehicle allowances, employee telephones or telephone allowances, or employee housing or housing allowances, whether or not such benefits are part of a bona fide compensation plan in effect at the time specified for the opening of Project bids.

9.3.2 Superintendent labor and clerical labor.

9.3.3 Bond premiums.

9.3.4 Insurance in excess of that required under Section 8.8.

9.3.5 Utility costs.

9.3.6 Work Site office expenses.

9.3.7 Home office expenses.

9.3.8 Permit or license costs.

9.4 Retention. The City or its agent may, in accordance with the Contract Documents and applicable law, withhold any payment of monies due or that may become due the Contractor because of:

9.4.1 Defective work not remedied or uncompleted work.

9.4.2 Claims filed or reasonable evidence indicating probable filing of claims.

9.4.3 Failure to properly pay subcontractors or to pay for material or labor.

9.4.4 Reasonable doubt that the Work can be completed for the balance then unpaid.

9.4.5 Damage to another contractor.

9.4.6 Damage to the City.

9.4.7 Damage to a third party.

9.4.8 Delay in the progress of the Work, which, in the City's judgment, is due to the failure of the Contractor to properly expedite the Work.

9.4.9 Liquidated damages or other charges that apply to the Contractor under the Agreement.

9.4.10 Any other lawful basis for withholding payment under the contract.

9.5 Securities in Lieu of Retention.

9.5.1 In accordance with Public Contract Code Section 22300, except where federal regulations or policies do not permit substitution of securities, the Contractor may substitute securities for any moneys withheld by the City to ensure performance of the Work. At the Contractor's request and expense, securities equivalent to the amount withheld will be deposited with the City, or with a state or federally chartered bank in California as the escrow agent, who will then pay those moneys to the Contractor under the terms of an Escrow for Security Deposit agreement. The Escrow for Security Deposit agreement is provided in the Contract Documents. Upon satisfactory completion of the Work, the securities will be returned to the Contractor.

9.5.2 Alternatively, at the Contractor's request and expense, the City will pay retentions earned directly to the escrow agent. At the Contractor's expense, the Contractor may direct investment of the payments into securities. Upon satisfactory completion of the Work, the Contractor will receive from the escrow agent all securities, interest, and payments received by the escrow agent from the City pursuant to this provision and the terms of the Escrow for Security Deposit agreement. The Contractor will, within 20 days of receipt of payment, pay to each subcontractor the respective amount of interest earned, less costs of retention withheld from each Subcontractor, on monies withheld to ensure the Contractor's performance of the Work.

9.5.3 Securities eligible for investment in accordance with this provision include those listed in Government Code Section 16430, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by the Contractor and the City.

9.5.4 The Contractor will be the beneficial owner of any securities substituted for moneys withheld and will receive any interest thereon.

10. PROJECT ACCEPTANCE AND CLOSEOUT

10.1 Occupancy. The City reserves the right to occupy or use any part or parts or the entirety of the Work before the Work is fully performed. Subject to

applicable law, exercising this right will in no way constitute acceptance of any part of the Work so occupied or used or acceptance of the entire Work, nor will such occupancy or use in any way affect the times when payments will become due the Contractor, nor will such occupancy or use in any way prejudice the City's rights under the Agreement, any Agreement bonds, or at law or equity. Occupancy or use shall not waive the City's rights to assess liquidated damages in accordance with Section 7 after the date of such occupancy or use.

10.2 Work Completion and Final Inspection. When the Contractor considers the Work is completed, the Contractor will submit written certification to the Construction Manager specifying that: the Contract Documents have been reviewed; the Work has been inspected for compliance with the Contract Documents; the Work has been completed in accordance with the Contract Documents; and that equipment and systems have been tested in the presence of the City's representative and are operational. The City and/or the City's authorized representatives will make an inspection to verify that the Work is complete and will notify the Contractor in writing of any incomplete or deficient Work. The Contractor will take immediate steps to remedy the stated deficiencies and give notice of correction to the Construction Manager. Upon receiving a notice of correction, the City or the City's authorized representatives will re-inspect the Work. The Contractor must correct all punch list items within 15 working days after the issuance of the punch list. Before acceptance of the Work the Contractor must submit: one set of the Project Record Drawings (As-Builts), and any equipment operating and maintenance instructions and data, warranties.

10.3 Work Acceptance.

10.3.1 All finished Work will be subject to inspection and acceptance or rejection by the City, the Construction Manager, and the Architect or Engineer and other government agencies having jurisdiction over the Work. Final acceptance of the Work will be at the discretion of the City.

10.3.2 The City will accept the Work in writing only when the Work has been completed to the City's reasonable satisfaction. Progress payments will in no way be construed as acceptance of any part of the Work.

10.3.3 In evaluating the Work, no allowance will be made for deviations from the Technical Specifications, Project Plans or other Contract Documents unless already approved in writing in accordance with the requirements of Section 4, above.

10.3.4 The fact that the Work and materials have been inspected from time to time and that progress payments have been made does not relieve the Contractor of the responsibility of replacing and making

good any defective or omitted work or materials in accordance with the requirements of the Contract Documents.

10.3.5 None of the provisions of this section, including acceptance of the Project, final payment, or use or occupancy of the Project Site shall constitute acceptance of Work not done in accordance with the Contract Documents nor relieve Contractor of liability relating to the express guarantees or responsibility for faulty materials or workmanship. Nothing in this section or the Contract Documents shall be construed to limit, relieve, or release Contractor's, subcontractors', and materials suppliers' liability to the City for damages sustained as a result of latent defects in materials, equipment, or the Work caused by the Contractor, its agents, suppliers, employees, or Subcontractors.

11. REMEDIES AND DISPUTES

11.1 Failure to Correct Work. Within ten (10) working days of receiving written notice from the City describing Work that is defective or that is otherwise not in accordance with the requirements of the Agreement and/or applicable law and directing that such Work be corrected, the Contractor and/or the Contractor's sureties must give the City written notice of the intent of the Contractor and/or the Contractor's sureties to correct such Work and commence correction of such Work in accordance with the City's notice and the Agreement. If the Contractor and/or the Contractor's sureties do not give the City written notice of intent to correct such Work and commence correction of such Work within ten (10) working days of receipt of the City's notice, then the City may correct such work and/or have such work corrected for the account and at the expense of the Contractor and/or its sureties, and the Contractor and/or its sureties will be liable to the City for any resulting excess cost. The City may, in addition to all other remedies that the City may have under the Agreement and at law or equity, deduct any such excess cost of completing the Work from amounts that are due or that may become due the Contractor. Contractor shall not be entitled to an extension of the Time of Completion because of a delay in the performance of the Work attributable to the City's exercise of its rights under this section.

11.2 Termination for Cause

11.2.1 In accordance with California Public Contract Code Section 7105, in addition to all other available remedies that the City may have under the Agreement, and at law or equity, the City may terminate the Contractor's control of the Work for any material breach of the Contract, including, but not limited to the following:

11.2.1.1 If the Contractor or any of its subcontractors engaged in the performance of the Work fails to timely perform the Work

and/or any of the Contractor's material obligations under the Contract Documents, including but not limited to submission of an acceptable schedule, that have accrued except for due to reasons beyond the control of the Contractor pursuant to the Contract Documents.

11.2.1.2 If the Contractor is adjudged bankrupt, or if it should make a general assignment for the benefit of creditors, or if a receiver should be appointed on account of its creditors.

11.2.1.3 If the Contractor or any of the subcontractors engaged in the performance of the Work persistently or repeatedly refuses or fails to supply enough properly skilled workmen or proper materials for the timely completion of the Work.

11.2.1.4 If the Contractor fails to make prompt payment to subcontractors engaged in the performance of the Work or for material or labor used in the performance of the Work in accordance with the Contract Documents and applicable law.

11.2.1.5 If the Contractor or any subcontractors engaged in the performance of the Work persistently disregards laws or ordinances applicable to the performance of the Work, or the instructions of the City, the Construction Manager, the Architect, or other authorized representatives of the City.

11.2.2 If the City intends to terminate the Contractor's control of the Work for any of the reasons specified in Sections 11.2.1.1 through 11.2.1.5, above, the City will immediately serve written notice to the Contractor and its sureties in accordance with the Contract Documents. Notice of the City's intent to terminate the Contractor's control of the Work will be given by registered or certified mail and specify the grounds for termination, the required cure and the time by which the cure must be effected. Upon receipt of notice of the City's intent to terminate the Contractor's control of the Work for any of the reasons specified in provisions 11.2.1.1 through 11.2.1.5, above, the Contractor will have ten (10) days from receipt of the notice or a longer time specified in the notice to cure its default. If the Contractor does not affect the required cure by the time specified in the notice, the City will issue a written notice of termination to the Contractor and its sureties by registered or certified mail. The notice of termination will specify: that upon receipt of the notice the Contractor's right to perform or complete the Work, including on behalf of the Contractor's sureties, is terminated; that the Contractor's sureties will have the right to take over and complete the Work and perform all of the Contractor's remaining obligations that have accrued under the Agreement; and

that if the Contractor's sureties do not both give the City written notice of their intention to take over and perform the Agreement and commence completion of the Work and performance of all of the Contractor's remaining obligations that have accrued under the Agreement within ten (10) days after receipt of notice of termination that the City may declare the Contractor's sureties in default and take over the completion of the Work or have the Work completed for the account and at the expense of the Contractor and its sureties, and the Contractor and its sureties will be liable to the City for any resulting excess cost. The City may, in addition to all other available remedies that the City may have under the Contract Documents and at law or equity, deduct any such excess cost of completing the Work from amounts that are due or that may become due the Contactor.

11.2.3 Upon termination of the Contractor's control of the Work for any of the reasons specified in Sections 11.2.1.1 through 11.2.1.5, the Contractor will, if so directed by the City, immediately remove from the Work site any and all materials and personal property belonging to the Contractor which have not been incorporated in the Work and the Contractor and its sureties will be liable upon their bond for all damages caused the City by reason of the Contractor's failure to complete the Work.

11.2.4 Upon termination of the Contractor's control of the Work for any of the reasons specified in provisions 11.2.1.1 through 11.2.1.5, above, the City reserves the right to refuse tender of the Contractor by any surety to complete the Work.

11.2.5 If the City completes or has completed any portion of, or the whole of the Work, following termination of the Contractor's control of the Work for any of the reasons specified in Sections 11.2.1.1 through 11.2.1.5, above, the City will neither be liable for nor account to the Contractor or the Contractor's sureties in any way for the time within which, or the manner in which such Work is performed, or for any changes made in such Work or for the money expended in satisfying claims and/or suits and/or other obligations in connection with completing the Work. If, following termination of the Contractor's control of the Work for any of the reasons specified in Sections 11.2.1.1 through 11.2.1.5, above, the unpaid balance of the Contract Price exceeds the expense of completing the Work, including compensation for additional legal, managerial and administrative services and all other amounts due for the completion of the Work and/or satisfaction of claims of the City and/or others arising out of the Agreement and any other charges that apply to the Contractor under the Agreement, the difference will be paid to the Contractor. If such expenses of completing the Work

exceed the unpaid balance of the Contract Price, the Contractor or its sureties will pay the difference to the City.

11.2.6 If the Agreement or Contractor's control of the Work is terminated for any reason, Contractor waives all consequential damages resulting therefrom, including, but not limited to, the loss of any anticipated profit by the Contractor for the Work, the loss of profit on any potential or future jobs, and the loss of bonding capacity.

11.2.7 In accordance with California Government Code Section 4410, in the event a national emergency occurs, and public work being performed by contract is stopped, directly or indirectly, because of the freezing or diversion of materials, equipment or labor, as the result of an order or a proclamation of the President of the United States, or of an order of any federal authority, and the circumstances or conditions are such that it is impracticable within a reasonable time to proceed with a substantial portion of the work, then the City and the Contractor may, by written agreement, terminate the Agreement. In accordance with California Government Code Section 4411, such an agreement will include the terms and conditions of the termination of the contract and provision for the payment of compensation or money, if any, which either party will pay to the other or any other person, under the facts and circumstances in the case. Compensation to the Contractor will be determined on the basis of the reasonable value of the work done, including preparatory work. As an exception to the foregoing, in the case of any fully completed separate item or portion of the Work for which there is a separate contract price, the contract price shall control. The parties may in any other case adopt the contract price as the reasonable value of the work or any portion of the work done.

11.2.8 In the event a termination for cause is later determined to have been made wrongfully or without cause, then the termination shall be treated as a termination for convenience, and the Contractor shall have no greater rights than it would have following a termination for convenience. Any contractor claim arising out of a termination for cause shall be made in accordance with this section.

11.3 Termination for Convenience.

11.3.1 The City may terminate performance of the Work under the Contract Documents in accordance with this clause in whole, or from time to time in part, whenever the City shall determine that termination is in the City's best interest. Termination shall be effected by the City delivering to the Contractor notice of termination specifying the extent to which performance of the Work under the Contract Documents is terminated, and the effective date of the termination.

11.3.2 Contractor shall comply strictly with the City's direction regarding the effective date of the termination, the extent of the termination, and shall stop work on the date and to the extent specified.

11.3.3 Contractor shall be entitled to a total payment on account of the Contract work so terminated measured by: (i) the actual cost to Contractor of Work actually performed, up to the date of the termination, with profit and overhead limited to twelve percent (12%) of actual cost of work performed, up to but not exceeding the actual contract value of the work completed as measured by the Schedule of Values and Progress Schedule; and (ii) offset by payments made and other contract credits. In connection with any such calculation, however, the City shall retain all rights under the Contract Documents including, without limitation, claims, indemnities, or setoffs.

11.3.4 Under no circumstances may Contractor recover legal costs of any nature, nor may Contractor recover costs incurred after the date of the termination.

11.4 Disputes.

The procedure set forth in California Public Contracts Code section 9204 (as summarized in Exhibit A attached hereto) shall apply to all "claims" by the Contractor on the City, as that term is defined in Section 9204. With respect to "claims" or any portion of a claim not resolved by way of the procedure set forth in Section 9204, the following procedure shall thereafter apply as follows:

11.4.1 In accordance with California Public Contract Code Section 20104.2, the following procedures apply to claims of $375,000 or less between the Contractor and the City:

11.4.1.1 The claim shall be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of final payment. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims.

11.4.1.2 For claims of less than fifty thousand dollars ($50,000), the City shall respond in writing to any written claim within 45 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the City may have against the Contractor.

11.4.1.2.1 If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the City and the Contractor.

11.4.1.2.2 The City's written response to the claim, as further documented, shall be submitted to the Contractor within 15 days after receipt of the further documentation or within a period of time no greater than that taken by the Contractor in producing the additional information, whichever is greater.

11.4.1.3 For claims of over fifty thousand dollars ($50,000) and less than or equal to three hundred seventy-five thousand dollars ($375,000), the City shall respond in writing to all written claims within 60 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the City may have against the Contractor.

11.4.1.3.1 If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the City and the Contractor.

11.4.1.3.2 The City's written response to the claim, as further documented, shall be submitted to the Contractor within 30 days after receipt of the further documentation, or within a period of time no greater than that taken by the Contractor in producing the additional information or requested documentation, whichever is greater.

11.4.1.4 If the Contractor disputes the City's written response, or the City fails to respond within the time prescribed, the Contractor may so notify the City, in writing, either within 15 days of receipt of the City's response or within 15 days of the City's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the City shall schedule a meet and confer conference within 30 days for settlement of the dispute.

11.4.1.5 Following the meet and confer conference, if the claim or any portion remains in dispute, the Contractor may file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from

the time the Contractor submits his or her written claim pursuant to subdivision (a) until the time that claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.

11.4.1.6 This article does not apply to tort claims and nothing in this article is intended nor shall be construed to change the time periods for filing tort claims or actions specified by Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code.

11.4.2 In accordance with California Public Contract Code Section 20104.4, the following procedures apply to civil actions to resolve claims of $375,000 or less between the City and the Contractor:

11.4.2.1 Within 60 days, but no earlier than 30 days, following the filing or responsive pleadings, the court shall submit the matter to non-binding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within 15 days by both parties of a disinterested third person as mediator, shall be commenced within 30 days of the submittal, and shall be concluded within 15 days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court or by stipulation of both parties. If the parties fail to select a mediator within the 15-day period, any party may petition the court to appoint the mediator.

11.4.2.2 If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act of 1986 (Article 3 (commencing with Section 2016) of Chapter 3 of Title 3 of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

11.4.2.2.1 Notwithstanding any other provision of law, upon stipulation of the parties, arbitrators appointed for purposes of this article shall be experienced in construction law, and, upon stipulation of the parties, mediators and arbitrators shall be paid necessary and reasonable hourly rates of pay not to exceed their customary rate, and such fees and expenses shall be paid equally by the parties,

except in the case of arbitration where the arbitrator, for good cause, determines a different division. In no event shall these fees or expenses be paid by state or county funds.

11.4.2.2.2 In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, any party who after receiving an arbitration award requests a trial de novo but does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, pay the attorney's fees of the other party arising out of the trial de novo.

11.4.2.3 The court may, upon request by any party, order any witnesses to participate in the mediation or arbitration process.

11.4.3 In accordance with California Public Contract Code Section 20104.6:

11.4.3.1 The City shall not fail to pay money as to any portion of a claim which is undisputed except as otherwise provided in the contract.

114.3.2 In any suit filed under Public Contract Code Section 20104.4 concerning this contract, the City shall pay interest at the legal rate on any arbitration award or judgment. Such interest shall accrue from date the suit was filed.

11.5 Non-Waiver.

11.5.1 Either party's waiver of any breach or failure to enforce any of the terms, covenants, conditions or other provisions of the Contract Documents at any time shall not in any way affect, limit, modify or waive that party's right thereafter to enforce or compel strict compliance with every term, covenant, condition or other provision hereof, any course of dealing or custom of the trade or oral representations notwithstanding.

11.5.2 Neither acceptance of the whole or any part of Work by City nor any verbal statements on behalf of City or its authorized agents or representatives shall operate as a waiver or modification of any provision of the Contract Documents, or of any power reserved to City herein nor any right to damages provided in the Contract Documents.

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CITY OF FORT BRAGG
416 Franklin Street
Fort Bragg, California 95437

CONTRACT, PART 3

SPECIAL PROVISIONS

12. SPECIAL PROVISIONS

12.1 Description of Work.

The Work in general consists of Street and sidewalk rehabilitation and other such items of work as are required to complete the project in accordance with this Contract, the Project Plans and Technical Specifications.

The estimate of the quantities of work to be done is approximate only, being as a basis for the comparison of bids, and the City does not expressly or by implication agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount or any portion of the work as directed by the Construction Manager.

Incidental items of construction necessary to complete the whole Work in a satisfactory and acceptable manner as shown on the Project Plans and as provided for in the Technical Specifications and not specifically referred to in this section, will be understood to be furnished by the Contractor.

12.2 Construction Limitations.

The Contractor will be expected to conduct his or her operations in a manner that creates a minimum of damage to the natural vegetation and landscape. Ingress and egress must be via the existing driveways. Care must be exercised to avoid hazards that may cause injury to persons, animals or property either during working hours of after work hours, which will include dust control, backfilling trenches immediately following pipe laying and temporary fencing as required. Excavation made under this Contract must be backfilled before leaving the Work for the night.

The Contractor will be responsible for obtaining permission from the property owners for any construction outside of the Work site or easements as shown on the plans. Equipment will be restricted to the immediate area of construction, pipe trenches will be backfilled as soon as possible.

Receptacles for construction residue, including oil, cleaning fluids, and litter must be covered. Such residues must be disposed of in a proper manner.

Construction activity within the existing right-of-way must be scheduled to minimize traffic inconvenience and safety hazards to motorists, pedestrians and cyclists.

12.3 Storm Water Pollution Prevention.

The Contractor must perform the Work in compliance with all applicable requirements of the California State Water Resources Control Board pursuant to Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002 ("General Permit") adopted pursuant to regulations adopted by the U.S. Environmental Protection Agency (USEPA) on November 16, 1990 and codified in 40 Code of Federal Regulations Parts 122, 123, 124. The General Permit applies to storm water discharges from construction sites that disturb land equal to or greater than one acre, and to construction activity that results in soil disturbances of less than one acre if the construction activity is part of a larger common plan of development that encompasses one acre or more of soil disturbance or if there is significant water quality impairment resulting from the activity. The General Permit requirements that may apply to the Contractor's performance of the Work include, but are not limited to:

a. Development and implementation of a Storm Water Pollution Prevention Plan ("SWPPP") that specifies Best Management Practices ("BMPs") that will prevent all construction pollutants from contacting storm water and with the intent of keeping all products of erosion from moving off site into receiving waters.

b. Elimination or reduction of non-storm water discharges to storm sewer systems and other waters of the nation.

c. Inspection of all BMPs.

Portions of the Work that may be subject to the General Permit include, but are not limited to clearing, grading, stockpiling and excavation.

Prior to commencing performance of the Work, the Contractor must prepare and file a Notice of Intent to obtain coverage under the General Permit, a vicinity map, and the applicable fee, with the California State Water resources Control Board, Division of Water Quality, Storm Water Permit Unit, P.O. Box 1977, Sacramento, California 95812-1977.

Prior to commencing performance of the Work, the Contractor must also prepare an SWPPP in accordance with all applicable requirements of the

General Permit and submit the SWPPP to the Construction Manager for approval.

The Contractor must also develop and implement a monitoring program to verify compliance with the General Permit.

The SWPPP must include a Project site map. Geometric equations, notes, details, and all data not related to water pollution control work shall be removed to provide clarity. A copy of the Project Plans must be used as a base plan, with the pertinent stage of construction shown as an overlay to accurately reflect Project Site conditions at various phases of construction.

The Contractor must revise and update the SWPPP whenever there is a change in construction operations that may affect the site drainage patterns or discharge of pollutants to surface waters, groundwaters, or a separate municipal storm sewer system.

Any fines, damages, Work delays or other impacts that result from failure of the Contractor or privities or agents of the Contractor to fully comply with the requirements of the General Permit or to fully implement the SWPPP will be solely the responsibility of the Contractor.

The Contractor must keep a copy of the General Permit, together with updates and revisions, at the Project Site and provide copies of the SWPPP at the request of the City.

12.4 Maintaining Traffic and Pedestrian Operations.

The Contractor must conduct his or her operations so as to cause the least possible obstruction and inconvenience to public traffic. Unless otherwise approved by the Construction Manager, all traffic must be permitted to pass through the Work.

Due to the need to accommodate and minimize inconvenience to the public, unless expressly specified or approved in writing by the Construction Manager, no road closures will be permitted. Public vehicular and pedestrian traffic must be allowed to travel through the Work area with an absolute minimum of interruption or impedance unless otherwise provided for in the Special Provisions or approved in writing by the Construction Manager. The Contractor must make provisions for the safe passage of pedestrians around the area of Work at all times.

Residents affected by construction must be provided passage and access through the Work area to the maximum extent possible. Where existing

driveways occur on the street, the Contractor must make provisions for the trench crossings at these points, either by means of backfill or by temporary bridges acceptable to the Construction Manager, so that the length of shut-down of any driveway is kept to a minimum. In addition, all driveways must be accessible at the end of each workday, and no driveway or property access may be closed for more than four (4) hours during the workday. Access to driveways, houses, and buildings along the road or street must be as convenient as possible and well maintained, and all temporary crossings must be maintained in good condition. To minimize the need for and complexity of detours, not more than one crossing or street intersection or road may be closed at any one time without the written approval of the Construction Manager.

The Contractor must provide multiple, advance written notices of closures to all affected property owners in a form approved by the Construction Manager.

Except as otherwise approved by the Construction Manager, the stockpiling or storing of material in City streets or rights of way shall be prohibited. Where this is unavoidable, all such materials must be piled or stored in a manner that will not obstruct sidewalks, driveways, or pedestrian crossings. Gutters and drainage channels must be kept clear and unobstructed at all times. All such materials shall be stored and handled in a manner that protects City streets, sidewalks, or other facilities from damage.

Where approved in advance by the Construction Manager, the Contractor must construct and maintain detours for the use of public traffic at his or her own expense. Failure or refusal of the Contractor to construct and maintain detours so approved at the proper time will be a material breach of the Contract subject to any and all remedies available pursuant to the Contract Documents and at law and equity. Such remedies include, but are not limited to, termination pursuant to Section 11.

Throughout performance of the Work, the Contractor must construct and adequately maintain suitable and safe crossings over trenches and such detours as are necessary to care for the public and private traffic at all times including Saturdays, Sundays and holidays.

The Contractor will be responsible for keeping all emergency services, including the Fort Bragg police and fire departments informed of obstructions to, or detours around any public or private roads caused by reasons of his or her operations.

The Contractor must comply with the State of California, Department of Transportation Manual of warning signs, lights, and devices for use and performance of work within the job site.

The fact that rain or other causes, either within or beyond the control of the Contractor, may force suspension or delay of the Work, shall in no way relieve the Contractor of his or her responsibility of maintaining traffic through the Project and providing local access as specified in this section. The Contractor must, at all times, keep on the job such materials, force and equipment as may be necessary to keep roads, streets and driveways within the Project open to traffic and in good repair and shall expedite the passage of such traffic, using such force and equipment as may be necessary.

Full compensation for conforming to the requirements of this section will be deemed included in the prices paid or the various Contract items of Work, and no additional allowances will be made therefor.

12.5 Public Safety.

The Contractor must at all times conduct the Work in accordance with Construction Safety Orders of the Division of Industrial Safety, State of California, to ensure the least possible obstruction to traffic and inconvenience to the general public, and adequate protection of persons and property in the vicinity of the Work.

No pedestrian or vehicle access way may be closed to the public without first obtaining permission of the Construction Manager.

Should the Contractor fail to provide public safety as specified or if, in the opinion of the Construction Manager, the warning devices furnished by the Contractor are not adequate, the City may place any warning lights or barricades or take any necessary action to protect or warn the public of any dangerous condition connected with the Contractor's operations, and the Contractor will be liable to the City for, and the City may deduct from amounts due or that may become due to the Contractor under the Contract, all costs incurred including, but not limited to, administrative costs.

Nothing in this section will be construed to impose tort liability on the City or Construction Manager.

Contractor acknowledges that, pursuant to the Americans with Disabilities Act ("ADA"), programs, services and other activities provided by a public entity to the public, whether directly or through a Contractor, must be accessible to the disabled public. Contractor shall provide the services

specified in the Contract Documents in a manner that complies with the ADA and any and all other applicable federal, state and local disability rights legislation. Contractor agrees not to discriminate against disabled persons in the provision of services, benefits or activities provided under the Contract Documents and further agrees that any violation of this prohibition on the part of Contractor, its employees, agents or assigns shall constitute a material breach of the Contract Documents.

12.6 Protection of Existing Facilities and Property.

The Contractor must notify Underground Service Alert (USA) for marking the locations of existing underground facilities.

Subject to Section 5 of the General Provisions, the Contractor must take all necessary measures to avoid injury to existing surface and underground utility facilities in and near the Work site. Subject to Section 5 of the General Provisions, no error or omission of utility markouts will be construed to relieve the Contractor from his responsibility to protect all underground pipes, conduits, cables or other structures affected by the Work.

The existing underground facilities in the area of Work may include telephone, television and electrical cables, gas mains, water mains, sewer pipe and drainage pipe. The various utility companies must be notified before trenching begins and at such other times as required to protect their facilities. Subject to Section 5 of the General Provisions, all underground facilities must be located and exposed ahead of trenching to prevent damage to the facilities, and to determine the depth and character of all facilities that cross or infringe on the trench prism. The Contractor must immediately notify the Construction Manager of any facilities found. If damage should occur to the existing facilities, the utility company and the City must be notified immediately and, subject to Section 5 of the General Provisions, repairs acceptable to the utility company must be made at the Contractor's expense.

The Project Plans show the underground utilities on the site of the construction insofar as they are known to the City. The drawings may not show facilities apparent from visual inspection of the site or service laterals or appurtenances, the existence of which can be inferred from the presence of other visible facilities such as buildings, meters, junction boxes, etc. on or adjacent to the construction site.

If in the performance of the Work an existing utility is encountered that is not shown on the Project Plans and is not apparent or inferable from visual inspection of the Project site, the Project Inspector must be notified

immediately. The Construction Manager will determine, subject to Section 5 of the General Provisions, whether the Project Plans or Technical Specifications should be modified, or whether the existing utility should be relocated or whether the Contractor must work around the existing utility. Subject to Section 5 of the General Provisions, the Contractor must replace, at his or her own expense, in as good condition as they were prior to the start of construction, all existing improvements and surroundings damaged by his or her operation. Reconstruction of all existing improvements must conform to CITY OF FORT BRAGG Public Works Standard Specifications and Details under the direction of and subject to the acceptance by the Construction Manager.

Subject to Section 5 of the General Provisions, should the Contractor fail to take adequate measures to avoid injury or damage to the facilities described above, the City may take any actions necessary to protect such facilities from the Contractor's operations. Subject to Section 5 of the General Provisions, the City may withhold the cost of injury to existing surface and underground utility facilities in and near the Work site from amounts due or that may become due the Contractor.

12.7 Preconstruction Conference.

A pre-construction conference will be scheduled, at which time the Contractor must present his or her proposed work schedule in accordance with Section 3.8 of the General Provisions, information concerning offsite yards, Subcontractors, location of disposal and stock pile areas, and traffic control plans. All such schedules will be subject to the approval of the Construction Manager and the applicable agencies.

City will schedule and administer intermittent progress meetings throughout duration of work. City will determine the location and time for the meetings.

12.8 Owner Notification.

The Contractor must notify all property owners and businesses affected by the Work at least 48 hours before Work is to begin. The notice must be in writing in the form of a door hanger, and must indicate the Contractor's name and phone number, type of work, day(s) and time when Work will occur. Notices must be reviewed in advance and approved by the Construction Manager.

12.9 Emergency Service Providers Notifications.

The Contractor must furnish the name and phone number of a representative that can be contacted in the event of an emergency. Said information must be reported to the City Police Department dispatcher, and updated as required to provide 24-hour phone access. Also see the Technical Specifications.

12.10 Clean up.

Attention is directed to Section 4-1.02 of the Caltrans Standard Specifications, which section is made a part of this Contract.

Before final inspection of the Work, the Contractor must clean the construction site and all ground occupied by him in connection with the Work, of all rubbish, excess material, falsework, temporary structures and equipment. All parts of the Work shall be left in a neat and presentable condition.

Nothing herein shall require the Contractor to remove warning, regulatory, and guide signs prior to formal acceptance by the Construction Manager.

12.11 Payment.

Payment for all work and work requirements specified in these Special Provisions shall be considered as included in the Contract Price and no additional allowances shall be made therefore. The Technical Specifications have specific detials for each schedule items payment.

12.12 Construction Staking.

Attention is directed to Section 3.9 of the General Provisions and Page 9 of the Technical Specifications for information on Construction Staking.

12.13 Materials Testing Allowance.

Attention is directed to Section 3.10 of the General Provisions and Materials Testing details in the Technical Specifications for information on Materials Testing Allowance.

12.14 Obstructions.

Attention is directed to Section 15, “Existing Highway Facilities,” of the Caltrans Standard Specifications, which section is made a part of this Contract.

Attention is directed to the existence of overhead and underground power, telephone, and television cable poles, underground sewer mains and laterals, underground gas mains, and underground water mains and laterals within the area in which construction is to be performed.

Prior to starting the Work, the Contractor must (a minimum of 2 working days in advance) call Underground Service Alert (USA), toll free, at 811, and provide USA with all necessary data relative to the proposed work. USA will accept calls and process information to participating agencies who have underground facilities in the area between the hours of 7:30 a.m. and 5:00 p.m. daily, except Saturdays, Sundays, and holidays. Between the hours of 5:00 p.m. and 7:30 a.m. calls will be recorded and then processed after 7:30 a.m. For emergency situations, after hours and on Saturdays, Sundays and holidays, the Contractor shall contact the organization owning the affected facility. Upon notification, agencies having facilities in the area of the proposed excavation will mark their locations in the field using USA standard colors and codes to identify the facility.

The Contractor will be required to work around public and private utility facilities and other improvements that are to remain in place within the construction area, and he will be held liable to the owners of such facilities for interference with service resulting from his operations.

12.15 Hours of Work.

Unless otherwise specified herein, all construction activity, except for emergency situations, will be confined to Monday through Friday between the hours of 7:30 a.m. and 6:00 p.m., to minimize nuisances to local residents. Mufflers and/or baffles will be required on all construction equipment to control and minimize noise. The Contractor must comply with all applicable noise regulations in the City’s Zoning Ordinance.

Saturdays, Sundays, holidays and overtime shall not be regarded as working days. Work shall not be allowed on non-working days without the expressed approval of the Construction Manager. The Contractor shall make a request for approval in writing with the stipulation (implied or expressed) that the Contractor shall pay for all overtime labor charges at the applicable hourly rate of the City or contract employee performing duties of inspector and/or

resident engineer. All overtime labor charges shall be deducted from the final payment along with any liquidated damages.

Work necessary for the proper care and protection of work already performed or in case of emergency may be allowed without permission of the Construction Manager.

12.16 Dust Control.

The Contractor must furnish all labor, equipment, and means required and carry out effective measures wherever and as often as necessary to prevent its operation from producing dust in amounts damaging to property, cultivated vegetation, or domestic animals, or causing a nuisance. The Contractor will be responsible for any damage resulting from any dust originating from the performance of the Work. The use of water resulting in mud on streets, sidewalks, or driveways, will not be permitted as a substitute for sweeping or other methods of dust control. The Contractor may not discharge smoke, dust, or any other air contaminants into the atmosphere in such quantity as will violate the regulations of any legally constituted authority.

Dust control must conform to the provisions in Sections 10-5, “Dust Control” and Section 18, “Dust Palliatives” of the Caltrans Standard Specifications, which section is made a part of this Contract.

12.17 Water for Construction and Dust Control.

Unless otherwise provided, the Contractor will be responsible for applying to the City’s Utility Department to establish utility accounts (at no charge) for all water necessary to perform the Work. The Contractor must comply with all City requirements for construction water, including provision of deposits and provision of backflow prevention devices. In accordance with State law, backflow prevention devices for construction water connections must be re-tested when relocated. The Contractor will be responsible for the cost of any re-testing.

The Contractor is prohibited from operating gate valves, fire hydrants, pumps or any other components of the City water system. The Contractor must contact the City’s utilities staff, a minimum of twenty-four (24) hours in advance, to operate these or any other components on the City water system.

12.18 Protection and Restoration of Vegetation.

Trees, lawns, shrubbery and vegetation that are not to be removed must be protected from damage or injury. Existing trees, shrubs, and other plants, that are not to be removed and are injured or damaged by reason of the Contractor's operations, must be replaced by the Contractor in accordance with the requirements in Section 20-3.01C, "Replacement," of the Caltrans Standard Specifications. Section 20-3.01C of the Caltrans Standard Specifications is made a part of this Contract.

When it is necessary to excavate adjacent to existing trees, shrubs, or hedges, the Contractor must use all possible care to avoid injury to the trees, shrubs, or hedges and their roots. No roots or limbs two inches (2") or larger in diameter may be cut without the express approval of the Construction Manager.

All roots two inches (2") in diameter and larger left in place must be wrapped with burlap to prevent scarring or excessive drying. When it is necessary to cut limbs and branches of trees to provide clearance for equipment used in construction, the Contractor must repair the damaged areas by properly painting with an emulsified asphalt type seal. All cuts through 1/2" or larger roots and limbs must be hand trimmed and cleanly cut before being repaired.

12.19 Surplus Material.

All material removed or excavated during the course of construction will be surplus. All surplus material will be the property of the Contractor and be disposed of outside the right-of-way, unless the City elects to salvage certain objects that are determined to be of historical interest. The City reserves the right of ownership of all objects that it elects to salvage, and the Contractor must protect such objects from subsequent damage until delivered unto the care of the owner.

12.20 Cultural Resources.

In accordance with the National Historic Preservation Act of 1966 (16 U.S.C. 470), the following procedures are implemented to ensure historic preservation and fair compensation to the Contractor for delays attendant to the cultural resources investigation. The Contractor hereby agrees to comply with these procedures.

12.21 Historical Finds.

In the event potential historical, architectural, archeological, or cultural resources (hereinafter called cultural resources) are discovered during subsurface excavations at the site of construction, the following procedures will apply:

1. The Contractor must immediately notify the Construction Manager and stop any Work that may jeopardize the find pending an investigation of its significance;
2. The Construction Manager will select a qualified archeologist (such as through the Northwest Information Center at Sonoma State University or other official contact) and wait for an archaeologist to complete an evaluation of significance before continuing Work in that area.
3. The Construction Manager will supply the Contractor with a “Stop Work Order” directing the Contractor to cease all portions of the Work that the Construction Manager determines may impact the find. The “Stop Work Order” will be effective until a qualified archaeologist assesses the value of the potential cultural resources. The “Stop Work Order” will contain the following:
    a. A clear description of the Work to be suspended;
    b. Any instructions regarding issuance of further orders by the Contractor for materials services;
    c. Guidance as to action to be taken regarding Subcontractors;
    d. Any direction to the Contractor to minimize costs; and
    e. Estimated duration of the temporary suspension.
4. If the archaeologist determines the potential find is a bona fide cultural resource, the Construction Manager may extend the duration of the “Stop Work Order” in writing, and if so the ”Stop Work Order” will remain in effect and Work subject to the “Stop Work Order” may not resume until authorized by the Construction Manager.

12.22 Cultural Resources Defined.

Possible indicators that a cultural resource has been found include, but are not limited to the following:

1. Prehistoric-era archaeological site indicators: obsidian tools, tool manufacture waste flakes, grinding and other implements, dwelling sites, animal or human bones, fossils, and/or locally darkened soil

containing dietary debris such as bone fragments and shellfish remains;

2. Historic-era site indicators: ceramic, glass, and/or metal.

12.23 Construction Manager's Discretion.

Once possible cultural resources are found at the Work site, the Construction Manager may use discretion to continue the Work, regardless of the cultural resource find, if the Construction Manager determines that there are overriding considerations such as the instability of the excavation site, the existence of adverse weather or other conditions that would preclude leaving the site exposed, or if the site would be unsafe to workers who would retrieve cultural resource items from therein.

CITY OF FORT BRAGG
416 Franklin Street
Fort Bragg, California 95437

CONSTRUCTION PERFORMANCE BOND

(Note: The successful bidder must use this form. Use of any other bond form may prevent a contract from forming and/or result in forfeiture of the successful bidder's bid bond.)

THIS CONSTRUCTION PERFORMANCE BOND (Bond), dated _____, is in the amount of _____ (Penal Sum), which is 100% of the Contract Sum and is entered into by and between the parties listed below to ensure the faithful performance of the Contract identified below. This Bond consists of this page and the Bond Terms and Conditions, Paragraphs 1 through 14 attached to this page. Any singular reference to _____ (Contractor), _____ (Surety), City of Fort Bragg (City), or other party shall be considered plural where applicable.

CONTRACTOR:	SURETY:
_____	_____
Name of Contractor	Name of Surety
_____	_____
Address	Principal Place of Business
_____	_____
City/State/Zip	City/State/Zip

CONSTRUCTION CONTRACT:

Agreement for the _____ (Project) located at _____ (Address), California, dated _____, in the amount of _____.

CONTRACTOR AS PRINCIPAL	SURETY
Company: (Corp. Seal)	Company: (Corp. Seal)
Signature:_____	Signature: _____
Name:_____	Name:_____
Title: _____	Title: _____

BOND TERMS AND CONDITIONS

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the City and the State of California for the complete and proper performance of the Construction Contract, which is incorporated herein by reference.

2. If Contractor completely and properly performs all of its obligations under the Construction Contract, Surety and Contractor shall have no obligation under this Bond.

3. If there is no City Default, Surety's obligation under this Bond shall arise after:

   3.1 City provides Surety with written notice that City has declared a Contractor Default under the Construction Contract pursuant to the terms of the Construction Contract; and

   3.2 City has agreed to pay the Balance of the Contract Sum:

      3.2.1 To Surety in accordance with the terms of this Bond and the Construction Contract; or

      3.2.2 To a Contractor selected to perform the Construction Contract in accordance with the terms of this Bond and the Construction Contract.

4. When City has satisfied the conditions of Paragraph 3 above, Surety shall promptly (within 40 Days) and at Surety's expense elect to take one of the following actions:

   4.1 Arrange for Contractor, with consent of City, to perform and complete the Construction Contract (but City may withhold consent, in which case the Surety must elect an option described in Paragraphs 4.2, 4.3 or 4.4 below); or

   4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors or Construction entities; provided, that Surety may not select Contractor as its agent or independent contractor or Contractor without City's consent; or

   4.3 Undertake to perform and complete the Construction Contract by obtaining bids from qualified contractors or Construction entities acceptable to City for a contract for performance and completion of the Construction Contract and, upon determination by City of the lowest responsive and responsible Bidder, arrange for a contract to be prepared for execution by City and the contractor or Contractor selected with City's concurrence, to be secured with performance and payment bonds executed by a qualified surety

equivalent to the bonds issued on the Construction Contract; and, if Surety's obligations defined in Paragraph 6 below, exceed the Balance of the Contract Sum, then Surety shall pay to City the amount of such excess; or

4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor or Contractor, and with reasonable promptness under the circumstances and, after investigation and consultation with City, determine in good faith its monetary obligation to City under Paragraph 6 below, for the performance and completion of the Construction Contract and, as soon as practicable after the amount is determined, tender payment therefor to City with full explanation of the payment's calculation. If City accepts Surety's tender under this Paragraph 4.4, City may still hold Surety liable for future damages then unknown or unliquidated resulting from the Contractor Default, as agreed by City and Surety at the time of tender. If City disputes the amount of Surety's tender under this Paragraph 4.4, City may exercise all remedies available to it at law to enforce Surety's liability under Paragraphs 6 and 7 below.

5. At all times City shall be entitled to enforce any remedy available to City at law or under the Construction Contract including, without limitation, and by way of example only, rights to perform work, protect Work, mitigate damages, advance critical Work to mitigate schedule delay, and coordinate Work with other consultants or contractors.

6. If Surety elects to act under Paragraphs 4.1, 4.2 or 4.3 above, within the time period provided in Paragraph 4, above, and complies with its obligations under this Bond, Surety's obligations under this Bond are commensurate with Contractor's Construction Contract obligations. Surety's obligations include, but are not limited to:

6.1 Contractor's obligations to complete the Construction Contract and correct Defective Work;

6.2 Contractor's obligations to pay liquidated damages; and

6.3 To the extent otherwise required of Contractor under the Construction Contract, Contractor's obligations to pay additional legal, design professional, and other costs not included within liquidated damages resulting from Contractor Default (but excluding attorney's fees incurred to enforce this Bond).

7. If Surety does not elect to act under Paragraphs 4.1, 4.2, 4.3, or 4.4, above, within the time period provided in Paragraph 4, above, or comply with its obligations under this Bond, then Surety shall be deemed to be in default on this Bond ten Days after receipt of an additional written notice from City to Surety demanding that Surety perform its obligations under this Bond. Such Surety default shall be independent of the Contractor Default. To the extent Surety's independent default causes City to suffer damages including, but not limited to, delay damages, which are different from, or in addition to (but not duplicative of) damages which City is entitled to receive under the Construction Contract, Surety shall also be liable for such damages. In the event any Surety obligation following its independent default is inconsistent or conflicts with California Civil Code Section 2809, or any other law which either prohibits, restricts, limits or modifies in any way any obligation of a surety which is larger in amount or in any other respect more burdensome than that of the principal, Surety hereby waives the provisions of such laws to that extent.

8. If Surety elects to act under Paragraphs 4.1, 4.2, 4.3 or 4.4 above, within the time period provided in Paragraph 4, above, and complies with all obligations under this Bond, Surety's monetary obligation under this Bond is limited to the Penal Sum.

9. No right of action shall accrue on this Bond to any person or entity other than City or its successors or assigns.

10. Surety hereby waives notice of any change, alteration or addition to the Construction Contract or to related subcontracts, design agreements, purchase orders and other obligations, including changes of time, and of any City action in accordance with Paragraph 5 above. Surety consents to all terms of the Construction Contract, including provisions on changes to the Contract. No extension of time, change, alteration, Modification, deletion, or addition to the Contract Documents, or of the Work (including services) required thereunder, or any City action in accordance with Paragraph 5 above shall release or exonerate Surety on this Bond or in any way affect the obligations of Surety on this Bond, unless such action is an City Default.

11. Any proceeding, legal or equitable, under this Bond shall be instituted in any court of competent jurisdiction where a proceeding is pending between City and Contractor regarding the Construction Contract, or in the Superior Court of the County of Mendocino, California, or in a court of competent jurisdiction in the location in which the Work is located. Communications from City to Surety under Paragraph 3.1 above shall be deemed to include the necessary agreements under Paragraph 3.2 above unless expressly stated otherwise.

12. All notices to Surety or Contractor shall be mailed or delivered (at the address set forth on the signature page of this Bond), and all notices to City shall be mailed or delivered as provided in the Construction Contract. Actual receipt of notice by

Surety, City or Contractor, however accomplished, shall be sufficient compliance as of the date received at the foregoing addresses.

13. Any provision in this Bond conflicting with any statutory or regulatory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein.

14. Definitions

14.1 Balance of the Contract Sum: The total amount payable by City to Contractor pursuant to the terms of the Construction Contract after all proper adjustments have been made under the Construction Contract, for example, deductions for progress payments made, and increases/decreases for approved Modifications to the Construction Contract.

14.2 Construction Contract: The agreement between City and Contractor identified on the signature page of this Bond, including all Contract Documents and changes thereto.

14.3 Contractor Default: Material failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract, limited to “default” or any other condition allowing a termination for cause as provided in the Construction Contract.

14.4 City Default: Material failure of City, which has neither been remedied nor waived, to pay Contractor progress payments due under the Construction Contract or to perform other material terms of the Construction Contract, if such failure is the cause of the asserted Contractor Default and is sufficient to justify Contractor termination of the Construction Contract.

END OF DOCUMENT

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CITY OF FORT BRAGG
416 Franklin Street
Fort Bragg, California 95437

CONSTRUCTION LABOR AND MATERIAL PAYMENT BOND

(Note: The successful bidder must use this form. Use of any other bond form may prevent a contract from forming and/or result in forfeiture of the successful bidder's bid bond.)

KNOW ALL PERSONS BY THESE PRESENTS:

1.01 WHEREAS, the City of Fort Bragg, 416 N. Franklin Street, Fort Bragg, California 95437 (City) has awarded a Contract to _____ _____ as Principal, dated the _____ day of _____, _____ (the Contract), titled THE **2022 Streets Rehabilitation** PROJECT in the amount of $_____, which Contract is by this reference made a part hereof, for the work of the following Contract:

The project work is generally described as the rehabilitation of pavement of up to eight (8) streets throughout the City, including approximately 3.5 miles of street striping on 7 additional streets, several sections of sidewalk (curb, gutter, and ADA curb ramp) installation, and rehabilitation of the specialty stamped crosswalks in the downtown business district as further described in the bid package.

1.02 WHEREAS, Principal is required to furnish a bond in connection with the Contract to secure the payment of claims of laborers, mechanics, material suppliers, and other persons as provided by law;

1.03 NOW, THEREFORE, we, the undersigned Principal and _____ _____ , as Surety, are held and firmly bound unto City in the sum of 100% OF THE CONTRACT PRICE **($_____)**, for which payment well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

1.04 THE CONDITION OF THIS OBLIGATION IS SUCH, that if Principal, or its executors, administrators, successors, or assigns approved by City, or its subcontractors shall fail to pay any of the persons named in California Civil Code Section 9100, or amounts due under the State of California Unemployment Insurance Code with respect to work or labor performed under the Contract, or for any amounts required to be deducted, withheld, and paid over to the State of California Employment Development Department from the wages of employees of Principal and subcontractors pursuant to Section 13020 of the State of California Unemployment Insurance Code with respect to such work and labor, that Surety will pay for the same in an amount not exceeding the sum specified in this bond,

plus reasonable attorneys' fees, otherwise the above obligation shall become and be null and void.

1.05 This bond shall inure to the benefit of any of the persons named in California Civil Code Section 9100, as to give a right of action to such persons or their assigns in any suit brought upon this bond. The intent of this bond is to comply with the California Mechanic's Lien Law.

1.06 Surety, for value received, hereby expressly agrees that no extension of time, change, modification, alteration, or addition to the undertakings, covenants, terms, conditions, and agreements of the Contract, or to the work to be performed thereunder, shall in any way affect the obligation of this bond; and it does hereby waive notice of any such extension of time, change, modification, alteration, or addition to the undertakings, covenants, terms, conditions, and agreements of the Contract, or to the work to be performed thereunder.

1.07 Surety's obligations hereunder are independent of the obligations of any other surety for the payment of claims of laborers, mechanics, material suppliers, and other persons in connection with Contract; 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 City's rights against the other.

1.08 Correspondence or claims relating to this bond shall be sent to Surety at the address set forth below.

IN WITNESS WHEREOF, we have hereunto set our hands this _____day of _____ , 2023.

CONTRACTOR AS PRINCIPAL	**SURETY**
Company: (Corp. Seal)	Company: (Corp. Seal)
_____	_____
Signature	Signature
_____	_____
Name	Name
_____	_____
Title	Title
_____	_____
Street Address	Street Address
_____	_____
City, State, Zip Code	City, State, Zip Code

END OF DOCUMENT

FORT BRAGG
416 Franklin Street
Fort Bragg, California 95437

MAINTENANCE BOND

(Note: The successful bidder must use this form. Use of any other bond form may prevent a contract from forming and/or result in forfeiture of the successful bidder's bid bond.)

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS the City Council of the CITY OF FORT BRAGG has awarded to _____, (designated as the "PRINCIPAL") a contract for the 2022 Streets Rehabilitation Project, Project No. PWP-00120, which contract and all of the contract documents as defined therein (designated as the "Contract") are hereby made a part hereof; and

WHEREAS, the PRINCIPAL is required under the terms of the Contract to furnish a bond for the correction of any defects due to defective materials or workmanship in the work performed under the Contract.

NOW, THEREFORE, we the PRINCIPAL and the undersigned _____ _____, as surety (designated as "SURETY"), an admitted surety insurer authorized to do business in the State of California, are held and firmly bound unto the CITY OF FORT BRAGG, (designated as the "OBLIGEE"), in the penal sum of _____ Dollars ($_____), lawful money of the United States, being a sum not less than ten percent (10%) of the final Contract price, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that if, during a maintenance period of one (1) year from the date of acceptance by the OBLIGEE of the contracted work, the PRINCIPAL upon receiving written notice of a need for repairs which are directly attributable to defective materials or workmanship, shall diligently take the necessary steps to correct said defects within seven (7) days from the date of said notice, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

If any action shall be brought by the OBLIGEE upon this bond, a reasonable attorney's fee, to be fixed by the Court, shall be and become a part of OBLIGEE's judgment in any such action.

No right of action shall accrue on this bond to, or for the use of, any person or corporation other than the OBLIGEE named herein or the heirs, executors, administrator or successor of the OBLIGEE.

IN WITNESS WHEREOF, the above bound parties have executed this instrument under their seals this ____ day of _____, _____ the name and corporate seals

of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

(Corporate Seal) PRINCIPAL

By:_____

(Acknowledgement) Title:_____

(Corporate Seal) SURETY

By:_____
(Attorney-in-fact)

(Acknowledgement) Title:_____

(NOTE TO SURETY COMPANY: A certified copy of unrevoked resolution of authority for the attorney-in-fact must be submitted with and attached to the executed bid bond.

END OF DOCUMENT

EXHIBIT A

CLAIMS PROCEDURE

SUMMARY OF PUBLIC CONTRACT CODE § 9204

The following procedure will apply to any claims by the Contractor on the City:

A "claim" is a separate demand on the City by a contractor on a public works project and sent by registered mail or certified mail with return receipt requested, for one or more of the following:

- A time extension, including relief from penalties for delay
- Payment by the City of money damages under the terms of the contract
- Payment of an amount that is disputed by the City

Initial Review

The claim must be supported by appropriate documentation. The City has 45 days within which to review the claim and provide the contractor with a written statement identifying the disputed and undisputed portions of the claim. If the City does not issue a written statement, the claim is deemed rejected in its entirety. The City will pay any undisputed portion of the claim within 60 days of issuing the statement.

Meet & Confer

If the contractor disputes the City's written response, or if the City does not issue one, the contractor may request in writing an informal conference to meet and confer for possible settlement of the claim. The City will schedule the meet and confer conference within 30 days of this request and provide a written statement identifying the remaining disputed and undisputed portions of the claim within 10 business days of the meet and confer. The City will pay the undisputed portion within 60 days of issuing this statement.

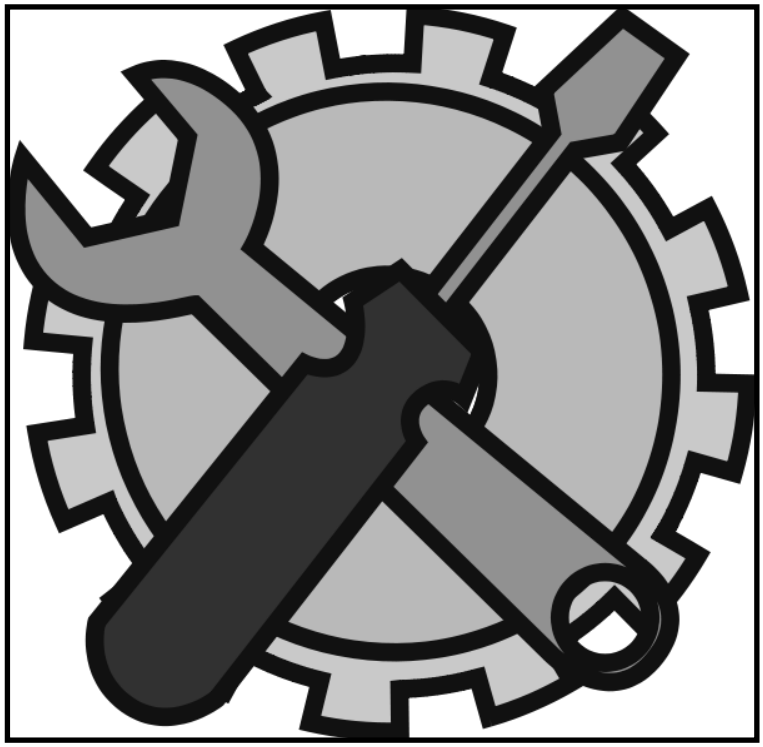
Mediation

With respect to any disputed portion remaining after the meet and confer, the City and contractor will submit the matter to nonbinding mediation, agree to a mediator within 10 business days after issuing the written statement, and share mediation costs equally. If mediation is unsuccessful, then the terms of the public works agreement and applicable law will govern resolution of the dispute.

Miscellaneous Provisions

Amounts not paid by the City in a timely manner bear interest at 7% per annum. Subcontractors may submit claims via this procedure through the general contractor. The City and contractor may waive the requirement to mediate, but cannot otherwise waive these claim procedures.

VOLUME 3



TECHNICAL SPECIFICATIONS

CITY OF FORT BRAGG
PUBLIC WORKS

2022 STREETS
REHABILITATION PROJECT

City of Fort Bragg

CITY PROJECT NO. PWP-00120

TECHNICAL SPECIFICATIONS

GENERAL

THE SPECIAL PROVISIONS CONTAINED HEREIN HAVE BEEN PREPARED BY OR UNDER THE DIRECTION OF THE FOLLOWING REGISTERED PERSONS.

TO BE SUPPLEMENTED WITH THE CALIFORNIA DEPARTMENT OF TRANSPORTATION 2018 STANDARD SPECIFICATIONS, 2018 STANDARD PLANS, THE REVISED STANDARD SPECIFICATIONS CURRENT AS OF APRIL 16TH, 2021, THE REVISED STANDARD PLANS CURRENT AS OF APRIL 16TH 2021, AND THE FORT BRAGG STANDARD SPECIFICATIONS.

Aaron Brusatori 4/13/2023

Aaron Brusatori, PE Date
Registered Civil Engineer No. 64384 Exp. 6/30/2023

5/22/23

Recommended for Approval Date

Approved By:

5/22/2023

John Smith Date
Director of Public Works

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Appendix A: Limited Geotechnical Investigation 2022 Streets Rehabilitation Project, Fort Bragg, California, dated January 16, 2023 by Geocon Consultants, Inc.

GENERAL PROVISIONS

STANDARD SPECIFICATIONS

The 2018 State of California Standard Plans and Specifications (State Standard Specifications), City of Fort Bragg Standard Specifications (City Standard Specifications) and Standard Plans (City Standard Plans), dated April 2008, the Contract Documents, the Contract Plans, Bid Forms and these Technical Specifications shall control all work to be done under this contract.

Copies of the City Standard Specifications and City Standard Plans may be obtained from the City of Fort Bragg, 416 North Franklin Street, Fort Bragg, California 95437 or are available on our website at https://city.fortbragg.com/Archive/ViewFile/Item/433. In the event of a conflict between the State Standard Specifications and the City Standard Specifications the City Standard Specifications shall control.

Unless otherwise indicated, improvements constructed under this Contract shall be constructed in accordance with the 2018 edition of the Standard Specifications of the State of California, California State Transportation Agency, Department of Transportation, which specifications are hereinafter referred to as the State Standard Specifications, and in accordance with the following modifications and revisions.

BEGINNING OF WORK

The Contractor is advised that no field construction work may commence, and the counting of working days shall not begin until Notice to Proceed is issued by the City. Work that does not involve field construction such as pre-construction meetings, creation of progress schedules, preparation of Traffic Control Plans, preparation of Storm Water Pollution Prevention Plan, etc., may occur prior to the counting of working days.

CHANGES AND EXTRA WORK

The Department may make changes within the scope of work and add extra work. The Engineer describes the changes and extra work, the payment basis, and any time adjustment in a Change Order.

A Change Order is approved when the Department signs the Change Order.

Until the Department approves a Change Order, continue to perform the work under the Contract unless the engineer orders you to start the work described in the Change Order before its approval.

Submit detailed cost data for a unit price adjustment for a bid item if (1) the Engineer requests the data or (2) you request a unit price adjustment resulting from a change of more than 25 percent in the bid item's quantity.

COORDINATION

The Contractor shall notify the City's Project Manager, Chantell O'Neal, or her designee, of any work to be performed under this Contract on any given work day either on the afternoon of the prior working day or before 8:30 a.m. on the given working day. Any work completed for which the City has not received prior notification of its scheduling MAY NOT BE ACCEPTED FOR PAYMENT.

The Contractor shall notify residents and businesses fronting on or adjacent to the Streets and Alleys of this Project of impending construction activity prior to doing any work in front of a resident's home or business office, in accordance with:

The Contractor's attention is directed to Sections 5-1.20 "Coordination with Other Entities", and 7-1.03, "Public Convenience", of the State Standard Specifications 12.9 **Owner Notification Emergency Service Providers Notifications** section of the Contract Special Provisions Part 3. The Contractor shall coordinate their work with the following entities throughout the project:

- Mendocino Coast Hospital Ambulance Service 707-937-1940
- Mendocino Transit Authority 707-234-6444
- City of Fort Bragg Police Department 707-964-0200
- City of Fort Bragg Fire Department 707-961-2831
- Waste Management of Fort Bragg 707-964-9172
- United States Postal Services 707-964-2302
- Fort Bragg Unified School District 707-961-3518

Payment

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

WORK ON PRIVATE PROPERTY

The Contractor's attention is directed to Section 5-1.36 "Property and Facility Preservation" of the State Standard Specifications and these Technical Specifications. The Contractor shall protect existing private improvements from damage. On-site private improvements may include, but are not limited to, trees, shrubbery, lawns, irrigation facilities, structures, mailboxes, pavement, curbing, fences, walls and drainage facilities.

If such objects are damaged, they shall be replaced, repaired and or restored at the Contractor's expense, to a condition as good as or better than when the Contractor entered upon the property, as determined by the City.

Work is to be constructed within existing public rights of way and Temporary Construction Agreement limits unless as otherwise directed by the City.

The Contractor shall be responsible for repairing, replacing, or restoring all fencing within the limits of Work that are damaged or removed during construction. Damage shall include all that is caused as a result of any and all work associated with the contract. All repairs to damaged fencing shall be done in a manner which results in fencing in equal or better than the previously existing conditions. Fence replacement or repair shall be completed as soon as it will not be damaged by further construction activities.

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

Payment

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

SUBMITTALS

The Contractor shall submit shop drawings, product data and samples as required for conformance with the Project Plans and Technical Specifications. Submittals shall conform to the City Standard Specifications Section 1-1.08, "Shop Drawings" and Volume 1 Submittals Section of Contract Provisions. At a minimum, the Contractor shall submit the following for review and approval by the City:

Item	Submitted	Approved	Notes
Pre-Construction Documentation			
Traffic Control Plan			
Stormwater Pollution Prevention Plan			
Class 2 Aggregate Base Gradation			
Type A HMA Mix Design			
Storm Drainage Facilities			
Nyloplast Drain Basin			
Plastic Storm Drainpipe and appurtenant structures			
Traffic Striping			
Signage			
Haul Route			
Video Acceptance Recording of SD Pipe			
Resident Notification Door Hanger			
Coordination With Other Entities Letter			
Concrete Reinforcement			
Detectable Warning Surface			
CALTRANS Encroachment Permit			

Payment

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

TECHNICAL CONSTRUCTION PROVISIONS

TRAFFIC CONTROL PLAN

Provisions for public convenience and safety, construction area traffic control, and hours of work shall be in accordance with the City Standard Specifications. Specific requirements are provided in Sections 1-1.05, and "Traffic Control Standard Specifications" of the Standard Specifications and The Contractor shall be responsible for public safety and traffic control within the Project limits and on the approaches to the Project.

Prior to performing any work that requires a lane closure, a Traffic Control Plan, prepared by the Contractor, shall be reviewed, and approved by the City of Fort Bragg.

A traffic control plan (or plans) shall be submitted for review for any work requiring modifications of existing traffic patterns. The traffic control plan shall include provisions for vehicular, pedestrian, and bicycle access. Additionally, the traffic control plan shall address traffic signal operation for any work performed within 200 feet of a signalized intersection.

Construction shall be suspended and no activities that interfere with public traffic shall be conducted on Memorial Day, Independence Day, Labor Day or Veterans Day, during the four-day Thanksgiving weekend and on December 21 through January 1 unless approved by City Engineer.

The local Fire Department, Sheriff/Police Department, California Highway Patrol, and Regional Transit (if applicable) shall be notified 24 hours in advance of construction work.

Construction area signs shall conform to the requirements of Section 1-1.05 of the Standard Specifications.

During construction, the Contractor shall not have any parking closures, in the same area, for more than three (3) consecutive working days.

With the exception of times during active paving, at least one lane of 10-foot minimum pavement width shall be maintained for each direction of travel during standard construction hours. Lane closure shall not be allowed without an approved traffic control plan, proper advance warning devices, signing and flag person control. Unless otherwise approved by the City of Fort Bragg, construction shall not be permitted on weekends and holidays.

Minor deviations from the requirements of this section concerning hours of work which do not change the cost of the work may be permitted upon the written request of the Contractor if in the opinion of the City Engineer, public traffic will be better served and the work expedited. These deviations shall not be adopted by the Contractor until the City Engineer has approved them in writing. All other modifications will be made by contract change order.

Pedestrian access facilities that comply with ADA regulations shall be provided through construction areas within the right-of-way and as specified herein. Pedestrian walkways shall be provided with surfacing of cold mix or hot mix asphalt concrete, Portland cement concrete, or timber. Surfaces shall be skid resistant and free of irregularities. After grinding, the contractor shall place cutback at curb return to eliminate tripping hazard.

Paved pedestrian access to sidewalks shall be maintained during all stages of construction. Walkways shall be maintained in good condition by the Contractor. Walkways shall be kept clear of obstructions.

Portable delineators, signs and tapers shall be installed per Section 12-3.11B(3) of the State Specifications where temporary drop-offs are created by construction.

Full compensation for providing said pedestrian facilities shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefore.

Any closure or detour of pedestrian access for contractor’s convenience shall be approved in writing by the City Engineer prior to scheduling work in the area under question. Any request for temporary closure or detour of pedestrians shall be made in writing and include plans and information showing requested duration, days of the week, routes, signing and safety measures. Approval or rejection of requests will be at the sole discretion of the City Engineer. Additional signing and safety measures for pedestrians approved as part of a pedestrian access modification

shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation shall be allowed therefore.

Measurement and Payment

All costs for maintaining traffic control systems shall be included in the LUMP SUM Price paid for the Traffic Control Plan and shall include full compensation for furnishing all labor (including flagging costs), materials (including signs and portable changeable message signs), tools, equipment and incidentals, and for doing all the work involved in placing, removing, storing, maintaining, moving to new locations, replacing, and disposing of the components of the traffic control systems as shown on the Plans, required to maintain traffic as specified in the State Specifications, in these Special Provisions, and as directed by the City Engineer and no additional compensation shall be allowed therefore.

No additional payment will be made for temporary pedestrian facilities.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

This work shall conform to the requirements in Section 13-3, ("Stormwater Pollution Prevention Plan (SWPPP) of the State Specifications and these Special Provisions.

The Contractor shall be required to prepare a SWPPP in conformance with Section 13-3 of the State Specifications. This Plan will be subject to review and approval by the City Engineer. The Plan shall be submitted to the City Engineer for review at least 5 days prior to the start of construction. During the review process, the Contractor shall revise the Plan as directed by the City Engineer. In no case will the Contractor be allowed to begin the clearing, grubbing, or earthwork operations without an approved SWPPP. If the Contractor's method fails to prevent erosion or siltation, the Contractor shall revise and adjust the control measures to provide effective control and shall be responsible for any damage resulting from erosion or siltation originating on the work site.

The Contractor shall furnish all of the labor, materials, tools, equipment and incidentals necessary to implement the erosion and sediment control measures as shown on the Contractor prepared and City approved SWPPP. All monitoring, inspections, testing, and reporting activities shall be performed by the City and are excluded from this item of work. For bidding purposes, the SWPPP is assumed to be Risk Level 2.

All fees and security deposits required for the preparation and completion of the SWPPP will be the responsibility of the Contractor. The City of Fort Bragg will obtain the necessary General Construction Storm Water Permit from the State of California and the Contractor will be required to conform to permit requirements.

Measurement and Payment

Conformance with all applicable erosion and sediment control requirements shall be included in the LUMP SUM Price. Measurement will be based on the percentage of work completed as determined by the City Engineer. SWPPP and shall include full compensation for furnishing all labor materials, tools, equipment and incidentals for doing the work involved and no additional compensation shall be allowed therefore.

CONSTRUCTION STAKING

The Contractor's attention is directed to Section 5-1.26 "Construction Surveys" of the State Specifications. The Contractor shall be responsible for providing all necessary construction stakes and marks to establish the lines and grades for the construction and completion of the work, including but not limited to, control and base lines, offset lines, cut/fill grade stakes, and temporary survey stakes.

The Contractor shall employ a person authorized to perform Land Surveying in the State of California to perform all necessary construction staking and survey work. All construction stakes and marks set by the Contractor's Land Surveyor or Civil Engineer, shall be carefully preserved by the Contractor. In case such stakes and marks are destroyed or damaged, they shall be promptly replaced, at the direction of the City Engineer, at no additional cost to the City.

Work performed under this bid item shall include as-built information for any storm water improvements (DI Invert and grate elevations and locations, flow line for laterals, alignment of lateral connections to manhole, mainline alignment and depth, etc.) that deviate from the Project Plans. The as built information shall be provided within 5 working days of completion of the survey, and the data shall be formatted to be imported in ArcGIS.

The Contractor will be provided CAD files to assist the construction staking effort. The City will provide reference files containing project control lines, aerial photogrammetric mapping of existing facilities (without digital terrain model), and proposed roadway improvements only. CAD files for plan sheets, electrical facilities, planting, and survey control will not be provided. These electronic files will be provided to the contractor upon contractor request once notice to proceed has been given.

Measurement and Payment

Construction Staking shall be paid for by LUMP SUM Price and shall include full compensation for furnishing all labor materials, tools, equipment and incidentals for doing the work involved in establishing the lines and grades, as shown on the plans, as specified in the Standard Specifications, State Specifications and these special provisions, and as directed by the Engineer, and no additional compensation shall be allowed, therefore.

REMOVE BASE & SURFACING

Removal of base, asphalt concrete, concrete curb, gutter, and sidewalks shall conform to Section 39-3.05 "Remove Base & Surfacing" and Section 15-1.03B "Removing Concrete" of the State Specifications, these Special Provisions, and as directed by the City Engineer.

The Contractor shall remove base, asphalt concrete, and concrete at the locations shown on the Project Plans. The quantities shown on the Project Plans assume that the Contractor will remove 2 feet of roadway along areas of new curb and gutter to provide adequate working space. The Contractor shall not be paid for any area of removed roadway base and surfacing in excess of these 2 feet, unless otherwise directed by the City Engineer. The Contractor will only be paid for the removal of base and surfacing as shown on the Project Plans. Roadway excavation and the removal and base of surfacing in all other areas will be paid for through other various bid items.

The Contractor shall protect existing concrete structures that are not shown for removal on the Project Plans. Any concrete structures damaged by the Contractors activities that are not shown to be removed on the Plans shall be repaired at the Contractor's expense.

The City Engineer may remove locations of work or specify additional project locations. Additional locations shall be paid for at the contract unit price of the appropriate bid items and no additional compensation will be allowed therefore.

Should lawn sod removed during excavation operations not be suitable for replacement in its original location due to Contractor negligence, new sod shall be furnished and placed by the Contractor at his expense to the satisfaction of the City Engineer. The City Engineer shall determine if new sod shall be required. Yard drain pipes and sprinkler heads and lines located near the existing back of sidewalk shall be protected from damage. Sewer cleanouts located near the existing back of sidewalk shall also be protected from damage and remain free of debris. Any damage shall be repaired at the Contractor's expense to the satisfaction of the City Engineer.

Measurement and Payment:

The contract unit price paid per SQUARE FEET of Remove Base & Surfacing shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and for doing all work involved in removing base and surfacing including, but not limited to, sawcutting, excavation, disposal of excess materials, and protecting facilities and structures not shown for removal as specified in the Standard Specifications, these Special Provisions, and as directed by the City Engineer and no additional compensation will be allowed therefore.

CLASS 2 AGGREGATE BASE

Aggregate Base (AB) shall be Class 2 and shall conform to Section 26, “Aggregate Bases,” of the State Specifications, and these Special Provisions.

Aggregate base shall be produced from commercial quality aggregate consisting of broken stone, crushed gravel, clean, rough-surfaced gravel and sand, or a combination thereof. The grading of the material shall be three-fourth inch (3/4”) maximum. Spreading and compacting shall be performed by methods that will produce a uniform base when firmly and properly compacted free from pockets of course or fine material.

Class 2 aggregate base shall be placed conforming to the Project Plans, Standard Drawings in the Standard Specifications, and as directed by the City Engineer.

Measurement and Payment:

The contract unit price paid per CUBIC YARD of Class 2 Aggregate Base shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and for doing all work involved in furnishing, placing, grading, and compacting Class 2 Aggregate Base, as specified in the State Standard Specifications, these Special Provisions, or as directed by the City Engineer and no additional compensation will be made therefore.

HOT MIX ASPHALT (TYPE A)

Hot Mix Asphalt (Type A) used shall conform to Section 39 “Asphalt Concrete” of the Standard Specifications and these Special Provisions.

The base course for Hot Mix Asphalt (Type A) shall be ¾” gradation. The top lift of Hot Mix Asphalt (Type A) shall be ½” gradation.

Supplying, mixing, proportioning, and storing Hot Mix Asphalt (Type A) shall conform to the requirements as specified in Section 39 “Asphalt Concrete” of the Standard Specifications except as specified herein.

The Contractor shall submit in writing to the City Engineer a complete mix design as described in Section 39-2.01A(3)(b) “Job Mix Formula” of the Standard Specifications.

Placement

The methods and equipment furnished by the Contractor shall produce a layer of asphalt concrete conforming to the requirements, including straightedge tolerance, of Section 39 "Asphalt Concrete," of the State Specifications.

The placement of all Hot Mix Asphalt (Type A) shall be done in uniform lifts. Any asphalt concrete structural sections replaced shall be brought to the elevation of the adjacent existing asphalt before Hot Mix Asphalt (Type A) is placed. The only allowable joints on the top lift of HMA (Type A) shall be the joints between the new and existing asphalt and the Contractor shall overlap said joint.

Measurement and Payment

Hot Mix Asphalt (Type A) shall be paid for on a per TON basis per Section 39-2.01D “Payment” of the State Specifications. Measurement will be based on the actual tons of Hot Mix Asphalt (Type A) installed as determined by the volume reported on Contractor provided truck tags. The contract unit price paid for shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all work involved in production, delivery, pre-overlay preparation, emulsion, compaction and placement of Hot Mix Asphalt (Type A) as shown on the Project Plans, as specified in these Special Provisions, as specified in the Standard Specifications, and as directed by the City Engineer and no additional compensation will be made therefore.

There is no Bid Item for Tack Coat. Full compensation for the furnishing and placement of Tack Coat will be considered as included in the prices paid for the various contract items of work and no additional payment shall be made therefore.

COLD PLANE

Cold Plane asphalt concrete shall conform to Section 39-3.04, “Cold Planing Asphalt Concrete Pavement,” of the State Specifications and these Special Provisions.

The Contractor shall cold plane asphalt concrete to the depths and at the locations shown on the Project Plans.

Measurement and Payment

Cold Plane shall be paid for on a per SQUARE FOOT basis. Measurement will be based on the actual square feet of Cold Plane performed as determined by measurement along the perimeter of the area of Cold Plane. The contract unit price paid for shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and for doing all work involved in the cold plane of asphalt concrete pavement including asphalt concrete tapers and material transport or disposal as shown on the Project Plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the City Engineer and no additional compensation will be made therefore.

4" DIGOUT

For all areas requiring 4" Digouts, the Contractor shall remove the existing asphalt concrete pavement and base section to a minimum of 4 inches below existing grade as indicated on the Project Plans, in conformance with these Special Provisions, or as directed by the City Engineer.

The Contractor shall compact the base and sub-base material to a relative compaction of 95%. The Contractor shall then backfill with and compact HMA (Type A) to a height flush with the adjacent existing AC.

This work shall conform to the detail shown on Project Plans. The HMA and emulsion tack-coat components shall conform to the Standard Specifications. HMA (Type A) used for this operation shall conform to the Hot Mix Asphalt (Type A) bid item. The maximum allowable HMA thickness that can be placed in one lift shall be 3 inches.

Edge lines shall be vertical, straight, and uniform having a clean, sharp edge. Edge lines shall be constructed parallel and/or at right angles to the direction of traffic flow. Areas of the grading plane that are low as a result of over excavation shall be filled with HMA (Type A) at the Contractor's expense.

The dimensions, physical locations, and total number of 4" Digout locations found on the Project Plans are for estimation purposes only. The exact dimensions and physical locations shall be marked in the field by the City Engineer. The Contractor's attention is directed to Section 9, "Payment" of the State Specifications. The quantity may be extended, reduced or deleted at the discretion of the City Engineer, with no change in unit price.

In the event that a 4" Digout will be left lower than the existing adjacent surface, at the end of each work day, the Contractor shall lessen the elevation difference between the surfaces with temporary asphalt concrete tapers. The slope of the temporary asphalt concrete tapers must not be greater than 1 inch vertical in 12 inches horizontal. When temporary asphalt concrete tapers are used, asphalt concrete for tapers must be commercial quality and may be spread and compacted by any method that will produce a smooth riding surface. Temporary asphalt concrete tapers and all loose material from the underlying surface must be completely removed before placing the permanent surfacing. Elevation differences between planed pavement and lips of gutters are not required to be sloped.

<u>Unforeseen Base Repairs Before, During, and After Paving Operations</u>

Unforeseen asphalt failure may occur just prior to, during, or after paving operations. During paving operations, the Contractor shall have equipment, material, and labor on-hand to over-excavate as directed by the City Engineer (minimum of 3") and backfill with HMA (Type A) in areas of the roadway that have failed and that have been marked by the City Engineer. Approximately ten (10) working days after overlay operations for a road, the City Engineer shall inspect the roadway and may direct the Contractor to perform unforeseen base failures that occurred during and after paving operations. The Contractor shall excavate as directed by the City Engineer (minimum of 6") and backfill with HMA (Type A) areas of the roadway that have failed and have been marked by the City Engineer for repair. If unsuitable material is encountered while performing base repairs before or after paving, the work shall conform to Section 19-1.05, "Unsuitable Material," of the Standard Specifications, except that payment shall be as specified in this section.

Full compensation for labor, equipment, excavation, asphalt concrete, and aggregate base (if any) within unforeseen base repairs (i.e., base failures occurring just prior to, during, or after paving

operations) shall conform to Section 19-1.05, “Unsuitable Material,” and no additional compensation will be made therefore.

All asphalt failure digouts shall be plugged at full depth with HMA (Type A) unless otherwise directed by the City Engineer.

Measurement and Payment

The estimate quantity for 4” Digouts contains a 15% contingency to account for additional areas of asphalt failure identified for replacement during construction by the City Engineer.

4” Digout shall be paid for on a per SQUARE FOOT basis. Measurement will be based on the actual square feet of 4” Digout installed as determined by measurement along the perimeter of the digout. The contract unit price paid for 4” Digout shall include full compensation for furnishing all labor, tools, equipment, incidentals, and for doing all work involved in removal and disposal of excavated material, compacting roadway base/subgrade material, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the City Engineer, and no additional compensation shall be allowed therefore.

HMA (Type A) used for this operation shall be paid for under the Hot Mix Asphalt (Type A) bid item.

6” DIGOUT

For all areas requiring 6” Digouts, the Contractor shall remove the existing asphalt concrete pavement and base section to a minimum of 6 inches below existing grade as indicated on the Project Plans, in conformance with these Special Provisions, or as directed by the City Engineer.

The Contractor shall compact the base and sub-base material to a relative compaction of 95%. The Contractor shall then backfill with and compact HMA (Type A) to a height flush with the adjacent existing AC.

This work shall conform to the "6” Digout” detail shown on Project Plans. The HMA and emulsion tack-coat components shall conform to the Standard Construction Specifications. HMA (Type A) used for this operation shall conform to Hot Mix Asphalt (Type A) bid item. The maximum allowable HMA thickness that can be placed in one lift shall be 3 inches.

Edge lines shall be vertical, straight, and uniform having a clean, sharp edge. Edge lines shall be constructed parallel and/or at right angles to the direction of traffic flow. Areas of the grading plane that are low as a result of over excavation shall be filled with HMA (Type A) at the Contractor’s expense.

The dimensions, physical locations, and total number of HMA (Type A) Digout locations found on the Project Plans are for estimation purposes only. The exact dimensions and physical locations shall be marked in the field by the City Engineer. The quantity may be extended, reduced, or deleted at the discretion of the City Engineer, with no change in unit price.

At the option of the Contractor, placement of the top lift of HMA (Type A) Digout can be sequenced to take place after any specified Cold Plane. In the event that a HMA (Type A) Digout will be left lower than the existing adjacent surface, at the end of each work day, the Contractor shall lessen the elevation difference between the surfaces with temporary asphalt concrete tapers. The slope of the temporary asphalt concrete tapers must not be greater than 1 inch vertical in 12 inches horizontal. When temporary asphalt concrete tapers are used, asphalt concrete for tapers must be

commercial quality and may be spread and compacted by any method that will produce a smooth riding surface. Temporary asphalt concrete tapers and all loose material from the underlying surface must be completely removed before placing the permanent surfacing. Elevation differences between planed pavement and lips of gutters are not required to be sloped.

Measurement and Payment

The estimate quantity for 6" Digouts contains a 15% contingency to account for additional areas of base failure identified for replacement during construction by the City Engineer.

6" Digout shall be paid for on a per SQUARE FOOT basis. Measurement will be based on the actual square feet of 6" Digout installed as determined by measurement along the perimeter of the digout. The contract unit price paid for 6" Digout shall include full compensation for furnishing all labor, tools, equipment, incidentals, and for doing all work involved in removal and disposal of excavated material, compacting roadway base/subgrade material as shown on the Plans, as specified in the Standard Construction Specifications and these Special Provisions, and as directed by the City Engineer, and no additional compensation shall be allowed therefore.

HMA (Type A) used for this operation shall be paid for under the Hot Mix Asphalt (Type A) bid item.

UNSUITABLE MATERIAL EXCAVATION & BACKFILL (CONTINGENCY)

Unsuitable material excavation and backfill shall conform to the provisions in Section 18-5 of the Standard Construction Specifications and as specified in these Special Provisions. Unsuitable material encountered within 2 feet of the subgrade shall be paid for as Remove Base & Surfacing.

If the Contractor encounters unsuitable material in the subgrade, the material shall be removed as directed by the City Engineer. The Contractor shall furnish and place geotextile fabric as specified elsewhere in these Special Provisions.

Backfill to replace unsuitable material removed shall be placed and compacted as specified in Section 18-5.02 of the Standard Construction Specifications. Suitable backfill material shall include the following:

A. Roadway excavation material approved by the City Engineer.
B. HMA (Type A).
C. Class 2 Aggregate Base.
D. Approved combination of A, B, and C above.

The selection of the proper backfill shall be at the discretion of the City Engineer. With the exception of Geotextile Fabric, all backfill materials listed above shall be paid for under the Unsuitable Material Excavation & Backfill bid item.

Measurement and Payment

Unsuitable Material Excavation & Backfill shall be paid for on a per CUBIC YARD basis. Measurement will be based on the actual cubic yards of Unsuitable Material Excavation & Backfill removed as determined by the volume of excavated material. The contract unit price paid for shall include, but is not limited to, full compensation for furnishing all labor, tools, equipment, incidentals, and for doing all work involved in removal and disposal of excavated material, subgrade preparation, backfill, and compaction, and no additional compensation will be allowed thereof.

The estimated quantity for Unsuitable Material Excavation and Backfill is for bidding purposes only. The quantity may be extended, reduced or deleted at the discretion of the City Engineer, with no change in unit price.

STAMPED HMA

HMA used in Stamped HMA shall conform to these Special Provisions and the State Specifications.

Using flexible templates, (⅜" cable or ¼" plastic), stamp the pattern into the asphalt using a vibratory plate compactor. Stamping should be performed on a freshly placed asphalt surface when the asphalt is still pliable. If stamping into existing asphalt, the existing asphalt surface must be heated using an infrared heating apparatus heat to the surface does not exceed 325° F. Use slow cycled heat to ensure the surface does not burn.

Measurement and Payment

Stamped HMA shall be paid for on a per SQUARE FOOT basis. Measurement will be based on the actual square feet of Stamped HMA installed as determined by measurement along the perimeter of the Stamped HMA. The contract unit price paid for Stamped HMA shall include full compensation for furnishing all labor, tools, equipment, incidentals, and for doing all work involved in stamping the HMA as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the City Engineer, and no additional compensation shall be allowed therefore.

HMA (Type A) used for this operation Hot Mix Asphalt (Type A) bid item.

COLD PLANE (CONFORM GRIND)

At transitions to adjacent roadways where no pavement work is planned and as shown on the Project Plans, the Contractor shall perform a Cold Plane (Conform Grind) in conformance with Section 39-3.04 of the State Specifications.

This work shall conform to the detail shown on Project Plans. The contractor is responsible for determining grind limits and maintaining a 2.5% maximum longitudinal slope.

Measurement and Payment

Cold Plane (Conform Grind) shall be paid for on a per SQUARE FOOT basis. Measurement will be based on the actual square feet of Cold Plane (Conform Grind) performed as determined by measurement along the perimeter of the area of Cold Plane (Conform Grind). The contract unit price paid for shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and for doing all work involved in cold planning asphalt concrete pavement including asphalt concrete tapers and material transport or disposal as shown on the Project Plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the City Engineer and no additional compensation will be made therefore.

SLURRY SEAL (TYPE II)

Slurry Seal (Type II) shall conform to Section 37-3, "Slurry Seals and Micro-Surfacings" of the State Specifications and these Special Provisions.

The Contractor shall slurry seal locations as shown on the Project Plans.

The Contractor shall clean all cracks within the area to receive a slurry seal. Cracks shall be clear of all weeds, dirt, and debris before being application of slurry seal. Cracks wider than 1/4 inch shall be sealed with an approved crack treatment prior to application of the slurry seal. Sealed cracks shall be allowed to cure prior to applying the slurry seal, and cracks shall not be overfilled in order to avoid bumps in the slurry seal. Crack treatment material shall be hot applied.

Immediately preceding the slurry seal application, the Contractor shall cover all grates, slotted manholes, and other appurtenances on and adjacent to the pavement that would allow the entry of the sealing materials; mask with roofing paper, all closed manhole covers, water and gas valve box covers, monuments, bollards, monument boxes, etc.; and remove all existing raised pavement markers, thermoplastic pavement markings.

Drainage inlets shall be uncovered and cleaned to the satisfaction of the Engineer as soon as the slurry seal sets. The other surface utilities shall be uncovered and cleaned the following day after completion of the slurry seal at each location. If they are not uncovered within this time frame, no additional seal shall be placed until they are uncovered.

Gutters, curbs, sidewalks, driveways, shoulders, and other structures adjacent to the pavement to be slurry sealed shall be cleaned of excess seal to the satisfaction of the Engineer.

Measurement and Payment

Slurry Seal (Type II) shall be paid for on a per SQUARE FOOT basis. Measurement will be based on the actual square feet of Slurry Seal (Type II) performed as determined by measurement of the area measured parallel to the ground surface, not including additional quantity used for overlaps. The contract unit price paid for shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and for doing all work involved in the slurry seal of asphalt concrete pavement including, but not limited to, surface preparation, crack cleaning and filling, furnishing emulsion, aggregate, additives and water, mix design, sampling and testing, placement and spreading as shown on the Project Plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the City Engineer and no additional compensation will be made therefore.

The Contractor shall visit the site and develop their own quantity for crack treatment prior to bidding, and no additional compensation will be provided for a change in the quantity of crack treatment from the Contractor's original estimate. Crack treatment shall be included in the unit price for Slurry Seal (Type II) and no additional compensation will be allowed therefore.

DETECTABLE WARNING SURFACE

Curb ramps shall have a cast-in-place prefabricated detectable warning surface composed of vitrified polymer including aluminum oxide and shall be "Armor-Tile" Herculite Series as manufactured by Engineered Plastics, Inc. or approved equal. The color of the detectable warning surface shall "Brick Red", Federal Number 22144. The finished surfaces of the detectable warning surface shall be kept free from blemishes, paint overspray, and other materials or debris.

Measurement and Payment

Detectable Warning Surface shall be paid for on a per SQUARE FOOT basis. Measurement will be based on the actual square foot of detectable warning surfaces installed as determined by actual count. The contract unit price paid for each Detectable Warning Surface shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and for doing all work

involved in installing Detectable Warning Surface completely in place as shown on the plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the City Engineer and no additional compensation will be allowed thereof.

ADJUST UTILITY TO GRADE

As necessary due to changes in the grade of the roadway and as indicated on the Project Plans, the frames and covers of existing City-owned utility structures shall be adjusted to grade in accordance with the provisions of Section 71-5 of the State Specifications, these Special Provisions, the Project Plans, and as directed by the City Engineer.

All utility structures encountered within the limits of asphalt pavement repairs and overlays shall be carefully referenced out prior to the placement of asphalt and the locations of all utility structures shall be painted on the surface immediately after paving. All drainage and sewer manhole covers within the limits of asphalt repair shall be adjusted to grade by the Contractor. Sanitary sewer manholes and drainage manholes shall be raised to grade per the Adjust Utility to Grade detail located within the Project Plans.

Manhole openings shall be covered during the entire operation so that no debris can fall into the sewer or storm drain system. Extreme care shall be taken to prevent spilling foreign material into the drainage or sanitary sewer system. The City Engineer will require the Contractor to immediately remove manhole covers for inspection to determine if any foreign material has fallen into the manhole. The Contractor shall be required to immediately remove all foreign material from the manhole's interior.

Additionally, existing storm drain drop inlets found within the limits of the Curb Ramp & Drainage Improvements which do not require relocation or replacement as shown on the Project Plans, shall be inspected for structural integrity and conformity to Std. Drawing 407 by the Contractor and verified acceptable by the City Engineer. Upon inspection, any hood and grate compliant with Std. Drawing 403 shall be salvaged and stockpiled for later use. Place a protective covering over existing storm drain drop inlet to prevent debris from falling into the storm drain system. The City Engineer will require the Contractor to immediately remove drop inlet covers for inspection to determine if any foreign material has fallen into the drop inlet. The Contractor shall be required to immediately remove all foreign material from the drop inlet's interior. The Contractor shall verify with the City Engineer for approval of either concrete or steel grade collars for adjusting grade of drop inlet opening and resetting salvaged hood and grate to be cast in-place with concrete curb and gutter.

Utility boxes encountered within the limits of construction of concrete improvements shall be inspected for structural integrity and determined acceptable for adjustment to grade. The Contractor shall coordinate with utility owner and City Engineer to determine if the utility box needs be relocated.

All materials removed during adjustment, except the existing frame and cover, hood and grate, or utility box and cover shall become the property of the Contractor and shall be disposed of as specified herein these Special Provisions. If, in the City Engineer's judgment, the existing frame, cover, hood and grate, or utility box is unsuitable, the existing frame, cover, or hood and grate shall be replaced with new frame, cover, hood and grate, or utility box as appropriate. Unsuitable frames, covers, hood and grates, and utility boxes shall become the property of the Contractor and shall be disposed of as provided above. The cost of replacing unsuitable frames, covers, hood and grate, and utility boxes which, in the City Engineer's judgment, were damaged by the Contractor's operations shall be at the Contractor's expense.

Contractor shall start raising iron within five (5) days of completing paving work on the street.

Measurement and Payment

Adjust Utility to Grade shall be paid for on a per EACH basis. Measurement will be based on the actual number of utilities adjusted to grade by the Contractor as determined by actual count. The contract unit price paid for each Adjust Utility to Grade shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and for doing all work involved in adjusting the utilities to grade including, but not limited to, manhole frames and covers, drop inlet hood and grate, sewer cleanouts, utility boxes, water valves, and monitoring wells to finished grade as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the City Engineer and no additional compensation will be allowed therefore.

RESET TRAFFIC LOOPS

Reset of Traffic Loop Detectors must conform to the Standard Specifications and State Specifications.

Traffic signal loop detectors must be installed as shown on the Project Plans and as detailed on Std. Drawings 711 & 712.

At locations shown on the Project Plans, the Contractor must replace the loop detectors with new loop detectors conforming to Section VI “Traffic Signals” of the Standard Specifications. At advanced detector locations, loop detectors that are more than 100 feet from the associated stop bar at the signalized intersection, the Contractor must replace the loop detector with a new Type A loop detector (one per lane). If there is no existing detector handhole in the vicinity of the new loop detector, a new detector handhole and conduit connecting to the associated pull box must be supplied and installed per Std. Drawing 712. At presence detection locations, loop detectors that are less than 100 feet from the associated stop bar at the signalized intersection, the Contractor must replace the loop detector with one or more Type A loop detectors as needed so that there are four working loop detectors per lane, spaced as shown on Std. Drawing 712. If there is no existing detector handhole in the same lane as the new loop detector(s), a new detector handhole and conduit connecting to the associated pull box must be supplied and installed. Unless otherwise indicated on the Project Plans, all costs associated with the replacement of damaged loop detectors, including the supply and installation of detector handholes and connecting conduits, will be borne by the Contractor.

Construction Materials

Each inductive detector loop conductor must be continuous, unspliced, Type RHW-USE neoprene-jacketed or Type USE crosslinked polyethylene insulated No. 12 stranded copper wire. Conductor insulation thickness must be a minimum of 40 mils.

Loop detector lead-in cable must consist of 4 No. 18 AWG stranded copper conductors insulated with 9 mils minimum of polypropylene, color coded, parallel laid, twisted together with 4 to 6 turns per foot. An amorphous interior moisture penetration barrier must be provided to prevent hosing, siphoning, or capillary absorption of water along cable interstices. Aluminum-polyester shielding must be applied around the conductors. The outer jacket must be 32 mils minimum thickness, high density polyethylene conforming to ASTM D1248, 65T for Dielectric Material, Type I, Class C, Grade 5, J3. The diameter of the lead-in cable must be approximately 1/4 inch.

Installation Details

Installation and testing must conform to the details and notes shown in the Std. Drawings and these Specifications.

Unless otherwise indicated in the Contract, loop detectors must be installed after the construction of all lower lifts of paving and after construction of pavement leveling courses but prior to the placement of the final lift of asphalt concrete for the affected portion of the roadway. Inductive loop detectors must be installed as shown on Std. Drawing 711, 712 and as specified in these Specifications. The Contractor must place all loop detectors in left turn lanes that adjoin a through traffic lane so that the loop detectors are 3.5 feet from the channelizing stripe that separates the left turn lane from the through traffic lane. Detector handholes must be centered in the associated vehicle lane and must be located approximately 4 feet clear of the nearest traffic signal loop detector. Loop detectors that are installed in the vehicle lane closes to the edge of pavement, either with or without curbs and gutters, must be constructed such that the wires connecting the loops to the associated detector handhole run on the side of the loops further from the edge of pavement.

Unless otherwise shown or specified in the Contract or directed by the City Engineer in the field, each new detector loop must be 5 feet by 5 feet and must be centered in the traveled lane. All detector loops must be field marked by the Contractor and their location approved by the Agency prior to pavement cutting. For installations that will serve lanes that are not parallel or concentric to lane markings existing at the time of loop installation, the Contractor must accurately mark the future lane lines prior to pavement cutting.

Sawcut slots must be cut into the pavement to the depth and width shown on the Std. Drawings. Slots cut in the pavement must be blown out with compressed air, then dried and inspected for any sharp objects or corners, which must be removed prior to installation of loop conductors. All conductors and conductor loops installed in the traveled way must be installed so that the top of the conductor is a minimum of 5/8 inch below the surface grade of the street.
Unless specified otherwise, each loop must consist of the 3 turns of conductors for each detector loop. All detector loops located two hundred 250 feet or farther from the stop line must consist of 4 turns of conductors for each detector loop.

The loop conductors must be installed in the slots using a 5/16 to 1/4-inch wooden paddle. As it is installed, the wire must be kept under slight tension and must be kept in the slots with suitable cardboard wedges. The cardboard wedges must not be removed until the loop sealant operation requires removal.
Loop conductors must be installed without splices and must terminate in the nearest pull box. Detector loops must be joined, in series, in the nearest pull box. See the Std. Drawings for typical loop connection details.

Each detector loop must be identified and tagged by loop number, start (S), and finish (F). Loop lead-ins must be individually identified as shown on the Plans. Identification must be by means of bands placed on the lead-in cable.

Each detector loop circuit must be tested for continuity, circuit resistance, and insulation resistance at the controller location. The loop circuit resistance must not exceed 0.50 ohms plus 0.35 ohms per 100 feet of lead-in cable. The insulation resistance must be performed between each circuit conductor and ground. The meggared insulation resistance must not be less than 200 megohms. The Contractor must replace any detector loop that fails this test at the Contractor's expense. All test results and corrections of failures must be documented. Test documentation must be provided

to the Agency to become a permanent record for future reference. All testing must be completed to the satisfaction of the Agency prior to traffic signal turn-on.

All loop conductors must be spliced to a lead-in cable, which must be run from the pull box adjacent to the loop detector to a sensor unit mounted in the controller cabinet. All splices between loops and the lead-in cable must be soldered.

If the conduit is not dry, the ends of all lead-in cable must be taped and waterproofed prior to installation. If splicing is not done immediately after installation, the ends of both the loop conductors and lead-in cable must be taped and waterproofed with an electrical insulating coating. The insulating coating must be fast drying, resistant to oils, acids, alkalis and corrosive atmospheric conditions and must be compatible with the insulations used in the conductors and cables.

Sealant for inductive loop detectors must be supplied and installed by the Contractor in accordance with the State Specifications, and these Specifications.

Sealant for loop detectors must be as specified for Elastomeric Sealant. Epoxy sealant will not be permitted. The Agency might allow the use of Asphaltic Emulsion Sealant in areas scheduled for asphalt concrete overlay.
Detector handholes must be type “B.” Detector handholes must be installed at the locations shown on the Plans, in the center of the lanes and in conformance with the Std. Drawings. The cement used to join the ABS sweep “Y” to the PVC conduit must be capable of providing a solvent type weld between the two materials.

Splicing Details

All splicing must be made in a dry environment. The splice between the lead-in cable and the loop conductors in the adjacent pull box must be a soldered waterproof type. This must be accomplished by stripping and cleaning ends of wires, twisting ends together, dipping twisted ends in flux, then soldering. Open flame soldering will not be permitted. Wire insulation must not be damaged while soldering. The soldered splice must be protected with an electrical spring connector of 3-part construction.

The 3-part construction spring connector must consist of a zinc-coated, free-expanding steel spring enclosed in a steel shell with a jacket of polyvinyl chloride. The outer jacket must have a flared skirt, be flexible, and be able to withstand 105 degrees C temperature continuously. Each splice must have the spring connector sized in accordance with the manufacturer's recommendations for the number of conductors and gauges being spliced. Wire strip lengths must also be in accordance with the manufacturer's recommendations.

After the spring connector has been applied to the splice, the Contractor must apply tape sealant to the splice. The tape sealant must be applied over the entire area of the splice and overlap the spring connector and detector lead-in cable at least 1-1/2 inches. The tape sealant must be Thomas and Betts Catalog No. HSTS25 or approved equal.

The Contractor must then apply heat-shrink tubing over the splice. Heat shrink tubing must be medium or heavy wall thickness irradiated polyolefin tubing containing an adhesive mastic inner wall. Minimum wall thickness prior to contraction must be 0.04 inch. When heated, the inner wall must melt and fill all crevices and interstices of the object being covered while the outer wall shrinks to form a waterproof insulation. Each end of the heat-shrink tube or the open end of the end cap of heat-shrink tubing must, after contraction, overlap the conductor insulation at least 1-1/2. Heat shrink tubing must conform to the requirements of UL Standard 468D and ANSI C119.1, for extended insulated tubing at 600 volts. The Contractor must use the appropriate size heat-shrink

tubing from the following Thomas and Betts Catalog Numbers HS61, HS6-1L, HS4-30, HS40-400 or equal product if approved by the Agency.

All heat shrink tubing must meet the following requirements:

Shrinkage Ratio:	33 percent, maximum, of supplied diameter when heated to 125°C and allowed to cool to 25°C
Dielectric Strength:	350 kilovolts per inch, minimum
Resistivity:	10^{14} ohms - centimeter, minimum
Tensile Strength:	2,000 lbs. per square inch, minimum
Operating Temperature:	-40°C to 90°C (135°C Emergency)
Water Absorption:	0.5 percent, maximum

When 3 or more conductors are to be enclosed within a single splice using heat-shrink tubing, mastic must be placed around each conductor, prior to being placed inside the heat-shrink tubing. The mastic must be the type recommended by the manufacturer of the heat-shrink tubing.

Heat-shrink tubing must not be heated with an open flame. A heating device designed for the purpose is required. Immediately after heating the splice and while the internally applied sealant is still liquid, the open end of the splice must be clamped together until the sealant dries.

If any detector lead-in splice fails within 1 year due to poor workmanship, the Contractor must replace all detector lead-in splices made by the Contractor within the intersection.

Where shown on the Plans, detector loops must be sawcut into detector handholes. Detector handholes must be installed in accordance with these Specifications and as shown on the Std. Drawings unless otherwise specified or directed by the Agency. Splicing in the detector handholes is not permitted.

Conduit from the detector handhole to the adjacent pull box must be sized as shown below:

Conduit Size	Loop Conductors
1-1/2" minimum	1-4 pairs
2" minimum	5 or more pairs

Measurement and Payment:

Reset Traffic Loops shall be paid for on a per EACH basis and shall include all work necessary within the area identified as “Reset Traffic Loop” on the Project Plans. The contract unit price paid for shall include, but is not limited to, full compensation for furnishing all labor, materials, tools, equipment, incidentals, and for doing all work involved in the production, delivery, excavation, disposal, testing, and placement of loop detector as shown on the Project Plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the City Engineer and no additional compensation will be made therefore.

CONCRETE CURB & GUTTER

Installation of Concrete Curb & Gutter shall conform to Section 73 “Concrete Curbs and Sidewalks” of the State Specifications, Std. Drawing 205, “Curb, Gutter, and Sidewalk,” the Project Plans, these Special Provisions, and as directed by the City Engineer.

All locations of Concrete Curb & Gutter require replacement with the curb and gutter type as shown on the Project Plans. Expansion joints shall be constructed at twenty-foot (20') intervals. Sidewalk contact joints shall be constructed where newly installed curb and gutter meets existing concrete features. Control joints and scoring shall match adjacent sidewalk.

The top back of curb shall match the adjacent existing and/or new concrete sidewalks and driveways. Minor adjustments of the height of curb may be required within one half inch (1/2") without adjusting the cross section.

Curb and gutter shall be water tested in the presence of the City Engineer prior to acceptance to verify that water will flow along the flowline of the replaced curb and gutter. No standing water will be allowed. The finished surface shall be free from humps, sags, and other irregularities.

After removal of curb and gutter, improvement work shall be completed within **five (5) working days** in accordance with these and any other related specifications. Failure to complete improvement work as specified above, as determined by the City Engineer, shall result in Liquidated Damages in the sum of **ONE THOUSAND DOLLARS (1,000.00)** for each and every calendar day beyond the five (5) working days of curb and gutter removal. If work is to remain in place over the weekend or holiday, the Contractor shall install temporary pedestrian barricades and delineators.

Concrete Curb & Gutter shall be sprayed uniformly with a clear curing compound. The material, method, and rate of application shall conform to Section 90 7.01B, "Curing Compound Method," of the State Specifications except that only non-pigmented curing compound conforming to the requirements of ASTM Designation: C 309, Type 1, Class B, or of AASHTO Designation: M 148, Type 1 D, shall be used.

The cost of excavation, removal, disposal of concrete and excess materials, and saw cutting to place PCC curb and gutter shall be included in the bid price per square foot of Remove Base & Surfacing and no additional compensation will be made therefore.

Measurement and Payment

Concrete Curb & Gutter shall be paid for on a per LINEAR FOOT basis. Measurement will be based on the actual linear feet of Concrete Curb & Gutter installed as determined by measurement along the flowline. The contract unit price paid for Concrete Curb & Gutter shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and for doing all work involved in Concrete Curb & Gutter including but not limited to excavation, subgrade preparation, disposal of excess materials, imported borrow, saw cutting, and dowels, as shown on the Project Plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the City Engineer and no additional compensation will be allowed therefore.

CONCRETE SIDEWALK

Concrete Sidewalk shall conform to Section 73, "Concrete Curbs and Sidewalks" of the State Specifications, the Project Plans, these Special Provisions, and as directed by the City Engineer.

Expansion joints shall be constructed at twenty-foot (20') intervals. Sidewalk contact joints shall be constructed where newly installed Concrete Sidewalk meets existing concrete features. Expansion joints and sidewalk contact joints shall conform to Std. Drawing 205. Control joints and scoring shall match adjacent sidewalk.

New sidewalk shall be sprayed uniformly with a clear curing compound. The material, method, and rate of application shall conform to Section 90-7.01B, “Curing Compound Method,” of the State Specifications except that only non-pigmented curing compounds conforming to the requirements of ASTM Designation: C 309, Type 1, Class B, or of AASHTO Designation: M 148, Type 1-D, shall be used.

After removal of existing sidewalk, improvement work shall be completed within **five (5) working days** in accordance with these and any other related specifications. Failure to complete improvement work as specified above, as determined by the City Engineer, shall result in Liquidated Damages in the sum of **ONE THOUSAND DOLLARS (1,000.00)** for each and every calendar day beyond the five (5) working days of sidewalk removal. If work is to remain in place over the weekend or holiday, the Contractor shall install temporary pedestrian barricades.

The Concrete Sidewalk area shall be defined as the sidewalk area between the back of curb and back of walk, including curb ramps. The retaining curb at the back of curb ramps shall be considered as part of the Concrete Sidewalk area and paid for with the Concrete Sidewalk bid item.

Any damage to adjacent, existing facilities during construction of the sidewalk shall be repaired at the Contractor's expense to the satisfaction of the City Engineer.

Curb Ramp

Curb ramps shall conform to Section 73 of the State Specifications, California ADA laws, these Special Provisions, and as directed by the City Engineer.

Curb ramps shall conform to current ADA guidelines, the details shown on the Project Plans and Section 73-3, “Sidewalks, Gutter Depressions, Island Paving, Curb Ramps, and Driveways” of the State Specifications.

All curb ramps shall have a detectable warning surface located at the front edge of the landing as shown on the Project Plans. The detectable warning surface shall conform to and be paid for as specified in the “Detectable Warning Surface” section of the Special Provisions.

The Contractor shall not leave any holes or drop off edges adjacent to the work area after a curb ramp is constructed. If necessary, Contractor shall place temporary asphalt concrete surfacing around a curb ramp immediately after completion of the ramp. No additional payment will be made for the placement and maintenance of temporary surfacing.

The Contractor shall sequence the demolition and construction of all curb ramps so that pedestrians will be able to use at least one side of the street in all locations and at all times.

Curb ramps shall be paid for under the Concrete Sidewalk bid item. The curb and gutter portion of the curb ramp shall be paid for under the Concrete Curb and Gutter bid item. The curb and gutter portion shall be considered that portion of the ADA ramp from the lip of gutter to the score mark between the back of curb and the sidewalk portion. Demolition of existing curb ramps and sidewalks shall be paid for under the Remove Base and Surfacing bid item.

Measurement and Payment

Concrete Sidewalk shall be paid for on a per SQUARE FOOT basis. Measurement will be based on the actual square footage of Concrete Sidewalk installed as determined by measurement along the perimeter of the concrete sidewalk. The contract unit price paid per SQUARE FOOT of Concrete Sidewalk shall include full compensation for furnishing all labor, materials, tools, equipment,

incidentals, and for doing all work involved in installing Concrete Sidewalk including, but not limited to, excavation, subgrade preparation, disposal of excess materials, imported borrow, sawcutting and dowels, as specified in the Standard Specifications, these Special Provisions, and as directed by the City Engineer and no additional compensation will be allowed therefore.

CONCRETE DRIVEWAY CONFORM

Concrete Driveway Conform shall conform to Section 73, "Concrete Curbs and Sidewalks" of the State Specifications, the Project Plans, these Special Provisions, and as directed by the City Engineer.

PCC Driveway Conform, refers to portion of the driveway on private property that must be reconstructed to transition from back of walk to the existing on-site driveway. The width, depth, and thickness of materials for each driveway transition shall match existing. This item shall include colored concrete or stamped concrete to match existing.

Concrete driveway conforms are typically one foot to two feet in width measured from the back of walkway. The Engineer shall determine the amount and exact limits of conform in the field. The estimated quantity of driveway conform is approximate. The City reserves the right to add, eliminate and /or modify any driveway conform in the field.

New driveway shall be sprayed uniformly with a clear curing compound. The material, method, and rate of application shall conform to Section 90-7.01B, "Curing Compound Method," of the State Specifications except that only non-pigmented curing compounds conforming to the requirements of ASTM Designation: C 309, Type 1, Class B, or of AASHTO Designation: M 148, Type 1-D, shall be used.

Measurement and Payment:

The contract price paid per SQUARE FOOT of Concrete Driveway Conform includes full compensation for meeting all of the provisions of this section, furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in installing Concrete Driveway Conform including but not limited to subgrade preparation, saw cutting and dowels, as shown on the plans, as specified in the Standard Construction Specifications, State Standard Specifications and these special provisions, and as directed by the Engineer.

The cost of excavation, removal, and disposal of existing concrete driveway shall be included in the Remove Base and Surfacing Bid Item.

REMOVE DRAIN INLET

This work shall consist of, but not be limited to, the removal of the entire existing storm drain drop inlet. The entire structure, inclusive of the subsurface structure, frame, grate, and hood, shall be removed and disposed of by the Contractor. Adjacent to all areas of removal, a two foot (2') minimum width, four inches (4") minimum depth section of existing roadway pavement shall be saw cut and removed. Removed materials shall be disposed of by the Contractor. The removal of existing storm drain inlets shall be measured and paid for as part of the Remove Drain Inlet bid item.

The furnishing and placement of any backfill and pipe filling, including furnishing and placing asphalt pavement and Portland Cement Concrete shall be included in the payment for Remove Drain Inlet, and no additional compensation shall be allowed therefore.

Measurement and Payment

Remove Drain Inlet bid item shall be paid for on a per EACH basis. Measurement will be based on the actual number of drop inlets removed and replaced in-place as determined by actual count. The contract unit price paid for each Remove Drain Inlet shall include full compensation for furnishing all the labor, materials, tools, equipment, incidentals, and for doing all the work involved in removing the existing storm drain inlet, excavation, backfill and compaction complete in place, all as identified on the Project Plans, as specified in the Standard Specifications, Std. Drawings, State Specifications, these Special Provisions, and as directed by the City Engineer, and no additional compensation will be allowed therefore.

DRAIN INLET

Drain Inlet shall comply with section 51-4.02D(8), 51-4.03H, and 70-5.05 of the State Specifications. This work shall consist of, but not be limited to, furnishing, and installing storm drain inlets, frames, grates and any other materials and appurtenances to the size, shape, and details, all as per the Project Plans and appropriate Std. Drawings, described in these Special Provisions, and directed by the City Engineer.

Concrete for drain inlets shall be either Class “A” or “B” and shall conform to Section 51-1.02, “Materials” of the State Specifications. The concrete box portion of the drain inlet shall be cast to the proper grade in a maximum of two (2) placements of concrete. Use of grout to adjust the drain inlet and / or catch basin frame to the proper grade will not be permitted without written approval of the City Engineer.

Grate and frame materials and method of placement shall conform to the requirements of Section 75-1.02, “Miscellaneous Iron and Steel”, of the State Specifications. Reinforcing bar supports or other approved means shall be used to hold the frame at proper grade during final placement of concrete. Broken pieces of concrete, or other debris, shall not be used for this purpose.

At the option of the Contractor, and depending on site conditions, drain inlets may be furnished and installed as precast units, or the units may be combined precast and cast-in-place structures, provided the structures in place substantially conforms to cast-in-place construction as specified in the Standard Specifications.

As a part of the Drain Inlet bid item, the contractor shall install a permanent, cast in place storm drain medallion. The City shall provide the storm drain medallion upon request.

The price of furnishing and installing the storm drain medallion shall be included in the unit price for Drain Inlet.

Measurement and Payment

Drain Inlet bid item shall be paid for on a per EACH basis. Measurement will be based on the actual number of drop inlets installed as determined by actual count. The contract unit price paid for each Drain Inlet shall include full compensation for furnishing all the labor, materials, Class 2 Aggregate Base, tools, equipment, incidentals, and for doing all the work involved in installing the Drain Inlet including grate and frame, drainage inlet marker, excavation, backfill and compaction complete in place, all as identified on the Project Plans, Standard Specifications, Std. Drawings, State Specifications, these Special Provisions, and as directed by the City Engineer, and no additional compensation will be allowed therefore.

30” NYLOPLAST DRAIN BASIN

30” Nyloplast Drain Basin includes all tools, equipment, materials, and labor necessary for the complete installation of drainage basins at the location shown on the plans. 30” Nyloplast Drain Basin shall be install per the manufacturer’s specifications and conform to the manufacturer’s drawings and the Project Plans. All drainage basins shall have a solid cover with an H-20 traffic rating.

This bid item includes lowering and raising the structure to grade to facilitate paving activities.

Measurement and Payment

30” Nyloplast Drain Basin bid item shall be paid for on a per EACH basis, as one complete installed unit, including concrete, cast iron ring, frame, and cover. Measurement will be based on the actual number of 30” Nyloplast Drain Basin installed as determined by actual count. The contract unit price per each Nyloplast Drain Basin shall include full compensation for furnishing all labor, materials, tools, equipment and incidental costs used for doing all work involved in the complete installation of the drain basin including, but not limited to, saw cutting, excavation, forming, backfill and compaction, and temporary and permanent surface restoration, and adjust structure to grade, complete in place, all as specified in the Standard Specifications, these special provisions, and as directed by the City Engineer, and no additional compensation will be allowed.

12” HDPE SD PIPE

The work shall consist of, but not be limited to, furnishing, and placing necessary bedding material, providing, and installing twelve-inch (12”) storm drain (SD) pipes, providing shoring, dewatering, excavation, disposing of material excavated from trench, backfilling, and compacting trenches, as necessary to complete the work as specified in these special provisions, in conformance with the Standard Specifications and as shown on the Project Plans.

No pipe shall be laid until the City Engineer inspects and approves the condition of the bottom of the trench. All pipes shall be laid below and founded on select import material as specified in Section 19 of the Standard Specifications. Storm drain pipes laid in trenches at such an elevation that the top of the pipe bell has less than the minimum cover specified in Std. Detail 412 must be protected with a concrete cap, as shown on Std. Drawing 412, "HDPE Trench Installation Detail". Unless otherwise specified, the concrete used in making the cap must be Class "B" concrete conforming to Section 28-5.02B, "Portland Cement Concrete", of the State Specifications. No separate payment shall be made for concrete cap. Full compensation for all work and materials involved in the concrete cap is included in the price paid for the storm drain pipe and no separate payment will be made therefore.

The Contractor shall hire an independent television inspection service to perform a closed-circuit television inspection of all newly constructed storm drain systems. The video camera shall be able to pan and tilt and shall be equipped with high intensity lights. The video camera shall be mounted on a transporter at a height equal to the radius of the pipe. A video of the television inspection shall be produced and delivered to the Engineer in color and on readable disc format, together with a typed log of the inspection.

The video shall display the following information: The camera’s location via a continuously updated footage counter measuring the distance from point of entry. At the beginning of each run of storm drain pipe, between adjacent structures, the video shall display the project name, date, company performing the inspection and the structure’s number (as labeled on the plans) at each end.

The following conditions shall exist prior to the television inspection:

All storm drain pipes shall be installed, grouted, backfilled and compacted; all structures shall be in place and grouted; Flow line wetted with clean water immediately before televising. When the above work has been completed the contractor shall notify the Engineer 48 hours in advance of the date for television inspection. During this inspection, the contractor or authorized representative shall be present to observe the video as provided by the television camera. The following video observation shall be considered defects in the construction of the storm drain system and will require corrections prior to acceptance.

a. Off grade - 0.08 foot or more deviation from grade.
b. Joint separation - greater than one corrugation.
c. Cracked or damaged pipe or evidence of the presence of an external object bearing upon the pipe (rock, root, etc.).
d. Pipe deflection of 7.5 percent or greater, measured inside the pipe.
e. Debris or other foreign objects;
f. Other obvious deficiencies when compared to approved Plans and Specifications, these Standards and Standard Drawings.

The Contractor shall be notified in writing of any deficiencies revealed by the television inspection that will require repair, following which the contractor shall excavate and make the necessary repairs and request a television re-inspection. Television re-inspection shall be at the Contractor's expense.

12" HDPE SD Pipe shall be listed by PPI (Plastic Pipe Institute, a division of the Society of the Plastics Industry) in PPI TR-4 with a 73.4◦F hydrostatic design basis of 800 psi. The PPI listing shall be in the name of the pipe manufacturer and shall be based on ASTM D2837 and PPI TR-3 testing and validation of samples of the pipe manufacturer's production pipe.

Material Requirements - Pipe shall be high molecular weight, high density polyethylene pipe and shall have a standard dimension ratio of 32.5 (SDR 32.5). The material shall have a standard PE code designation of PE 3408 and have a cell classification of 345434C as described in ASTM D3350. The pipe shall contain no recycled compound except that generated in the manufacturer's own plant from resin of the same specification from the same raw material pipe.

The pipe shall be homogeneous throughout and free of visible cracks, bubbles, holes, foreign inclusions, or other injurious defects. It shall be uniform in color, opacity, density, and other physical properties and produced to the dimensions and tolerances specified in ASTM D2239. The inside and outside surfaces shall be semi-matte or glossy in appearance. Any pipe not meeting these criteria shall be rejected.

The polyethylene pipe manufacturer shall provide certification that stress regression testing has been performed on the specific product. The said certification shall include a stress life curve per ASTM D2837. The stress regression testing shall have been done in accordance with ASTM D2837, and the manufacturer shall provide a product supplying a minimum Hydrostatic Design basis (HDR) of 1,600 psi, as determined in accordance with ASTM D2837.

The manufacturer's certification shall state that the pipe was manufactured from one specific resin in compliance with these specifications. The certification shall state the specific resin used, its source, and list its compliance to these specifications.
All joints for the buried polyethylene pipe shall be of the thermal butt fusion type or bolted

flanges reinforced with stainless steel.

Polyethylene fittings shall be of the same material as the pipe and manufactured by the pipe manufacturer.

HDPE pipe less than 24" in diameter shall have a minimum cover of 24" from top of pipe to bottom of roadway structural section.

If an existing storm drain pipe that is abandoned or scheduled to be abandoned is in conflict with a new 12" HDPE SD pipe or any other proposed improvement, then all necessary portions of the existing pipe shall be removed and disposed of at the Contractor's expense and no additional payment shall be made for the installation of the proposed improvement.

The furnishing and placement of any backfill, asphalt pavement, and Portland Cement Concrete shall conform to Section 50 of the Standard Specifications and shall be included in the payment for 12" HDPE SD Pipe and no additional compensation shall be allowed therefore.

Substitution of a thicker walled pipe (lower SDR number) at no additional cost to the City is acceptable.

The Contractor shall furnish to the City a manufacturer's certificates showing the pipe to be installed conforms to the specified ASTM or AWWA designation. Pipe and resin producers shall be certified according to the PPI/CPPA Third Party Certification Program.

Pipe joints shall be watertight joins and must meet a 10.8-psi (74 kPa) laboratory test per ASTM D3212 and utilize a bell and spigot design with a gasket meeting ASTM F477. Fittings used with the pipe shall not reduce or impair the overall integrity or function of the pipeline. Fittings may be molded or fabricated and shall be furnished by the pipe manufacturer. The manufacturer shall provide, when required, a suitable repair coupling certified to provide a watertight seal to 3.5 psi.

Measurement and Payment

12" HDPE SD Pipe shall be paid for on a per LINEAR FOOT basis. Measurement will be based on the actual number of linear feet of pipe installed measured along at finished grade along the centerline of the trench. The contract unit price paid per linear foot of 12" HDPE SD Pipe bid item shall include full compensation for furnishing all the labor, materials, Class 2 Aggregate Base, concrete cap, tools, equipment, and incidentals for doing all the work involved in pipe installation including trenching, disposing of excavated trench material, backfilling, shoring, dewatering, compacting, temporary and permanent surface restoration, testing, complete and in place, all as specified in the Project Plans, specified in these Special Provisions, the Standard Specifications, and as directed by the City Engineer, and no additional compensation will be allowed therefore.

24" HDPE SD PIPE

The work shall consist of, but not be limited to, furnishing, and placing necessary bedding material, providing, and installing twenty-four-inch (24") storm drain (SD) pipes, providing shoring, dewatering, excavation, disposing of material excavated from trench, backfilling, and compacting trenches, as necessary to complete the work as specified in these special provisions, in conformance with the Standard Specifications and as shown on the Project Plans.

No pipe shall be laid until the City Engineer inspects and approves the condition of the bottom of the trench. All pipes shall be laid below and founded on select import material as specified in Section 19 of the Standard Specifications. Storm drain pipes laid in trenches at such an elevation

that the top of the pipe bell has less than the minimum cover specified in Std. Detail 412 must be protected with a concrete cap, as shown on Std. Drawing 412, "HDPE Trench Installation Detail". Unless otherwise specified, the concrete used in making the cap must be Class "B" concrete conforming to Section 28-5.02B, "Portland Cement Concrete", of the State Specifications. No separate payment shall be made for concrete cap. Full compensation for all work and materials involved in the concrete cap is included in the price paid for the storm drain pipe and no separate payment will be made therefore.

The Contractor shall hire an independent television inspection service to perform a closed-circuit television inspection of all newly constructed storm drain systems. The video camera shall be able to pan and tilt and shall be equipped with high intensity lights. The video camera shall be mounted on a transporter at a height equal to the radius of the pipe. A video of the television inspection shall be produced and delivered to the Engineer in color and on readable disc format, together with a typed log of the inspection.

The video shall display the following information: The camera's location via a continuously updated footage counter measuring the distance from point of entry. At the beginning of each run of storm drain pipe, between adjacent structures, the video shall display the project name, date, company performing the inspection and the structure's number (as labeled on the plans) at each end.

The following conditions shall exist prior to the television inspection:

All storm drain pipes shall be installed, grouted, backfilled and compacted; all structures shall be in place and grouted; Flow line wetted with clean water immediately before televising. When the above work has been completed the contractor shall notify the Engineer 48 hours in advance of the date for television inspection. During this inspection, the contractor or authorized representative shall be present to observe the video as provided by the television camera. The following video observation shall be considered defects in the construction of the storm drain system and will require corrections prior to acceptance.

a. Off grade - 0.08 foot or more deviation from grade.
b. Joint separation - greater than one corrugation.
c. Cracked or damaged pipe or evidence of the presence of an external object bearing upon the pipe (rock, root, etc.).
d. Pipe deflection of 7.5 percent or greater, measured inside the pipe.
e. Debris or other foreign objects;
f. Other obvious deficiencies when compared to approved Plans and Specifications, these Standards and Standard Drawings.

The Contractor shall be notified in writing of any deficiencies revealed by the television inspection that will require repair, following which the contractor shall excavate and make the necessary repairs and request a television re-inspection. Television re-inspection shall be at the Contractor's expense.

24" HDPE SD Pipe shall be listed by PPI (Plastic Pipe Institute, a division of the Society of the Plastics Industry) in PPI TR-4 with a 73.4◦F hydrostatic design basis of 800 psi. The PPI listing shall be in the name of the pipe manufacturer and shall be based on ASTM D2837 and PPI TR-3 testing and validation of samples of the pipe manufacturer's production pipe.

Material Requirements - Pipe shall be high molecular weight, high density polyethylene pipe and shall have a standard dimension ratio of 32.5 (SDR 32.5). The material shall have a standard PE code designation of PE 3408 and have a cell classification of 345434C as

described in ASTM D3350. The pipe shall contain no recycled compound except that generated in the manufacturer's own plant from resin of the same specification from the same raw material pipe.

The pipe shall be homogeneous throughout and free of visible cracks, bubbles, holes, foreign inclusions, or other injurious defects. It shall be uniform in color, opacity, density, and other physical properties and produced to the dimensions and tolerances specified in ASTM D2239. The inside and outside surfaces shall be semi-matte or glossy in appearance. Any pipe not meeting these criteria shall be rejected.

The polyethylene pipe manufacturer shall provide certification that stress regression testing has been performed on the specific product. The said certification shall include a stress life curve per ASTM D2837. The stress regression testing shall have been done in accordance with ASTM D2837, and the manufacturer shall provide a product supplying a minimum Hydrostatic Design basis (HDR) of 1,600 psi, as determined in accordance with ASTM D2837.

The manufacturer's certification shall state that the pipe was manufactured from one specific resin in compliance with these specifications. The certification shall state the specific resin used, its source, and list its compliance to these specifications.

All joints for the buried polyethylene pipe shall be of the thermal butt fusion type or bolted flanges reinforced with stainless steel.

Polyethylene fittings shall be of the same material as the pipe and manufactured by the pipe manufacturer.

HDPE pipe less than 24" in diameter shall have a minimum cover of 24" from top of pipe to bottom of roadway structural section.

If an existing storm drain pipe that is abandoned or scheduled to be abandoned is in conflict with a new 24" HDPE SD Pipe or any other proposed improvement, then all necessary portions of the existing pipe shall be removed and disposed of at the Contractor's expense and no additional payment shall be made for the installation of the proposed improvement.

The furnishing and placement of any backfill, asphalt pavement,
and Portland Cement Concrete shall conform to Section 50 of the Standard Specifications and shall be included in the payment for 24" HDPE SD Pipe and no additional compensation shall be allowed therefore.

Substitution of a thicker walled pipe (lower SDR number) at no additional cost to the City is acceptable.

The Contractor shall furnish to the City a manufacturer's certificates showing the pipe to be installed conforms to the specified ASTM or AWWA designation. Pipe and resin producers shall be certified according to the PPI/CPPA Third Party Certification Program.

Pipe joints shall be watertight joint and must meet a 10.8-psi (74 kPa) laboratory test per ASTM D3212 and utilize a bell and spigot design with a gasket meeting ASTM F477. Fittings used with the pipe shall not reduce or impair the overall integrity or function of the pipeline. Fittings may be molded or fabricated and shall be furnished by the pipe manufacturer. The manufacturer shall provide, when required, a suitable repair coupling certified to provide a watertight seal to 3.5 psi.

Alternative Material

City shall accept the use of these preferred alternative pipe materials on a case-by-case basis at the discretion of the City Engineer. The Contractor shall submit to the City Engineer for review a suitable pipe material that meets these special provisions listed herein at no additional cost to the City.

A. Acrylonitrile-Butadiene-Styrene (ABS)

18" ABS composite pipe and fittings shall meet the requirements of ASTM D2680 (ABS composite sewer pipe). Contractor shall submit to the City Engineer a manufacturer's certificate indicating that the ABS pipe was manufactured and tested in accordance with the appropriate ASTM designation prior to installation of the pipe. The pipe shall have a "home" mark to indicate full insertion of the spigot end when pipe segments are joined.

Joints shall be solvent cemented in accordance with ASTM D2235. Any excess cement from outside of pipe joint shall be removed after bell and spigot are joined. When the storm main is of a material other than ABS, the connection joint to the storm main shall be made with a flexible adapter manufactured by FERNCO or approved equal. ABS pipe shall have a minimum cover of 24 inches.

B. Polypropylene (PP)

Corrugated polypropylene (PP) pipe used for storm drainage applications shall be dual walled with a smooth interior (type S) and comply with ASTM F2881 for 18" nominal inside pipe diameter. Polypropylene compound for pipe and fitting production shall be impact modified copolymer meeting the material requirements of ASTM F2881.

PP joints must be watertight in accordance with ASTM D3212 with factory-installed gaskets conforming to ASTM F477. At a minimum, the pipe shall meet 10.8 psi (74kPa) when laboratory tested. PP storm drains may be subject to field testing for watertightness in accordance with ASTM F1417 or ASTM F2487.

The Contractor shall furnish to the City a manufacturer's certificate showing the pipe to be installed conforms to the specified ASTM Standards. PP drainage pipe shall be ADS HP Storm or approved equal.

Storm drain bedding and initial backfill shall conform to Std. Drawing 9-1 with the following exceptions. PP drainage pipe shall have a minimum 6 inches of bedding, type A or B, compacted to 95% relative compaction. PP drainage pipe less than 48 inches in diameter shall be backfilled with controlled low-strength material (CLSM) under section: 50-15.02 of the Standard Specifications. CLSM shall be placed to a level at least 12 inches above the pipe crown. Pipe installed in the trench shall have a minimum cover of 24 inches.

Measurement and Payment

24" HDPE SD Pipe shall be paid for on a per LINEAR FOOT basis. Measurement will be based on the actual number of linear feet of pipe installed measured along at finished grade along the centerline of the trench. The contract unit price paid per linear foot of 24" HDPE SD Pipe bid item shall include full compensation for furnishing all the labor, materials, Class 2 Aggregate Base, concrete cap, tools, equipment, and incidentals for doing all the work involved in pipe installation including trenching, disposing of excavated trench material, backfilling, shoring, dewatering, compacting, temporary and permanent surface restoration, testing, complete and in place, all as specified in the Project Plans, specified in these Special Provisions, the Standard Specifications and as directed by the City Engineer, and no additional compensation will be allowed therefore.

REMOVE & REPLACE WATER BAR

This work shall consist of, but not be limited to, the removal of the entire existing concrete water bar and the installation of new water bar in the same location. The Contractor shall remove and dispose of the existing water bar and complete all pavement work prior to placement of new water bar.

After the existing concrete water bar has been removed, the Contractor shall backfill with Class 2 Aggregate Base up to the bottom of the existing AC layer and compact the Class 2 Aggregate Base.

Measurement and Payment

Remove & Replace Water Bar shall be paid for on a per EACH basis. Measurement will be based on the actual number of water bars removed and replaced as determined by actual count. The contract price paid for Remove & Replace Water Bar shall include full compensation for furnishing all the labor, tools, equipment, and incidentals for doing all the work involved in the removal and replacement of the existing water bar, including, the removal and disposal of the existing water bar, compacting, temporary surface restoration, forming the new water bar with HMA, complete and in place, all as specified in the Project Plans, specified in these Special Provisions, and as directed by the City Engineer, and no additional compensation will be allowed therefore.

Class 2 Aggregate Base used for this operation shall be paid for under the Class 2 Aggregate Base bid item.

HMA (Type A) used for this operation shall be paid for under the Hot Mix Asphalt (Type A) bid item.

REMOVE SD PIPE

This work shall consist of, but not be limited to, the removal of the entire existing storm drain pipe and grouting the existing manhole connection. The Contractor shall remove and dispose of the existing storm drain pipe. The removal of existing storm drain pipe that is in line with proposed storm drain pipe shall be measured and paid for as part of the Remove SD Pipe bid item.

The furnishing and placement of any backfill, asphalt pavement, and Portland Cement Concrete shall conform to Section 28-5.02B of the State Specifications and shall be included in the payment for Remove SD Pipe and no additional compensation shall be allowed therefore.

The Contractor shall remove the entire storm drain pipe and grout the pipe's manhole connection as to not leave an opening in the existing manhole with concrete. Concrete for the manhole shall be class "A" concrete in conformance with Section 50-5 "Portland Cement Concrete" of the Standard Specifications.

Measurement and Payment

Remove SD Pipe shall be paid for on a per LINEAR FOOT basis. Measurement will be based on the actual number of linear feet of pipe removed and replaced measured along at finished grade along the centerline of the trench. The contract unit price paid per linear foot of Remove SD Pipe bid item shall include full compensation for furnishing all the labor, materials, Class 2 Aggregate Base, concrete cap, tools, equipment, and incidentals for doing all the work involved in storm drain pipe removal including trenching, disposing of excavated trench material, backfilling, shoring, dewatering, compacting, temporary and permanent surface restoration, testing, complete and in place, all as specified in the Project Plans, specified in these Special Provisions, the Standard

Specifications, and as directed by the City Engineer, and no additional compensation will be allowed therefore.

RELOCATE FENCE

This work shall consist of relocating the existing fence behind the concrete barrier curb to the locations shown on the project plans.

The existing fence shall be removed and relocated in such a way as to not damage the existing fence. Any portion of the existing fence that is damaged shall be repaired or replaced at the Contractor's expense.

Measurement and Payment:

The contract unit price paid per LINEAR FOOT of Relocate Fence shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and for doing all work involved in relocating the existing fence including, but not limited to, removing existing foundations, backfilling fence post holes, disposal of excess materials, and protecting facilities and structures not shown for removal as specified in the Standard Construction Specifications, these Special Provisions, and as directed by the City Engineer and no additional compensation will be allowed therefore.

RELOCATE FIRE HYDRANT

Existing hydrant shall be removed and relocated to the new locations shown on the plans and the Std. Drawing 502. All work associated with relocating existing fire hydrants shall comply with the Standard Specifications. The Contractor shall contact the City Maintenance Lead for inspection prior to relocating fire hydrants.

Existing hydrant assembly shall be disconnected at the existing valve. The existing valve shall remain in place. The Hydrant shall be relocated to the new location the same working day it is removed.

Existing Hydrant may be further disassembled at existing fittings at the option of the Contractor. The components to be relocated shall be cleaned of all earth and other foreign materials. All adhering concrete shall be removed from the components to be relocated.

Hydrant components that are to be relocated and which are damaged as a result of the Contractor's operations shall be repaired by the Contractor, at his expense.

Materials which are lost for any reason, and components which are damaged beyond repair as a result of the Contractor's operations shall be either replaced by the Contractor, at his expense, or, at the discretion of the Engineer, the estimated cost of replacement may be deducted from any monies due the Contractor.

Replacement for lost or damaged components shall be of the same kind and of the same or better quality and condition as the lost or damaged materials were prior to their removal.
The hydrant lateral shall be extended to the necessary length to relocate the hydrant at the location shown on the plans. The lateral shall be extended with ductile iron pipe.

A blue reflective pavement marker shall be placed in the street in front of the relocated fire hydrant 12" inches off the centerline striping as directed by the Engineer. The reflective pavement marker shall conform to the requirements of "FH Pavement Markers" bid item.

Measurement and Payment

Relocate Fire Hydrant shall be paid for on a per EACH basis. Measurement will be based on the actual number of fire hydrants relocated as determined by actual count. The contract price paid for Relocate Fire Hydrant shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in relocating fire hydrants, including all excavation, backfill, piping, fittings, reconnecting relocated hydrant to existing fire service line, disposal of excess materials, and any necessary surface restoration.

RELOCATE ROADSIDE SIGN

This work shall consist of, but not be limited to, the relocating and installing Roadside Signs conforming to the provisions in Section 82, "Signs and Markers" of the State Specifications, and as shown on the Project Plans, described in these Special Provisions, and as directed by the City Engineer.

Relocate Roadside Sign shown on the Project Plans shall be furnished and installed by the Contractor.

Prior to starting work, the Contractor shall verify and report the condition of all existing signs that are to remain or to be relocated and submit the findings to the City Engineer. At the option of the City Engineer, removed signs shall be salvaged or disposed. Existing signs to be salvaged shall be delivered, unloaded and stockpiled at the City Engineer's direction.

Roadside signs and placement of roadside signs shall conform to the latest edition of Caltrans' Traffic Manual and the California Manual on Uniform Traffic Control Devices (CA MUTCD). All roadside signs shall be diamond grade.

Measurement and Payment

Relocate Roadside Sign shall be paid for on a per EACH basis. Measurement will be based on the actual number of Roadside Signs relocated as determined by actual count. The contract unit price paid for Relocate Roadside Sign shall include, but not be limited to, full compensation for furnishing all the labor, materials, tools, equipment, incidentals, and for doing all the work involved in installing, removing and relocating of the signs, complete in place, all as shown on the Project Plans, specified in the Standard Specifications, the CA MUTCD, these Special Provisions, and as directed by the City Engineer and no additional compensation will be allowed.

Any sign or sign post damaged by the Contractor's actions shall be replaced at not cost to the City.

ROADSIDE SIGN

This work shall consist of, but not be limited to, the furnishing and installing Roadside Signs conforming to the provisions in Section 82, "Signs and Markers" of the State Specifications, and as shown on the Project Plans, described in these Special Provisions, and as directed by the City Engineer.

Roadside Sign shown on the Project Plans shall be furnished and installed by the Contractor.

Roadside signs and placement of roadside signs shall conform to the latest edition of Caltrans' Traffic Manual and the California Manual on Uniform Traffic Control Devices (CA MUTCD). All roadside signs shall be diamond grade.

Measurement and Payment

Roadside Sign shall be paid for on a per EACH basis. Measurement will be based on the actual number of Roadside Signs installed as determined by actual count. The contract unit price paid for Roadside Sign shall include, but not be limited to, full compensation for furnishing all the labor, materials, tools, equipment, incidentals, and for doing all the work involved in installing, complete in place, all as shown on the Project Plans, including, but not limited to, furnishing sign posts and aluminum signs, specified in the Standard Specifications, the CA MUTCD, these Special Provisions, and as directed by the City Engineer and no additional compensation will be allowed.

CURB PAINT

The work shall consist of, but not be limited to, painting curbs as shown on the Project Plans. Curb Paint material and method of placement shall conform to Section 84 and 85 of the 2018 California Standard Specifications, to the current California Manual on Uniform Traffic Control Devices, and to these Special Provisions.

The primer shall be compatible with the paint and applied per the manufacturer's specifications. All paint shall be the following brands, or approved equal:

Table 1: Curb Paint

Color	Type	Brand
White	Latex	Morton International, Ameritone, Colorama
Red	Acrylic	Colorama, Morton International
Yellow	Acrylic	Morton International, Ameritone, Colorama

Paint to be used only with prior written approval from the City Engineer.

All paint for new curb paint shall be applied at a minimum of two (2) full coats. First coat shall be dry prior to application of the second coat. All curbs to receive paint shall be spray painted. Brushes and rollers shall not be allowed without prior City Engineer approval. Primer shall be applied prior to the application of the final two (2) coats of paint.

Measurement and Payment

Curb Paint shall be paid for on a per LINEAR FOOT basis. Measurement will be based on the actual linear footage of Curb Paint installed as measured along the top back of curb. The contract price paid per linear foot for Curb Paint shall include full compensation for furnishing all the labor, materials, tools, equipment, incidentals, and for doing all the work involved in placing the curb markings, including referencing existing pavement markings, alignment and layout work, complete in place, all as specified in the 2018 Caltrans Standard Specifications, CA MUTCD, these Special Provisions, and as directed by the City Engineer, and no additional compensation will be allowed.

PAVEMENT PAINT

The work shall consist of, but not be limited to, painting red cross walk pavement markings and handicap pavement paint as shown on the Project Plans. Pavement paint material and method of placement shall conform to Section 84 and 85 of the 2018 California Standard Specifications, to the current California Manual on Uniform Traffic Control Devices, and to these Special Provisions.

Pavement paint shall conform to Manufacturer's recommendations and City Standards. All coating products shall be packed in standard closed containers. Each container of separately packaged

component shall be clearly and durably labeled to indicate the date of manufacture, manufacturer's batch number, quantity, color, component identification and designated name or formula specification number together with special instructions.

Broom-clean asphalt surface using mechanical brooming device, or stiff bristle hand broom. Scrape and blow fine sand and debris off of surface. Pressure washing may be necessary to remove debris. Use a non-solvent-based degreaser to remove stains. Thoroughly rinse the area and let dry for 24 hours.

Surfaces should be dry for at least 24 hours prior to applying pavement paint. The ambient temperature must be at least 50ºF and rising. The temperature of the asphalt surface must be at least 5ºF above the dew point temperature during and after applying paint. Pavement Paint application must be complete at least two hours before sunset to allow for proper cure.

Mask all adjacent areas using paint-grade masking tape. Use duct taped on concrete and asphalt surfaces. Building paper extended minimum of 48 inches beyond the edge of painted area is required to prevent over-spray of paint onto adjacent areas.

Apply pavement paint using spray texture gun (Graco RTX1500 TexSprayer) or Benron "EZ-TEX DX" sprayers, or approved equal.

The paint manufacturer shall approve spray gun settings and alternative spray equipment. The applied thickness of the paint shall be determined according to the application as noted in the following table. The City may specify greater thickness is so directed.

Pavement Paint must be applied prior to application of thermoplastic pavement marking cross walk markings.

Required Film Thickness for Vehicle Traffic

Application	**Film Thickness**
Prime Coat where applicable…….	5 wet mils (1 dry mil)
First coat……..	22 wet mils (15 dry mils)
Second coat……	22 wet mils (15 dry mils)
Third coat……	22 wet mils (15 dry mils)
Fourth coat where necessary……..	22 wet mils (15 dry mils)

Colored samples shall be provided to the City for approval prior to beginning work.

Samples shall display the following:

Terra Cotta Full Tint Color
Variations of the above if requested by the City.

Paint samples and mockups are to be applied to an asphalt surface covering a 96" x 96" area.

Approval of color and pattern to be provided in writing to the Contractor no less than 7 days prior to construction of Pavement Paint surfaces.

The primer shall be compatible with the paint and applied per the manufacturer's specifications.
All paint shall be the following brands, or approved equal:

Color	Type	Brand
Black, white	Enamel	Krylon (Premium)
White	Alkyd	Aervoe-Pacific

Pavement Paint used for red cross walks shall be Terra Cotta Full Tint color.

All paint for new pavement markings shall be applied at a minimum of two (2) full coats. First coat shall be dry prior to application of the second coat. All markings to receive paint shall be spray painted. Brushes and rollers shall not be allowed without prior City Engineer approval. Primer shall be applied prior to the application of the final two (2) coats of paint.

Measurement and Payment

Pavement Paint shall be paid for on a per SQUARE FOOT basis. Measurement will be based on the actual square footage of pavement paint installed. The contract price paid per square foot for Pavement Paint shall include full compensation for furnishing all the labor, materials, tools, equipment, incidentals, and for doing all the work involved in placing the pavement paint, including referencing existing pavement markings, alignment and layout work, complete in place, all as specified in the 2018 Caltrans Standard Specifications, CA MUTCD, these Special Provisions, and as directed by the City Engineer, and no additional compensation will be allowed.

TRAFFIC STRIPE

All permanent traffic striping within the Project limits shall be made of thermoplastic material and shall be installed per the Project Plans or as directed by the City Engineer. The work shall conform to 84 “Markings” of the State Specifications and these Special Provisions.

New, permanent thermoplastic Traffic Stripe shall be installed on each segment of the roadway within seven (7) days after final paving operations. The Contractor shall install temporary traffic stripes immediately after pavement operations are completed for each roadway and prior to opening the roadway for traffic Temporary traffic stripes shall be completely removed prior to the application of thermoplastic traffic stripes.

The supply, installation, and removal of temporary traffic stripes shall be considered incidental and included in the unit cost paid for the various items of work and no additional compensation shall be allowed therefore.

Traffic Stripe shall be measured and paid for by the linear foot, for the various details referenced in Standard Plans A20A through A20D of the State Standard Plans, along the line of the centerline of the traffic stripes, without deductions for gaps in broken traffic stripes. Details that include double stripes shall be measured along the single centerline between the pair of stripes. Crosswalks and stop bars will be measured and paid for with the “Pavement Marking” bid item.

Temporary striping and pavement markings shall conform to the provisions of Section 12 "Temporary Traffic Control” of the State Specifications.

Measurement and Payment

Traffic Stripe shall be paid for on a per LINEAR FOOT basis. Measurement will be based on the actual linear feet of Traffic Stripe installed as determined by measurement along the centerline of stripe or pair of stripes. The contract unit price paid for shall include full compensation for furnishing

all labor, materials, tools, equipment and incidentals and for dong all the work involved in installing traffic stripes and temporary traffic stripes, including layout, pavement markers, and establishing alignment for traffic stripes, as shown on the Project Plans, as specified in the Standard Specifications, these Special Provisions and State Specifications and as directed by the City Engineer and no additional compensation shall be allowed therefore.

Pavement markers installed to indicate the location of a fire hydrant, as shown on the Project Plans, shall be paid for with the Fire Hydrant Pavement Marker bid item.

PAVEMENT MARKING

This section includes furnishing and installing thermoplastic Pavement Markings. All permanent pavement markings within the Project limits shall be made of thermoplastic material and shall be installed per the Project Plans or as directed by the City Engineer. The work shall conform to Section 84 of the State Specifications and these Special Provisions.

This section includes furnishing and installing pavement markers as shown on the Project Plans and the State Std. Drawings. The work shall conform to Section 84 of the State Specifications and these Special Provisions. Except as otherwise provided in Section 85-1.06 of the State Specifications, pavement markers shall be cemented to the pavement with hot melt bituminous adhesive or Rapid Set type epoxy adhesive. All pavement markers, excluding Fire Hydrant Pavement Markers which are paid for with the Fire Hydrant Pavement Marker bid item, shall be included in this bid items and separate payment shall be made.

Measurement and Payment

Pavement Marking shall be paid for on a per SQUARE FOOT basis. Measurement will be based on the actual square foot of Pavement Marking installed as determined by measurement of area listed on the Project Plans and referenced State Standard Plans. The contract unit price paid for shall full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and placing pavement markings and furnishing and placing pavement markers, complete in place, including layout, and establishing alignment for pavement markings as directed on the Project Plans, as specified in the State Specifications, these Special Provisions and as directed by the City Engineer, and no additional compensation shall be allowed therefore.

REMOVE TRAFFIC STRIPE

Remove Traffic Stripe shall conform to Section 84-9.03B, “Remove Traffic Stripes and Pavement Markings” of the State Specifications and these Special Provisions. Traffic stripe is defined as paint, thermoplastic, or other stripe material including pavement markers. The Contractor shall remove all traffic stripes and pavement markers, as indicated on the Project Plans, regardless of material type that conflict with the new traffic stipes.

Traffic stripes must be removed by sandblasting or approved grinding method. To protect the public when sandblasting is performed within 10 feet of a lane occupied by vehicular traffic, the sandblast equipment must be equipped with a shield and a vacuum attachment operating concurrently with the pressure equipment to immediately remove grindings and sand from the surface of the roadway. The Contractor must immediately remove all remaining sand and grindings from the roadway.

Handling and disposal of hazardous materials associated with the removal of traffic stripes and pavement markings must comply with all applicable Federal, State, and local laws, rules, regulations, ordinances, and statutes. The Contractor is responsible for all costs associated with non-compliance, including any fines levied.

Placement of permanent or temporary pavement markings, as detailed in 84-2.03 “Application of Stripes and Markings,” of the State Specifications, is required prior to opening the subject portion of roadway to traffic.

Measurement and Payment

Remove Traffic Stripe shall be paid for on a per LINEAR FOOT basis. Measurement will be based on the actual linear feet of traffic stripe removed as determined by measurement along the centerline of stripe or pair of stripes. Remove Traffic Stripe will be paid for off of the centerline measurement regardless of the stripe width. Traffic stripes with gaps or skipped striping will only be measured along portions with traffic striping; gaps without striping will not be measured for payment. The contract unit price paid for the removal of traffic stripe shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals and for dong all the work involved in removing traffic stripes, including temporary striping, removal of roadway debris and disposal of all waste, as shown on the Project Plans, as specified in the Standard Specifications, State Specifications, these Special Provisions, and as directed by the City Engineer and no additional compensation shall be allowed therefore.

REMOVE PAVEMENT MARKING

Remove Pavement Marking shall conform to Section 84-9.03B, “Remove Traffic Stripes and Pavement Markings” of the State Specifications and these Special Provisions. Pavement Marking is defined as paint, thermoplastic, or other stripe material. The Contractor shall remove all pavement markings, as indicated on the Project Plans, regardless of material type that conflict with the new pavement markings.

Pavement markings must be removed by sandblasting or approved grinding method. To protect the public when sandblasting is performed within 10 feet of a lane occupied by vehicular traffic, the sandblast equipment must be equipped with a shield and a vacuum attachment operating concurrently with the pressure equipment to immediately remove grindings and sand from the surface of the roadway. The Contractor must immediately remove all remaining sand and grindings from the roadway.

Handling and disposal of hazardous materials associated with the removal of traffic stripes and pavement markings must comply with all applicable Federal, State, and local laws, rules, regulations, ordinances, and statutes. The Contractor is responsible for all costs associated with non-compliance, including any fines levied.

Placement of permanent or temporary pavement markings, as detailed in 84-2.03 “Application of Stripes and Markings,” of the State Specifications, is required prior to opening the subject portion of roadway to traffic.

Measurement and Payment

Remove Pavement Marking shall be paid for on a per SQUARE FOOT basis. Measurement will be based on the actual square feet of pavement marking removed as installed as determined by measurement of area listed on the Project Plans and referenced State Standard Plans. The contract unit price paid for the removal of pavement markings shall include full compensation for

furnishing all labor, materials, tools, equipment and incidentals and for doing all the work involved in removing traffic stripes, including temporary striping, removal of roadway debris and disposal of all waste, as shown on the Project Plans, as specified in the Standard Specifications, these Special Provisions and as directed by the City Engineer and no additional compensation shall be allowed therefore.

FIRE HYDRANT PAVEMENT MARKER

This section includes furnishing and installing fire hydrant pavement markers as shown on the Project Plans and the State Standard Plans. The work shall conform to Section 84 of the State Specifications and these Special Provisions. Except as otherwise provided in Section 85-1.06 of the State Specifications, pavement markers shall be cemented to the pavement with hot melt bituminous adhesive or Rapid Set type epoxy adhesive.

Blue reflective pavement markers used to mark fire hydrants shall be placed 6" to the hydrant side of the center stripe or in the center of the roadway when no center strip is present. Blue reflective pavement markers shall not conflict with permanent traffic stripe and no overlapping shall occur.

Measurement and Payment

FH Pavement Marker shall be paid for on a per EACH basis. Measurement will be based on the actual number of FH Pavement Markers installed as determined by actual count. The contract unit price paid for shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and placing pavement markers, complete in place, including adhesives, and establishing alignment for pavement markers as specified in the State Specifications, these Special Provisions and as directed by the City Engineer, and no additional compensation shall be allowed therefore.

MONUMENT PRESERVATION

This work shall consist of, but not be limited to, all labor, instruments, tools, stakes, and other materials required to identify, preserve and protect all existing survey information, inclusive of survey monuments and markers, within the Project's area of disturbance as described in these Special Provisions, Section 81 of the Standard Specifications, Section 8700 of the California Business & Professions Code, the California Streets & Highways Code and as directed by the City Engineer. The Contractor's attention is directed to the California Business and Professions Code, Section 8771. Survey monuments and markers are hereinafter referred to as "monuments."

The Contractor shall have a California Licensed Land Surveyor or Professional Engineer legally authorized to practice land surveying evaluate the project site, including all staging areas, no more than one (1) month prior to start of construction to investigate, verify, and reference the location of existing monuments and/or survey markers which may be disturbed during the course of construction. The Contractor shall be fully responsible for the accuracy of identifying, preserving, and perpetuation for any and all survey monuments in danger of being disturbed by the construction activities of this Project. Existing monuments and/or survey markers to be preserved may be considered recorded or unrecorded and may not be visible from the ground's surface. This Licensed Land Surveyor or Professional Engineer legally authorized to practice land surveying shall prepare a Pre-Construction Certificate of Monument Preservation to document whether monuments and/or survey markers exist or do not exist in the area which may be disturbed during the course of construction. Information detailing the characteristics of existing monuments shall be included in this document. The Pre-Construction Certificate of Monument Preservation shall be provided to the City prior to the start of construction. The Contractor shall be responsible for ensuring this Licensed Land Surveyor or Professional Engineer legally authorized to practice land surveying resets all

existing monuments and other survey markers destroyed during construction and records the proper documentation per California Business and Professions Code Section 8771 and all requirements of the County Surveyor's office. If existing monuments and/or survey markers were disturbed during the course of construction, the Contractor shall submit a Post-Construction Certificate of Monument Preservation prepared by a California Licensed Land Surveyor or Professional Engineer legally authorized to practice land surveying to the City prior to release of final payment to the Contractor. All such survey information destroyed during construction shall be reset at the Contractor's expense and to the satisfaction of the City Engineer.

All monuments within the roadway that are damaged, disturbed or destroyed during construction must be reset and enclosed in a survey monument well per State Standard Plan A74 Type D.

All computations and field work necessary to establish the exact position of the work from control points shall be performed by the Contractor, including establishing or designation of control points. All computation, survey notes, and other records necessary to accomplish the work shall be neat, legible, and accurate. Such computations, notes and other records shall be made available to the City Engineer upon request and shall become the property of the City and delivered to the City Engineer before acceptance of the project.

It is the Contractor's responsibility to perform the research necessary to accurately quantify the efforts necessary to perform the work described above prior to bidding and then to supply the City with an accurate contract unit price. The contract unit price shall include all fees necessary to file corner records or a record of survey. No additional compensation will be made for this bid item.

Measurement and Payment

Monument Preservation shall be paid for on a LUMP SUM basis. Measurement for the Monument Preservation will be based on the percentage of work completed as determined by the City Engineer. Progress payments shall not exceed 75% until final closeout documents, including record drawing markups, are received and full demobilization, including equipment and material being removed from the site, has occurred. The contract lump sum price paid for Monument Preservation shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in constructing the survey monuments, complete in place, including research, Pre-Construction Certificate of Monument Preservation, Post-Construction Certificate of Monument Preservation, survey monuments, survey monument wells, granular material, excavating and backfilling holes, disposing of surplus excavated material, tie-out protection, corner records, records of survey, and resetting of monuments as required, as shown or specified, specified in these Special Provisions, and directed by the City Engineer, and no additional compensation shall be allowed therefore. Tie-outs to existing monuments are to be provided to the City by the Contractor prior to starting work.

MOBILIZATION

This work shall consist of, but not be limited to, preparatory work and operations, including, those necessary for the movement of personnel, equipment, supplies and incidentals to the project site; for the establishment of all offices, buildings and/or other facilities necessary for work on the project; and for all other work and operations which must be performed or costs incurred prior to beginning work on the various contract items on the project site. This item includes the costs associated with obtaining all necessary permits and any associated fees necessary to perform the work; and includes removal of all construction equipment, personnel, construction related materials, temporary facilities, construction markings/paint, debris, and all other construction related items.

Measurement and Payment

Mobilization shall be paid for on a LUMP SUM basis. Measurement will be based on the percentage of work completed as determined by the City Engineer. Progress payments shall not exceed 75% until final closeout documents, including record drawing markups, are received and full demobilization, including equipment and material being removed from the site, has occurred. The contract lump sum price paid for Mobilization shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in mobilization and demobilization as specified herein, complete and in place, specified in the Standard Specifications, these Special Provisions, and as directed by the City Engineer, and no additional compensation will be allowed. The lump sum bid for Mobilization shall not exceed 10% of the total bid price.

Appendix A

GEOCON
CONSULTANTS, INC.
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

Project No. S2310-05-01
January 16, 2023

VIA ELECTRONIC MAIL

Aaron Brusatori, PE
R.E.Y. Engineers, Inc.
905 Sutter Street, Suite 200
Folsom, California 95630

Subject: LIMITED GEOTECHNICAL INVESTIGATION
2022 STREETS REHABILITATION PROJECT
FORT BRAGG, CALIFORNIA

Mr. Brusatori:

In accordance with your authorization, we have prepared this limited geotechnical investigation report for the 2022 Streets Rehabilitation project in Fort Bragg, Mendocino County, California. The project will rehabilitate/repair the existing hot-mix asphalt (HMA) pavement within several street segments, including:

- West Fir Street between west of California State Route 1 (SR-1) – Segment 1
- North Franklin Street between East Bush Street and East Oak Avenue – Segment 2
- South Franklin Street between East Oak Avenue and North Harbor Drive – Segment 3
- East Chestnut Street west of South Franklin Street – Segment 4
- South Harold Street south of East Chestnut Street – Segment 5
- Azalea Street west of South Sanderson Way – Segment 6
- Penitenti Way west of South Sanderson Way – Segment 7
- Boatyard Drive from SR-20 extending approximately 780 feet north – Segment 8

The project will also replace existing storm drain lines within Segments 1 and 2 and along North Franklin Street between East Bush Street and Spruce Street. Other improvements will include reconstructing various existing accessible ramps and sidewalks, curbs, and gutters. The approximate project limits are shown on the Vicinity Map, Figure 1.

PROJECT DESCRIPTION AND PURPOSE

The project segments consist of residential/local, collector, and arterial streets. The roadway widths range between 20 and 45 feet but are generally 40 to 45 feet wide and include two traffic lanes, one thru lane in each direction. The roadways are paved with HMA pavement underlain by aggregate base (AB) placed on subgrade soil. An aerial view of the project segments showing the existing configurations is presented on the Site Plans, Figures 2-1 through 2-5.

We reviewed excerpts from the *City of Fort Bragg 2021 Pavement Management Plan (PMP)Update,* provided by REY Engineers. The excerpts included the Pavement Condition Index (PCI) for the project segments. Based on our review of this information and our observations, the existing HMA pavement

within the project segments is generally in "Fair" to "Failed" condition with PCIs ranging from 7 to 63. The pavement generally exhibits typical age- and traffic-related distress such as cracking and surface deformation such as rutting. Details regarding existing pavement conditions are discussed in this report. In total, the project will rehabilitate approximately 10,800 linear feet of city street pavement and replace existing storm drain lines at select locations. Pavement rehabilitation measures will likely include isolated dig-out repairs of heavily distressed pavement, surface treatments, overlays, and possibly reconstruction. The new storm drain lines will likely be buried on the order of 5 to 10 feet deep and will likely be installed using conventional cut-and-cover construction techniques. Typical current conditions of the project alignment and existing pavement are shown in Photos 1 through 20.

The purpose of our services was to evaluate the existing pavement structural section details and subsurface soil conditions and to provide geotechnical design and construction recommendations for the project as presently proposed.

SCOPE OF SERVICES

To prepare this report, we performed the following scope of services:

- Performed a site reconnaissance in conjunction with REY Engineers to observe existing pavement conditions and pre-mark our exploratory excavations.
- Notified subscribing utility companies via Underground Service Alert (USA) a minimum of two working days (as required by law) prior to performing exploratory excavations at the site.
- Obtained an encroachment permit from the City of Fort Bragg to perform exploratory excavations within the city right-of-way.
- Applied for, paid the required fees, and obtained a drilling permit from the Mendocino County Environmental Health Department (MCDEH).
- Provided necessary traffic control measures during field work.
- Performed 13 pavement cores (C1 through C13) within the project limits. Ten (10) of the cores were performed using a portable core drill equipped with a 4-inch diameter core barrel. The other three (3) pavement cores were performed with a core barrel attached to a truck-mounted drill rig. Approximate pavement core locations are shown on the Site Plans, Figures 2-1 through 2-5.
- Performed three (3) exploratory borings (B1 through B3) using a truck-mounted drill rig equipped with solid flight augers. Approximate boring locations are shown on the Site Plans, Figures 2-1 through 2-5.
- Measured the existing pavement section material thicknesses at the core and boring locations.
- Obtained representative soil samples from the core and boring locations.
- Upon completion, backfilled the cores and borings in accordance with City and County requirements and restored the surface with rapid set concrete dyed black.
- Performed laboratory testing to evaluate pertinent geotechnical parameters.
- Prepared this summary report with our findings, conclusions and recommendations.

PAVEMENT CONDITION ASSESSMENT

In the City of Fort Bragg's PMP Update (2021), the existing pavement condition was assessed using the Pavement Condition Index (PCI) method. The PCI is a numerical indicator that rates the surface

condition of a pavement as determined based on a visual inspection. The PCI quantifies the present condition of pavement based on distresses observed at the pavement surface and provides a rational basis for preservation, repair, and/or replacement needs. The PCI ranges from 0 to 100 and is categorized as follows:

TABLE 1
PCI RATINGS PER ASTM D6433

PCI	Rating/Condition
71 – 100	Good
56 – 70	Fair
41 – 55	Poor
26 – 40	Very Poor
11 – 25	Serious
0 – 10	Failed

Pavement treatments can be broadly classified as preservation, repair/rehabilitation, or replacement/reconstruction. Pavement preservation treatments are aimed at extending existing pavement service life and typically include localized preventative maintenance (crack sealing, repairing potholes, etc.) and surface treatments (slurry seals, microsurfacing, chip seals, etc.). Typically, pavement preservation treatments are most appropriate for pavements with a PCI equal to or greater than 56 ("Fair" condition and better). For PCI rating between 26 and 55 ("Very Poor" and "Poor" condition) repair and rehabilitation methods such as overlays and geosynthetic reinforced overlays are appropriate. For pavements with a PCI rating of 25 and below ("Serious" and "Failed"), reconstruction is usually appropriate.

In the city's 2021 PMP Update, the existing pavement within the project segments is generally in "Fair" to "Failed" condition with a PCI ranging from 7 to 63 as summarized in Table 2.

TABLE 2
PAVEMENT CONDITION ASSESSMENT RESULTS

Segment ID	Location	Pavement Condition Index (PCI)	Standard Pavement Condition Index Rating
1	West Fir Street between west of SR-1	7	Failed
2	North Franklin Street between East Bush Street and West Fir Street	51	Poor
2	North Franklin Street between West Fir Street and East Oak Avenue	62	Fair
3	South Franklin Street between East Oak Avenue and South Street	48	Poor
3	South Franklin Street between South Street and North Harbor Drive	61	Fair
4	East Chestnut west of South Franklin Street	8	Failed
5	South Harold Street south of East Chestnut Street	14	Serious
6	Azalea Street	17	Serious
7	Penitenti Way	18	Serious
8	Boatyard Drive from SR-20 extending approximately 780 feet north	50	Poor

The PCI ratings presented in Table 2 appear to be generally consistent with our observations. The Site Plans, Figures 2-1 through 2-5 graphically show the PCI ratings along each project segment.

EXISTING PAVEMENT CONDITIONS

Existing Pavement Sections

Table 3 summarizes the existing pavement section material thicknesses encountered at our core locations. Approximate core locations are shown on the Site Plans, Figures 2-1 through 2-5. Photos of the core samples collected from our field investigation are shown in Photos 21 through 33.

TABLE 3
EXISTING PAVEMENT SECTIONS

Core ID	Location	HMA[1] thickness (inches)	AB[2] thickness (inches)	HMA Details[3]
C1	North Franklin Street	2½	7	Slurry seal, no lift boundaries observed
C2	North Franklin Street	3	6	Slurry seal, no lift boundaries observed
C3	West Fir Street	2½	5	Core sample split at approximately 1 inch from top of pavement
C4	North Franklin Street	3½	8½	Slurry seal, partial-depth crack in core sample, no lift boundaries observed
C5	South Franklin Street	3	9	Slurry seal, no lift boundaries observed
C6	East Chestnut Street	3½	7½	No lift boundaries observed
C7	South Harold Street	2	1½	Full-depth crack in core sample, no lift boundaries observed
C8	Penitenti Way	2	5½	Full-depth crack in core sample, no lift boundaries observed
C9	Azalea Street	2	3½	Full-depth crack in core sample, no lift boundaries observed
C10	South Franklin Street	3	7½	Slurry seal, no lift boundaries observed
C11	South Franklin Street	4	7½	Slurry seal, no lift boundaries observed
C12	Boatyard Drive	4	6½	Chip seal, no lift boundaries observed
C13	Boatyard Drive	3	5½	Full-depth crack in core sample, chip seal came loose in core sample, no lift boundaries observed
Average:		3	6	

Notes:
1. HMA = hot-mix asphalt.
2. AB = aggregate base
3. Lift boundaries are approximate and are referenced from the top of core sample (i.e., top of pavement).

Existing Pavement Conditions

West Fir Street and East Chestnut Street (Segments 1 and 4):
The existing HMA along West Fir and East Chestnut Street is in serious to failed condition. The pavement in these segments exhibit typical age and traffic-related distress such as longitudinal, transverse, and alligator cracking, potholes, pavement patches, and moderate to severe rutting. We also observed surface defects such as raveling and oxidation. Typical existing conditions of each segment are shown in Photos 1 and 2 and 9 through 11.

North Franklin Street (Segment 2):
The existing HMA along North Franklin Street is generally in fair condition and appears to have received a slurry seal in the past. The pavement in this segment exhibits typical age and traffic-related distress such as some areas with longitudinal and transverse cracking and some areas of low to moderate severity alligator cracking. Typical existing conditions are shown in Photos 3 through 6.

South Franklin Street (Segment 3):
The existing HMA along South Franklin Street is generally in fair to poor condition and appears to have received digout repairs and a slurry seal in the past. The pavement in this segment exhibits typical age and traffic-related distress such as some areas with longitudinal and transverse cracking and areas of moderate to severe alligator cracking and rutting. Typical existing conditions are shown in Photos 7, 8 and 12. The southernmost portion of South Franklin Street (South Street to North Harbor Drive) appears to be less distressed than this segment beginning at South Street and extending north. Typical existing conditions at the southernmost portion of this segment are shown in Photos 14 and 15.

South Harold Street, Azalea Street, and Penitenti Way (Segments 5, 6, and 7):
The existing HMA along South Harold Street, Azalea Street, and Penitenti Way is in serious condition. The pavement in these segments exhibits typical age and traffic-related distress such as longitudinal and transverse cracking, moderate to severe alligator cracking, potholes, pavement patches, and moderate to severe rutting. We also observed surface defects such as raveling and oxidation. Typical existing conditions are shown in Photos 16 through 18.

Boatyard Drive (Segment 8):
The existing HMA along Boatyard Drive generally appears to be in fair to poor condition and appears to have received a chip seal in the past. The existing pavement along Boatyard Drive exhibits typical age and traffic-related distress such as longitudinal and transverse cracking, low to moderate severity alligator cracking, moderate rutting, and pavement patches. Typical existing conditions are shown in Photos 19 and 20.

SUBSURFACE CONDITIONS

We identified subsurface soil conditions by observing and sampling exploratory borings and reviewing geologic literature. Soil conditions below the pavement within the project limits generally consist of Quaternary-age alluvial marine terrace deposits (map symbol, Qm). The soil descriptions provided below include the USCS symbol where applicable.

Alluvium (Marine Terrace Deposits)

Below the existing pavement sections, we encountered alluvial marine terrace deposits ("alluvium") to a maximum depth explored of approximately 16½ feet. The alluvium generally consists of interbedded layers of loose to medium dense silty sand (SM), clayey sand (SC), poorly graded sand (SP), and poorly graded sand with silt (SP-SM).

Soil and geologic conditions described in the previous paragraphs are generalized. The Key to Logs and exploratory boring logs, Figures 3 through 6, detail soil type, color, moisture, consistency, and USCS classification of the soils encountered at specific locations and elevations.

Groundwater

We encountered groundwater in each of our borings (B1 through B3) at depths ranging from approximately 10 to 16 feet at the time of drilling on March 14, 2022. The groundwater depths measured in our borings may not represent "stabilized" groundwater elevations and groundwater may be encountered at higher elevations at the time of construction. If groundwater is encountered in project excavations, dewatering will likely be necessary. Specific recommendations are provided herein.

It should be noted that fluctuations in the level of groundwater may occur due to variations in rainfall, temperature, and other factors. Depth to groundwater can also vary significantly due to localized pumping, irrigation practices, and seasonal fluctuations. Therefore, it is possible that groundwater will be higher or lower than the level observed during our investigation.

Laboratory Test Results

We performed Resistance-Value (R-Value) testing on representative subgrade soil samples to evaluate pavement support characteristics. R-Value testing was performed in accordance with California Test Method (CTM) 301. R-Value test results are summarized in Table 4. To account for subgrade soil variability, we recommend using a R-Value of 50 for design.

TABLE 4
SUMMARY OF R-VALUE TEST RESULTS

Sample ID	Location	Sample Description	R-Value
B1, B2, and B3 Bulk Composite	North Franklin Street and West Fir Street	Silty Sand with Gravel	69
C4 Bulk	North Franklin Street	Silty Sand	63
C8 Bulk	Penitenti Way	Silty Sand	56
C11 Bulk	South Franklin Street	Silty Sand	64
C12 and C13 Bulk Composite	Boatyard Drive	Silty Clayey Sand with Gravel	53

We also performed laboratory tests on selected soil samples in general accordance with American Society for Testing and Materials (ASTM) procedures. Laboratory testing was performed to evaluate in-situ moisture and density testing, grain size distribution, fines content, and corrosion potential. Corrosion screening laboratory test results and discussion is presented in subsequent sections. Other laboratory test results are included as Figures 7 and 8.

Soil Corrosion Screening

We performed pH, resistivity, chloride, and sulfate tests on two samples to generally evaluate the corrosion potential of the soil. These tests were performed in accordance with California Test Method (CTM) Nos. 643, 422, and 417. The results are presented in Table 5 and should be considered for design of the proposed improvements.

TABLE 5
SOIL CORROSION PARAMETER TEST RESULTS
(CALIFORNIA TEST METHODS 643, 417, AND 422)

Sample No.	Sample Depth (ft.)	pH	Minimum Resistivity (ohm-cm)	Chloride (ppm)	Sulfate (ppm)
B1-3.5	3.5	5.1	2,680	9.9	2.7
B3-7	7	5.1	7,400	5.0	8.7

Notes: ppm = parts per million

Soil with a low pH (higher acidity) is considered corrosive as it can react with lime in cement to leach out soluble reaction products and result in a more porous and weaker concrete. Per Caltrans *Corrosion Guidelines* (Caltrans 2018), soil with a pH of 5.5 or lower may be corrosive to concrete or steel in contact with the ground.

Soil resistivity is the measure of the soil's ability to transmit electric current. Corrosion of buried ferrous metal is proportional to the resistivity of the soil. A lower resistivity indicates a higher propensity for transmitting electric currents that can cause corrosion of buried ferrous metal items. In general, the higher the resistivity, the lower the rate for corrosion. Per Caltrans *Corrosion Guidelines* (Caltrans 2018), resistivity serves as an indicator parameter for the possible presence of soluble salts and it is not included as a parameter to define a corrosive area for structures. A minimum resistivity value for soil less than 1,100 ohm-cm may indicate the presence of high quantities of soluble salts and a higher propensity for corrosion. Based on the laboratory minimum resistivity test results and Caltrans criteria, the soil tested does not have a higher propensity for corrosion.

Table 6 presents a summary of concrete requirements set forth by California Building Code (CBC) Section 1904 and American Concrete Institute (ACI) 318 for possible chloride exposure. Chlorides can break down the protective oxide layer on steel surfaces resulting in corrosion. Sources of chloride include, but are not limited to, deicing chemicals, salt, brackish water, seawater, or spray from these sources.

TABLE 6
REQUIREMENTS FOR CONCRETE EXPOSED TO
CHLORIDE-CONTAINING SOLUTIONS
(AFTER ACI 318 TABLES 19.3.1.1 and 19.3.2.1)

Chloride Severity	Exposure Class	Condition	Maximum Water to Cement Ratio by Weight	Minimum Compressive Strength (psi)
Not Applicable	C0	Concrete dry or protected from moisture	N/A	2,500
Moderate	C1	Concrete exposed to moisture but not to external sources of chlorides	N/A	2,500
Severe	C2	Concrete exposed to moisture and an external source of chlorides	0.40	5,000

The appropriate Chloride Severity/Exposure Class should be determined by the project designer based on the specific conditions at the location of the proposed structure. Further guidance is provided in ACI 318.

Table 7 presents a summary of concrete requirements set forth by CBC Section 1904 and ACI 318 for sulfate exposure. Similar to chlorides, sulfates can break down the protective oxide layer on steel leading to corrosion. Sulfates can also react with lime in cement to soften and crack concrete.

TABLE 7
REQUIREMENTS FOR CONCRETE EXPOSED TO SULFATE-CONTAINING SOLUTIONS
(AFTER ACI 318 TABLES 19.3.1.1 and 19.3.2.1)

Sulfate Severity	Exposure Class	Water-Soluble Sulfate (SO_4) Content		Cement Type (ASTM C 150)	Maximum Water to Cement Ratio by Weight[1]	Minimum Compressive Strength (psi)
		Percent By Mass	Parts Per Million (ppm)			
Not Applicable	S0	$SO_4 < 0.10$	$SO_4 < 1,000$	No Type Restriction	N/A	2,500
Moderate	S1	$0.10 \leq SO_4 < 0.20$	$1,000 \leq SO_4 < 2,000$	II	0.50	4,000
Severe	S2	$0.20 \leq SO_4 \leq 2.00$	$2,000 \leq SO_4 \leq 20,000$	V	0.45	4,500
Very Severe	S3	$SO_4 > 2.00$	$SO_4 > 20,000$	V+Pozzolan or Slag	0.45	4,500

Notes:

1. Maximum water to cement ratio limits are different for lightweight concrete, see ACI 318 for details.

Based on the laboratory test results, the Sulfate Severity is classified as "Not Applicable", and the Exposure Class is S0. The concrete mix deign(s), if any, should be developed accordingly. The presence of water-soluble sulfates is not a visually discernible characteristic; therefore, other soil samples from the site could yield different concentrations. Additionally, over time landscaping activities (i.e., addition of fertilizers and other soil nutrients) may affect the concentration.

Geocon does not practice in the field of corrosion engineering and the above information is provided as screening criteria only. If corrosion sensitive improvements are planned, we recommend that further evaluations by a corrosion engineer be performed to incorporate the necessary precautions to avoid premature corrosion on buried metal pipes and metal or concrete structures in direct contact with the soils.

PAVEMENT REHABILITATION ALTERNATIVES

Approximate Traffic Loading

Specific design traffic loading information such as design Traffic Indexes (TI) was not provided for our review. However, we obtained the minimum required TIs per street type from the Street Design section in the *City of Fort Bragg Standard Specifications and Standard Plans* (April 2008). We employed an empirical analysis to back-calculate the approximate TI based on the average existing pavement section thicknesses for each segment. Table 8 summarizes the back-calculated approximate TIs that the project segments would provide if they were new based on the subgrade soil design R-Values. The approximate TIs do not consider the actual stiffness or condition of the pavement materials.

TABLE 8
SUMMARY OF BACK-CALCULATED TRAFFIC INDEXES

Location	Street Type[1]	Average Existing Pavement Section	Design R-Value[2]	Approximate TI[3]	Minimum Required TI[4]
West Fir Street	Collector	2½" HMA 5" AB	50	4.5	5.5
North Franklin Street	Arterial	3" HMA 7" AB	50	5.5	7.0
South Franklin Street	Arterial	3" HMA 8" AB	50	5.5	7.0
East Chestnut Street	Arterial	3½" HMA 7½" AB	50	6.0	7.0
South Harold Street	Residential / Local	2" HMA 1½" AB	50	4.0	4.5
Penitenti Way	Residential / Local	2" HMA 5½" AB	50	4.0	4.5
Azalea Street	Residential / Local	2" HMA 3½" AB	50	4.0	4.5
Boatyard Drive	Arterial	3½" HMA 6" AB	50	6.0	7.0

Notes:
1. As categorized in the *City of Fort Bragg 2021 PMP Update – PCI List by Street Name.*
2. Recommended R-Value based on laboratory R-Value test results and accounting for subgrade variability.
3. Approximate TI assuming new pavement section materials.
4. As specified in Street Design in *City of Fort Bragg Standard Specifications and Standard Plans* (April 2008).

Based on the average existing pavement sections and a subgrade soil design R-Value of 50, the existing pavement structural sections are not structurally sufficient for the minimum required TIs. The subgrade soils offer high quality pavement support characteristics; however, the structural capacity of the existing pavement section is limited by the existing HMA thicknesses as they do not meet the minimum required thicknesses for the minimum required TIs, per Caltrans design methodologies. In addition, the existing pavements exhibit signs of age and distress and are likely no longer structurally sufficient even for the back-calculated TIs presented in Table 8. The existing pavement requires rehabilitation.

Pavement Rehabilitation Alternatives and Service Life

The structural capacity of pavement sections within the project segments that are in fair to poor condition may be improved by increasing the overall HMA thickness by means of an HMA overlay placed on the existing HMA in conjunction with isolated dig-outs. The pavements in serious to failed condition are too deteriorated and structurally deficient to adequately support an HMA overlay and reconstruction should be considered. Alternatively, if desired due to budget constraints, surface treatments with dig-outs may be applied to the existing pavements, with the understanding that it does not contribute to the structural capacity of existing pavement structures and that the service life will be shorter compared to pavement rehabilitation or reconstruction.

Pavement rehabilitation measures such as an HMA overlay contribute to the structural capacity of an existing pavement structure and therefore, extend the pavement structural section's service life. The pavement service life is defined as the period of time that a rehabilitated pavement performs adequately before additional rehabilitation or reconstruction is required. The typical service life of a pavement

rehabilitated with an HMA overlay is typically on the order of 7 to 12 years depending on the overlay thickness; however, reflective cracking (e.g. cracks from the underlying materials reflecting through the new HMA layer) can develop sooner. Use of a pavement interlayer between the existing pavement surface and the overlay can delay the initial arrival of reflective cracking and potentially further delay the ongoing development of the cracking after it has appeared on the pavement surface. Further discussion is provided herein.

Surface treatments (e.g. slurry seals, microsurfacing, chip seals, cape seals, etc.) do not directly contribute to the structural capacity of existing pavement structures and therefore, are considered non-structural surface treatments. Such surface treatments are not expected to meet the same service life criteria as structural HMA overlays. The intent of surface treatments is to maintain ride quality and skid resistance, protect the existing pavement from environmental factors, and provide aesthetic value. The typical service life of surface treatment can vary from 5 to 10 years before additional surface treatment is required, depending on the surface treatment used. Surface treatment and repair/rehabilitation options, generally listed in order of increasing robustness, are described in detail below. In general, the more robust options will result in lower future maintenance costs.

Crack Sealing / Slurry Seal / Microsurfacing

Crack sealing and crack filling are preventative maintenance methods which can be used to repair cracks in pavement surfaces. Slurry seals and microsurfacing are polymer-modified cold-mix pavement surfacing that consists of a mixture of fine aggregate, asphalt emulsion, water, and mineral fillers. These treatments are designed for crack penetration, to maintain ride quality and skid resistance, protect the existing pavement from environmental factors, correct raveling and oxidation, and provide aesthetic value. Microsurfacing uses select aggregate types and offers many of the same benefits as slurry seals but are also useful for rut filling and correcting minor surface deformations. Fiberized microsurfacing contains high strength glass fibers that contribute to improve the resistance to propagation of reflective cracking and increases flexural durability. The service life of slurry seal and microsurfacing typically ranges from 5 to 7 years. Slurry seals can typically be closer to 5 years and microsurfacing closer to 7 years.

Chip Seal

Chip seals consist of applying a thin layer of bituminous binder covered with a topping of graded aggregate to an existing pavement surface. After application of the topping aggregate over the bituminous binder, the aggregate is rolled into the binder by a vibrating rolling compactor to provide embedment and adhesion. Bituminous binders may consist of emulsions, paving grade asphalt cement, or modified versions of each by various polymers such as latex and natural rubbers. Chip seals protect the pavement from the effects of sun and water, increases skid resistance, fill small cracks, and other surface defects. A geosynthetic stress absorbing membrane interlayer (SAMI) can be used in conjunction with a chip seal to reduce reflective cracking and extend the service life of the chip seal. The service life of chip seals is typically on the order for 6 to 8 years.

Cape Seal

Cape seals are a multi-layered pavement preservation treatment consisting of a chip seal covered by a slurry seal or microsurfacing. Placing a slurry seal or microsurfacing over the chip seal helps to further secure in-place the aggregate used in the chip seal to form a dense and relatively thin (less than 1 inch) pavement system with a smooth-finished riding surface. The service life of a cape seal is typically on the order of 7 to 9 years.

HMA Overlay

HMA overlay consists of placing additional HMA over existing pavements to extend the service life. Milling a portion of the existing pavement surface may be used in conjunction with an overlay to remove brittle, oxidized pavement. Prior to placing the overlay, heavily distressed HMA areas should be repaired (digouts). The service life of a pavement structure after applying an HMA overlay (time until additional pavement structural improvements or pavement reconstruction may be required), as defined in this report, is typically on the order of 7 to 12 years depending on the overlay thickness. Overlays (combined with use of interlayer materials) are often evaluated by the ability to withstand reflective cracking which can reduce the typical service life. Using a paving interlayer between the existing HMA and overlay may delay the initial development of reflective cracking and potentially further delay the ongoing development of the cracking after it has appeared on the pavement surface. The delay in reflective cracking depends on the thickness of the HMA overlay and the type of interlayer used. An interlayer, if used, should be placed in accordance with manufacturer's recommendations. Gap-graded rubberized HMA (RHMA-G) may also be used to further delay the occurrence of reflective cracking and increase service life. HMA overlay combined with digouts is considered appropriate for North/South Franklin Street and Boatyard Drive.

Full-Depth Reclamation (FDR)

FDR consists of reconstructing an existing distressed or structurally deficient pavement section by in-place recycling of the pavement materials with chemical treatment to enhance the structural properties of the recycled materials. This work consists of pulverizing existing pavement section materials in-place, reshaping the grade to allow for any conforms and drainage, and uniformly mixing with Portland cement and water. The mixture is then compacted, finished, and cured in such a manner that the cement-treated mixture forms a dense, uniform mass conforming to the lines, grades, and cross sections required. HMA is then placed over the cured FDR cement-treated materials to complete the pavement structural section. FDR requires a high degree of quality control at each phase of the process. FDR mix-design development was beyond our scope of work. However, FDR is considered an appropriate repair strategy for West Fir Street, East Chestnut Street, South Harold Street, Penitenti Way, and Azalea Circle.

Removal and Replacement

Removal and replacement consists of removing the existing pavement section (HMA and AB) and replacing with a new section. Although removal and replacement has the potential to provide the longest service life; often times it is cost prohibitive and can result in significant disruption to the public during construction. Removal and replacement is considered an appropriate repair strategy for West Fir Street, East Chestnut Street, South Harold Street, Penitenti Way, and Azalea Circle.

CONCLUSIONS AND RECOMMENDATIONS

General

No soil or geologic conditions were encountered during our investigation that would preclude construction of the proposed improvements, provided the recommendations contained in this report are incorporated into the design and construction of the project.

The primary geotechnical constraints identified in our investigation are:

- Shallow groundwater.
- Caving and sloughing potential (loose granular soil).
- Potentially unstable trench bottoms, and
- Existing underground utilities.

The design and contractor should be aware of these constraints. Discussion of these constraints, recommended procedures for mitigation and design criteria are included herein. Conclusions and recommendations provided in this report are based on analysis of data obtained from our field exploration program, laboratory testing program, and our understanding of the proposed improvements.

Excavation and Soil Characteristics

In our opinion, excavations in the project area may be accomplished with standard effort using conventional heavy-duty excavation equipment capable of excavating to the planned project depths. We do not anticipate excavations to generate oversized materials such as cobbles or boulders.

Because of predominant granular nature of the soils at the project site, sidewall caving and sloughing is likely during excavations. These conditions may require flattening/sloping back trench sidewalls, or enhanced shoring to maintain a stable trench. General temporary excavation sloping and shoring recommendations are provided herein.

Shallow groundwater/seepage will likely be present within project excavations which can create unstable trench bottoms and exacerbate sidewall caving/sloughing. Groundwater control/dewatering will likely be required for the project.

Excavations should be performed carefully to avoid damaging existing underground utilities and adjacent structures. Adjacent improvements should be monitored by the contractor so that excavation methods and support systems can be modified in a timely manner, if surface deflections are observed.

If earthwork operations occur during or after the wet season (typically winter and spring), or in periods of precipitation, in-place and excavated soils will likely be wet and unstable, especially below flatwork and pavements. Earthwork contractors should be aware of moisture sensitivity of soils and potential compaction/workability difficulties.

Materials for Fill

Excavated soil generated from project excavations are suitable for use as trench backfill provided it does not contain deleterious matter, vegetation, or rocks/cementations larger than 3 inches in maximum dimension. Pipe bedding and trench backfill materials should conform to the requirements in the *City of Fort Bragg Standard Trench Detail Std. No. 300.*

Temporary Excavations

Temporary excavations must meet Cal-OSHA requirements as appropriate. Excavation sloping, benching, the use of trench shields, and the placement of trench spoils should conform to the latest applicable Cal-OSHA standards. The contractor should have a Cal-OSHA-approved "competent person" onsite during excavation to evaluate trench conditions and to make appropriate recommendations where necessary. It is the contractor's responsibility to provide sufficient and safe excavation support as well as protecting nearby utilities, structures, and other improvements which may be damaged by earth movements.

The excavation support recommendations provided by Cal-OSHA are generally geared towards protecting human life and not necessarily towards preventing damage to nearby structures or surface improvements. The contractor should be responsible for using the proper active shoring systems or sloping to prevent damage to any structure or improvements near underground excavations.

Project excavations will be adjacent to other existing utilities. The condition of existing utility backfill is not known and there is a potential for existing backfill (particularly granular backfill) adjacent to excavations which can cause excavation sidewall instability and sloughing. The contractor should be aware of the potential for sloughing (and possibly caving/undermining of adjacent ground surface or improvements) and have equipment readily available to flatten slopes or install shoring if necessary.

Where portable safety shields (trench boxes) are used to protect workers, trench side walls are not directly supported. Thus, the use of a shield should be limited to open areas to minimize the potential of effects on adjacent improvements or ground surface settlement behind the shield. Trench shields should be sized to minimize clearance between the shield and trench side walls. Unsupported trenches should be backfilled immediately after removing the shield.

Shoring should be used in areas where temporary slopes must be steeper than those required by Cal/OSHA or where the presence of adjacent improvements prohibits sloping. Design of shoring systems is the responsibility of the contractor. Qualified contractor personnel should inspect shoring systems daily during construction. If excessive movement or slippage is noted, the bracing system should be strengthened before personnel are allowed to enter the excavation.

Dewatering Considerations

We encountered groundwater in each of our borings (B1 through B3) at depths ranging from approximately 10 to 16 feet on March 14, 2022. Given the granular nature of soil in the project area, we expect the soil to be relatively permeable and transmissive to groundwater flow.

Perched groundwater/seepage will likely be present in project excavations. We expect that perched groundwater/seepage conditions will be worse in the winter and spring and less prevalent in summer and fall. The contractor should be prepared to accommodate seepage and/or groundwater in project excavations per Section 19-1.06 of the City of Fort Bragg Standard Specifications and Standard Plans.

Trench Bottoms / Bearing Conditions / Foundation for Storm Drain Line

Given the likelihood of groundwater/seepage within trench excavations, soft and/or unstable trench bottom conditions should be expected along the alignment.

Since we do not know the extent of potential soft or unstable areas, our field representative should provide mitigation recommendations in the field at the time of construction. Typical mitigation alternatives include over-excavation and replacement with a crushed gravel mat wrapped in

geosynthetic filter fabric to provide a stable bottom for support of the pipe. In general, unstable trench mitigation alternatives should conform to the *City of Fort Bragg Standard Trench Detail Std. No. 300.*

Geocon should be contacted to provide additional recommendations if unsuitable material extends to depths beyond 3 feet below the storm drain invert. In extreme cases, pier or pile support, or other structural support, may be necessary.

The weight of the pipe, contents, and compacted backfill above the pipe should not result in a significant increase in load over present overburden. Assuming soft and/or unsuitable subgrade areas are mitigated, pipeline settlement should be negligible. Pipeline buoyancy in trenches allowed to become filled with groundwater should be considered.

Pipe Loading Design Criteria

Trench loading is typically computed using Marston's Formula in accordance with ASCE *Manual of Engineering Practice No. 60/WPCF Manual of Practice No. FD-5*. Trench loading will depend on depth of cover, total unit weight of compacted backfill, and surface loading, and installation conditions. We recommend using the following geotechnical values in trench loading calculations:

- Average backfill total unit weight = 115 pounds per cubic foot
- Settlement Ratio (r_{sd}) factor = -0.2 (flexible pipe)
- kμ' factor = 0.19

Traffic loading, load factors, and other parameters should be determined by the design engineer.

Pipe Bedding and Trench Backfill

Earthwork operations should be observed and fills tested for recommended compaction and moisture content by a Geocon representative. Engineered fill should be placed in lifts of 8 inches or less in loose thickness, moisture conditioned at or above optimum moisture content and compacted to the required relative compaction based on ASTM D1557 test method.

Prior to commencing earthwork, a pre-construction conference should be held at the site with a representative of the City, the earthwork contractor, and the geotechnical engineer in attendance. Soil handling instructions and/or the project plans should be discussed at the pre-construction conference.

Pipe bedding and pipe zone backfill is defined as material supporting, surrounding and extending 12 inches above the crown of the pipe. Bedding and pipe zone backfill should conform to the specifications shown on *City of Fort Bragg Standard Trench Detail Std. No. 300*. Minimum bedding depths and placement should be performed in accordance with these specifications.

Due to the potential of seasonal variation of groundwater levels, bedding should be encased in a geotextile fabric to reduce the potential for soil fines migration into bedding and pipe zone material. Trench filter fabric should conform to city standards and specifications.

Trench backfill is the material placed above the bedding, starting 12 inches above the crown of the pipe. Trench backfill may consist of native soil it does not contain deleterious matter, vegetation, or rocks/cementations larger than 3 inches in maximum dimension.

Trench backfill should be mechanically compacted to 90% relative compaction. The trench should be restored with at least 3 inches of HMA and 12 inches of Class 2 AB or match the existing pavement

section plus 1 inch of HMA, whichever is greater. AB should be mechanically compacted to at least 95% relative compaction. Flooding or jetting is not recommended.

Trench Plugs

Pipeline bedding and trench backfill material may provide a preferential path for groundwater flow. Where the pipeline is constructed in sloping ground, trench plugs should be constructed at periodic intervals to reduce flow of groundwater through granular trench bedding and backfill material. Trench plugs should consist of lean concrete, or controlled density fill. Trench plugs must be at least 12-inches-thick and be keyed at least 12 inches into trench bottom and walls. A typical trench plug detail is presented as Figure 9. Trench plugs should be constructed at the interval shown in Table 9.

TABLE 9
MAXIMUM SPACING FOR TRENCH PLUGS

Trench Slope (%)	Maximum Spacing (ft)
< 5	1,000
5 - 15	500
15 - 25	300
25 - 35	200
35 - 100	100
> 100	50

Concrete Sidewalks, Curb, and Gutter

Sidewalk, curb, and gutter within City right-of-way should be designed and constructed in accordance with the *City of Fort Bragg Standard Curb, Gutter and Sidewalk Std. No. 205,* as applicable. Prior to placing AB, subgrade soil should be scarified at least 6 inches, uniformly moisture conditioned at or slightly above optimum moisture content and compacted to at least 90% relative compaction. AB should be compacted to 95% relative compaction.

Pavement Rehabilitation Alternatives

Pavement Preservation / Surface Treatments

In general, prior to applying pavement preservation treatments (slurry seal, microsurfacing, or chip seals) heavily distressed HMA areas should be excavated to at least the bottom of the existing HMA section and backfilled with full-depth HMA to match the existing adjacent section. Dig-out repairs should extend at least 1 foot laterally beyond the observed surface failure that prompted the dig-out, or to the edge of pavement, where applicable. Areas of low to moderate distress may be repaired by means of an inlay or "partial digout" provided cracks do not extend the full depth of the existing HMA section. Inlay repairs should be excavated to at least 1 inch and backfilled with HMA to match the existing adjacent section. If full-depth cracks are observed in inlay areas, use of a pavement interlayer or complete dig-outs should be considered. The HMA plugs should be compacted using appropriate compaction equipment.

Slurry seals and microsurfacing, if used, should conform to and be constructed in accordance with the requirements of Section 37-3 of the Caltrans *Standard Specifications*. Chip seals, if used, should conform to and be constructed in accordance with the requirements of Section 37-2 of the Caltrans Standard Specifications. If a SAMI is used in conjunction with a chip seal, the chip seal aggregate must comply

with the 3/8-inch gradation and the SAMI should conform to and be installed in accordance with Section 37-2.05 of the Caltrans *Standard Specifications*. Cape seals, if used, should conform to Sections 37-2 and 37-3 of Caltrans' *Standard Specifications*.

HMA Overlay (North/South Franklin Street and Boatyard Drive)

In general, prior to placing the overlay, heavily distressed HMA areas should be excavated at least 6 inches and backfilled with full-depth HMA. Dig-out repairs should extend at least 1 foot laterally beyond the observed surface failure that prompted the dig-out, or to the lip of curb/gutter, where applicable. The full-depth HMA plugs should be compacted using appropriate compaction equipment.

Milling may also increase the performance of an HMA overlay by removing oxidized, brittle pavement. The depth of milling should be selected such that the final milled surface is not located near or slightly above an existing HMA-lift boundary. After milling, if performed, and prior to placing the HMA overlay, cracks wider than ¼ inch should be routed and cleaned to increase adhesion between the sealant and the pavement surface and be filled with an approved crack sealant. Crack sealant should be placed to within ¼ inch of the pavement surface.

Per Caltrans design methods, the "reflective cracking criteria" states that the minimum overlay thickness is one-half the existing HMA thickness, but not less than 2 inches. We recommend the following minimum overlay thicknesses:

- 2 inches – North and South Franklin Street
- 2 inches – Boatyard Drive

Using a paving interlayer (fabric, mat, grid, or composite grid) between the existing pavement surface and the overlay can delay the initial arrival of reflective cracking extending to the pavement surface and potentially further delay the ongoing development of the cracking after it has appeared on the pavement surface. The delay in reflective cracking generally depends on the thickness of the overlay and the type of interlayer used. In general, reflective cracking in an un-reinforced HMA overlay will appear on the new pavement surface in a period of years approximately equivalent to the overlay thickness in inches (1 inch per year). It should be noted that the service life of a rehabilitated pavement structure after applying an overlay and the rate at which reflective cracking develops is also a function of other factors such as environmental and weather conditions, drainage conditions, traffic loading, pavement structural section adequacy, subgrade and base conditions, workmanship, and others. Table 10 provides pavement interlayer options with associated potential delay in the development of reflective cracking appearing at the pavement surface with respect to a minimum overlay thickness of 2 inches.

TABLE 10
OVERLAY INTERLAYER ALTERNATIVES
2" HMA OVERLAY

Interlayer Type	Approximate Delay in Reflective Cracking[5]	Potential Improvement in Overlay Performance[6]
None	2 years	0%
Paving Fabric[1]	3 years	50%
Paving Mat[2]	5 years	150%
Paving Grid[3]	5½ years	175%
Paving Composite Grid[4]	6 years	200%

Notes:
1. Meets Caltrans' Criteria for Paving Fabric *
2. Meets Caltrans' Criteria for Paving Mat *
3. Meets Caltrans' Criteria for Paving Grid (Class P1 or P2 or Equal) *
4. Meets Caltrans' Criteria for Paving Composite Grid (Class P1 or P2 or Equal) *
5. Approximate delay in reflective cracking is defined as the time to reflective cracking appearing at the pavement surface. Assumes cracks develop in a period of years approximately equivalent to the overlay thickness in inches (1 inch per year). For example, a 2-inch-thick unreinforced overlay will develop reflective cracking in approximately 2 years.
6. Potential improvement in overlay performance estimated based on PRI *Study of Interlayer Effectiveness using APA Crack Testing* (TenCate Geosynthetics) and previous project experience.

*For Caltrans pavement interlayer specifications, refer to Section 12.4 of *MTAG Volume 1 Flexible Pavement Preservation 2nd Edition, Chapter 12 – Interlayers,* January 27, 2009.

If a paving interlayer (paving fabric, mat, or grid) is used and milling is performed, we recommend that finish-milling (fine - ¼ inch or less) or micro-milling (3 millimeters) be performed in lieu of conventional (standard or coarse) milling. If the teeth spacing used for milling is too wide (typically greater than ¼ inch), it will likely require additional emulsion and labor to have the paving interlayer properly adhere to the milled pavement surface. Alternatively, a leveling course of HMA may be placed over the milled surface prior to placing the paving interlayer. If a paving composite grid is used, an HMA leveling course (typically 1-inch thick) will likely be needed to provide a sufficient bond for the material. All paving interlayers and required tack coats (asphalt emulsion) should be installed in accordance with the manufacturer's recommendations.

For overlays, we recommend the following HMA materials:

- HMA leveling courses less than 1-inch-thick: 3/8-inch maximum HMA or #4 mix,
- HMA overlays <2 inches thick: ½-inch maximum HMA,
- HMA overlays ≥2 inches thick: ½ or ¾-inch HMA,
- RHMA-G <2 inches thick: 3/8-inch maximum RHMA-G, and
- RHMA-G overlays ≥2 inches thick: ½-inch RHMA-G.

The final overlay and milling thicknesses and whether or not to use an interlayer should be determined by the project designer based on the grade constraints and cost considerations. In our opinion, an appropriate overlay strategy for the North/South Franklin Street and Boatyard Drive may consist of fine milling or micro-milling the existing HMA surface, placing a paving mat interlayer, and placing a 2-inch-thick HMA overlay. This strategy will increase the existing HMA layer by 2 inches and increase the pavement's structural capacity. The average resulting pavement structural section would be 5 inches of HMA over 7 inches of AB and would be structurally sufficient for a TI of approximately 8.5. In addition, this strategy should resist reflective cracking for a period of approximately 4 to 5 years, at which time crack sealing maintenance would be required.

Removal and Replacement – West Fir, East Chestnut, South Harold, Penitenti, & Azalea

Table 11 provides new pavement structural sections based on street type. The structural sections are based on the design methods of the *Caltrans Highway Design Manual* using a subgrade design R-value of 50 and various Traffic Index (TI) values as indicated in Table 11. The project engineer should determine the appropriate TI based on the anticipated traffic loading. We can provide additional pavement section alternatives based on other TIs upon request.

TABLE 11
FLEXIBLE PAVEMENT SECTIONS

Street Type	Design TI	HMA[1] (inches)	AB[2] (inches)	Total Section Thickness (inches)
Residential / Local	4.5	2½	4	6½
Collector	5.5	3	4	7
Arterial	7.0	4	5	9

Notes:
1. HMA = Hot Mix Asphalt (Type A) conforming to Section 39 of Caltrans' latest *Standard Specifications*.
2. AB = Class 2 Aggregate Base conforming to Section 26 of Caltrans' latest *Standard Specifications*.

The recommended alternative pavement sections are based on the following assumptions:

1. Subgrade soil has a minimum R-Value of 50.
2. Subgrade soil is processed, uniformly moisture-conditioned at or near optimum moisture content, compacted to 95% or higher relative compaction, and is stable. The 95% relative compaction requirement applies to the top 6 inches of pavement area subgrade; however, underlying materials must be sufficiently compacted and stable. Prior to placing AB, subgrade soil should be proof-rolled with a loaded water truck to verify stability. We note that additional removals, deeper scarification, moisture-conditioning, and compaction efforts may be required to achieve overall stability and compaction.
3. Class 2 AB has a minimum R-Value of 78 and meets the requirements of Section 26 of Caltrans' latest *Standard Specifications*.
4. Class 2 AB is compacted to 95% or higher relative compaction at or near optimum moisture content. Prior to placing HMA, the AB should be proof-rolled with a loaded water truck to verify stability.
5. HMA should conform to Section 39 of the Caltrans' latest *Standard Specifications.*
6. Periodic maintenance of HMA pavements is performed.

Asphalt pavement section recommendations for driveways are based on the design procedures of Caltrans' *Highway Design Manual* (Design Manual), Chapter 600, updated November 20, 2017. It should be noted that most rational pavement design procedures are based on projected street or highway traffic conditions and, hence, may not be representative of vehicular loading that occurs in parking lots and driveways. Pavement proximity to landscape irrigation, reduced traffic speed and short turning radii increase the potential for pavement distress to occur in parking lots even though the volume of traffic is significantly less than that of an adjacent street. The *Design Manual* indicates that the resulting pavement sections for parking lots are "minimized to keep initial costs down but are

reasonable because additional AC surfacing can be added later, if needed, and generally without incurring traffic hazards or traffic handling problems." It is generally not economically feasible to design and construct driveways for the unique loading conditions previously described. Periodic maintenance of the pavement in these areas, therefore, should be anticipated.

Drainage and Moisture Protection

Adequate drainage is imperative to reduce the potential for premature pavement deterioration, differential soil movement, erosion, and subsurface seepage. Care should be taken to properly grade improvements so that surface drainage is directed toward appropriate drainage facilities.

CLOSURE AND LIMITATIONS

The pavement recommendations and associated design life presented in this report assume that periodic pavement maintenance is performed (such as crack sealing and similar surface treatment). The conclusions and recommendations presented in this limited pavement evaluation are based on our observations, limited investigation (coring), and our geotechnical experience. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the subsurface conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, we should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous materials or environmental contamination was not part of our scope of services.

Our professional services were performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices used in the site area at this time. No warranty is provided, express or implied.

Please contact us if you have any questions regarding this letter or if we may be of further service.

Respectfully Submitted,

GEOCON CONSULTANTS, INC.



Jeremy J. Zorne, PE, GE
Senior Engineer



Victor M. Guardado, PE
Project Engineer

Attachments: Figure 1, Vicinity Map
Figures 2-1 through 2-5, Site Plans
Figure 3, Key to Logs
Figures 4 through 6, Log of Borings
Figure 7, Summary of Laboratory Results
Figure 8, Grain Size Distribution
Figure 9, Trench Plug Detail
Photos 1 through 33



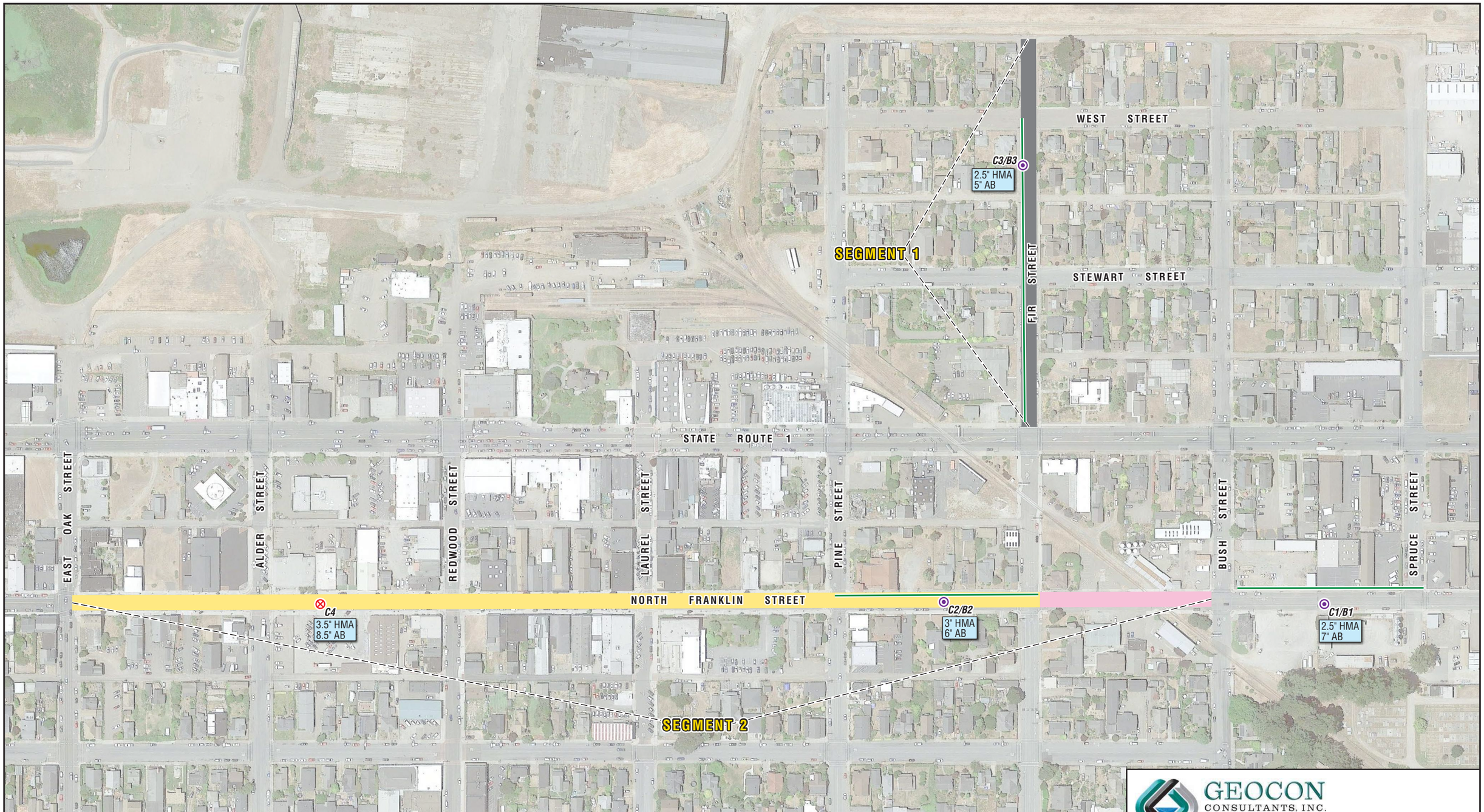
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Fort Bragg Improvements

Fort Bragg, California

VICINITY MAP

S2310-05-01	January 2023	Figure 1



LEGEND:

- C1 ⊗ Approximate Pavement Core Location
- C1/B1 ⊙ Approximate Boring Location (pavement core collected)
- Proposed Storm Drain Line Replacement (approximate alignment)

Pavement Condition Index:

- Good (PCI = 71-100)
- Fair (PCI = 56-70)
- Poor (PCI = 41-55)
- Very Poor (PCI = 26-40)
- Serious (PCI = 11-25)
- Failed (PCI = 0-10)

3.5" HMA / 8.5" AB — Approximate Pavement Structural Section Thickness
HMA = hot-mix asphalt; AB = aggregate base

0 220
Scale in Feet

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Fort Bragg Improvements

Fort Bragg, California

SITE PLAN – Segments 1 and 2

S2310-05-01 | January 2023 | Figure 2-1



LEGEND:

C1 ⊗ Approximate Pavement Core Location

3.5" HMA / 8.5" AB — Approximate Pavement Structural Section Thickness
HMA = hot-mix asphalt; AB = aggregate base

Pavement Condition Index:

- Good (PCI = 71-100)
- Fair (PCI = 56-70)
- Poor (PCI = 41-55)
- Very Poor (PCI = 26-40)
- Serious (PCI = 11-25)
- Failed (PCI = 0-10)

N

0 320
Scale in Feet

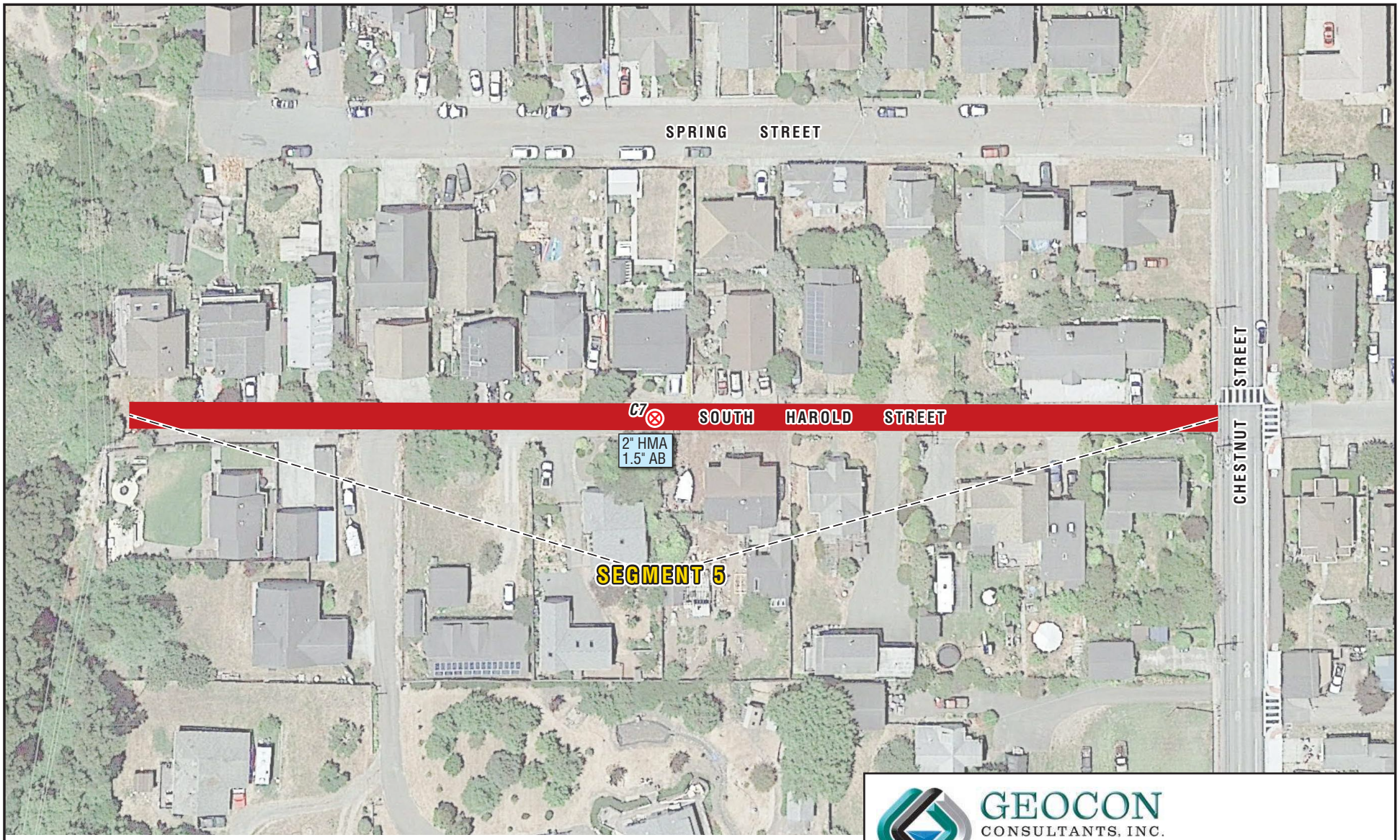
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Fort Bragg Improvements

Fort Bragg,
California

SITE PLAN – Segments 3 and 4

S2310-05-01	January 2023	Figure 2-2



LEGEND:

C1 ⊗ Approximate Pavement Core Location

3.5" HMA
8.5" AB
Approximate Pavement Structural Section Thickness
HMA = hot-mix asphalt; AB = aggregate base

Pavement Condition Index:

- Good (PCI = 71-100)
- Fair (PCI = 56-70)
- Poor (PCI = 41-55)
- Very Poor (PCI = 26-40)
- Serious (PCI = 11-25)
- Failed (PCI = 0-10)

N

0 80
Scale in Feet

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Fort Bragg Improvements

Fort Bragg,
California

SITE PLAN – Segment 5

S2310-05-01	January 2023	Figure 2-3



LEGEND:

C1 ⊗ Approximate Pavement Core Location

3.5" HMA / 8.5" AB — Approximate Pavement Structural Section Thickness
HMA = hot-mix asphalt; AB = aggregate base

Pavement Condition Index:

- Good (PCI = 71-100)
- Fair (PCI = 56-70)
- Poor (PCI = 41-55)
- Very Poor (PCI = 26-40)
- Serious (PCI = 11-25)
- Failed (PCI = 0-10)

N

0 100
Scale in Feet

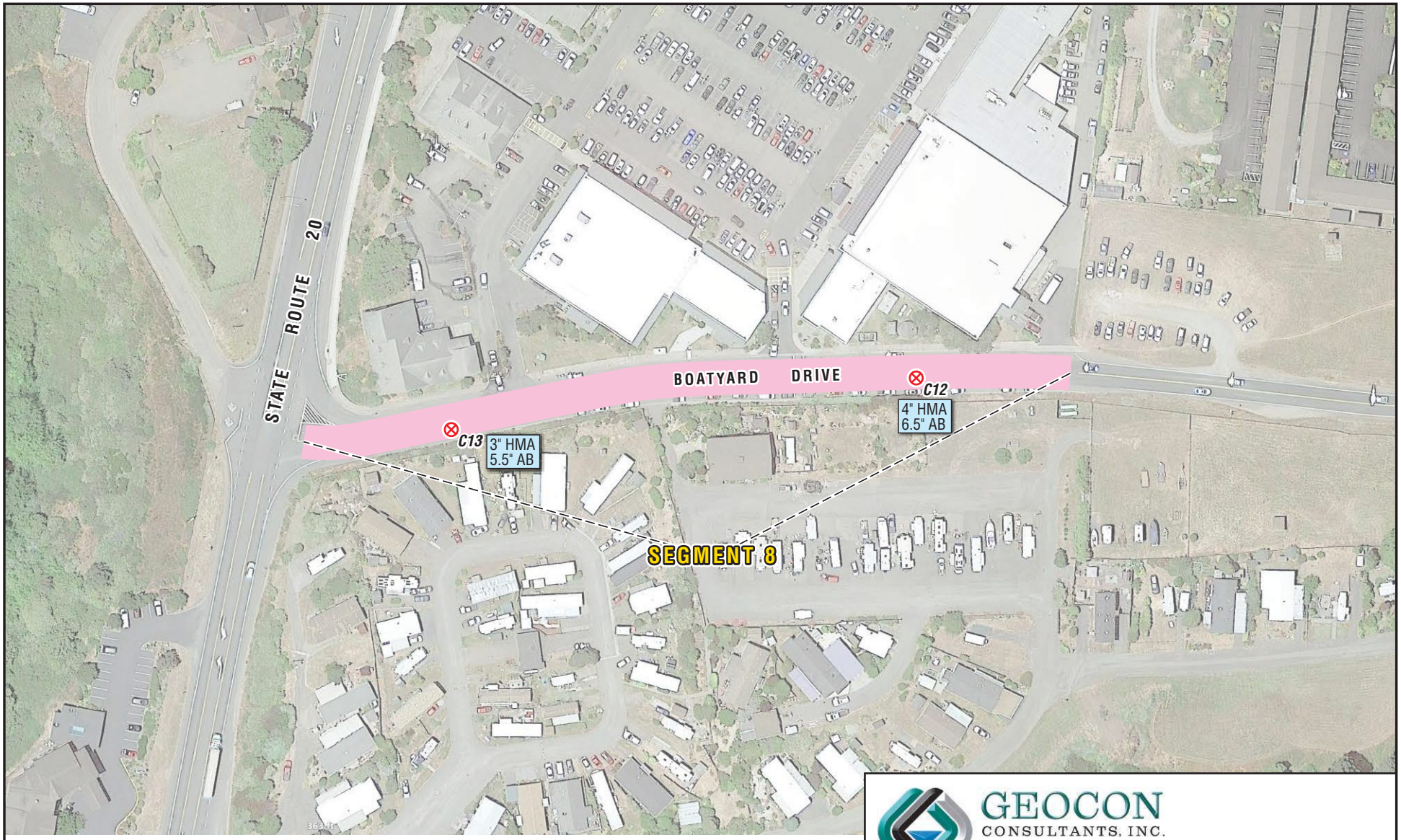
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Fort Bragg Improvements

Fort Bragg,
California

SITE PLAN – Segments 6 and 7

S2310-05-01	January 2023	Figure 2-4



LEGEND:

C1 ⊗ Approximate Pavement Core Location

3.5" HMA
8.5" AB
Approximate Pavement Structural Section Thickness
HMA = hot-mix asphalt; AB = aggregate base

Pavement Condition Index:

- Good (PCI = 71-100)
- Fair (PCI = 56-70)
- Poor (PCI = 41-55)
- Very Poor (PCI = 26-40)
- Serious (PCI = 11-25)
- Failed (PCI = 0-10)

N

0 140
Scale in Feet

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Fort Bragg Improvements

Fort Bragg,
California

SITE PLAN – Segment 8

S2310-05-01	January 2023	Figure 2-5

UNIFIED SOIL CLASSIFICATION

MAJOR DIVISIONS					TYPICAL NAMES
COARSE-GRAINED SOILS (MORE THAN HALF IS COARSER THAN NO. 200 SIEVE)	GRAVELS (MORE THAN HALF COARSE FRACTION IS LARGER THAN NO.4 SIEVE SIZE)	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW		WELL GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
			GP		POORLY GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
		GRAVELS WITH OVER 12% FINES	GM		SILTY GRAVELS, SILTY GRAVELS WITH SAND
			GC		CLAYEY GRAVELS, CLAYEY GRAVELS WITH SAND
	SANDS (MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO.4 SIEVE SIZE)	CLEAN SANDS WITH LITTLE OR NO FINES	SW		WELL GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
			SP		POORLY GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
		SANDS WITH OVER 12% FINES	SM		SILTY SANDS WITH OR WITHOUT GRAVEL
			SC		CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SOILS (MORE THAN HALF IS FINER THAN NO. 200 SIEVE)	SILTS AND CLAYS (LIQUID LIMIT 50% OR LESS)		ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTS WITH SANDS AND GRAVELS
			CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, CLAYS WITH SANDS AND GRAVELS, LEAN CLAYS
			OL		ORGANIC SILTS OR CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS (LIQUID LIMIT GREATER THAN 50%)		MH		INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS, FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH		ORGANIC CLAYS OR CLAYS OF MEDIUM TO HIGH PLASTICITY
	HIGHLY ORGANIC SOILS		PT		PEAT AND OTHER HIGHLY ORGANIC SOILS

BORING/TRENCH LOG LEGEND

- No Recovery
- Shelby Tube Sample
- Bulk Sample
- SPT Sample
- Modified California Sample
- Groundwater Level (At Completion)
- Groundwater Level (Seepage)

PENETRATION RESISTANCE

SAND AND GRAVEL			SILT AND CLAY			
RELATIVE DENSITY	BLOWS PER FOOT (SPT)*	BLOWS PER FOOT (MOD-CAL)*	CONSISTENCY	BLOWS PER FOOT (SPT)*	BLOWS PER FOOT (MOD-CAL)*	COMPRESSIVE STRENGTH (tsf)
VERY LOOSE	0 - 4	0 - 6	VERY SOFT	0 - 2	0 - 3	0 - 0.25
LOOSE	5 - 10	7 - 16	SOFT	3 - 4	4 - 6	0.25 - 0.50
MEDIUM DENSE	11 - 30	17 - 48	MEDIUM STIFF	5 - 8	7 - 13	0.50 - 1.0
DENSE	31 - 50	49 - 79	STIFF	9 - 15	14 - 24	1.0 - 2.0
VERY DENSE	OVER 50	OVER 79	VERY STIFF	16 - 30	25 - 48	2.0 - 4.0
			HARD	OVER 30	OVER 48	OVER 4.0

*NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE LAST 12 INCHES OF AN 18-INCH DRIVE

MOISTURE DESCRIPTIONS

FIELD TEST	APPROX. DEGREE OF SATURATION, S (%)	DESCRIPTION
NO INDICATION OF MOISTURE; DRY TO THE TOUCH	S<25	DRY
SLIGHT INDICATION OF MOISTURE	25≤S<50	DAMP
INDICATION OF MOISTURE; NO VISIBLE WATER	50≤S<75	MOIST
MINOR VISIBLE FREE WATER	75≤S<100	WET
VISIBLE FREE WATER	100	SATURATED

QUANTITY DESCRIPTIONS

APPROX. ESTIMATED PERCENT	DESCRIPTION
<5%	TRACE
5 - 10%	FEW
11 - 25%	LITTLE
26 - 50%	SOME
>50%	MOSTLY

GRAVEL/COBBLE/BOULDER DESCRIPTIONS

CRITERIA	DESCRIPTION
PASS THROUGH A 3-INCH SIEVE AND BE RETAINED ON A NO. 4 SIEVE (#4 TO 3")	GRAVEL
PASS A 12-INCH SQUARE OPENING AND BE RETAINED ON A 3-INCH SIEVE (3"-12")	COBBLE
WILL NOT PASS A 12-INCH SQUARE OPENING (>12")	BOULDER

LABORATORY TEST KEY

CP – COMPACTION CURVE (ASTM D1557)
CR – CORROSION ANALYSIS (CTM 422, 643, 417)
DS – DIRECT SHEAR (ASTM D3080)
EI – EXPANSION INDEX (ASTM D4829)
GSA – GRAIN SIZE ANALYSIS (ASTM D422)
MC – MOISTURE CONTENT (ASTM D2216)
PI – PLASTICITY INDEX (ASTM D4318)
R – R-VALUE (CTM 301)
SE – SAND EQUIVALENT (CTM 217)
TXCU – CONSOLIDATED UNDRAINED TRIAXIAL (ASTM D4767)
TXUU – UNCONSOLIDATED UNDRAINED TRIAXIAL (ASTM D2850)
UC – UNCONFINED COMPRESSIVE STRENGTH (ASTM D2166)

BEDDING SPACING DESCRIPTIONS

THICKNESS/SPACING	DESCRIPTOR
GREATER THAN 10 FEET	MASSIVE
3 TO 10 FEET	VERY THICKLY BEDDED
1 TO 3 FEET	THICKLY BEDDED
3 ⅝-INCH TO 1 FOOT	MODERATELY BEDDED
1 ⅛-INCH TO 3 ⅝-INCH	THINLY BEDDED
⅜-INCH TO 1 ⅛-INCH	VERY THINLY BEDDED
LESS THAN ⅜-INCH	LAMINATED

STRUCTURE DESCRIPTIONS

CRITERIA	DESCRIPTION
ALTERNATING LAYERS OF VARYING MATERIAL OR COLOR WITH LAYERS AT LEAST ¼-INCH THICK	STRATIFIED
ALTERNATING LAYERS OF VARYING MATERIAL OR COLOR WITH LAYERS LESS THAN ¼-INCH THICK	LAMINATED
BREAKS ALONG DEFINITE PLANES OF FRACTURE WITH LITTLE RESISTANCE TO FRACTURING	FISSURED
FRACTURE PLANES APPEAR POLISHED OR GLOSSY, SOMETIMES STRIATED	SLICKENSIDED
COHESIVE SOIL THAT CAN BE BROKEN DOWN INTO SMALLER ANGULAR LUMPS WHICH RESIST FURTHER BREAKDOWN	BLOCKY
INCLUSION OF SMALL POCKETS OF DIFFERENT SOIL, SUCH AS SMALL LENSES OF SAND SCATTERED THROUGH A MASS OF CLAY	LENSED
SAME COLOR AND MATERIAL THROUGHOUT	HOMOGENOUS

CEMENTATION/INDURATION DESCRIPTIONS

FIELD TEST	DESCRIPTION
CRUMBLES OR BREAKS WITH HANDLING OR LITTLE FINGER PRESSURE	WEAKLY CEMENTED/INDURATED
CRUMBLES OR BREAKS WITH CONSIDERABLE FINGER PRESSURE	MODERATELY CEMENTED/INDURATED
WILL NOT CRUMBLE OR BREAK WITH FINGER PRESSURE	STRONGLY CEMENTED/INDURATED

IGNEOUS/METAMORPHIC ROCK STRENGTH DESCRIPTIONS

FIELD TEST	DESCRIPTION
MATERIAL CRUMBLES WITH BARE HAND	WEAK
MATERIAL CRUMBLES UNDER BLOWS FROM GEOLOGY HAMMER	MODERATELY WEAK
½-INCH INDENTATIONS WITH SHARP END FROM GEOLOGY HAMMER	MODERATELY STRONG
HAND-HELD SPECIMEN CAN BE BROKEN WITH **ONE** BLOW FROM GEOLOGY HAMMER	STRONG
HAND-HELD SPECIMEN CAN BE BROKEN WITH **COUPLE** BLOWS FROM GEOLOGY HAMMER	VERY STRONG
HAND-HELD SPECIMEN CAN BE BROKEN WITH **MANY** BLOWS FROM GEOLOGY HAMMER	EXTREMELY STRONG

IGNEOUS/METAMORPHIC ROCK WEATHERING DESCRIPTIONS

DEGREE OF DECOMPOSITION	FIELD RECOGNITION	ENGINEERING PROPERTIES
SOIL	DISCOLORED, CHANGED TO SOIL, FABRIC DESTROYED	EASY TO DIG
COMPLETELY WEATHERED	DISCOLORED, CHANGED TO SOIL, FABRIC MAINLY PRESERVED	EXCAVATED BY HAND OR RIPPING (Saprolite)
HIGHLY WEATHERED	DISCOLORED, HIGHLY FRACTURED, FABRIC ALTERED AROUND FRACTURES	EXCAVATED BY HAND OR RIPPING, WITH SLIGHT DIFFICULTY
MODERATELY WEATHERED	DISCOLORED, FRACTURES, INTACT ROCK-NOTICEABLY WEAKER THAN FRESH ROCK	EXCAVATED WITH DIFFICULTY WITHOUT EXPLOSIVES
SLIGHTLY WEATHERED	MAY BE DISCOLORED, SOME FRACTURES, INTACT ROCK-NOT NOTICEABLY WEAKER THAN FRESH ROCK	REQUIRES EXPLOSIVES FOR EXCAVATION, WITH PERMEABLE JOINTS AND FRACTURES
FRESH	NO DISCOLORATION, OR LOSS OF STRENGTH	REQUIRES EXPLOSIVES

IGNEOUS/METAMORPHIC ROCK JOINT/FRACTURE DESCRIPTIONS

FIELD TEST	DESCRIPTION
NO OBSERVED FRACTURES	UNFRACTURED/UNJOINTED
MAJORITY OF JOINTS/FRACTURES SPACED AT 1 TO 3 FOOT INTERVALS	SLIGHTLY FRACTURED/JOINTED
MAJORITY OF JOINTS/FRACTURES SPACED AT 4-INCH TO 1 FOOT INTERVALS	MODERATELY FRACTURED/JOINTED
MAJORITY OF JOINTS/FRACTURES SPACED AT 1-INCH TO 4-INCH INTERVALS WITH SCATTERED FRAGMENTED INTERVALS	INTENSELY FRACTURED/JOINTED
MAJORITY OF JOINTS/FRACTURES SPACED AT LESS THAN 1-INCH INTERVALS; MOSTLY RECOVERED AS CHIPS AND FRAGMENTS	VERY INTENSELY FRACTURED/JOINTED

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KEY TO LOGS | Figure 3

PROJECT NO. **S2310-05-01** PROJECT NAME **Fort Bragg Improvements**

BORING B1

ELEV. (MSL.) _____ DATE COMPLETED **3/14/22**

ENG./GEO. **T. Henderson** DRILLER **Clear Heart Drilling**

EQUIPMENT **Truck-Mounted DR-10K1 w/Solid Flight Augers** HAMMER TYPE **140lb | Auto**

DEPTH IN FEET	SAMPLE INTERVAL & RECOVERY	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	ADDITIONAL TESTS
0					**HOT-MIX ASPHALT - 2.5 INCHES**				
1	B1-BULK				**AGGREGATE BASE - 7 INCHES**				
	B1-1			SM	**ALLUVIUM**				
	B1-1.5				Loose, moist, dark brown, Silty SAND, trace fine gravel, fine		93.5	15.6	
2	B1-2				to coarse sand	11			
3	B1-3						92.8	13.6	
	B1-3.5								
4	B1-4					10			
5	B1-5						90.3	12.4	
	B1-5.5			SP	Loose, moist, brown, Poorly Graded SAND, trace fine to				
6	B1-6				medium gravel	12			
7	B1-7								
				SC	Loose, moist, brown with gray and orange, Clayey SAND				
8						6			
9									
10	B1-10			SM	Loose, moist to wet, brown, Silty SAND, trace fine gravel				
11						10			
12			▽						
13									
14									
15	B1-15			SC	Medium dense, wet, brown, Clayey SAND with fine to medium				
16					gravel	30			
					BORING TERMINATED AT 16.5 FEET GROUNDWATER ENCOUNTERED AT 12 FEET BACKFILLED WITH NEAT CEMENT GROUT & CAPPED WITH RAPID SET CONCRETE				

Figure 4, Log of Boring, page 1 of 1

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SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL ◧ ... STANDARD PENETRATION TEST ■ ... DRIVE SAMPLE (UNDISTURBED)

⊠ ... DISTURBED OR BAG SAMPLE ◥ ... CHUNK SAMPLE ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. **S2310-05-01** PROJECT NAME **Fort Bragg Improvements**

BORING B2

ELEV. (MSL.) _____ DATE COMPLETED **3/14/22**

ENG./GEO. **T. Henderson** DRILLER **Clear Heart Drilling**

EQUIPMENT **Truck-Mounted DR-10K1 w/Solid Flight Augers** HAMMER TYPE **140lb | Auto**

DEPTH IN FEET	SAMPLE INTERVAL & RECOVERY	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	ADDITIONAL TESTS
0					**HOT-MIX ASPHALT - 3 INCHES**				
1	B2-BULK				**AGGREGATE BASE - 6 INCHES**				
	B2-1			SM	**ALLUVIUM**				
	B2-1.5				Loose, damp, dark brown, Silty SAND, trace fine gravel, fine				
2	B2-2				to coarse sand	11	97.9	12.3	
3	B2-3								
	B2-3.5				- root				
4	B2-4			SP	Medium dense, damp, brown, Poorly Graded SAND	19	99.4	12.9	
5	B2-5								
	B2-5.5				- orangish brown				
6	B2-6					26		8.9	
7	B2-7								
8					- trace medium gravel	17			
9									
10	B2-10			SM	Medium dense, moist, orangish brown, Silty SAND, fine to				
11					coarse sand	11			
12									
13									
14									
15	B2-15								
	B2-15.5								
16	B2-16		▽		- wet	28			
					BORING TERMINATED AT 16.5 FEET GROUNDWATER ENCOUNTERED AT 16 FEET BACKFILLED WITH NEAT CEMENT GROUT & CAPPED WITH RAPID SET CONCRETE				

Figure 5, Log of Boring, page 1 of 1

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SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL ◧ ... STANDARD PENETRATION TEST ■ ... DRIVE SAMPLE (UNDISTURBED)

⊠ ... DISTURBED OR BAG SAMPLE ◥ ... CHUNK SAMPLE ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. **S2310-05-01** PROJECT NAME **Fort Bragg Improvements**

BORING B3

ELEV. (MSL.) _____ DATE COMPLETED **3/14/22**

ENG./GEO. **T. Henderson** DRILLER **Clear Heart Drilling**

EQUIPMENT **Truck-Mounted DR-10K1 w/Solid Flight Augers** HAMMER TYPE **140lb | Auto**

DEPTH IN FEET	SAMPLE INTERVAL & RECOVERY	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	ADDITIONAL TESTS
0					**HOT-MIX ASPHALT - 2.5 INCHES**				
1	B3-BULK			SM	**AGGREGATE BASE - 5 INCHES**				
	B3-1				**ALLUVIUM**				
	B3-1.5				Loose, damp, dark brown, Silty SAND, fine to coarse sand		88.4	13.7	
2	B3-2					8			
3	B3-3								
	B3-3.5			SP	Loose, damp to moist, orangish brown, Poorly Graded SAND				
4	B3-4				- tan with black mottling	15	102.6	11.0	
5	B3-5								
	B3-5.5								
6	B3-6				- orangish tan	24	104.7	6.7	
7	B3-7				- medium dense				
8						13			
9									
10	B3-10		▽	SC	Medium dense, wet, bluish gray, Clayey SAND				
11						11			
12									
13									
14									
15	B3-15			SP-SM	Dense, wet, grayish tan, Poorly Graded SAND with Silt				
16						49			
					BORING TERMINATED AT 16.5 FEET GROUNDWATER ENCOUNTERED AT 10 FEET BACKFILLED WITH NEAT CEMENT GROUT & CAPPED WITH RAPID SET CONCRETE				

Figure 6, Log of Boring, page 1 of 1

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SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL ◧ ... STANDARD PENETRATION TEST ■ ... DRIVE SAMPLE (UNDISTURBED)

⊠ ... DISTURBED OR BAG SAMPLE ◪ ... CHUNK SAMPLE ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

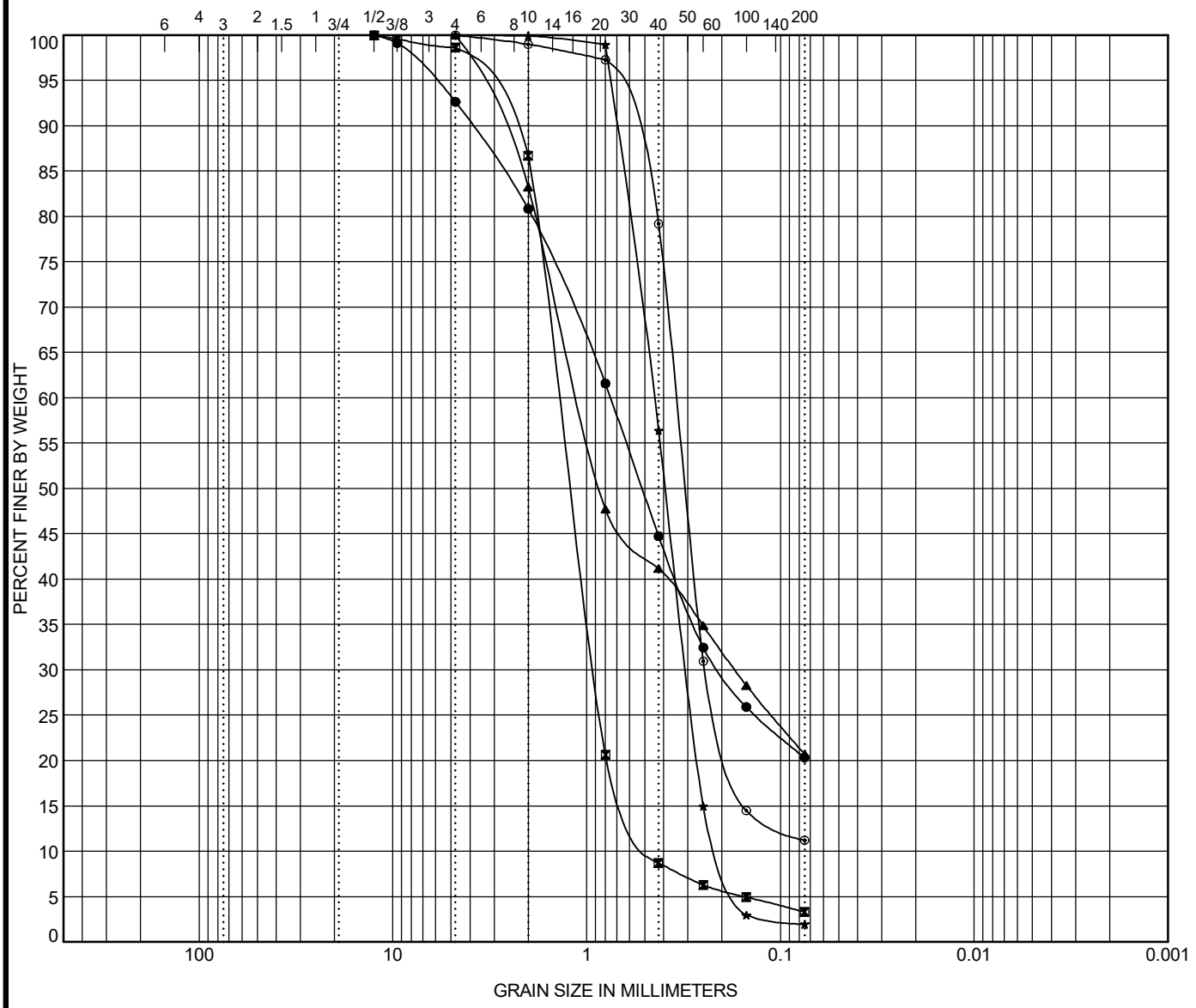
Sample ID	Depth (feet)	Liquid Limit	Plastic Limit	Plasticity Index	Maximum Size (mm)	%<#200 Sieve	Water Content (%)	Dry Density (pcf)
B1-Bulk	0-5				---	32.2		
B1-1.5	1.5				---		15.6	93.5
B1-3	3				---		13.6	92.8
B1-5	5				---		12.4	90.3
B1-7	7				---	17.2		
B1-10	10				---	20.3		
B2-Bulk	0-5				---	16.2		
B2-2	2				---		12.3	97.9
B2-4	4				---		12.9	99.4
B2-5.5	5.5				---	3.3		
B2-6	6				---		8.9	
B2-10	10				---	23.6		
B2-15.5	15.5				---	20.7		
B3-Bulk	0-5				---	15.2		
B3-1.5	1.5				---		13.7	88.4
B3-4	4				---		11.0	102.6
B3-6	6				---	1.9	6.7	104.7
B3-7	7				---	11.2		
B3-15	15				---	11.2		

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Summary of Laboratory Results

Project: Fort Bragg Improvements
Location: Fort Bragg, California
Number: S2310-05-01
Figure: 7

US LAB SUMMARY GEOTECH 2 S2310-05-01 2022 FORT BRAGG STREET REHAB.GPJ US_LAB.GDT 4/7/22



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Sample No.	Classification	LL	PL	PI	Cc	Cu
●	B1-10	SILTY SAND(SM)					
⊠	B2-5.5	POORLY GRADED SAND(SP)				1.32	3.0
▲	B2-15.5	SILTY SAND(SM)					
★	B3-6	POORLY GRADED SAND(SP)				1.01	2.2
⊙	B3-15	POORLY GRADED SAND WITH SILT(SP-SM)				2.94	5.9

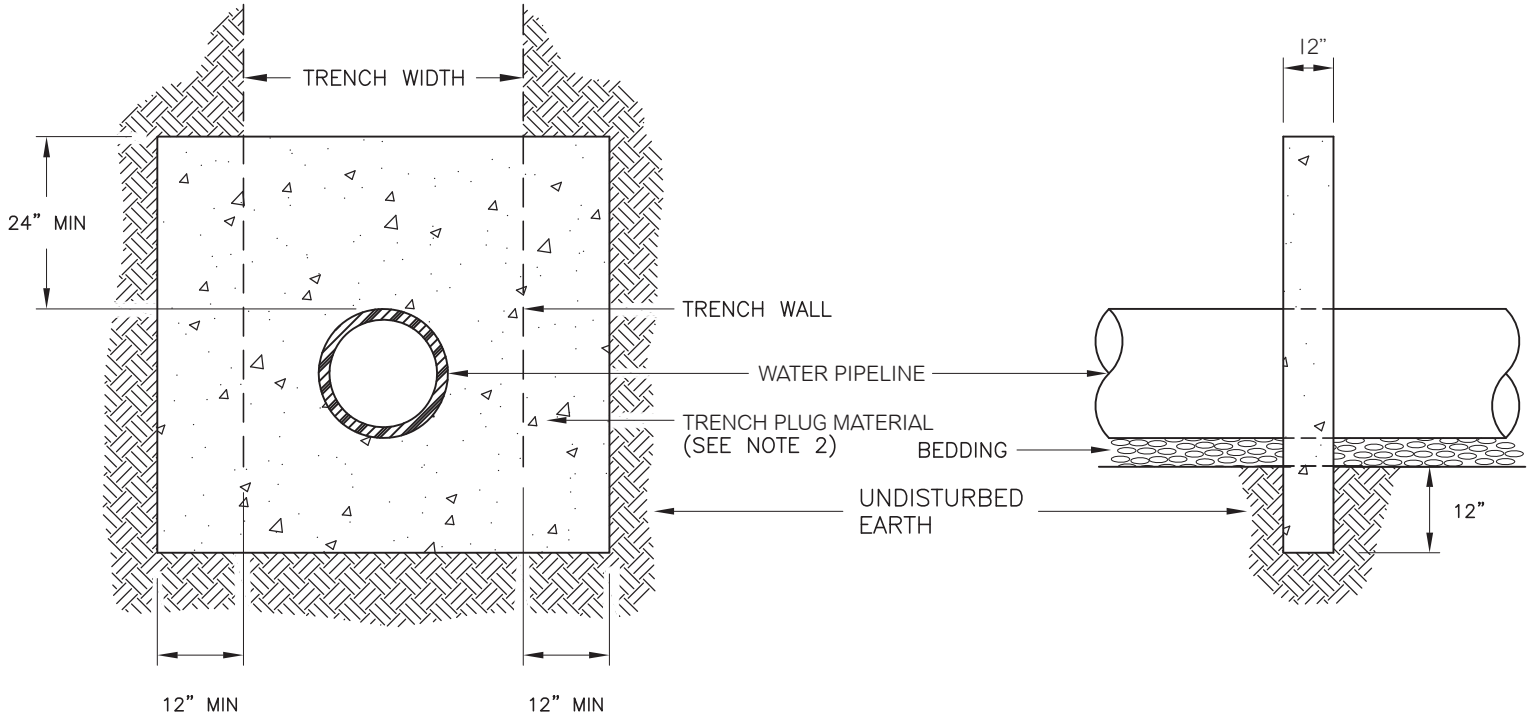
	Sample No.	D100	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	B1-10	12.5	0.518	0.207		7.4	72.3	20.3	
⊠	B2-5.5	12.5	1.202	0.911	0.456	1.3	95.4	3.3	
▲	B2-15.5	4.75	0.848	0.171		0.0	79.3	20.7	
★	B3-6	4.75	0.392	0.303	0.202	0.0	98.1	1.9	
⊙	B3-15	4.75	0.308	0.243		0.0	88.8	11.2	

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GRAIN SIZE DISTRIBUTION (ASTM D422, D6913)

Project: Fort Bragg Improvements
Location: Fort Bragg, California
Number: S2310-05-01
Figure: 8

GRAIN SIZE COPY 2 S2310-05-01 2022 FORT BRAGG STREET REHAB.GPJ US LAB.GDT 4/7/22



NOTES:

1. TOP OF PLUG TO EXTEND INTO INTERMEDIATE BACKFILL 12" MINIMUM OF TOP OF GROUND WATER HGL, WHICHEVER IS LESS.
2. TRENCH PLUG MATERIAL MAY CONSIST OF COMPACTED CLAY, LOW-PERMEABILITY CEMENT-TREATED SAND, OR LOW-PERMEABILITY CONTROLLED DENSITY FILL (CDF).

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Fort Bragg Improvements

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California

TYPICAL TRENCH PLUG DETAIL

S2310-05-01	January 2023	Figure 9



Photo No. 1 Typical pavement conditions. West Fir Street at West Street (looking east).



Photo No. 2 Typical pavement conditions. West Fir Street east of Stewart Street (looking east).

PHOTOS NO. 1 & 2

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Photo No. 3 Typical pavement conditions. North Franklin Street north of East Fir Street (looking north).



Photo No. 4 Typical pavement conditions. North Franklin Street south of East Fir Street (looking south).

PHOTOS NO. 3 & 4

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Photo No. 5 Typical pavement conditions. North Franklin Street north of East Laurel Street (looking north).



Photo No. 6 Typical pavement conditions. North Franklin Street north of East Alder Street (looking west).

PHOTOS NO. 5 & 6

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Photo No. 7 Typical pavement conditions. South Franklin Street between Madrone and Maple Street (looking east).



Photo No. 8 Typical pavement conditions. South Franklin Street between Hazel and East Chestnut Street (looking south).

PHOTOS NO. 7 & 8

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GEOCON Project No. S2310-05-01 | January 2023



Photo No. 9 Typical pavement conditions. East Chestnut Street west of South Franklin Street (looking east).



Photo No. 10 Typical pavement conditions. East Chestnut Street west of South Franklin Street (looking east).

PHOTOS NO. 9 & 10

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Photo No. 11 Typical pavement conditions. East Chestnut Street west of South Franklin Street (looking south).



Photo No. 12 Typical pavement conditions. South Franklin Street between Walnut Street and East Chestnut Street (looking north).

PHOTOS NO. 11 & 12

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Photo No. 13 Typical pavement conditions. South Franklin Street north of South Street (looking south).



Photo No. 14 Typical pavement conditions. South Franklin Street south of South Street (looking north).

PHOTOS NO. 13 & 14

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GEOCON Project No. S2310-05-01 | January 2023



Photo No. 15 Typical pavement conditions. South Franklin Street north of North Harbor Drive (looking south).

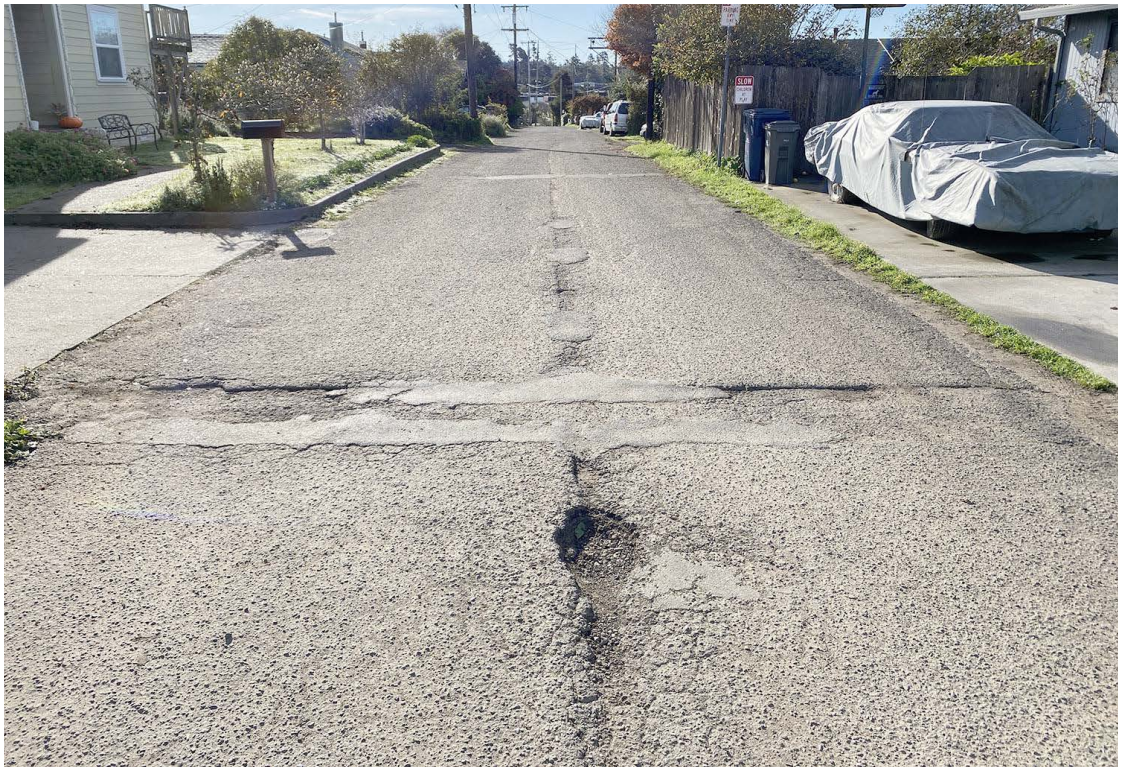


Photo No. 16 Typical pavement conditions. South Harold Street south of East Chestnut Street (looking south).

PHOTOS NO. 15 & 16

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Photo No. 17 Typical pavement conditions. Azalea Street (looking west).



Photo No. 18 Typical pavement conditions. Penitenti Way (looking west).

PHOTOS NO. 17 & 18

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Photo No. 19 Typical pavement conditions. Boatyard Drive (looking north).



Photo No. 20 Typical pavement conditions. Boatyard Drive (looking south/southwest towards SR-20).

PHOTOS NO. 19 & 20

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3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

Fort Bragg Improvements

Fort Bragg,
California

GEOCON Project No. S2310-05-01 | January 2023



Photo No. 21 Pavement Core C1



Photo No. 22 Pavement Core C2

GEOCON
CONSULTANTS, INC.
3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

PHOTOS NO. 21 & 22

Fort Bragg Improvements

Fort Bragg,
California

GEOCON Project No. S2310-05-01 | January 2023



Photo No. 23 Pavement Core C3



Photo No. 24 Pavement Core C4

GEOCON
CONSULTANTS, INC.
3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

PHOTOS NO. 23 & 24

Fort Bragg Improvements

Fort Bragg,
California

GEOCON Project No. S2310-05-01 | January 2023



Photo No. 25 Pavement Core C5



Photo No. 26 Pavement Core C6

GEOCON
CONSULTANTS, INC.
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PHONE 916.852.9118 – FAX 916.852.9132

PHOTOS NO. 25 & 26

Fort Bragg Improvements

Fort Bragg,
California

GEOCON Project No. S2310-05-01 | January 2023



Photo No. 27 Pavement Core C7



Photo No. 28 Pavement Core C8

GEOCON
CONSULTANTS, INC.
3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

PHOTOS NO. 27 & 28

Fort Bragg Improvements

Fort Bragg,
California

GEOCON Project No. S2310-05-01 | January 2023



Photo No. 29 Pavement Core C9



Photo No. 30 Pavement Core C10

GEOCON
CONSULTANTS, INC.
3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

PHOTOS NO. 29 & 30

Fort Bragg Improvements

Fort Bragg,
California

GEOCON Project No. S2310-05-01 | January 2023



Photo No. 31 Pavement Core C11



Photo No. 32 Pavement Core C12

GEOCON
CONSULTANTS, INC.
3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
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PHOTOS NO. 31 & 32

Fort Bragg Improvements

Fort Bragg,
California

GEOCON Project No. S2310-05-01 | January 2023



Photo No. 33 Pavement Core C13

GEOCON
CONSULTANTS, INC.
3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

PHOTO NO. 33

Fort Bragg Improvements

Fort Bragg,
California

GEOCON Project No. S2310-05-01 | January 2023

CITY OF FORT BRAGG, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
PROJECT PLANS FOR:

2022 STREETS REHABILITATION PROJECT

SHEET INDEX:

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C03	TYPICAL SECTIONS
C04	TYPICAL SECTIONS
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C09	PAVING & STRIPING - N FRANKLIN ST
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C13	PAVING & STRIPING - S HAROLD ST, AZALEA CIR, & PENITENTI WAY
C14	STRIPING - PINE ST & HAROLD ST
C15	STRIPING - HAROLD ST & REDWOOD AVE
C16	STRIPING - REDWOOD AVE & E OAK ST
C17	STRIPING - E OAK ST
C18	STRIPING - E OAK ST & FORT BRAGG SHERWOOD RD
C19	STRIPING - S HAROLD ST & S LINCOLN ST
C20	PLAN & PROFILE - W FIR ST
C21	PLAN & PROFILE - W FIR ST
C22	CURB RAMP - BOATYARD DR & CHESTNUT ST
C23	CURB RAMP - W FIR ST
C24	CURB RAMP - HAROLD ST
C25	CURB RAMP - AZALEA CIR & PENITENTI WAY

BID ALTERNATE 1

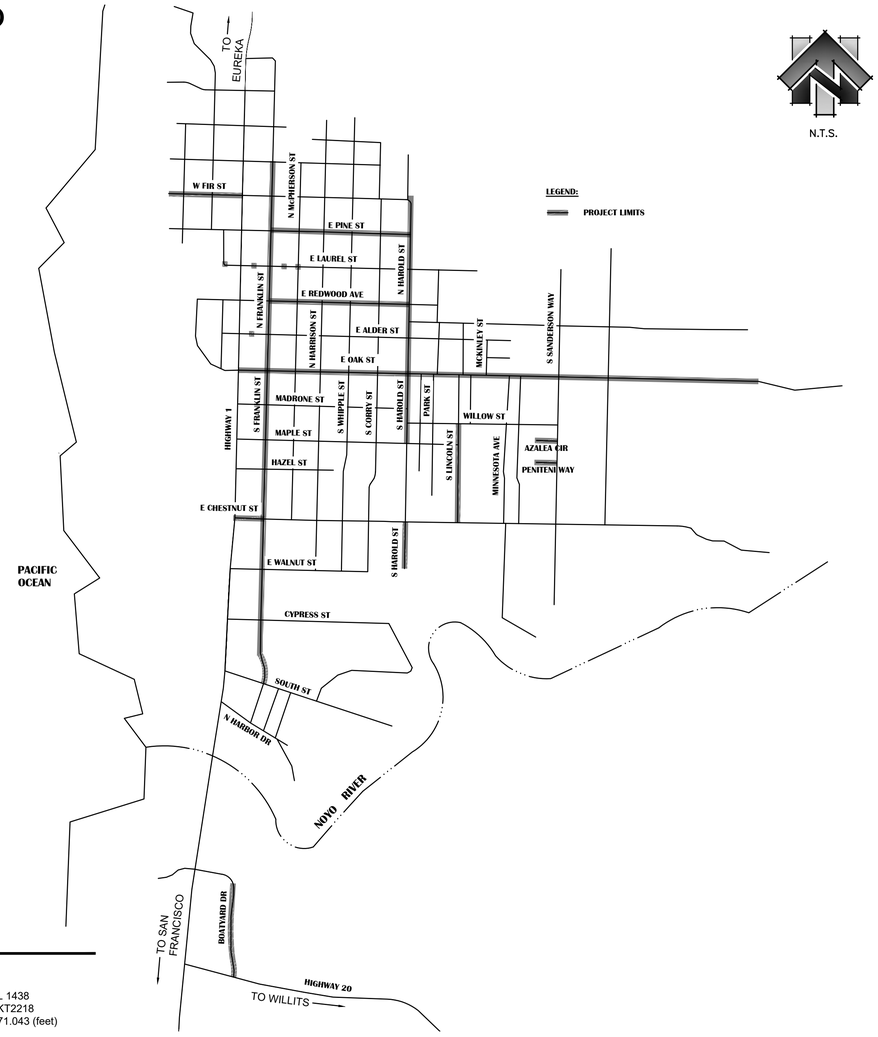
C04	TYPICAL SECTIONS
C07	SHEET INDEX
C14	STRIPING - PINE ST & HAROLD ST
C15	STRIPING - HAROLD ST & REDWOOD AVE
C17	STRIPING - E OAK ST
C19	STRIPING - S HAROLD ST & S LINCOLN ST
C24	CURB RAMP - HAROLD ST

BID ALTERNATE 2

C03	TYPICAL SECTIONS
C07	SHEET INDEX
C13	PAVING & STRIPING - S HAROLD ST, AZALEA CIR, & PENITENTI WAY
C25	CURB RAMP - AZALEA CIR & PENITENTI WAY

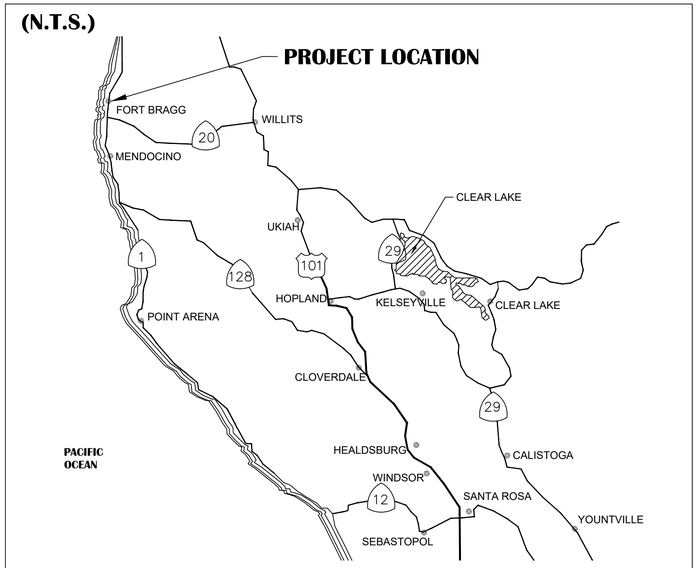
LOCATION MAP:

(N.T.S.)



VICINITY MAP:

(N.T.S.)



UTILITY REPRESENTATIVES

UTILITY	REPRESENTATIVE	TELEPHONE
ELECTRICITY		
PG&E	CHAD WATTS	(707) 338-1362
TELEPHONE		
AT&T	MIKE McAFEE	(707) 575-2218
WATER		
CITY PUBLIC WORKS	IAN SANDERSON	(707) 357-0231
SEWER		
CITY PUBLIC WORKS	IAN SANDERSON	(707) 357-0231
DRAINAGE		
CITY PUBLIC WORKS	IAN SANDERSON	(707) 357-0231
U.S.A.		
U.S.A.		(800) 624-4444
FIRE		
FORT BRAGG FIRE DEPARTMENT	CHIEF ORSI	(707) 961-2831
CABLE TV		
COMCAST	MARTINA GOMEZ	(925) 424-0278
RAILWAY		
MENDOCINO RAILWAY - SKUNK TRAIN	ROBERT PINOLI	(707) 849-1922

GENERAL NOTES:

OWNER OF RECORD
CITY OF FORT BRAGG
416 NORTH FRANKLIN STREET
FORT BRAGG, CA 95437
(707) 961-2823

GEOTECHNICAL REPORT
TITLE: GEOTECHNICAL INVESTIGATION
2022 STREETS REHABILITATION
PROJECT
FORT BRAGG, CALIFORNIA

DATE: JANUARY 2023

PROJECT No.: S2310-05-01

PREPARED BY: GEOCON CONSULTANTS, INC.

BENCHMARK
DESIGNATION: L 1438
PID: KT2218
NAV88 ORTHO HEIGHT: 71.043 (feet)

DESCRIPTION
DESCRIBED BY NATIONAL GEODETIC SURVEY 1988
2.6 KM (1.60 MI) SOUTH FROM FORT BRAGG. 2.6 KM (1.60 MI) SOUTHERLY ALONG STATE HIGHWAY 1 FROM THE JUNCTION OF OAK STREET IN FORT BRAGG, IN THE WEST END OF THE SOUTH ABUTMENT CURB OF THE HIGHWAY BRIDGE SPANNING HARE CREEK, 0.2 KM (0.10 MI) SOUTH OF THE INTERSECTION OF STATE HIGHWAY 20, 7.0 M (23.0 FT) NORTH OF THE SOUTH END OF THE WEST CONCRETE GUARDRAIL, AND 5.1 M (16.7 FT) WEST OF THE CENTERLINE OF THE HIGHWAY. THE MARK IS 0.3 M ABOVE THE HIGHWAY.

BASIS OF BEARING
HORIZONTAL DATUM: NAD 83(1986)
VERTICAL DATUM NAVD 88

RECORD DRAWING CERTIFICATE:

THIS SET OF PLANS, HAVING BEEN REVIEWED BY ME, REFLECT ALL APPROVED REVISIONS TO THE PROJECT KNOWN TO ME, AND ALL FIELD DEVIATIONS TO THE PLANNED IMPROVEMENTS BY THE CONSTRUCTION CONTRACTOR, AS REPORTED TO ME AS OF _____. IT DOES NOT REPRESENT FIELD VERIFICATION OF PLANNED IMPROVEMENTS BY ME.

_____
DATE

REGISTERED PROFESSIONAL ENGINEER
AARON S. BRUSATORI
No. 64384
Exp. 6/30/23
CIVIL
STATE OF CALIFORNIA

DESIGNED UNDER THE DIRECTION OF

Aaron Brusatori 4/13/2023

AARON S. BRUSATORI, PE, R.C.E. # 64384 DATE

CITY OF FORT BRAGG

_____

JOHN SMITH, DIRECTOR OF PUBLIC WORKS DATE

NO.	REVISION DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE
HOR. SCALE: N.T.S.
VERT. SCALE: N.T.S.

CITY OF FORT BRAGG CALIFORNIA

REY ENGINEERS, INC.
Civil Engineers | Land Surveyors | LiDAR
925 Samoa Blvd., Suite 201, Fortuna, CA 95540
Phone (707) 725-3300 Fax (707) 725-3303

2022 STREETS REHAB PROJECT
TITLE SHEET
CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GB
REVIEWER: AB

PROJECT NO.
3139.002
SHEET NO. C01 OF C25

N:_3139 – Fort Bragg_002 – 2022 Streets Rehab_10 – CAD Drawings\Improvement Plans_3139.002 – TITLE SHEET–R19_.dwg Apr 13, 2023 – 1:48pm, grugh

GENERAL NOTES:

1. CONTRACTOR SHALL OBTAIN REQUIRED PERMITS FROM ALL AGENCIES AND PAY ALL FEES PRIOR TO COMMENCEMENT OF ANY WORK.
2. CONTRACTOR SHALL GIVE THE CITY OF FORT BRAGG PUBLIC WORKS DEPARTMENT 48 HOURS NOTICE BEFORE STARTING WORK. CALL (707) 961-2823 OR CONTACT AT 416 NORTH FRANKLIN ST. FORT BRAGG, CA 95437
3. A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO BEGINNING OF WORK. CONTACT THE CITY ENGINEER TO SCHEDULE SUCH MEETING.
4. WORKING HOURS ARE LIMITED TO MONDAY THROUGH FRIDAY FROM 7:00 AM TO 5:00 PM, UNLESS AMENDED BY PROJECT CONDITIONS, INSPECTION WILL BE AVAILABLE MONDAY THROUGH FRIDAY FROM 8:30 AM TO 4:30 PM. CONTRACTORS SHALL SCHEDULE INSPECTIONS 48 HOURS IN ADVANCE BY PHONE (707) 961-2823.
5. ANY DISCREPANCY DISCOVERED BY CONTRACTOR IN THESE PLANS OR ANY FIELD CONDITIONS DISCOVERED BY CONTRACTOR THAT MAY DELAY OR OBSTRUCT THE PROPER COMPLETION OF THE WORK PER THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE CITY ENGINEER AND THE OWNER IMMEDIATELY UPON DISCOVERY. SAID NOTIFICATION SHALL BE IN WRITING.
6. GRADE BREAKS ON CURBS AND SIDEWALKS SHALL BE ROUNDED OFF IN FORMS AND SURFACE FINISHING.
7. ADJUST ALL EXISTING UTILITIES OR MONUMENT FRAMES AND COVERS SHOWN TO BE ADJUSTED TO GRADE THAT ARE WITHIN THE PAVING LIMITS. ON STREETS RECEIVING OVERLAY, LOWER UTILITIES PRIOR TO GRINDING AND RAISE TO FINISHED GRADE AFTER PAVING.
8. PROTECT ALL DRAINAGE INLETS WITH TEMPORARY CONSTRUCTION SITE BMP MEASURES IN ACCORDANCE WITH AN APPROVED STORMWATER POLLUTION PREVENTION PLAN.
9. ALL WORKMANSHIP, MATERIALS, AND CONSTRUCTION SHALL CONFORM TO THE CITY OF FORT BRAGG STANDARD SPECIFICATIONS AND STANDARD PLANS, AND THE STATE STANDARD SPECIFICATIONS AND STANDARD PLANS.
10. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT (USA) AT (800) 227-2600 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION FOR MARK-OUTS OF EXISTING UNDERGROUND FACILITIES.
11. THE CONTRACTOR SHALL POSSESS THE CLASS(ES) OF LICENSE(S) AS SPECIFIED IN THE 'NOTICE TO CONTRACTORS' CONTAINED IN THE INVITATION FOR BIDS FOR THIS PROJECT.
12. THE LOCATIONS OF P.G.&E., SBC, AND CABLE TV UTILITIES SHOWN ON THE PLANS ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL POTHOLE AND DETERMINE THE EXACT HORIZONTAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION.
13. PRIOR TO COMMENCING WORK ON THIS PROJECT, THE CONTRACTOR SHALL CALL:

FOR UTILITY ADJUSTMENT AND SCHEDULING	
CITY OF FORT BRAGG PUBLIC WORKS DEPARTMENT	(707)961-2823 X133
PG&E ELECTRIC CO.	(707)338-1362
AT&T	(707)575-2218
COMCAST	(925) 424-0278
WASTE MANAGEMENT	(707)964-9172
RAILROAD	(707)849-1922
FOR ROAD CLOSURES	
FIRE DEPT	(707)961-2831
USPS	(707)964-2302
POLICE	(707)964-0200
AMBULANCE	(707)937-1940

14. ANY DAMAGES TO CITY OR OTHER UTILITIES CAUSED BY PROJECT OPERATIONS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
15. THE CONTRACTOR SHALL OBTAIN A TRENCH SAFETY PERMIT FROM THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO EXCAVATION OF ANY TRENCH GREATER THAN 4-FEET DEEP.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMMEDIATE OFF-SITE DISPOSAL OF ALL BITUMINOUS PAVEMENT, CONCRETE, REINFORCEMENT, AND SPOILS NOT NEEDED FOR BACKFILL AS REQUIRED BY THE ENGINEER AND PER SPECIFICATIONS. ALL DISPOSAL SHALL CONFORM TO THE CITY'S CONSTRUCTION DEMOLITION ORDINANCE. (FBMC 15.34.030)
17. ALL LANDSCAPING, FENCING AND IRRIGATION SYSTEMS OR OTHER PRIVATE IMPROVEMENTS DISTURBED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED IN KIND OR AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S COST.
18. EXISTING SHRUBBERY AND TREES SHALL BE REMOVED OR TRIMMED ONLY AS PLANS INDICATE OR DIRECTED BY THE ENGINEER.
19. THE CONTRACTOR SHALL MAINTAIN REASONABLE ACCESS TO ALL DRIVEWAYS AND SIDEWALKS DURING ACTIVE CONSTRUCTION.
20. ALL TRENCHES SHALL BE PAVED AT THE END OF EACH WORKING DAY PER SPECIFICATIONS.
21. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES TEMPORARY TRAFFIC CONTROL (CA MUTCD). ALL SIGNS SHALL BE APPROPRIATELY CONSTRUCTED WITH REFLECTIVE MATERIAL ON A BACKING OF METAL OR FABRIC (NO WOOD OR PLASTIC ALLOWED) AND SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION TO PROVIDE PROPER VISIBILITY. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN PRIOR TO THE START OF CONSTRUCTION FOR REVIEW BY THE CITY OF FORT BRAGG.
22. CAUTION SHALL BE EXERCISED WHEN DIGGING WITHIN THE DRIPLINE OF ANY TREE. ROOTS LARGER THAN 2 INCHES SHALL NOT BE CUT WITHOUT PERMISSION FROM THE ENGINEER. IN THE EVENT THAT A TREE ROOT LARGER THAN 2 INCHES NEEDS TO BE REMOVED, THE ROOT PRUNING SHALL BE PERFORMED BY A CITY APPROVED LICENSED ARBORIST.
23. CONTRACTOR SHALL PROTECT AND PRESERVE CITY SURVEY MONUMENTS. IF NOT POSSIBLE, CONTRACTOR SHALL COORDINATE 10 DAYS IN ADVANCE WITH CITY OF FORT BRAGG APPROVED SURVEYOR FOR REFERENCING OF EXISTING MONUMENTS PRIOR TO WORK IN THE AREA. IF MONUMENT(S) ARE DISTURBED CONTRACTOR SHALL RECONSTRUCT PER CITY STANDARDS.
24. NO CONSTRUCTION SHALL COMMENCE WITHOUT PRIOR APPROVAL OF THE CITY OF FORT BRAGG'S PUBLIC WORKS DIRECTOR.
25. OVERHEAD UTILITY SERVICE DROPS TO RESIDENTS ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL INVESTIGATE THE SITE AND BE AWARE OF LIMITED OVERHEAD CLEARANCES.
26. THE CONTRACTOR SHALL REPLACE CURB AND GUTTER AT CONTRACTOR'S EXPENSE WHERE EXCAVATION DISTURBS SUPPORTING SOIL UNDER THE CURB AND GUTTER PER SPECIAL PROVISIONS.
27. THE CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY AND THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL AND THE CITY OF FORT BRAGG HARMLESS FOR ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.
28. LOCATIONS OF THE UNDERGROUND OBSTRUCTIONS SHOWN ON THE PLANS ARE APPROXIMATE ONLY AND SHOULD NOT BE TAKEN AS FINAL OR ALL INCLUSIVE. THE CONTRACTOR IS CAUTIONED THAT THE PLANS MAY NOT INCLUDE ALL EXISTING UTILITIES AND THE CITY OF FORT BRAGG AND THE ENGINEER ASSUME NO RESPONSIBILITY FOR OBSTRUCTIONS THAT MAY BE ENCOUNTERED.
29. UNAUTHORIZED CHANGES AND USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THESE PLANS MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

UTILITIES CAUTIONARY NOTE

CITY UNDERGROUND UTILITIES INCLUDING WATER, WASTE WATER, AND STORM DRAIN PIPES AND STRUCTURES MAY BE SHALLOW AND SPECIAL CARE SHOULD BE EXERCISED. WATER SERVICES MAY BE TAPPED VERTICALLY FROM THE MAIN AND MAY PROTRUDE 6"± ABOVE THE TOP OF PIPE. IF EXISTING WATER SERVICES ARE FOUND TO BE IN CONFLICT WITH PROPOSED IMPROVEMENTS, CONTRACTOR IS TO ABANDON EXISTING SERVICES AND INSTALL NEW SERVICE CONNECTION TO EXISTING WATER MAIN PER CITY STANDARD DETAIL 503. POTHOLING OR OTHER NON DESTRUCTIVE INVESTIGATIONS SHOULD BE EMPLOYED TO AVOID DAMAGE TO SHALLOW CITY FACILITIES.

ABBREVIATIONS

AB - AGGREGATE BASE
AC - ASPHALT CONCRETE
ALT - ALTERNATE
BOW - BACK OF WALK
CLSM - CONTROLLED LOW STRENGTH MATERIAL
CT - COURT
DI - DRAIN INLET
DR - DRIVE
DTL - DETAIL
E - EAST
EG - EXISTING GRADE
ELEV - ELEVATION
EP - EDGE OF PAVEMENT
(E) - EXISTING
F.O.C - FACE OF CURB
FDR-C - FULL DEPTH RECLAMATION WITH CEMENT
FG - FINISH GRADE
FL - FLOW LINE
FT - FEET
GEOR - GEOTECHNICAL ENGINEER OF RECORD
GR - GRATE
HDPE - HIGH DENSITY POLYETHYLENE
HMA - HOT MIX ASPHALT
HT - HEIGHT
IN - INCH
INCL - INCLUDING
INV - INVERT
LF - LINEAR FOOT
LL - LIMIT LINE
LN - LANE
MAX - MAXIMUM
MH - MANHOLE
MIN - MINIMUM
N - NORTH
N/A - NOT APPLICABLE
N/O - NORTH OF
NE - NORTHEAST
NPW - NON-POTABLE WATER
NTS - NOT TO SCALE
NW - NORTHWEST
OD - OUTSIDE DIAMETER
OG - ORIGINAL GROUND
(P) - PROPOSED
PCC - PORTLAND CEMENT CONCRETE
PVC - POLYVINYL CHLORIDE
P & S - PAVING & STRIPING
QTY - QUANTITY
RHMA-G - RUBBERIZED HOT MIX ASPHALT (GAP GRADED)
R&R - REMOVE & REPLACE
S - SOUTH
S: - SLOPE
S/O - SOUTH OF
SD - STORM DRAIN
SDMH - STORM DRAIN MANHOLE
SDWK - SIDEWALK
SE - SOUTHEAST
SF - SQUARE FOOT
SHLD - SHOULDER
SPECS - SPECIFICATIONS AND SPECIAL PROVISIONS
SS - SANITARY SEWER
SSMH - SANITARY SEWER MANHOLE
ST - STREET
STD - STANDARD
SW - SOUTHWEST
T.C.E - TEMPORARY CONSTRUCTION EASEMENT
TBC - TOP BACK OF CURB
TBD - TO BE DETERMINED
TYP - TYPICAL
UCS - UNCONFINED COMPRESSIVE STRENGTH
UNK - UNKNOWN
UTL - UTILITY
W - WEST
WH/AP - WHERE APPLICABLE
WY - WAY

LEGEND

PROPOSED

- CONCRETE SIDEWALK (SEE DETAIL ON SHEET C05)
- CONCRETE CURB & GUTTER (SEE DETAIL ON SHEET C05)
- REMOVE BASE & SURFACING LIMITS
- DETECTABLE WARNING SURFACE
- 6" DIGOUT (SEE DETAIL ON SHEET C05)
- 4" DIGOUT (SEE DETAIL ON SHEET C05)
- CONCRETE DRIVEWAY CONFORM
- ROAD SURFACE TREATMENT (SEE TYPICAL SECTION ON SHEET C03)
- SLURRY SEAL (TYPE II)
- COLD PLANE (CONFORM GRIND) (SEE DETAIL ON SHEET C05)
- REMOVE DI (SEE DETAIL ON SHEET C06)
- DI (TYPE G1) (SEE CALTRANS 2018 STANDARD PLAN D72B)
- 30" DIA NYLOPLAST DRAIN BASIN (SEE DETAIL ON SHEET C06)
- 12"SD — SD PIPE & SIZE
- STAMPED HMA (SEE DETAIL ON SHEET C05)
- ADJUST UTILITY TO GRADE (SEE DETAIL ON SHEET C05)
- SAWCUT MID-PANEL
- ##### — ADDRESS HOUSE NUMBER
- FH — FIRE HYDRANT PAVEMENT MARKER (PLACE PER MUTCD FIGURE 3B-102 (CA))
- PAVEMENT MARKING - TYPE IV(L/R)) ARROW (SEE CALTRANS 2018 STANDARD PLAN A24A)
- STOP — PAVEMENT MARKING - WORDS (SEE CALTRANS 2018 STANDARD PLAN A24D & CALTRANS 2018 REVISED STANDARD PLAN RSP A24E)
- PAVEMENT MARKING - STOP BAR
- PAVEMENT MARKING - ADVANCE WARNING MARKINGS FOR SPEED HUMPS (SEE DETAIL ON SHEET C06)
- PAVEMENT MARKING - LADDER CROSS WALK (SEE CALTRANS 2018 STANDARD PLAN A24F)
- PAVEMENT MARKING - CONTINENTAL CROSS WALK (SEE CALTRANS 2018 STANDARD PLAN A24F)
- PAVEMENT MARKING - ALLEY CROSS WALK (SEE DETAIL ON SHEET C05)
- PAVEMENT MARKING - BASIC CROSSWALK (SEE CALTRANS 2018 STANDARD PLAN A24F)
- RED PAVEMENT PAINT
- PAVEMENT MARKING - TYPE VII (L/R)) ARROW (SEE CALTRANS 2018 STANDARD PLAN A24A)
- ROADSIDE SIGN & POST (SEE DETAIL ON SHEET C05)
- RELOCATE ROADSIDE SIGN
- R X R — PAVEMENT MARKING - RAILROAD CROSSING SYMBOL (SEE CALTRANS 2018 STANDARD PLAN A24B, 110 SF OF PAVEMENT MARKING)
- PAVEMENT MARKING - SYMBOLS AND NUMERALS (SEE CALTRANS 2018 STANDARD PLAN A24C)
- PAVEMENT MARKING - SYMBOLS BIKE LANE ARROW (SEE CALTRANS 2018 STANDARD PLAN A24A)
- PAVEMENT MARKING - SYMBOLS AND NUMERALS (SEE CALTRANS 2018 STANDARD PLAN A24C)
- HANDICAP PAVEMENT PAINT (SEE CA MUTCD FIGURE 3B-22 (CA))
- TRAFFIC STRIPE - DETAIL 1 (SEE CALTRANS 2018 STANDARD PLAN A20A)
- TRAFFIC STRIPE - DETAIL 22 (SEE CALTRANS 2018 STANDARD PLAN A20A)
- TRAFFIC STRIPE - DETAIL 38A (SEE CALTRANS 2018 REVISED STANDARD PLAN RSP A20D)
- TRAFFIC STRIPE - DETAIL 39A (SEE CALTRANS 2018 REVISED STANDARD PLAN RSP A20D)
- TRAFFIC STRIPE - DETAIL 39 (SEE CALTRANS 2018 REVISED STANDARD RSP PLAN A20D)
- X–X — ROADSIDE SIGN CODE
- RED CURB PAINT
- T.C.E. — TEMPORARY CONSTRUCTION EASEMENT

EXISTING

- (E)DROP INLET
- (E)SDMH
- (E)SSMH
- (E)SANITARY SEWER CLEANOUT
- SD — (E)STORM DRAIN PIPE
- W — (E)POTABLE WATER PIPE
- SS — (E)SANITARY SEWER PIPE
- G — (E)GAS PIPE
- COMM — (E)COMMUNICATION
- E — (E)UNDERGROUND ELECTRICAL
- ABN — ABANDONED UTILITY
- (E)VALVE
- (E)WATER METER
- (E)FIRE HYDRANT
- (E)UTILITY MANHOLE
- (E)TRAFFIC SIGN
- (E)UTILITY BOX
- (E)POWER POLE
- (E)SURVEY MONUMENT
- SLOW SCHOOL STOP XING — (E)PAVEMENT MARKINGS

NO.	REVISION DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE
HOR. SCALE: N.T.S
VERT. SCALE: N.T.S

REY ENGINEERS, INC.
Civil Engineers | Land Surveyors | LiDAR
905 Sonoma Street, Suite 220 | Ukiah, CA 95482
Phone (916) 930-3040 | Fax (916) 930-3333

2022 STREETS REHAB PROJECT

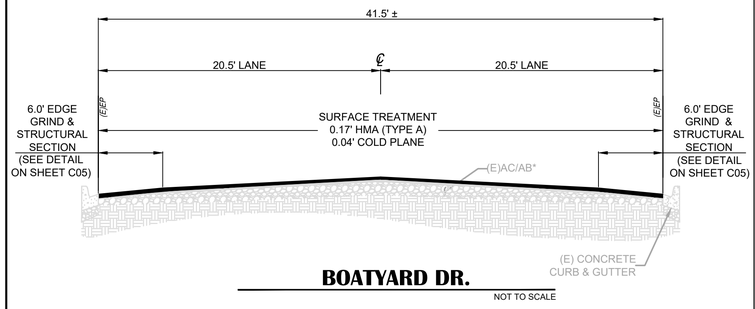
LEGEND & ABBREVIATIONS

CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GB
REVIEWER: AB

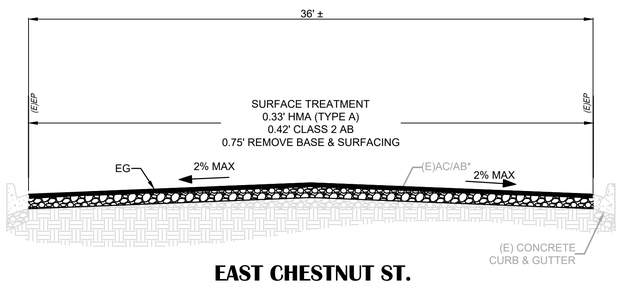
PROJECT NO.
3139.002
SHEET NO. **C02** OF **C25**

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BOATYARD DR.

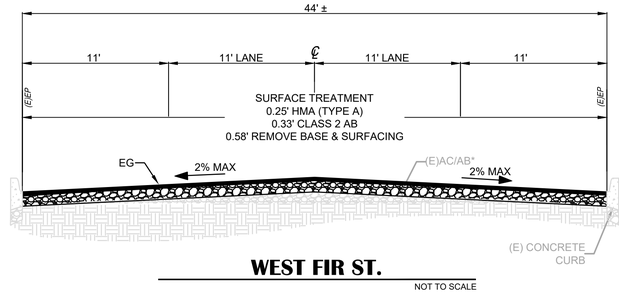
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EAST CHESTNUT ST.

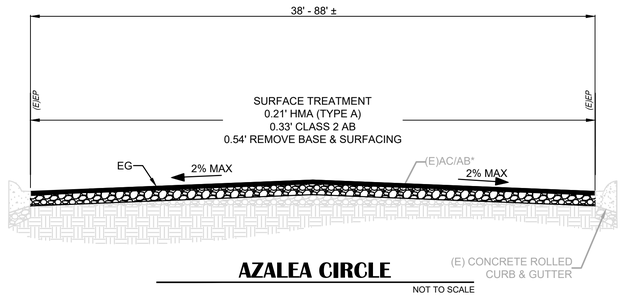
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NOTE: SEE PLAN SHEET FOR STRIPING DIMENSIONS.



WEST FIR ST.

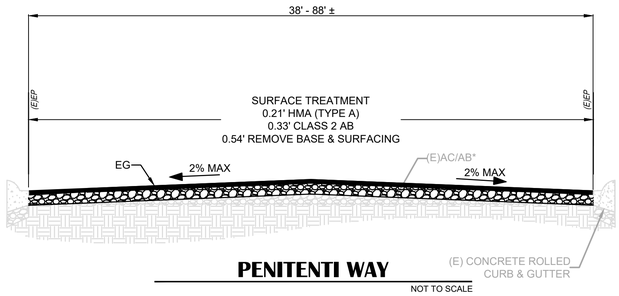
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AZALEA CIRCLE

NOT TO SCALE

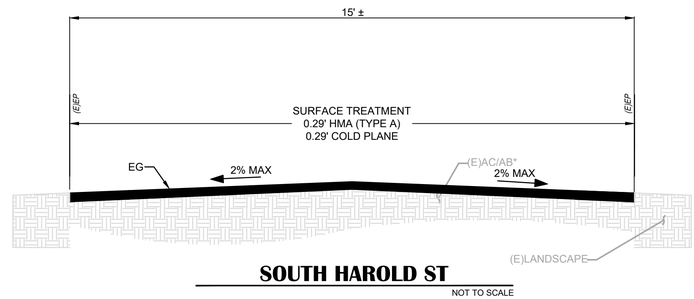
BID ALT. 2



PENITENTI WAY

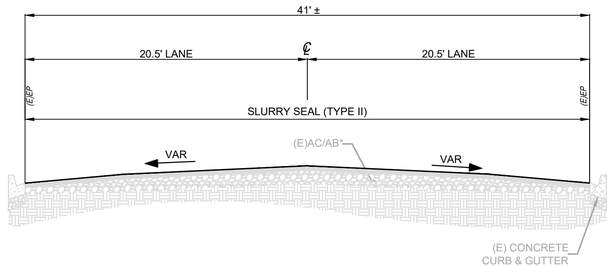
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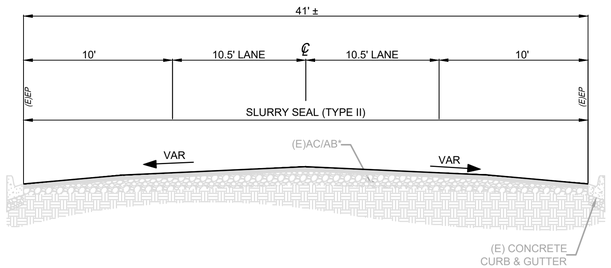
SOUTH HAROLD ST

NOT TO SCALE



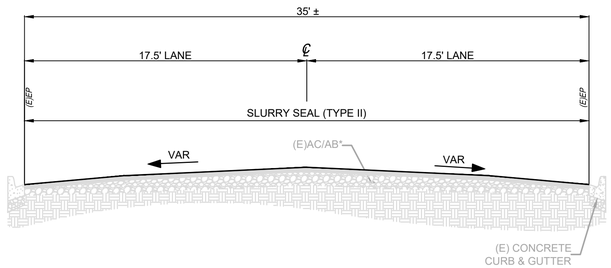
FRANKLIN ST.

FROM MANZANITA ST TO ELM ST NOT TO SCALE



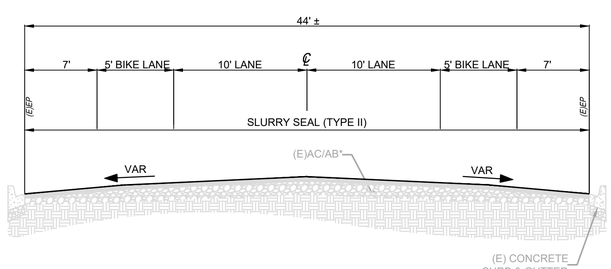
FRANKLIN ST.

FROM ELM ST. TO PINE ST. NOT TO SCALE



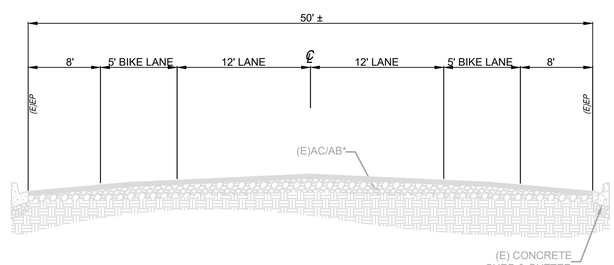
FRANKLIN ST.

FROM PINE ST. TO OAK ST. NOT TO SCALE



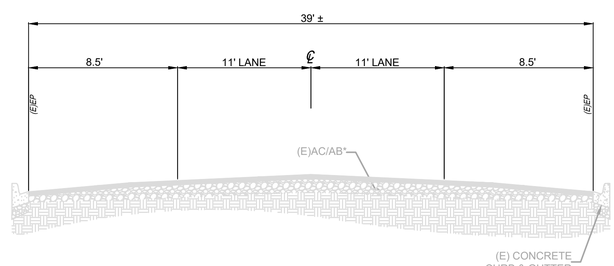
FRANKLIN ST.

FROM OAK ST. TO SOUTH ST. NOT TO SCALE



SOUTH LINCOLN ST.

NOT TO SCALE



EAST PINE ST.

FROM HW1 TO FRANKLIN ST. NOT TO SCALE

NO.	REVISION DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE
HOR. SCALE: N.T.S
VERT. SCALE: N.T.S

CITY OF FORT BRAGG CALIFORNIA

REY ENGINEERS, INC
Civil Engineers | Land Surveyors | LIDAR
925 Main Street - Suite 201, Fortuna, CA 95540
Phone (Fax) 530.3067 (Fax) 530.3303

2022 STREETS REHAB PROJECT

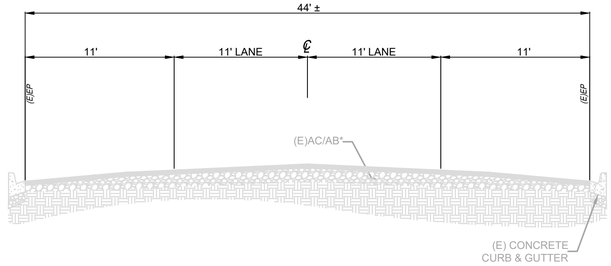
TYPICAL SECTIONS

CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AS

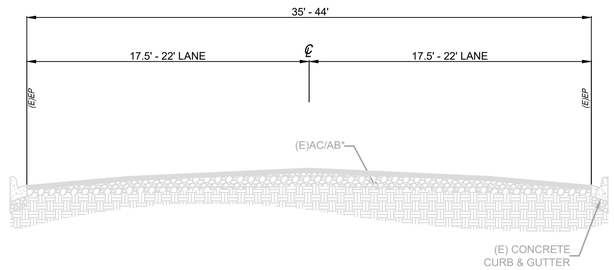
PROJECT NO.
3139.002
SHEET NO. **C03** OF **C25**

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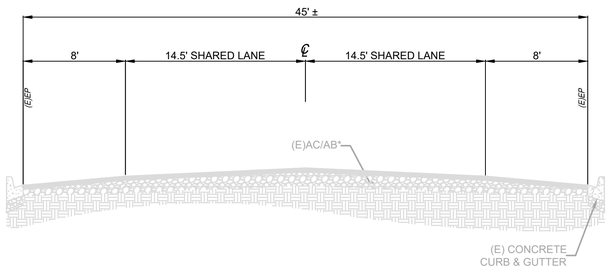
EAST PINE ST.

FROM FRANKLIN ST. TO N COREY ST. NOT TO SCALE



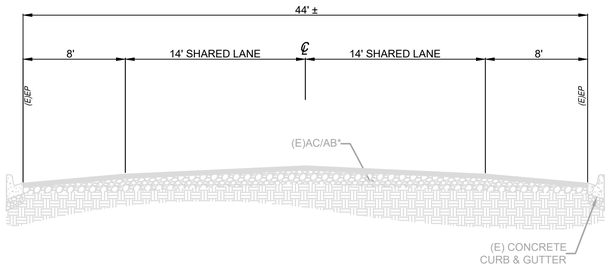
REDWOOD ST.

NOT TO SCALE



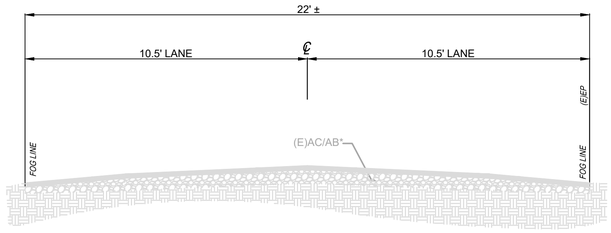
EAST OAK ST.

FROM HW 1 TO FRANKLIN ST. NOT TO SCALE



EAST OAK ST.

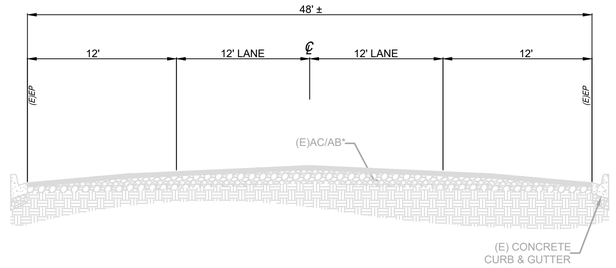
FROM FRANKLIN ST. TO DANA ST. NOT TO SCALE



EAST OAK ST.

FROM DANA ST. TO CITY LIMITS NOT TO SCALE

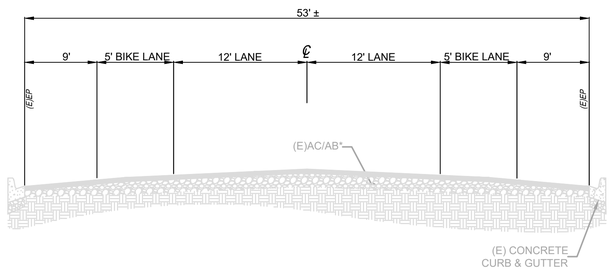
BID ALT. 1



NORTH HAROLD ST.

FROM FIR ST. TO LAUREL ST. NOT TO SCALE

BID ALT. 1



N/S HAROLD ST.

FROM LAUREL ST. TO MAPLE ST. NOT TO SCALE

BID ALT. 1

NO.	REVISION DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE

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Civil Engineers | Land Surveyors
925 Samoa Blvd., Ste. 220 | Arcata, CA 95521
Phone: (707) 825-3040 | Fax: (916) 330-3303

2022 STREETS REHAB PROJECT

TYPICAL SECTIONS

CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO

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DRAFTER: TH

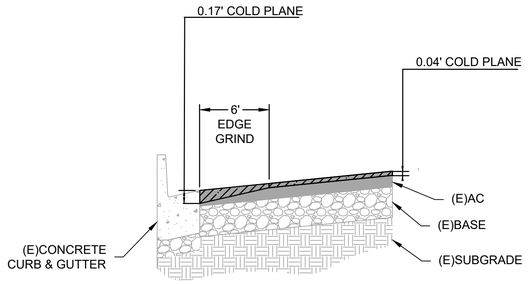
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REVIEWER: AB

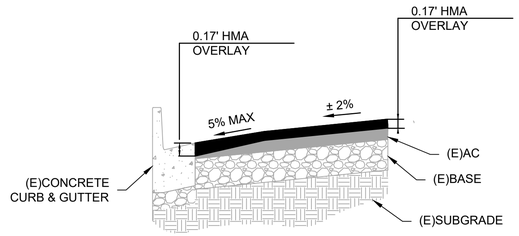
PROJECT NO. 3139.002

SHEET NO. C04 OF C25

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STEP 1 - VARIABLE GRIND

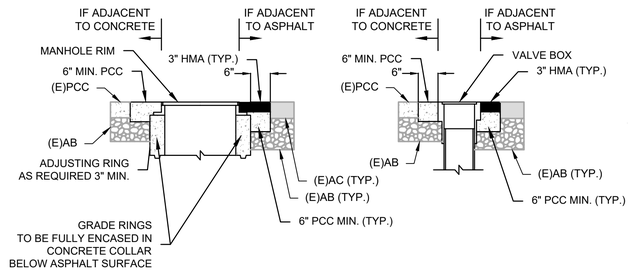


STEP 2 - HMA LIFT

6' EDGE GRIND

NOT TO SCALE

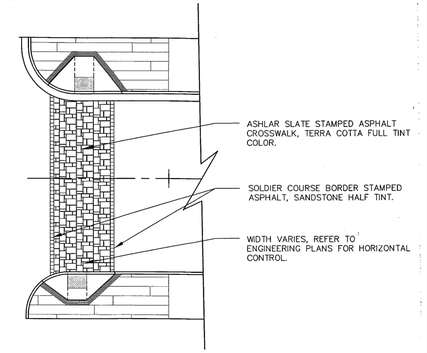
1



ADJUST UTILITY TO GRADE

NOT TO SCALE

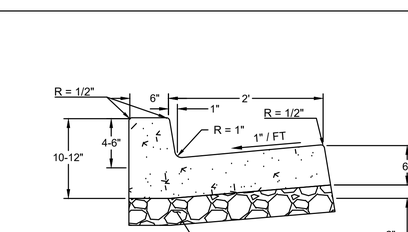
2



STAMPED HMA

NOT TO SCALE

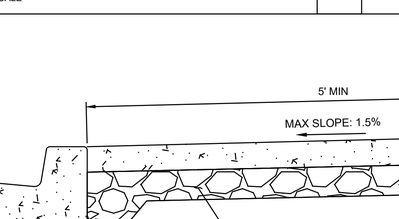
3



6" DIGOUT

NOT TO SCALE

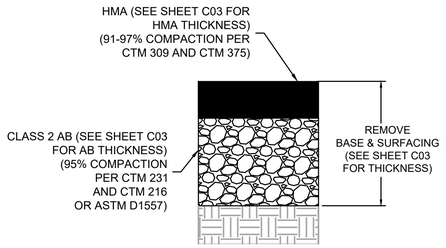
4



4" DIGOUT

NOT TO SCALE

5



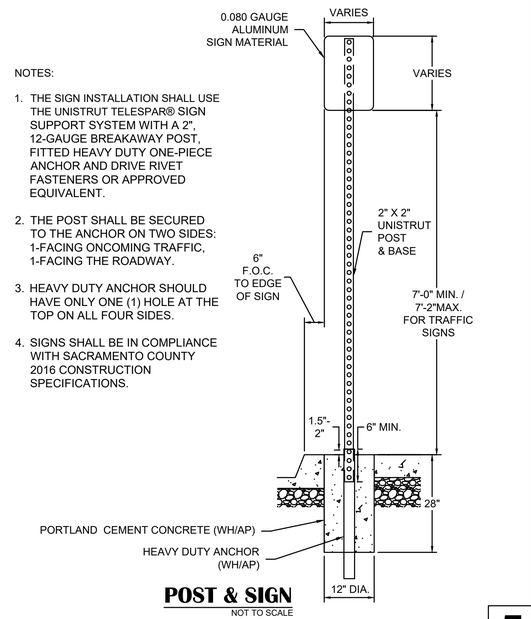
ROADWAY RECONSTRUCTION

NOT TO SCALE

6

NOTES:

1. THE SIGN INSTALLATION SHALL USE THE UNISTRUT TELESPAR® SIGN SUPPORT SYSTEM WITH A 2", 12-GAUGE BREAKAWAY POST, FITTED HEAVY DUTY ONE-PIECE ANCHOR AND DRIVE RIVET FASTENERS OR APPROVED EQUIVALENT.
2. THE POST SHALL BE SECURED TO THE ANCHOR ON TWO SIDES: 1-FACING ONCOMING TRAFFIC, 1-FACING THE ROADWAY.
3. HEAVY DUTY ANCHOR SHOULD HAVE ONLY ONE (1) HOLE AT THE TOP ON ALL FOUR SIDES.
4. SIGNS SHALL BE IN COMPLIANCE WITH SACRAMENTO COUNTY 2016 CONSTRUCTION SPECIFICATIONS.

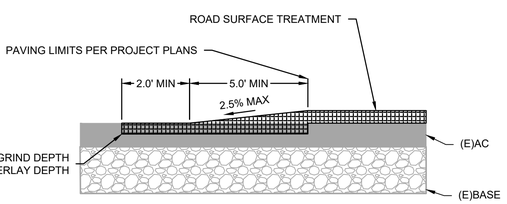


POST & SIGN

NOT TO SCALE

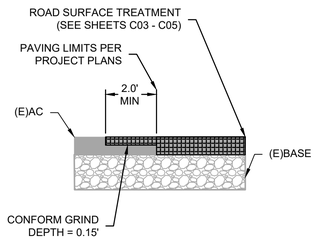
7

11



OVERLAY (RAISING GRADE)

NOT TO SCALE

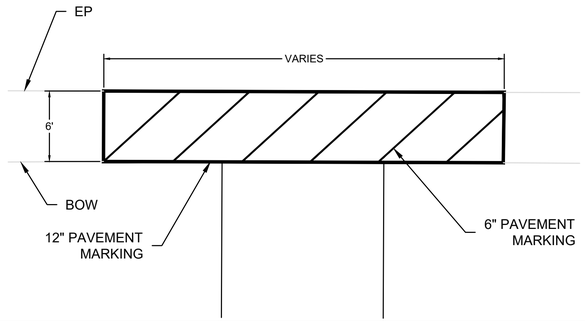


FULL DEPTH HMA & RECONSTUCTION

COLD PLANE (CONFORM GRIND)

NOT TO SCALE

8

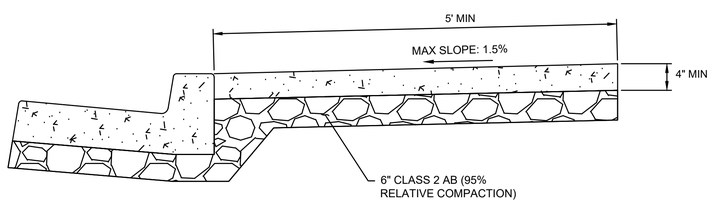


PAVEMENT MARKING - ALLEY STRIPING

NOTES:
1. ALL PAVEMENT MARKINGS SHALL BE WHITE UNLESS OTHERWISE NOTED

NOT TO SCALE

9



CONCRETE CURB AND GUTTER

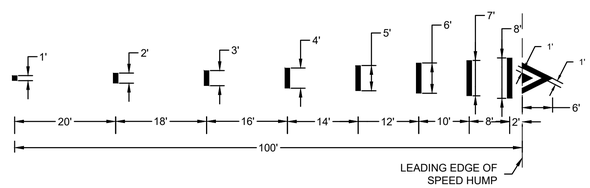
NOT TO SCALE

NOTES:
1. CURB HEIGHT SHALL MATCH (E)CURB HEIGHT.
2. SIDEWALK WITH MAY BE LESS THAN 5' WHEN TRANSITIONING TO (E)SIDEWALK.

CONCRETE SIDEWALK

NOT TO SCALE

10



PAVEMENT MARKING - ADVANCED WARNING MARKINGS FOR SPEED HUMPS

NOT TO SCALE

NOTES:
1. SEE CA MUTCD 2014 ED
   A. FIGURE 3B-29 - OPTION A
   B. FIGURE 3B-31
2. 50 SF TOTAL

NO.	REVISION	DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE

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CITY OF FORT BRAGG CALIFORNIA

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Civil Engineers | Land Surveyors | LiDAR
925 Selva Street, Suite 201, Fortuna, CA 95540
Phone: 707.725.3240 Fax: 707.725.3333

2022 STREETS REHAB PROJECT

DETAILS

CALIFORNIA

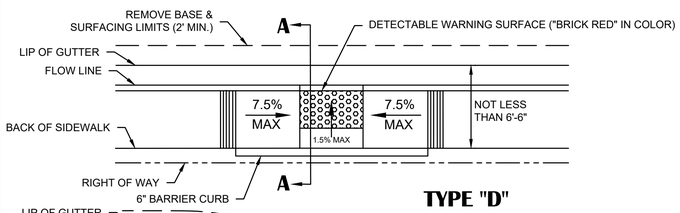
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DRAFTER: TH
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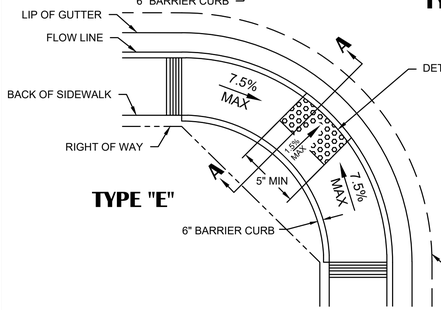
PROJECT NO.
3139.002

SHEET NO. C05 OF C25

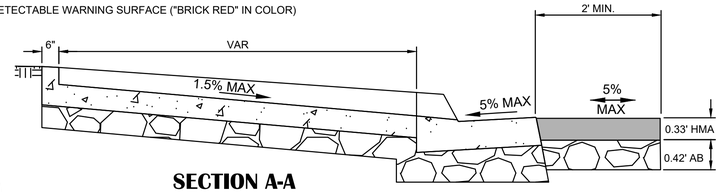
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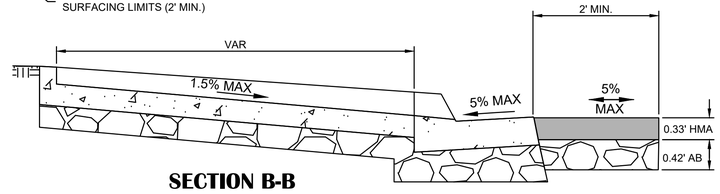
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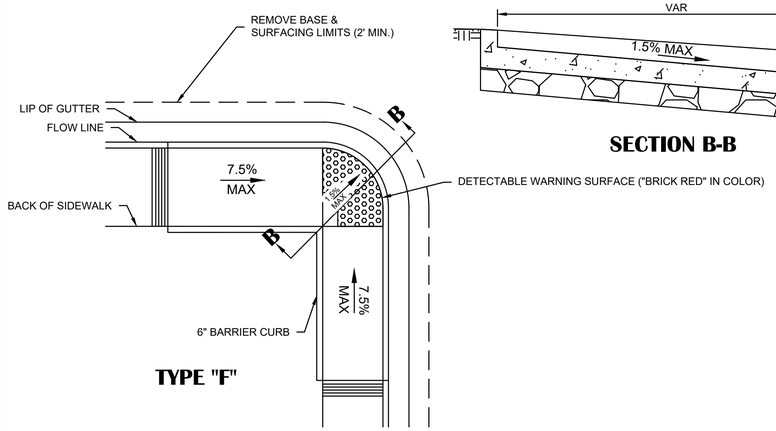
TYPE "E"



SECTION A-A



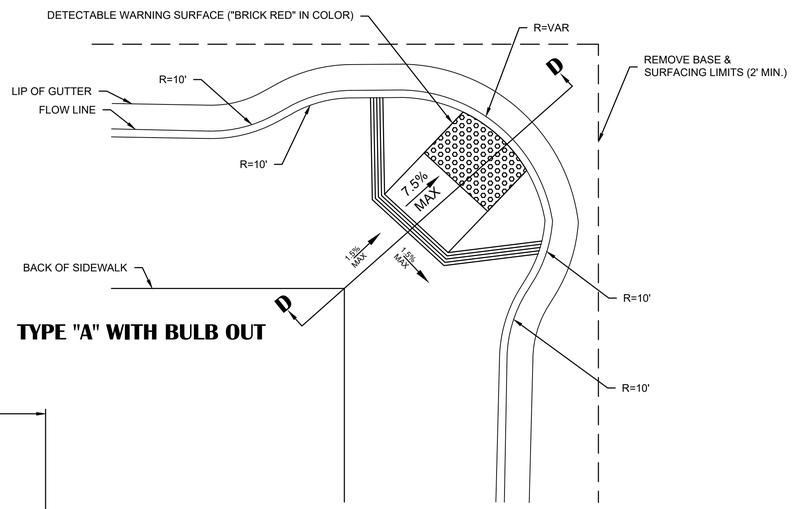
SECTION B-B



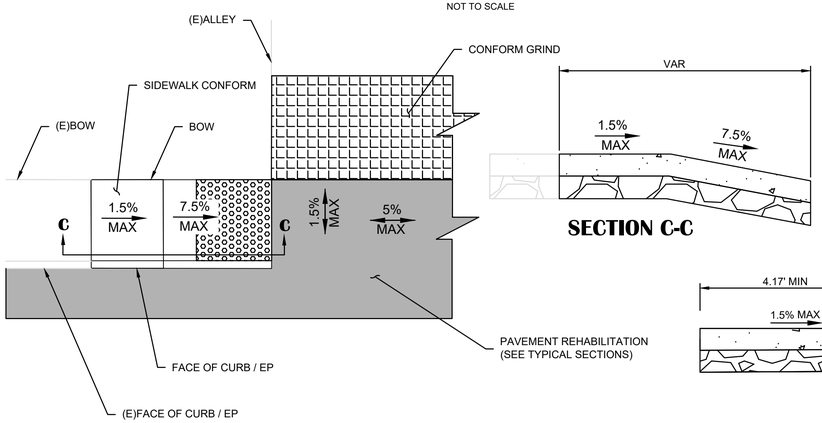
TYPE "F"

CURB RAMPS

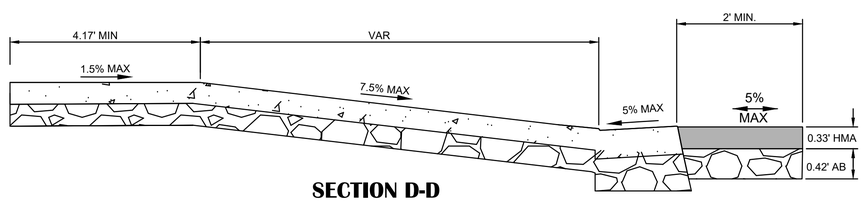
NOT TO SCALE



TYPE "A" WITH BULB OUT



SECTION C-C



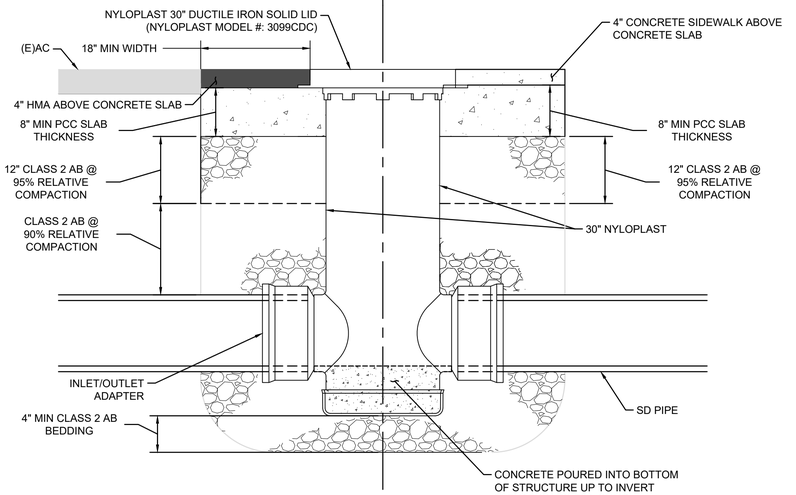
SECTION D-D

ALLEY RAMPS

NOT TO SCALE

12

IN ROADWAY ↔ IN SIDEWALK

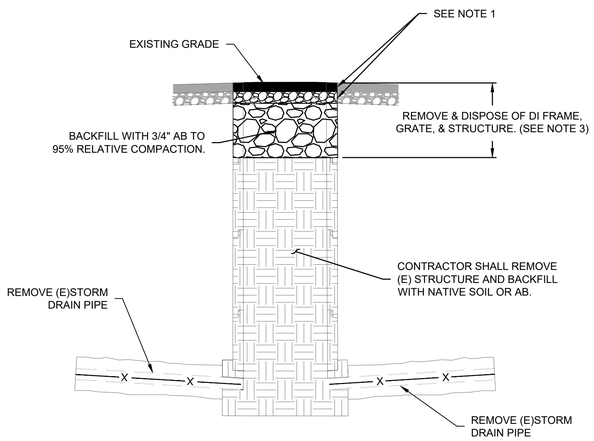


NOTES:

1. GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2. THE NYLOPLAST GRATE SHALL MEET H-20 LOADING.
3. THE NYLOPLAST STRUCTURE BODY SHALL BE CUT TO FINAL GRADE.

30" NYLOPLAST DRAIN BASIN

NOT TO SCALE



NOTES:

1. SEE PLANS FOR PROPOSED HARDSCAPE IMPROVEMENTS OVER REMOVED DI.
2. DROP INLET SHALL HAVE THE INVERTS PLUGGED WITH A WATER TIGHT MECHANICAL PLUG PRIOR TO CONCRETE PLUGS.
3. THE FRAME & GRATE SHALL BE REMOVED AND RETURNED TO THE CITY CORP YARD AND THE STRUCTURE FILLED IN ACCORDANCE WITH THIS DETAIL.

REMOVE DI

NOT TO SCALE

13
15

NO.	REVISION	DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE
HOR. SCALE: N.T.S.
VERT. SCALE: N.T.S.

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925 Southern Street, Suite 200, Folsom, CA 95630
Phone: (916) 355-3300 Fax: (916) 355-3303

2022 STREETS REHAB PROJECT

DETAILS

CITY OF FORT BRAGG CALIFORNIA

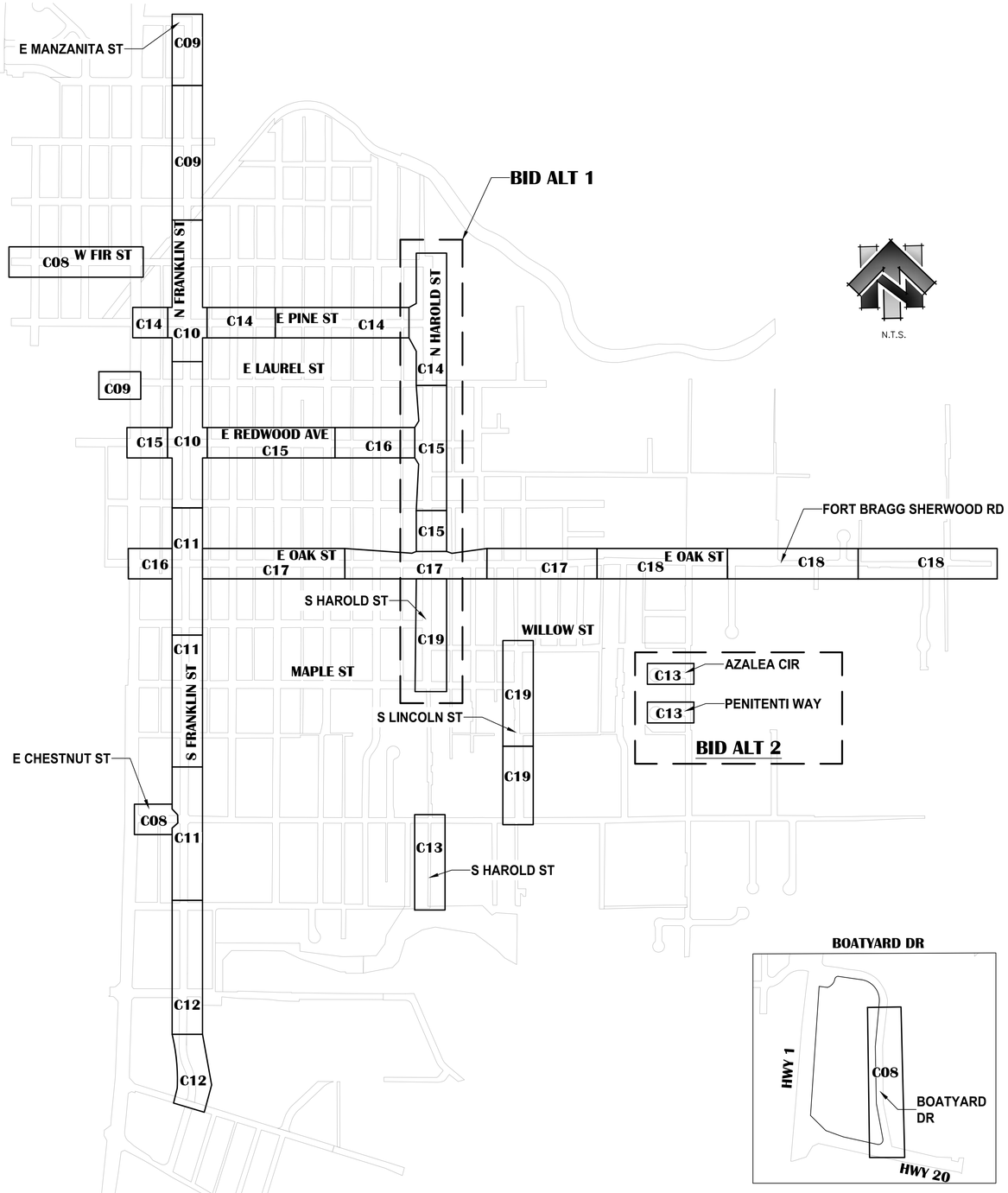
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PROJECT NO.
3139.002
SHEET NO. C06 OF C25

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PAVING AND STRIPING PLAN

STREET	SHEET NUMBERS
W FIR ST	C08
E CHESTNUT	C08
BOATYARD DR	C08
N FRANKLIN ST	C09, C10, C11
S FRANKLIN ST	C10, C11, C12
AZALEA CIR	C13
PENITINI WAY	C13
S HAROLD ST	C13, C19
E PINE ST	C14
N HAROLD ST	C14, C15, C17
E REDWOOD AVE	C15, C16
E OAK ST	C16, C17, C18
FORT BRAGG SHERWOOD RD	C18
S LINCOLN ST	C19



NO.	REVISION DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE
HOR. SCALE: N.T.S.
VERT. SCALE: N.T.S.

CITY OF FORT BRAGG CALIFORNIA

REY ENGINEERS, INC.
Civil Engineers | Land Surveyors | LIDAR
925 Samoa Blvd., Suite 201, Arcata, CA 95521
Phone (Fax) 530-3067 (Fax) 530-3063

2022 STREETS REHAB PROJECT

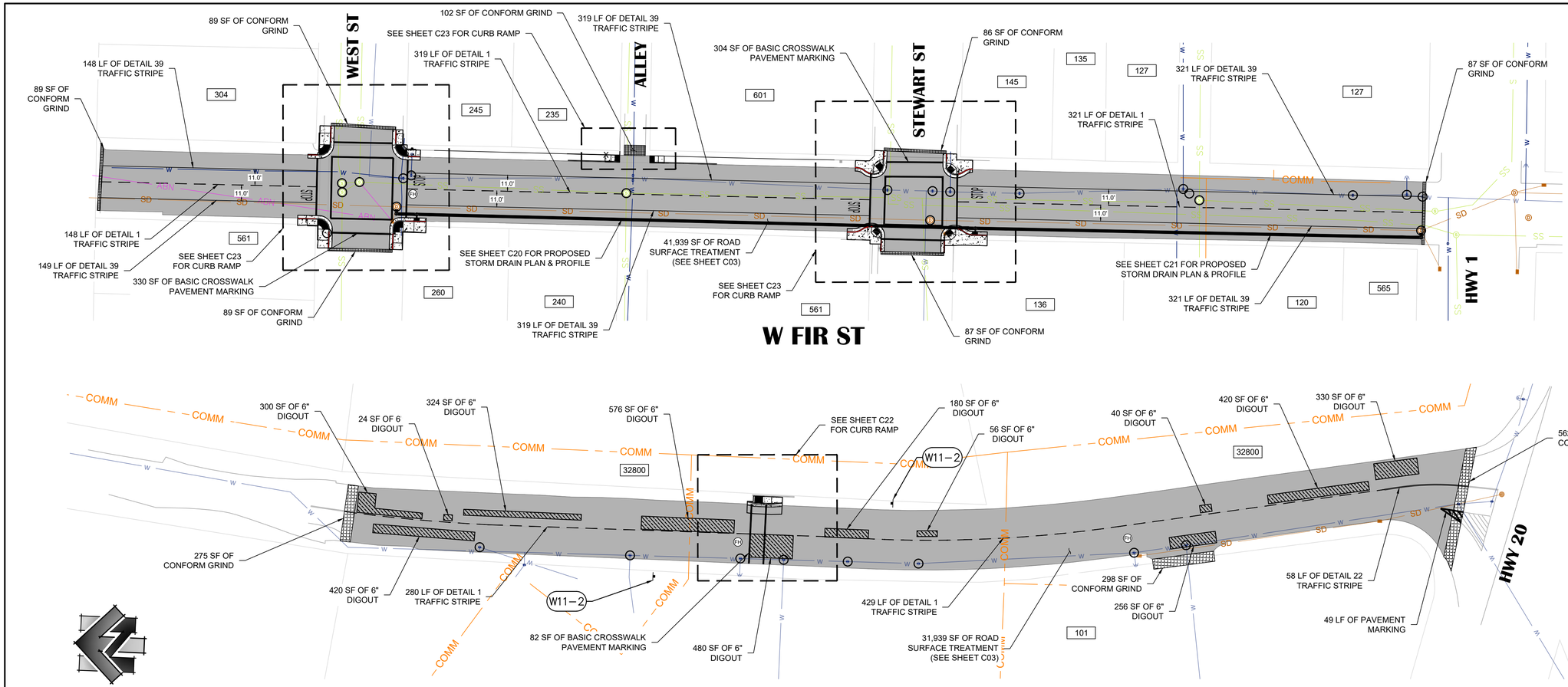
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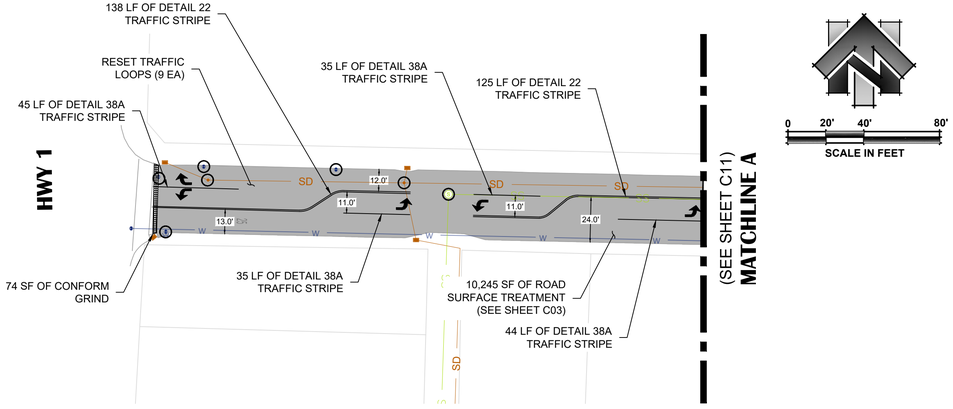
CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AB

PROJECT NO.
3139.002
SHEET NO. C07 OF C25

N:\3139 - Fort Bragg\002 - 2022 Streets Rehab\10 - CAD Drawings\Improvement Plans\3139.002 - SHEET INDEX.dwg Apr 13, 2023 - 1:49pm, grugh





GENERAL NOTES:

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HOR. SCALE: 1"=40'
VERT. SCALE: N.T.S.

CITY OF FORT BRAGG CALIFORNIA

REY ENGINEERS, INC
Civil Engineers | Land Surveyors | LiDAR
925 Stone Street, Suite 200 | Sebastopol, CA 95472
Phone (707) 360-3040 | Fax (707) 360-3303

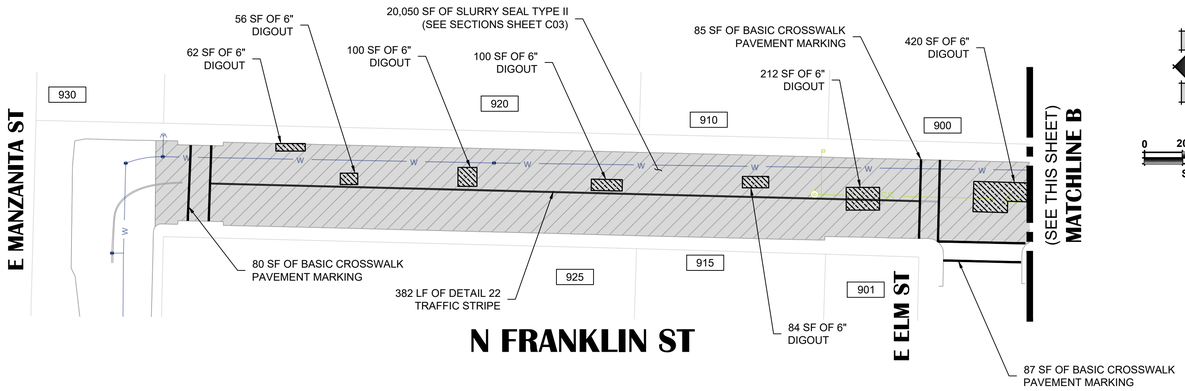
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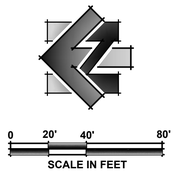
PAVING & STRIPING PLAN
FIR ST, CHESTNUT ST, & BOATYARD DR
CITY OF FORT BRAGG CALIFORNIA

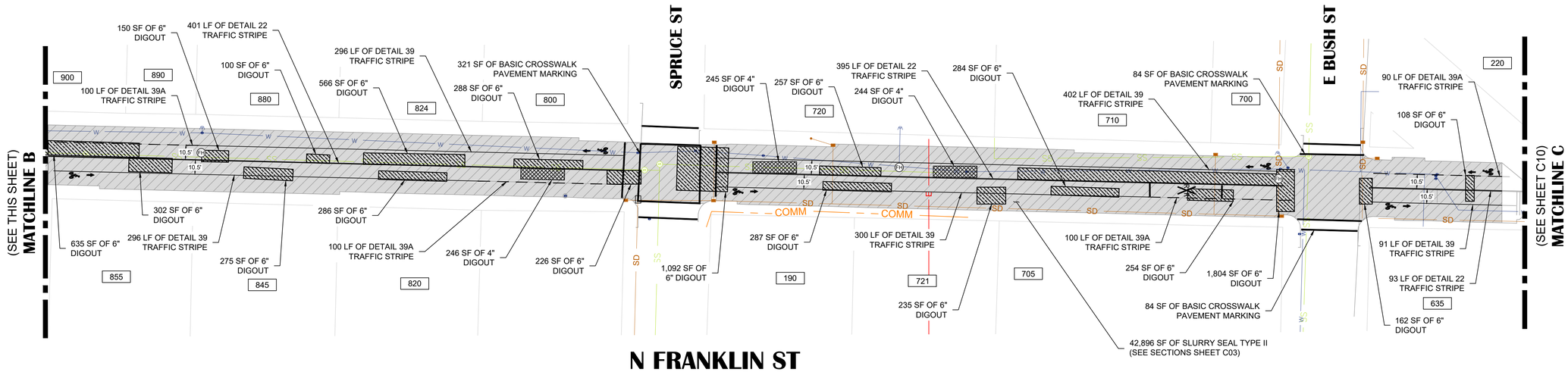
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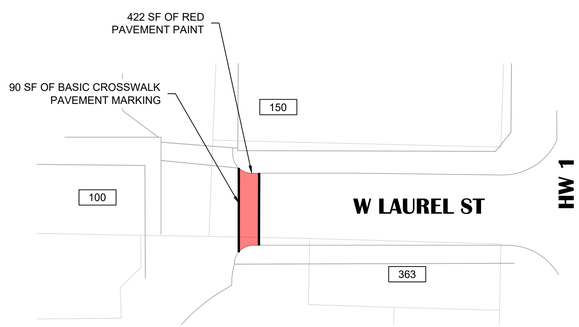
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SHEET NO. C08 OF C25

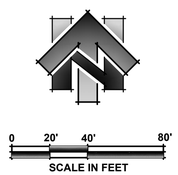
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VERT. SCALE: N.T.S.

CITY OF FORT BRAGG CALIFORNIA

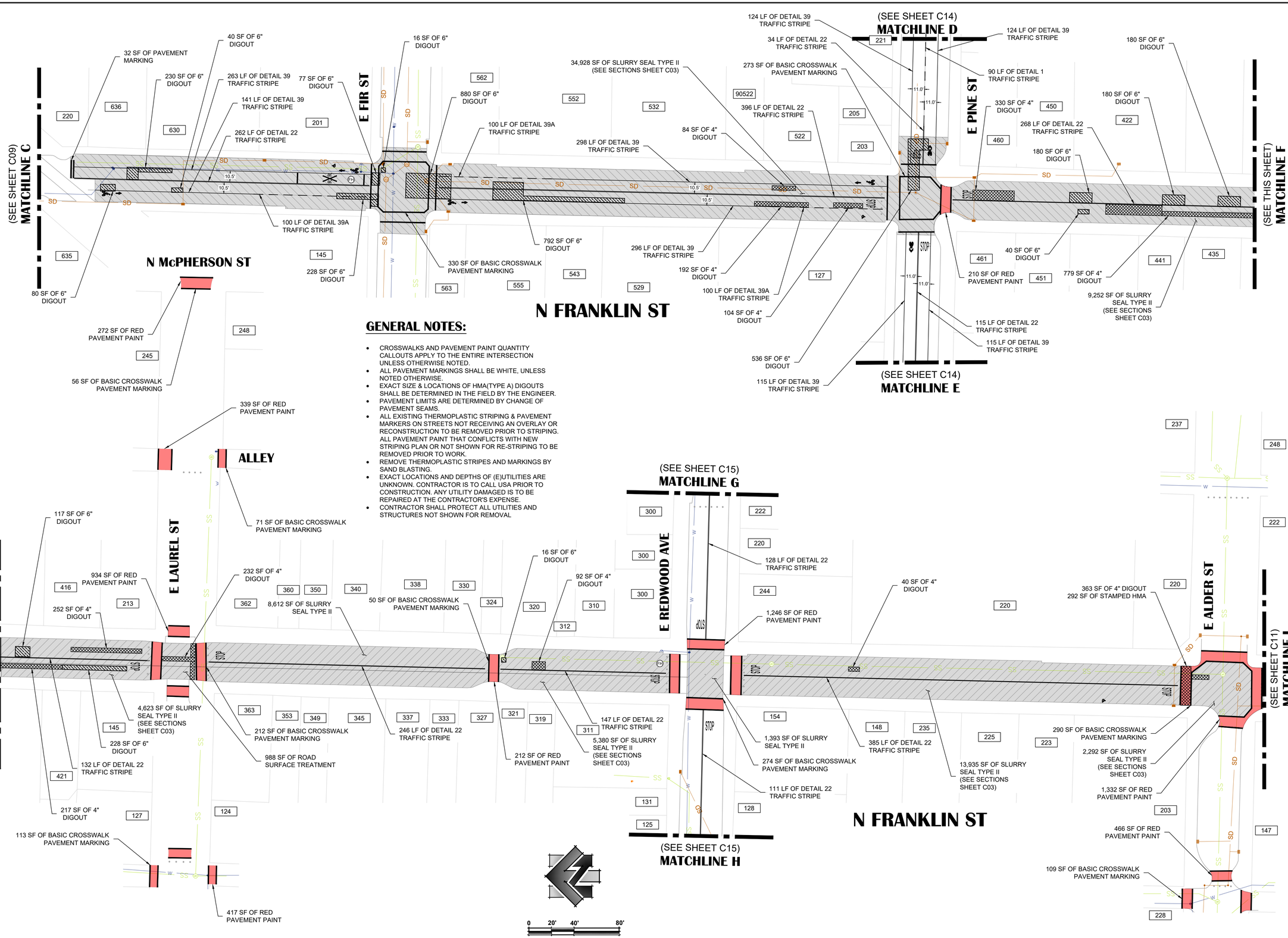
REY ENGINEERS, INC.
Civil Engineers | Land Surveyors | LiDAR
925 Sandpiper Street, Suite 201, Fortuna, CA 95540
Phone: (707) 725-3080 Fax: (707) 725-3083

2022 STREETS REHAB PROJECT
PAVING & STRIPING PLAN
N FRANKLIN ST
CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AB

PROJECT NO. 3139.002
SHEET NO. C09 OF C25

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CITY OF FORT BRAGG CALIFORNIA

REY ENGINEERS, INC.
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925 Redwood Avenue, Suite 201, Fortuna, CA 95540
Phone (707) 725-3387, Fax (707) 725-3383

2022 STREETS REHAB PROJECT

PAVING & STRIPING PLAN
N FRANKLIN ST
CITY OF FORT BRAGG CALIFORNIA

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DATE: 04/13/23
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REVIEWER: AB

PROJECT NO. 3139.002
SHEET NO. C10 OF C25

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SCALE IN FEET: 0 20' 40' 80'

(SEE SHEET C10) MATCHLINE I

(SEE SHEET C17) MATCHLINE J

(SEE SHEET C16) MATCHLINE K

(SEE THIS SHEET) MATCHLINE L

(SEE THIS SHEET) MATCHLINE M

(SEE SHEET C12) MATCHLINE N

(SEE SHEET C08) MATCHLINE A

N FRANKLIN ST

S FRANKLIN ST

E OAK ST

MADRONE ST

MAPLE ST

HAZEL ST

E CHESTNUT ST

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REY ENGINEERS, INC.
Civil Engineers | Land Surveyors | LiDAR
905 Main Street, Suite 220 Fortuna, CA 95540
Phone (707) 725-3340 Fax (707) 725-3383

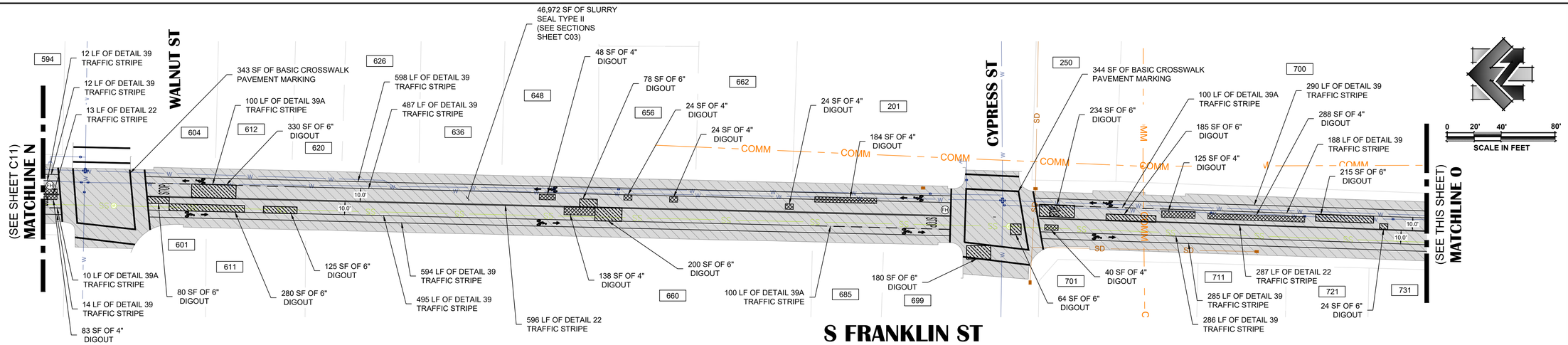
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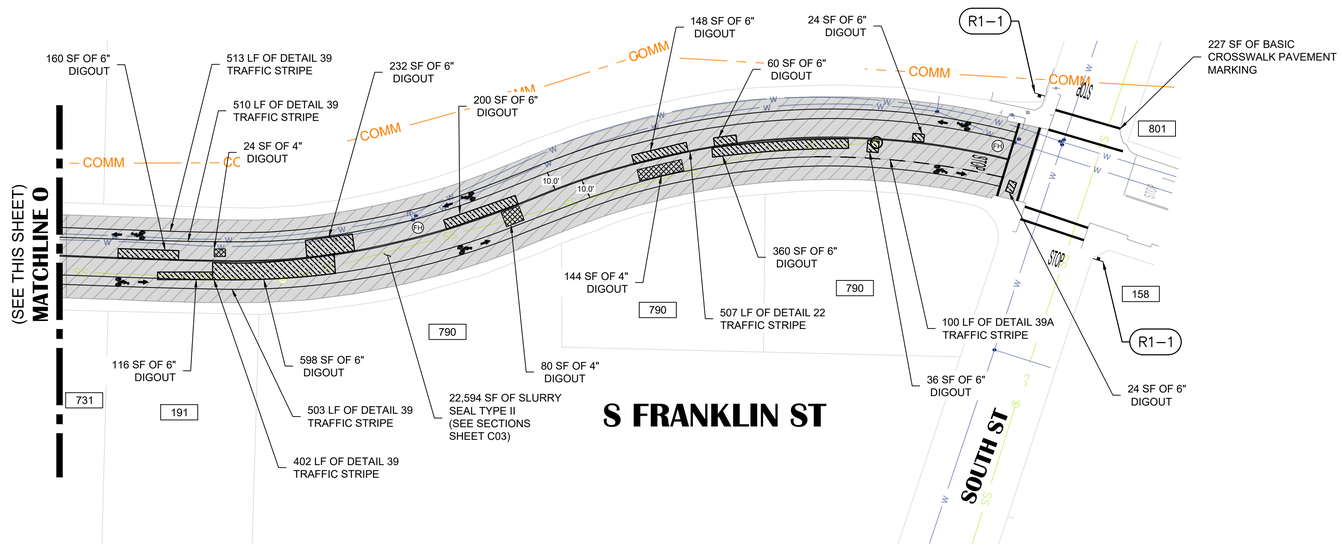
PAVING & STRIPING PLAN
N FRANKLIN ST & S FRANKLIN ST
CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AB

PROJECT NO. 3139.002
SHEET NO. C11 OF C25

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CITY OF FORT BRAGG CALIFORNIA

REY ENGINEERS, INC.
Civil Engineers | Land Surveyors | LiDAR
925 Samoa Blvd. Suite 220 Arcata, CA 95521
Phone (Fax) 530.3040 Fax (Fax) 530.3303

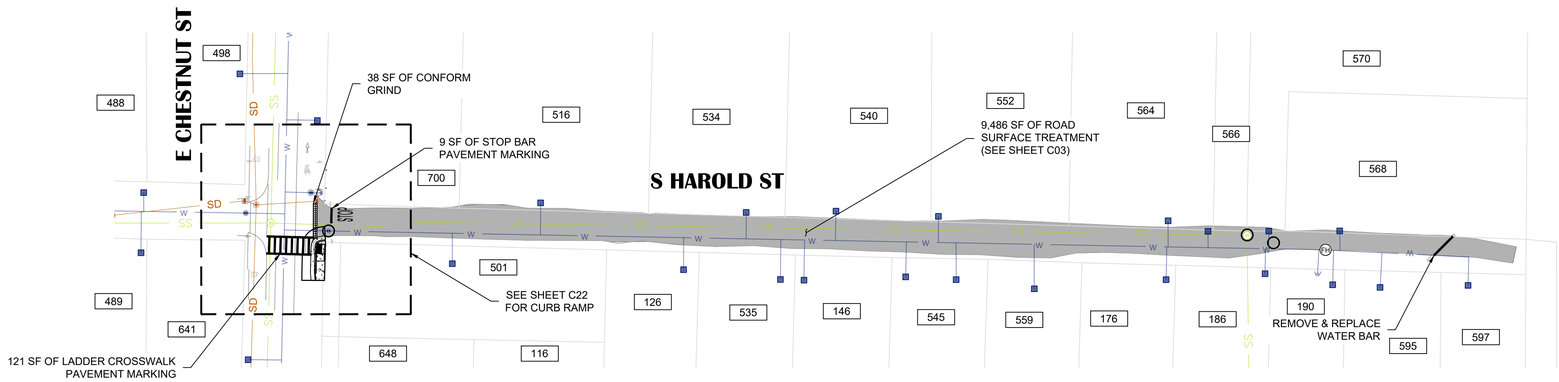
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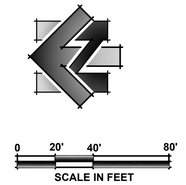
PAVING & STRIPING PLAN
S FRANKLIN ST
CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AB

PROJECT NO. 3139.002
SHEET NO. C12 OF C25

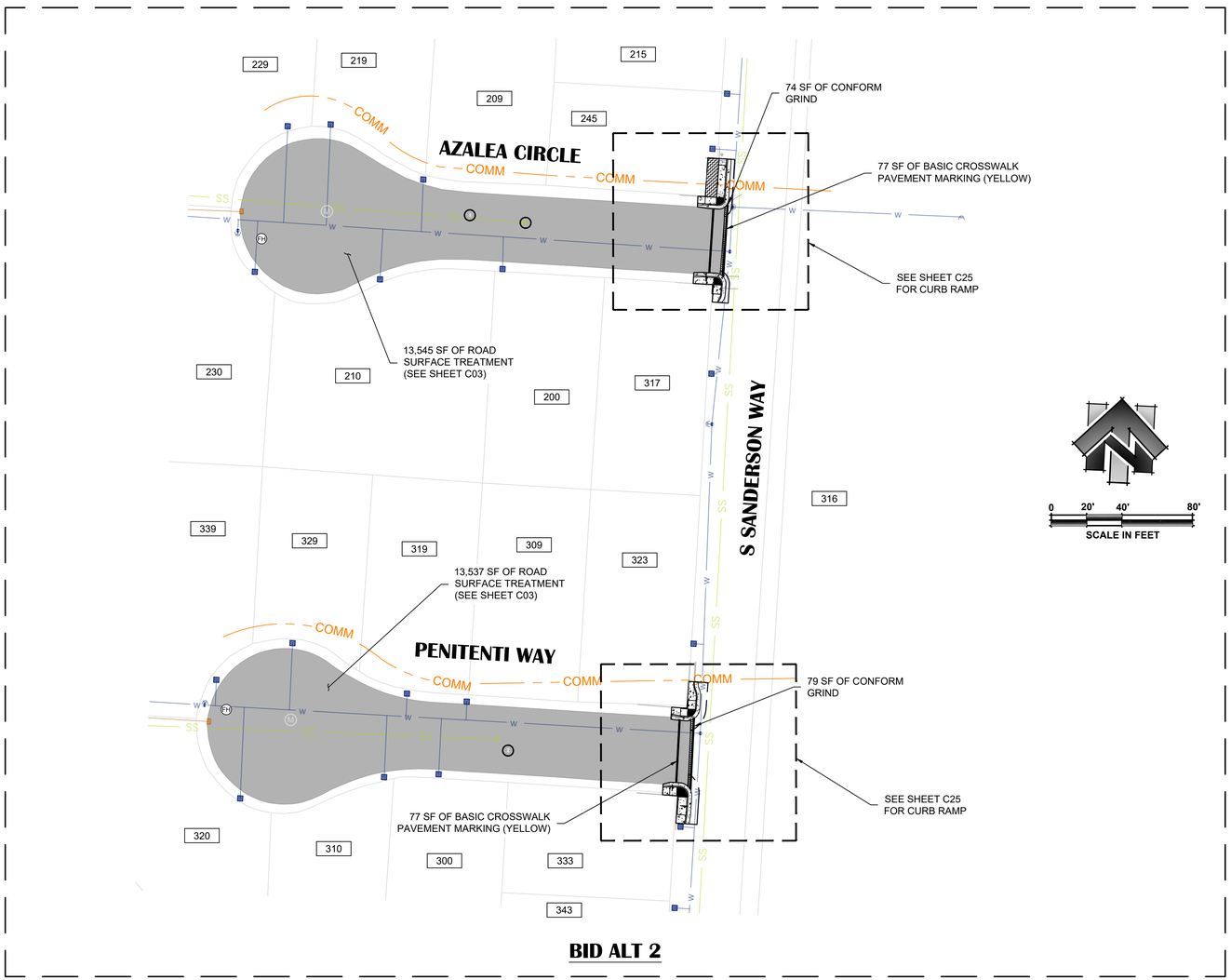
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- CONTRACTOR IS TO CONFORM TO ALL (E)AC & (E)PCC DRIVEWAYS. NO VERTICAL SEPARATIONS BETWEEN ADJACENT SURFACES GREATER THAN 0.5" WILL BE ALLOWED. CONTRACTOR SHALL PLACE AB SHOULDER BACKING TO ADJOINING AB DRIVEWAYS IF VERTICAL SEPARATION OF LESS THAN 0.5" CANNOT BE ACHIEVED.



BID ALT 2

NO.	REVISION DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE
HOR. SCALE: 1"=40'
VERT. SCALE: N.T.S.

CITY OF FORT BRAGG CALIFORNIA

REY ENGINEERS, INC.
Civil Engineers | Land Surveyors | LiDAR
105 Stone Street, Suite 201, Fulton, CA 95439
Phone: 916.355.3067 Fax: 916.355.3303

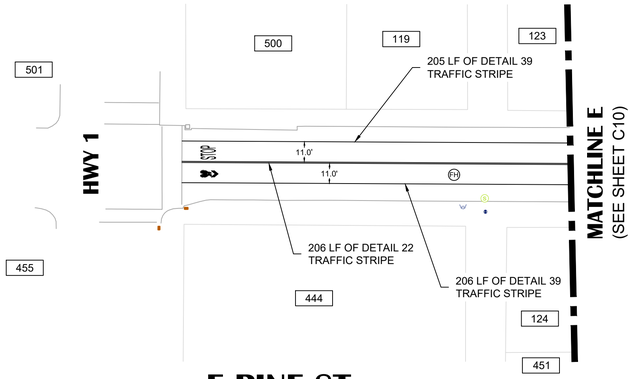
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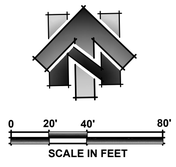
PAVING & STRIPING PLAN
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CITY OF FORT BRAGG CALIFORNIA

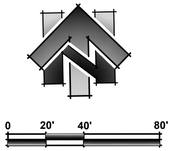
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3139.002
SHEET NO. **C13** OF **C25**

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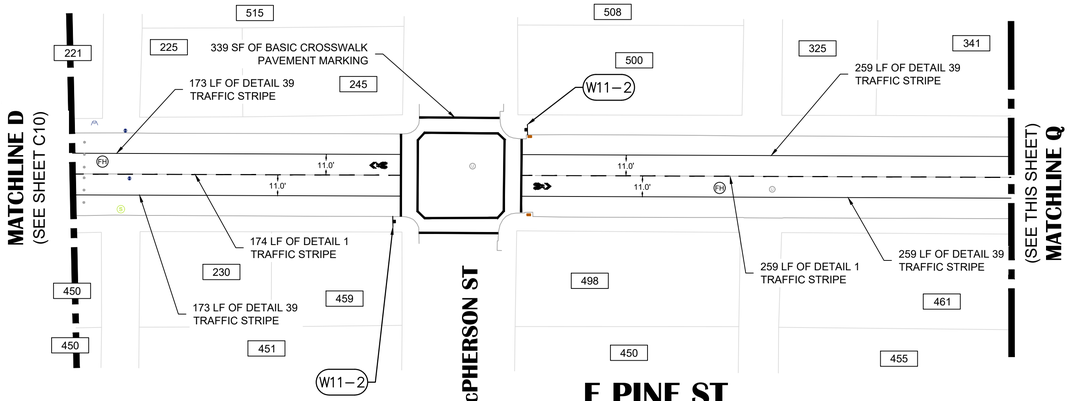


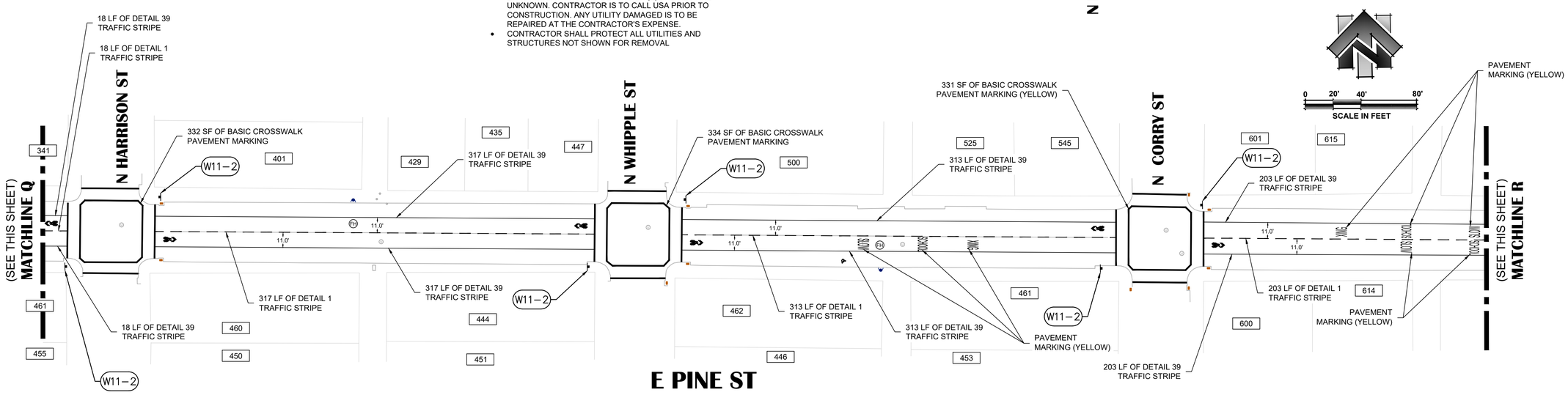


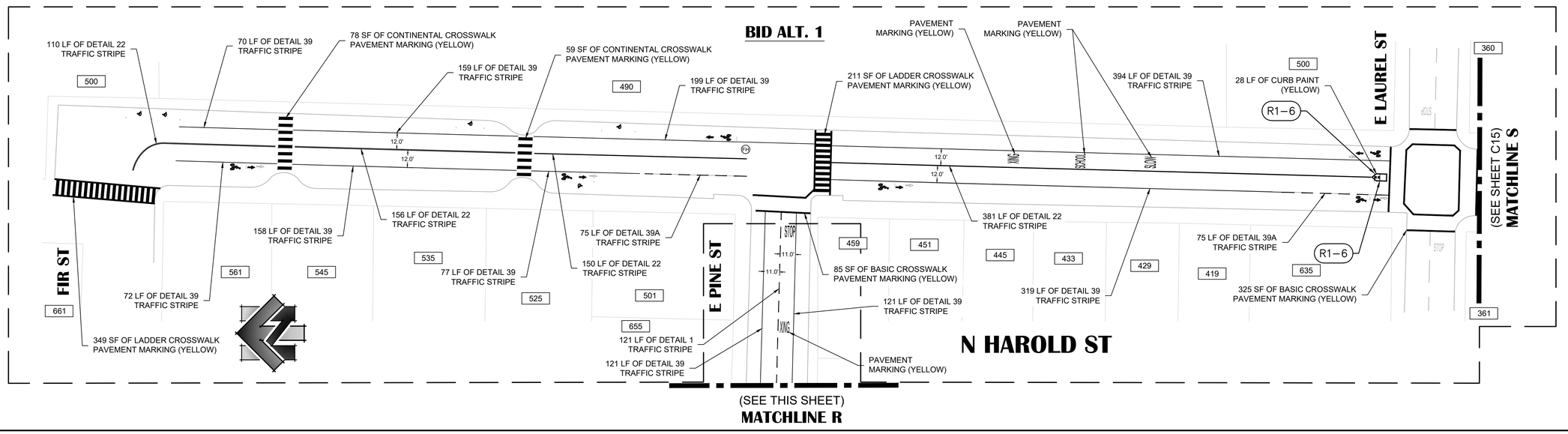


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CITY OF FORT BRAGG CALIFORNIA

REY ENGINEERS, INC.
Civil Engineers | Land Surveyors | LiDAR
925 Oak Grove Ave, Suite 220 | Menlo Park, CA 94025
Phone: (415) 326-3040 | Fax: (415) 326-3333

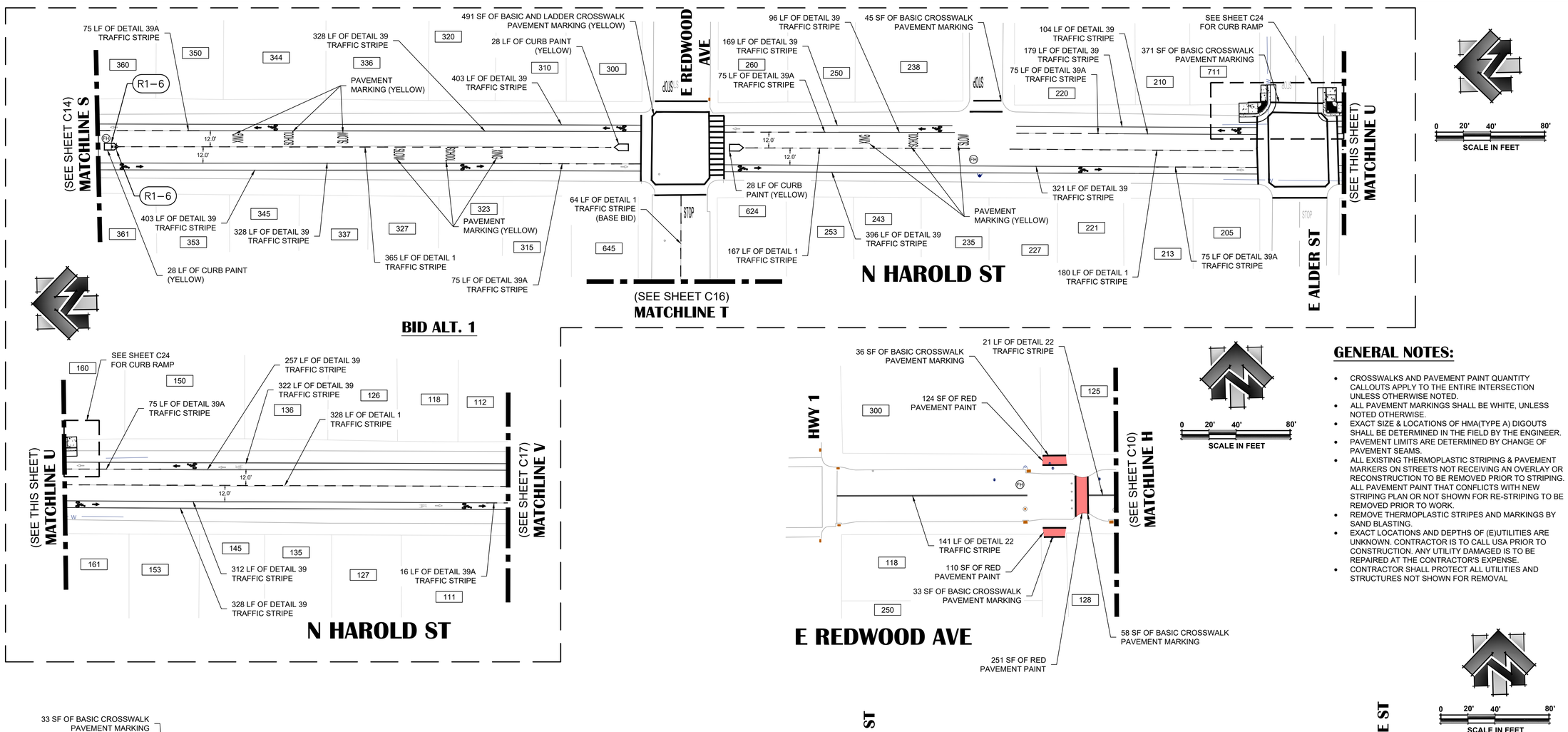
2022 STREETS REHAB PROJECT

STRIPING PLAN
PINE ST & HAROLD ST
CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AB

PROJECT NO. 3139.002
SHEET NO. C14 OF C25

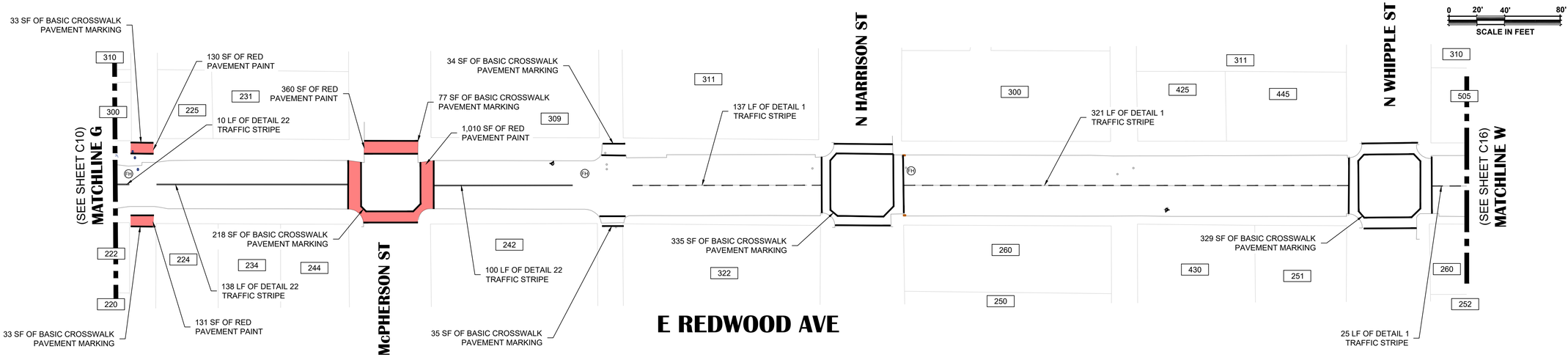
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BID ALT. 1

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Civil Engineers | Land Surveyors | LiDAR
925 Stiltner Street, Suite 200, Fairfax, CA 95930
Phone 707.824.3000 Fax 707.824.3003

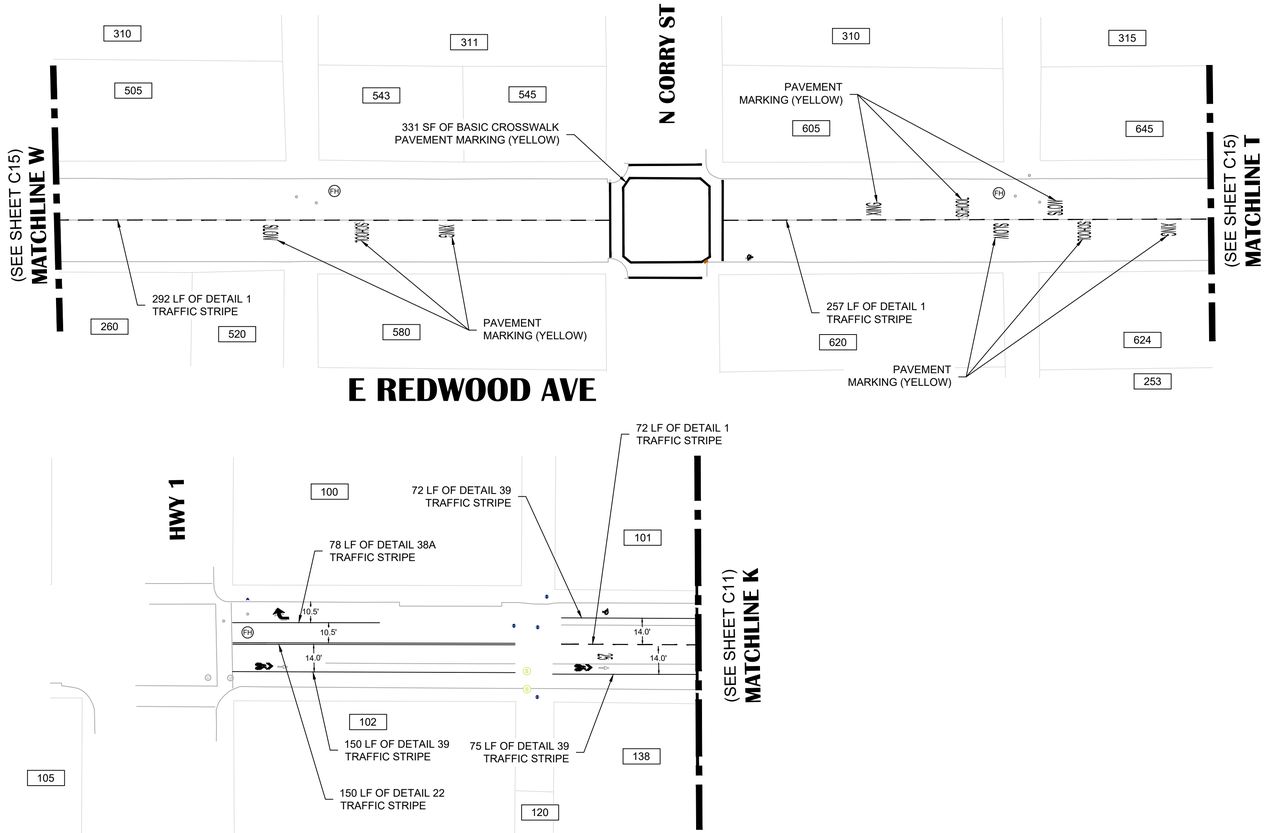
2022 STREETS REHAB PROJECT

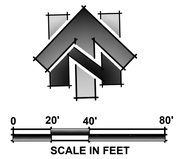
STRIPING PLAN
HAROLD ST & REDWOOD AVE
CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AB

PROJECT NO. 3139.002
SHEET NO. C15 OF C25

N:\3139 - Fort Bragg\002 - 2022 Streets Rehab\10 - CAD Drawings\Improvement Plans\3139.002 - LAYOUT.dwg Apr 13, 2023 - 1:51pm, grugh





GENERAL NOTES:

- CROSSWALKS AND PAVEMENT PAINT QUANTITY CALLOUTS APPLY TO THE ENTIRE INTERSECTION UNLESS OTHERWISE NOTED.
- ALL PAVEMENT MARKINGS SHALL BE WHITE, UNLESS NOTED OTHERWISE.
- EXACT SIZE & LOCATIONS OF HMA(TYPE A) DIGOUTS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- PAVEMENT LIMITS ARE DETERMINED BY CHANGE OF PAVEMENT SEAMS.
- ALL EXISTING THERMOPLASTIC STRIPING & PAVEMENT MARKERS ON STREETS NOT RECEIVING AN OVERLAY OR RECONSTRUCTION TO BE REMOVED PRIOR TO STRIPING. ALL PAVEMENT PAINT THAT CONFLICTS WITH NEW STRIPING PLAN OR NOT SHOWN FOR RE-STRIPING TO BE REMOVED PRIOR TO WORK.
- REMOVE THERMOPLASTIC STRIPES AND MARKINGS BY SAND BLASTING.
- EXACT LOCATIONS AND DEPTHS OF (E)UTILITIES ARE UNKNOWN. CONTRACTOR IS TO CALL USA PRIOR TO CONSTRUCTION. ANY UTILITY DAMAGED IS TO BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL PROTECT ALL UTILITIES AND STRUCTURES NOT SHOWN FOR REMOVAL

NO.	REVISION DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE
HOR. SCALE: 1"=40'
VERT. SCALE: N.T.S.

CITY OF FORT BRAGG CALIFORNIA

REY ENGINEERS, INC.
Civil Engineers | Land Surveyors | LIDAR
925 Samoa Blvd., Suite 220, Arcata, CA 95521
Phone: (707) 630-3260 Fax: (707) 630-3263

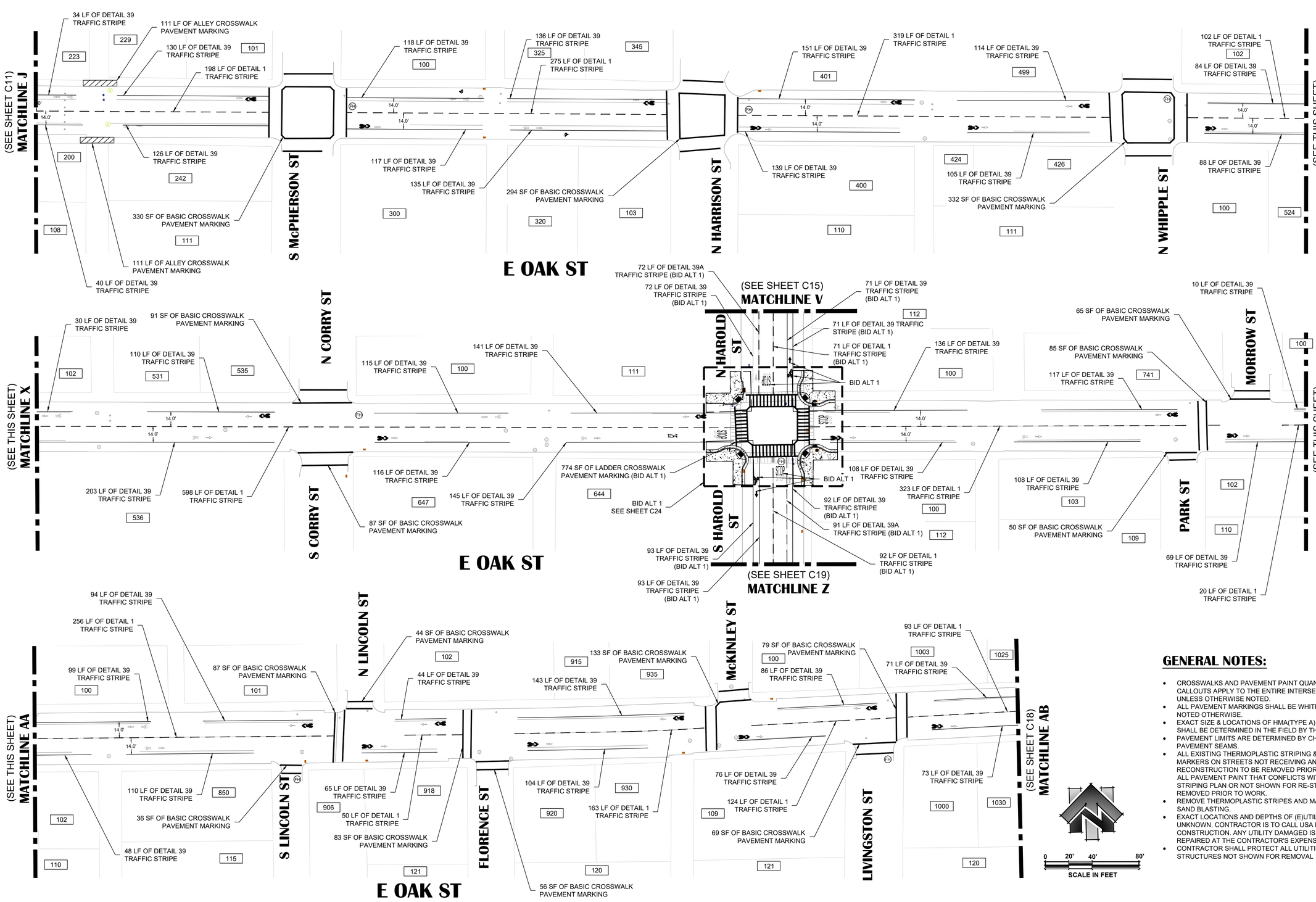
2022 STREETS REHAB PROJECT

STRIPING PLAN
REDWOOD AVE & E OAK ST
CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AS

PROJECT NO.
3139.002
SHEET NO. C16 OF C25

N:\3139 - Fort Bragg\002 - 2022 Streets Rehab\10 - CAD Drawings\Improvement Plans\3139.002 - LAYOUT.dwg Apr 13, 2023 - 1:51pm, grugh



GENERAL NOTES:

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NO.	REVISION DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE
HOR. SCALE: 1"=40'
VERT. SCALE: N.T.S.

CITY OF FORT BRAGG CALIFORNIA

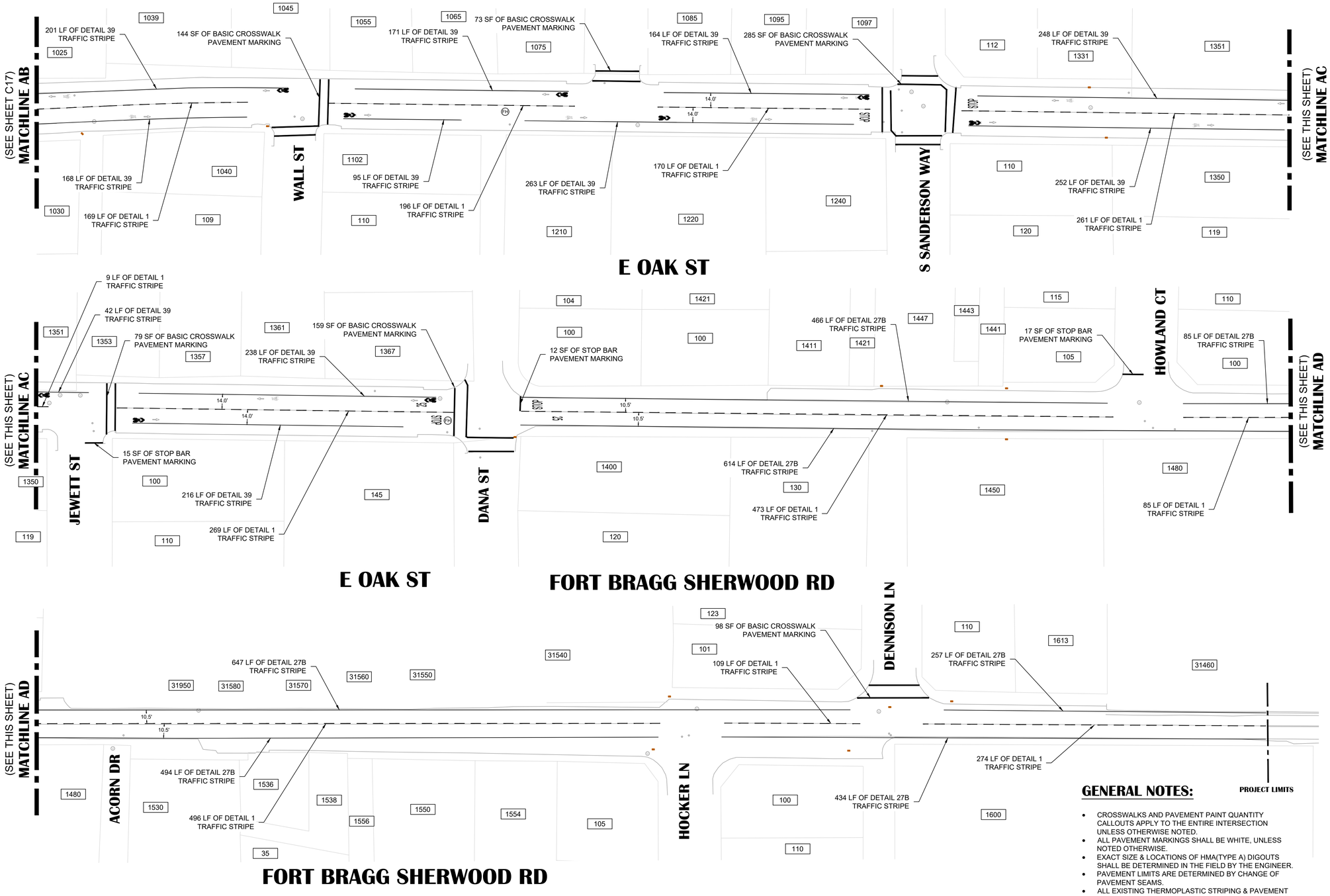
R.E.Y. ENGINEERS, INC.
Civil Engineers | Land Surveyors | LiDAR
925 Silver Spur, Suite 220, Rancho Palos Verdes, CA 90275
Phone 619.384.3067 Fax 619.384.3303

2022 STREETS REHAB PROJECT
STRIPING PLAN
E OAK ST
CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AB

PROJECT NO. 3139.002
SHEET NO. C17 OF C25

N:\3139 - Fort Bragg\002 - 2022 Streets Rehab\10 - CAD Drawings\Improvement Plans\3139.002 - LAYOUT.dwg Apr 13, 2023 - 1:51pm, grugh



GENERAL NOTES:

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NO.	REVISION DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE
HOR. SCALE: 1"=40'
VERT. SCALE: N.T.S.

CITY OF FORT BRAGG CALIFORNIA

REY ENGINEERS, INC.
Civil Engineers | Land Surveyors | LiDAR
925 Redwood Avenue, Suite 201, Fortuna, CA 95540
Phone: (707) 725-3000 Fax: (707) 725-3003

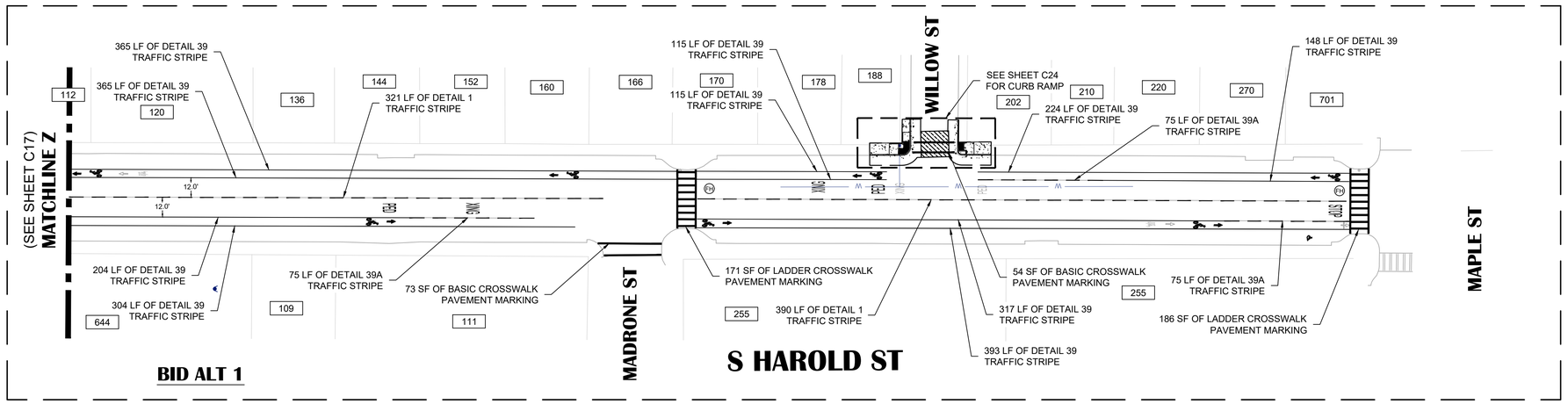
2022 STREETS REHAB PROJECT

STRIPING PLAN
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CITY OF FORT BRAGG CALIFORNIA

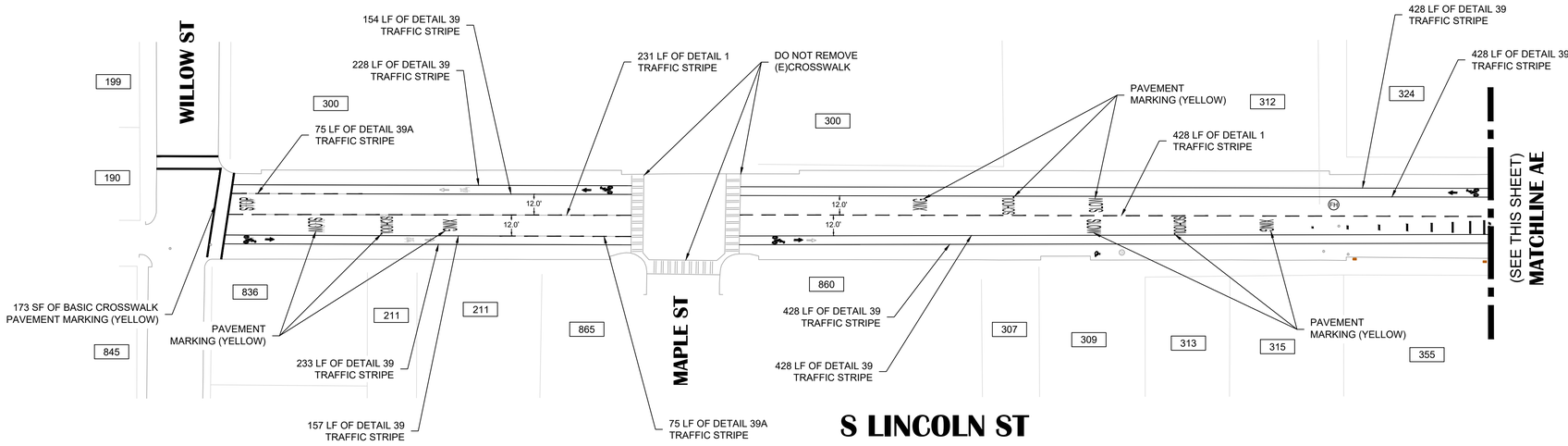
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DATE: 04/13/23
DRAFTER: TH
DESIGNER: GS
REVIEWER: AS

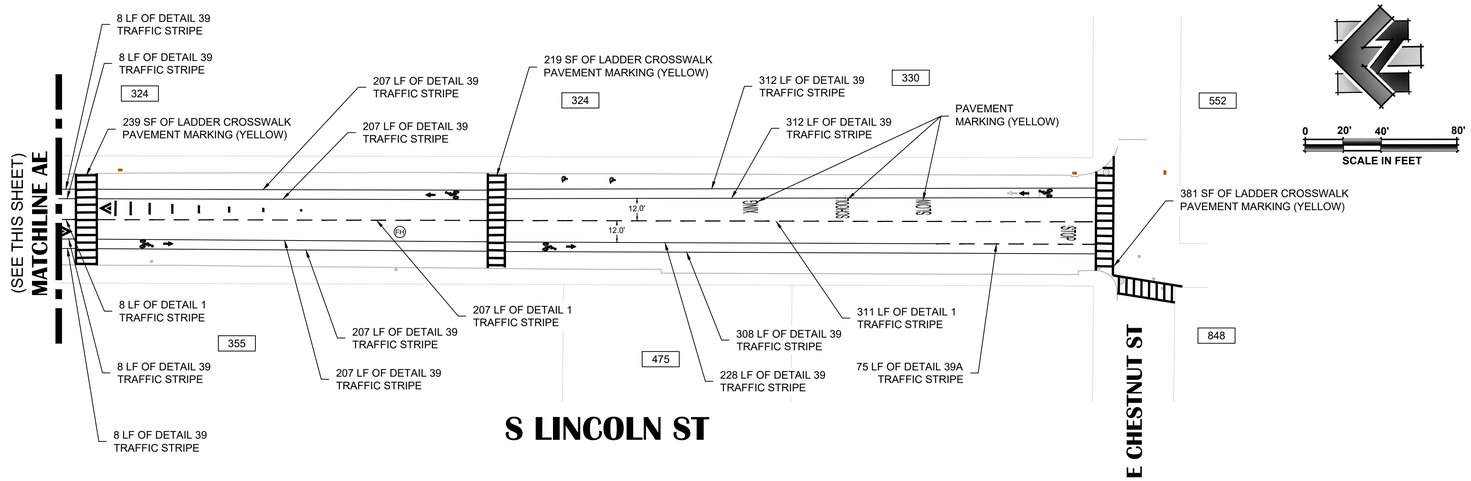
PROJECT NO. 3139.002
SHEET NO. C18 OF C25

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GENERAL NOTES:

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- CONTRACTOR SHALL PROTECT ALL UTILITIES AND STRUCTURES NOT SHOWN FOR REMOVAL

NO.	REVISION DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE
HOR. SCALE: 1"=40'
VERT. SCALE: N.T.S.

CITY OF FORT BRAGG CALIFORNIA

R.E.Y. ENGINEERS, INC.
Civil Engineers | Land Surveyors | LiDAR
925 Stamper Street, Suite 201 Fairfield, CA 94533
Phone 707.864.3500 Fax 707.864.3503

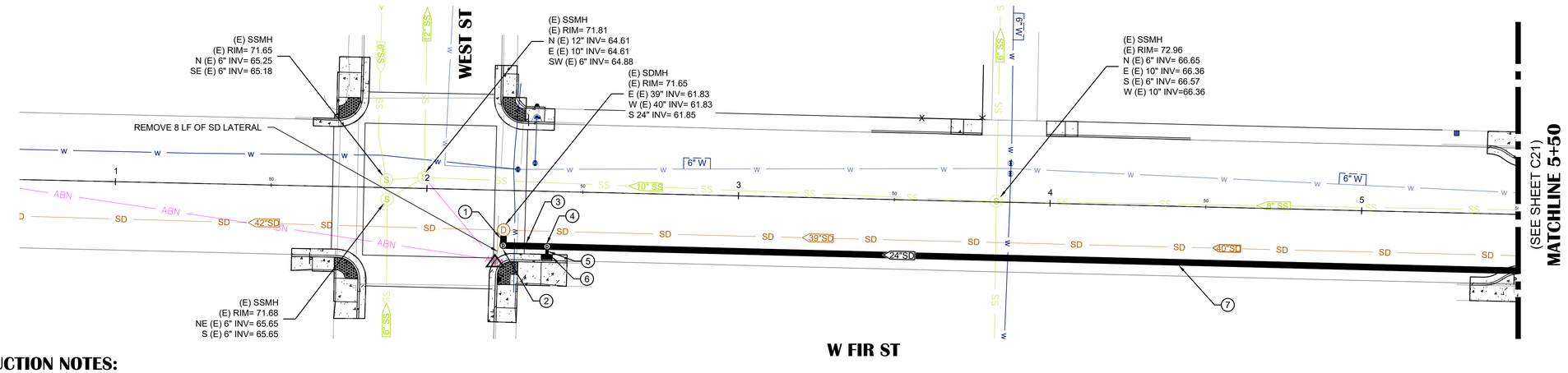
2022 STREETS REHAB PROJECT

STRIPING PLAN
S HAROLD ST & S LINCOLN ST
CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AB

PROJECT NO. **3139.002**
SHEET NO. C19 OF C25

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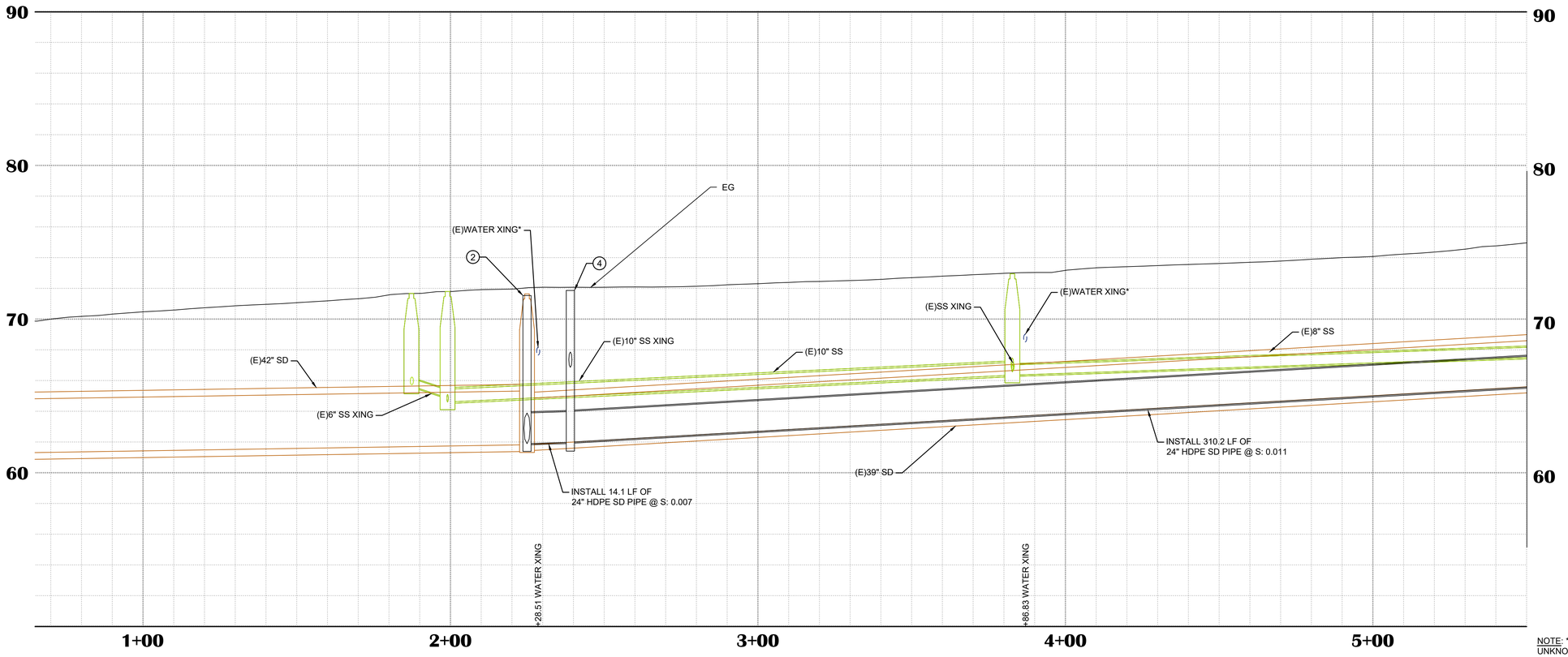
CONSTRUCTION NOTES:

1. INSTALL 3.0 LF OF 24" HDPE SD PIPE @ S: 0.010.
2. INSTALL 30" DIA NYLOPLAST DRAIN BASIN WITH STANDARD H-20 SOLID COVER. SEE DETAIL ON SHEET C06. RIM: 71.54 N 24" PLASTIC PIPE INV= 61.90 E 24" PLASTIC PIPE INV= 61.90
5. INSTALL 14.1 LF OF 24" HDPE SD PIPE @ S: 0.007.
4. INSTALL 30" DIA NYLOPLAST DRAIN BASIN WITH STANDARD H-20 SOLID COVER. SEE DETAIL ON SHEET C06. RIM: 71.87 E 24" PLASTIC PIPE INV= 62.00 S 12" PLASTIC PIPE INV= 66.87 W 24" PLASTIC PIPE INV= 61.99
5. INSTALL 3.4 LF OF 12" HDPE SD PIPE @ S: 0.020.
6. INSTALL TYPE G1 DI PER 2018 CALTRANS STD. PLAN D72B. FL: 71.29 N 12" INV= 66.94
7. INSTALL 310.2 LF OF 24" HDPE SD PIPE @ S: 0.011.

GENERAL NOTES:

- (E)UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY (E)UTILITY LOCATIONS AND DEPTHS.
- CONTRATOR SHALL PROTECT ALL (E) UTILITIES AND STRUCTURES NOT SHOWN FOR REMOVAL.
- WATERLINE ON THE NORTH SIDE OF FIR ST. NOT SHOWN ON PROFILE VIEW DUE TO CLARITY.
- ALL NEW DRAIN INLETS SHALL HAVE A STAMPED MEDALLION.

0 10' 20' 40'
SCALE IN FEET



NOTE: * INDICATES DEPTH UNKNOWN

NO.	REVISION DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=4'

CITY OF FORT BRAGG CALIFORNIA

REY ENGINEERS, INC
Civil Engineers | Land Surveyors | LIDAR
925 Main Street, Suite 201, Fortuna, CA 95540
Phone (916) 330-3307 Fax (916) 330-3303

2022 STREETS REHAB PROJECT
PLAN AND PROFILE
W FIR ST
CITY OF FORT BRAGG CALIFORNIA

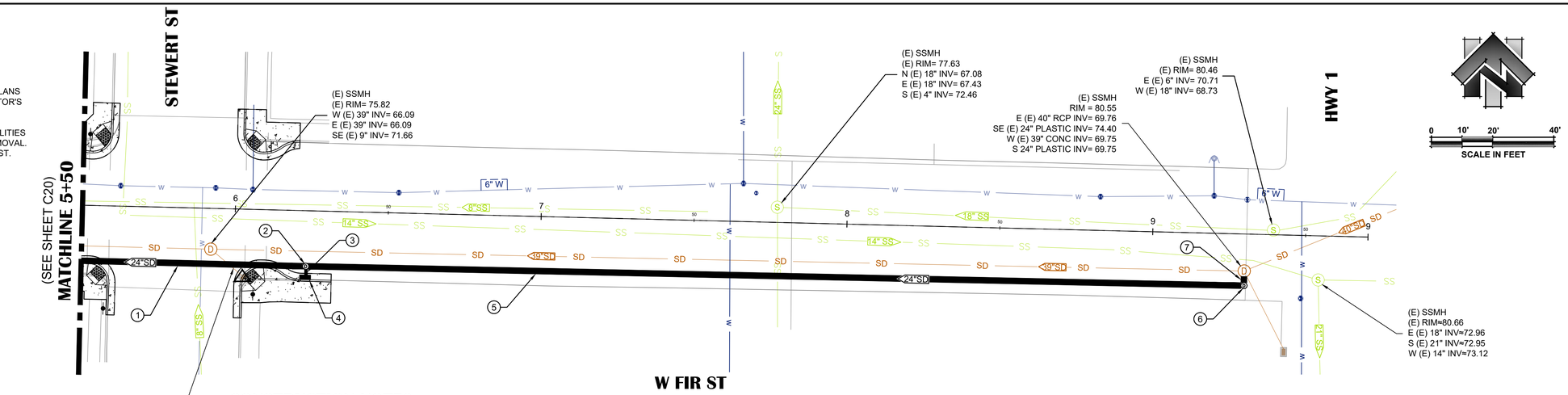
DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AS

PROJECT NO.
3139.002
SHEET NO. C20 OF C25

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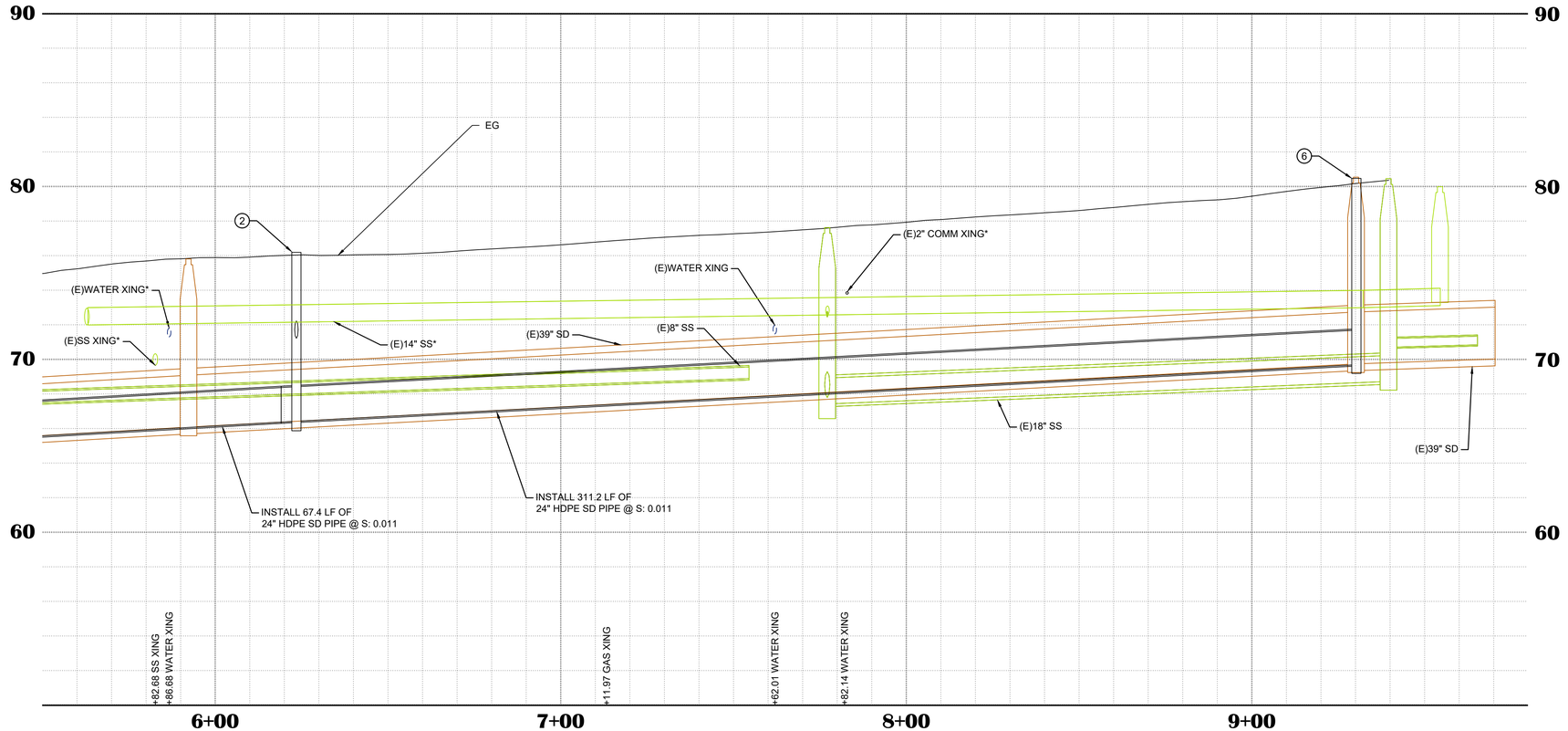
GENERAL NOTES:

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- CONTRATOR SHALL PROTECT ALL (E) UTILITIES AND STRUCTURES NOT SHOWN FOR REMOVAL.
- WATERLINE ON THE NORTH SIDE OF FIR ST. NOT SHOWN ON PROFILE VIEW DUE TO CLARITY.
- ALL NEW DRAIN INLETS SHALL HAVE A STAMPED MEDALLION.



CONSTRUCTION NOTES:

1. INSTALL 67.4 LF OF 24" HDPE SD PIPE @ S: 0.011.
2. INSTALL 30" DIA NYLOPLAST DRAIN BASIN WITH STANDARD H-20 SOLID COVER. SEE DETAIL ON SHEET C06.
   RIM: 76.20
   E 24" PLASTIC PIPE INV= 66.38
   S 12" PLASTIC PIPE INV= 71.19
   W 24" PLASTIC PIPE INV= 66.38
3. INSTALL 3.6 LF OF 12" HDPE SD PIPE @ S: 0.020.
4. INSTALL TYPE G1 DI PER 2018 CALTRANS STD PLAN D72B.
   FL: 75.16
   N 12" INV= 71.26
5. INSTALL 311.2 LF OF 24" HDPE SD PIPE @ S: 0.011.
6. INSTALL 30" DIA NYLOPLAST DRAIN BASIN WITH STANDARD H-20 SOLID COVER. SEE DETAIL ON SHEET C06.
   RIM: 80.48
   N 24" PLASTIC PIPE INV= 69.70
   W 24" PLASTIC PIPE INV= 69.70
7. INSTALL 2.0 LF OF 24" HDPE SD PIPE @ S: 0.025.



NOTE: * INDICATES DEPTH UNKNOWN

NO.	REVISION	DESCRIPTION	CHECKED BY	DATE

SCALE IN FEET: 0 10' 20' 40'

DRAWING SCALE
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=4'

CITY OF FORT BRAGG CALIFORNIA

REY ENGINEERS, INC
Civil Engineers | Land Surveyors | LIDAR
925 Samoa Blvd., Suite 201, Arcata, CA 95521
Phone (707) 826-3360 | Fax (707) 826-3363

2022 STREETS REHAB PROJECT

PLAN AND PROFILE W FIR ST

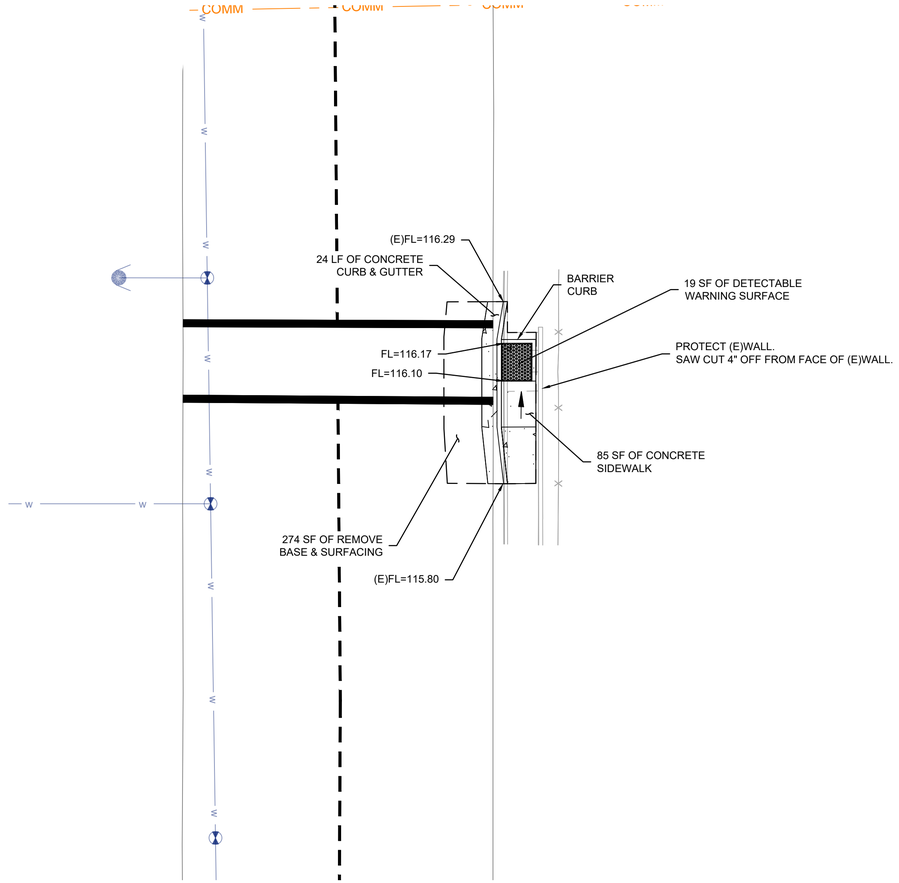
CALIFORNIA

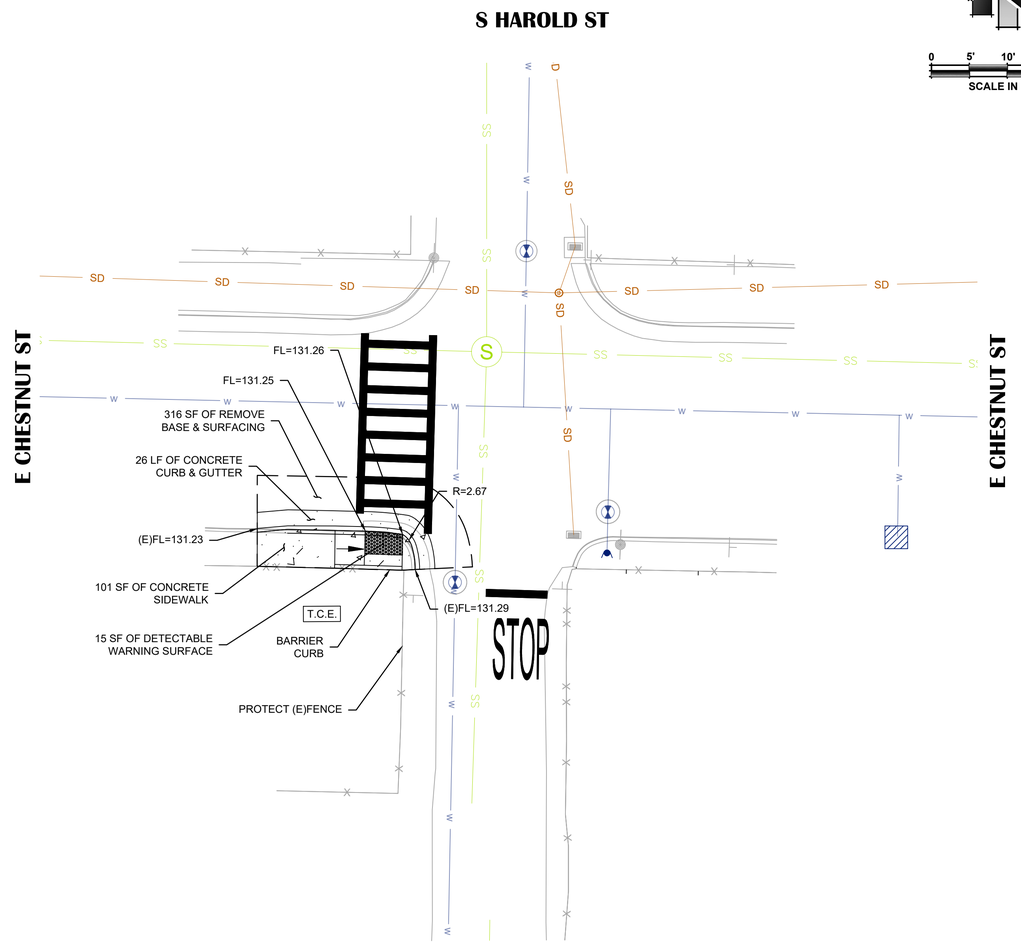
CITY OF FORT BRAGG

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AE

PROJECT NO. 3139.002
SHEET NO. C21 OF C25

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GENERAL NOTES:

- CROSSWALKS SHALL HAVE A MAX CROSS SLOPE OF 1.5% & A MAX. LONGITUDINAL/RUNNING SLOPE OF 4.5%.
- ALL PAVEMENT MARKINGS SHALL BE WHITE, UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL SAWCUT ALONG (E)SIDEWALK JOINTS UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING UTILITIES BY CALLING FOR USA PRIOR TO DIGGING & POTHOLING WHEN NECESSARY.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL CURB RAMPS ARE COMPLIANT WITH CURRENT ADA REQUIREMENTS.
- CONTRACTOR TO PROVIDE TEMPORARY SURFACING, AS NECESSARY, TO CONSTRUCT CURB RAMPS.
- ALL SIDEWALK IMPROVEMENTS SHALL CONFORM TO EXISTING SIDEWALK.
- CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND STRUCTURES NOT SHOWN FOR REMOVAL.
- ALL NEW DRAIN INLETS SHALL HAVE A STAMPED MEDALLION.
- SEE PAVING AND STRIPING SHEETS FOR TRAFFIC STRIPING AND PAVEMENT MARKINGS.
- EXISTING TRAFFIC STRIPING AND PAVEMENT MARKINGS ARE NOT SHOWN.

NO.	REVISION DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE
HOR. SCALE: 1"=10'
VERT. SCALE: N.T.S.

CITY OF FORT BRAGG CALIFORNIA

REY ENGINEERS, INC.
Civil Engineers | Land Surveyors | LiDAR
925 Redwood Avenue - Suite 202 - Fortuna, CA 95540
Phone 707.725.3001 - Fax 707.725.3003

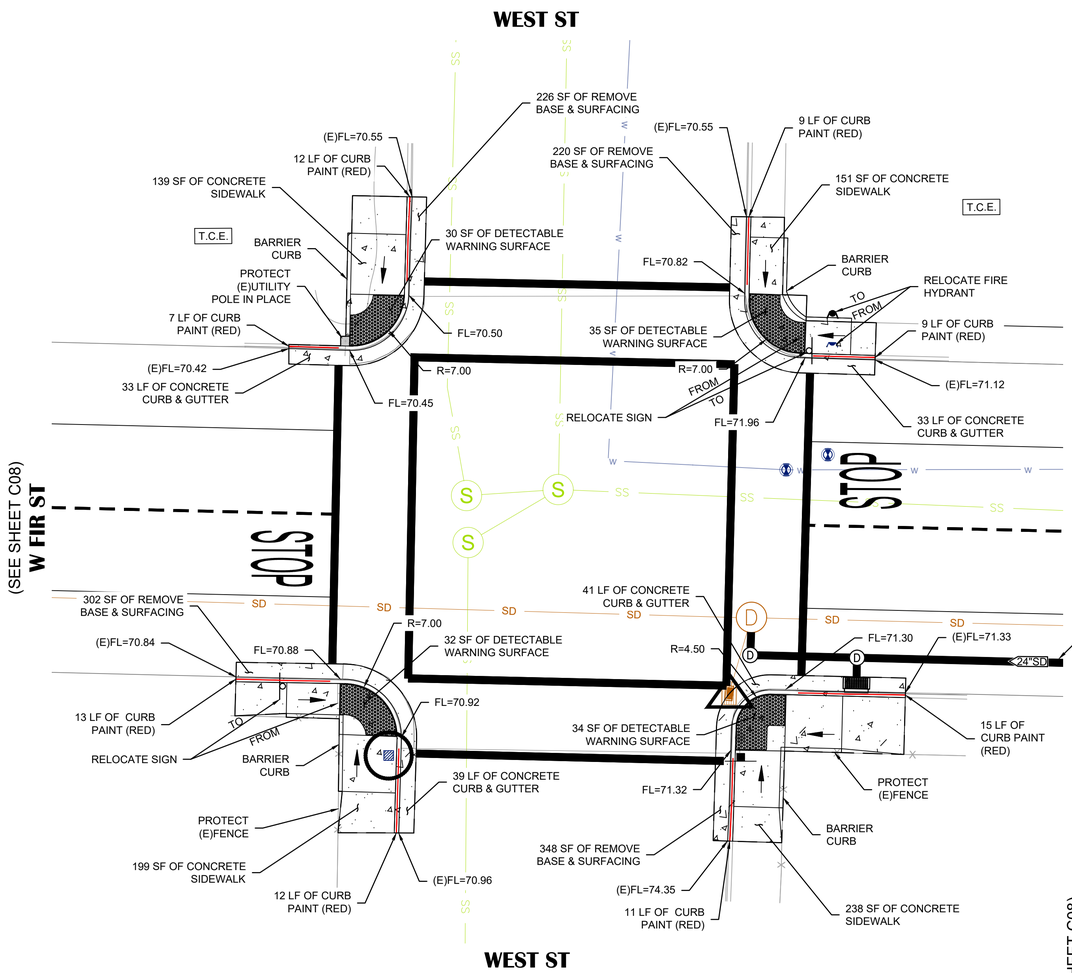
2022 STREETS REHAB PROJECT

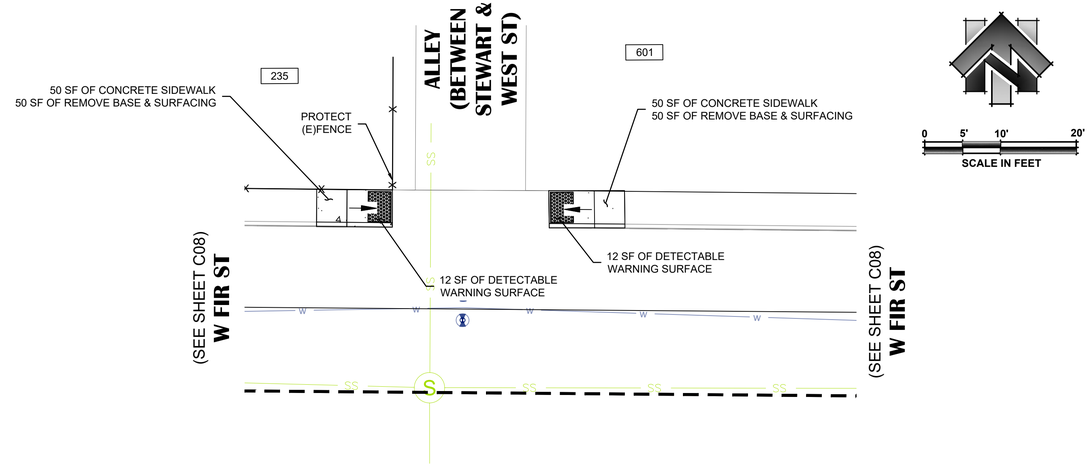
CURB RAMP
BOATYARD DR & CHESTNUT ST
CITY OF FORT BRAGG CALIFORNIA

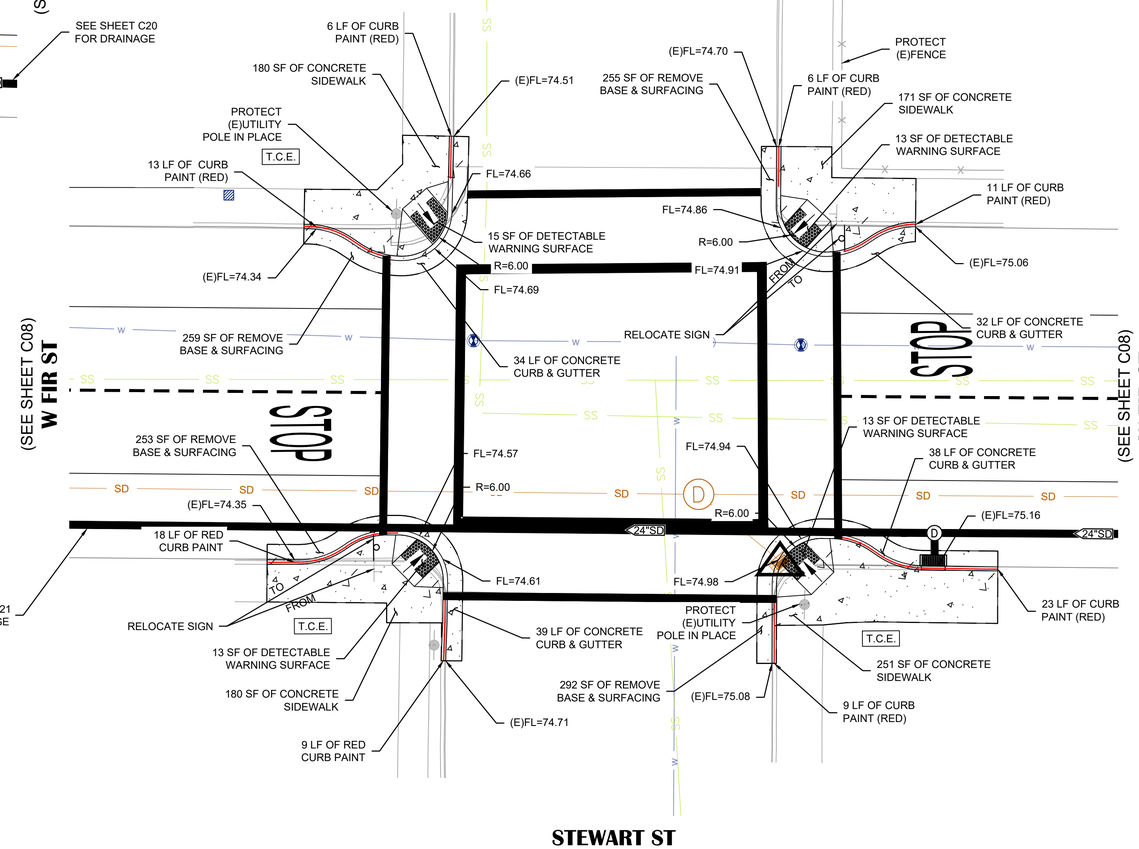
DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AB

PROJECT NO.
3139.002
SHEET NO. C22 OF C25

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COORDINATION NOTE:

- CITY TO COORDINATE WITH LAND OWNER TO ENTER AND CONSTRUCT IMPROVEMENTS.

GENERAL NOTES:

- CROSSWALKS SHALL HAVE A MAX CROSS SLOPE OF 1.5% & A MAX LONGITUDINAL/RUNNING SLOPE OF 4.5%.
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NO.	REVISION DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE
HOR. SCALE: 1"=10'
VERT. SCALE: N.T.S.

CITY OF FORT BRAGG CALIFORNIA

REY ENGINEERS, INC.
Civil Engineers | Land Surveyors | LiDAR
925 Tamalpais Avenue, Suite 220 Fairfax, CA 94930
Phone: 415.258.3040 Fax: 415.258.3303

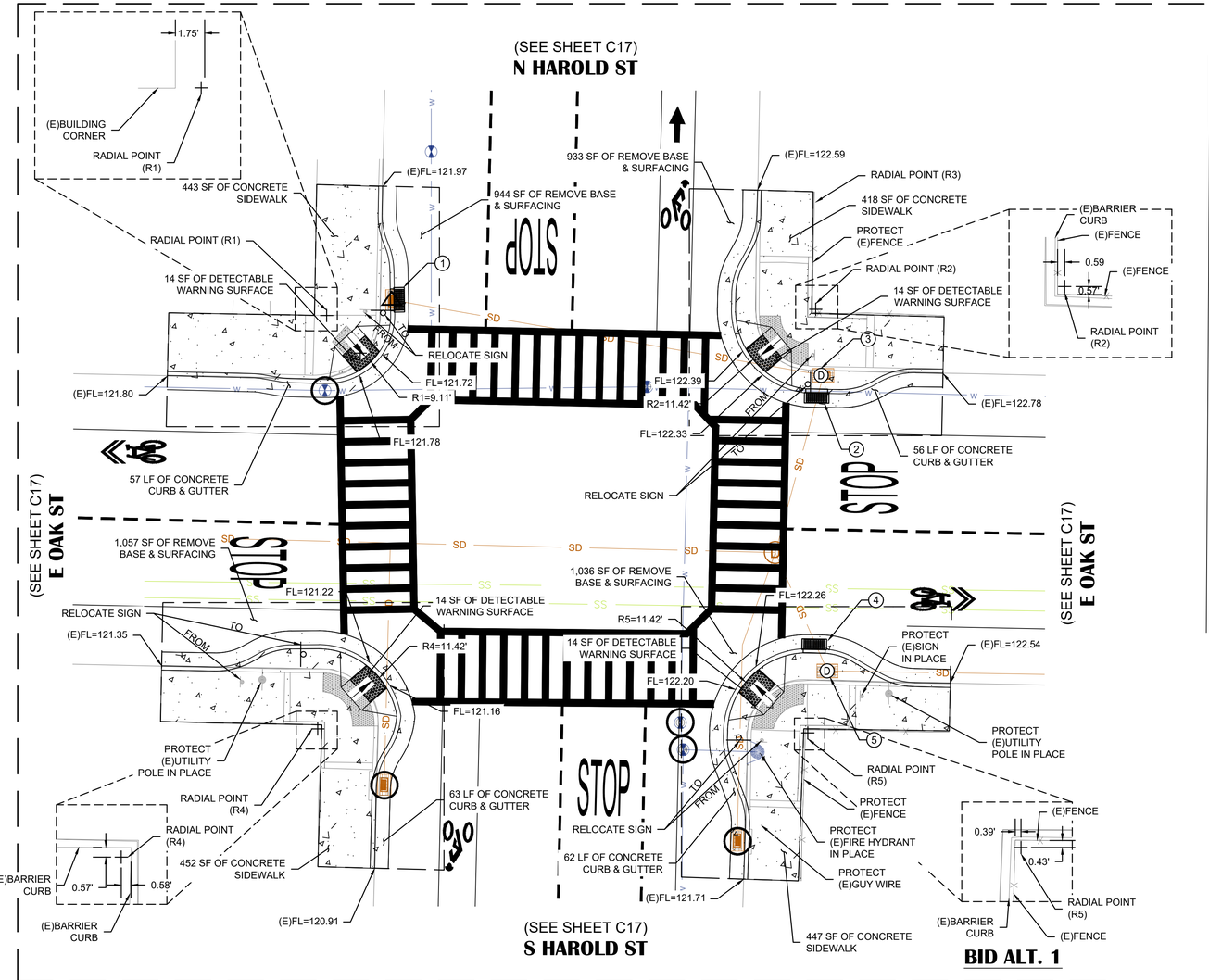
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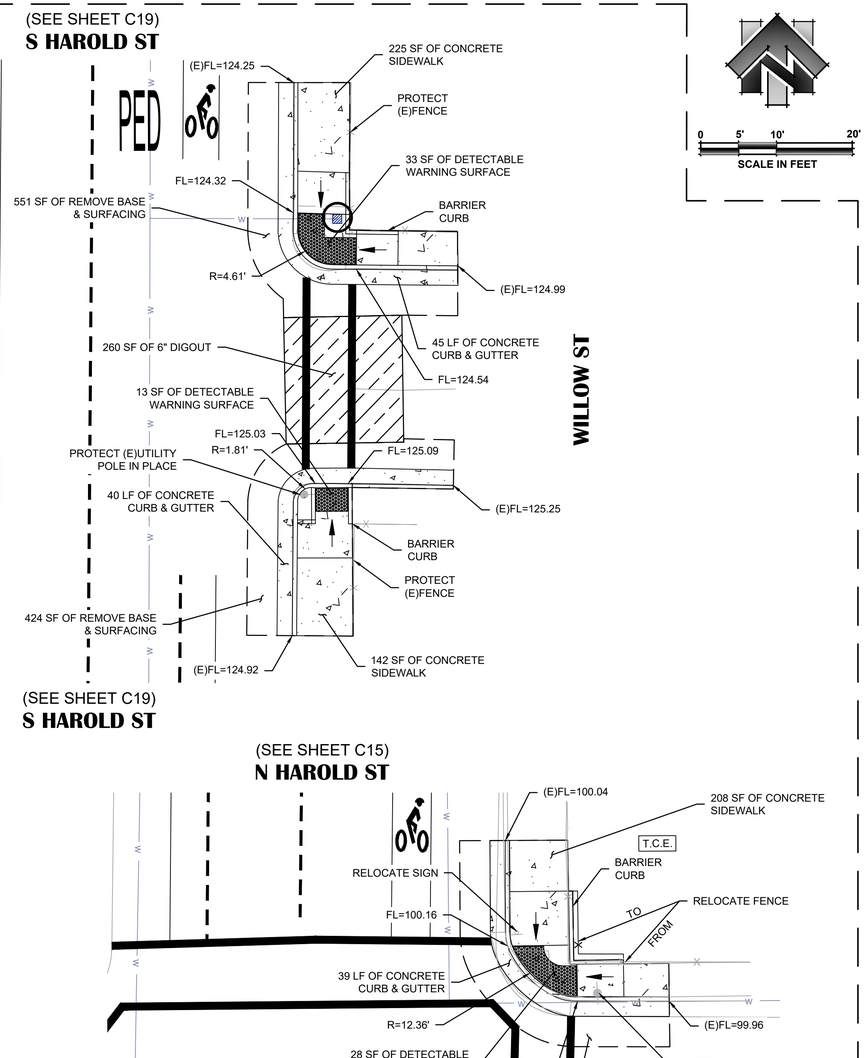
CURB RAMP
W FIR ST
CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AB

PROJECT NO. 3139.002
SHEET NO. C23 OF C25

N:\3139 - Fort Bragg\002 - 2022 Streets Rehab\10 - CAD Drawings\Improvement Plans\3139.002 - CURB RAMPS DETAILS.dwg Apr 13, 2023 - 1:53pm, grugh





COORDINATION NOTE:

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- ALL SIDEWALK IMPROVEMENTS SHALL CONFORM TO EXISTING SIDEWALK.
- CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND STRUCTURES NOT SHOWN FOR REMOVAL.
- ALL NEW DRAIN INLETS SHALL HAVE A STAMPED MEDALLION.
- SEE PAVING AND STRIPING SHEETS FOR TRAFFIC STRIPING AND PAVEMENT MARKINGS.
- EXISTING TRAFFIC STRIPING AND PAVEMENT MARKINGS ARE NOT SHOWN.

CONSTRUCTION NOTES:

1. INSTALL TYPE G1 DI PER 2018 CALTRANS STD. PLAN D72B.
   FL: 121.70
   E 12" INV= MATCH EXISTING
2. INSTALL TYPE G1 DI PER 2018 CALTRANS STD. PLAN D72B.
   FL: 122.14
   S 18" INV= MATCH EXISTING
3. REMOVE DI AND INSTALL 30" DIA NYLOPLAST DRAIN BASIN WITH STANDARD H-20 SOLID COVER
   SEE DETAIL ON SHEET C06.
   RIM: 122.80
   W 12" INV= MATCH EXISTING
   S 18" INV = MATCH EXISTING
4. INSTALL TYPE G1 DI PER 2018 CALTRANS STD. PLAN D72B.
   FL: 122.36
   NW 18" INV= MATCH EXISTING
5. REMOVE DI AND INSTALL 30" DIA NYLOPLAST DRAIN BASIN WITH STANDARD H-20 SOLID COVER
   SEE DETAIL ON SHEET C06.
   RIM: 122.69
   N 18" INV= MATCH EXISTING
   E 6" INV = MATCH EXISTING

NO.	REVISION	DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE
HOR. SCALE: 1"=10'
VERT. SCALE: N.T.S.

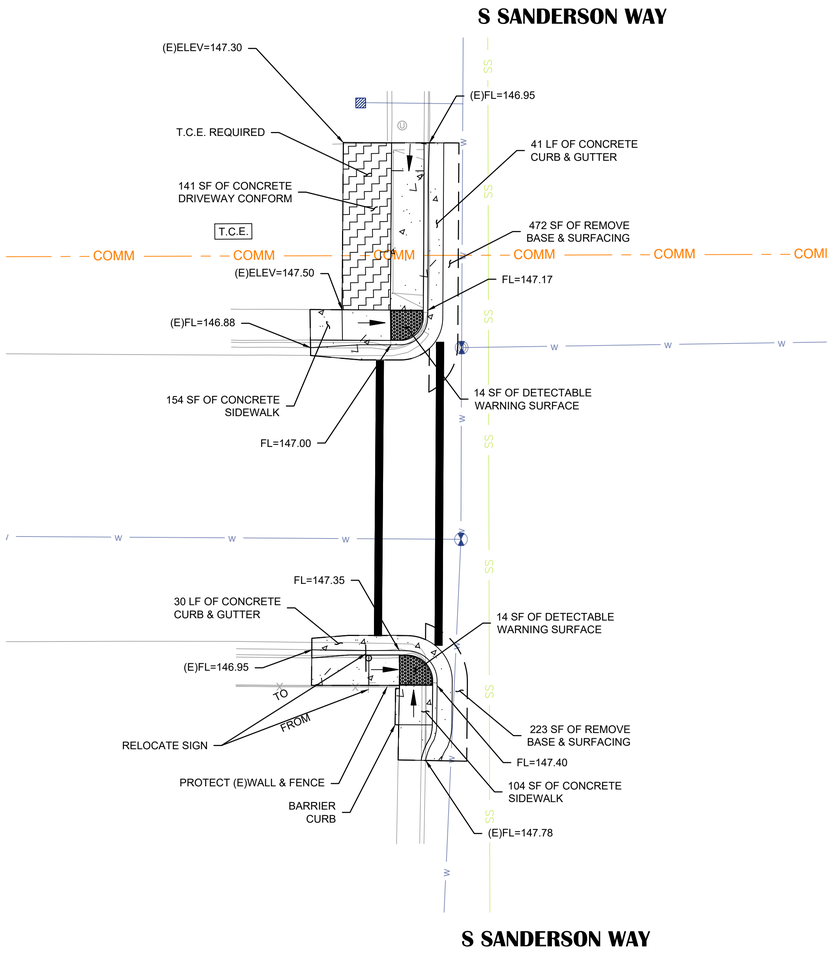
REY ENGINEERS, INC.
Civil Engineers | Land Surveyors | LIDAR
925 Scherer Street, Suite 201, Folsom, CA 95630
Phone (916) 355-3040 Fax (916) 355-3303

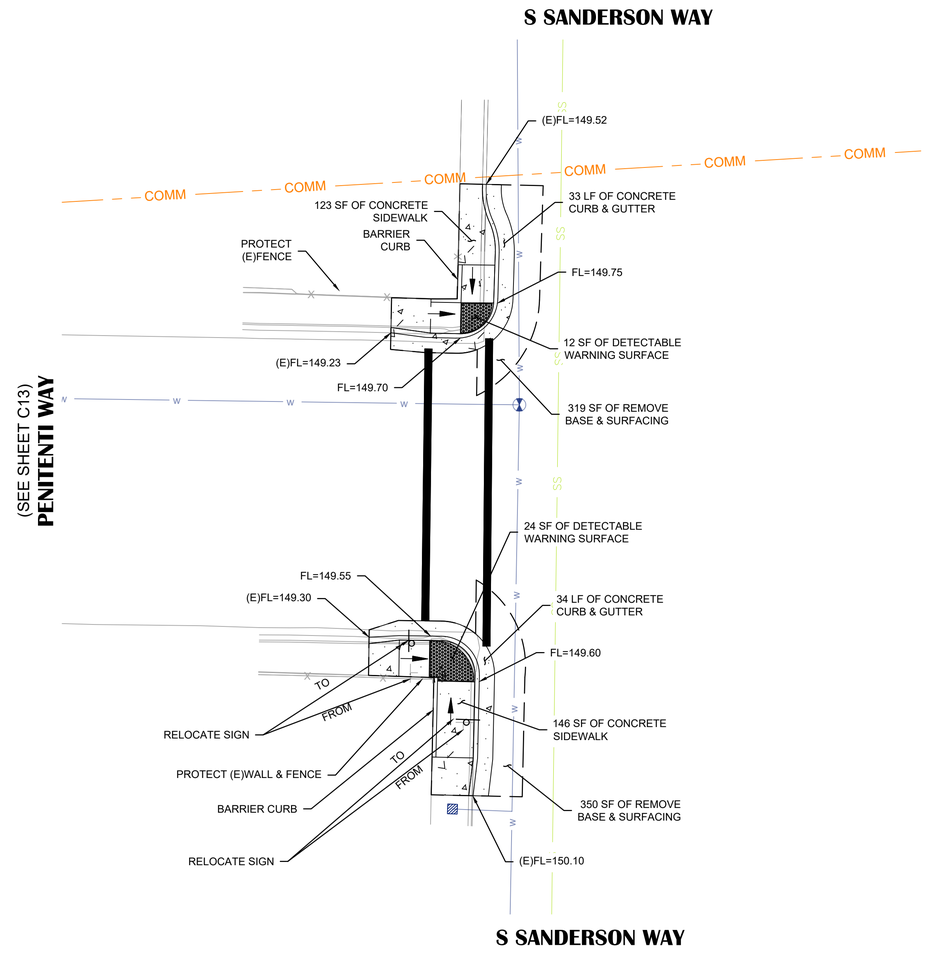
2022 STREETS REHAB PROJECT
CURB RAMP
HAROLD ST
CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AB

PROJECT NO. 3139.002
SHEET NO. C24 OF C25

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BID ALT. 2

GENERAL NOTES:

- CROSSWALKS SHALL HAVE A MAX CROSS SLOPE OF 1.5% & A MAX LONGITUDINAL/RUNNING SLOPE OF 4.5%.
- ALL PAVEMENT MARKINGS SHALL BE WHITE, UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL SAWCUT ALONG (E)SIDEWALK JOINTS UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING UTILITIES BY CALLING FOR USA PRIOR TO DIGGING & POTHOLING WHEN NECESSARY.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL CURB RAMPS ARE COMPLIANT WITH CURRENT ADA REQUIREMENTS.
- CONTRACTOR TO PROVIDE TEMPORARY SURFACING, AS NECESSARY, TO CONSTRUCT CURB RAMPS.
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0 5' 10' 20'
SCALE IN FEET

NO.	REVISION DESCRIPTION	CHECKED BY	DATE

DRAWING SCALE
HOR. SCALE: 1"=10'
VERT. SCALE: N.T.S.

CITY OF FORT BRAGG CALIFORNIA

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Civil Engineers | Land Surveyors | LiDAR
925 Selva Street, Suite 201, Fairfax, CA 94930
Phone: 415.485.3300 Fax: 415.485.3303

2022 STREETS REHAB PROJECT
CURB RAMP
AZALEA CIR & PENITENTI WAY
CITY OF FORT BRAGG CALIFORNIA

DRAWING INFO
DATE: 04/13/23
DRAFTER: TH
DESIGNER: GR
REVIEWER: AB

PROJECT NO.
3139.002
SHEET NO. C25 OF C25

N:\3139 - Fort Bragg\002 - 2022 Streets Rehab\10 - CAD Drawings\Improvement Plans\3139.002 - CURB RAMPS DETAILS.dwg Apr 13, 2023 - 1:53pm, grugh