

CITY OF IMPERIAL
Imperial, California

CONTRACT DOCUMENTS AND
SPECIFICATIONS FOR

**AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1 PROJECT**

BID NO. 2024-07

CITY OF IMPERIAL
COMMUNITY DEVELOPMENT DEPARTMENT
400 South Imperial Avenue
Suite 101
Imperial, California 92251
(760) 355-1152

July 3, 2024 (Rev 1)

CITY OF IMPERIAL

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CITY OF IMPERIAL

**NOTICE INVITING SEALED BIDS
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1 PROJECT
BID NO. 2024-07**

PUBLIC NOTICE IS HEREBY GIVEN that the City of Imperial, as CITY, invites sealed bids for the above stated project and will receive such bids in the offices of the City Clerk at 420 S. Imperial Avenue, Imperial, California 92251 up to the hour of 3:00 P.M. on Wednesday, July 31, 2024, at which time they will be publicly opened and read aloud. A bid summary will then be prepared and posted. A Pre-Bid meeting will be conducted at 10:00 A.M. on Tuesday, July 16, 2024 at the City of Imperial Community Development Department located at 400 S. Imperial Ave., Suite 101; Imperial, California 92251 to be followed by a Field Walk-through at the project site.

The work to be done consists of furnishing all materials, equipment, tools, labor, and incidentals as required by the contract documents, including, but not limited to the following activities: Mill and overlay in parts of streets as detailed in the plans, installation of ¾" asphalt leveling course, installation of asphalt-rubber aggregate membrane (ARAM), installation of gap-graded asphalt rubber hot mix (ARHM), slurry seal, removal and replacement of concrete curb & gutter, sidewalks, ADA ramps, spandrels, driveways and cross gutters. Installation of 18" concrete pipe collar, concrete headwall, type G-2 inlet with grate. Furnishing and installation of new water service. Installation of thermoplastic striping, installation of Rectangular Flashing Beacon Assembly System and Pedestrian Hybrid Beacon, and furnishing and installation of landscape and irrigation. Includes road traffic control around the construction zones.

The scope of work includes, prior to the start of construction, the coordination between the City of Imperial, the County of Imperial and the Contractor.

Bid packages (USB's) will be available on Tuesday, July 09, 2024 at the City of Imperial Community Development Department located at 400 S. Imperial Avenue, Suite 101; Imperial, California 92251 upon payment of \$85.00 non-refundable fee (\$100.00 if mailed). Only those firms who have purchased the bid documents will be provided any addendums that may be issued for this project prior to the bid opening date.

Any contract entered into pursuant to this notice will incorporate the provisions of State Labor Code of the State of California. Compliance with the higher State prevailing rates of wages and apprenticeship employment standards established by the State director of Industrial Relations will be required. Affirmative action to ensure against discrimination in employment practices on the basis of race, color, national origin, ancestry, sex, or religion will also be required.

This project has a specific contract Disadvantaged Businesses Enterprises (DBE) Contract Goal of 17%, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered areas. Said DBE Goal is applicable to all contractor's construction work (whether or not it is Federally funded or assisted) performed in the covered area. If the Contractor performs construction work in a geographical area outside of the covered area, it shall apply to the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its Federally involved and non-Federally involved construction. The Contractor's compliance with Executive Order 11246 and the regulations in 41.

CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60- 4.3(a), and its efforts to meet the goals established for the geographical area where the contract resulting from the solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform through the duration of the contract, and in each trade, and the Contractor shall make a good faith effort to employ women and minority individuals evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

Each bid must be accompanied by a guaranty of cash, certified check, cashier's check or bid bond made payable to the City of Imperial for an amount equal to at least ten percent (10%) of the bid.

Such guaranty to be forfeited should the bidder to whom the contract is awarded fails to enter the contract. All guaranties to be returned after the contract is awarded. In conformance with the State of California Public Contract Code Section 22300, the contractor may substitute securities for any funds withheld by the City to ensure performance under the contract. At request and expense of the contractor, securities equivalent to the amount withheld shall be deposited with the City or with a State or Federally chartered bank as the escrow agent who shall pay such funds to the contractor upon notification by the City of contractor's satisfactory completion of contract. The type of securities deposited, and the method of release shall be approved by the City Attorney's office.

As used in this notice, and in the contract resulting from this solicitation, the "covered area" is in the City of Imperial in Imperial County, State of California.

The contract documents call for monthly payments based upon the engineer's estimate of the work completed. The City of Imperial will retain five (5%) percent of each progress payment as security for completion of the balance of the work. At the request and expense of the successful bidder, the City will pay the amounts so retained upon compliance with the requirements of Public Contract Code Section 22300 and the provisions of the contract documents pertaining to Substitution of Securities.

Bids must be prepared on the approved proposal forms in conformance with the Instructions to Bidders and submitted in a sealed envelope plainly marked on the outside:

**ATTN: CITY CLERK
SEALED BID FOR:
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1 PROJECT
BID NO. 2024-07**

The Proposal should be delivered no later than 3:00 P.M. on Wednesday, July 31, 2024, addressed as follows:

**City of Imperial, City Hall – City Clerk
420 S. Imperial Avenue, Imperial, CA 92251**

Questions concerning the proposal should be directed to Jesus Villegas, Project Manager via email: jvillegas@imperial.ca.gov. Questions should be received no later than 1:00 P.M on Tuesday, July 23, 2024.

Clarification desired by a proposer shall be requested in writing with sufficient time to allow for a response prior to the date RFPs are due. Oral explanation or instructions shall not be considered binding on behalf of the City.

Any modifications to this solicitation will be issued by the City as a written addendum. The City will not consider proposals received after the specified time and date. This bid proposal does not commit the City of Imperial to award a contract or pay any costs associated with the preparation of a Proposal.

The City of Imperial reserves the right to reject any or all bids, to award each item separately, delete portions of the work, and/or waive any informality on any bid. No bid may be withdrawn for 45 days after the time set for the opening thereof. Failure by the successful bidder to enter into a contract with the City or to deliver goods and/or services in accordance with the bid may result in a declaration by the City that the bidder is not a responsible bidder, and elimination from consideration in future bidding.

No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1 (a)]. No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Any bid submitted by a contractor or subcontractor not properly licensed and not registered with the Department of Industrial Relations shall be considered non-responsive and will be rejected.

At the time of contract award, the prime contractor shall possess a Class "A" contractor's license and/or any combination of "C" specialty contractor's license(s) sufficient to perform the work.

CITY OF IMPERIAL
INSTRUCTIONS TO BIDDERS
FOR
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1 PROJECT
BID NO. 2024-07

PROPOSAL FORMS

Bids shall be submitted in writing on the Bid Proposal forms provided by the CITY, including, all forms "Required Federal Contract Provisions" must be filled and initialed. All information requested therein must be clearly and legibly set forth in the manner and form indicated. The CITY will not consider any bid proposal not meeting these requirements and/or not submitting all forms requested herein.

PROPOSAL GUARANTEE (BID BOND)

Proposals must be accompanied by a proposal guarantee consisting of a certified check or bid bond payable to the CITY in the amount of (10%) of the total amount Bid. Any proposal not accompanied by such a guarantee will not be considered. If a bidder to whom a contract is awarded fails or refuses to execute the contract documents or furnish the required insurance policies and bonds as set forth in those documents, the proposal guarantee shall be forfeited to the CITY. The proposal guarantees of all bidders will be held until the successful bidder has properly executed all contract documents.

NON-COLLUSION AFFIDAVIT

Bidder shall declare that the only persons or parties interested in the proposal as principals are those named therein; that no officer, agent, or employee of the CITY is personally interested, directly or indirectly, in the proposal; that the proposal is made without connection to any other individual, firm, or corporation making a bid for the same work; and that the proposal is in all respects fair and without collusion or fraud. The Non-Collusion Affidavit shall be executed and submitted with the proposal.

PROPOSAL BID SHEET

Bidders shall give unit prices for each and all of the items set forth. No aggregate bids will be considered. The bidder shall set forth for each item of work, in clearly legible figures, a unit item price and a total for the item in the respective spaces provided for this purpose. The quantities listed in the Bid sheets are supplied to give an indication of the general scope of work, but the accuracy of figures is not guaranteed, and the bidder shall make his own estimates from the drawings. In case of a variation between the unit price and the totals shown by the bidder, the unit price will be considered to be the bid.

No bidder may withdraw his proposal for a period of forty-five (45) days after the time set for opening thereof. However, the CITY will return all proposal guarantees within ten (10) days after the award of the contract or rejection of the bids, as the case may be, to the respective bidders whose proposals they accompany.

DELIVERY OF PROPOSAL

Proposals may be mailed or delivered by messenger. However, it is the bidder's responsibility alone to ensure delivery of the proposal to the hands of the CITY's designated official prior to the bid opening hour stipulated in the "Notice Inviting Sealed Bids." Late proposals will not be considered.

WITHDRAWAL OF PROPOSALS

A proposal may be withdrawn by a written request signed by the bidder. Such requests must be delivered to the CITY's designated official prior to the bid opening hour stipulated in the "Notice Inviting Sealed Bids". The withdrawal of a proposal will

not prejudice the right of the bidder to submit a new proposal, providing there is time to do so. Proposals may not be withdrawn after said hour without forfeiture of the proposal guarantee.

IRREGULAR PROPOSALS

Unauthorized conditions, limitations, or provisions attached to a proposal will render it irregular and may cause its rejection. The completed proposal forms shall be without interlineations, alterations, or erasures. Alternative proposals will not be considered unless specifically requested. No oral, telegraphic, or telephonic proposal, modification, or withdrawal will be considered.

TAXES

No mention shall be made in the proposal of Sales Tax, Use Tax, or any other tax, as all unit prices and bid amounts will be deemed and held to include any such taxes, which may be applicable.

DISQUALIFICATION OF BIDDERS

In the event that any bidder acting as a prime contractor has an interest in more than one proposal, all such proposals will be rejected, and the bidder will be disqualified.

This restriction does not apply to subcontractors or suppliers who may submit quotations to more than one bidder, and while doing so, may also submit a formal proposal as a prime contractor.

No contract will be executed unless the bidder is licensed in accordance with the provisions of the State Business and Professions Code.

INTERPRETATION OF PLANS AND DOCUMENTS

If any person contemplates submission of a bid for the proposed contract and is in doubt as to the true meaning of any part of the services to be performed, he may submit to the Engineer of the CITY a written request for an interpretation or correction thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation or correction of the proposed documents shall be made only by addendum duly issued and copy of such addendum will be mailed or delivered to each person receiving a set of such documents.

The Engineer will not be responsible for any other explanation or interpretations of the proposed documents.

ADDENDA OR BULLETINS

All bidders are advised as to the possibility of issuance of addenda affecting the items, scope or quantity of the work required for this project. Each bidder shall be fully responsible for informing himself as to whether or not any such addenda have been issued. The effect of all addenda to the Contract Documents shall be considered in the bid and said addenda shall be made a part of the contract documents and shall be returned with them. Failure to cover in his bid any such addenda issued may render his bid irregular and may result in its rejection by the CITY.

LEGAL RESPONSIBILITIES

All proposals must be submitted, filed, made, and executed in accordance with State and Federal laws relating to bids for contracts of this nature whether the same are expressly referred to herein or not.

Any Bidder submitting a proposal shall by such action thereby agree to each and all of the terms, conditions, provisions, and requirements set forth, contemplated, and referred to in the Contract Documents, and to full compliance therewith.

AWARD OF CONTRACT

Following a review of the bids, the CITY shall determine whether to award the contract or to reject all bids. The award of contract, if made, will be to the lowest responsible Bidder as determined solely by the CITY. At the time of contract award, the successful Bidder shall hold a Class A Contractors License, as required to perform the work, issued by the State of California.

Additionally, the CITY reserves the right to reject any or all proposals, to accept any bid or portion thereof, to waive any irregularity, and to take the bids under advisement for the period of time stated in the "Notice Inviting Sealed Bids", all as may be required to provide for the best interests of the CITY. In no event will an award be made until all necessary investigations are made as to the responsibility and qualifications of the Bidder to whom the award is contemplated.

No bidder may withdraw his proposal for a period of forty-five (45) days after the time set for opening thereof. However, the CITY will return all proposal guarantees within ten (10) days after the award of the contract and execution of the contract documents or rejection of the bids, as the case may be, to the respective bidders whose proposals they accompany.

LABOR CODE

Pursuant to the provisions of Section 1773 of the Labor Code of the State of California (herein referred to as Labor Code), the CITY has obtained the general provisions rate of per diem wages and the general prevailing rate for holiday and overtime work in this locality for each craft, classification or type of workman needed to execute the contract from the Director of the Department of Industrial Relations. These rates are on file with the Clerk of the CITY.

Travel and subsistence payments to each workman needed to execute the work shall be made as such travel and subsistence payments are defined in the applicable collective bargaining agreements filed in accordance with Section 1773.8 of the Labor Code.

The Contractor shall comply with the provisions of Section 1774 of the Labor Code. Failure to comply with the subject section will subject the Contractor to penalty and forfeiture provisions of Section 1775 of the Labor Code.

Pursuant to the provisions of Section 1770 of the Labor Code, the general prevailing rate of wages has been ascertained (which rate includes employer payments for health and welfare, vacation, pension and similar purposes) applicable to the work to be done, for straight time, overtime, Saturday, Sunday and holiday work. The holiday wage rate listed shall be applicable to all holidays recognized in the collective bargaining agreement of the particular craft, classification or type of workmen concerned.

The CITY will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wage rate set forth in the contract. The possibility of wage increases is one of the elements to be considered by the Contractor in determining his bid and will not under any circumstances be considered as the basis of a claim against the CITY on the contract.

The CONTRACTOR and subcontractors shall comply with Section 1777.6 of the Labor Code which stipulates that it shall be unlawful to refuse to accept otherwise qualified employees as registered apprentices solely on the grounds of race, religious creed, color, national origin, ancestry, sex, or age, of such employee, except as provided in Section 3077 of the Labor Code.

WORKMAN'S COMPENSATION CERTIFICATE

Section 3700 of the Labor Code requires that every employer shall secure the payment of

compensation by either being insured against liability to pay compensation with one or more insurers or by securing a certificate of consent to self-insure from the State Director of Industrial Relations.

In accordance with this section and with Section 1861 of the Labor Code, the contractor shall sign a Compensation Insurance Certificate, which is included with the Contract Agreement, and submit same to City along with the other required contract documents, prior to performing any work. Reimbursement for this requirement shall be considered as included in the various items of work.

CLAYTON ACT AND CARTWRIGHT ACT

Section 4551 of the State Government Code specifies that in executing a public works contract with the CITY to supply goods, services or materials, the Contractor or Subcontractor offers and agrees to assign to the CITY all rights, title and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 commencing with Sec. 16700) of Part 2 of Division 7 of the Business and Professions Code, arising from purchase of goods, services or materials pursuant to the contract or subcontract. This assignment shall become effective when the CITY tender's final payment to the Contractor without further acknowledgment by the parties.

SUBSTITUTION OF SECURITIES

In conformance with the State of California Public Contract Code Section 22300, the contractor may substitute securities for any funds withheld by the CITY to ensure performance under the contract.

At the request and expense of the contractor, securities equivalent to the amount withheld shall be deposited with the City or with a State or Federally chartered bank as the escrow agent who shall pay such funds to the contractor upon notification by CITY of Contractor's satisfactory completion of the contract.

The type of securities deposited, and the method of release shall be approved by the City Attorney's office.

SUBLETTING AND SUBCONTRACTING

Pursuant to the Subletting and Subcontracting Fair Practices Act (commencing with Section 4100 of the Government Code), bidders are required to list in their proposal the name and location of place of business of each subcontractor who will perform work or labor or render services in or about the construction of the work or improvement or a subcontractor who specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the Plans and Specifications in excess of 1/2 of 1% of this prime contractor's total bid. Failure to list a subcontractor for a portion of the work means that the prime contractor will do that portion of the work. It is the Agency's intent for the Subletting and Subcontracting Fair Practices Act to apply to all phases of the work.

CITY BUSINESS LICENSE

The Contractor shall obtain a City of Imperial Business License prior to the City's issuing the Notice to Proceed.

The annual fee for the Business License is one-hundred dollars (\$100.00).

QUALITY ASSURANCE

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

You may examine the records and reports of tests the Agency performs if they are available at the job site.

Schedule work to allow time for QAP.

BUY AMERICA

Furnish steel and iron materials to be incorporated into the work with certificates of compliance. Steel and iron materials must be produced in the U.S. except:

1. Foreign pig iron and processed, pelletized, and reduced iron ore may be used in the domestic production of the steel and iron materials [60 Fed Reg 15478 (03/24/1995)].
2. If the total combined cost of the materials does not exceed the greater of 0.1 percent of the total bid or \$2,500, materials produced outside the U.S. may be used.

Production includes:

1. Processing steel and iron materials, including smelting or other processes that alter the

physical form or shape (such as rolling, extruding, machining, bending, grinding, and drilling) or chemical composition.

2. Coating application, including epoxy coating, galvanizing, and painting, that protects or enhances the value of steel and iron materials.

VERIFICATION OF COMPLIANCE WITH ECONOMIC SANCTIONS IN RESPONSE
TO RUSSIA'S ACTIONS IN UKRAINE

Per California Executive Order N-6-22, the City of Imperial is required to assure that all contractors doing business with the City of Imperial are in compliance with economic sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as sanctions imposed under state law, if any.

DISADVANTAGE BUSINESS

ENTERPRISE (DBE)

Under 49 CFR 26.13(b):

The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

Take necessary and reasonable steps to ensure that DBEs have opportunity to participate in the contract (49 CFR 26).

To ensure equal participation of DBEs provided in 49 CFR 26.5, the Agency shows a goal for DBEs. Make work available to DBEs and select work parts consistent with available DBE subcontractors and suppliers.

Meet the DBE goal shown elsewhere in these special provisions or demonstrate that you made adequate good faith efforts to meet this goal.

It is your responsibility to verify that the DBE firm is certified as DBE at date of bid opening. For a list of DBEs certified by the California Unified Certification Program, go to: http://www.dot.ca.gov/hq/bep/find_certified.htm.

All DBE participation will count toward the California Department of Transportation's federally mandated statewide overall DBE goal.

Credit for materials or supplies you purchase from DBEs counts towards the goal in the following manner:

- 100 percent counts if the materials or supplies are obtained from a DBE manufacturer.
- 60 percent counts if the materials or supplies are obtained from a DBE regular dealer.
- Only fees, commissions, and charges for assistance in the procurement and delivery of materials or supplies count if obtained from a DBE that is neither a manufacturer nor regular dealer. 49 CFR 26.55 defines "manufacturer" and "regular dealer."

You receive credit towards the goal if you employ a DBE trucking company that performs a commercially useful function as defined in 49 CFR 26.55(d)(1) through (4) and (6).

a. DBE Commitment Submittal

Submit the Exhibit 15-G *Local Agency Bidder DBE Commitment (Construction Contracts)* form, included in the Bid book. If the form is not submitted with the bid, remove the form from the Bid book before submitting your bid.

If the DBE Commitment form is not submitted with the bid, the apparent low bidder, the 2nd low bidder, and the 3rd low bidder must complete and submit the DBE Commitment form to the Agency. DBE Commitment form must be received by the Agency no later than 4:00 p.m. on the 4th business day after bid opening.

Other bidders do not need to submit the DBE Commitment form unless the Agency requests it. If the Agency requests you to submit a DBE Commitment form, submit the completed form within 4 business days of the request.

Submit written confirmation from each DBE stating that it is participating in the contract. Include confirmation with the DBE Commitment form. A copy of a DBE's quote will serve as written confirmation that the DBE is participating in the contract.

If you do not submit the DBE Commitment form within the specified time, the Agency will find your bid nonresponsive.

b. Good Faith Efforts Submittal

If you have not met the DBE goal, complete and submit the DBE Information - Good Faith Efforts, Exhibit 15-G, form with the bid showing that you made adequate good faith efforts to meet the goal. Only good faith efforts directed towards obtaining participation by DBEs will be considered. If good faith efforts documentation is not submitted with the bid, it must be received by the Agency no later than 4:00 p.m. on the 4th business day after bid opening.

If your DBE Commitment form shows that you have met the DBE goal or if you are required to submit the DBE Commitment form, you must also submit good faith efforts documentation within the specified time to protect your eligibility for award of the contract in the event the Agency finds that the DBE goal has not been met.

Good faith efforts documentation must include the following information and supporting documents, as necessary:

1. Items of work you have made available to DBE firms. Identify those items of work you might otherwise perform with your own forces and those items that have been broken down into economically feasible units to facilitate DBE participation. For each item listed, show the dollar value and percentage of the total contract. It is your responsibility to demonstrate that sufficient work to meet the goal was made available to DBE firms.
2. Names of certified DBEs and dates on which they were solicited to bid on the project. Include the items of work offered. Describe the methods used for following up initial solicitations to determine with certainty if the DBEs were interested, and the dates of the follow-up. Attach supporting documents such as copies of letters, memos, facsimiles sent, telephone logs, telephone billing statements, and other evidence of solicitation. You are reminded to solicit certified DBEs through all reasonable and available means and provide sufficient time to allow DBEs to respond.
3. Name of selected firm and its status as a DBE for each item of work made available. Include name, address, and telephone number of each DBE that provided a quote and their price quote. If the firm selected for the item is not a DBE, provide the reasons for the selection.
4. Name and date of each publication in which you requested DBE participation for the project. Attach copies of the published advertisements.
5. Names of agencies and dates on which they were contacted to provide assistance in contacting, recruiting, and using DBE firms. If the agencies were contacted in writing, provide copies of supporting documents.
 6. List of efforts made to provide interested DBEs with adequate information about the plans, specifications, and requirements of the contract to assist them in responding to a solicitation. If you have provided information, identify the name of the DBE assisted, the nature of the information provided, and date of contact. Provide copies of supporting documents, as appropriate.
 7. List of efforts made to assist interested DBEs in obtaining bonding, lines of credit, insurance, necessary equipment, supplies, and materials, excluding supplies and equipment that the DBE subcontractor purchases or leases from the prime contractor or its affiliate. If such assistance is provided by you, identify the name of the DBE assisted, nature of the assistance offered, and date assistance was provided. Provide copies of supporting documents, as appropriate.
8. Any additional data to support demonstration of good faith efforts.

The Agency may consider DBE commitments of the 2nd and 3rd bidders when determining whether the low bidder made good faith efforts to meet the DBE goal.

c. Exhibit 15-G - Local Agency Bidder DBE Information (Construction Contracts)

Complete and sign Exhibit 15-G *Local Agency Bidder DBE Commitment (Construction Contracts)* included in the contract documents regardless of whether DBE participation is reported.

Provide written confirmation from each DBE that the DBE is participating in the Contract. A copy of a DBE's quote serves as written confirmation. If a DBE is participating as a joint venture partner, the Agency encourages you to submit a copy of the joint venture agreement.)

d. Subcontractor and Disadvantaged Business Enterprise Records

Use each DBE subcontractor as listed on Exhibit 12-B Bidder's List of Subcontractors (*DBE and Non- DBE*) and Exhibit 15-G *Local Agency Bidder DBE Commitment (Construction Contracts)* form unless you receive authorization for a substitution.

The Agency requests the Contractor to:

1. Notify the Construction Manager of any changes to its anticipated DBE participation
2. Provide this notification before starting the affected work
3. Maintain records including:
 - Name and business address of each 1st-tier subcontractor
 - Name and business address of each DBE subcontractor, DBE vendor, and DBE trucking company, regardless of tier
 - Date of payment and total amount paid to each business

If you are a DBE contractor, include the date of work performed by your own forces and the corresponding value of the work.

Before the 15th of each month, submit a Monthly DBE Trucking Verification form.

If a DBE is decertified before completing its work, the DBE must notify you in writing of the decertification date. If a business becomes a certified DBE before completing its work, the business must notify you in writing of the certification date. Submit the notifications. On work completion, complete a Disadvantaged Business Enterprises (DBE) Certification Status Change, Exhibit 17-O, form. Submit the form within 30 days of contract acceptance.

Upon work completion, complete Exhibit 17-F *Final Report – Utilization of Disadvantaged Business Enterprises (DBE), First-Tier Subcontractors*. Submit it within 90 days of contract acceptance. The Agency will withhold \$10,000 until the form is submitted. The Agency releases the withhold upon submission of the completed form.

e. Performance of Disadvantaged Business Enterprises

DBEs must perform work or supply materials as listed in the Exhibit 15-G *Local Agency Bidder DBE Commitment (Construction Contracts)* form, included in the Bid.

Do not terminate or substitute a listed DBE for convenience and perform the work with your own forces or obtain materials from other sources without authorization from the Agency.

The Agency authorizes a request to use other forces or sources of materials if it shows any of the following justifications:

1. Listed DBE fails or refuses to execute a written contract based on plans and specifications for the project.
2. You stipulated that a bond is a condition of executing the subcontract and the listed DBE fails to meet your bond requirements.
3. Work requires a contractor's license and listed DBE does not have a valid license under Contractors License Law.
4. Listed DBE fails or refuses to perform the work or furnish the listed materials.
5. Listed DBE's work is unsatisfactory and not in compliance with the contract.
6. Listed DBE is ineligible to work on the project because of suspension or debarment.
7. Listed DBE becomes bankrupt or insolvent.
8. Listed DBE voluntarily withdraws with written notice from the Contract
9. Listed DBE is ineligible to receive credit for the type of work required.

10. Listed DBE owner dies or becomes disabled resulting in the inability to perform the work on the Contract.
11. Agency determines other documented good cause.

Notify the original DBE of your intent to use other forces or material sources and provide the reasons. Provide the DBE with 5 days to respond to your notice and advise you and the Agency of the reasons why the use of other forces or sources of materials should not occur. Your request to use other forces or material sources must include:

1. One or more of the reasons listed in the preceding paragraph
2. Notices from you to the DBE regarding the request
3. Notices from the DBEs to you regarding the request

If a listed DBE is terminated or substituted, you must make good faith efforts to find another DBE to substitute for the original DBE. The substitute DBE must perform at least the same amount of work as the original DBE under the contract to the extent needed to meet the DBE goal.

The substitute DBE must be certified as a DBE at the time of request for substitution.

Unless the Agency authorizes (1) a request to use other forces or sources of materials or (2) a good faith effort for a substitution of a terminated DBE, the Agency does not pay for work listed on the Exhibit 15-G *Local Agency Bidder DBE Commitment (Construction Contracts)* form unless it is performed or supplied by the listed DBE or an authorized substitute.

REQUIRED CONTRACT PROVISIONS - FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract

Funds for Lobbying ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic

and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining

agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wages contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and

social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the

Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in

this term if the prime contractor meets all of the following conditions:

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and

Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers to any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in

addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower

Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

FEMALES AND MINORITY GOALS

To comply with Section II, "Nondiscrimination," of "Required Contract Provisions Federal-Aid Construction Contracts," the following are goals for female and minority utilization goals for Federal-aid construction contracts and subcontracts that exceed \$10,000:

The nationwide goal for female utilization is 6.9 percent.

The goals for minority utilization [45 Fed Reg 65984 (10/3/1980)] are as follows:

MINORITY UTILIZATION GOALS

Economic Area		Goal (Percent)
174	Redding CA: Non-SMSA (Standard Metropolitan Statistical Area) Counties: CA Lassen; CA Modoc; CA Plumas; CA Shasta; CA Siskiyou; CA Tehama	6.8
175	Eureka, CA Non-SMSA Counties: CA Del Norte; CA Humboldt; CA Trinity	6.6
176	San Francisco-Oakland-San Jose, CA: SMSA Counties: 7120 Salinas-Seaside-Monterey, CA	28.9
	CA Monterey	25.6
	7360 San Francisco-Oakland CA Alameda; CA Contra Costa; CA Marin; CA San Francisco; CA San	19.6
	7400 San Jose, CA CA Santa Clara, CA	14.9
	7485 Santa Cruz, CA Santa Cruz	9.1
	7500 Santa Rosa CA Sonoma	17.1
	8720 Vallejo-Fairfield-Napa, CA CA Napa; CA Solano Non-SMSA Counties: CA Lake; CA Mendocino; CA San Benito	23.2
177	Sacramento, CA: SMSA Counties: 6920 Sacramento, CA CA Placer; CA Sacramento; CA Yolo	16.1
	Non-SMSA Counties CA Butte; CA Colusa; CA El Dorado; CA Glenn; CA Nevada; CA Sierra; Sutter; CA Yuba	14.3

178	Stockton-Modesto, CA: SMSA Counties: 5170 Modesto, CACA Stanislaus	12.3
	8120 Stockton, CACA San Joaquin	24.3
	Non-SMSA Counties CA Alpine; CA Amador; CA Calaveras; CA Mariposa; CA Merced; CA Tuolumne	19.8
179	Fresno-Bakersfield, CASMSA Counties: 0680 Bakersfield, CACA Kern	19.1
	2840 Fresno, CACA Fresno	26.1
	Non-SMSA Counties: CA Kings; CA Madera; CA Tulare	23.6
180	Los Angeles, CA: SMSA Counties: 0360 Anaheim-Santa Ana-Garden Grove, CACA Orange	11.9
	4480 Los Angeles-Long Beach, CACA Los Angeles	28.3
	6000 Oxnard-Simi Valley-Ventura, CACA Ventura	21.5
	6780 Riverside-San Bernardino-Ontario, CA CA Riverside; CA San Bernardino	19.0
	7480 Santa Barbara-Santa Maria-Lompoc, CACA Santa Barbara	19.7
	Non-SMSA Counties CA Inyo; CA Mono; CA San Luis Obispo	24.6
181	San Diego, CA: SMSA Counties 7320 San Diego, CACA San Diego	16.9
	Non-SMSA CountiesCA Imperial	18.2

For each July during which work is performed under the contract, you and each nonmaterial-supplier subcontractor with a subcontract of \$10,000 or more must complete Form FHWA PR-1391 (Appendix C to 23 CFR 230). Submit the forms by August 15.

TITLE VI

FEMALES AND MINORITY GOALS

During the performance of this Agreement, the contractor, for itself, its assignees and successors in interest (hereinafter collectively referred to as Contractor) agrees as follows:

- (1) Compliance with Regulations: CONTRACTOR shall comply with the regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the REGULATIONS), which are herein incorporated by reference and made a part of this agreement.
- (2) Nondiscrimination: CONTRACTOR, with regard to the work performed by it during the AGREEMENT, shall not discriminate on the grounds of race, color, sex, national origin, religion, age, or disability in the selection and retention of sub-applicants, including procurements of materials and leases of equipment. CONTRACTOR shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the agreement covers a program set forth in Appendix B of the Regulations.
- (3) Solicitations for Sub-agreements, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by CONTRACTOR for work to be performed under a Sub-agreement, including procurements of materials or leases of equipment, each potential sub-applicant or supplier shall be notified by CONTRACTOR of the CONTRACTOR'S obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- (4) Information and Reports: CONTRACTOR shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the California Department of Transportation or FHWA to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of CONTRACTOR is in the exclusive possession of another who fails or refuses to furnish this information, CONTRACTOR shall so certify to the California Department of Transportation or the FHWA as appropriate, and shall set forth what efforts CONTRACTOR has made to obtain the information.
- (5) Sanctions for Noncompliance: In the event of CONTRACTOR's noncompliance with the nondiscrimination provisions of this agreement, the California Department of Transportation shall impose such agreement sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
 - (a) withholding of payments to CONTRACTOR under the Agreement within a reasonable period of time, not to exceed 90 days; and/or
 - (b) cancellation, termination or suspension of the Agreement, in whole or in part.
- (6) Incorporation of Provisions: CONTRACTOR shall include the provisions of paragraphs (1) through (6) in every sub-agreement, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

CONTRACTOR shall take such action with respect to any sub-agreement or procurement as the California Department of Transportation or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance, provided, however, that, in the event CONTRACTOR becomes involved in, or is threatened with, litigation with a sub-applicant or supplier as a result of such direction, CONTRACTOR may request the California Department of Transportation enter into such litigation to protect the interests of the State, and, in addition, CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States

USE OF THE UNITED STATES – FLAG VESSELS

The CONTRACTOR agrees-

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.
3. To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

BID PROPOSAL DOCUMENTS

CITY OF IMPERIAL

BID PROPOSAL

For

AHSC-ARPA/HWY 86 BEAUTIFICATION

PHASE 1 PROJECT

BID NO. 2024-07

TO CITY OF IMPERIAL, as CITY:

In accordance with CITY's "Notice Inviting Sealed Bids", the undersigned BIDDER hereby proposes to furnish all materials, equipment, tools, labor, and incidentals required for the above stated project as set forth in the Contract Documents, and to perform all work in the manner and time prescribed.

BIDDER declares that this proposal is based upon careful examination of the work site, Plans, Specifications, Instructions to Bidders, and Contract Documents. If this proposal is accepted for award, BIDDER agrees to enter into a contract with the CITY at the unit and/or lump sum prices set forth in the following Proposal Bid Sheet. BIDDER understands that failure to enter into a contract in the manner and time prescribed will result in forfeiture to the CITY of the Bid Bond accompanying this proposal.

BIDDER understands that a bid is required for the entire work that the estimated quantities set forth in the Proposal Bid Sheet are solely for the purpose of comparing bids, and that final compensation under the contract will be based upon the actual quantities of work satisfactorily completed. It is agreed that the unit and/or lump sum prices bid include all appurtenant expenses, taxes, royalties, and fees. In the case of discrepancies in the amounts bid, unit prices shall govern over extended amounts.

BIDDER agrees and acknowledges that he is aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for workman's compensation or to undertake self-insurance in accordance with the provisions of that code, and that the BIDDER will comply with such provisions of that code before commencing the performance of this Contract if awarded it.

BIDDER certifies that in all previous contracts or subcontracts, all reports which may have been due under the requirements of any agency, State, or Federal equal employment opportunity orders have been satisfactorily filed, and that no such reports are currently outstanding.

BIDDER declares that the only persons or parties interested in this proposal as principals are those named herein; that no officer, agent, or employee of the CITY is personally interested, directly or indirectly, in this proposal; that this proposal is made without connection to any other individual, firm, or corporation making a bid for the same work; and that this proposal is in all respects fair and without collusion or fraud.

BIDDER certifies that affirmative action has been taken to seek out and consider disadvantaged business enterprises for those portions of the work to be subcontracted, and that such affirmative actions have been carefully documented, that said documentation is open to inspection, and that said affirmative action will remain in effect for the life of any contract awarded hereunder. Furthermore, BIDDER certifies that affirmative action will be taken to meet all equal employment opportunity requirements of the contract documents.

DATED: _____, 2024

BIDDER: _____

BIDDER'S ADDRESS:

BY: _____

TITLE: _____

TELEPHONE #: _____

FAX #: _____

BIDDER'S INFORMATION

BIDDER certifies that the following information is true and correct:

Bidder's Name _____

Business Address _____

Telephone _____

State Contractor's License No. and Class _____

Original Date Issued _____ Expiration Date _____

The following are the names, titles, addresses, and phone numbers of all individuals, firm members, partners, joint ventures, and/or corporate officers having a principal interest in this proposal:

The dates of any voluntary or involuntary bankruptcy judgments against any principal having an interest in this proposal are as follows:

All current and prior DBA's, alias, and/or fictitious business names for any principal having an interest in this proposal are as follows:

CONTRACTOR'S LICENSING STATEMENT

The undersigned is licensed in accordance with the laws of the State of California providing for the registration of Contractors.

Contractor's License Number: _____

Name of Individual Contractor (Print or type): _____

Signature of Owner: _____

Business Address: _____

Or

Name of Firm: _____

Business Address: _____

Name: _____ Title: _____

Address: _____

Or

Name of Corporation: _____

Corporation Address: _____

Corporation organized under the laws of the State of _____

Signature of President of Corporation

Signature of Secretary of Corporation

LIST OF SUBCONTRACTORS

BIDDER proposes to subcontract certain portions of the work, and to procure materials and equipment from suppliers and vendors as follows:

Name Under Which Subcontractor Is Licensed	Specific License of No.	Address Office Mill/Shop	Percent of Total Contract	Description of Subcontract

REFERENCES

The following are the names, addresses, and phone numbers for three public agencies for which BIDDER has performed similar work within the past two years:

DESIGNATION OF SURETIES

The following are the names, addresses, and phone numbers for all brokers and sureties from whom BIDDER intends to procure insurance and bonds:

CITY OF IMPERIAL

BID BOND

AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1 PROJECT

BID NO. 2024-07

KNOW ALL MEN BY THESE PRESENTS that _____

as BIDDER, and _____

as SURETY, are held and firmly bound unto the CITY OF IMPERIAL, as CITY, in the penal sum of _____ dollars (\$ _____), which is ten percent (10%) of the total amount bid by BIDDER to the CITY for the above stated project, for the payment of which sum, BIDDER and SURETY agree to be bound, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that, whereas BIDDER is about to submit a bid to CITY for the above stated project, if said bid is rejected, or if said bid is accepted and a contract is awarded and entered into by BIDDER in the manner and time specified, then this obligation shall be null and void, otherwise it shall remain in full force and effect in favor of AGENCY.

WITNESS our hands this ____ day of _____, 2024.

(seal)

CONTRACTOR (CORPORATION) – TYPE

By: _____
President

By _____
Secretary/Treasurer

NOTE: SIGNATURE OF CORPORATE OFFICIALS MUST BE NOTARIZED.

Subscribed and sworn to before me
this _____ day of _____, 2024.

Notary Public _____

SURETY'S NAME-TYPE

Mailing Address _____

By: _____
Name

Title _____

NOTE: SIGNATURE OF SURETY MUST BE NOTARIZED.

Subscribed and sworn to before me
this _____ day of _____, 2024.

Notary Public _____

(seal)

NON-COLLUSION AFFIDAVIT

STATE OF CALIFORNIA)
) SS
COUNTY OF _____)

_____ being first duly sworn deposes and says that he is _____ (sole owner, a partner, president, etc.) of _____ the party making the foregoing bid; that such bid is not made in the interest of or behalf of any undisclosed person, partnership, company, association, organization or corporation, that such bid is genuine and not collusive or a sham, that said bidder has not directly or indirectly induced or solicited any other bidder to put in a sham bid, or that anyone shall refrain from bidding, that said bidder has not in any manner, directly or indirectly sought by agreements, communication or conference with anyone to fix the bid price of said bidder or of any other bidder, or to fix the overhead, profit, or cost element of such bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract or anyone interested in the proposed contract; that all statements contained in such bid are true, and further, that said bidder has not, directly or indirectly submitted his 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 in connection, organization, bid depository, or to any member or persons as have a partnership or other financial interest with said bidder in his general business.

Signed: _____

Title: _____

Subscribed and sworn to before me
this _____ day of _____, 2024.

Notary Public _____

EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION

EXHIBIT 12-E

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

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

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

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

DEBARMENT AND SUSPENSION CERTIFICATION
EXHIBIT 12-E

TITLE 49, CODE OF FEDERAL REGULATIONS, PART 29

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

- Is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency;
- Has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past 3 years;
- Does not have a proposed debarment pending; and
- Has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

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

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

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

NAME OF CONTRACTOR _____

ADDRESS: _____

SIGNATURE: _____

DATE: _____

**NON-LOBBYING CERTIFICATION FOR FEDERAL
AID CONTRACTS - EXHIBIT 12-E**

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

NAME OF CONTRACTOR _____

ADDRESS: _____

SIGNATURE: _____

DATE: _____

DISCLOSURE OF LOBBYING ACTIVITIES

COMPLETE THIS FORM TO DISCLOSE LOBBYING ACTIVITIES PURSUANT TO 31 U.S.C. 1352

<p>1. Type of Federal Action:</p> <p><input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance</p>	<p>2. Status of Federal Action:</p> <p><input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award</p>	<p>3. Report Type:</p> <p><input type="checkbox"/> a. initial <input type="checkbox"/> b. material change</p> <p style="text-align: right;">For Material Change Only:</p> <p style="text-align: right;">year _____ quarter _____ date of last report _____</p>
<p>4. Name and Address of Reporting Entity</p> <p><input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known</p> <p style="text-align: center;">Congressional District, if known</p>	<p>5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:</p> <p style="text-align: center;">Congressional District, if known</p>	
<p>6. Federal Department/Agency:</p>	<p>7. Federal Program Name/Description:</p> <p style="text-align: right;">CFDA Number, if applicable _____</p>	
<p>8. Federal Action Number, if known:</p>	<p>9. Award Amount, if known:</p>	
<p>10. a. Name and Address of Lobby Entity (If individual, last name, first name, MI)</p>	<p>b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI)</p>	
(attach Continuation Sheet(s) if necessary)		
<p>11. Amount of Payment (check all that apply)</p> <p>\$ _____ <input type="checkbox"/> actual <input type="checkbox"/> planned</p>	<p>13. Type of Payment (check all that apply)</p> <p><input type="checkbox"/> a. retainer <input type="checkbox"/> b. one-time fee <input type="checkbox"/> c. commission <input type="checkbox"/> d. contingent fee <input type="checkbox"/> e. deferred <input type="checkbox"/> f. other, specify _____</p>	
<p>12. Form of Payment (check all that apply):</p> <p><input type="checkbox"/> a. cash <input type="checkbox"/> b. in-kind; specify: nature _____ value _____</p>		
<p>14. Brief Description of Services Performed or to be performed and Date(s) of Service, including officer(s), employee(s), or member(s) contacted, for Payment Indicated in Item 11:</p> <p style="text-align: center;">(attach Continuation Sheet(s) if necessary)</p>		
<p>15. Continuation Sheet(s) attached: Yes No</p>		
<p>16. Information requested through this form is authorized by Title 31 U.S.C. Section 1352. This disclosure of lobbying reliance was placed by the tier above when his transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to Congress semiannually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.</p>		
		<p>Signature: _____</p> <p>Print Name: _____</p> <p>Title: _____</p> <p>Telephone No.: _____ Date: _____</p>

Federal Use Only:

Authorized for Local Reproduction
Standard Form - LLL

Standard Form LLL Rev. 09-12-97

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime federal recipient, at the initiation or receipt of covered federal action or a material change to previous filing pursuant to title 31 U.S.C. Section 1352. The filing of a form is required for such payment or agreement to make payment to lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress an officer or employee of Congress or an employee of a Member of Congress in connection with a covered federal action. Attach a continuation sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered federal action for which lobbying activity is and/or has been secured to influence, the outcome of a covered federal action.
2. Identify the status of the covered federal action.
3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last, previously submitted report by this reporting entity for this covered federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District if known. Check the appropriate classification of the reporting entity that designates if it is or expects to be a prime or subaward recipient. Identify the tier of the sub awardee, e.g., the first sub awardee of the prime is the first tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in Item 4 checks "Sub awardee" then enter the full name, address, city, State and zip code of the prime federal recipient. Include Congressional District, if known.
6. Enter the name of the federal agency making the award or loan commitment. Include at least one organization level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the federal program name or description for the covered federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans and loan commitments.
8. Enter the most appropriate federal identifying number available for the federal action identification in item 1 (e.g., Request for Proposal (RFP) number, Invitation for Bid (IFB) number, grant announcement number, the contract grant. or loan award number, the application/proposal control number assigned by the federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered federal action where there has been an award or loan commitment by the Federal agency, enter the federal amount of the award/loan commitments for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influenced the

covered federal action.

(b) Enter the full names of the individual(s) performing services and include full address if different from 10 (a). Enter Last Name, First Name and Middle Initial (MI).

11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide a specific and detailed description of the services that the lobbyist has performed or will be expected to perform and the date(s) of any services rendered. Include all preparatory and related activity not just time spent in actual contact with federal officials. Identify the federal officer(s) or employee(s) contacted or the officer(s) employee(s) or Member(s) of Congress that were contacted.
15. Check whether or not a continuation sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name title and telephone number.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.

CITY OF IMPERIAL

**AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1 PROJECT**

BID NO. 2024-07

**THIS FORM MUST BE FULLY COMPLETED AND INCLUDED WITH THE BID
DOCUMENTS OR THE BID SHALL BE NON-RESPONSIVE.**

DESIGNATION/CERTIFICATION OF ASPHALT-RUBBER BINDER APPLICATOR(S)
BIDDER proposes to have Asphalt-Rubber **BINDER** for **ARAM** (application) applied by:

Name/Address

This section shall be completed even if the bidder plans to apply Asphalt-Rubber binder with its own equipment and labor forces. Name above must be actual company applying Asphalt-Rubber binder on the roadway.

Bidder shall attach to this form copies of all required air pollution control district or air quality management district current final permit to operate (PTO) documents (not temporary, experimental, research, expired, and/or authority to construct (ATC)) which allow the operation of the specific equipment to be used to control emissions during the application of Asphalt-Rubber binder on the roadway (the Application). The Application, in a manner conforming with these projects specifications, has been indisputably determined to be in non-compliance with California air quality regulations limiting opacity of emissions, unless a permitted emission control device is used during the Application to directly remove emission occurring during the Application. It is for that device, which may be described as an air filter, custom air pollution control system, portable air pollution control, opacity control unit, emission control unit, consisting of collection hood and 3-stage oil mist filter system, or other similar description for which a copy of a current final PTO must be provided from the local air pollution control district or air quality management district.

If the bidder fails to fully complete this portion of the bid and provide the foregoing documentation, the bid is non-responsive and shall be rejected.

CERTIFICATION UNDER PENALTY OF PERJURY

I certify under penalty of perjury under the law of the State of California that I have read and understand the requirements contained in this form. I further certify that all information provided in response to this form is true and accurate to the best of my knowledge and belief.

Print Name, Title

Signature of Bidder

Date

**DESIGNATION/CERTIFICATION OF ASPHALT-RUBBER AND AGGREGATE
MEMBRANE CONTRACTOR AND/OR SUBCONTRACTOR(S).**

**THIS FORM MUST BE INCLUDED AND FULLY COMPLETED WITH THE BID OR
THE BID SHALL BE CONSIDERED NON-RESPONSIVE**

Bidder proposes to have the ARAM installed by:

(Insert name of contractor/sub-contractor above)

This section shall be completed even if the apparent low bidder plans to produce and install ARAM with its own forces. Name of contractor and/or subcontractor(s) shall be the actual company(ies) applying the binder and aggregate.

For any bid to be considered responsive, performance criteria must be demonstrated on five separate projects performed by the same contractor or subcontractor(s) designated above, and with equivalent aggregate and binder proposed for the ARAM in this bid. Five years shall have elapsed since completion of the ARAM surface installation on each project, and the projects shall be located in Southern California in areas or regions which have documented National Weather Service maximum air temperatures of above 105°F during June, July, August, and September for a minimum of 40 days on a three year average annual basis. To be considered a valid representative project, bidder must submit the name of the project, owner agency, agency representative's name and phone number, and a list of streets with limits totaling at least 1 mile (based on full width) in length for each project and the date the project was actually performed. A project will be considered a valid representative project if asphalt emulsion spray application was originally placed with or without an application of sand, within 15 calendar days of the application of ARAM. Any other cover coat or course on the ARAM will cause the ARAM to be considered invalid as a representative project. ARAM on all projects must show insignificant raveling (loss of rock) and insignificant flushing (binder migration to the surface) at the time of inspection between the bid date and the date of award of the current project by the Agency soliciting bids for this current project. Bidder shall verify any proposed representative projects prior to listing a subcontractor(s) with such projects, or the bid shall be considered non-responsive. If the Bidder cannot list in the space provided five projects that meet the criteria specified herein that were performed by the proposed ARAM contractor or subcontractor(s), the bid shall be considered non-responsive.

REPRESENTATIVE ARAM PROJECTS

**THIS FORM MUST BE INCLUDED AND
FULLY COMPLETED WITH THE BID
OR
THE BID SHALL BE CONSIDERED NON-RESPONSIVE**

Name of Project No.1: _____ Date Completed: _____

Agency _____ Agency Contact: _____

Phone: _____ Approx. Length of ARAM (Full Width): _____

Name of Project No.2: _____ Date Completed: _____

Agency _____ Agency Contact: _____

Phone: _____ Approx. Length of ARAM (Full Width): _____

Name of Project No.4: _____ Date Completed: _____

Agency _____ Agency Contact: _____

Phone: _____ Approx. Length of ARAM (Full Width): _____

Name of Project No.4: _____ Date Completed: _____

Agency _____ Agency Contact: _____

Phone: _____ Approx. Length of ARAM (Full Width): _____

Name of Project No.5: _____ Date Completed: _____

Agency _____ Agency Contact: _____

Phone: _____ Approx. Length of ARAM (Full Width): _____

Signature of Bidder

Title

Date

CITY OF IMPERIAL

PROPOSAL BID SHEET

Page 1 of 4

FOR
**AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1 PROJECT**

BID NO. 2024-07

ITEM	QUANTITY	UNIT	ITEM	UNIT COST	AMOUNT
1	1	LS	Mobilization/Demobilization	\$	\$
2	1	LS	Erosion Control	\$	\$
3	1	LS	Construction Staking	\$	\$
4	1	LS	Survey Monument Preservation	\$	\$
5	1	LS	Temporary Traffic Control	\$	\$
6	1	LS	Utility Coordination	\$	\$
7	1	LS	Clearing and Grubbing	\$	\$
8	1,130	LF	Construct PCC Curb and Gutter per City of Imperial Standard Detail 400	\$	\$
9	1,225	LF	Construct PCC Barrier Curb per City of Imperial Standard Detail No 401	\$	\$
10	55	LF	Construct Type A3-6 Pin on Curb per Caltrans Standard Plan A87A	\$	\$
11	580	LF	Construct HMA Dike Type A per Caltrans Standard Plan A87B	\$	\$
12	20,700	SF	Construct PCC Sidewalk per City of Imperial Standard Detail 407-A	\$	\$
13	1	EA	Construct Type A PCC ADA Passageway per Caltrans Standard Plan A88B	\$	\$
14	1	EA	Construct Type B PCC ADA Passageway per Caltrans Standard Plan A88B	\$	\$
15	17	EA	Construct PCC ADA Curb Ramp (All Types)	\$	\$

PROPOSAL BID SHEET Page 2 of 4
BID NO. 2024-07

16	575	SF	Construct PCC Spandrel per City of Imperial Standard Detail 410	\$	\$
17	270	SF	Construct PCC Concrete Cross Gutter	\$	\$
18	1,550	SF	Construct PCC Median Infill	\$	\$
19	4,350	SF	Construct PCC Driveway (All Types)	\$	\$
20	4,720	TON	Construct Hot Mix Asphalt (Thickness Per Plan)	\$	\$
21	6,030	CY	Construct Class 2 Aggregate Base (Under HMA and PCC)	\$	\$
22	86,000	SF	1.5" Cold Mill	\$	\$
23	2,700	SY	Furnish and Install Paving Fabric	\$	\$
24	11,941	CY	Unclassified Excavation	\$	\$
25	1	EA	Construct Sidewalk Underdrain with Rip Rap Pad	\$	\$
26	305	LF	Furnish and Install 18" RCP Storm Drain, 1350-D	\$	\$
27	9	EA	Construct 18" Concrete Pipe Collar	\$	\$
28	9	EA	Construct Straight Headwall per Caltrans Standard Plan D89B	\$	\$
29	1	EA	Construct Type G-2 Inlet With Grate per Caltrans Standard Plan D73-B and D77-A	\$	\$
30	1	LS	Furnish and Install New Water Service (Lateral and Meter)	\$	\$
31	1	LS	Furnish and Install Signing and Marking	\$	\$
32	1	LS	Furnish and Install Rectangular Flashing Beacon (RRFB) Assembly System	\$	\$
33	1	LS	Furnish and Install Pedestrian Hybrid Beacon	\$	\$
34	1	LS	Furnish and Install Landscape and Irrigation	\$	\$

PROPOSAL BID SHEET Page 3 of 4
BID NO. 2024-07

35	23,157	SY	Place Type II Slurry Seal	\$	\$
				Total Bid Proposal:	\$

CITY OF IMPERIAL
PROPOSAL BID SHEET Page 4 of 4
FOR
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1 PROJECT

BID NO. 2024-07

NOTE 1: THE ESTIMATED QUANTITIES INDICATED ABOVE ARE APPROXIMATE. THE ENGINEER WILL NOT ASSUME RESPONSIBILITY FOR THE QUANTITIES ILLUSTRATED IN THE PROJECT PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE QUANTITIES.

NOTE 2: THE LOWEST RESPONSIVE BID WILL BE BASED ON THE LOWEST TOTAL BID PROPOSAL.

TOTAL AMOUNT OF BID PROPOSAL (NUMBERS) _____

TOTAL AMOUNT OF BID PROPOSAL (WORDS) _____

Note: The estimated quantities listed in the Proposal Bid Sheet(s) are supplied to give an indication of the general scope of the work, but the accuracy of these figures is not guaranteed, and the bidder shall make his own estimates from the drawings. In case of a variation between the unit price and the totals shown by the bidder, the unit price will be considered to be the bid.

Bidder's Name and Telephone Number

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**VERIFICATION OF COMPLIANCE WITH ECONOMIC SANCTIONS IN RESPONSE
TO RUSSIA’S ACTIONS IN UKRAINE**

Per California Executive Order N-6-22, the City of Imperial is required to assure that all contractors doing business with the City of Imperial are in compliance with economic sanctions imposed by the U.S. government in response to Russia’s actions in Ukraine, as well as sanctions imposed under state law, if any. Please execute this document to verify your current compliance with Executive Order N-6-22 and to ensure that this project will be in compliance with Executive Order N-6-22.

NOTICE: Having conducted a good faith review, I attest that the person/entity submitting this bid is in compliance with the economic sanctions imposed by the U.S. government in response to Russia’s actions in Ukraine, as well as sanctions imposed under state law, if any. Further, I attest that I am aware of Executive Order N-6-22 and agree monitor the project to ensure the project remains in compliance with Executive Order N-6-22.

BIDDER

Note that responses may be subject to disclosure under the California Public Records Act. Accordingly, it is within the discretion of the respondent to determine what information to provide. Additionally, please do not include any confidential information or disclosures that could pose security risks.

BID PROPOSAL

IN WITNESS WHEREOF, BIDDER executes and submits this bid proposal with the names, titles, hands, and seals of all forenamed principals this _____ day of _____, 2024.

Bidder: _____

By: _____

Title: _____

Subscribed and sworn to this _____ day of _____, 2024.

NOTARY PUBLIC _____

AGENCY acknowledges this proposal was received and opened at the time and in the place specified, and that it was accompanied by the required guarantee in the amount of ten percent (10%) of the total bid.

By: _____

Title: _____

CONTRACT DOCUMENTS

CITY OF IMPERIAL

CONSTRUCTION SERVICES AGREEMENT

This CONSTRUCTION SERVICES AGREEMENT ("Agreement"), is made and effective _____, by and between City of Imperial, a municipal corporation ("AGENCY"), and [insert contractor name], a [sole proprietorship, partnership, limited liability partnership, corporation] ("CONTRACTOR"). In consideration of the mutual covenants and conditions set forth herein, the parties agree as follows:

I. SCOPE OF WORK

The CONTRACTOR shall perform within the time set forth in this Agreement and shall furnishing all materials, equipment, tools, labor and incidentals as required by the Plans, Specifications and Contract Documents. The work to be performed includes, but not limited to the following activities for this contract:

Removal of existing asphalt in poor conditions, grind and overlay in parts of streets as needed, installation of ¾" asphalt leveling course, installation of asphalt-rubber aggregate membrane (ARAM), installation of gap-graded asphalt rubber hot mix (ARHM), slurry seal, removal and replacement of fire hydrants, removal and replacement of sanitary sewer manholes, installation of Storm Drain System (12" Dia. ADS HP Storm Drain Pipe, PCC Junction Boxes & PCC Catch Basins), utility adjustments, removal and replacement of concrete curb & gutter, sidewalks and ADA ramps, installation of thermoplastic striping. Includes road traffic control around the construction zones. All work to be completed within existing City of Imperial public right of way. The grindings derived from the construction activity listed under Item "6" of the Proposal Bid Sheet, shall be disposed and "stockpiled" at the following location: City Shop & Wastewater Treatment Plant located at 701 E. 14th Street, Imperial, CA 92251.

The scope of work includes, prior to the start of construction, the coordination between the City of Imperial and the Contractor.

By entering into this Agreement, CONTRACTOR acknowledges that there may be other contractors on the site whose work will be coordinated with that of its own. CONTRACTOR expressly warrants and agrees that it will cooperate with other contractors and will do nothing to delay, hinder, or interfere with the work of other separate contractors, the AGENCY, the Construction Manager, the Architect, or utilities. CONTRACTOR also expressly agrees that, in the event its work is hindered, delayed, interfered with, or otherwise affected by a separate contractor, its sole remedy will be a direct action against the separate contractor. To the extent allowed by law, the CONTRACTOR will have no remedy, and hereby expressly waives any remedy against the AGENCY, the Construction Manager, or the Architect on account of delay, hindrance, interference or other events caused by a separate contractor.

II. TIME FOR PROJECT COMPLETION

All of CONTRACTOR's work on the Project shall be completed within durations established for the individual activities as set forth in the Project Construction Schedule. All work shall commence no later than ten (10) calendar days after receiving a written Notice to Proceed from the AGENCY or Construction Manager, if a Construction Manager is employed by AGENCY on the Project. CONTRACTOR shall refer to the

invitations for bids, and Project Plans and Specifications, all of which, as set forth below, are incorporated herein by reference, for contractual obligations regarding individual activity durations. The aggregate sum total work of all individual Prime Contractors to the AGENCY comprises the entire "Project" and shall be commenced and completed in conformance with the Project Construction Schedule.

The entire Project shall be completed within **Ninety (90) consecutive calendar days.**

III. THE CONTRACT SUM

The AGENCY shall pay to the CONTRACTOR for the performance of this Agreement, subject to any additions and deductions provided in the Project documents, the sum of _____ (\$____.00).

IV. PROGRESS PAYMENTS

Based upon Applications for Payment submitted to the Architect by the CONTRACTOR and Certificates for Payment issued by the Architect, the AGENCY shall make progress payments on account of the Contract Sum to the CONTRACTOR as provided in the General Conditions.

This Agreement is subject to the provisions of Article 1.7 (commencing at Section 20104.50) of Division 2, Part 3 of the Public Contract Code regarding prompt payment of contractors by local governments. Article 1.7 mandates certain procedures for the payment of undisputed and properly submitted payment requests within 30 days after receipt, for the review of payment requests, for notice to Contractor of improper payment requests, and provides for the payment of interest on progress payment requests which are not timely made in accordance with that Article. This AGREEMENT hereby incorporates the provisions of Article 1.7 as though fully set forth herein.]

V. RETENTION OF SECURITIES

Public Contract Code Section 22300 permits the substitution of securities for any monies withheld by a public agency to ensure performance under a contract, at the request and expense of the CONTRACTOR.

VI. INDEMNITY, DEFENSE AND HOLD HARMLESS AGREEMENT

CONTRACTOR shall indemnify, defend with legal counsel approved by AGENCY, and hold harmless AGENCY, its officers, officials, employees and volunteers from and against all liability, loss, damage, expense, cost (including without limitation reasonable legal counsel fees, expert fees and all other costs and fees of litigation) of every nature arising out of or in connection with CONTRACTOR's negligence, recklessness or willful misconduct in the performance of work hereunder or its failure to comply with any of its obligations contained in this Agreement, except such loss or damage which is caused by the sole or active negligence or willful misconduct of the AGENCY. Should conflict of interest principles preclude a single legal counsel from representing both AGENCY and CONTRACTOR, or should AGENCY otherwise find CONTRACTOR's legal counsel unacceptable, then CONTRACTOR shall reimburse the AGENCY its costs of defense, including without limitation reasonable legal counsel fees, expert fees and all other costs

and fees of litigation. The CONTRACTOR shall promptly pay any final judgment rendered against the AGENCY (and its officers, officials, employees and volunteers) with respect to claims determined by a trier of fact to have been the result of the CONTRACTOR's negligent, reckless or wrongful performance. It is expressly understood and agreed that the foregoing provisions are intended to be as broad and inclusive as is permitted by the law of the State of California and will survive termination of this Agreement.

CONTRACTOR obligations under this section apply regardless of whether such claim, charge, damage, demand, action, proceeding, loss, stop notice, cost, expense, judgment, civil fine or penalty, or liability was caused in part or contributed to by an Indemnitee. However, without affecting the rights of AGENCY under any provision of this agreement, CONTRACTOR shall not be required to indemnify and hold harmless AGENCY for liability attributable to the active negligence of AGENCY, provided such active negligence is determined by agreement between the parties or by the findings of a court of competent jurisdiction. In instances where AGENCY is shown to have been actively negligent and where AGENCY'S active negligence accounts for only a percentage of the liability involved, the obligation of CONTRACTOR will be for that entire portion or percentage of liability not attributable to the active negligence of AGENCY.

VII. PREVAILING WAGES

- A. In accordance with the provisions of Labor Code §§1770 to 1781, the City Council of The City of Imperial has adopted the latest publication of the General Prevailing Wage Rates entitled, "State of California, Department of Transportation, Equipment Rental Rates and General Prevailing Wage Rates."
- B. The following Labor Code sections are hereby referenced and made a part of this Agreement:
 - 1. Section 1775 - Penalty for Failure to Comply with Prevailing Wage Rates.
 - 2. Section 1777.4 - Apprenticeship Requirements.
 - 3. Section 1777.5 - Apprenticeship Requirements.
 - 4. Section 1813 - Penalty for Failure to Pay Overtime.
 - 5. Sections 1810 and 1811 - Working Hour Restrictions.
 - 6. Section 1775 - Payroll Records.
 - 7. Section 1773.8 - Travel and Subsistence Pay.

VIII. RECORD AUDIT

In accordance with Government Code, Section 8546.7, records of both the AGENCY and the CONTRACTOR shall be subject to examination and audit by the Auditor General for a period of three (3) years after final payment.

IX. FINAL PAYMENT

Final payment, constituting the entire unpaid balance of the Agreement Sum, shall be paid by the AGENCY to the CONTRACTOR no sooner than thirty-five (35) days after a Notice of Completion has been recorded, unless otherwise stipulated in the Notice of Completion, provided the work has then been completed, the Agreement fully performed, and a final Certificate for Payment has been issued by the Architect.

X. CONTRACTOR'S FAILURE TO PROCURE COMPLETION OF PROJECT

In the event CONTRACTOR fails to furnish tools, equipment, or labor in the necessary quantity or quality, or fails to prosecute the work or any part thereof contemplated by this Agreement in a diligent and workmanlike manner, and if the CONTRACTOR for a period of three (3) calendar days after receipt of written demand from AGENCY or its designated representative to do so, fails to furnish tools, equipment, or labor in the necessary quantity or quality, and to prosecute its work and all parts thereof in a diligent and workmanlike manner, or after commencing to do so within said three (3) calendar days, fails to continue to do so; then the AGENCY may exclude the CONTRACTOR from the premises, or any portion thereof, and take possession of said premises or any portion thereof, together with all material and equipment thereon, and may complete the work contemplated by this Agreement or any portion of said work, either by furnishing the tools, equipment, labor or material necessary, or by letting the unfinished portion of said work, or the portion taken over by the AGENCY to another contractor or by a combination of such methods. In any event, the procuring of the completion of said work, or the portion thereof taken over by the AGENCY, shall be a charge against the CONTRACTOR, and may be deducted from any money due or becoming due to CONTRACTOR from the AGENCY, or the CONTRACTOR shall pay the AGENCY the amount of said charge, or the portion thereof unsatisfied. The sureties provided for under this Agreement shall become liable for payment should CONTRACTOR fail to pay in full any said cost incurred by the AGENCY.

XI. INSURANCE

Prior to the beginning of and throughout the duration of the Work, CONTRACTOR and its subcontractors shall maintain insurance in conformance with the requirements set forth below. CONTRACTOR will use existing coverage to comply with these requirements. If that existing coverage does not meet the requirements set forth herein, CONTRACTOR agrees to amend, supplement or endorse the existing coverage to do so.

CONTRACTOR acknowledges that the insurance coverage and policy limits set forth in this section constitute the minimum amount of coverage required. Any insurance proceeds available to CONTRACTOR or its subcontractors in excess of the limits and coverage identified in this Agreement and which is applicable to a given loss, claim or demand, will be equally available to AGENCY.

A. CONTRACTOR shall provide the following types and amounts of insurance:

Without limiting CONTRACTOR's indemnification of AGENCY, and prior to commencement of Work, CONTRACTOR shall obtain, provide and maintain at its own expense during the term of this Agreement, policies of insurance of the type and amounts described below and, in a form, satisfactory to AGENCY.

General liability insurance. CONTRACTOR shall maintain commercial general liability insurance with coverage at least as broad as Insurance Services Office form CG 00 01, in an amount not less than \$1,000,000 per occurrence, \$2,000,000 general aggregate, for bodily injury, personal injury, and property damage, and \$2,000,000 completed operations aggregate. The policy must include contractual liability that has not been amended. Any endorsement restricting standard ISO “insured contract” language will not be accepted.

Automobile liability insurance. CONTRACTOR shall maintain automobile insurance at least as broad as Insurance Services Office form CA 00 01 covering bodily injury and property damage for all activities of the CONTRACTOR arising out of or in connection with Work to be performed under this Agreement, including coverage for any owned, hired, non-owned or rented vehicles, in an amount not less than \$1,000,000 combined single limit for each accident.

Umbrella or excess liability insurance. [Optional depending on limits required] CONTRACTOR shall obtain and maintain an umbrella or excess liability insurance that will provide bodily injury, personal injury and property damage liability coverage at least as broad as the primary coverages set forth above, including commercial general liability, automobile liability, and employer’s liability. Such policy or policies shall include the following terms and conditions:

- A drop-down feature requiring the policy to respond in the event that any primary insurance that would otherwise have applied proves to be uncollectable in whole or in part for any reason;
- Pay on behalf of wording as opposed to reimbursement;
- Concurrency of effective dates with primary policies;
- Policies shall “follow form” to the underlying primary policies; and
- Insureds under primary policies shall also be insureds under the umbrella or excess policies.

Workers’ compensation insurance. CONTRACTOR shall maintain Workers’ Compensation Insurance (Statutory Limits) and Employer’s Liability Insurance (with limits of at least \$1,000,000) for CONTRACTOR’s employees in accordance with the laws of the State of California, Section 3700 of the Labor Code. In addition, CONTRACTOR shall require each subcontractor to similarly maintain Workers’ Compensation Insurance and Employer’s Liability Insurance in accordance with the laws of the State of California, Section 3700 for all of the subcontractor’s employees.

CONTRACTOR shall submit to AGENCY, along with the certificate of insurance, a Waiver of Subrogation endorsement in favor of AGENCY, its officers, agents, employees and volunteers.

Pollution liability insurance. Environmental Impairment Liability Insurance shall be written on a CONTRACTOR’s Pollution Liability form or other form acceptable to AGENCY providing coverage for liability arising out of sudden, accidental and gradual pollution and remediation. The policy limit shall be no less than \$1,000,000 dollars per claim and in the aggregate. All activities contemplated in this Agreement shall be specifically scheduled on the policy as “covered operations.” The policy shall provide

coverage for the hauling of waste from the project site to the final disposal location, including non-owned disposal sites.

Builder's risk insurance. Upon commencement of construction and with approval of AGENCY, CONTRACTOR shall obtain and maintain builder's risk insurance for the entire duration of the Project until only the AGENCY has an insurable interest. The Builder's Risk coverage shall include the coverages as specified below.

The named insureds shall be CONTRACTOR and AGENCY, including its officers, officials, employees, and agents. All Subcontractors (excluding those solely responsible for design Work) of any tier and suppliers shall be included as additional insureds as their interests may appear. CONTRACTOR shall not be required to maintain property insurance for any portion of the Project following transfer of control thereof to AGENCY. The policy shall contain a provision that all proceeds from the builder's risk policy shall be made payable to the AGENCY. The AGENCY will act as a fiduciary for all other interests in the Project.

Policy shall be provided for replacement value on an "all risk" basis for the completed value of the project. There shall be no coinsurance penalty or provisional limit provision in any such policy. Policy must include: (1) coverage for any ensuing loss from faulty workmanship, Nonconforming Work, omission or deficiency in design or specifications; (2) coverage against machinery accidents and operational testing; (3) coverage for removal of debris, and insuring the buildings, structures, machinery, equipment, materials, facilities, fixtures and all other properties constituting a part of the Project; (4) Ordinance or law coverage for contingent rebuilding, demolition, and increased costs of construction; (5) transit coverage (unless insured by the supplier or receiving contractor), with sub-limits sufficient to insure the full replacement value of any key equipment item; (6) Ocean marine cargo coverage insuring any Project materials or supplies, if applicable; (7) coverage with sub-limits sufficient to insure the full replacement value of any property or equipment stored either on or off the Site or any staging area. Such insurance shall be on a form acceptable to Agency to ensure adequacy of terms and sublimits and shall be submitted to the Agency prior to commencement of construction.

Other provisions or requirements

Proof of insurance. CONTRACTOR shall provide certificates of insurance to AGENCY as evidence of the insurance coverage required herein, along with a waiver of subrogation endorsement for workers' compensation. Insurance certificates and endorsements must be approved by AGENCY's risk manager prior to commencement of performance. Current certification of insurance shall be kept on file with AGENCY at all times during the term of this contract. AGENCY reserves the right to require complete, certified copies of all required insurance policies, at any time.

Duration of coverage. CONTRACTOR shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property, which may arise from or in connection with the performance of the Work hereunder by CONTRACTOR, his agents, representatives, employees or subcontractors. CONTRACTOR must maintain general liability and umbrella or excess liability insurance for as long as there is a statutory exposure to completed operations claims. AGENCY

and its officers, officials, employees, and agents shall continue as additional insureds under such policies.

Primary/noncontributing. Coverage provided by CONTRACTOR shall be primary and any insurance or self-insurance procured or maintained by AGENCY shall not be required to contribute with it. The limits of insurance required herein 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 AGENCY before the AGENCY's own insurance or self-insurance shall be called upon to protect it as a named insured.

Products/completed operations coverage. Products/completed operations coverage shall extend a minimum of three (3) years after project completion. Coverage shall be included on behalf of the insured for covered claims arising out of the actions of independent contractors. If the insured is using subcontractors, the Policy must include work performed "by or on behalf" of the insured. Policy shall contain no language that would invalidate or remove the insurer's duty to defend or indemnify for claims or suits expressly excluded from coverage. Policy shall specifically provide for a duty to defend on the part of the insurer. The AGENCY, its officials, officers, agents, and employees, shall be included as additional insureds under the Products and Completed Operations coverage.

Agency's rights of enforcement. In the event any policy of insurance required under this Agreement does not comply with these requirements or is canceled and not replaced, AGENCY has the right but not the duty to obtain the insurance it deems necessary and any premium paid by AGENCY will be promptly reimbursed by CONTRACTOR or AGENCY will withhold amounts sufficient to pay premium from CONTRACTOR payments. In the alternative, AGENCY may cancel this Agreement.

Acceptable insurers. All insurance policies shall be issued by an insurance company currently authorized by the Insurance Commissioner to transact business of insurance or is on the List of Approved Surplus Line Insurers in the State of California, with an assigned policyholders' Rating of A- (or higher) and Financial Size Category Class VII (or larger) in accordance with the latest edition of Best's Key Rating Guide, unless otherwise approved by the AGENCY's risk manager.

Waiver of subrogation. All insurance coverage maintained or procured pursuant to this agreement shall be endorsed to waive subrogation against AGENCY, its elected or appointed officers, agents, officials, employees and volunteers or shall specifically allow CONTRACTOR or others providing insurance evidence in compliance with these specifications to waive their right of recovery prior to a loss. CONTRACTOR hereby waives its own right of recovery against AGENCY and shall require similar written express waivers and insurance clauses from each of its subconsultants.

Enforcement of contract provisions (non estoppel). CONTRACTOR acknowledges and agrees that any actual or alleged failure on the part of the AGENCY to inform CONTRACTOR of non-compliance with any requirement imposes no additional obligations on the AGENCY nor does it waive any rights hereunder.

Requirements not limiting. Requirements of specific coverage features, or limits contained in this Section are not intended as a limitation on coverage, limits or other requirements, or a waiver of any coverage normally provided by any insurance. Specific reference to a given coverage feature is for purposes of clarification only as it pertains to a given issue and is not intended by any party or insured to be all inclusive, or to the exclusion of other coverage, or a waiver of any type. If the CONTRACTOR maintains higher limits than the minimums shown above, the AGENCY requires and shall be entitled to coverage for the higher limits maintained by the CONTRACTOR. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the AGENCY.

Notice of cancellation. CONTRACTOR agrees to oblige its insurance agent or broker and insurers to provide to AGENCY with a thirty (30) day notice of cancellation (except for nonpayment for which a ten (10) day notice is required) or nonrenewal of coverage for each required coverage.

Additional insured status. General liability policies shall provide or be endorsed to provide that AGENCY and its officers, officials, employees, agents, and volunteers shall be additional insureds under such policies. This provision shall also apply to any excess/umbrella liability policies.

Prohibition of undisclosed coverage limitations. None of the coverages required herein will be in compliance with these requirements if they include any limiting endorsement of any kind that has not been first submitted to AGENCY and approved of in writing.

Separation of insureds. A severability of interests provision must apply for all additional insureds ensuring that CONTRACTOR's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the insurer's limits of liability. The policy(ies) shall not contain any cross-liability exclusions.

Pass through clause. CONTRACTOR agrees to ensure that its subconsultants, subcontractors, and any other party involved with the project who is brought onto or involved in the project by CONTRACTOR, provide the same minimum insurance coverage and endorsements required of CONTRACTOR. CONTRACTOR agrees to monitor and review all such coverage and assumes all responsibility for ensuring that such coverage is provided in conformity with the requirements of this section. CONTRACTOR agrees that upon request, all agreements with consultants, subcontractors, and others engaged in the project will be submitted to AGENCY for review.

Agency's right to revise requirements. The AGENCY reserves the right at any time during the term of the contract to change the amounts and types of insurance required by giving the CONTRACTOR a ninety (90) day advance written notice of such change. If such change results in substantial additional cost to the CONTRACTOR, the AGENCY and CONTRACTOR may renegotiate CONTRACTOR's compensation.

Self-insured retentions. Any self-insured retentions must be declared to and approved by AGENCY. AGENCY reserves the right to require that self-insured retentions be eliminated, lowered, or replaced by a deductible. Self-insurance will not be considered to comply with these specifications unless approved by AGENCY.

Timely notice of claims. CONTRACTOR shall give AGENCY prompt and timely notice of claims made or suits instituted that arise out of or result from CONTRACTOR's performance under this Agreement, and that involve or may involve coverage under any of the required liability policies.

Additional insurance. CONTRACTOR shall also procure and maintain, at its own cost and expense, any additional kinds of insurance, which in its own judgment may be necessary for its proper protection and prosecution of the Work.

XII. CONTRACTOR'S LICENSE

CONTRACTOR must possess at the time of commencing work and throughout the Project duration, a Contractor's License, issued by the State of California, which is current and in good standing. CONTRACTOR shall ensure that any subcontractor working on the Project possesses at the time of commencing work and throughout the Project duration, a Contractor's License, issued by the State of California, which is current and in good standing.

XIII. REGISTRATION REQUIREMENTS

Pursuant to Section 1771.1(a) of the Labor Code:

"A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded."

CONTRACTOR must be registered with the Department of Industrial Relations (DIR) of the State of California in order to be eligible to work on public works projects. CONTRACTOR must ensure registration with the DIR that is active and in good standing.

No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

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

The CONTRACTOR is not subject to public works requirements (including registration with the DIR) if the public works project is under \$1,000, unless the AGENCY knows that the same CONTRACTOR will be awarded total project costs in excess of \$1,000 for a given year.

XIV. CORPORATION IN GOOD STANDING

If CONTRACTOR is a corporation, the undersigned hereby represents and warrants that the corporation is duly incorporated and in good standing in the State of _____, and that _____ whose title is _____, is authorized to act for and bind the corporation.

XV. PROVISIONS REQUIRED BY LAW

Each and every provision of law and clause required by law to be inserted in this Agreement shall be deemed to be inserted herein and the Agreement shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not currently inserted, then upon application of either party the Agreement shall forthwith be physically amended to make such insertion or correction.

XVI. SUBSURFACE HAZARDOUS MATERIALS

- A. In the event trenches or other excavations extend deeper than four (4) feet below the surface, the CONTRACTOR shall promptly, and before the following conditions are disturbed, notify the AGENCY in writing of any:
 - 1. Material that the CONTRACTOR believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II or Class III disposal site in accordance with the provisions of existing law.
 - 2. Subsurface or latent physical conditions at the site differing from those indicated.
 - 3. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in the Work or the character provided for in the CONTRACT.
- B. Upon receipt of said notification the AGENCY will investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the CONTRACTOR's cost of or the time required for performance of any part of the work, the AGENCY will issue a change order under the procedures described in the General Conditions.
- C. In the event that a dispute arises between the AGENCY and the CONTRACTOR whether the conditions materially differ, or involve hazardous waste or cause a decrease or increase in the CONTRACTOR's cost of or time required for performance of any part of the work, the CONTRACTOR shall not be excused from any scheduled completion date provided for by the Agreement, but shall proceed with all work to be performed under the Agreement. The CONTRACTOR

shall retain any and all rights provided either by Agreement or by law which pertain to the resolution of disputes and protests between the contracting parties.

XVII. LIQUIDATED DAMAGES

Pursuant to Government Code Section 53069.85, if work is not completed within the contract time or in strict accordance with the Project Schedule, it is understood, acknowledged and agreed that the AGENCY will suffer damage. It is therefore agreed that the CONTRACTOR shall pay to the AGENCY the sum of: \$1,000.00 for each and every calendar day of delay beyond the Contract Time, or beyond any completion schedule, construction schedule or Project milestones established in or pursuant to the Project Schedule, or beyond the time indicated in the Project Schedule for any individual Contract activity.

CONTRACTOR expressly understands, acknowledges and agrees that such liquidated damages can and shall be imposed if the CONTRACTOR does not meet each and every aspect of any activity schedule, completion schedule, construction schedule or Project milestones established in or pursuant to the Project Schedule. If the AGENCY accepts work or makes any payment under this Agreement after a default by reason of delays, the acceptance of such work and/or payment(s) shall in no respect constitute a waiver or modification of any provisions regarding Contract Time, a completion schedule, the Project Schedule or the accrual of liquidated damages. In the event the same is not paid, the CONTRACTOR further agrees that the AGENCY may deduct the amount thereof from any money due or that may become due the CONTRACTOR under the Agreement. This Article does not exclude recovery of damages under provisions of the Contract Documents and is expressly in addition to the AGENCY's ability to seek other damages.

CONTRACTOR is to refer to Section II of this AGREEMENT for Project Construction Schedule for duration of individual activities. Liquidated damages may be assessed if any individual activity duration exceeds the time indicated for that activity on the Project Construction Schedule.

XVIII. CLAIM PROCEDURES UNDER PUBLIC CONTRACT CODE SECTION 9204

CONTRACTOR shall comply with the procedure set forth in Public Contracts Code section 9204 for any claim, as that term is defined therein, for one or more of the following: 1) a time extension, including, without limitation, for relief from damages or penalties for delay, 2) payment of money or damages arising from work done pursuant to this Agreement, and/or 3) payment of an amount disputed by the AGENCY under this Agreement.

XIX. COMPONENT PARTS OF THE CONTRACT

This Agreement entered into consists of the following CONTRACT DOCUMENTS, all of which are component parts of the Agreement as if herein set out in full or attached hereto:

- 6.1 Invitation for Bids/Advertisement.
- 6.2 Proposal Requirements.
- 6.3 General Conditions
- 6.4 Supplemental General Conditions (State)
- 6.5 Specifications

- 6.6 Special Provisions
- 6.7 Proposal Bid Form
- 6.8 Bid Bond
- 6.9 Proposal Agreement
- 6.10 Agreement
- 6.11 Faithful Performance Bond
- 6.12 Labor and Material Bond
- 6.13 Workers' Compensation Insurance Certification
- 6.14 Subcontractor's Listing
- 6.15 Noncollusion Affidavit
- 6.16 Drug and Alcohol Testing Requirements
- 6.17 Corporate Certification or Partnership Information
- 6.18 Contractor's Certification of Qualification for License Classification

All of the above-named CONTRACT DOCUMENTS are intended to be complementary. Work required by one of the above-named CONTRACT DOCUMENTS and not by others shall be done as if required by all.

The Contract Documents may only be amended by Change Order as provided in section 1-20 of the General Conditions.

No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

XX. ENTIRE CONTRACT

AGENCY and CONTRACTOR each bind itself, its partners, successors, assigns and legal representative to the other party hereto, its partners, successors, assigns and legal representative in respect of all covenants, agreements and obligations contained in the Contract Documents.

This Agreement constitutes the entire contract of the parties. No other agreements or contracts, whether oral or written, pertaining to the work to be performed, exists between the parties. This Agreement can be modified only by an amendment in writing, signed by both parties.

CONTRACTOR
[Name of Contractor]

AGENCY
City of Imperial

By: _____

By: _____

Title: _____

Dennis Morita, City Manager

Date: _____

Date: _____

ATTEST:

City Clerk

APPROVED AS TO FORM:

By: _____
Katherine Turner, City Attorney

CONTRACT PERFORMANCE BOND

(CALIFORNIA PUBLIC WORK)

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, the CITY OF IMPERIAL (sometimes referred to hereinafter as "Obligee") has awarded to _____ (hereinafter designated as the "Contractor"), an agreement for the work described as follows:

**AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1 PROJECT**

BID NO. 2024-07

(hereinafter referred to as the "Public Work"); and

WHEREAS, the work to be performed by the Contractor is more particularly set forth in that certain contract for the said Public Work dated _____ (hereinafter referred to as the "Contract"), which Contract is incorporated herein by this reference; and

WHEREAS, the Contractor is required by said Contract to perform the terms thereof and to provide a bond both for the performance and guaranty thereof.

NOW, THEREFORE, we, _____, the undersigned Contractor, as Principal, and _____

_____,
a corporation organized and existing under the laws of the State of _____, and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the City of Imperial in the sum of _____ Dollars (\$ _____), said sum being not less than one hundred percent (100%) of the total amount payable by the said Obligee under the terms of the said Contract, for which amount will and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the bounden Contractor, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and will and truly keep and perform the covenants, conditions and agreements in the said Contract and any alteration thereof made as therein provided, on his or its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill the one year guarantee of all materials and workmanship; and indemnify and save harmless the Obligee, its officers and agents, as stipulated in said Contract, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

The said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the Specifications accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the Specifications.

No final settlement between the Obligee and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.
Contractor and Surety agree that if the Obligee is required to engage the services of an attorney in connection with enforcement of the bond, each shall pay Obligee's reasonable attorney's fees incurred, with or without suit, in addition to the above sum.

IN WITNESS WHEREOF, we have hereunto set our hands and seals
this _____ day of _____, 2024.

PRINCIPAL/CONTRACTOR:

By: _____

SURETY:

By: _____
Attorney-in-Fact

The rate of premium on this bond is _____ per thousand.

The total amount of premium charged: \$ _____

(The above must be filled in by corporate surety).

IMPORTANT: Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in Section 105 of the California Insurance Code, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, it must also appear on the Treasury Department's most current list (Circular 570 as amended). **THIS IS A REQUIRED FORM.**

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of agent or representative for service of process in California if different from above)

(Telephone Number of Surety and agent or representative for service of process in California).

STATE OF CALIFORNIA)
) ss.
COUNTY OF _____)

On this ___ day of _____, in the year 2024, before me, _____
_____, a Notary Public in and for
said State, personally appeared _____
_____, known to me to be the person whose name is subscribed to the within
instrument as the Attorney-in-Fact of the _____
_____ (Surety) thereto and
his own name as Attorney-in-Fact.

Notary Public in and for said State

(SEAL)

My Commission expires: _____
NOTE: A copy of the power of attorney to local representatives of the bonding company
must be attached hereto.

PAYMENT BOND
(CALIFORNIA PUBLIC WORK)

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, the City of Imperial (sometimes referred to hereinafter as "Obligee") has awarded to (hereinafter designated as the "Contractor"), an agreement dated _____, described as follows:

**AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1 PROJECT**

BID NO. 2024-07

(hereinafter referred to as the "Contract"): and

WHEREAS, said Contractor is required to furnish a bond in connection with said Contract, and pursuant to Section 3247 of the California Civil Code;

NOW, THEREFORE, We, _____, the undersigned Contractor, as Principal; and _____, a corporation organized and existing under the laws of the State of _____, and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the City of Imperial and to any and all persons, companies or corporations entitled to file stop notices under Section 3181 of the California Civil Code, in the sum of _____ Dollars (\$ _____), said sum being not less than one hundred percent (100%) of the total amount payable by the said Obligee under the terms of the said Contract, for which payment will and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that, if said Contractor, his or its heirs, executors, administrators, successors or assigns, or Sub-contractors, shall fail to pay for any materials, provisions or other supplies, implements, machinery or power used in, upon for or about the performance of the Public Work contracted to be done, or to pay any person for any work or labor of any kind, or for bestowing skills or other necessary services thereon, or for amounts due under the Unemployment Insurance Code with respect to such work or labor, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of said Contractor and his Subcontractors pursuant to Section 13020 of the Unemployment Insurance Code with respect to such work and labor as required by the provisions of Section 3247 through 3252 of the Civil Code, the Surety or Sureties hereon will pay for same in an amount not exceeding the sum specified in this bond, otherwise the above obligation shall be void. In addition to the provisions hereinabove, it is agreed that this bond will inure to the benefit of any and all persons, companies and corporations entitled to serve stop notices under Section 3181 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or additions to the terms of the said Contract or to the work to be performed thereunder or the Specifications accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the Specifications.

No final settlement between the Obligee and the Contractor hereunder shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

Contractor and Surety agree that if the Obligee is required to engage the services of an attorney in connection with the enforcement of this bond, each shall pay Obligee's reasonable attorney's fees incurred, with or without suit, in addition to the above sum.

IN WITNESS WHEREOF, we have hereunto set our hands and seal this _____ day of _____, 2024.

PRINCIPAL/CONTRACTOR:

By: _____

SURETY: _____

By: _____

Attorney-in-Fact

IMPORTANT: Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in Section 105 of the California Insurance Code, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, it must also appear on the Treasury Department's most current list (Circular 570 as amended). **THIS IS A REQUIRED FORM.**

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of agent or representative for service of process in California if different from above)

(Telephone Number of Surety and agent or representative for service of process in California).

STATE OF CALIFORNIA)
) ss.
COUNTY OF _____)

On this _____ day of _____, in the year 2024, before me, _____, a Notary Public in

and for said State personally appeared _____
_____, known to me to be the person whose name is subscribed to the within
instrument as the Attorney-in-Fact of the _____(Surety) and
acknowledged to me that he subscribed the name of the _____
_____(Surety) thereto and his own name as Attorney-in-Fact.

Notary Public in and for said State

(SEAL)

My Commission expires: _____

Note: A copy of the power of attorney to local representatives of the bonding company
must be attached hereto.

GENERAL LIABILITY ENDORSEMENT

CITY OF IMPERIAL
420 S. Imperial Ave.
Imperial, CA 92251

A. POLICY INFORMATION

Endorsement # _____

1. Insurance Company: _____

Policy Number: _____

2. Policy Term: (From) _____ (To) _____

Endorsement Effective Date: _____

3. Named Insured: _____

4. Address of Named Insured: _____

5. Limit of Liability Any One Occurrence/Aggregate:

\$ _____

6. Deductible or Self-Insured Retention (Nil unless otherwise specified):

\$ _____

7. Coverage is equivalent to:

Comprehensive General Liability form GL0002 _____

Commercial General Liability "Occurrence" form CG0001 _____

8. Bodily Injury and Property Damage Coverage is: _____
"occurrence"

Note: The City of Imperial standard insurance requirements specify "occurrence" coverage. "Claims-made" coverage is not acceptable. If commercial general liability form or equivalent is used, the general aggregate must apply separately to this location/project or the general aggregate must be twice the occurrence limit.

9. Description of Project: _____

B. POLICY AMENDMENTS

This endorsement is issued in consideration of the policy premium. Notwithstanding

any inconsistent statement in the policy to which this endorsement is attached or any other endorsement attached thereto, it is agreed as follows:

1. INSURED. As respects any work performed on the above-described Project, the City of Imperial, its elected or appointed officers, officials, employees, consulting engineers, and volunteers are included as insured with regard to damages and defense of claims arising from: (a) activities performed by or on behalf of the Named Insured, (b) products and completed operations of the Named Insured, or (c) premises owned, leased or used by the Named Insured.
2. CONTRIBUTION NOT REQUIRED. As respects: (a) work performed by the Named Insured on the above-described Project for or on behalf of the City of Imperial; or (b) products sold by the Named Insured to the City of Imperial for use on the Project; or (c) premises leased by the Named Insured from the City of Imperial, the insurance afforded by this policy shall be primary insurance as respects the City of Imperial, its elected or appointed officers, officials, employees, consulting engineers, or volunteers; or stand in an unbroken chain of coverage excess of the Named Insured schedule underlying primary coverage. In either event, any other insurance maintained by the City of Imperial, its elected or appointed officers, officials, employees, consulting engineers, or volunteers shall be in excess of this insurance and shall not contribute with it.
3. SCOPE OF COVERAGE. This policy, if primary, affords coverage at least as broad as:
 - (1) Insurance Services Office form number GL 0002 (Ed. 1/73), Comprehensive General Liability Insurance and Insurance Services Office form number GL 0404 Broad Form Comprehensive General Liability endorsement; or
 - (2) Insurance Services Office Commercial General Liability Coverage, "occurrence" form CG 0001; or
 - (3) If excess, affords coverage which is at least as broad as the primary insurance forms referenced in the preceding sections (1) and (2).
4. SEVERABILITY OF INTEREST. The insurance afforded by this policy applies separately to each insured who is seeking coverage or against whom a claim is made, or a suit is brought, except with respect to the Company's limit of liability.
5. PROVISIONS REGARDING THE INSURED'S DUTIES AFTER ACCIDENT OR LOSS. Any failure to comply with reporting provisions of the policy shall not affect coverage provided to the City Imperial, its elected or appointed officer, officials, employees, consulting engineers or volunteers.
6. CANCELLATION NOTICE. The insurance afforded by this policy shall not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail return receipt requested has been given to the City of Imperial. Such notice shall be addressed as shown in the heading of this endorsement.

C. INCIDENT AND CLAIM REPORTING PROCEDURE

Incidents and claims are to be reported to the insurer at:

ATTN: _____
(Title) (Department)

(Company)

(Street Address)

(City) (State) (Zip Code)

(Telephone Number)

D. SIGNATURE OF INSURER OR AUTHORIZED REPRESENTATIVE OF THE INSURER

I, _____, warrant that I have authority to bind the
(print/type name) listed Insurance company and by my
signature hereon do so bind this company.

SIGNATURE OF AUTHORIZED REPRESENTATIVE (Original Signature required on
endorsement furnished to the City of Imperial)

ORGANIZATION: _____
TITLE: _____
ADDRESS: _____
TELEPHONE: _____

AUTOMOBILE LIABILITY ENDORSEMENT

CITY OF IMPERIAL
420 S. Imperial Ave.
Imperial, CA 92251

A. POLICY INFORMATION

Endorsement # _____

1. Insurance Company: _____
Policy Number: _____
2. Policy Term: (From) _____ (To) _____
Endorsement Effective Date: _____
3. Named Insured: _____
4. Address of Named Insured: _____
5. Limit of Liability Any One Occurrence/Aggregate
\$ _____
6. Deductible or Self-Insured Retention (Nil unless otherwise specified):

B. POLICY AMENDMENTS

This endorsement is issued in consideration of the policy premium. Notwithstanding any inconsistent statement in the policy to which this endorsement is attached or any other endorsement attached thereto, it is agreed as follows:

1. **INSURED.** The City of Imperial, its elected or appointed officers, officials, consulting engineers, employees and volunteers are included as insured with regard to damages and defense of claims arising from: the ownership, operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by the Named Insured, regardless of whether liability is attributable to the Named Insured or a combination of the Named Insured and the City of Imperial, its elected or appointed officers, officials, employees, consulting engineers or volunteers.
2. **CONTRIBUTION NOT REQUIRED.** As respects work performed by the Named Insured for or on behalf of the City of Imperial, the insurance afforded by this policy shall:
 - (a) be primary insurance as respects the City of Imperial, its elected or

appointed officers, officials, employees, consulting engineers or volunteers;

or

(b) stand in an unbroken chain of coverage in excess of the Named Insured's primary coverage. In either event, any other insurance maintained by the City of Imperial, its elected or appointed officers, officials, employees or volunteers shall be in excess of this insurance and shall not contribute with it.

3. SCOPE OF COVERAGE. This policy, if primary, affords coverage to the Named Insured at least as broad as:

(1) Insurance Services Office form number CA 00001 (Ed. 1/78), Code 1 ("any auto") and endorsement CA 0025.

(2) If excess, affords coverage which is at least as broad as the primary insurance forms referenced in the preceding section (1).

4. SEVERABILITY OF INTEREST. The insurance afforded by this policy applies separately to each insured who is seeking coverage or against whom a claim is made, or a suit is brought, except with respect to the Company's limit of liability.

5. PROVISIONS REGARDING THE INSURED'S DUTIES AFTER ACCIDENT OR LOSS. Any failure to comply with reporting provisions of the policy shall not affect coverage provided to the City of Imperial, its elected or appointed officer, officials, employees, consulting engineers or volunteers.

6. CANCELLATION NOTICE. The insurance afforded by this policy shall not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail return receipt requested has been given to the City of Imperial. Such notice shall be addressed as shown in the heading of this endorsement.

C. INCIDENT AND CLAIM REPORTING PROCEDURE

Incidents and claims are to be reported to the insurer at:

ATTN: _____
(Title) (Department)

(Company)

(Street Address)

(City) (State) (Zip Code)

(Telephone)

D. SIGNATURE OF INSURER OR AUTHORIZED REPRESENTATIVE OF THE INSURER

I, _____, warrant that I have authority to bind the
(print/type name) listed Insurance Company and by my
signature hereon do so bind this company.

SIGNATURE OF AUTHORIZED REPRESENTATIVE (Original Signature required on
endorsement furnished to the City of Imperial)

ORGANIZATION: _____
TITLE: _____
ADDRESS: _____
TELEPHONE: _____

WORKER'S COMPENSATION/EMPLOYERS LIABILITY
ENDORSEMENT

CITY OF IMPERIAL
420 S. Imperial Ave.
Imperial, CA 92251

A. POLICY INFORMATION Endorsement # _____

1. Insurance Company: _____

Policy Number: _____

2. Effective Date of This Endorsement: _____

3. Named Insured: _____

4. Employer's Liability Limit (Coverage B) _____

B. POLICY AMENDMENTS

In consideration of the policy premium and notwithstanding any inconsistent statement in the policy to which this endorsement is attached or any other endorsement attached thereto, it is agreed as follows:

1. CANCELATION NOTICE. The insurance afforded by this policy shall not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail return receipt requested has been given to the City of Imperial. Such notice shall be addressed as shown in the heading of this endorsement.
2. WAIVER OF SUBGROGATION. The Insurance Company agrees to waive all rights of subrogation against the City of Imperial, its elected or appointed officers, officials, agents and employees for losses paid under the terms of this policy which arise from work performed by the Named Insured for the City of Imperial.

C. **SIGNATURE OF INSURER OR AUTHORIZED REPRESENTATIVE
OF THE INSURER**

I, _____, warrant that I have authority to bind the
(print/type name) listed Insurance company and by my
signature hereon do so bind this company.

SIGNATURE OF AUTHORIZED REPRESENTATIVE (Original Signature required on
endorsement furnished to the City of Imperial)

ORGANIZATION: _____

TITLE: _____

ADDRESS: _____

TELEPHONE: _____

CITY OF IMPERIAL
GENERAL SPECIFICATIONS
FOR
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1 PROJECT

BID NO. 2024-07

SCOPE OF WORK

The work to be done consists of furnishing all materials, equipment, tools, labor, and incidentals as required by the contract documents, which includes, but not limited to the following activities: Removal of existing asphalt in poor conditions, grind and overlay in parts of streets as needed, installation of ¾" asphalt leveling course, installation of asphalt-rubber aggregate membrane (ARAM), installation of gap-graded asphalt rubber hot mix (ARHM), slurry seal, removal and replacement of fire hydrants, removal and replacement of sanitary sewer manholes, installation of Storm Drain System (12" Dia. ADS HP Storm Drain Pipe, PCC Junction Boxes & PCC Catch Basins), utility adjustments, removal and replacement of concrete curb & gutter, sidewalks and ADA ramps, installation of thermoplastic striping. Includes road traffic control around the construction zones. All work to be completed within existing City of Imperial public right of way. The grindings derived from the construction activity listed under Item "6" of the Proposal Bid Sheet, shall be disposed and "stockpiled" at the following location: City Shop & Wastewater Treatment Plant located at 701 E. 14th Street, Imperial, CA 92251.

LOCATION OF WORK

1. Worthington Rd/Barioni St between Nance Rd and North "P" St.
2. Old SR-86 between 2nd St and 12th St..
3. "B" St between West 4th St and Worthington Rd.
4. West 7th St between South "D" St and South "E" St.
5. West 4th St between South "D" St and South "G" St.
6. South "E" St between West 3rd St and West 4th St.
7. South "F" St between West 3rd St and West 4th St.
8. South Imperial Ave between West 5th St and West 6th St.
9. West 6th St between South Imperial Ave and Old SR-86.

TIME OF COMPLETION

The Contractor shall complete all work in every detail within **Ninety (90) consecutive calendar days** after the date of the Notice to Proceed, exclusive of maintenance periods.

TRAFFIC REQUIREMENTS

All streets must remain open to public traffic. Temporary street and/or sidewalk closures may be made with the prior approval of the City Engineer.

UTILITY REQUIREMENTS

The Contractor is advised of the existence of the utility notification service provided by UNDERGROUND SERVICE ALERT (USA). USA member utilities will provide the Contractor with an approximate location of their substructures in the construction area

when the Contractor gives at least 48 hours notice to the Underground Service Alert by calling 1-800-422-4133. Contractor shall contact USA as specified and shall provide the City with proof of contact with USA upon request.

The Contractor shall notify the following agencies at least 48 hours in advance of excavating around any of their structures. The utility companies listed below can be contacted as indicated.

1. Imperial Irrigation District: Ignacio Romo, (760) 482-3426
2. Southern California Gas: Joe Montenegro, (760) 352-6100
3. SBC - Telephone Company: Mike Ormond, (760) 337-3358
4. Time Warner (cable TV): Keith Johnson, (760) 352-8835
5. County Public Works Department: Veronica Atondo, (442) 265-1818
6. City of Imperial Public Services: David Dale, (760) 355-3336
8. Community Development Director: Othon Mora, (760) 355-1152

The Contractor shall exercise extreme care to protect all existing utilities in place whether shown on the plans or not and shall assume full responsibility for all damage resulting from his operations. The Contractor shall coordinate with each utility company as to the requirements and methods for protection of their facilities during the construction period and shall be responsible for preparation and processing of any required plans or permits. The Contractor shall assume full responsibility to maintain uninterrupted service for all utilities, including temporary service connections. Payment for protection in place shall be deemed as included in the items of work as shown on the proposal bid sheet and no additional compensation will be allowed.

FLOW AND ACCEPTANCE OF WATER

It is anticipated that storm, surface or other waters may be encountered at various times and locations during the work herein contemplated. The Contractor, by submitting a bid, acknowledges that he has investigated the risk arising from such waters and has prepared his bid accordingly, and Contractor, by submitting a bid, assumes all of said risk.

The Contractor shall conduct his operations in such a manner that storm, or other waters may proceed uninterrupted along their existing street or drainage courses. Diversion of water for short reaches to protect construction in progress will be permitted if public and/or private properties, in the opinion of the Engineer, are not subject to the probability of damage. The Contractor shall obtain written permission from the applicable public agency or property owner before any diversion of water outside of street right of way will be permitted.

REMOVAL OF WATER / DEWATERING

The Contractor shall provide and maintain at all times during construction ample means and devices to promptly remove and properly dispose of all water entering the excavations or other parts of the work. Dewatering for the pipelines shall commence when ground water is first encountered and shall be continuous until such time as the excavated area or trenches are properly backfilled. Dewatering shall be accomplished by well points or some other method which will insure a preservation of final lines and grade of the bottoms of excavation, all subject to the approval of the Engineer.

Disposal of water from dewatering operations shall be the sole responsibility of the Contractor. Disposal methods shall conform to the Porter-Cologne Water Quality Control Act, 1974, the Federal Water Pollution Control Act Amendments of 1972, and the California Administrative Code, Title 23, Chapter 3.

Full compensation of dewatering shall be considered as included in the contract prices paid for the related items of work, and no additional compensation will be allowed, therefore.

TRENCH EXCAVATION AND SHORING

For any contract for public works for excavation of any trench or trenches five (5) feet or more in depth, the Agency shall require submission by the Contractor and acceptance by the awarding body or by a Registered Civil or Structural Engineer to whom authority to accept has been delegated, in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. This plan shall be prepared by a Registered Civil or Structural Engineer.

Nothing in this Section shall be deemed to allow the use of a shoring, sloping, or protective system less effective than that required by the safety standards set forth by the State of California Safety Requirements. Nothing in this Section shall be construed to impose tort liability on the awarding body or any of its employees.

STANDARD SPECIFICATIONS

The Standard Specifications of the Agency are contained in the latest edition of the STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, as written and promulgated by the Joint Cooperative Committee of the Southern California Chapter of the American Public Works Association and the Southern California District of the Associated General Contractors of California (The Greenbook).

Copies of these Standard Specifications are available from the publisher:

Building News, Incorporated
P.O. Box 3031 Terminal Annex
Los Angeles, California 90051
(213) 202-7775
<http://www.bnibooks.com>

The Standard Specifications set forth above will control the general provisions for this contract except as amended by the Plans, Special Provisions, or other contract documents.

The section numbers of the following Special Provisions coincide with those of the said Standard Specifications. Only those sections requiring amendment or elaboration, or specifying options, are called out.

In case of conflict between the Standard Specifications and the Special Provisions, the Special Provisions shall take precedence over and be used in lieu of such conflicting portions.

References in the Special Provisions to Standard Plans shall mean the Standard Plans of the City of Imperial or another governing agency as specified.

Where the Plans or Specifications describe portions of the work in general terms, but not in complete detail, it is understood that the item is to be furnished and installed complete and in place and that only the best general practice is to prevail and that only materials and workmanship of the first quality are to be used. Unless otherwise specified, the Contractor shall furnish all labor, materials, tools, equipment and incidentals, and do all the work involved in executing the contract.

WAGE RATES AND LABOR CODE REQUIREMENTS

Wage Rates

The Contractor and all Subcontractors shall be required to adhere to the higher of the Federal or State general prevailing rate of per diem wages as determined and published by Davis-Bacon or the State Director of the Department of Industrial Relations, pursuant to Sections 1770, 1773, and 1773.2 of the California Labor Code. Copies of these rates and the latest revisions thereto are on file in the Office of the Clerk of the Agency and are available for review upon request.

Attention is directed to the provisions of Sections 1774, 1775, 1776, 1777.5, and 1777.6 of the State Labor Code. Sections 1774 and 1775 require the Contractor and all subcontractors to pay not less than the highest of either the federal or state prevailing wage rates to all workmen employed in the execution of the contract and specify forfeitures and penalties for failure to do so. The minimum state wage rates to be paid are those determined by the State Director of the Department of Industrial Relations. Section 1776 requires the Contractor and all Subcontractors to keep accurate payroll records, specifies the contents thereof, their inspection and duplication procedures, and certain notices required of the Contractor pertaining to their location.

Apprentices

Section 1777.5 requires the Contractor or Subcontractor employing tradesmen in any apprentice able occupation to apply to the Joint Apprenticeship Committee nearest the site of the public works project and which administers the apprenticeship program in that trade for a certificate of approval. The certificate will also fix the ratio of apprentices to journeymen to be used in the performance of the contract.

The Contractor is required to make contributions to funds established for the administration of apprenticeship programs if he employs registered apprentices or journeymen in any apprentice able trade and if other Contractors on the public works site are making such contributions.

Information relative to apprenticeship standards, contributions, wage schedules and other requirements may be obtained from the State Director of Industrial Relations or from the Division of Apprenticeship Standards.

Clayton Act and Cartwright Act

Section 4551 of the State Government Code specifies that in executing a public works contract with the Agency to supply goods, services or materials, the Contractor or Subcontractors offers and agrees to assign to the Agency all rights, title and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 commencing with Sec. 16700) of Part 2 of Division 7 of the Business and Professions Code, arising from purchase of goods, services or materials pursuant to the contract or subcontract. This assignment shall become effective when the Agency tender's final payment to the contractor without further acknowledgment by the parties.

CITY OF IMPERIAL SPECIAL PROVISIONS

For
**AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1 PROJECT**

BID NO. 2024-07

MODIFICATIONS TO: STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

PART I - GENERAL PROVISIONS

SECTION 1 - TERMS, DEFINITIONS, ABBREVIATIONS AND SYMBOLS

1-1 **DEFINITIONS.**

City	- City of Imperial
Board	- City Council
Caltrans	- California Department of Transportation
County	- County of Imperial
Engineer	- City Engineer
Federal	- United States of America
State	- State of California

SECTION 2 - SCOPE AND CONTROL OF THE WORK

2-1 **AWARD AND EXECUTION OF CONTRACT.**

Is amended as follows:

Within ten (10) working days after the date of the Notice of Award, the Contractor shall execute and return the following contract documents to the Agency:

- ~ Contract Agreement
- ~ Faithful Performance Bond
- ~ Payment Bond
- ~ General Liability Endorsement
- ~ Automobile Liability Endorsement
- ~ Worker's Compensation/Employers Liability Endorsement

Failure to comply with the above will result in annulment of the award and forfeiture of the Proposal Guarantee.

The Contract Agreement shall not be considered binding upon the City until executed by the authorized City officials.

A corporation to which an award is made may be required, before the Contract Agreement is executed by the City, to furnish evidence of its corporate existence, of its right to enter into contracts in the State of California, and that the officers signing the contract and bonds for the corporation have the authority to do so.

2-2 **CONTRACT BONDS.**

add the following:

Both the Faithful Performance Bond and the Payment Bond shall each be for not

less than one hundred percent (100%) of the total contract amount. The Payment Bond shall remain in force until thirty-five (35) days after the date of recordation of the Notice of Completion. The Faithful Performance Bond will not be released until one year after said date.

2-3 PLANS AND SPECIFICATIONS.

2-3.1 General.

the first paragraph is amended as follows:

The Contractor shall maintain a control set of Plans and Specifications on the project site at all times. All final locations determined in the field, and any deviations from the Plans and Specifications, shall be marked in red on this control set to show the record conditions. Upon completion of all work, the Contractor shall return the control set to the Engineer. Final payment will not be made until this requirement is met.

SECTION 3 - CHANGES IN WORK

3-1 CHANGES INITIATED BY THE AGENCY

3-1.1 General.

add the following:

The term "Contract Price" as specified herein shall serve to mean the total dollar value of the Contractor's original bid for all of the various items of work combined and shall not be construed to mean the subtotal shown for any singular item of work.

3-2 EXTRA WORK

3-2.1 Payment

3-2.2 Markup.

add the following as the first paragraph:

The markups mentioned hereinafter shall include, but are not limited to, all costs for the services of superintendents, project managers, timekeepers, and other personnel not working directly on the change order and pickup or yard trucks used by the above personnel. These costs shall not be reported as labor or equipment elsewhere except when actually performing work directly on the change order and then shall not be reported at the labor classification of the work performed.

SECTION 4 - CONTROL OF MATERIALS

4-1 MATERIALS AND WORKMANSHIP

4-1.1 Test of Materials.

add the following:

TESTING LABORATORY SERVICES

All test which require the services of a laboratory to determine compliance with the Contract Documents shall be performed by an independent commercial testing laboratory acceptable to the Engineer.

Samples and test specimens will be delivered to the testing laboratory by testing laboratory personnel. The testing laboratory shall perform all laboratory tests within a reasonable time.

Contractor shall furnish all sample materials and cooperate in the sampling and field-testing activities, interrupting the Work when necessary. When sampling or testing activities are performed in the field by Engineer, Contractor shall furnish personnel and facilities to assist in the activities as required.

The City shall not retain any testing laboratory against which Contractor has reasonable objection, and if at any time during the construction process the services become unacceptable to Contractor, Contractor may request in writing that such services be terminated.

The request must be supported with evidence of improper testing. If the Engineer determines that sufficient cause exists, the Engineer shall terminate the services and engage a different testing laboratory.

TRANSMITTAL OF TEST REPORTS

Written reports of tests and engineering data furnished by Contractor for Engineer's review of materials and equipment proposed to be used in the Work shall be submitted as specified for Shop Drawings.

The testing laboratory retained by the Engineer will furnish three copies of a written report of each test performed by laboratory personnel. Two copies of each test report will be transmitted to the engineer and one copy to the Contractor within three working days after each test is completed.

SECTION 5 - UTILITIES

5-1 LOCATION.

add the following paragraph:

The Contractor shall notify the utilities designated in the General Specifications at least 48 hours in advance of excavating around any of their structures.

SECTION 6 - PROSECUTION, PROGRESS, AND ACCEPTANCE OF THE WORK

6-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF WORK.

is amended as follows:

The Contractor's proposed Construction Schedule shall be submitted to the Engineer within ten (10) working days after the date of the Notice of Award of Contract. The schedule shall be supported by written statements from each supplier of materials or equipment indicating that all orders have been placed and acknowledged and setting forth the dates that each item will be delivered.

Prior to issuing the Notice to Proceed, the Engineer will schedule a pre-construction meeting with the Contractor to review the proposed Construction Schedule and delivery dates, arrange the utility coordination, discuss construction methods, and clarify inspection procedures.

The Contractor shall submit periodic Progress Reports to the Engineer by the tenth day of each month. The report shall include an updated Construction Schedule. Any deviations from the original schedule shall be explained. Progress payments will be withheld pending receipt of any outstanding reports.

6-2 TIME OF COMPLETION.

6-2.1 General.

add the following:

The time for completion shall be **Ninety (90) consecutive calendar days** from the issuance date of the Notice to Proceed.

6-2.2 Working Day.

is amended as follows:

The Contractor's activities shall be confined to the hours between 7:00 AM and 6:00 PM, Monday through Friday, excluding holidays. Deviation from these hours will not be permitted without the prior consent of the City of Imperial Planning and Development Department, except in emergencies involving immediate hazard to persons or property.

In the event of either a requested or emergency deviation, inspection service fees will be charged against the Contractor. The service fees will be calculated at overtime rates including benefits, overhead, and travel time. The service fees will be deducted from any amounts due the Contractor.

6-3 LIQUIDATED DAMAGES.

the last sentence is amended as follows:

For each consecutive calendar day in excess of the time specified, as adjusted in accordance with Subsection 6-6, for completion of the work the Contractor shall pay to the Agency, or have withheld from monies due it, the sum of \$1,000.00 per day.

SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

7-1 CONTRACTOR'S EQUIPMENT AND FACILITIES.

add the following:

A noise level limit of 86 dbA at a distance of fifty feet (50') shall apply to all

construction equipment on or related to the job whether owned by the Contractor or not. The use of excessively loud warning signals shall be avoided except in those cases required for the protection of personnel.

7-2 LABOR.

7-2.2 Laws.

add the following:

The Contractor, and all subcontractors, suppliers and vendors, shall comply with all Agency, State, and Federal orders regarding affirmative action to ensure equal employment opportunities and fair employment practices. Failure to file any report due under said orders will result in suspension of periodic progress payments.

The Contractor shall ensure unlimited access to the job site for all equal employment opportunity compliance officers.

7-3 LIABILITY INSURANCE.

the entire Subsection is amended as follows:

7-3.1 Indemnification.

The Contractor shall indemnify and save harmless the CITY OF IMPERIAL and the County of Imperial from all claims or suits for damages arising from his prosecution of the contract work, as more fully described in Subsection 7-3.2 "Contractor's Liability".

The Contractor shall maintain during the life of the contract a protective liability policy. The policy shall provide for not less than the following amounts;

Bodily Injury	\$ 500,000	each person
	\$1,000,000	each accident
	\$1,000,000	aggregate products and completed operations
Property Damage	\$ 250,000	each accident
		Worker's Compensation Statutory

All liability insurance policies shall bear an endorsement or shall have attached a rider whereby it is provided that, in the event of expiration or proposed cancellation of such policies for any reason whatsoever, the Agency shall be notified by registered mail, return receipt requested, giving a sufficient time before the date thereof to comply with any applicable law or statute, but in no event less than 30 days before expiration or cancellation is effective. The following statement shall be included on the insurance certificate:

"Additional Insured: The insurer agrees that the City and its City Council, and/or all City Council appointed groups, committees, boards and any other City Council appointed body, and/or elective and appointive officers, servants or employees of the City when acting as such are additional insured hereunder, for the acts of the insured, and such insurance shall be primary to any insurance of the City."

The Contractor agrees to protect, defend and indemnify the CITY OF IMPERIAL against loss, damage or expense by reason of any suit, claims, demands,

judgments and causes of action caused by the Contractor, his employees, agents or any subcontractor or by any third party arising out of or in consequence of the performance of all or any operations covered by the Certificate of Insurance. The Contractor, at his option, may include such coverage under his Public Liability coverage.

7-3.2 Contractor's Liability.

The CITY OF IMPERIAL, its City Council, or the Engineer shall not be answerable or accountable in any manner, for any loss or damage that may happen to the work or any part thereof; or for any of the materials or other things used or employed in performing the work; or for injury to any person or persons, either workmen or the public; or for damage to adjoining property from any because which might have been

prevented by the Contractor, or his workmen, or anyone employed by him; against all of which injuries or damages to persons and property the Contractor having control over such work must properly guard. The Contractor shall be responsible for

any damage to any person or property resulting from defects or obstructions at any time before its completion and final acceptance, and shall indemnify and save harmless the CITY OF IMPERIAL, its City Council, and the Engineer from all suits or actions of every name and description, brought for, or on account of, any injuries or damages received or sustained by any person or persons, or by the Contractor, his servants or agents, in the construction of the work or by or in consequence of any negligence in guarding the same, in improper materials used in its construction,

or by or on account of any act or omission of the Contractor or his agents, and so much of the money due the Contractor under and by virtue of the Contract as shall be considered necessary by the City may be retained by the City until disposition has been made of such suits or claims for damages aforesaid.

If, in the opinion of the Engineer, the precautions taken by the Contractor are not safe or adequate at any time during the life of the Contract, he may order the Contractor to take further precautions, and if the Contractor shall fail to do so, the Engineer may order the work done by others and charge the Contractor for the cost thereof, such cost to be deducted from any moneys due or becoming due the Contractor. Failure of the Engineer to order such additional precautions, however, shall not relieve the Contractor from his full responsibility for public safety.

7-4 PERMITS.

the first sentence is amended as follows:

Prior to the start of any work, the Contractor shall take out the applicable Agency permits and make arrangements for Agency inspections. The Contractor and all subcontractors shall each obtain any and all other permits, licenses, inspections, certificates, or authorizations required by any governing body or public utility. Payment for this work shall be included in the bid items of work and no additional compensation will be allowed. The City of Imperial will waive the City's usual encroachment permit fees.

The Contractor and all subcontractors shall each obtain any and all other permits, licenses, inspections, certificates, or authorizations required by any governing

body or public utility. Payment for this work shall be included in the bid items of work and no additional compensation will be allowed.

7-5 PUBLIC CONVENIENCE AND SAFETY.

7-5.1 Traffic and Access.

add the following:

When entering or leaving roadways carrying public traffic, the Contractor's equipment, whether empty or loaded, shall in all cases yield to public traffic.

The Contractor shall notify all affected property owners of the proposed schedule a minimum of 48 hours, but not more than 72 hours, in advance of any limitation or closure of access to their property. Form of said notice shall be as approved by the Engineer and shall contain the date and time of the closure. In the event of delay, whether beyond the control of the Contractor or not, the Contractor shall notify all affected property owners as to the extent of the delay and his revised schedule. In the event of delay over 72 hours, the Contractor shall re-notify the property owners as described above. Payment for notification and coordination as per Section 7-10 as modified herein shall be included in the compensation paid for the various items of work and no additional compensation will be allowed.

7-5.2 Storage of Equipment and Materials in Public Streets.

add the following:

The Contractor shall assume full responsibility for any damage caused by stockpiling and shall repair same at his expense. The Contractor shall also be responsible for providing traffic control as required to protect the public from hazards caused by stockpiling within the right of way. Payment for the above, if any, will be deemed as included in the items of work and no additional compensation will be allowed.

The Contractor may, at his own expense, maintain and operate a work and storage area outside of the public right-of-way.

In such case the Contractor shall submit to Agency written authorization from the owners of the subject property prior to occupation. Occupation of site without written authorization shall be grounds for immediate suspension of work.

Location of site to be approved by Agency. Condition and operation of yard shall conform to these specifications. The Contractor shall assume full responsibility for all damage to the site resulting from his operations and shall repair and/or replace same, at his own expense, to the satisfaction of the owner of the subject property. The Contractor shall vacate site and return it to pre-project condition within five (5) working days following application for Notice of Completion. The Contractor shall obtain a written release from the property owner accepting the condition of the vacated site and releasing the Contractor from any further clean-up or restoration work and shall submit a copy of such release to Agency. The Notice of Completion will not be issued until said release is submitted.

7-5.3 Street Closures, Detours, and Barricades.
add the following:

The Contractor shall maintain the minimum traffic requirements designated in the General Specifications. It shall be the Contractor's responsibility to furnish a detailed detour signing and barricade plan for Agency approval.

The Contractor shall be responsible for providing temporary access to all driveways at the end of each workday.

The Contractor shall provide and maintain all other signs, barricades, pedestals, flashers, delineators and other necessary facilities for the protection of the public within the limits of the construction area. He shall also post proper signs to notify the public regarding detours and the condition of the roadway, all in accordance with the provisions of the Vehicle Code and the current State of California Department of Transportation Manual of Warning Signs, Lights and Devices for Use in Performance of Work Upon Highways.

The Contractor shall furnish competent flagmen as are necessary to give adequate warning to traffic or to the public of any dangerous conditions to be encountered. Flagmen, while on duty and assigned to give warnings to the public of construction and of any dangerous conditions to be encountered as a result thereof, shall perform their duties and shall be provided with the necessary equipment in accordance with the current "Instructions to Flagmen," of the Department of Transportation. The equipment shall be furnished and kept clean and in good repair by the Contractor, at his expense.

Should the Contractor appear to be neglectful or negligent in furnishing warning and protective measures as provided, the Engineer may direct attention to the existence of a hazard and the necessary warning and protective measures shall be furnished and installed by the Contractor at his expense. Should the Engineer point out the inadequacy of warning and protective measures, such action on the part of the Engineer shall not relieve the Contractor from responsibility for public safety or abrogate his obligation to furnish any pay for these devices.

The Contractor shall distribute notices to all affected residents and businesses at the stated minimum time prior to the start of work:

Excavations, overlays and miscellaneous repairs – 36 hours

The Contractor shall also be required to post "Temporary No Parking" signs along the streets to be resurfaced during each working day, forty-eight (48) hours prior to resurfacing. The "NOTICES" and "Temporary No Parking" signs will be furnished by the Contractor.

The Contractor shall notify the following entities at least forty-eight (48) hours in advance of any street closure or restriction to access:

1. City of Imperial Engineering Division at 355-1152
2. Fire Department at (442) 265-3010
3. Imperial Police Dept. at 355-4327

4. Imperial County Sheriff's Dept.: (442) 265-2021
5. Imperial County Public Works Dept.: (442) 265-1818

Full compensation for conforming to this article shall be considered as included in the various items of work involved, and no additional compensation will be allowed, therefore.

7-5.4 Safety.

7-5.4.1 Safety Orders.
add the following:

CONSTRUCTION SAFETY ORDERS

The Construction Safety orders of the State of California, Department of Industrial Relations, effective November 15, 1975, and as amended, shall be applicable to the work in this contract. The Contractor's special attention is directed to:

Article 6

Excavations, Trenches and Earthwork

Article 11

Traffic Control, Flagmen, Barriers and Warning signs; and

***Article 28 ***

Miscellaneous Construction Equipment prior to the start of work, the Contractor will be required to obtain a permit from the Office of the Division of Occupational Safety and Health. The office serving the Imperial area is at 7807 Convoy court, Suite 140, San Diego, California 92111, Telephone Number; (619) 637-5534.

The Contractor shall provide the City Engineer's office with a copy of the permit prior to the start of excavation, and the permit shall be maintained on the job site at any timework requiring trenching or shoring operations exist.

Where excavation of any trench 5 feet or more in depth is required, the Contractor shall submit to the City Engineer for approval, in writing, two weeks in advance of excavations, a detailed plan showing the design of shoring bracing, sloping, protection of existing utilities, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench. If such plan varies from shoring system standards established by the Construction Safety Order. The plan shall be prepared by a Registered Civil or Structural Engineer.

Copies of said regulations are available from the documents Section, P.O. box 20191, Sacramento, California 95820. The cost of furnishing labor, tools, equipment, services and items required thereby shall be borne by the Contractor as part of this contract work and he shall not be entitled to additional compensation for compliance with said regulations.

7-6 PAYROLL RECORDS.
add the following paragraph:

Payroll records shall be submitted to the Agency by the tenth day of each month. Progress payments will be withheld pending receipt of any outstanding reports.

SECTION 8 - MEASUREMENT AND PAYMENT

8-1 Partial and Final Payment. *the last paragraph is amended as follows:*

The closure date for periodic progress payments will be five (5) working days prior to the first Monday of each month.

The final progress payment will not be released until the Contractor returns the control set of Plans and Specifications showing the as-built conditions.

The full five percent (5%) retention will be deducted from all payments. The final retention will be authorized for payment thirty-five (35) days after the date of recordation of the Notice of Completion.

In conformance with the Public Contracts Code, Section 22300, the Contractor may substitute securities for any monies withheld by the Agency to secure performance under the contract.

At the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the Agency or with a State or Federally chartered bank as the escrow agent who shall pay such monies to the Contractor upon notification by Agency of Contractor's satisfactory completion of the contract. Actual pay quantity measurements will be done at the end of each working day and agreed upon by both the Contractor and the Engineer's representative.

The type of securities deposited, and the method of release shall be approved by the City Attorney's office.

8-1.1 Delivered Materials.

is amended as follows:

Materials and equipment delivered but not incorporated into the work will not be included in the estimate for progress payment, subject to the discretion of the City Engineer.

8-1.2 Dewatering.

is amended as follows:

The Contractor may encounter groundwater or water from other sources during excavation. The Contractor shall provide and maintain at all times during construction, ample means and devices with which to promptly remove and properly dispose of all water from any source entering the excavations or other parts of the work. Dewatering shall be accomplished by methods, which will ensure a dry excavation and preservation of the final lines and grades of the bottoms of excavations.

Dewatering shall commence when groundwater is first encountered and shall be

continuous until such times as water can be allowed to rise in accordance with the provisions of this section or other requirements.

Disposal of watering from dewatering operations shall be the sole responsibility of the Contractor. Disposal methods shall conform to the Porter-Cologne Water quality control Act, 1974, the Federal Water Pollution Control Act Amendment of 1972; and the California Administrating code, Title 23, Chapter 3.

The Contractor shall dispose of the water from the work in a suitable manner without damage to adjacent property. Conveyance of the water shall be such as to not interfere with traffic flow or other construction. No water shall be drained into work built or under construction without prior consent of the City Engineer.

Water shall be desanded before disposal in any storm drain system. The system used for desanding the water shall be a baffled structure and shall provide not less than five minutes detention time and shall have a "flow-through" velocity not exceeding 0.2 feet per second at the anticipated peak flow. The desanding box shall be cleaned as required to maintain the detention time and flow-through limitations specified above.

*8-1.3 Mobilization.
is amended as follows:*

Mobilization shall consist of preparatory work and operations, including but not limited to those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; for the establishment of all offices, buildings and other facilities necessary for the work on this project; and for all work and operations which must be performed or cost incurred prior to beginning work on the various contract items on the project site.

The compensation paid for mobilization shall be full compensation for all costs incurred by the Contractor for doing all the work involved in mobilization as specified herein. Payment for mobilization will be included in the items of work listed in the **BID PROPOSAL**.

PART II – CONSTRUCTION MATERIALS

All CONSTRUCTION MATERIALS AND CONSTRUCTION METHODS shall be according to the latest edition of the State of California Department of Transportation (CALTRANS) Standard Specifications, CALTRANS Standard Drawings / Details, the 2024 Edition of the "Standard Specifications for Public Works Construction" ("GREENBOOK") and, according to the CONSTRUCTION PROJECT PLANS called for in APPENDIX C.

PART III – STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK") 2024 Edition

All CONSTRUCTION MATERIALS AND CONSTRUCTION METHODS shall be according to the latest edition of the State of California Department of Transportation (CALTRANS) Standard Specifications, CALTRANS Standard Drawings / Details, and according to the CONSTRUCTION PROJECT PLANS called for in APPENDIX C.

1.0 GENERAL

The Technical Specifications for the work to be completed shall comply with the City of Imperial Standard Specifications and Details, the latest Caltrans Standard Specifications 2023, and the Specifications as required in this Technical Conditions Section. Major material component standard specifications have been included in these Technical Specifications. Some of the major material component standard specifications refer to other Caltrans Standard Specifications, 2023. These “referred to” specifications have not been included in this Technical Specifications section. It shall be necessary to refer to the Caltrans Standard Specifications, 2023 document to review the “referred to” sections. If pertinent specifications are not included within these Technical Specifications, refer to Caltrans Standard Specifications, 2023.

If there is any conflict between the Specifications, the most stringent Specification shall prevail.

2.0 MOBILIZATION/DEMobilIZATION

Mobilization/demobilization shall include the preparatory work and operations that must be performed, or costs incurred before starting work, on the various items of the project site (Public Contracts Code § 10104); including activities and associated costs for transportation of contractor's personnel, equipment, and operating supplies to the site, move-on and move-off operations, establishment of offices, storage yards, hooks-up and disconnects for utility services, and the application for and acquiring of permits from other agencies.

Mobilization/demobilization also includes all work involved, including, but not limited to, the following items: Davis-Bacon Posters, mobilizing labor force; securing construction water supply; obtaining bonds; moving equipment and temporary construction facilities onto site; pre-construction and progress meetings, proper cleaning and clearance of the site to return it to its original condition; securing and leasing construction staging and storage areas, removal of all Contractor equipment, supplies, and labor force; warranty provisions; payments for bonds, and obtaining insurance, and for related items of work not otherwise provided for necessary to complete the work as shown on the Plans and as specified herein.

Measurement and Payment

“Mobilization / Demobilization” shall be measured for payment as a lump sum.

Payment for **“Mobilization / Demobilization”** shall conform to the provisions in Section 9-1.16D, “Mobilization,” of the Caltrans Standard Specifications.

Up to 25% of this Bid Item may be paid upon the start of construction. Up to an additional 50% of the Bid Item may be paid when 50% of the construction is completed, as determined by the Engineer. The remaining 25% shall be paid upon completion of the project including all activities and associated costs for transportation of Contractor's personnel, equipment, and operating supplies from the site, as well as any other

general facilities of the Contractor's operations at the site.

3.0 PROJECT IDENTIFICATION SIGNS

The Contractor shall provide, erect, and maneuver 2 (two) Project Identification signs. The signs shall be posted at all times. All project identification signs will be located within the City right-of-way. Final sign locations shall be determined in a field visit with the Contractor and Engineer prior to placement by the Contractor.

The Project Identifications signs shall conform to the following construction details:

1. 48 inches wide by 30 inches height
2. 0.063" Anodized Aluminum Panels
3. Avery-Dennison T-6500 High Intensity Series Prismatic Reflective Sheeting (3M Type IV), or equivalent
4. Avery-Dennison OL-1000 Premium Anti-Graffiti Overlay Film, or equivalent
5. UV Inks to be used without exception
6. Use City of Imperial Standard colors
7. Signs shall include:
 - a. City of Imperial logo
 - b. Affordable Housing and Sustainable Communities (AHSC) Program logos
 - c. Project Name with "UNDER CONSTRUCTION" underneath

Contractor shall submit shop drawings for review and approval by the Engineer prior to furnishing the signs. Signs shall be installed ten (10) working days prior to the start of construction.

Any requests to relocate the Project Information signs for the convenience of the Contractor shall be submitted to the Engineer for review and acceptance.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for furnishing, erecting, maintaining, and removing the project identification signage shall be considered as included in the contract lump sum paid for "**Mobilization / Demobilization**" and no additional payment will be allowed therefor. This payment will be made on a basis of the percentage of work completed on the entire project.

4.0 STORMWATER MANAGEMENT AND DISCHARGE CONTROL

4.1 Stormwater Management and Discharge Control

4.1.1 General

Contractor shall provide and maintain methods, equipment, and temporary construction, as necessary to provide controls over environmental conditions at the construction site and adjacent areas. Remove physical evidence of temporary facilities at completion of

work.

- The Contractor shall prepare a SWPPP for the project. The Contractor prepared SWPPP shall include a Waste Management Plan to transport, handle, and store contaminated waste soil excavated from the pipe trench for dewatering and disposal. The plan shall include a site plan showing the location of BMP elements and activities described in Appendix A, "Best Management Practices," for which the Contractor shall adhere to. The anticipated best management practices include, but are not limited to: Hydroseeding Mulch for soil stabilization and erosion control, Geotextiles, Plastic Covers & Erosion Control Blankets/Mats as alternatives for soil stabilization and erosion control, Silt Fence for sediment control, Fiber Rolls for soil stabilization and sediment control, Gravel Bag Berms around the trench site and the construction staging areas to prevent storm water runoff and inflow from outside the site, Street Sweeping and Vacuuming the active construction site, Storm Drain Inlet Protection where applicable, and Entrance/Outlet Tire Grates to prevent sediment from tracking to public roadways.

The Waste Management Plan shall be submitted and approved by the Engineer before any waste soil is transported for disposal.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for "**Erosion Control**" and no additional payment will be allowed therefor.

4.1.2 Dust Control

Contractor shall be responsible for controlling objectionable dust caused by its operation of vehicles and equipment, clearing or for any reason whatsoever. Contractor shall apply water and calcium chloride or use other methods subject to the approval of the Engineer, which will keep dust in the air to a minimum. The Contractor's operations shall comply with Air Quality Control Board requirements. The Contractor shall be responsible for any damage resulting from any dust originating from its operations. Dust abatement measures shall be continued until the Contractor is relieved of further responsibility by the Engineer.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

4.1.3 Water Control

Contractor shall provide methods to control surface water and water from excavations

and structures to prevent damage to the work, the site, or adjoining properties.

Contractor shall control fill, grading and ditching to direct water away from excavations, pits, tunnels, adjoining properties, and other construction areas; and to direct drainage to proper runoff courses so as to prevent any erosion, damage or nuisance. Water control shall comply with local and federal permitting requirements.

Contractor shall provide, operate and maintain equipment and facilities of adequate size to control surface water.

Contractor shall dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of the site or to adjoining areas and in conformance with all environmental requirements.

The Contractor is advised of the potential for a high level of ground water in certain portions of the project area. The ground water levels should be expected to fluctuate. If encountered, the Contractor shall conform to local municipal standards for disposal of ground water from dewatering. Discharge to either the sanitary sewer or storm drain will require initial and periodic analysis by the Contractor as required by the permit and may require pretreatment and/or removal of contamination. Should the testing conducted by the Contractor identify hazardous material in the ground water, the Contractor shall immediately notify the Engineer in writing. The Contractor will be responsible for obtaining all required permits for disposal of ground water prior to discharging water.

The Contractor is responsible for obtaining all permits, pumping and treating water and discharge monitoring. At all times the Contractor shall discharge in compliance with the discharge authorization. Treated water and discharge volumes shall be measured using a totalizing flow meter.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Unless otherwise provided for, full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

Full compensation for all work involved in dewatering, including the plan, permit, maintenance, monitoring, and all necessary labor, tools, equipment, and incidentals shall be considered included in the contract lump sum price paid for **“Clearing and Grubbing”** and no additional payment will be made therefor.

4.1.4 Pollution Control

Contractor shall provide methods, means and facilities required to prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations. Contractor shall provide equipment and personnel, and perform emergency measures required to contain any spillages, and to remove soils or liquids

contaminated as a result of contractor's activities. Excavate and dispose offsite any contaminated soil or liquid and replace with suitable compacted fill and topsoil.

Contractor shall take special measures to prevent harmful substances from entering public waters.

Prevent disposal of wastes, effluents, chemicals, or other such substances adjacent to streams, or in sanitary or storm sewers.

All Contractors' equipment used during construction shall conform to all current federal, state and local laws and regulations.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

4.1.5 Erosion Control

Contractor shall utilize Best Management Practices to control erosion and storm water pollution as shown in the Plans, in conformance with local, state and federal water pollution control regulations, and as directed by the Engineer.

The Contractor shall perform water pollution control work during construction in conformance with the requirements documented in these Special Provisions and the Standard Specifications. The Contractor shall evaluate, maintain, amend, and update their Project Storm Water Pollution Prevention Plan ("SWPPP") prior to commencing work and on an ongoing basis to document any changes required to accommodate the progression of construction activities throughout the life of the project.

Erosion Control work shall include the implementation and maintenance of the Project SWPPP and implementation and maintenance of storm water pollution prevention Best Management Practices (BMPs) required to prevent and control discharges of dust, soil, sediment, debris, and other pollutants from the project site onto adjacent areas and/or into the storm water conveyance system from construction activities shown on the Plans in compliance with all applicable laws and regulations of authorities having jurisdiction.

The Contractor shall perform water pollution control work in conformance with the requirements in the Project's SWPPP, the "California Stormwater Quality Association Construction Stormwater Best Management Practices Handbook" and the Caltrans "Construction Site Best Management Practices" manual in effect on the day the Notice to Contractors is dated.

Measurement and Payment

“**Erosion Control**” shall be measured for payment as a lump sum.

The contract lump sum price paid for “**Erosion Control**” shall include full compensation for preparing, updating, and implementing the Project SWPPP, and for continuously implementing and maintaining all required BMPs, erosion control measures, water pollution control practices, sampling, analysis, monitoring, training, and other necessary measures to prevent and control discharges to the maximum extent practicable; including all labor, materials, tools, equipment, and incidentals, removals, waste management, disposal, and for doing all work as shown on the Plans, as specified in the Contractor prepared project SWPPP, the Standard Specifications and these Special Provisions, and as directed by the Engineer, and no additional compensation will be allowed therefor.

4.1.6 National Pollutant Discharge Elimination System (NPDES)

Chapter 13.10 (Stormwater Management and Discharge Control) of the Municipal Code requires the control of non-stormwater discharge and reduction of pollutant discharge to the maximum extent practicable. Pollutant is defined as solid waste, sewage, garbage, medical waste, wrecked or discarded equipment, radioactive materials, dredged spoil, rock, sand, sediment, industrial waste and any organic or inorganic contaminant whose presence degrades the quality of the receiving waters.

To be in compliance, sand and sediment must be controlled. When a site is being developed and there is any disturbance of the soil or site excavation there is a need for a plan to reduce the pollutant discharge to the maximum extent practicable.

In 1989 USEPA developed regulations for storm water in major urban areas as part of the Federal Water Pollution Control (Clean Water) Act of 1972. In California, EPA mandated permits are issued and controlled by nine regional water quality control boards

Disposal of potable water during construction is considered a permissible discharge provided the release does not contribute to the violations of water quality standards. The discharge water must be de-chlorinated and cannot cause downstream erosion.

1. The Contractor shall apply for coverage under the California Water Resources Control Board Order No. 2009-009-DWQ (and subsequent addendums) NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities if the amount of disturbed area is greater than one acre. The Contractor shall prepare and implement the Storm Water Pollution Prevention Plan (SWPPP), utilize BMPs, conduct monitoring and report satisfactory completion in accordance with the General Permit.
2. The Contractor shall provide copies of the Notice of Intent and the Notice of Termination for compliance with conditions of the General Permit.

3. The SWPPP shall be submitted at least five working days prior to the start of construction to the Owner and be approved in writing by the Owner prior to commencing work.

The SWPPP shall provide that no sand, silt, or debris shall be allowed to enter the storm drain system including public streets.

Construction work shall not start until:

1. The Contractor prepares a SWPPP for review by the Engineer and receives approval.
2. The Contractor enters all pertinent data in the State Water Resources Control Board SMARTS system to obtain the WDID number.
3. A WDID is issued by SWRCB in response to a Notice of Intent (NOI).
4. SWPPP review requirements have been fulfilled. If the RWQCB requires time for SWPPP review, allow 30 days for the RWQCB to review the SWPPP.
5. The Contractor's submittals required in the Project's SWPPP have been reviewed and approved by the Engineer.
6. The Engineer determines that the appropriate BMPs are implemented and additional BMP materials are staged for rapid deployment, as necessary, in readiness for a likely precipitation event.
7. The Contractor submits the name and qualifications of the Contractor's Qualified SWPPP Practitioner (QSP). The Contractor's QSP shall meet the minimum requirements specified in the Construction General Permit and the Project SWPPP.
8. Contractor's and subcontractor's personnel have received the training required in the Project's SWPPP and said training is adequately documented and certified by the Contractor.

Contractor shall pay all fees associated with filing the Notice of Intent (NOI) to the State Water Resources Control Board necessary to obtain and maintain permit coverage under the CGP, including annual renewal fees.

The Contractor shall implement the plan and take remedial and preventive action immediately when pollutant discharge occurs and/or the City Engineer directs.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for all work involved in Stormwater Management and Discharge Control, including the plan, furnishings, installation, maintenance and removal of all necessary silt fences, fiber rolls, gravel bags, sand bags, and materials, and furnishings all necessary labor, tools and equipment, shall be considered included in the contract lump sum price paid for "**Erosion Control**" and no additional payment will be made

therefor.

5.0 CONSTRUCTION STAKING

The Contractor will provide the surveying, construction staking, and potholing, which are necessary to complete the work. The cost of any surveying, construction staking and potholing will be paid per lump sum, and no additional compensation will be allowed. All surveying and construction staking as required to relocate facilities of So Cal Gas, IID, AT&T, Cox Communications, etc. shall be self-performed by each corresponding agency, unless otherwise approved.

The Contractor shall prepare a pothole plan identifying locations where all utilities, shown or not shown on the plan, will be encountered where excavations are planned. The contractor, using non-destructive air-vacuum excavation, will identify the horizontal and vertical location, size, material type of each utility or conflict and submit a pothole report along with the location information plotted on the as-built redlines upon the completion of work.

Measurement and Payment

“Construction Staking” shall be measured for payment as a lump sum.

The contract lump sum price paid for **“Construction Staking”** shall include full compensation for all labor, materials, tools, equipment, and incidentals, and for doing all required surveying and construction staking necessary to complete the project per the Plans and these Special Provisions, and no additional compensation will be allowed therefor.

6.0 SURVEY MONUMENT PRESERVATION

The Contractor shall be responsible for protecting all existing horizontal and vertical survey controls, monuments, ties and benchmarks located within the limits of the project. If any of the above require any removal, relocating or resetting, the Contractor shall, prior to any construction work and under the supervision of a California-licensed surveyor or pre-1972 licensed civil engineer, establish sufficient temporary ties and bench marks to enable the points to be reset by the Contractor after completion of construction.

Prior to the start of construction, the Contractor shall inventory all existing survey monuments within the project limits. Monument records are for information purposes only and can be provided by the City upon request. The Contractor is responsible for ensuring that all survey monuments within the project area are preserved (both pre and post construction) and are restored following construction.

Any ties, monuments and benchmarks disturbed during construction shall be reset after construction per City of Imperial or County of imperial standards, as applicable, and the tie notes submitted to the City of Imperial or County of Imperial on 8-1/2" x 11" note paper. The Contractor and its sureties shall be liable for, at its expense, any resurvey

required due to its negligence in protecting existing ties, monuments, benchmarks or any such horizontal and vertical controls.

The Contractor shall comply with The Land Surveyors Acts #9771 (Record of Surveys-Monumentation) and #8773 (Corner Records-Records of Survey for "Lost Corners").

Measurement and Payment

"Survey Monument Preservation" shall be measured for payment as a lump sum.

The contract lump sum price paid for **"Survey Monument Preservation"** shall include full compensation for all labor, materials, tools, equipment, and incidentals, and for doing all required work related to preserving and/or restoring all existing property corners, monuments and well monuments; as well as filing and recording all necessary pre and post construction corner record and/or record of survey maps, including fees, and no additional compensation will be allowed therefor.

7.0 TEMPORARY TRAFFIC CONTROL

The Contractor shall prepare Traffic Control Plans for all improvements identified in the Construction Documents, obtain City review and approval, obtain permits, and fully implement and maintain said Traffic Control Plans.

The Contractor-prepared Traffic Control Plans shall be submitted to the City's Traffic Engineer for approval within ten (10) business days following contract award and at least fourteen (14) days prior to beginning the work. The traffic control permit application shall be coordinated so that no items of work will be delayed.

The Contractor shall not begin work without the approved traffic control permit(s). The Contractor-prepared Traffic Control Plans are not valid until work dates are approved.

All traffic control for the project shall be in accordance with the Special Provisions and the latest edition of the California Manual on Uniform Traffic Control Devices (California MUTCD) and the latest edition of the "Construction Area Traffic Control Devices" of Caltrans Standard Specifications.

The Contractor shall furnish, install, and maintain a minimum 48" high temporary chain link fence with continuous detectable edging, fabric screen, and lighting, or approved equivalent, at all locations where the pedestrian path of travel is adjacent to the work zone.

The Contractor shall utilize Armorcast Guardian 170 Barrier Heavy Duty, or approved equivalent, water-filled plastic rails to direct pedestrians to pedestrian ramps at all street corners, and at all locations where the pedestrian path of travel is adjacent to a vehicular travel lane.

All traffic control devices used at night must be equipped with flashing lights. Signs used at night must be reflectorized with a material that has a smooth, sealed, outer surface,

or illuminated to show approximately the same shape and color, day and night. Street lighting is not an acceptable source of illumination.

The Contractor shall maintain emergency vehicle access in all directions, at all times.

The Contractor shall schedule its work so as to prevent interruption to driveway access, street sweeping, and trash collection.

The Contractor shall backfill or cover trenches with slip-resistant, recessed steel trench plates at the end of each workday. Upon completion of excavation, backfill and provide a satisfactory surface for traffic. Portable concrete barrier i.e., K-rail, additional noticing, and other items may be required when trenching cannot be secured overnight by backfilling or trench-plating.

Working Hours are 7:00 a.m. to 5:00 p.m. and may be subject to change at the discretion of the Engineer. Access shall be provided at all times for residents and businesses in the affected areas. If access is at any time restricted for residents adjacent to the project area, Contractor shall notify them of said restriction in writing at least 48-hours in advance.

The Contractor shall be responsible for the maintenance of necessary barricades, signs, etc. at all times, including Saturdays, Sundays, overnight, and holidays. In addition, Contractor shall provide traffic control approaching construction zone, including detour routes.

Contractor shall at all times maintain not less than one (1) - 12-foot minimum width traffic lane in each direction on all streets and alleys open for public traffic. Within the construction zone, when one traffic lane in each direction is not possible due to construction Work within the project scope, Contractor shall maintain two-way traffic within one 14-foot wide traffic lane, and shall include the necessary traffic control, including the use of flaggers. Or Contractor shall implement a street closure and detour as described herein.

The Contractor shall notify the Engineer of its intent to begin work at least two (2) days before the work is begun.

When entering or leaving roadways carrying public traffic, the Contractor's equipment, whether empty or loaded, shall in all cases yield to public traffic.

Personal vehicles of the Contractor's employees shall not be parked on the traveled way at any time, including any section closed to public traffic.

The provisions of this section may be modified or altered, if in the opinion of the Engineer, public traffic will be better served and work expedited. Any proposed modifications shall be approved in writing by the Engineer.

No surplus or other material shall be placed on private property unless prior written permission, signed by the property owner, is furnished to the Engineer.

Existing signs shall not be removed until new signage is ready to install, temporary traffic control signs are in place, or until authorized by the Engineer.

The Contractor shall coordinate with the City for appropriate traffic control in advance of, and during, special events.

Street Closures and Detours

Closures and detours shall be in accordance with all applicable State, County, and City requirements for closures of streets. Street closures and detours shall not impact public transit operations.

Street closures, detours, barricades lights, other safety devices must conform to the CA-MUTCD.

General vehicle travel lanes and turning movements may be detoured only when necessary to complete the Work, as approved by the Engineer, and as shown on the approved Traffic Control Plans. Throughout all phases of work, including times when general traffic is detoured, Contractor shall maintain emergency vehicle access in all directions through the work zone.

During street closures and detours, the Contractor shall provide barriers, guards, lights, signs, temporary bridges, flag persons, and watch persons. The Contractor shall be responsible for compliance with additional public safety requirements which may arise. Contractor must furnish and install signs and warning devices and promptly remove them upon completion of the Work.

At least 48 hours in advance of closing, partially closing or reopening, any street, alley, or other public thoroughfare, Contractor must notify the Police, Fire, and Traffic Engineering Departments, and comply with their requirements. Deviations must first be approved in writing by the Engineer.

The Engineer will order closing down the Work if the Contractor fails or refuses to construct and maintain detours as required.

Whenever a portion of the roadway is completed, that section of the road shall be available to traffic immediately if it does not conflict with the remaining the traffic control devices and does not compromise public safety.

Contractor shall furnish flag persons when required to give adequate warning to traffic or to the public of any dangerous conditions to be encountered.

Traffic Signals

Do not interrupt the operation of the existing traffic signals and lighting **unless allowed on the Traffic Control Plans.**

Work that disturbs the normal traffic signal timing operations shall be coordinated with

the City a minimum of 72 hours prior to commencing work.

Traffic signals shall remain fully actuated at all times unless otherwise approved by the Engineer. If traffic signal loop detectors are rendered inoperative by the proposed work, video detection shall be used to provide actuation.

As required by the Engineer, and as shown on the approved Traffic Control Plans, the Contractor shall furnish and maintain temporary traffic signal equipment.

If at anytime a traffic signal is "black", R1-1 signs shall be placed on barricades at the intersection.

Parking

Where a parking prohibition is required to complete the work, the Contractor shall post signs 48 hours in advance of scheduled construction. The signs shall indicate the days (Mon., Tues., Wed., etc.) when work will be underway and enforcement will be requested. The signs must indicate the time when parking will be prohibited, (e.g. 7:00 a.m. to 4:00 p.m.). Time shall not be during hours when work is prohibited by other provisions of these specifications. The signs shall further indicate that enforcement may result in towing. The signs shall be posted at intervals along the street of not more than fifty (50) feet, and at a position at the edge of pavement or immediately behind the curb. Additional signs shall be installed when required by the Engineer to assure adequacy of the notice.

Upon posting no parking signs, the Contractor shall advise the Engineer who must inspect and certify that posting was completed in accordance with these specifications. Said certification must be at least 48 hours prior to required enforcement.

To request towing, the Contractor may contact the Police Department or Traffic Division. Towing will not normally be performed before 7:00 a.m. or after 4:30 p.m. If towing outside these hours is required, it shall be by prior arrangement with the Police Department Traffic Division Commander, and subject to availability of officers.

Following posting no parking signs, the Contractor shall maintain the signs no less than twice per day and additionally as directed by the Engineer to assure maintenance of the notice. The Contractor shall make every effort to schedule work so that any posted "No Parking" zone will be used on the days posted. In the event the Contractor is unable to maintain the planned schedule, the days posted (Mon., Tues., etc.) shall be revised in advance to reduce the impact of the parking restrictions for days when no work will be done. If additional days are added, the Contractor shall again notify the Engineer who will re-certify the posting.

Measurement and Payment

"Temporary Traffic Control" shall be measured for payment as a lump sum.

The contract lump sum price paid for **"Temporary Traffic Control"** shall include full

compensation for furnishing all labor, materials, tools, equipment, transportation, preparation of Traffic Control Plans, maintenance of traffic control devices, and incidentals for all necessary and required Traffic Control and Stage Construction to completely implement and maintain the Traffic Control Plans, per these Special Provisions, and any approved revisions thereto, obtaining all permits, all required coordination efforts, temporary traffic signals, and no additional compensation will be allowed therefor.

8.0 MAINTANCE AND PROTECTION OF EXISTING IMPROVEMENTS

Protection and restoration of existing improvements shall be in accordance with Section 5-1.37, 5-1.38 and 5-1.39 Caltrans Standard Specifications. Private, and public, facilities and structures removed in conflict with construction shall be replaced in kind, as shown on the Plans and as directed by the Engineer.

Improvements such as sidewalks, curbs, gutters, Portland cement concrete (PCC) and asphalt concrete pavements, underlying material, irrigation systems, lawns and plants, buildings, walls, pavements, fencing, lighting, utilities, and any other improvements removed, broken or damaged by the Contractor's operations shall be replaced or reconstructed with the same kind of material as found on the work, or with materials of equal quality. The new work shall be left in a serviceable condition to the satisfaction of the Engineer.

The Contractor shall protect existing facilities which are to remain in place, that are to be reused, or which are to remain the property of the owner by: temporary covers, shoring, bracing, and supports, and other methods approved by the Engineer. Items which are to remain or are to be salvaged which are damaged during the performance of the work shall be repaired to their original condition or replaced with new by the Contractor, at no additional cost to the owner or the City.

Do not overload structural elements. Provide new supports and reinforcement for existing construction weakened by demolition or removal work.

The Contractor shall protect all services and utilities which are to remain. Where removal of existing structures, utilities, sidewalk, pavers and pavement is specified or indicated, Contractor shall provide approved barricades, temporary covering of exposed areas, and temporary services or connections for utilities.

The Contractor shall use extra caution in the excavation adjacent to existing utilities and structures. Existing high voltage electrical lines and communications lines are present in the area. Existing utilities shall remain in operation during construction and the Contractor shall utilize extreme caution in the protection in place of these utility lines during excavation for the installation and compaction of structural soil.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for the various items of work, and no additional compensation will be allowed therefor.

9.0 TREE REMOVAL

Individual tree removal work shall conform to Sections 20-1.03 of the Caltrans Standard Specifications and be performed in advance of earthwork. All cuttings and debris shall be removed immediately. All tree stumps shall be removed in their entirety.

Where underground utilities conflict with tree or stump removal, the utilities shall be carefully supported and protected by the Contractor, and in case of damage, they shall be restored by the Contractor, at the Contractor's expense, to the satisfaction of the Engineer. Any voids created by stump removal shall be backfilled to the existing grade with Class 2 aggregate base or compacted fill material.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for "**Clearing and Grubbing**", and no additional payment will be allowed therefor.

10.0 DEMOLITION, CLEARING AND GRUBBING

Clearing and grubbing shall conform to Section 17-2 of the Caltrans Standard Specifications, and as directed by the Engineer. "Clearing and Grubbing" shall include the removal and disposal of existing PCC sidewalks and base, driveways and base, pavements and base, curbs, and gutters and base, asphalt concrete and base, temporary sidewalk patches, aggregate base below paved surfaces, pavement interlayer fabric, geogrid, petromat, signs and posts, trees and roots, irrigation systems, fences, walls, utilities, storm drain, foundations, disposal/salvaging of traffic signal and street light poles and equipment, and removal and replacement of other obstructions and facilities in conflict with the construction and in performing the Work as specified.

Where necessary to make an excavation within fifteen feet (15') of any tree to remain, use all possible care to avoid injury to trees and tree roots. Any exposed tree roots shall be hand trimmed to a level of twelve inches (12") below grade and three inches (3") outside the limits of finished pavement, making clean cuts through each exposed root and immediately covered with backfill or damp burlap material. At no time, shall roots be pruned by mechanical means such as excavator, trencher or backhoe. All work shall be done in accordance with such generally accepted arboricultural specifications and standards of practice necessary to protect the vitality of the tree. Any tree to remain in place and damaged beyond salvage ability by the Contractor shall be replaced at the direction of the Engineer with two (2) fifteen (15) gallon trees of the same species and planted.

Concrete removal shall be sawcut to neat, clean lines as shown on the Plans. Ragged or uneven pavement edges will not be allowed. In such cases, the Contractor will be required to over cut the adjacent pavement to a minimum of one (1') foot and replace the full depth pavement section. No additional payment will be allowed for this additional

sawcutting, over excavation, and replacement.

Whenever a part of a slab of existing concrete is broken or damaged, the entire section or slab to the nearest joint shall be removed and the concrete reconstructed as specified above and as shown on the Plans.

The outline of all areas to be removed in Portland cement concrete sidewalks, driveways and pavements shall be removed in accordance with Section 15-1.03 of the Caltrans Standard Specifications, and as described herein. Portland cement concrete shall be sawcut with an abrasive type saw prior to removing the concrete material. Cuts shall be neat and true along score lines, with no shatter outside the removal area.

Asphalt pavement and base materials shall be removed in accordance with Section 19-2.03A, and as described herein.

Where asphalt concrete surfacing is repaired or replaced on private property, the Contractor shall install asphalt concrete and base material to the same or higher thickness as the existing section, or as shown on the Plans.

The Contractor shall prevent sawcut slurry discharges to gutters, storm drains, and watercourses. The Contractor shall shovel, absorb or vacuum the slurry residue from the pavement or gutters and remove from the site at the end of the day or job (whichever is sooner).

The Contractor shall not remove more than one thousand (1,000) linear feet of sidewalk, driveways and curbs (measured along the roadway center line) in advance of the installation of new sidewalks, driveways, and curbs, unless approved by the Engineer.

Where shown on the Plans, or as directed by the Engineer, the Contractor shall modify, cap, abandon, or relocate existing irrigation systems. Replacements shall be with in-kind materials.

Foundations shall be removed to a depth of at least 30-inches below existing ground.

All materials to be removed and disposed of by the Contractor shall become the property of the Contractor. The Contractor has sole discretion on the means of hauling away the removal items and is obligated to dispose of such materials in accordance with all applicable laws, regulations, and ordinances. The Contractor may use Contractor's own vehicles and employees to haul waste that is incidental to the contract. If the Contractor self-hauls waste material, he or she must designate the specific State permitted landfill or recycling facility that will be used to dispose of any waste material generated on the job. If the Contractor does not designate a State permitted disposal site, he or she shall obtain a hold harmless agreement acceptable to the City.

Certain existing improvements shall be demolished, removed, disposed, stored, salvaged, reconstructed, and/or relocated as shown on the Plans. Items and materials not scheduled for re-use, relocation or re-installation within the project limits shall be

immediately loaded into trucks and removed from the site and legally disposed of off-site.

The Contractor shall not dispose of the improvements or materials therefrom by sale, gift, or in any manner whatsoever to the general public at the site, provided, however, that this provision shall not be construed as limiting or prohibiting the sale or disposal of such improvements or materials at the site to duly licensed contractors, and provided that the Contractor verifies that all such materials have been removed from the site.

To the maximum extent practicable, recycle nonhazardous job site waste and excess material.

Excavated materials determined to contain aerially deposited lead or other hazardous materials which have special requirements for disposal, shall be disposed of properly.

In addition to the above items, Clearing and Grubbing shall include, but not be limited to, the following items as shown on the Plans or specified in these Special Provisions:

1. Removal of existing asphalt concrete pavement sections, including asphalt concrete, pavement interlayer fabric, geogrid, petromat, and aggregate base materials.
2. Removal of thermoplastic pavement markings, posts, fencing, utility boxes, and pull boxes.
3. Removal of PCC pavement, PCC curb, PCC curb and gutter, PCC sidewalks, PCC curb ramps, including aggregate base material.
4. Removal of trees, shrubs, stumps, trash, debris, vegetation in the pavement cracks or curb lines, whether or not specifically indicated on the Plans or otherwise shown to be protected or relocated.
5. Deleterious materials resulting from Clearing and Grubbing operations shall be hauled away and legally disposed of at a site obtained by the Contractor.
6. Removal and disposal of any additional items not specifically mentioned which may be found within the work limits.
7. Applying water.
8. Dust Control.
9. Maintenance of project appearance.
10. Clean-up of project upon completion of work.
11. Clearing tree roots (root pruning), where tree roots are the cause of damage to existing sidewalks or may damage new improvements.
12. Tree trimming.

13. Tree protection.
14. Protection of existing facilities which are to remain.
15. Removal of underground structures.
16. Removal and salvage of existing utilities, street lighting, and traffic signal equipment.
17. Removal and disposal of interfering portions of underground utility conduit and appurtenances.
18. Removal and salvage of existing signs, post foundations, street furniture, and pull boxes.
19. Removal of Detectable Warning Tiles.
20. Asphalt concrete milling.
21. Adjustment of utility boxes to finished grade.

Damage to asphalt concrete pavement, buildings and structures, utilities, PCC flatwork, and other existing facilities which are to remain in place beyond the excavation limits shall be repaired to a condition satisfactory to the Engineer at the Contractor's expense.

Measurement and Payment

“Clearing and Grubbing” shall be measured for payment as a lump sum.

The contract lump sum price paid for **“Clearing and Grubbing”** shall include full compensation for all labor, materials, tools, equipment, and incidentals, and for doing all work involved in demolition and clearing and grubbing, including but not limited to watering, dust control, transportation, demolition, removal, salvage, root pruning (including Contractor-paid Certified Consulting Arborist), hauling and /or disposal or recycling and associated fees, permits and permit fees, performing abandonments, removals, storing, salvaging, disposal, sawcutting, protection of existing facilities, adjustments to grade, relocations, project site maintenance, and reconstruction of existing facilities, and no additional compensation will be allowed therefor.

11.0 EARTHWORK

All excavation, grading, cuts and fills, hand-digging, export, import, structural excavation, structural backfill, trench backfill, stockpiling, borrow, transport, mixing, moisture conditioning, and compaction necessary to obtain the finished grades as shown on the Plans shall be considered “unclassified excavation” and shall be done in accordance with Section 19 of the Caltrans Standard Specifications. Excess materials shall become the property of the Contractor and shall be removed from the site.

The Contractor may perform their own below ground surface investigation of the site, subject to all County and City permitting, and at the Contractor’s sole expense.

Section 4216/4217 of the Government Code requires a dig alert identification number be issued before a "Permit to Excavate" will be valid. To obtain a "Dig Alert" I.D. number, call Underground Service Alert toll free at 8-1-1 or 1-800-422-4133 two (2) working days before digging.

The Contractor will be required to grade for the new improvements in accordance with the Standard Specifications. If material must be imported to make finish subgrade, the Contractor may use Class 2 aggregate base or imported borrow. The cost of supplying and placing this material shall be considered included in the contract unit price paid for "**Unclassified Excavation**" and no additional compensation will be allowed therefor.

The Contractor is responsible for locating all existing utilities that might be disturbed or damaged from the Contractor's operation. The cost of this work, including removal and disposal of excess material, is considered included in the various bid items and no additional compensation shall be allowed therefor.

Unless otherwise shown on the Plans, or otherwise described in these Special Provisions, compaction requirements of subgrade, fill areas, and embankments, shall be a minimum of 90% relative compaction.

Contractor shall observe safety precautions in all phases of the work, including, but not limited to trench shoring, bracing, lighting, and barricades, as dictated by reason and by the Safety Orders of the Division of Industrial Safety, State of California (CAL/OSHA). Contractor shall acquire an exemption letter or trenching permit from the CAL/OSHA and comply with Labor Code Section 6705, Excavation Plans for Worker Protection. Contractor shall submit a copy of the exemption letter or trenching permit with excavation drawings to the Engineer prior to starting excavation work.

Structure excavation shall include the temporary support of all sloped and vertical plains of excavation. Shoring, where needed, shall be placed to protect existing improvements including adjacent properties. Temporary shoring design is the Contractor's responsibility and shall be designed in accordance with State of California Department of Industrial Relations, Division of Occupational Safety and Health requirements, and stamped by a registered civil or structural engineer in the State of California. The Contractor shall submit the shoring plans and calculations to the Engineer for review and approval prior to the commencement of the construction for which the shoring is required.

The Contractor shall furnish all labor, equipment, and materials required to design, construct, and remove all sheeting, shoring, and bracing, or other equivalent method of support, for the walls of open excavations required for the construction of this project.

Prior to the beginning of excavations requiring shoring, the Contractor shall designate in writing to the Engineer, someone whose responsibility is to supervise the project safety measures and someone (Trench Safety Foreman) whose responsibility is to supervise the installation and removal of sheeting, shoring, and bracing.

In addition to shoring the excavations in accordance with the minimum requirements of

the Industrial Safety Orders, it shall be the Contractor's responsibility to provide any and all additional shoring required to support the sides of the excavation against the effects of loads which may exceed those derived by using the criteria set forth in the Industrial Safety Orders. The Contractor shall be solely responsible for any damages which may result from its failure to provide adequate shoring to support the excavation under any or all of the conditions of loading which may exist, or which may arise during the construction of the project.

Full compensation for trench safety and shoring of excavation is included in the contract prices paid for the various items of work, including all costs relating to trench safety and shoring of **excavations**, the cost for preparation of the shoring plan, and obtaining said permit from the Division of Industrial Safety as described herein, and no additional payment will be made therefor.

No additional payment will be made as a result of required revisions in the trench support details due to the type of soil encountered which requires a method of trench support different from that approved.

Measurement and Payment

“Unclassified Excavation” shall be measured for payment by the cubic yard.

The contract unit price paid for “Unclassified Excavation” shall include full compensation for all excavation, disposal, site preparation, unclassified fill, borrow excavation, grading, hand-digging, compaction, field testing, imported borrow, export, backfill, subgrade preparation, re-compaction, disposing of surplus material, stockpiling, hauling it to its final location, labor, materials, tools, equipment and all incidental work, and no additional compensation shall be made therefor.

12.0 CLASS 2 AGGREGATE BASE

The Class 2 base material shall conform to Caltrans Standard Specifications Section 26 for ¾ inch maximum base material. The gradation requirements are as follows:

<u>SIZE PERCENT</u>	<u>PASSING</u>
1 IN/25.00MM	100
¾ IN/19.00MM	87-100
#4/4.75MM	30-65
#30/600MM	5-35
#200/75.00MM	0-12

The sand equivalent shall be 25 or greater. An angular aggregate is to be used. Class 2 base material shall be compacted to 95 percent of maximum density according to ASTM D-1557, unless otherwise noted on the plans or details. The tolerance for the class 2 base between design subgrade elevation and actual subgrade elevation as constructed in the field shall be plus or minus 0.02 feet as referenced from the design subgrade. Prior to the placement of class 2 base the native subbase grade shall be checked and approved by the construction manager or City Inspector. The native subbase grade shall be within plus or minus 0.05 feet of native subbase design grade prior to the placement of class 2 base.

The Contractor shall supply a five-gallon sample of the class 2 base to the material testing laboratory within four (4) days of the notice to proceed. The material shall be delivered to the testing laboratory to determine the maximum density, gradation, r-value, sand equivalent and durability index of the class 2 base. A copy of the test results shall be forwarded to the construction manager or City by the geotechnical consultant for review. The gradation of the class 2 base shall be determined, and the test results forwarded to the construction manager or City for approval prior to the delivery of the class 2 base material to the construction site. Class 2 base utilizing recycled materials shall be allowed in lieu of virgin class 2 base as long as the specifications meet the Caltrans standard specifications section 26.

The Contractor shall take samples for testing Relative Compaction of the class 2 the aggregate based in accordance Section 26-1.01D(2)(d) and the California Test 231.

The Contractor shall submit certified test reports form the vendor specifying the aggregate gradation along with a certification form the vendor that the material meets the specification and requirements of this section within five (5) working days following the Notice to Proceed.

Measurement and Payment

“**Construct Class 2 Aggregate Base (Under HMA and PCC)**” shall be measured for payment by the cubic yard of material placed.

The contract unit price paid for “**Construct Class 2 Aggregate Base (Under HMA and PCC)**” shall include full compensation for all loading, testing, quality control, hauling, depositing, moisture conditioning, compacting, labor, materials, tools, equipment and all incidental work, and no additional compensation shall be allowed therefor.

13.0 ASPHALT CONCRETE

13.1 General

Asphalt Concrete shall be constructed in accordance with Section 39 of the Caltrans Standard Specifications and these Special Provisions, including, but not limited to, requirements, specifications, quality, and acceptance criteria for designing, producing, and placing asphalt concrete by mixing aggregate and asphalt binder in a laboratory and at a mixing plant, and spreading and compacting the asphalt concrete mixture at the site.

The Contractor shall submit a certification and mix design in accordance with the Caltrans Standard Specifications by the asphalt concrete vendor demonstrating that the supplied material meets the requirements of this Special Provision, along with a test report showing the gradation of the material, supplied within ten (10) working days following the Notice to Proceed. The mix design shall clearly specify the source(s) of all aggregates and asphalt binders utilized in the mix design, along with a statement that said aggregate and asphalt binder sources shall be used for the duration of the project.

All asphalt concrete shall be Type A Hot Mix Asphalt (HMA), PG 70-10, unless otherwise noted in this Special Provision. Reclaimed Asphalt Pavement (RAP) shall not exceed 15%.

Asphalt concrete base course pavement lift thickness shall be between 2.4” and 4”. Asphalt concrete base course gradation shall be $\frac{3}{4}$ inch.

Asphalt concrete surface course pavement lift thickness shall be between 1.6” and 2.4”. Asphalt concrete surface course gradation shall be $\frac{1}{2}$ inch.

Asphalt concrete pavement sections less than 4” thick shall be placed as a single base course pavement lift.

Leveling course shall be constructed in accordance with Section 39-2.01 of the Caltrans Standard Specifications, and these Special Provisions, including, but not limited to, requirements, specifications, quality, and acceptance criteria for designing, producing, and placing asphalt concrete by mixing aggregate and asphalt binder in a laboratory and at a mixing plant, and spreading and compacting the asphalt concrete mixture.

The leveling course asphalt binder shall be PG 70-10. The aggregates for the leveling course must comply with the gradation specifications for Type A HMA in section 39-2.02B.

The Contractor shall submit a quality control plan for HMA at least 5 days prior to the pre-paving meeting in accordance with Section 39-2.01q(3)(c) of the Caltrans standard Specifications. The Contractor shall take HMA samples to testing size in accordance with California Test 125 and reduce samples of HMA to testing size under California Test 306.

Contractor shall submit job mix verification in accordance Section 39-201A(4)(b) of the Caltrans standard Specifications.

Contractor shall evaluate HMA production and placement at production start-up in accordance with Section 39-2.01A(h)(v) of the Caltrans standard Specifications.

During HMA placement determine the HMA density using a nuclear gauge in accordance with Section 39-2.01A(4)(h)(vi) of the Caltrans standard Specifications.

Contractor shall take density cores every 5 business days, or every 250 tons of HMA placed, whichever comes first, in accordance with Section 39-2.01A(h)(viii) of the Caltrans standard Specifications. Contractor shall take density cores from the final layer in accordance with Section 39-2.01(4)(i)(ii) of the Caltrans standard Specifications.

Contractor shall test for pavement smoothness in accordance with Section 39-2.01A(4)(i)(iii) of the Caltrans standard Specifications.

Asphalt rubber hot mix (ARHM) shall be constructed in accordance with Section 302-9 of the Greenbook Standard Specifications including, but not limited to, requirements, specifications, quality, and acceptance criteria for designing, producing, and placing ARHM by mixing aggregate and rubberized asphalt binder in a laboratory and at a mixing plant, and spreading and compacting the ARHM mixture at the site.

Asphalt rubber aggregate membrane (ARAM) shall be constructed in accordance with Section 302-10 of the Greenbook Standard Specifications including, but not limited to, requirements, specifications, quality, and acceptance criteria for designing, producing, and placing ARAM by mixing aggregate and rubberized asphalt binder in a laboratory and at a mixing plant, and spreading and compacting the ARAM mixture at the site. Before placement of the first lift of the asphalt concrete base course, the Contractor shall tie-out the locations of the tops and full dimensions of all manholes, valve lids, vault covers, survey monuments, etc. that must be adjusted to grade by the Contractor or various utility companies. Adjustments to grade shall be in accordance with the Standard Specifications, these Special Provisions, and utility company's requirements. It is the responsibility of the Contractor to preserve the location and condition of all manholes, valve lids, vault covers, etc. during the course of construction. All adjustments to grade shall be considered included in the contract lump sum price

paid for "Clearing and Grubbing" and no additional compensation will be made therefor.

The final surface course of asphalt concrete shall be installed as a last order of work following the completion of all surrounding concrete and utility improvements.

Measurement and Payment

"**Construct Hot Mix Asphalt**" shall be measured for payment by the ton of material placed.

The contract unit price paid for "**Construct Hot Mix Asphalt**" shall include full compensation for all labor, materials, testing and quality assurance, quality control, density cores, tools, equipment, and incidentals, loading, hauling, depositing, compacting, rolling, surface preparation, tack coat, asphalt concrete, leveling course, ARAM, and ARHM, and no additional compensation will be allowed therefor.

13.2 Tack Coat

Tack coat consisting of RS1 emulsified asphalt conforming to the requirements of Section 94 of the Caltrans Specifications shall be applied prior to the placement of asphalt concrete, trench restoration, or successive layers of asphalt concrete.

Measurement and Payment

No separate measurement will be made for complying with the requirements of this section.

Full compensation for furnishing and installing tack coat shall be included in the contract unit price paid for "**Construct Hot Mix Asphalt**" and no separate payment shall be made therefor.

13.3 Stress Relieving Pavement Mat (Engineering Paving Mat Interlayer)

This work shall consist of furnishing and placing an engineered paving mat within the pavement structure as shown on the Plans or directed by the Engineer. The engineered paving mat shall provide a moisture barrier/stress relieving membrane and shall be placed beneath an asphalt concrete overlay.

Paving interlayer fabric shall be Mirafi MPM30 (PGM-30) or approved equivalent and shall be constructed of high-strength glass filaments bonded to a polyester fabric, conforming to the following properties:

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value
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Tensile Strength @ 0°	ASTM D5035 (2C-E)	lbs	200
Tensile Strength @ 90°			200
Tensile Elongation	ASTM D5035	%	<5
			Minimum Test Value
Melting Point	ASTM D276	F° (C°)	450° (232°)
Asphalt Retention	ASTM D6140	gal/yd ²	0.10
Mass/Unit Area	ASTM D5261	oz/yd ²	4.0

Physical Properties	Unit	Roll Characteristics	
Roll Dimensions (width x length)	ft	10 x 450	12.5 x 360
Roll Area	yd ²	500	500
Estimated Roll Weight	lbs	172	172

The engineered paving mat shall be stored in accordance with the manufacturer's requirements in a dry, covered condition free from dust, dirt and moisture. The engineered paving mat shall be installed in accordance with the manufacturer's specifications and this Special Provision. Where a conflict exists between the specifications, the more stringent specification will apply. A copy of the proposed manufacturer's specifications shall be provided to the Engineer for review and approval at the pre-construction meeting or no later than (10) ten working days prior to installation.

A tack coat consisting of PG 70-10 asphalt binder shall be applied to the milled pavement surface immediately prior to application of the engineered paving mat interlayer.. Application rate shall be 0.15 +/- .03 gallons per square yard.

The surface on which the engineered paving mat is to be placed shall be reasonably free of dirt, water, vegetation or other debris. The engineered paving mat shall be placed on a drainable surface, and any rutting or low spots in the pavement shall be removed by milling or by the use of a leveling course. Cracks exceeding ¼-inch in width shall be filled with suitable elastomeric crack filler.

Neither the asphalt binder nor the engineered paving mat shall be placed when weather conditions, in the judgment of the Engineer, are not suitable. Air and pavement temperatures shall be sufficient to allow the tack coat to hold the engineered paving mat in place. The air temperature shall be 50 ° F and rising for placement of the asphalt tack coat.

Application of the tack coat shall be by a calibrated distributor truck spray bar. Emulsified Asphalt shall not be allowed. Temperature of the tack coat shall be sufficiently high enough to permit uniform spray pattern and shall be between 325° F and 400° F.

The target width of the tack coat application shall be the engineered paving mat material width plus four (4) inches. Tack coat application shall be wide enough to cover the entire width of engineered paving mat material overlaps. The tack coat shall be applied only as far in advance of the engineered paving mat material installation as is appropriate to ensure a tacky surface at the time of the engineered paving mat material placement. Traffic shall not be allowed on the tack coat.

The engineered paving mat shall be placed onto the tack coat with minimum folds or wrinkles and before the tack coat has cooled and lost tackiness. As directed by the Engineer, wrinkles or folds in excess of (one) 1 inch shall be slit and laid flat or pulled out and replaced. In these repaired areas, additional tack coat shall be applied as needed to achieve a sound bond to the substrate. Damaged engineered paving mat shall be removed and replaced, per the manufacturer's recommendations, at the Contractor's expense with the same type of material.

Brooming, squeegee, or pneumatic tire rolling shall be used to remove any air bubbles and to maximize engineered paving mat contact with the pavement surface and shall be done in accordance with the manufacturer's specifications and to the satisfaction of the Engineer.

Excess tack coat that bleeds through the engineered paving mat under normal construction traffic shall be countered by broadcasting clean sand or hot mix to create a bond break between the excess tack and the construction equipment tires. If sand is applied, any excess sand shall be removed from the interlayer prior to placing the asphalt concrete overlay. No other material, such as asphalt release agents or diesel, shall be used for this purpose. No traffic, except necessary construction traffic or emergency vehicles, shall be driven on the engineered paving mat, unless approved by the Engineer. If the Engineer approved traffic on the engineered paving mat, clean sand shall be lightly broadcast over the engineered paving mat interlayer, and any loose sand shall be removed prior to paving.

Placement of the first lift of the asphalt concrete overlay shall closely follow placement of the engineered paving mat. All areas in which the engineered paving mat has been placed shall be paved during the same day, unless approved otherwise by the Engineer. In the event of rainfall on the engineered paving mat prior to the placement of the first asphalt concrete overlay lift, the

engineered paving mat shall be allowed to dry before the asphalt concrete is placed. The compacted thickness of the first lift of the asphalt concrete overlay on the engineered paving mat shall not be less than 1.5 inches, and the temperature of the mix at placement shall not exceed the engineered paving mat's melting point temperature. Where the total asphalt concrete overlay thickness is less than 1.5 inches, engineered paving mat shall not be used.

Measurement and Payment

"Furnish and Install Paving Fabric" shall be measured for payment by the square yard of material placed. All overlaps of mat interlayer required by the Manufacturer's installation specifications will not be included in the square yardage measurement.

The contract unit price paid for **"Furnish and Install Paving Fabric"** shall include full compensation for preparation, tack coat, placement, storage, and all labor, materials, tools, equipment, and incidentals necessary for a complete installation, and no additional compensation will be allowed therefor.

13.4 Hot Mix Asphalt Dike

Hot mix asphalt dike shall be constructed in conformance with Sections 39-2 of the Caltrans Standard Specifications, the applicable Standard Drawings, the Plans and these Special Provisions.

Measurement and Payment

"Construct HMA Dike Type A per Caltrans Standard Plan A87B" shall be measured for payment by the linear foot of dike installed.

The contract unit price paid for **"Construct HMA Dike Type A per Caltrans Standard Plan A87B"** shall include full compensation for all material, labor, plant, equipment, furnishing all transportation, hauling, spreading, finishing, complete in place, and incidentals necessary for a complete installation and no additional compensation will be allowed therefor.

14.0 COLD MILL

Existing asphalt concrete shall be cold milled or ground in accordance with Section 404 of the Greenbook Standard Specifications, and these Special Provisions.

At least two full time flag persons shall be assigned to the milling machine for traffic control when working on streets open to traffic.

The asphalt concrete millings shall be disposed of at a recycling plant. The Contractor shall provide the City with proof that the asphalt concrete millings and other asphalt concrete to be disposed of has been recycled.

The Contractor shall take care not to contaminate the millings with non-aggregate base material, including disintegrated granite.

Measurement and Payment

“**Cold Mill**” shall be measured for payment by the square foot of material removed.

The contract unit price paid for “**Cold Mill**” shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in cold milling asphalt concrete pavement and disposing of the material removed, as specified in these Special Provisions, as shown on the Plans and as directed by the Engineer, and no additional compensation shall be allowed therefor.

15.0 SLURRY SEAL

This work shall consist of furnishing and placing of Emulsion Aggregate Slurry (EAS) (Type II) and shall conform to section 37-3 of the Caltrans Standard Specifications.

Prior to applying the slurry seal the existing pavement shall be cleaned and prepared in accordance with the Standard Specifications. Existing pavement markings and pavement markers shall be removed prior to applying the slurry seal.

Measurement and Payment

“**Place Type II Slurry Seal**” shall be measured for payment by the square yard of material placed.

The contract unit price paid for “**Place Type II Slurry Seal**” shall include full compensation for providing and placing EAS, surface preparation, and all labor, materials, equipment, tools, and incidentals necessary for a complete installation, and no additional compensation will be allowed therefor.

16.0 ADJUST MANHOLES AND UTILITIES TO GRADE

All manhole frames and covers, valve boxes and lids, and other similar existing utilities shall be raised to the grade of the finished pavement surface by the contractor. Manhole frames and covers, and similar utility covers shall be lowered a minimum of 3 inches below the design pavement surface prior to the installation of A.C. pavement. Manhole frames and covers, and other lids shall be raised after paving operations have occurred. 8-inch wide, 8-inch deep concrete collars shall be poured concentric with the outside of valve extension risers 3/8 inches below the finish pavement surface. A one (1) foot wide, one (1) foot deep concrete collar shall be poured concentric with the outside of all manhole frames and covers 3/8 inches below the surface of the pavement. Manhole frames and covers shall be raised with concrete grade rings 3/8 inches below the new street pavement surface elevation. The manhole frame and covers and valve extension risers and covers shall be raised 3/8 inches below the pavement grade after paving operations are complete

Measurement and Payment

No separate measurement will be made for complying with the requirements of this section.

Full compensation for adjusting manholes to grade shall be included in the contract lump sum price paid for “**Clearing and Grubbing**,” and no separate payment shall be made therefor.

17.0 WATER SERVICE

Water Service lateral and meter box shall be constructed as shown on the Plans.

Measurement and Payment

“**Furnish and Install New Water Service**” shall be measured for payment by each constructed.

The contract unit price paid for “**Furnish and Install New Water Service**” shall include full compensation for all labor, materials, testing, and equipment to install the new water service. This bid item shall include all earthwork and imported bedding and backfill materials, service saddle, corporation stop, copper tubing, fittings, angle meter valve, sacrificial anodes, meter box and lid, and all other appurtenances, and no additional payment shall be allowed therefor.

18.0 PCC SURFACE IMPROVEMENTS

18.1 General

PCC shall meet the requirements of Section 90-2 “Minor Concrete” of the Caltrans Standard Specifications.

PCC concrete, utilized for but not limited to, curb and gutter, barrier curb, spandrels, cross-gutter, valley gutter, ribbon gutters, residential and commercial driveways, sidewalks and all other concrete infrastructure shall contain a minimum of 7 sacks of cement per cubic yard of concrete and attain 5,000 psi compressive strength after 28 days curing unless stated otherwise on the plans. The PCC shall contain 1 ½ lbs. of polypropylene fiber per cubic yard. A concrete mix design shall be submitted to the Engineer within five (5) days after the issuance of the notice to proceed. New formwork shall be utilized in the construction of every concrete facility. The formwork shall be true to line and grade. The vertical flowline elevation tolerance shall be +/- 0.02 feet for design grade for slopes of 1.0% or greater, +/- 0.01 for design grade for slopes less than 1.0%. The City Inspector shall check the formwork for line and grade prior to the placement of concrete. The Contractor shall notify the Engineer 72 hours prior to the required inspection. Exposed surfaces of concrete areas shall receive a double trowel finish. Weakened plane joints shall be placed every 8 lineal feet

for ribbon gutter, cross gutter and valley gutter construction unless otherwise illustrated on the Plans or Standard Plans. Expansion joints shall be placed every 32 feet along curb and gutter, barrier curb, valley gutter and sidewalk construction unless otherwise illustrated on the Plans or Standard Plans. Installation of curb and gutter, valley gutter and cross-gutters shall begin at the lowest elevation and proceed uphill. A total of one (1) set of cylinders and one (1) slump test shall be required for every 50 cubic yards of concrete, except that a minimum of one (1) set of cylinders and slump test shall be required each day twenty (20) or more yards of concrete are placed at a project site.

The maximum allowable slump shall be four (4) inches. A set of cylinders shall be composed of three (3) cylinders. The first cylinder of a set shall be tested after seven (7) days curing. The second cylinder of a set shall be tested after 28 days curing. The third cylinder shall be held in reserve and tested if directed by the Engineer. The test results will be forwarded to the construction manager or City for review. The Engineer shall receive a concrete vendor slip for each truck load of concrete delivered to the project site.

Prior to the placement of concrete, the subgrade depth shall be inspected to ensure that the full depth of concrete, as noted on the plans, is attained. Excess fill material shall be removed as required by the Engineer. The form boards shall be checked for the proper elevation. Compaction tests on the subgrade shall have achieved the density requirements specified. The Engineer shall then allow the placement of concrete.

The concrete shall be screeded and floated. All edges shall be struck with a concrete edger. Weakened plane joints shall be established at right angles to the sidewalk edge as illustrated on the standard drawings. The weakened plane joints shall be 3/8 inch in width and 3/4 inch in depth. Expansion joints consisting of 1/2-inch-thick fiberboard material shall be placed across the full section of the PCC sidewalk every 32 lineal feet, or as required by the standard plans. After the concrete surface has been floated and cured adequately, it shall receive a double trowel finish. The troweling shall be accomplished by hand with a steel trowel. The surface of the concrete shall receive a light broom finish after the surface is double troweled. The surface of the concrete shall be smooth and true to grade. Tolerance for the concrete surface shall be 1/8 inch in 10 lineal feet with maximum high and low variance not occurring in less than 20 feet. The Contractor shall maintain the concrete surface moist or wet for a 24-hour period after the concrete is placed and finished troweled. Placement of burlap bags or used carpet over the concrete surface and a continuous application of water over the concrete surface will be required for a 24-hour period. After the 24-hour period, a concrete sealer shall be applied to all new PCC concrete surfaces. The concrete surfaces shall be cleaned of all dirt and residue prior to the placement of the concrete sealer. Concrete shall not be placed after 10:00 a.m. on Fridays.

Measurement and Payment

Measurement for the various items of Portland Cement Concrete (PCC) work shall be measured in accordance with the Bid Schedule and as specified in the

various sections of these Special Provisions.

Unless specified otherwise in the Bid Schedule, miscellaneous structure foundations shall be paid under the item of work they are associated.

Measurement and payment for concrete curb and gutter (all types) or curb only (all types) shall include transition sections necessary to conform to existing curb and gutter or curb, transition sections between different types of curb and gutter or curb; curb and gutter or curb along ADA curb ramps (all types) and driveways (all types); and dispersion area bmp curb inlets/outlets.

PCC bid items include, but are not limited to:

“Construct PCC Curb and Gutter per City of Imperial Standard Detail 400”

“Construct PCC Barrier Curb per City of Imperial Standard Detail No 401”

“Construct Modified Rolled Curb”

“Construct Type A3-6 Pin on Curb per Caltrans Standard Plan A87A”

“Construct PCC Sidewalk per City of Imperial Standard Detail 407-A”

“Construct Type A PCC ADA Passageway per Caltrans Standard Plan A88B”

“Construct Type B PCC ADA Passageway per Caltrans Standard Plan A88B”

“Construct PCC ADA Curb Ramp (All Types)”

“Construct PCC Spandrel per City of Imperial Standard Detail 410”

“Construct PCC Cross Gutter per City of Imperial Standard Detail 411”

“Construct PCC Median Infill”

“Construct PCC Driveway (All Types)”

Full compensation for Portland Cement Concrete construction as indicated in the Bid Schedule is considered included in the contract unit prices paid for the various PCC bid items and no additional compensation will be allowed therefor. The contract unit prices paid for the PCC items of work shall include full compensation for furnishing all labor, materials, tools, equipment, transportation, testing, reinforcement, joints, joint sealant, dowels, transitions, finishing, curing, test panels, subgrade preparation, sawcutting, truncated domes (for ADA curb ramps), and incidentals necessary for a complete installation, and no additional compensation will be allowed therefor.

19.0 TRENCH EXCAVATION, PIPE SUBGRADE, AND TRENCH BACKFILL

Trenches, excavation, and backfill for storm drain pipes and structures shall conform to Sections 300, 302, 306 and other applicable sections of the Greenbook Standard Specifications, the Plans and these Special Provisions.

On the same day, the trench shall be excavated, waste material removed or salvaged, pipe laid, and trench backfilled. Backfill shall be to final grade, except in streets, driveways and other areas that receive asphalt concrete or PCC paving. In these areas, the Contractor may backfill to not less than two inches (2") of final grade and place temporary paving on the same day the trench is opened. The Contractor shall assume full responsibility for maintaining the surface of the trench at the same grade existing on each side, and shall open the streets and other areas to allow normal passage of vehicular and pedestrian traffic.

Permanent trench surface restoration and base paving shall be placed within ten (10) days after pipe installation.

Surplus material shall not be dumped on private property, unless prior written permission, signed by the property owner is furnished to the Engineer.

The Contractor shall comply with the California Public Contract Code Section No. 7104, Contracts for digging trenches or excavations; notice on discovery of hazardous waste or other unusual conditions; investigations; change orders; effect on contract; as follows:

The Contractor shall promptly, and before the following conditions are disturbed, notify the City in writing, of any:

1. 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.
2. Subsurface or latent physical conditions at the site differing from those indicated.
3. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

The City shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the work shall issue a change order request under the procedures described in the contract.

In the event that a dispute arises between the City and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any

part of the work, the Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all work to be performed under the contract. The Contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

Where unsuitable material is encountered in the trench bottom, it shall be removed to the width and depth as ordered by the Engineer. This material shall be replaced by Class 2 Aggregate Base.

Full compensation for Class 2 Aggregate Base to replace unsuitable material as specified shall be included in contract unit price paid for the various items requiring the all material, including all labor, tools, and equipment including excavating and disposing of the unsuitable material, loading, hauling, disposal, compacting and all work involved in the placement as specified, and no additional payment will be made therefor.

Pipe bedding and trench backfill shall be installed in accordance with the Plans, Section 306 of the Greenbook Standard Specifications, and these Special Provisions.

The bottom of the trench shall be excavated a minimum of six (6") inches below the grade of the bottom of the pipe and a subgrade installed consisting of crushed rock conforming to the following grading and composition requirements placed. The crushed rock shall be used for installations of all non-pressure pipe. The crushed rock shall be clean crushed stone free of organic matter. Crushed rock shall be certified to contain less than 1% asbestos by weight or volume and shall conform to the following gradation:

U. S. Standard Percent	Passing Sieve Size By Weight
25mm (1")	100
19mm (3/4")	90-100
12.5mm (1/2")	30-60
9.5mm (3/8")	0-20
4.75mm (No. 4)	0-5
2.36mm (No. 8)	----

In addition, crushed rock shall meet or exceed the following requirements for resistance to abrasion or impact as measured using ASTM Test Method C 131, Test Sample Grading B: 100 Revolutions: 15% Maximum Loss by Weight 500 Revolutions: 52% Maximum Loss by Weight.

The crushed rock shall be placed to twelve inches (12") above the top of the pipe. The remainder of pipe bedding shall be as shown on the Plans and

Standard Drawings and the Standard Specifications.

Jetting as a procedure for compaction for any type of pipe shall not be used.

Additional bedding required below or adjacent to pipe subgrade to fill the void caused by the removal of existing obstructions shall be crushed rock as specified above and shall not be a separate bid item. The cost of this material is considered as included in the contract unit prices paid for gravity pipes, and no additional payment will be made therefor.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract unit prices paid for the various items of work, and no separate payment shall be made therefor.

20.0 RCP STORM DRAIN

Reinforced Concrete Pipe (RCP) storm drains shall be 1350-D, sizes as shown on the Plans. The storm drain pipes shall conform to, and be placed in accordance with, Sections 65-2 of the Caltrans Standard Specifications, the Plans, and these Special Provisions.

Connections and stabilization of new storm drain pipe to new and existing structures shall be included as incidental costs of RCP Storm Drain and built in accordance with the applicable Standard Drawings and Standard Specifications.

Measurement and Payment

“Furnish and Install 18” RCP Storm Drain” shall be measured for payment by the linear foot of pipe installed.

The contract unit price paid for **“Furnish and Install 18” RCP Storm Drain”** shall include full compensation for furnishing all labor, materials, tools, equipment, transportation and incidentals for doing all work involved in installing storm drain pipes, connection to new and existing storm drainage pipes and structures, trench safety and shoring, excavation, bedding, backfill, temporary pavement repair, disposal of existing pipe and excavated materials, and all labor, materials, tools, equipment, and incidentals, and all work necessary for installation, complete in place, and no additional compensation shall be allowed therefor.

21.0 REINFORCED CONCRETE STRUCTURES

Reinforced concrete inlets, storm drain cleanouts, and headwalls shall conform to Sections 51, and 52, of the Caltrans Standard Specifications. Reinforced concrete structures shall be constructed per the Standard Drawings and as shown on the Plans. Miscellaneous iron and steel appendages or hardware shown on the Plans and the Standard Drawings shall be galvanized in accordance with Section 75-1.02B of the Caltrans Standard Specifications. No

load shall be allowed on any concrete member until the concrete has attained a compressive strength of at least three-thousand (3,000) psi.

Contractor shall adjust the cement content and admixtures, with the prior approval from the Engineer, as necessary to assure the concrete will reach the required compressive strength before backfill.

All steel reinforcing shall be Grade 60, ASTM Designation A615. Aluminum and plastic supports for reinforcement shall not be used.

Reinforcing steel bars shall be accurately spaced as shown on the Plans and/or Standard Drawings. The spacing of the first bar immediately adjacent to a transverse construction joint shall be one-half the required spacing shown on the Plans. In no case shall the clear distance between parallel bars be less than 2-½ diameters of the bar or a minimum of two (2) inches.

Unless otherwise shown on the Plans and/or Standard Drawings, embedment of reinforcing steel (other than stirrups and spacers) shall be 1-½ inches clear depth for #8 bars and smaller, and shall be 2 inches clear for #9 bars and larger. Where placement of reinforcing steel requires alternate bars of different size, embedment requirements shall be governed by the larger bar. Stirrups and spacers shall be embedded not less than one-inch clear depth. Measurement of embedment shall be from the outside of the bar to the nearest concrete face.

Tack welding on reinforcing bars will not be permitted.

Splicing of reinforcing bars shall be either by lapping, butt welding, or by mechanical butt splicing, at the option of the Contractor. Splicing shall comply with the requirements set forth in Section 52-6, "Splicing," of the Caltrans Standard Specifications and the applicable subsections of Section 11-3 of the Caltrans Standard Specifications.

Reinforcing bars may be continuous at locations where splices are shown on the Plans, at the option of the Contractor. The location of splices, except where shown on the Plans, shall be determined by the Contractor as approved by the Engineer, based upon using available commercial lengths where practicable.

Unless otherwise shown on the Plans or approved by the Engineer, splices in adjacent reinforcing bars shall be staggered. The minimum distance between staggered splices for reinforcing bars No. 11 or smaller shall be the length required for a lapped splice in the bar.

Completed welded butt splices and mechanical butt splices shall develop not less than 90 percent of the specified minimum ultimate tensile strength of the un-spliced reinforcing bar.

The deviation in alignment of reinforcing bars at a welded or mechanical splice shall not be more than ¼-inch over a 3 ½ foot length of bar.

Prior to use in the work, welded butt splices and mechanical butt splices shall be

qualified by tests made on sample splices.

During progress of the Work, in addition to inspection and non-destructive testing performed by the Engineer on all types of butt splices, job control tests shall be made on sample splices representing each lot of mechanical butt splices. Sample splices for qualification and job control tests shall be tested for compliance with all specified requirements for splices. All such sample splices shall be fabricated and tested by the Contractor at its cost and a copy of the test results furnished to the Engineer.

Splices shall consist of placing the reinforcing bars in contact and wiring them together in such a manner as to maintain the alignment of the bars and to provide minimum clearances.

No lapped splices will be permitted at locations where the concrete section is not sufficient to provide a minimum clear distance of two (2) inches between the splice and the nearest adjacent bar. The clearance to the surface of the concrete shall not be reduced.

The length of lapped splices shall be as follows: Reinforcing bars No. 8, or smaller, shall be lapped at least 45 diameters of the smaller bar joined, and reinforcing bars Nos. 9, 10, and 11 shall be lapped at least 60 diameters of the smaller bar joined, except when otherwise shown on the Plans.

Splices of tensile reinforcement at points of maximum stress shall be avoided; however, any deviation from splices shown on the Plans shall be approved by the Engineer. Splices in longitudinal steel shall be staggered at least the length of the splice.

Measurement and Payment

“Construct type G-2 Inlet With Grate per Caltrans Standard Plan D73-b and D77-A”, “ Construct straight Headwall per Caltrans Standard Plan D89B”,and “Construct 18” Concrete Pipe Collar” shall be measured for payment by each constructed.

The contract unit prices paid for **“Construct type G-2 Inlet With Grate per Caltrans Standard Plan D73-b and D77-A and “Construct 18” Concrete Pipe Collar”** shall include full compensation for furnishing all labor, materials, tools, equipment, transportation and incidentals for doing all the work involved in installing concrete structures, trench safety and shoring, excavation, removals and disposals, concrete formwork, reinforcement, compaction, backfill, curing, finishing, necessary for a complete installation, and no additional compensation shall be allowed therefor.

22.0 REINFORCED CONCRETE UNDERDRAIN AND RIP RAP PAD

Reinforced concrete underdrain and rip rap pad shall conform to Sections 51 and 52 of the Caltrans Standard Specifications. Reinforced concrete underdrains and masonry structures shall be constructed as shown on the Plans.

Unless otherwise shown on the Plans and/or the Standard Drawings, miscellaneous iron and steel appendages or hardware shown on the Plans, and the Standard Drawings, shall be galvanized in accordance with Section 75-1.02B of the Caltrans Standard Specifications. No load shall be allowed on any concrete member until the concrete has attained a compressive strength of at least three-thousand (3,000) psi.

Contractor shall adjust the cement content and admixtures, with the prior approval from the Engineer, as necessary to assure the concrete will reach the required compressive strength before backfill.

All steel reinforcing shall be Grade 60, ASTM Designation A615. Aluminum and plastic supports for reinforcement shall not be used.

Reinforcing steel bars shall be accurately spaced as shown on the Plans and/or Standard Drawings. The spacing of the first bar immediately adjacent to a transverse construction joint shall be one-half the required spacing shown on the Plans. In no case shall the clear distance between parallel bars be less than 2-½ diameters of the bar or a minimum of two (2) inches.

Unless otherwise shown on the Plans and/or Standard Drawings, embedment of reinforcing steel (other than stirrups and spacers) shall be 1-½ inches clear depth for #8 bars and smaller, and shall be 2 inches clear for #9 bars and larger. Where placement of reinforcing steel requires alternate bars of different size, embedment requirements shall be governed by the larger bar. Stirrups and spacers shall be embedded not less than one-inch clear depth. Measurement of embedment shall be from the outside of the bar to the nearest concrete face.

Tack welding on reinforcing bars will not be permitted.

Splicing of reinforcing bars shall be either by lapping, butt welding, or by mechanical butt splicing, at the option of the Contractor. Splicing shall comply with the requirements set forth in Section 52-6 of the Caltrans Standard Specifications and the applicable subsections of Section 11-3 of the Caltrans Standard Specifications.

Reinforcing bars may be continuous at locations where splices are shown on the Plans, at the option of the Contractor. The location of splices, except where shown on the Plans, shall be determined by the Contractor as approved by the Engineer, based upon using available commercial lengths where practicable.

Unless otherwise shown on the Plans or approved by the Engineer, splices in adjacent reinforcing bars shall be staggered. The minimum distance between staggered splices for reinforcing bars No. 11 or smaller shall be the length required for a lapped splice in the bar.

Completed welded butt splices and mechanical butt splices shall develop not less than 90 percent of the specified minimum ultimate tensile strength of the un-spliced reinforcing bar.

The deviation in alignment of reinforcing bars at a welded or mechanical splice shall not be more than ¼-inch over a 3 ½ foot length of bar.

Prior to use in the work, welded butt splices and mechanical butt splices shall be qualified by tests made on sample splices.

During progress of the work, in addition to inspection and non-destructive testing performed by the Engineer on all types of butt splices, job control tests shall be made on sample splices representing each lot of mechanical butt splices. Sample splices for qualification and job control tests shall be tested for compliance with all specified requirements for splices. All such sample splices shall be fabricated and tested by the Contractor at its cost and a copy of the test results furnished to the Engineer.

Splices shall consist of placing the reinforcing bars in contact and wiring them together in such a manner as to maintain the alignment of the bars and to provide minimum clearances.

No lapped splices will be permitted at locations where the concrete section is not sufficient to provide a minimum clear distance of two (2) inches between the splice and the nearest adjacent bar. The clearance to the surface of the concrete shall not be reduced.

The length of lapped splices shall be as follows: Reinforcing bars No. 8, or smaller, shall be lapped at least 45 diameters of the smaller bar joined, and reinforcing bars Nos. 9, 10, and 11 shall be lapped at least 60 diameters of the smaller bar joined, except when otherwise shown on the Plans.

Splices of tensile reinforcement at points of maximum stress shall be avoided; however, any deviation from splices shown on the Plans shall be approved by the Engineer. Splices in longitudinal steel shall be staggered at least the length of the splice.

Measurement and Payment

“Construct Sidewalk Underdrain with Rip Rap Pad” shall be measured for payment by each constructed.

The contract unit price paid for **“Construct Sidewalk Underdrain with Rip Rap Pad”** shall include full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals for doing all work involved in installing the structures, trench safety and shoring, excavation, subgrade preparation, removals and disposals, concrete formwork, concrete, footings, reinforcement, anchors, sleeving through footing, compaction, mortar, grout, block, backfill, joints, joint sealant, curing, rip rap, fabric, and testing necessary for a complete installation, and no additional compensation will be allowed therefor.

23.0 TRAFFIC STRIPING, PAVEMENT MARKERS, AND ROADSIDE SIGN

23.1 General

All signs to be installed shall be in conformance with the guidelines set forth in

the latest edition of the California Manual on Uniform Traffic Control Devices (CA-MUTCD), Section 56 and 82 of the Caltrans Standard Specifications unless otherwise specified here-in.

Signs shall be installed per City of Imperial Standard Detail No. 516 unless otherwise shown on Plans. Signs shown to be installed on light poles shall use strap and saddle brackets.

All traffic striping, reflective and non-reflective pavement markers, painted lines, pavement markings, and post delineators as shown on the Plans shall conform to the provisions in Section 84 and 85 of the Caltrans Specifications, and these Special Provisions.

Measurement and Payment

“Furnish and Install Signing and Marking” shall be measured for payment as a lump sum.

The contract lump sum price paid for **“Furnish and Install Signing and Marking”** shall include all removal, salvage, and relocation of existing signs, stripes, posts, and delineators, the installation of new signs, stripes, posts, delineators, and pavement markers, painting of curbs, posts, foundations, and coring, and all labor, materials, tools, equipment, and incidentals necessary for a complete installation, and no additional compensation will be allowed therefor.

23.2 Thermoplastic Traffic Striping and Pavement Markings

Use hot applied “Thermoplastic” materials for all striping details, crosswalks, pavement arrows, pavement legends, limit lines/stop bars and symbols. Thermoplastic traffic striping and pavement markings shall conform to Section 314-4.4 of the Greenbook.

Samples of traffic striping and pavement marking materials shall be submitted to the Engineer at least two weeks prior to application.

Measurement and Payment

No separate measurement will be made for complying with the requirements of this section.

Full compensation for complying with the requirements of this section shall be included in the contract lump sum price paid for **“Furnish and Install Signing and Marking”** and no separate payment shall be made therefor.

23.3 Raised Pavement Markers

Pavement markers shall conform to Section 85 of the Standard Specifications.

Pavement marker height shall be 0.70 inch minimum. “Low profile” type markers will not be acceptable. Adhesives for pavement markers shall be either rapid-set epoxy adhesive or hot-melt bituminous adhesive.

Measurement and Payment

No separate measurement will be made for complying with the requirements of this section.

Full compensation for complying with the requirements of this section shall be included in the contract lump sum price paid for “**Furnish and Install Signing and Marking**” and no separate payment shall be made therefor.

23.4 Traffic Signs

All traffic signs shall be of new aluminum panel with a .080” gauge thickness meeting Section 56-2 of the Standard Specifications. The sheeting must be 3M Diamond Grade (DG3) Reflective Sheeting for all non-school signs and fluorescent yellow-green for all school signs, or City approved equivalent. All sign faces shall have an application of anti-graffiti overlay film. The film must be 3M product overlay film series 1160, or City approved equivalent.

Measurement and Payment

No separate measurement will be made for complying with the requirements of this section.

Full compensation for complying with the requirements of this section shall be included in the contract lump sum price paid for “**Furnish and Install Signing and Marking**” and no separate payment shall be made therefor.

23.5 Traffic Sign Size

All signs shall be “Standard” size as specified in the most recent edition of the California Manual on Uniform Traffic Control Devices (CA-MUTCD).

Measurement and Payment

No separate measurement will be made for complying with the requirements of this section.

Full compensation for complying with the requirements of this section shall be included in the contract lump sum price paid for “**Furnish and Install Signing and Marking**” and no separate payment shall be made therefor.

23.6 Break-Away Perforated Square Tube Steel Support System

Sign posts, anchor posts and anchor sleeves shall be manufactured of Telespar perforated square tube or City approved equivalent. Fastening the perforated tube steel assembly and traffic signal connection to the Telespar post shall be done by using a 3/8” Cadmium Plated Steel Drive Rivets.

The 32" perforated square anchor post (2" x 2") shall be installed at a minimum of 29 inches in the ground with one of the sides of the square post parallel to the face of curb, leaving a maximum of 3 inches of the assembly exposed above the surface. Insert an 18" anchor sleeve (2-1/4" x 2-1/4") and level anchor sleeve with the anchor post. Insert the 12 feet high sign post (1-3/4" x 1-3/4"), about 12 inches into the anchor base. Installation of the perforated break-away sign post shall comply with Standard Detail Drawing no. 516 of the City of Imperial Standard Drawings.

Installations in existing sidewalks shall be done by coring a hole for no less than the thickness of the existing concrete. The anchor assemblies (sleeve and post) shall be driven to a maximum of 3-4 inches above the paved surface using a pneumatic hammer, a self-contained power equipment, manually installed or any other method approved by the manufacturer. Prior to the installation, the anchor assemblies shall be "duct" taped around the assembly to below ground level so runoff does not flow into it.

Signs installed in sidewalk shall provide a minimum 42" clear walk path.

Measurement and Payment

No separate measurement will be made for complying with the requirements of this section.

Full compensation for complying with the requirements of this section shall be included in the contract lump sum price paid for "**Furnish and Install Signing and Marking**" and no separate payment shall be made therefor.

23.7 Foundations

Provide foundations for all new and relocated signs on posts. Foundation shall extend a minimum of 2 inches below the sign post and be a minimum 10 inches in diameter.

PCC for sign foundations shall conform to Section 90-2 of the State Specifications. Sign foundations shall contain not less than 470 pounds of cement per cubic yard. Contractor shall furnish all foundation bolts, nuts, and washers.

Measurement and Payment

No separate measurement will be made for complying with the requirements of this section.

Full compensation for complying with the requirements of this section shall be included in the contract lump sum price paid for "**Furnish and Install Signing and Marking**" and no separate payment shall be made therefor.

24.0 RECTANGULAR RAPID FLASHING BEACON (RRFB) ASSEMBLY SYSTEM

24.1 General

RRFB system shall be by TAPCO (or approved equal), solar powered, wireless, and single sided. The light bars shall be self-contained and pedestrian push button activated. The RRFB system shall be fully compliant with all FHWA and CA-MUTCD guidelines. Each pole for the RRFB system shall be accompanied by a 20 watt solar panel mounted to the top of pole, controller, batteries, and wireless radio that operates on the same radio frequency once the light bars are activated, LED light bars, warning signs, pedestrian push button (where shown on the plans), pedestal base, anchor bolts, nuts, washers, and foundation.

The pedestrian push button for the RRFB shall be Polara iNX, or approved equal. The push button shall be ADA compliant, with arrow pointing in the direction of the crosswalk. The push button shall be accompanied by a R10-25 sign, "Push Button to Turn on Warning Lights" and installed per plan. The push button frame shall be cast aluminum housing with yellow powder coated finish with watertight o-ring seals.

Each light bar shall house LED light arrays: two rapidly and alternately flashing rectangular amber (vehicle) indications and one amber side-mounted (pedestrian) indication. The RRFB pedestrian warning system shall be synchronized with wireless 900mHz radios, and push buttons. The RRFB Light Bar shall be in conformance with all applicable FHWA MUTCD standards and guidelines, and shall meet or exceed the requirements specified in FHWA Memorandum IA-21, Interim Approval for Optional Use of Pedestrian-Actuated Rectangular Rapid Flashing Beacons at Uncontrolled Marked Crosswalks. The RRFB housing shall be constructed of durable, corrosion-resistant powder-coated aluminum with stainless steel vandal resistant fasteners. Mounting shall include hardware for either single or back-to-back pole mounting and shall be universal to the pole.

The RRFB flash controller shall be housed within a NEMA 3R-Type control cabinet. The flash controller shall be capable of automatically adjust the LED drive current control to optimize brightness for ambient lighting conditions determined by the phototransistor input. The LED drive outputs shall reach the full output current as programmed within the duration of the on-time. The controller shall have a integrated Real Time Clock (RTC) with an on-board battery backup and housed in a IP67 type enclosure.

Warning signs supplementing the RRFB system shall be per Plan and standard size. Signs shall be mounted using the strap and saddle method. Unless specified here-in, signs and mounting shall meet requirements specified in the State Standard Specifications and section "Traffic Signs" of these Special Provisions. Warning signs and LED light bars shall face the direction of on-coming traffic intended to alert when activated.

The solar panel shall be installed such that there are no direct obstructions to the sun's path. Contractor shall contact the manufacturer to provide recommended orientation of the solar panels. The recommended orientation made by the manufacturer shall be submitted to the Engineer for approval prior to installation. The orientation and angle of each solar panel may vary depending on the

placement of each pole in order to optimize the performance of each pole.

The solar panel must be IEC612 15, TUV, and UL 1703 certified. The solar panel shall operate at 12VDC nominal with a maximum output rating of 20 watts. Solar Panel shall be constructed of an anodized aluminum frame, high-transmission 1/8" tempered glass, with silicon cells encapsulated in double-layer EVA, and with a white polymer backing. The solar panel specifications:

- Overall Size: 22.68" x 14.06"
- Maximum power voltage: 17.2 VDC
- Maximum power current: 1.16 A
- Short circuit current: 1.31 A
- Open circuit voltage: 21.6 VDC
- Operate from -40° to +185°F (-40° to +85°C)

The controller may be self-contained in the solar panel or may be in a lock box with hinged door and vandal resistant. The lock box shall attach to the pole via strap and saddle method. The controller shall be able to adjust the brightness of the light bars as outside lighting levels change between day and night, being brighter during the day and less bright at night.

The control cabinet shall be a NEMA 3R Type and powder coated grey. A U-Bolt kit shall be included to secure the control cabinet on the pole. All materials used for the installation or mounting of the control cabinet shall be either aluminum or stainless steel and anti-vandal.

Solar power batteries shall be 44Ah and shall be achieved by using two quantity batteries of 22Ah each. Batteries shall be housed inside the Control Cabinet, have a nominal output voltage of 12 VDC, sealed and spill-proof, Absorbent Glass Mat, U.L. recognized, maintenance free, and shall be fused for short circuit protection.

Wireless radio transceivers shall be BlinkerBeam or approved equal and operate wirelessly at 900 Mhz, utilizing Frequency Hopping Spread Spectrum (FHSS) technology to minimize the effects of external RF interference. Wireless radios shall seamlessly integrate with the controller to ensure sequential activation of other radio- equipped devices in the system. The radios shall be compliant with part 15 of FCC rules, operate from 3.3VDC to 15VDC, capable of providing site-survey data for verification of signal strength between network devices, provide Parent or Child operations, and provide seamlessly integration with the controller to ensure sequential activation of other radio-equipped devices in the system.

The pole shall be 13' length Schedule 40 aluminum with a minimum 4¼" outside diameter.

The pedestal base shall be FHWA certified and meet AASHTO break-away

requirements. Pedestal base shall be made of TP-358 cast aluminum and provide an aluminum 8.5" minimum access door on the downstream side of the pole.

Anchor bolts, nuts, washers, and foundation shall meet requirements specified in the State Standard Specifications and subsection "Foundations" under section "Traffic Signal Improvements" of these Special Provisions.

The Contractor shall set up an on-site training session with a certified representative from the manufacturer and a representative from the City to go over the installation, programming, testing, adjusting, calibrating, and maintaining of the assembly. The Contractor shall furnish all materials and equipment necessary for the training and notify the Engineer at least ten (10) working days prior the desired training date.

Warranty:

Provide a minimum ten (10) year manufacturer's warranty against any defects or failures for solar panels, minimum three (3) year manufacturer's warranty against any defects or failures for batteries, and a minimum five (5) year manufacturer's warranty against any defects or failures for all other parts. The warranty period begins on the date of Contract acceptance. The Contractor shall furnish replacement parts within fifteen (15) calendar days after notification of a failed part. Deliver replacement part(s) to the City of Imperial Department of Public Services located at:

David Dale, PE, PLS
Public Services Director
City of Imperial
420 S. Imperial Avenue
Imperial, CA 92251
760-355-3336 direct

Measurement and Payment

"Furnish and Install Rectangular Flashing Beacon (RRFB) Assembly System" shall be measured for payment as a lump sum.

Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for **"Furnish and Install Rectangular Flashing Beacon (RRFB) Assembly System"** and no separate payment will be made therefor. The lump sum price paid for furnishing and installing RRFB Crossing System shall include, but not be limited to, the complete installation of RRFB improvements as shown on the Plans, including poles, lighting bars, solar panels, mounting of signs on poles, pedestrian push buttons, bases, foundations, hardware, fabrication, miscellaneous PCC and AC patching, sidewalk patching, cables/conductors, grounding conductors, all connections, testing, training, warranties, loading, transportation, storing, repair of existing facilities impacted during construction, and clean up. The contract

lump sum price paid shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, as directed by the Engineer, and all other appurtenant work as shown on the Plans and as specified in these Special Provisions, and no additional compensation will be allowed therefore.

25.0 PEDESTRIAN HYBRID BEACON

25.1 General

Pedestrian Hybrid Beacon work shall be performed as shown on the Plans, the Caltrans Standard Plans, and as specified in the Caltrans Standard Specifications and these Special Provisions.

Measurement and Payment

“Furnish and Install Pedestrian Hybrid Beacon” shall be measured for payment as a lump sum.

The contract lump sum price paid for **“Furnish and Install Pedestrian Hybrid Beacon”** shall include full compensation for all loading, transportation, preparation, anchor bolts, base plates, hardware, concrete, reinforcement, potholing, excavation, backfill, shoring, poles, painting, foundations, equipment, conduit and wiring, pull boxes, video detection systems, connections, testing, labor, materials, tools, equipment, and incidentals necessary for a complete installation, and no additional compensation will be allowed therefor.

25.2 Foundations

The construction of traffic signal pole foundations shall conform to Section 87-103E(3), “Concrete Pads, Foundations, and Pedestals”, of the Standard Specifications. PCC shall conform to Section 90-2, "Minor Concrete", of the Standard Specifications and shall contain not less than 505 pounds of cement per cubic yard. Contractor shall furnish all foundation bolts, nuts, washers, and CIDH pile foundation reinforcing.

Prior to installation, the Contractor shall confirm via potholing that each foundation does not conflict with new or existing underground facilities.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for **“Furnish and Install Pedestrian Hybrid Beacon”** and no separate payment will be made thereof.

25.3 Traffic Signal Standards

The furnishing and installation of traffic signal pole standards shall conform to

Section 86-1.02J , “Standards, Poles, Steel Pedestals, and Posts” and Section 87-1.03J, “Standards, Poles, Steel Pedestals, and Posts” of the Standard Specifications.

All traffic signal pole standards shall be finished with a textured semi-gloss black finish by Cardinal Coatings or approved equivalent.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for **“Furnish and Install Pedestrian Hybrid Beacon”** and no separate payment will be made therefor.

25.4 Vehicle Signal Faces, Signal Heads, and Mounting Assemblies

Signal faces, signal heads and auxiliary equipment, as shown on the plans, and the installation thereof, shall conform to the provisions in Sections 86-1.02R, “Signal Heads” and 87-1.03R, “Signal Heads”, of the Standard Specifications.

All new vehicle signal heads shall be black, aluminum metal housing with black aluminum louvered backplates with a lusterless finish.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for **“Furnish and Install Pedestrian Hybrid Beacon”** and no separate payment will be made therefor.

25.5 Pedestrian Signal Head and Housing

Pedestrian signal heads shall conform to Section 86-1.02S, “Pedestrian Signal Heads”, and Section 87-1.03S, “Pedestrian Signal Heads”, of the Standard Specifications and these Special Provisions. Pedestrian signals shall be light emitting diode (LED) signal modules/combo pedestrian signal housing. Pedestrian signals shall have visible countdown timers within the LED face. The LED pedestrian traffic signal module (16”x18”) shall be GELcore’s GT1 LED Pedestrian Signal, or City approved equal.

All new pedestrian signal heads shall have a honeycomb front screen comprising of 3/8-inch-thick aluminum honeycomb screen with 0.2-inch-wide cells or a 1/2-inch-thick plastic screen with 3/8-inch-wide squares with 1/16-inch wall thickness that:

1. Is installed so it tilts downward at an angle of 15 ± 2 degrees from the top and completely covers the message plate
2. Includes a clear front cover made of either a minimum 1/8-inch-thick acrylic plastic sheet or a minimum 1/16-inch-thick polycarbonate plastic
3. Is held firmly in place, including the cover, with stainless steel or aluminum clips or stainless steel metal screws

The screen and frame of the pedestrian signal shall be anodized aluminum that is flat black color.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for **“Furnish and Install Pedestrian Hybrid Beacon”** and no separate payment will be made therefor.

25.6 Pedestrian Push Button System

Pedestrian push buttons shall conform to Section 86-1.02U, “Push Button Assemblies”, and Section 87-1.03U, “Push Button Assemblies”, Section 86-1.02T, “Accessible Pedestrian Signals” of the Standard Specifications, and these Special Provisions.

The Contractor shall install new Polara Accessible Pedestrian Signal (APS) iNS2 or approved equal push buttons with double-sided R10-3E, 9”x15” signs. Push button frames shall be yellow finish metal housing. Prior to installation, the Contractor shall provide a worksheet detailing the custom voice message to the Engineer for review and approval. The APS push button system shall include the rack-mounted central control unit, power supply, and interconnect board as required for a Type 332L Cabinet.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for **“Furnish and Install Pedestrian Hybrid Beacon”** and no separate payment will be made therefor.

25.7 Safety Lighting

Contractor shall furnish and install new LED safety lights (on the proposed traffic signal standards where shown on the Plans. The Contractor shall furnish and install a photoelectric control unit and plug into the LED safety light receptacle.

The twist-lock electronic photocontrol unit shall be a Ripley Lighting Controls (Model Number RD8645-BK) with a 10-year warranty, or approved equivalent.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for **“Furnish and Install Pedestrian Hybrid Beacon”** and no separate payment will be made therefor.

25.8 Conduit

Conduit shall conform to the Provisions in Section 86-1.02B, "Conduit and Accessories", and Section 87-1.03B, "Conduit Installation", of the Standard Specifications and these Special Provisions, and be limited to rigid electrical non-metallic (PVC schedule 40 and 80) conduit. After conductors have been installed, the ends of conduits terminating in pull boxes and controller cabinets shall be sealed with an approved type of sealing compound. Rigid steel conduit, to be used as a drilling or jacking rod, shall be fitted with suitable drill bits for size hole required.

Measurement and Payment

No separate measurement will be made for the requirements of this section. Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for **“Furnish and Install Pedestrian Hybrid Beacon”** and no separate payment will be made therefor.

25.9 Conductors and Wiring

Cables and conductors shown on the Traffic Signal Plans shall conform to the provisions of Section 86-1.02F, "Conductors and Cable", and Section 87-1.03F, "Conductor and Cable Installation", of the Standard Specifications and these Special Provisions. Insulation on conductors installed for internally illuminated street name signs shall be color-coded orange with no stripes. Emergency vehicle pre-emptor detector lead-in cable shall meet the characteristics of IPCEA-S-61-402 of NEMA WC5, Section 7.4, 600V, Control Cable, 75°C, Type B.

Conductors shall be 3 No. 20-7x28 stranded and shall be individually tinned. Conductor insulation shall be low-density polyethylene material having a minimum thickness of 25 mils. Conductors shall be color-coded: 1-yellow, 1-blue, and 1-orange. The cable shall have one (1) No. 20-7x28 stranded, tinned, bare drain wire. The drain wire shall be placed between the insulated conductor and a shield. The shield shall be of tinned copper-brass or aluminum polyester tape with a nominal 20% overlap. The conductive surface of the shield shall be in contact with the drain wire.

Capacitance measured between any conductor and the other two conductors and the shield shall not exceed 48 pico-farads per foot when tested at 1000 hertz. The cable jacket shall be a black PVC material rated for 600 volts and 75°C and shall have an average minimum wall thickness of 45 mils. The finished

outside diameter of the cable shall be between 0.28 and 0.30 of an inch. The cable jacket shall be marked with the manufacturer's name, insulation type designation, number of conductors and conductor size, and voltage and temperature ratings.

Measurement and Payment

No separate measurement will be made for the requirements of this section. Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for "**Furnish and Install Pedestrian Hybrid Beacon**" and no separate payment will be made therefor.

25.10 Bonding and Grounding

Bonding and Grounding shall conform to the requirements in Section 86, "General", and Section 87, "Electrical Systems", of the Standard Specifications and these Special Provisions. Grounding jumper shall be attached by a 3/16 inch or larger brass bolt in the signal standard or controller pedestal and shall be run to the conduit, ground rod or bonding wire in adjacent pull box. Except for conduits that only contain loop lead-in-cable and/or signal interconnect cable, all non-metallic conduits shall be bonded with a #8 copper wire run continuously in all other circuits.

Measurement and Payment

No separate measurement will be made for the requirements of this section. Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for "**Furnish and Install Pedestrian Hybrid Beacon**" and no separate payment will be made therefor.

25.11 Pull Boxes

All new pull boxes shall be Caltrans Standard traffic rated (T) pull boxes as shown on Caltrans Standard Plan ES-8A and shall conform to the requirements of Section 86-1.02C, "Pull Boxes," and Section 87-1.03C, "Installation of Pull Boxes" of the Standard Specifications. Pull boxes shall be No. 6 unless otherwise specified on the Plans.

Pull boxes and pull box extensions shall be concrete.

Pull box covers shall be steel, reinforced and galvanized post fabrication.

Pull box lids shall be labeled "TRAFFIC SIGNAL".

Measurement and Payment

No separate measurement will be made for the requirements of this section. Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for "**Furnish and Install Pedestrian Hybrid Beacon**" and no separate payment will be made therefor.

25.12 Controller Cabinet

Controller cabinet shall conform to Section 86-1.02Q, "Controller Cabinets" of the Standard Specifications and these Special Provisions.

The Contractor shall furnish and install Type 332L controller cabinet manufactured by Swarco McCain, Inc. or approved equal, and controller assembly indicated on the Plans. The cabinet shall meet all Caltrans and FHWA

functional requirements to accommodate Caltrans approved 170/2070 cabinet assembly meeting TEES 2009 or later.

All proposed Type 332L cabinet assemblies shall conform to State Standard Specifications and Caltrans Standard Drawing Number ES-3C including conduit location, cabinet foundation and PCC sidewalk pad per these Technical Specifications. Construct controller cabinet foundation as shown for Type 332L cabinets, including furnishing and installing anchor bolts, install the controller cabinet on the foundation, and make field wiring connections to the terminal block in the controller cabinet. The Type 332L cabinet shall be appropriate for use of 2070 ATC controllers.

The cabinet shall include 19" Electronics Industry Alliance (EIA) rack, two 14-position input files, standard a 12-position output file, and 6-position auxiliary output file.

At minimum, the Type 332L cabinet shall conform to the following:

Standard Features

- 8-phase, 4-pedestrian operation (2 right turn overlaps available)
- Auxiliary 4-phase, 2-phase spare operation output
- 36 detector channel capability (3 per left turn, 6 per through movement)
- 2-channel or 4-channel industry standard detection modules
- Railroad (2) and emergency vehicle (4) preemption inputs
- Solid state relay (SSR) (Mercury Contactor replacement)
- SSR Fault Indicator Light
- Relay safety feature interrupts 24 VDC control to the load switches if the SSR fails during a flash condition
- Programmable "Yellow/Red" or "All Red" flashes through the use of flash plugs
- DC isolation inputs for pedestrian push buttons and special functions
- 210 Signal Monitor slot
- Main power circuit breaker (30A) on service panel
- Transient voltage & surge suppression filter
- Drawer / shelf combination

Cabinet Assemblies

- 14-position input files (2)
- 12-position output file
- Model PDA-2L Power Distribution Assembly
- Model 206L power-saving, high-efficiency power supply

- Flash transfer relay sockets (4)
- Dual-circuit flasher sockets (2)
- Input panel
- Service panel
- Police panel with signal “On/Off” and “Auto/Flash” switches, including two keys
- Conflict monitor shall be EDI Model 2010ECLip or equivalent with a red monitor assembly circuit board and capable of monitoring green, amber and red indications
- Rack mounted 1U, 6 outlet power supply per agency specifications

General Specifications

- Dimensions: 67” H x 24” W x 30” D (rounded to the nearest inch)
- Material: 5052-H32 aluminum, 0.125” thick

Controller Assembly

The Contractor shall furnish and install Swarco McCain, Inc. model 2070LX or approved equal signal controller. The signal controller shall be preloaded with the latest Omni eX local intersection control software and shall include one 5 ft CAT5E, shielded RJ45 patch cable.

The signal controller assembly shall include the following modules: 2070-1C CPU, 2070-2E+ Field I/O, 2070-4A Power Supply, and 2070-LX Front Panel.

Measurement and Payment

No separate measurement will be made for the requirements of this section. Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for “**Furnish and Install Pedestrian Hybrid Beacon**” and no separate payment will be made therefor.

25.13 Battery Backup System Cabinets

Battery backup system cabinets shall conform to Section 86-1.02Q(4) & 87-1.03D, “Battery Backup System Cabinets” of the Standard Specifications and these Special Provisions.

The battery back-up systems shall include the uninterruptable power supply (UPS) system control unit, batteries, cables, and cabinet (side-mounted) as shown on plans. The BBS unit shall be configured to run communication hub cabinet redundant power separate from the internal A/C unit.

The uninterruptable power supply (UPS) shall have a standard battery pack, capable of operating a full HUB cabinet location for over 2 hours at 700W (watts) output maintaining field ITS elements only. A typical intersection consuming 450W can be powered for approximately 4 hours. In Red- Flash operation, which consumes only about 300W, over 6 hours of backup is possible. These times assume fully charged batteries at the ambient temperature of 25°C.

The BBS cabinet shall be side mounted to the traffic signal cabinets (Type 332L) and shall house the BBS unit and four (4) batteries. The BBS system shall not provide back-up power to the internal A/C unit inside the hub cabinet.

Operation

The uninterruptable power supply (UPS) shall be capable of producing a full regenerated and regulated, true sine wave power, with continuous AC outputs. There shall be a bypass box that provides the link between the utility power, the UPS power, and the loads.

The bypass box shall enable removal and replacement of the traffic UPS without shutting down the traffic control system (i.e. "hot swap" capability).

For Type 332 style cabinets, upon loss of power the Traffic UPS can actuate the existing Flash Transfer Relays (FTRs), Mercury Contactor (MC) or Railroad Preemption to allow the traffic control system to put the cabinet into Flash Mode operation.

Existing Flasher Modules and Flash Transfer Relays are utilized. The traffic UPS does not duplicate or take over flash operation or flash transfer relay functions.

The UPS provides continuous, fully regenerated, conditioned, regulated, sinusoidal (AC) power to selected devices such as signal controllers, counters, modems, communications hubs, NTCIP adapters, video equipment, etc.

To facilitate emergency crews and police activities, the traffic UPS shall be compatible with police panel functions (i.e. "Signals OFF" switch must kill power to the field wiring even when on UPS/Battery power).

Utility Voltage Windows and Battery Operation

The UPS operates on utility power if the utility voltage is between 75 and 155 VAC. When the utility falls below 75 VAC or climbs above 155 VAC the UPS shall operate from the batteries.

Description

The Traffic UPS shall consist of three major components, the UPS Power Module, the Bypass Box, and the Battery System.

The UPS Power Module consists of the following:

- True on-line, double conversion, pure sine wave, high frequency inverter utilizing IGBT technology
- Programmable LCD Display
- A DB9 RS232 and USB Type B connectors for remote signal alarms and true RS232 monitoring and remote communications
- Auxiliary Temp Sensor
- Multi-stage, temperature compensated battery charger

The bypass box shall be three-pole, double-throw switch that switches both hot and neutral lines to the UPS or cabinet.

The battery module shall be comprised of one or more strings of 4, 6 or 8 individual 12V batteries connected in series for a total string voltage of 48VDC nominal for SP1250LX-48 or 72VDC nominal for SP1250LX or 96VDC for SP2000LX.

The batteries shall be manufactured for extreme temperature, deep cycle, AGM/VRLA (Absorbed Glass Mat/ Valve Regulated Lead Acid) batteries that have been field proven and tested. The batteries supplied shall be certified to operate at extreme temperatures from -40°C to $+74^{\circ}\text{C}$.

The batteries shall be provided with appropriate interconnect wiring harness. Optional battery mounting trays and brackets shall be available for selection by the Engineer.

The interconnect cable shall connect to the base module with a quick-release circular connector.

The UPS module shall include a charger that replenishes the Battery Pack whenever possible and required. This charger shall operate with a charging current of 0.6A. An Optional Fast Charger shall be available, which operates with a charging current of up to 3.5A.

Mounting/Configuration

NEMA Style: mounting method shall be shelf-mount or wall-mount, as indicated on the plans. In Type 332/334 Style Cabinets: The mounting method is 19" rack-mount. Shelf angles or rails, typically supplied by others, are available as optional accessories.

Battery construction shall be heavy-duty, with inter-cell connections for low-impedance between cells, and heavy-duty plates to withstand shock and vibration.

UPS Specifications

The specifications of the UPS system are provided in the following tables:

Electrical Specifications	
Input Specification	
Nominal Input Voltage	120 VAC, Single Phase
Input Voltage Range	75 VAC to 155 VAC

Input Frequency	45 to 65 Hz (+/-5%)
Input Configuration	3 Wire (Hot, Neutral & Ground)
Input Protection	Input breaker 20 amps, SP2000LX 30A
Output Specification	
Nominal Output Voltage	120 VAC, Single Phase
Power Rating	1.25 KVA (1250VA/875W), 2 KVA (2000VA/1400W)
Output Voltage Regulation	+/-4% for 100% step load change and from High battery to Low battery condition
Output Frequency	50 or 60 Hz (+/- .5%) unit not in sync.
Output Configuration	3 Wire (Hot, Neutral & Ground)
Output Wave Form	True Sine wave
Overload capability	110% for 10 minutes 200% for 50 milliseconds 2k PLUS 160% for 10 seconds
Fault clearing	Current limit and automatic shutdown
Short circuit protection	Current limit and automatic shutdown
Efficiency	85% at full load (on utility)
Load Power Factor	.7 lagging through unity to .7 leading

Physical Specifications, UPS Electronics Module	
Dimensions	Width = 19", Depth = 10", Height = 3.5"
Weight	UPS: 15 lbs., Shipping weight: 20 lbs.
Physical Specifications, Bypass Box	
Dimensions	Width = 7", Depth = 2.5", Height = 4.5"
Weight	Bypass Box: 5 lbs., Shipping weight: 5 lbs.
Environmental Specifications	
Temperature	- 40°C to +74°C
Design	
Standard Features	Power factor corrected input Fully regenerative True on-line continuous power Low distortion sine wave output Designed for non-linear loads

	Extended brownout protection EIA/RS232 data interface
Certifications	IEEE 587/ANSI C62.4 IEC 555 @ 120 VA NEMA
Typical Recharge Time (to 85% capacity @ 100% load)	48-72hrs
Control and Indicators	
Switches / Control Panel	System power Cold start Test Alarm silence Four line LCD display panel
Alarms	Utility interrupt Inverter failure Overload Low battery Self-test
Intelligent Computer Interfaces	Serial interface for EIA 232 1 each DB9-F (RS232 and signal interface pins) and 1 each USB Full interactive remote computer monitoring and control of most features including load control (requires optional monitoring software) NTCIP and TCP/IP ready
Contact Closures	"D" connector Open collector Others per manufacturer specifications
Battery Specifications	
Temperature	- 40°C to +74°C
Ampere-Hour ratings	(see table below)
Hydrogen gas emissions`	Meets Mil-Spec #MIL-B-8565J

Typical Battery Runtime Specifications, Wattage, Weight, and Dimensions									
No. of Batteries	Volts/ A-hrs.	Estimated Runtime (Per set @ 77°F / 25°C) (New Batteries, fully charged)				Unit Weight (lb)	Overall Dimensions Per Battery (in)		
		300 Watts	500 Watts	700 Watts	875 Watts		Length (in)	Width (in)	Height (in)
*Set of 6 Batteries	12VDC/ 41 AH	6.4 Hrs.**	3.5 Hrs.**	2.4 Hrs.**	1.7 Hrs.**	29	7.68	5.15	7.9
*Battery sets, with six (6) batteries per set, that are wired in series, shall provide 72 VDC.									
** Actual times may vary, runtimes are dependent on many factors.									

Communications, Controls & Diagnostics

UPS System shall be supplied with TCIP/Ethernet interface.

Front Panel controls shall include Power ON, Cold (DC) Start, Alarm Silence, Battery Test, Bypass Circuit Breaker, and DC/Battery Circuit Breaker
Measurement and Payment

No separate measurement will be made for the requirements of this section. Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for “**Furnish and Install Pedestrian Hybrid Beacon**” and no separate payment will be made therefor.

25.14 Emergency Vehicle Preemption

The Contractor shall furnish and install new Global Traffic Technologies (GTT) Opticom Emergency Vehicle Preemption System equipment or approved equal as indicated on the Plans.

The Contractor shall furnish and install GTT Model 764 Multimode Phase Selector in each new controller cabinet.

Where indicated on the Plans, EVP detectors shall be of an infrared two direction, dual output detector GTT Model 721 with manufacturer provided mounting equipment and cabling.

The Contractor shall have a manufacturer representative onsite to configure and test the EVP detectors and phase selector for functionality prior to traffic signal activation.

The Contractor shall clearly label and verify the labeling of each optical detector cable connected in the controller cabinet.

Measurement and Payment

No separate measurement will be made for the requirements of this section. Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for “**Furnish and Install Pedestrian Hybrid Beacon**” and no separate payment will be made therefor.

25.15 Electrical Service Pedestal

The installation of the electrical service pedestals shall conform to all IID Utility Service Guide Requirements, Section 56-3, 86 and 87 of the Caltrans Standard Specifications, and these Special Provisions.

The service pedestals shall have 30A single/double in-line fuse, 3/4-inch x 8-foot copper ground rod, and neutral-ground bonding (for both 120v and 240v circuits). The service pedestals shall be a Type III-CF service equipment enclosure (aluminum type) and shall be installed per drawing number ES-2F of the Caltrans Standard Drawings. The service pedestals shall provide service as shown on the Plans. Maximum base size of service equipment enclosure shall not exceed 16 inches x 16 inches (406.4 mm x 406.4 mm) and service equipment shall meet all IID requirements.

Continuous welding of exterior seams in the service equipment enclosures is not required. Circuit breakers shall be the cable-in/cable-out type, mounted on non-energized clips. All circuit breakers shall be mounted vertically with the up position of the handle being the "ON" position. Dead front panel or panels, and corresponding exterior door, shall be hinged on one side and shall be openable without the use of tools. A barrier-type terminal block rated for 40 A, minimum, shall be provided in each service equipment enclosure. The terminal block shall have a minimum of 12 positions with terminals rated at No. 8 or larger, to accept the field wires indicated on the Plans. Field wires shall be terminated using crimped, insulated loop connectors.

All new and existing electrical services are provided by Imperial Irrigation District (IID). The Contractor must coordinate directly and comply with all standards set forth by IID for the conduit between the service point and the meter pedestal. The Contractor shall note that IID specifications and requirements may be more stringent than those specifications described in these Special Provisions and supporting documents. In case of a conflict, the IID specifications shall supersede these Special Provisions and supporting documents.

Measurement and Payment

No separate measurement will be made for the requirements of this section. Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for "**Furnish and Install Pedestrian Hybrid Beacon**" and no separate payment will be made therefor.

25.16 Wireless Radio System (Signal Interconnect)

The Contractor shall furnish and install a point-to-multipoint Wireless Broadband Radio Assembly - Single Radio, Dual Radio or Integrated Unit as required for wireless connectivity. Wireless Broadband Radio Assemblies are used to transmit and receive 10/100/1000 Mbps Ethernet data between field cabinets as designated on the plans and **shall be compatible with the existing radios at E. Barioni Blvd/N. Imperial Ave traffic signal.**

Upon the receipt of the Notice to Proceed, the Contractor shall prepare a Concept of Operations Plan (COP) for the project. The COP shall outline the

location and installation of the Wireless Broadband Radios at each of the traffic signal location. A detailed description or schematic shall be provided that outline the type of the antennas, mounting locations, and antenna direction. The Contractor shall submit at least (3) hard copies and one electronic submittal of the preliminary Proof of COP for review and approval. The Contractor shall incorporate comments received from the Engineer and resubmit the plan for final approval of the COP.

Any costs to the Contractor for the coordination between the manufacturer or other subcontractors shall be considered incidental and included in the cost of the Wireless Broadband Radio system.

Materials

All components, furnished, assembled, fabricated or installed shall be new and in strict accordance with all of the details shown in the contract documents or as specified by the Engineer.

Wireless Broadband Radio Assembly-Single Radio External

The Wireless Broadband Radio Assembly - Single Radio external includes the radio transceiver, external antenna kit, and all cables and mounting hardware required. The single radio unit will typically be utilized in point-to-point and end of the line type configurations. It will also serve as the remote in a master/remote configuration.

Wireless Broadband Radio Assembly-Dual Radio Integrated

The Wireless Broadband Radio Assembly - Dual Radio Integrated includes two independent radio transceivers, one integrated antenna, two N type connectors for a second external antenna and all cables and mounting hardware required. Both radio transceivers and one antenna shall be housed in the same enclosure. The dual radio unit will typically be utilized in drop/insert, point-to-multipoint or signal interconnect repeater type configurations.

Wireless Broadband Radio Assembly-Integrated Unit

The Wireless Broadband Radio Assembly - Integrated Unit includes the radio transceiver, single antenna, and all cables and mounting hardware required. The mounting of the antenna shall be integral to the radio transceiver housing requiring no external antenna input. The integrated unit will typically be utilized in point to point and end of the line type configurations.

System Requirements

This specification covers the minimum technical requirements for a 5 GHz and 2.4 GHz options for high capacity wireless broadband Ethernet system for ITS communications. The system shall consist of connectorized radios and/or radios with integrated panel antennas with options for external panel antennas. Also, the devices must be offered in both single radio units, dual radio units and gateway units.

The system shall function in mesh, point-to-point or point-to-multipoint modes, repeater gateway and hotspot radio for a range of up to 20 miles.

Radio Unit Specifications:

- i. Over air data rate shall be compatible with 802.11ac, 802.11n, and 802.11a/b/g.
- ii. The radio shall be compatible with IEE Standards 802.11e WMM and QOS, 802.11h DFS and TPC, 802.1d Ethernet Bridging, 802.1p Traffic Prioritization, 802.1q VLAN, 802.1s Spanning Tree, 802.1w Rapid Spanning

- Tree, 802.3ab Gigabit Ethernet, 802.3ac Extended Frame Size, 802.1q & 802.1p support, 802.3ad Link Aggregation/Port, Bonding/Port Tracking, 802.3i 10 Mbps Ethernet, 802.3u 100 Mbps Ethernet and Auto-Negotiation, 802.3x Full Duplex and Flow Control.
- iii. AES encryption, advanced IP filtering, WPA2, multilevel authentication, user access and MAC Access Control.
 - iv. Temperature rating of -40° to 75°C.

Construction Details

The results of the COP shall determine the type of antenna required for the wireless link in accordance with the manufacturer's recommendations and shall be documented in the shop drawing. Particular care shall be given to the interconnection of all of the components and the cabling. The Engineer reserves the right to inspect and/or factory test any completed assemblies prior to delivery of the material to the project site. Any deviations from these specifications that are identified during such testing shall be corrected prior to shipment of the assembly to the project site.

Each radio shall be provided with the proper mounting hardware for proper installation as shown on the plans. The cost for this mounting hardware shall be included in the cost of the radio assembly.

The outdoor rated Cat5E cable shall be installed on the span and into the signal pole back to the controller cabinet unless otherwise shown on the plans. Splices in the cable shall not be allowed between the equipment and field terminals. The contractor shall install the equipment in accordance with the contract documents, standard sheets, and manufacturer's instructions. The contractor shall perform all of the tests necessary to confirm acceptable operation, in the presence of the Engineer.

After the initial directional setup is made, the procedure outlined below shall be implemented to maximize the signal strength for each radio link. The Contractor shall adjust the output power to optimize the receive signal level at the slaves in compliance with FCC regulations. The master radio shall then be setup to transmit a continuous signal. The radio technician shall then adjust the beam heading at each slave location by measuring the radio signal level monitor output while adjusting the antenna beam heading for maximum signal. The contractor shall make a record of the channel settings and power levels to which each radio is set and the measured signal level measurement received at each radio. These test results shall be submitted to the Engineer in a written report.

Once the Antenna/feed-line and Antenna alignment tests have been completed, an Operational Stand-Alone test shall be initiated. For this test, the broadband radios to be tested shall be connected to the designated Ethernet port at each field equipment location as indicated in the plan set. The Contractor shall program the radios and adjust for proper operation. The Contractor shall then connect a portable computer to the master radio. Utilizing fully functioning network visualization and management software to be provided by the contractor, each slave unit shall be addressed and successful two-way communications shall be demonstrated. Message throughput shall exceed 99% over at least a fifteen minute period. The contractor shall keep an accurate record of each Operational Subsystem Test and shall provide a written report to the Engineer.

Testing Requirements

Testing shall be performed in accordance with the manufacturer's recommendations. The testing procedure shall be submitted for approval prior to installation of the equipment. The testing shall be performed in the presence of the Engineer.

Warranty

The manufacturer shall warranty and guarantee that all material supplied shall be free from all defects in materials and workmanship for a period of THREE (3) years from date of acceptance.

Measurement and Payment

No separate measurement will be made for the requirements of this section. Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for "**Furnish and Install Pedestrian Hybrid Beacon**" and no separate payment will be made therefor.

25.17 Ethernet Switch

The Contractor shall furnish and install Moxa EDS-G512E-4SFP-T or approved equal. Gigabit Ethernet switch shall include, one Cat5e blue molded-snagless 6 foot RJ45 cable and two temperature hardened Small-Form Pluggable (SFP) transceivers, 20km Single-Mode, LC-Type Connectors.

The Gigabit Ethernet Switch shall be warranted by the Contractor against all defects in material and workmanship for a minimum of 2 years or the manufacturer's standard warranty, whichever is of greater duration. The warranty for the Gigabit Ethernet Switch shall include the following; that in the event malfunction during the warranty period, the defective unit, card, module, subassembly, or auxiliary device shall be replaced with a working unit within three working days for us while the warranted unit is being repaired. The Contractor is responsible for all shipping costs of malfunctioning Gigabit Ethernet Switch equipment for repair or replacement.

All screws, nuts and locking washers shall be stainless steel. The use of self-tapping screws shall not be allowed without written approval by the Engineer. The Contractor shall meet all applicable codes and standard requirements for all external wiring to the Gigabit Ethernet Switches. All wire and cable shall be neatly installed and secured per common practices and standards. Contractor shall provide service loop at all connection points.

The Contractor or approved subcontractor with the Engineer all switch configuration information, (i.e. IP addresses, VLANs etc.) forty-five (45) days prior to installing the Ethernet Switch.

The Contractor or approved subcontractor involved in the installation and testing of the Gigabit Ethernet Switch equipment shall have a minimum three (3) years' experience in the installation, testing and maintenance of Ethernet equipment.

The Gigabit Ethernet Switch shall meet the following tests:

- A. Pre-Installation Testing: The Contractor shall inspect the Gigabit Ethernet Switch upon delivery for any visual damage, inventory contents, and ensure proper functionality.

- B. Subsystem Testing: The Contractor shall ensure the Gigabit Ethernet Switches are correctly installed, configured, and are properly functioning as networked subsystem.

Measurement and Payment

No separate measurement will be made for the requirements of this section. Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for “**Furnish and Install Pedestrian Hybrid Beacon**” and no separate payment will be made therefor.

25.18 Advanced Solar-Powered Flashing Beacon Assembly

The Contractor shall furnish and install a LaneLight or approved equal solar-powered flashing beacon assembly where indicated on the plans. The flashing beacon assembly shall operate simultaneously with the Pedestrian Hybrid System and shall flash upon activation and/or start of the Pedestrian Hybrid System operations.

Solar PV Powered System

System shall be solar powered with manufacturer designed and supplied solar/battery power package. System shall be solar powered with manufacturer designed and supplied solar/battery power package. The system shall consist of a 55 watt solar panel with top of pole mount, MPPT solar charge regulator integral to the transmitter/receiver unit, surge arrestor between solar panel and transmitter/receiver unit, 40 amp-hour rated Lithium Iron Phosphate (LiFePO4) battery, NEMA 3R rated cabinet with #2 Corbin lock. Solar system autonomy shall exceed 5 days operation at constant operation with 1-hour solar exposure to full recovery.

Cabinet shall be supplied with mounting hardware suitable for banding bolt-fastening to a pole. Fully equipped weight shall not exceed 25 lb.

The solar panels and battery/batteries shall be specifically sized by the system manufacturer according to the regional solar conditions and shall include all necessary mounting hardware for side of pole mounting.

The solar panel aiming direction and aiming angle shall be fully adjustable and installed according to the manufacturer’s angle and direction specifications for the geographical location of the crosswalk.

Replacement solar panels and replacement batteries shall be available and replaceable independent of other system components.

Cabinet shall be supplied with mounting hardware suitable for banding to a pole.

System Controller

The system controller shall be as follows:

1. LaneLight model MK10 or approved equal with wig-wag dual output, with cloud adjustment, system condition and activation count reporting capability.
2. Casing material: Anodized aluminum
3. Operating temperature range: -40°C to 65°C (-40°F to 149°F)
4. Operating voltage: 10-30 VDC
5. Supply voltage: 110 to 240 volts AC line voltage with factory supplied power converter/12VDC Solar
6. Output voltage: 12 VDC
7. Transient/Inrush current limiting – internal on all outputs
8. Overload –internal, auto-reset circuit breakers on outputs, 10A threshold on two output channels
9. Power Factor Correction – provided, Power Output limiting – 120%
10. Short Circuit – Continuous protection, intermittent cycle permitted
11. Activation time: 0 to 120 seconds, or continuous
12. Pattern Mode: Signal beacon pattern shall comply with FHWA MUTCD
13. Configuration: On board menu or remote via USB or Cloud
14. Diagnostics: On board menu or remote via USB or Cloud
15. Terminal connection type: Screw terminals
16. Standards compliance: NEMA

Signs

Shall meet CAMUTCD standards, Diamond Grade, and sized per plan.

Communication

Communication from the traffic signal controller to the advanced flashing beacon assembly shall be wireless, using RF communications and shall include an antenna, accessories, and mounting equipment to install within a 332 cabinet.

Communication between system control units, local and/or from system to cloud or network:

1. Transmitter/receiver unit, hard-wired to intersection/hybrid signal controller
2. Cellular network connectivity cloud system or other modem network access service equipped in one transmitter/receiver unit; peer to peer network between transmitter/receiver units, 2.4GHz frequency
3. Transmitter/receiver unit, located in each remote unit

Beacons

Flashing beacon faces and modules shall conform to the provisions in Sections 86-1.02R, "Signal Heads" and 87-1.03R, "Signal Heads", of the Standard Specifications.

All beacon assemblies shall consist of a quantity of two (2) 12-inch LED, low voltage (12VDC) single units, provided by the system manufacturer; standard signal housings shall be furnished with visors, side of pole mounts, and shall conform to the following specifications:

1. Luminous Intensity acc. to EN12368: Yellow > 200cd
2. Color acc. to EN12368: Yellow 585-597nm
3. LED Type: High Flux
4. Power Consumption: Yellow – 4W
5. Material (lens and housing): UV-stabilized polycarbonate; signal housing: Polycarbonate.
6. Mounting: Signal arrays, side of pole, stainless band or other secure pole mount

Warranty

System components shall have a non-pro-rated warranty period of five (5) years against manufacturer defects and failure under normal use.

Measurement and Payment

No separate measurement will be made for the requirements of this section. Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for "**Furnish and Install Pedestrian Hybrid Beacon**" and no separate payment will be made therefor.

26.0 LANDSCAPE AND IRRIGATION

26.1 General

Landscape and Irrigation work shall be performed in accordance with Section 20 and of the Caltrans Standard Specifications and these Special Provisions.

Measurement and Payment

"**Furnish and Install Landscape and Irrigation**" shall be measured for payment as a lump sum.

The contract lump sum price paid for "Furnish and Install Landscape and Irrigation" shall include full compensation for furnishing all labor, materials, tools, equipment, transportation, earthwork, testing, amendments, bedding, backfill, compaction, wiring, connections, controllers, concrete, backflow preventers, plants, trees, root barriers, mulch, accessories, incidentals, and all required

coordination efforts, and no additional compensation will be allowed therefor.

26.2 Soil Testing, Preparation, and Amendments

This work consists of the collection and testing of the existing planting soil for plant nutrient levels, and soil preparation and amendments based on the soil test locations as shown on the Plans. For each unamended soil type, furnish soil analysis and a written report by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; sodium absorption ratio (SAR), electrical conductivity (ECe), boron content, deleterious material; pH; and mineral and plant-nutrient content of the soil.

Submittals

Submit soil test results, soil amendments and fertilizers as identified in the soil test report.

Measurement and Payment

No separate measurement will be made for complying with the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for **“Furnish and Install Landscape and Irrigation”** and no separate payment will be allowed therefor.

26.3 Trees, Understory Planting, Root Barrier, Boulders, and Mulch

This work consists of the acquisition and installation of all trees, understory planting, root barriers, boulders, rock mulch and bark mulch as shown on the Plans. The Work shall include all landscape accessories such as aeration tubes, grates, filter fabric socks, drainage gravel, tree stakes and ties, and pre plant weed control.

Bark Mulch: As indicated on the Plans.

Rock Mulch: As indicated on the Plans.

Root Barrier: As indicated on the Plans.

Submittals

Submit product data for all items listed above and shown on the Plans. Plant material data shall list all quantities, sizes, quality, and nursery sources for plant materials. Include color plant photos for each plant specified.

Measurement and Payment

No separate measurement will be made for complying with the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for **“Furnish and Install Landscape and Irrigation”** and no separate payment will be allowed therefor.

26.4 Irrigation

This work consists of acquisition and installation of the landscape irrigation system, including all pipes, sleeves, wires, valves, appurtenances, controllers, power connections, dripline and accessories as identified on the Plans. The irrigations system shall be installed in accordance with the manufacturer's requirements and the Standard Specifications. Where a conflict exists between the specifications, the more stringent specification will apply.

Submittals

Submit material lists and cut sheet for all products shown on the Plans. At project turnover the Contractor shall provide as-built redline drawings with dimensions, and one controller chart for each automatic controller. Controller chart shall show the area covered by the particular controller. The areas covered by the individual control valves shall be indicated using colored highlighter pens.

Measurement and Payment

No separate measurement will be made for complying with the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract lump sum price paid for **“Furnish and Install Landscape and Irrigation”** and no separate payment will be allowed therefor.

END OF SECTION

Appendix A

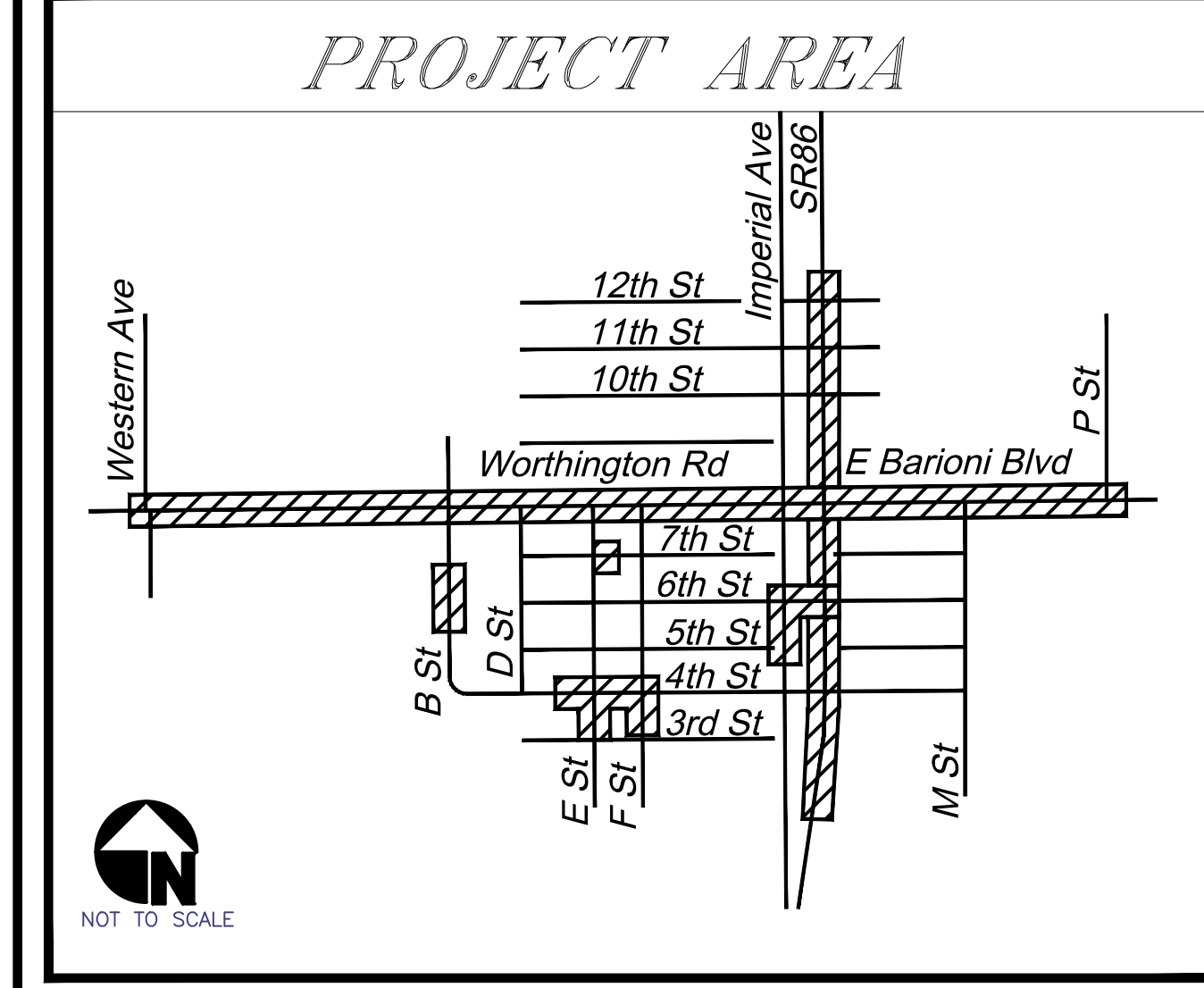
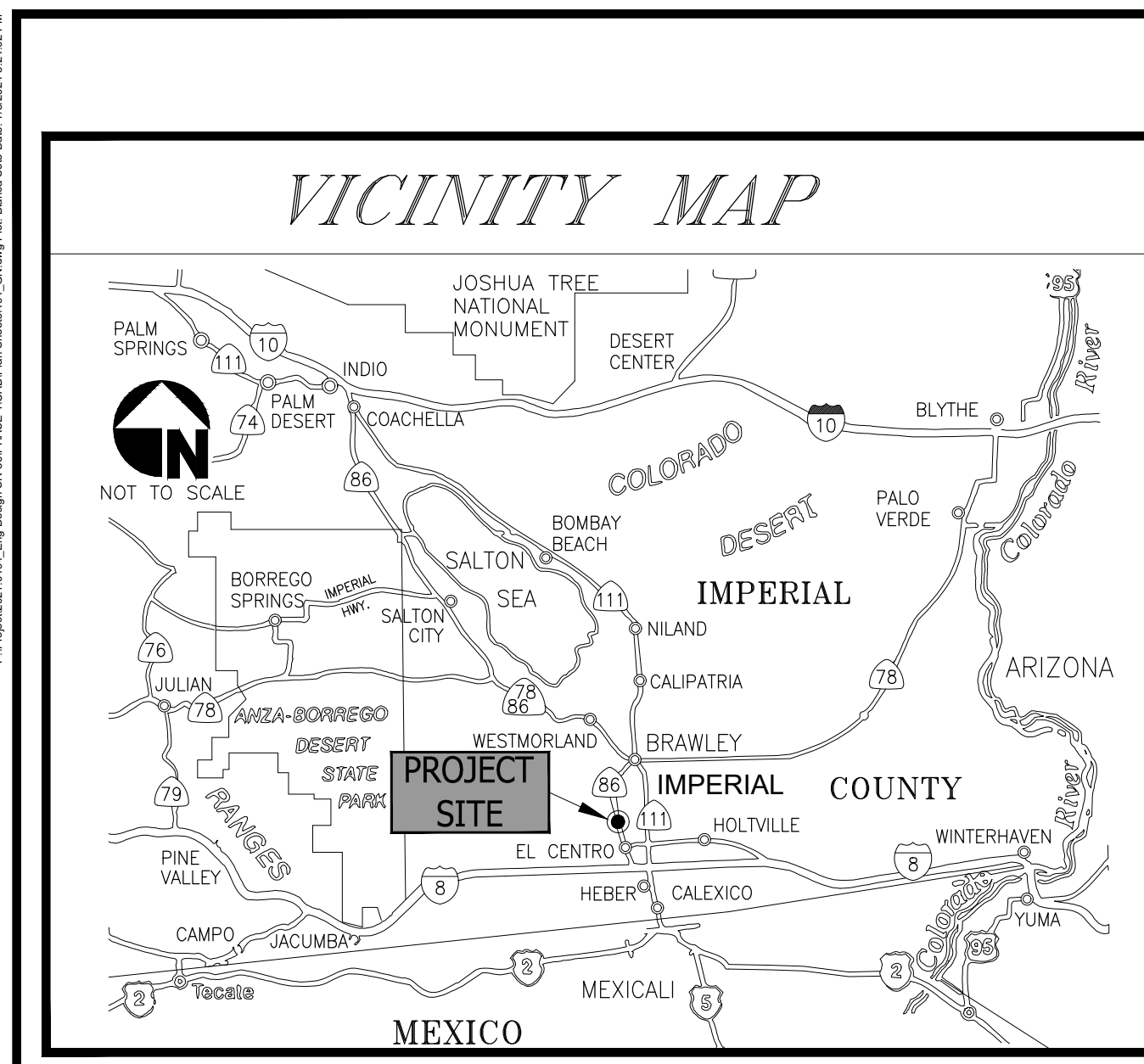
CALIFORNIA STATE

GENERAL PREVAILING WAGE RATES

**THE CONTRACTOR SHALL CHECK WITHIN 10 DAYS OF
THE BID OPENING THE LATEST WAGE RATES**

Appendix B
FEDERAL PREVAILING WAGE

APPENDIX C
CONSTRUCTION PROJECT PLANS



CITY OF IMPERIAL - AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1 PROJECT

IN THE CITY OF IMPERIAL, CALIFORNIA

JULY 2024

PROJECT INFORMATION

OWNER
 CITY OF IMPERIAL
 420 S. IMPERIAL AVE.
 IMPERIAL, CA 92251
 TEL. 760-355-4373

ENGINEER
 CR ASSOCIATES
 3900 FIFTH AVENUE, SUITE 310
 SAN DIEGO, CA 92103
 TEL. (619) 795-6086

AGENCY CONTACTS

CITY OF IMPERIAL
 OTHON MORA, MCM, CBO
 COMMUNITY DEVELOPMENT DIRECTOR
 400 S. IMPERIAL AVE, STE 101
 IMPERIAL, CA 92251
 PHONE: 760-355-1152

JESUS VILLEGAS
 ENGINEERING DEPARTMENT
 400 S. IMPERIAL AVE, STE 101
 IMPERIAL, CA 92251
 PHONE: 760-355-3840

GAS COMPANY
 GERARDO TABARES
 PLANNING & ENGINEERING, SOUTHEAST REGION/REDLANDS
 1981 WEST LUGONIA
 REDLANDS, CA 92374-9796
 PHONE: 213-231-1840

AT&T
 ABIGAIL BECKER
 AT&T ENGINEERING
 855 COPLEY DRIVE
 SAN DIEGO, CA 92121
 PHONE: 858-368-3148

IMPERIAL IRRIGATION DISTRICT
 ESAU PEREZ
 ENGINEERING AID II
 333 E. BARIONI BLVD.
 IMPERIAL, CA 92251
 PHONE: 760-339-9274

CITY COUNCIL

ROBERT AMPARANO	MAYOR
JAMES TUCKER	MAYOR PRO-TEM
KATHERINE BURNWORTH	COUNCIL MEMBER
STACY MENDOZA	COUNCIL MEMBER
IDA OBESO-MARTINEZ	COUNCIL MEMBER

NOTE TO CONTRACTOR
 CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. 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 HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

ENGINEER'S NOTE TO CONTRACTOR
 THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN OR NOT SHOWN ON THESE DRAWINGS.

NOTE:
 ANY REFERENCES TO SPECIFIC MANUFACTURERS OR MODELS ARE FOR DESCRIPTIVE PURPOSES ONLY. CONTRACTORS ARE ALLOWED TO PROVIDE APPROVED EQUAL MATERIALS OR PRODUCTS SUBJECT TO ENGINEER'S APPROVAL.

STREET IMPROVEMENT GENERAL NOTES

- APPROVALS: ALL WORK PERFORMED AND MATERIAL FURNISHED FOR COMPLETION OF IMPROVEMENTS CALLED FOR ON THESE DRAWINGS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF AUTHORIZED REPRESENTATIVES OF THE CITY AND DEVELOPER AND SHALL NOT BE COVERED, BURIED, OR OTHERWISE CONCEALED UNTIL SUCH HAS BEEN SO INSPECTED AND APPROVED. ALL UNDERGROUND CONDUIT AND APPURTENANCES FOR ELECTRICAL POWER, TELEPHONE AND CABLE TELEVISIONS SYSTEM SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF AUTHORIZED REPRESENTATIVES OF THE SERVING UTILITIES. ALL EARTHWORKS SHALL BE SUBJECT TO INSPECTION, TESTING AND APPROVAL OF THE SOILS TESTING FIRM THAT FURNISHED THE SOILS REPORT REFERENCED WITHIN THESE DRAWINGS. EACH SUBCONTRACTOR SHALL GIVE THE INSPECTING AUTHORITY NO LESS THAN 24 HOUR NOTICE OF HIS NEED FOR INSPECTION OR TESTING.
- SITE CONDITIONS: EACH SUBCONTRACTOR DOING WORK ON THIS PROJECT SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE SAFETY OF ALL PERSONS AND PROPERTY WITHIN HIS WORK AREA, DAY AND NIGHT, DURING BOTH WORKING AND NONWORKING HOURS; AND SHALL PROVIDE BARRICADES, SHORING, FLAG MEN, SIGNS, LIGHTING, AND OTHER DEVICES REQUIRED THEREFORE.
- STANDARD SPECIFICATIONS: THE STANDARD SPECIFICATIONS REFERENCED IN THESE SPECIFICATION SHALL BE THOSE OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) DATED JULY 2023. COPIES OF SUCH ARE OBTAINABLE FROM: CALTRANS, CENTRAL PUBLICATION DISTRIBUTION UNIT, 1900 ROYAL OAKS DRIVE, SACRAMENTO, CA 95815-3800. ALL THE WORK SHOWN OR CALLED FOR ON THESE DRAWING SHALL CONFORM TO THESE SPECIFICATIONS REFERENCED HEREIN, INCLUDING THOSE OTHER SECTIONS AND ASTM, AWWA, AND AASHTO STANDARDS THEREIN REFERENCED.
- UNDERGROUND CONDUIT: PLANS, DETAILS AND SPECIFICATIONS FOR CONSTRUCTION OF UNDERGROUND CONDUIT AND APPURTENANCES FOR THE ELECTRICAL POWER, TELEPHONE AND CABLE TELEVISIONS SYSTEM HAVE BEEN PREPARED BY OR IN ACCORDANCE WITH THE REQUIREMENTS AND APPROVALS OF THE SERVING UTILITY COMPANIES. ALL SUCH WORK SHALL CONFORM TO THOSE REFERENCED DOCUMENTS TO SAME EXTENT AS IF THEY WERE SHOWN, DETAILED AND SPECIFIED WITH THESE DRAWINGS AND RELATED DOCUMENTS. QUESTIONS REGARDING DESIGN AND DETAILS OF SUCH WORK SHALL BE DIRECTED TO THE UTILITY INVOLVED THEREWITH.
- TRAFFIC CONTROL: EACH SUBCONTRACTOR SHALL PROVIDE TRAFFIC CONTROL SIGNS, LIGHTS, FLAG MEN, AND OTHER DEVICES NECESSARY TO PROTECT HIS WORK AND EXCAVATIONS AND TO PROTECT VEHICULAR AND PEDESTRIAN TRAFFIC PASSING THROUGH OR NEAR THE WORK AREA IN ACCORDANCE WITH THE "MANUAL OF TRAFFIC CONTROL FOR CONSTRUCTION AND MAINTENANCE WORKS ZONES", AS PUBLISHED BY THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION (CALTRANS). COPIES OF SAID MANUAL MAY BE OBTAINED FROM THAT ADDRESS REFERENCED IN SECTION C.
- TESTING: EACH SUBCONTRACTOR SHALL INCLUDE AS A PART OF HIS WORK ALL TESTING OF MATERIAL AND WORKMANSHIP REQUIRED BY THE CITY AND OTHER AGENCIES AND UTILITIES HAVING JURISDICTION OVER THE WORK. TESTING SHALL BE BY AN INDEPENDENT LABORATORY APPROVED BY THAT AGENCY OR UTILITY REQUIRING SAME, EXCEPT ALL TRENCH BACK FILL, INCLUDING COMPACTION OF SAME, SHALL BE TESTED BY THAT FIRM WHICH FURNISHED THE SOILS REPORT REFERENCED FOR EARTHWORK WITHIN THE DRAWINGS. COPIES OF ALL TEST REPORTS SHALL BE PROVIDED TO THE CITY AND OTHER AGENCIES AND UTILITIES REQUIRING TESTS. MATERIALS AND WORKMANSHIP FOUND DEFICIENT SHALL BE REMOVED, REPAIRED OR OTHERWISE CORRECTED TO THE SATISFACTION OF THE GOVERNING AGENCY OR UTILITY AND THE DEVELOPER.
- TRENCH SAFETY: EACH SUBCONTRACTOR SHALL PROVIDE SHORING, SHEETING, SHIELDS AND EXCAVATED SLOPES IN TRENCH EXCAVATIONS CONFORMING TO THE REQUIREMENTS OF THE CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT (CAL/OSHA) AS ADMINISTERED BY THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS AND DEPICTED IN THE "TRENCH AND EXCAVATIONS SAFETY GUIDE" AVAILABLE FROM CAL/OSHA COMMUNICATIONS, 1515 CLAY STREET, SUITE 1901 OAKLAND, CA 94612.
- CERTIFICATES OF COMPLIANCE: SUBCONTRACTORS DOING CONCRETE AND PAVING ITEMS OF WORK SHALL PROVIDE WRITTEN AND SIGNED CERTIFICATIONS FROM CONCRETE AND PAVING SUPPLIES CERTIFYING THAT ALL MATERIALS SUPPLIED BY HIM TO PROJECT COMPLY WITH THESE SPECIFICATIONS. CERTIFICATES SHALL BE APPROVED OF FORM AND CONTENT, SIGNED BY AN AUTHORIZED REPRESENTATIVE OF THE PRODUCT SUPPLIES AND ENDORSED BY THE SUBCONTRACTOR INSTALLING THE PRODUCT. WET SIGNED COPIES OF SAID CERTIFICATES SHALL BE FURNISHED TO THE CITY AND DEVELOPER IMMEDIATELY UPON COMPLETION OF THE WORK.
- ENCROACHMENT PERMIT CONDITIONS AND PROVISIONS SHALL TAKE PRECEDENCE OVER THE APPROVE PLANS AND SPECIFICATIONS.
- PRE-CAST CONCRETE: WHERE IN THE DRAWINGS REINFORCED CAST-IN-PLACE CONCRETE STRUCTURES ARE SHOWN OR DETAILED, PRE-CAST CONCRETE STRUCTURES MAY BE USED IN THEIR PLACE. PRE-CAST STRUCTURES SHALL BE OF EQUAL QUALITY, SIZE AND DESIGN TO THAT SHOWN OR DETAILED AND SHALL BE SUBJECT TO THE REVIEW AND ACCEPTANCE OF THE CITY OR UTILITY PRIOR TO DELIVERY TO PROJECT SITE. NO LESS THAN THREE COPIES OF THE DETAILS AND SPECIFICATIONS FOR THE PRE-CAST STRUCTURES SHALL BE PROVIDED FOR REVIEW, COMMENTS OR APPROVAL.
- PRE CONSTRUCTION: A PRE CONSTRUCTION MEETING SHALL BE HELD INCLUDING REPRESENTATIVES OF THE CITY, DEVELOPER AND ALL PARTIES DOING WORK PURSUANT TO THE DRAWINGS; AT SAID MEETING, THE NAME OF ALL PARTIES, THEIR ADDRESSES AND PHONE NUMBERS SHALL BE PROVIDED ALONG WITH ESTIMATED DATES WHEN EACH TYPE OF WORK WILL BE UNDER WAY. OTHER DATA RELATIVE TO LICENSE NUMBERS, CONTRACTORS INSURANCE MAY ALSO BE REQUIRED FROM EACH SUBCONTRACTOR DOING WORK ON THE PROJECT. NO LESS THAN 3 DAYS NOTICE WILL BE GIVEN FOR SAID MEETING.

DESIGN MIXES: SUBCONTRACTORS PROVIDING ASPHALTIC CONCRETE PAVING, BASE AGGREGATE AND ANY KIND OF PORTLAND CEMENT CONCRETE REQUIRED FOR THRUST BLOCK, POST FOOTINGS AND PIPELINE ENCASEMENTS, SHALL BE THE PRODUCT OF AN INDIVIDUAL QUALIFIED AND LICENSED TO PROVIDE SUCH SERVICES AND WHEN APPROVED BY THE CITY, SHALL BECOME A REQUIREMENT OF THESE SPECIFICATIONS TO THE SAME EXTENT AS IF FULLY SET OUT HEREIN.

- EXISTING UTILITIES: UTILITIES SHOWN ON THE PLANS SHOULD BE LOCATED WITH AS MUCH CARE AS POSSIBLE WITH THE AID OF AVAILABLE RECORDS. HOWEVER THE LOCATIONS SHOWN MUST BE CONSIDERED APPROXIMATE ONLY. PRIOR TO THE START OF WORK, THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL UTILITY COMPANIES AND SHALL LOCATE ALL LINES ACCURATELY BY EXCAVATION AND MEASUREMENT. PRIOR TO ANY EXCAVATION THE CONTRACTOR SHALL CALL THE 1-800-422-4133 ALERT NUMBER.

UTILITIES COORDINATION

- NO LESS THAN 3 WORKING DAYS PRIOR TO ANY EXCAVATION OR TRENCHING, EACH CONTRACTOR DOING SUCH WORK SHALL CONTACT OR TELEPHONE THE FOLLOWING AGENCIES SO THAT EXISTING UNDERGROUND UTILITIES MAY BE LOCATED AND, IF REQUIRED BY THE AGENCY, AN INSPECTOR MAY BE PRESENT
- CITY OF IMPERIAL (760) 427-4238
 - IMPERIAL IRRIGATION DISTRICT (POWER) (800) 303-7756
 - IMPERIAL IRRIGATION DISTRICT (WATER) (760) 339-9169
 - SOUTHERN CALIFORNIA GAS COMPANY (800) 423-1391
 - AT & T (510) 645-2929
 - SPECTRUM (260) 335-4818

- SAFETY: THE CONTRACTOR SHALL PROVIDE ALL MEANS AND DEVICES NECESSARY AND/OR REQUIRED TO PROTECT HIS EMPLOYEES AND ALL OTHERS FROM INJURY OR DAMAGE INCLUDING BUT NOT LIMITED TO: TRENCH, SHORING, TRAFFIC BARRICADES, LIGHTING, FLAGMEN, WARNING DEVICES, JOB COORDINATION AND SUPERVISION. ALL COORDINATION, EQUIPMENT, AND OTHER LABOR REQUIRED FOR DETOUR SHALL BE PROVIDED BY THE CONTRACTOR.

- THE STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH THE CITY OF IMPERIAL STANDARDS OR COUNTY OF IMPERIAL DEPARTMENT OF PUBLIC WORKS ENGINEERING DESIGN GUIDELINES ADDITIONAL NOTES ARE DESIGNED AS "SPECIFIC CONDITIONS NOTES" IF IN COUNTY RIGHT-OF-WAY AND AS APPROVED BY THE PUBLIC WORKS DIRECTOR.
- PRIOR TO ANY DEMOLITION OR EXCAVATION FOR THIS CONTRACT, CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS HAS BEEN OBTAINED FROM AVAILABLE RECORDS ONLY AND MAY NOT REFLECT ALL EXISTING UTILITIES. LOCATION OF ALL EXISTING UTILITIES SHALL BE CONFIRMED BY FIELD MEASUREMENTS AND POTHOLING BY CONTRACTOR PRIOR TO CONSTRUCTION OF WORK. CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN HEREON AND ANY OTHER EXISTING LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. ACCURATE VERIFICATION AS TO SIZE, LOCATION AND DEPTH OF EXISTING UNDERGROUND SERVICES SHALL BE THE CONTRACTORS RESPONSIBILITY. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITY AGENCIES PRIOR TO STARTING HIS WORK WITH UTILITY REPRESENTATIVES. FOR LOCATION OF UNDERGROUND UTILITIES AND APPURTENANCES, CONTACT "UNDERGROUND SERVICE ALERT": AT 1-800 422 4133

- LOCATION AND ELEVATION OF IMPROVEMENTS TO BE MET BY WORK TO BE DONE SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION OF NEW WORK. CONTRACTOR WILL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES.

- NO PAVING SHALL BE DONE UNTIL EXISTING POWER POLES ARE RELOCATED OUTSIDE THE AREAS TO BE PAVED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ANY STRIPING, PAVEMENT MARKERS, OR LEGENDS OBLITERATED BY THE CONSTRUCTION OF THIS PROJECT.
- ALL UNDERGROUND UTILITIES WITHIN THE STREET RIGHT-OF-WAY SHALL BE CONSTRUCTED, CONNECTED AND TESTED PRIOR TO CONSTRUCTION OF BERM, CURB, CROSS-GUTTER AND PAVING.
- ALL SIGNS TO BE ALUMINUM WITH 3M HIGH INTENSITY TYPE REFLECTIVE FACE OR EQUIVALENT

- ANY EXISTING SURVEY MONUMENTS OR CITY RECOGNIZED BENCHMARKS SHALL BE PROTECTED BY THE CONTRACTOR. SHOULD ANY SUCH MONUMENTS OR BENCHMARKS BE REMOVED, DAMAGED, OBLITERATED OR ALTERED BY THE CONTRACTORS OPERATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER RESETTling OF THE SAME AS PER THE SUBDIVISION MAP ACT, THE PROFESSIONAL LAND SURVEYORS ACT AND TO THE SATISFACTION OF THE CITY OF IMPERIAL CITY ENGINEER/PUBLIC SERVICES DIRECTOR. SUCH POINTS SHALL BE REFERENCED AND REPLACED WITH APPROPRIATE MONUMENTATION BY A LICENSED LAND SURVEYOR OR A REGISTERED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE SHALL BE FILED BY THE LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER

DEMOLITION NOTES

- PRIOR TO THE REMOVAL OF ANY PRIVATE IMPROVEMENTS (INCLUDING LANDSCAPING AND IRRIGATION) THE CONTRACTOR SHALL OBTAIN APPROVAL FOR THE REMOVAL FOR THE CITY ENGINEER. CONTRACTOR SHALL COORDINATE WITH THE CITY ENGINEER FOR SITE INSPECTION OF THE IMPROVEMENTS PLANNED FOR REMOVAL. THE LIMITS OF REMOVAL SHALL BE ADJUSTED AS DIRECTED BY THE CITY ENGINEER.
- ALL PRIVATE IMPROVEMENTS OUTSIDE OF THE PUBLIC RIGHT OF WAY REMOVED TO FACILITATE THE CONSTRUCTION OF THE NEW IMPROVEMENTS SHALL BE REPLACED IN-KIND BY THE CONTRACTOR.
- THE LIMITS OF REMOVAL SHOWN ON THE PLANS FOR PRIVATE CONCRETE DRIVEWAYS AND WALKWAYS ARE APPROXIMATE. THE ACTUAL LIMITS SHALL BE EXTENDED, WHERE NEEDED, TO EXISTING CONSTRUCTION JOINTS WHEN THE LIMITS SHOWN ON THE PLANS FALL WITHIN 5' OF THE EXISTING CONSTRUCTION JOINT. CONTRACTOR SHALL REVIEW THE PROPOSED LIMITS OF PRIVATE CONCRETE DRIVEWAY AND WALKWAY REMOVALS WITH THE CITY ENGINEER PRIOR TO THE WORK BEING DONE. DRIVEWAY PROFILES SHALL BE ADJUSTED ACCORDINGLY.
- VERIFY THAT ANY UTILITIES SHOWN TO BE RELOCATED BY OTHERS HAVE BEEN RELOCATED AND NO LONGER IN CONFLICT.

ABBREVIATIONS

AC	ASPHALT CONCRETE	HMA	HOT MIX ASPHALT	SS	SANITARY SEWER
ADA	AMERICANS WITH DISABILITY ACT	IID	IMPERIAL IRRIGATION DISTRICT	ST	STREET
APN	ASSESSORS PARCEL NUMBER	LN	LANE	STD	STANDARD
ARAM	ASPHALT RUBBER AGGREGATE MEMBRANE	LSCP	LANDSCAPE	SDWK	SIDEWALK
ARHM	ASPHALT RUBBER HOT MIX	LT	LEFT	STA	STATION
ASPH	ASPHALT	ME	MATCH EXISTING	TC	TOP OF CURB
AVE	AVENUE	MH	MANHOLE	TELE	TELECOM
BEG	BEGIN	MIN	MINIMUM	TS	TRAFFIC SIGNAL
BCR	BEGINNING OF CURB RETURN	MOD	MODIFIED	TYP	TYPICAL
BFP	BACKFLOW PREVENTER	N	NORTH	WB	WESTBOUND
BLVD	BOULEVARD	NB	NORTHBOUND	WTR	WATER
BSW	BACK OF SIDEWALK	NTS	NOT TO SCALE	WM	WATER METER
C&G	CURB AND GUTTER	O.C.	ON CENTER	WV	WATER VALVE
C/L	CENTERLINE	OHE	OVERHEAD ELECTRIC		
CMU	CONCRETE MASONRY UNIT	PB	PULL BOX		
COMP	COMPACTED	PCC	PORTLAND CEMENT CONCRETE		
CONC	CONCRETE	PMVT	PAVEMENT		
DWY	DRIVEWAY	PP	POWER POLE		
EB	EASTBOUND	PROP	PROPOSED		
ECR	END OF CURB RETURN	PVC	POLY VINYL CHLORIDE		
EG	EXISTING GROUND	PVT	PRIVATE		
ELEC	ELECTRICAL	RCP	REINFORCED CONCRETE PIPE		
EOP	EDGE OF PAVEMENT	RD	ROAD		
EQUIP	EQUIPMENT	RRFB	RECTANGULAR RAPID FLASHING BEACONS		
ETW	EDGE OF TRAVELED WAY	RSP	REVISED STANDARD PLANS		
EX	EXISTING	RT	RIGHT		
FG	FINISHED GRADE	RW	RIGHT-OF-WAY		
FH	FIRE HYDRANT	S	SOUTH		
FL	FLOW LINE	SB	SOUTHBOUND		
FS	FINISHED SURFACE	SD	STORM DRAIN		
GG	GAP GRADED	SL	STREET LIGHT		

DECLARATION OR RESPONSIBLE CHARGE

I, BLANCA H. SOTO, HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF IMPERIAL IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR THE PROJECT DESIGN.

By: Blanca Soto DATE: 06/21/2024
 BLANCA H. SOTO
 R.C.E. 86597
 EXPIRATION DATE: 03/31/2025

SHEET INDEX

01	TITLE SHEET, VICINITY MAP, AND GENERAL NOTES
02	KEY MAP
03	CONSTRUCTION DETAILS
04	TYPICAL SECTIONS
05-18	IMPROVEMENT PLANS
19	TRAFFIC SIGNAL PLAN
20-27	SIGNAGE AND STRIPING PLANS
28-49	LANDSCAPE AND IRRIGATION PLANS
50-52	CITY OF IMPERIAL STANDARD DRAWINGS

APPROVED BY DIRECTOR OF PUBLIC SERVICES
 CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. DATE: _____

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
 Call: TOLL FREE
1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG.



NO.	REVISIONS:	APPROVED	DATE

UNAUTHORIZED CHANGES & USES: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

CITY OF IMPERIAL

420 South Imperial Avenue
 Imperial, CA 92251
 Ph: (760) 355-4371 Fax: (760) 355-4718

BENCHMARK:

SEE SHEET 2 FOR BENCHMARK INFORMATION



PREPARED UNDER THE DIRECT SUPERVISION OF:

Blanca Soto R.C.E. NO. 86597

DATE: 06/21/2024 REG. EXP. 03/31/2025

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1

SHEET CONTENT: TITLE SHEET, VICINITY MAP, AND GENERAL NOTES

SCALE: N/A

DRAWN BY: BS

REVIEWED BY: RD

JUNE 2024

SHEET **01** OF 52 SHEETS

JOB NO. CIP#823

SR 86 CONSTRUCTION GEOMETRIC DATA						
	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
C2	737.30'	N04°03'44"E	4000.00'	369.70'	10°33'40"	
L4	1073.69'	N09°20'34"E				
C3	676.60'	N04°29'05"E	3990.00'	339.11'	9°42'57"	
L5	3914.85'	N00°22'23"W				

S IMPERIAL AVE CONSTRUCTION CENTERLINE GEOMETRIC DATA						
	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L20	577.88'	N00°24'22"W				
L21	1700.70'	N00°21'55"W				
L22	329.97'	N00°19'21"W				
L23	2991.45'	N00°24'50"W				

W WORTHINGTON RD CONSTRUCTION CENTERLINE GEOMETRIC DATA						
	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L30	489.53'	N89°38'09"E				
L31	1300.71'	N89°38'04"E				
L32	304.37'	N89°38'05"E				
C30	91.31'	N87°01'08"E	1000.00'	45.69'	5°13'54"	
L33	347.31'	N84°24'11"E				
C31	91.31'	N87°01'08"E	1000.00'	45.69'	5°13'54"	
L34	4367.35'	N89°38'05"E				
L35	1908.11'	N89°38'40"E				

B ST CONSTRUCTION CENTERLINE GEOMETRIC DATA						
	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L40	1500.00'	N00°23'55"W				

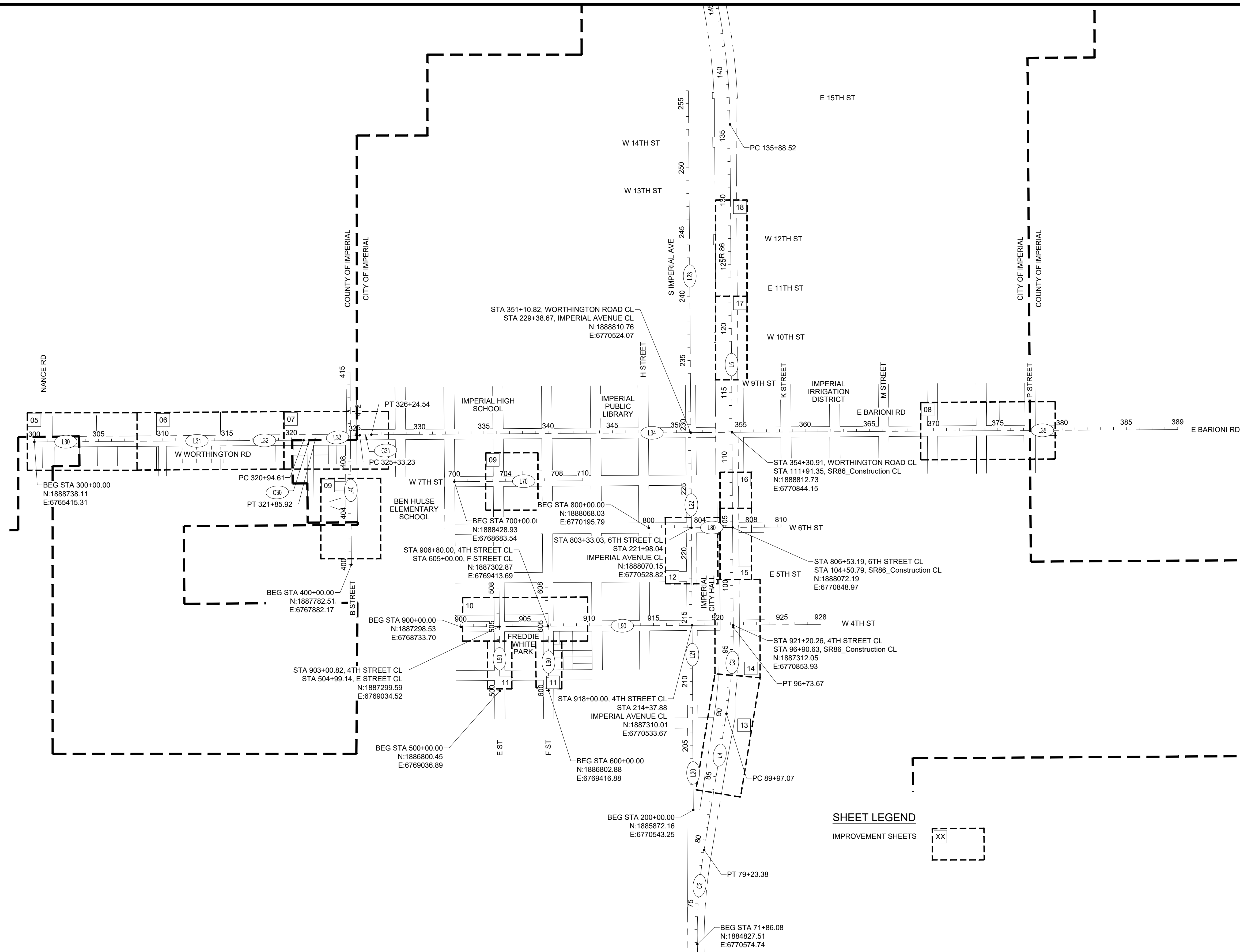
E ST CONSTRUCTION CENTERLINE GEOMETRIC DATA						
	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L50	800.00'	N00°21'55"W				

F ST CONSTRUCTION CENTERLINE GEOMETRIC DATA						
	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L60	800.00'	N00°21'55"W				

W 7TH ST CONSTRUCTION CENTERLINE GEOMETRIC DATA						
	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L70	1000.00'	N89°38'05"E				

W 6TH ST CONSTRUCTION CENTERLINE GEOMETRIC DATA						
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L80	1030.00'	N89°38'05"E				

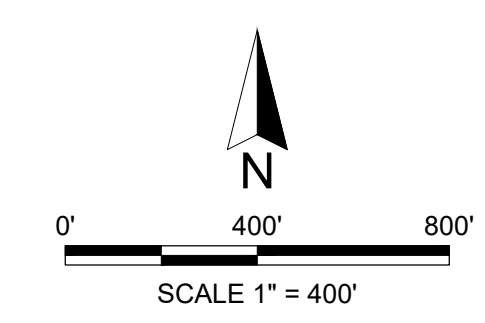
W 4TH ST CONSTRUCTION CENTERLINE GEOMETRIC DATA						
	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L90	2800.00'	N89°38'05"E				



BENCHMARK

THE STATION MARK IS A STANDARD BENCHMARK DISK SET IN A RETAINING WALL BY THE RAILROAD TRACKS STAMPED "D 1225 1971". THE STATION IS 1.4 MILES SOUTH ALONG THE SOUTHERN PACIFIC COMPANY RAILROAD FROM THE CROSSING OF MAIN STREET AT IMPERIAL, 0.15 MILE NORTH OF THE CROSSING OF ATEN ROAD, AT THE JUNCTION OF A SPUR TRACK SOUTH, IN THE TOP AND 1.0 FOOT SOUTH OF THE NORTH END OF THE EAST CONCRETE HEADWALL OF A 12-INCH PIPE CULVERT UNDER THE SPUR TRACK, 34.0 FEET EAST OF THE EAST RAIL OF THE MAIN TRACK, 9.0 FEET EAST OF THE EAST RAIL OF THE SPUR TRACK, AND ABOUT 1-FOOT LOWER THAN THE MAIN TRACK.

PROJECT ELEVATION: 945.57'



APPROVED BY DIRECTOR OF PUBLIC SERVICES
CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. _____ DATE _____

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

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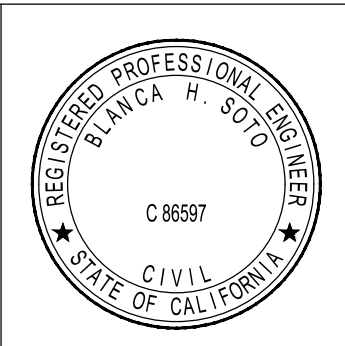


NO.	REVISIONS:	APPROVED	DATE

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CITY OF IMPERIAL
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Imperial, CA 92251
Ph: (760) 355-4371 Fax: (760) 355-4718

BENCHMARK:
SEE SHEET 2 FOR BENCHMARK INFORMATION



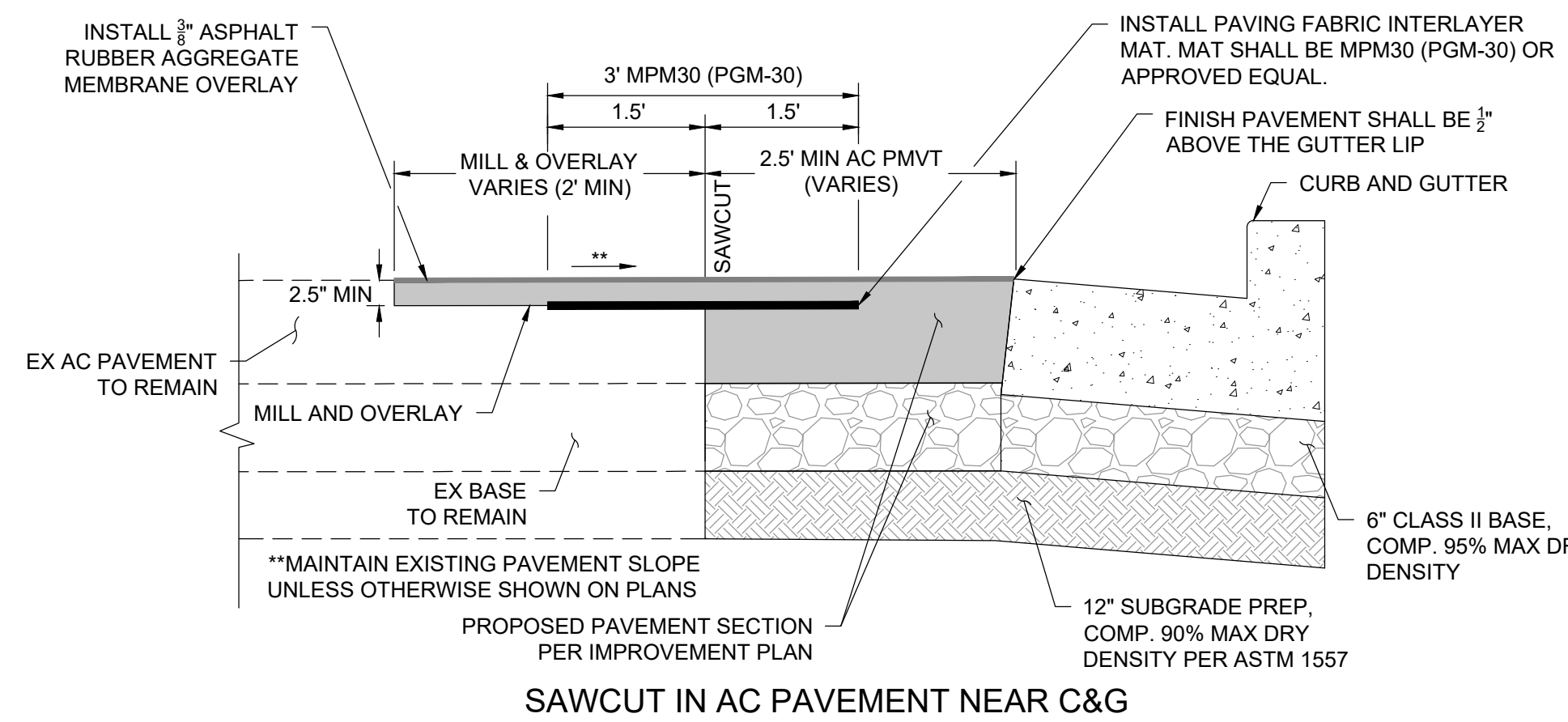
PREPARED UNDER THE DIRECT SUPERVISION OF:
Blanca Soto
BLANCA H. SOTO R.C.E. NO. 86597
DATE: 06/21/2024 REG. EXP. 03/31/2025

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: KEY MAP

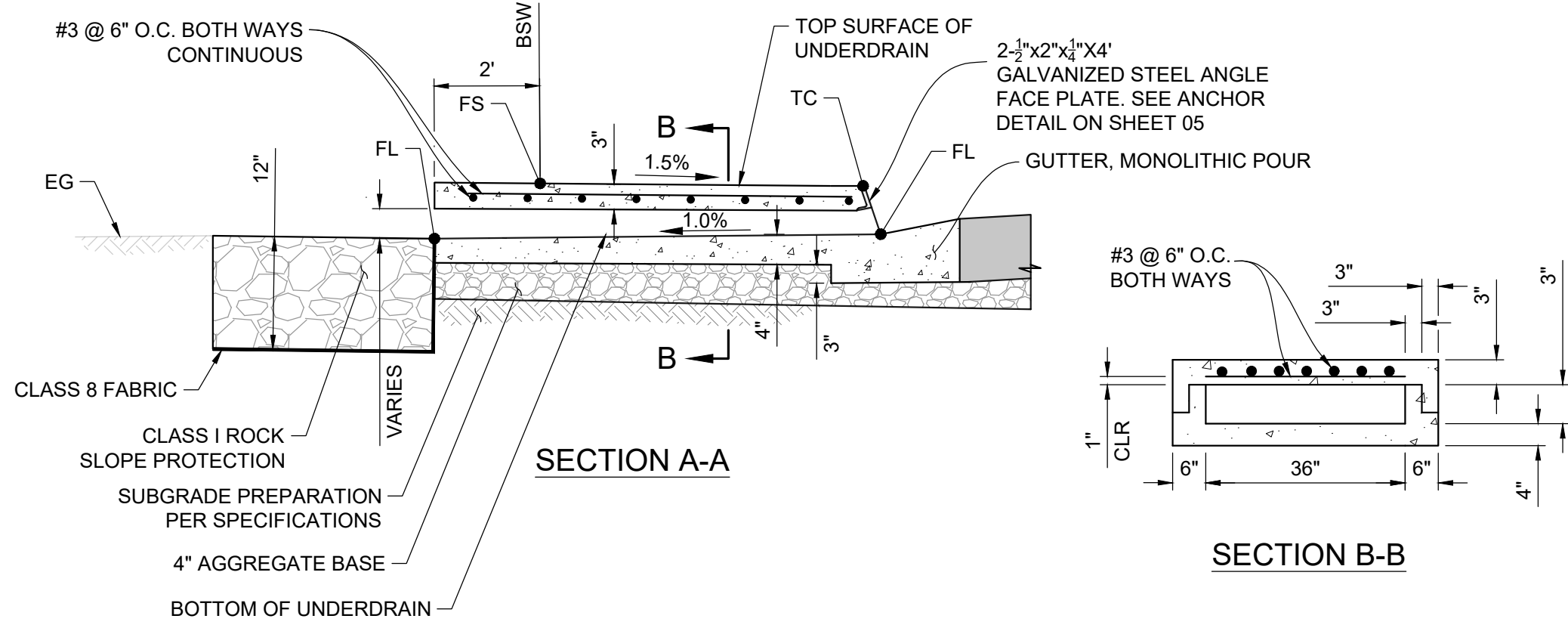
SCALE: N/A
DRAWN BY: BS
REVIEWED BY: RD
JUNE 2024

SHEET **02**
OF 52 SHEETS
JOB NO. CIP#823

P:\Projects\2021\Imperial\Drawings\88-ARPA\88-ARPA-Hwy 86\88-ARPA-Hwy 86-02021.dwg, 07/11/2024 10:50:11 AM



SAWCUT IN AC PAVEMENT NEAR C&G

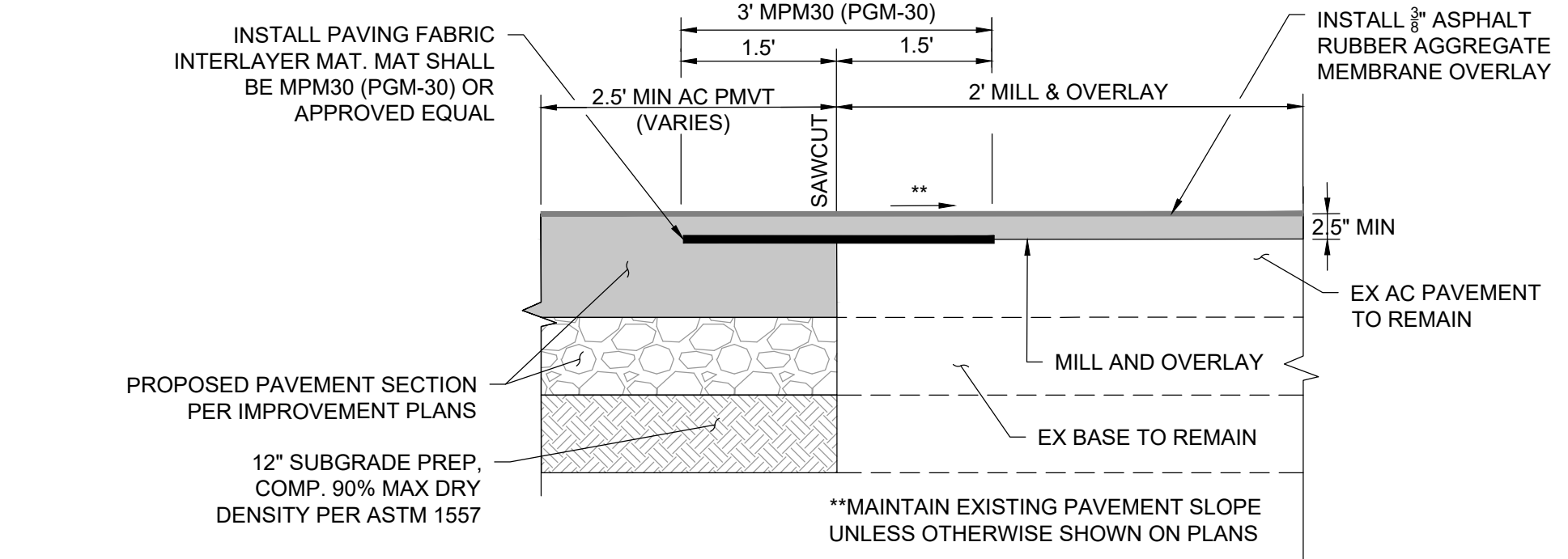


SECTION A-A

SECTION B-B

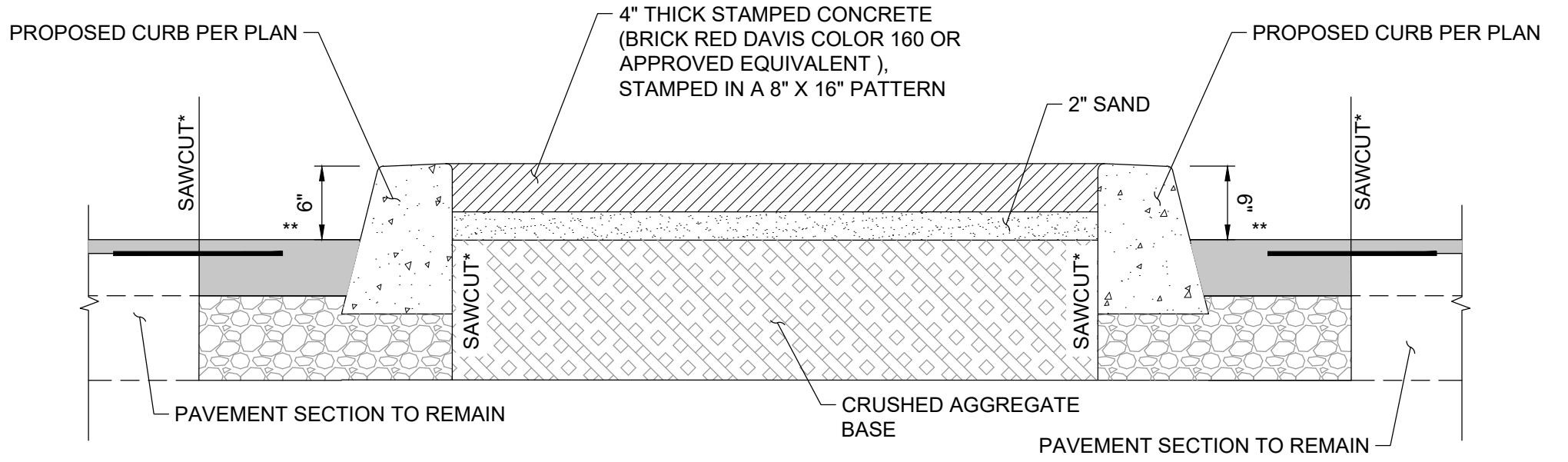
- NOTES:**
- TROWEL FINISH BOTTOM OF UNDERDRAIN AND TOP SURFACE OF UNDERDRAIN BEYOND THE BACK OF "SIDEWALK" (BSW). TOP SURFACE OF UNDERDRAIN WITHIN THE "SIDEWALK" SHALL MATCH THE ADJACENT SIDEWALK FINISH. PROVIDE A SCORE MARK WITHIN THE TOP OF UNDERDRAIN ALONG THE BACK OF SIDEWALK LINE.
 - MODIFIED SIDEWALK UNDERDRAIN SHALL CONFORM WITH CITY OF IMPERIAL STANDARD DETAIL NO. 407 UNLESS OTHERWISE SHOWN.

C MODIFIED SIDEWALK UNDERDRAIN
NOT TO SCALE



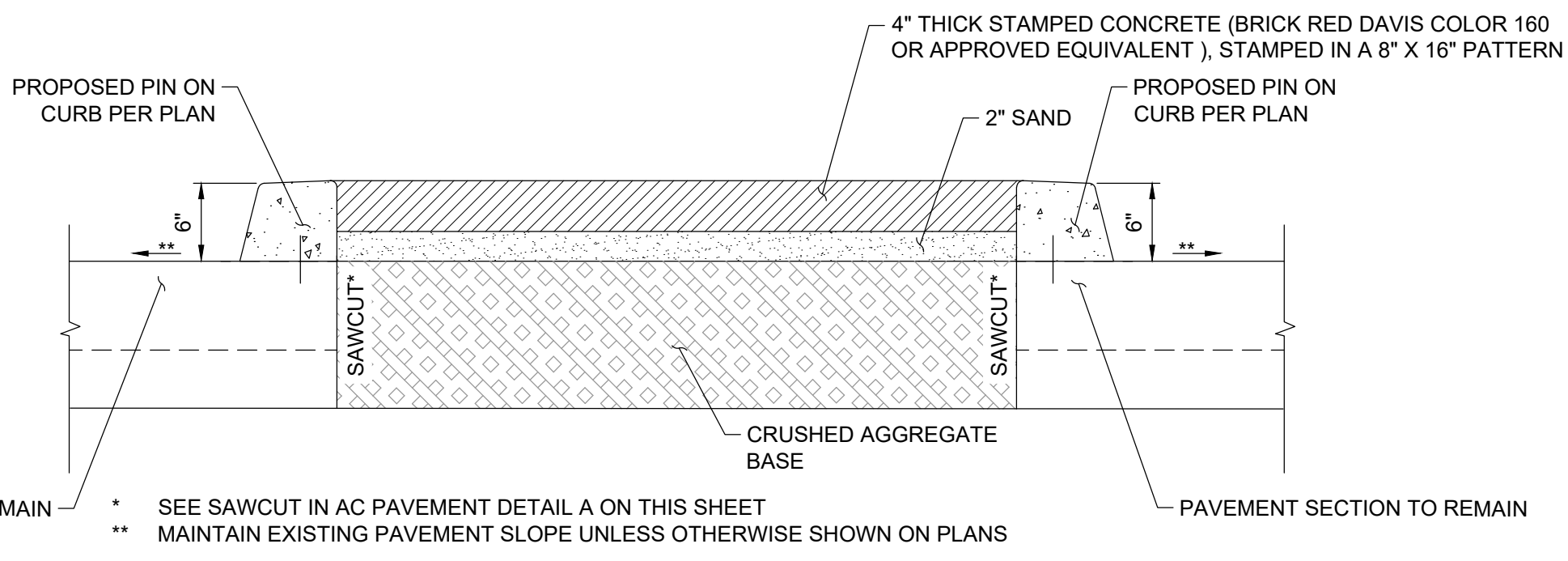
ROADWAY SAWCUT DETAIL

A SAWCUT IN AC PAVEMENT
NOT TO SCALE



PCC BARRIER CURB

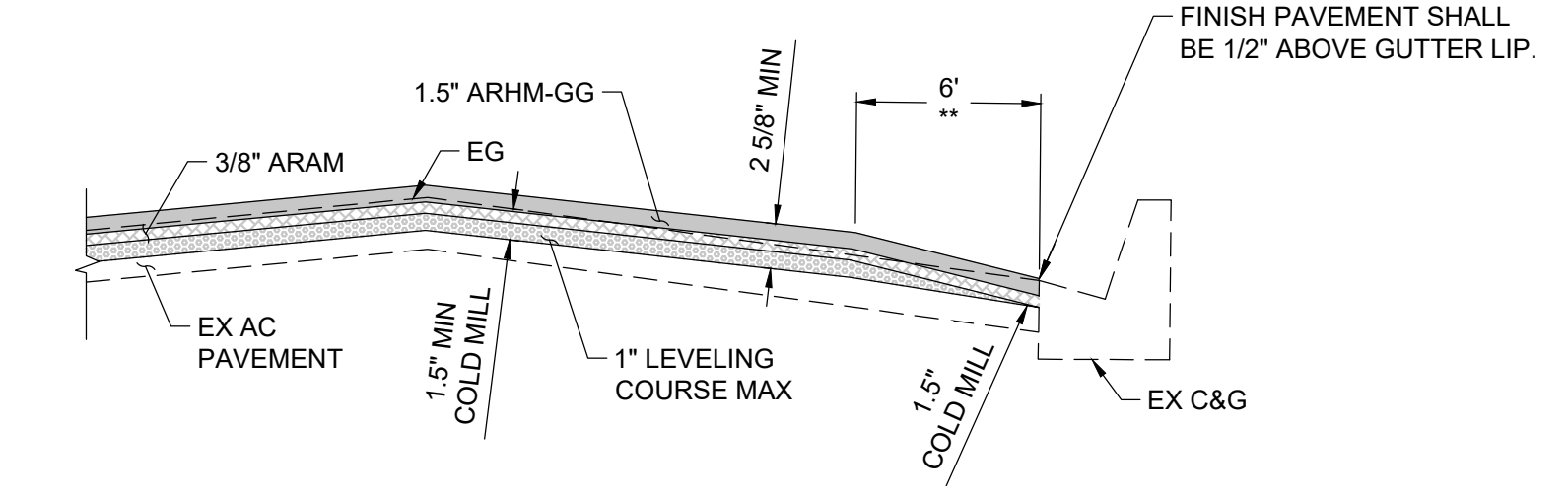
- SEE SAWCUT IN AC PAVEMENT DETAIL A ON THIS SHEET
- MAINTAIN EXISTING PAVEMENT SLOPE UNLESS OTHERWISE SHOWN ON PLANS



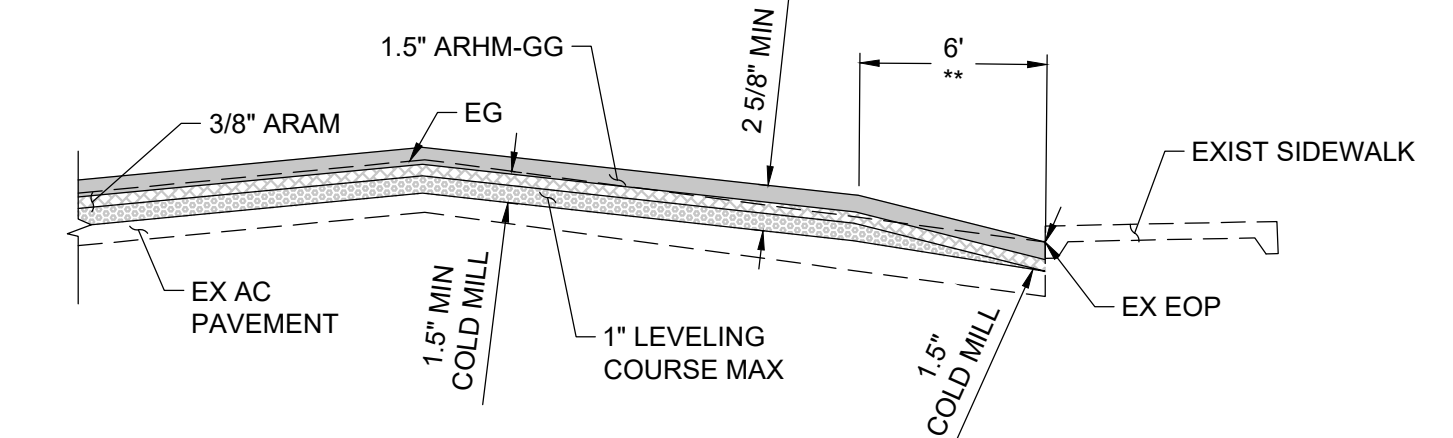
PIN ON CURB

- SEE SAWCUT IN AC PAVEMENT DETAIL A ON THIS SHEET
- MAINTAIN EXISTING PAVEMENT SLOPE UNLESS OTHERWISE SHOWN ON PLANS

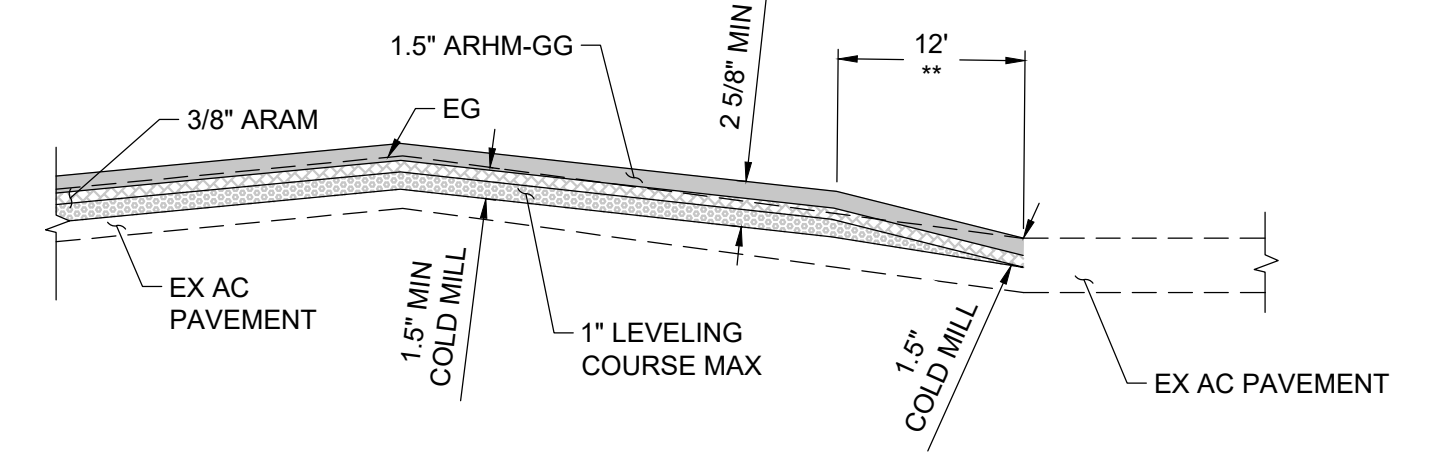
H PCC MEDIAN INFILL
NOT TO SCALE



D MILL AND OVERLAY NEXT TO EXISTING CURB AND GUTTER**
NOT TO SCALE



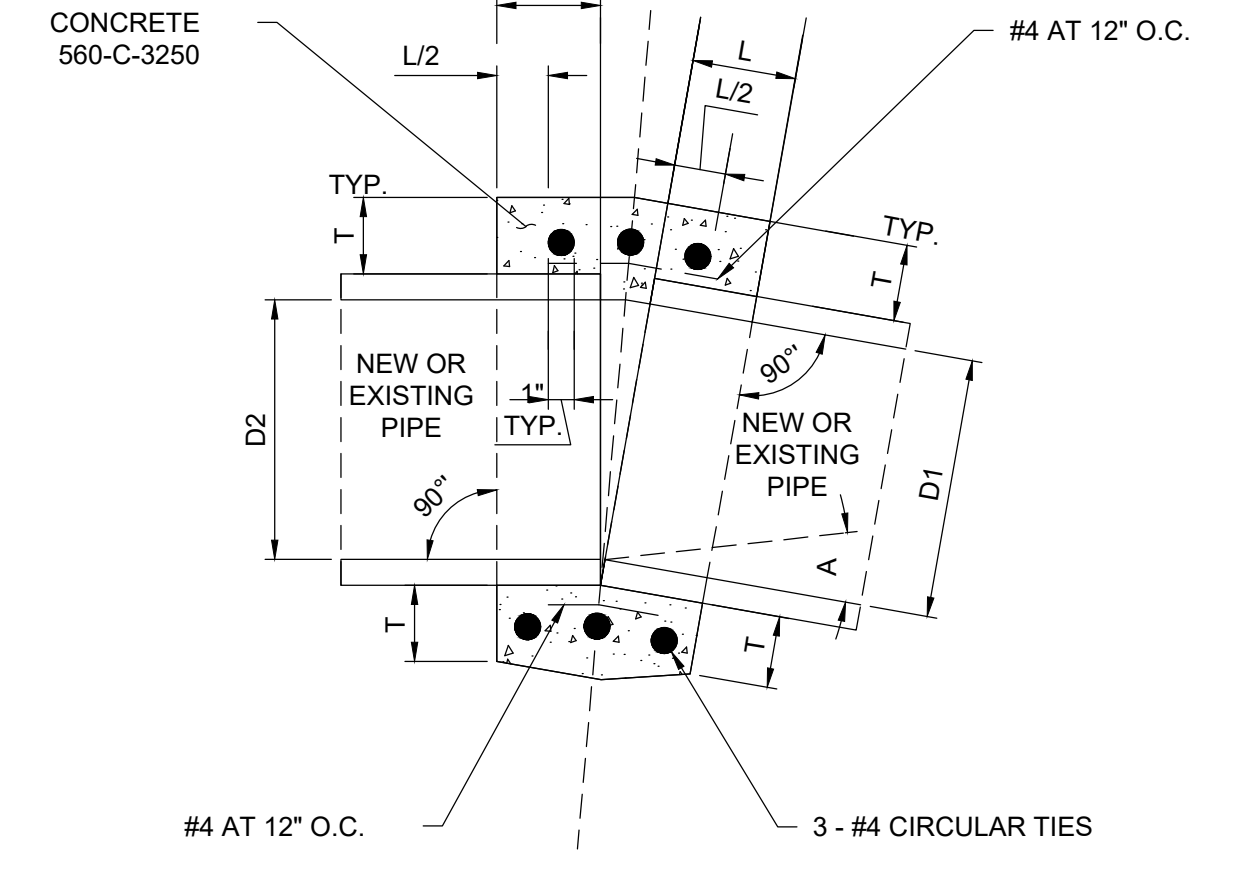
E MILL AND OVERLAY NEXT TO EXISTING SIDEWALK**
NOT TO SCALE



F MILL AND OVERLAY NEXT TO EXISTING EDGE OF PAVEMENT**
NOT TO SCALE

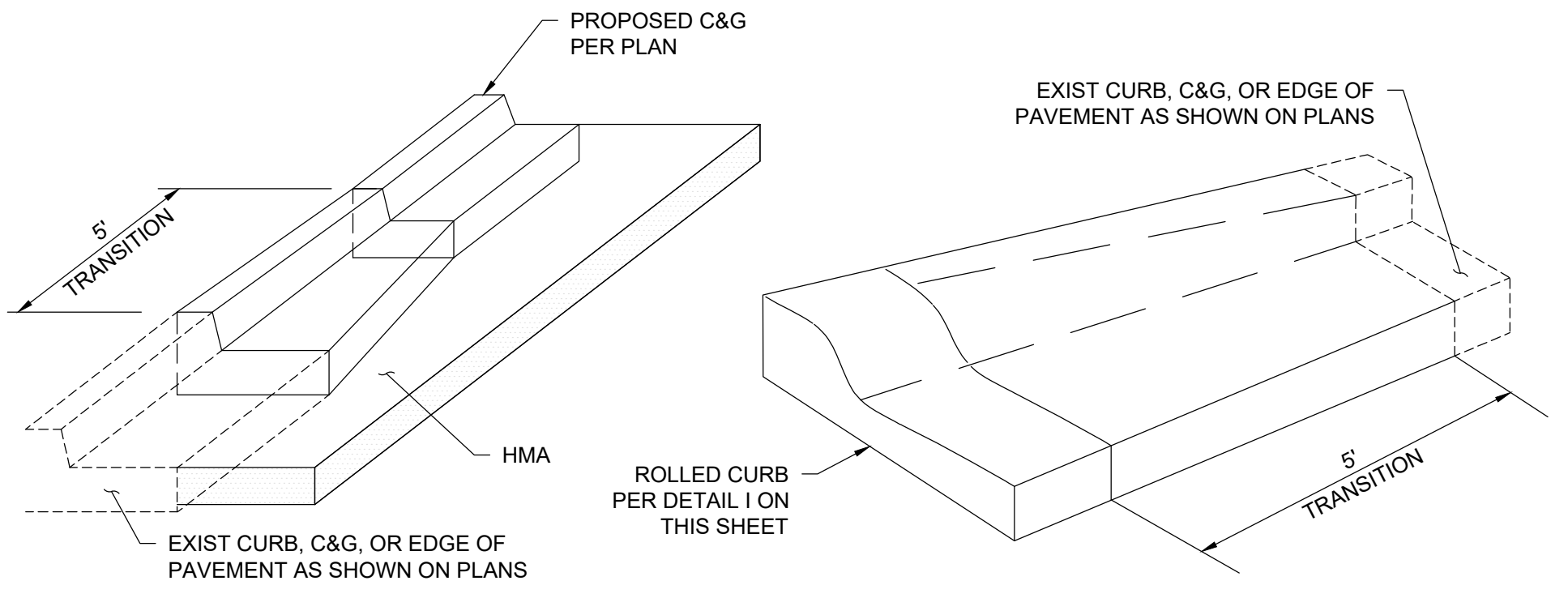
**CONTRACTOR TO TRANSITION TO EXISTING, ENSURING NO PONDING DEVELOPS BETWEEN EXISTING AND PROPOSED SURFACE

- NOTES:**
- WHERE PIPES OF DIFFERENT DIAMETERS ARE JOINED WITH A CONCRETE COLLAR, L AND T SHALL BE THOSE OF THE LARGER PIPE. D=D1 OR D2 WHICHEVER IS GREATER.
 - OMIT REINFORCING ON PIPES 24" AND LESS IN DIAMETER AND ON ALL PIPES WHERE ANGLE A IS LESS THAN 10°.
 - WHERE REINFORCING IS REQUIRED THE DIAMETER OF THE CIRCULAR TIES SHALL BE $D = (2 \times \text{WALL THICKNESS}) + 8"$.
 - PIPE MAY BE CORRUGATED METAL PIPE, CONCRETE PIPE OR REINFORCED CONCRETE PIPE.

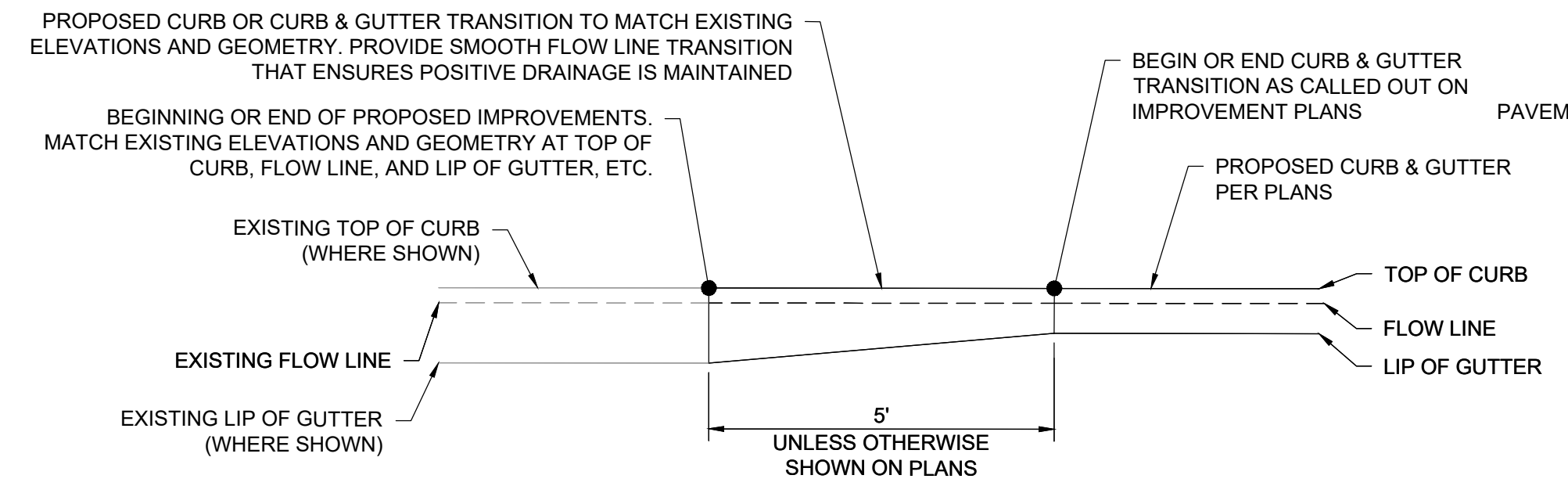


G PIPE COLLAR DETAIL
NOT TO SCALE

D	L	T
12"	2'-0"	6"
18"	2'-0"	6"
24"	2'-0"	6"
36"	2'-0"	8"



ROLLED CURB



B CURB & GUTTER TRANSITION
NOT TO SCALE

SEE SHEETS 50 - 52 FOR CITY OF IMPERIAL STANDARD DETAILS

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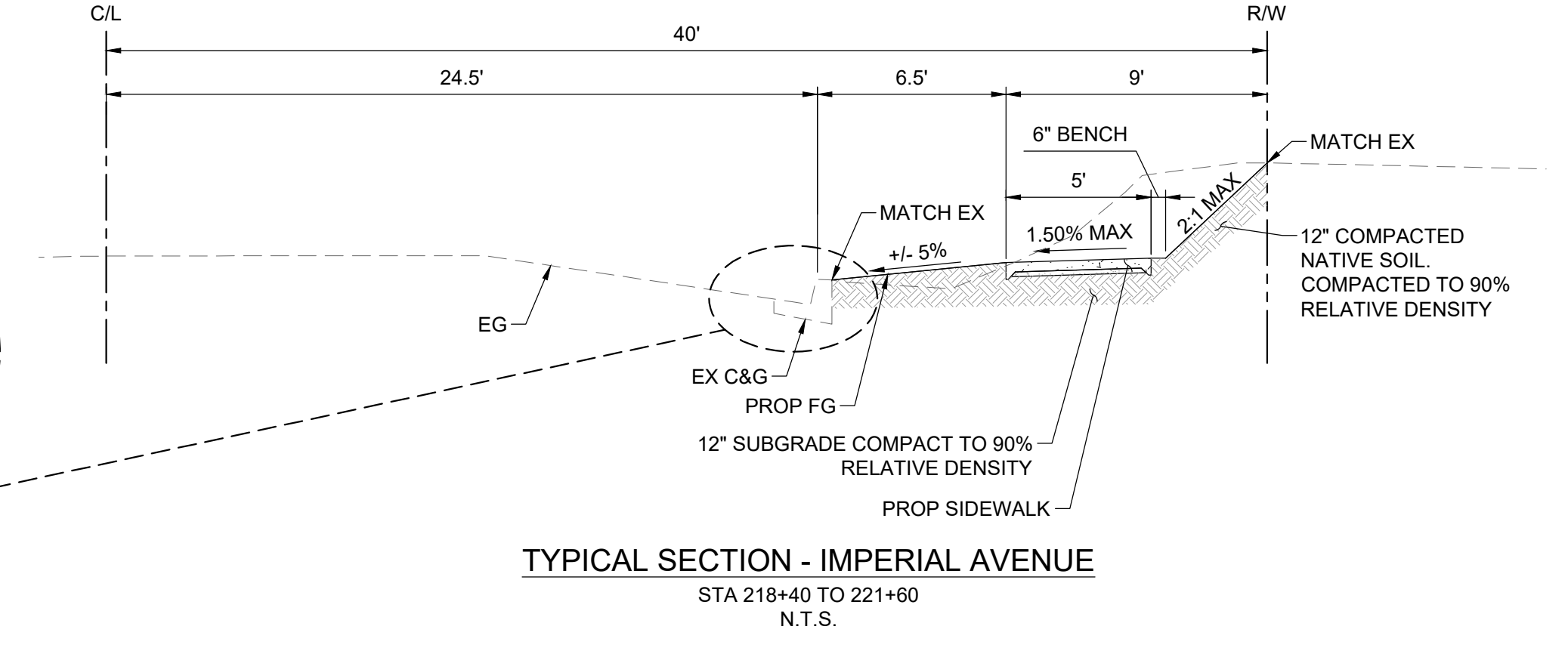
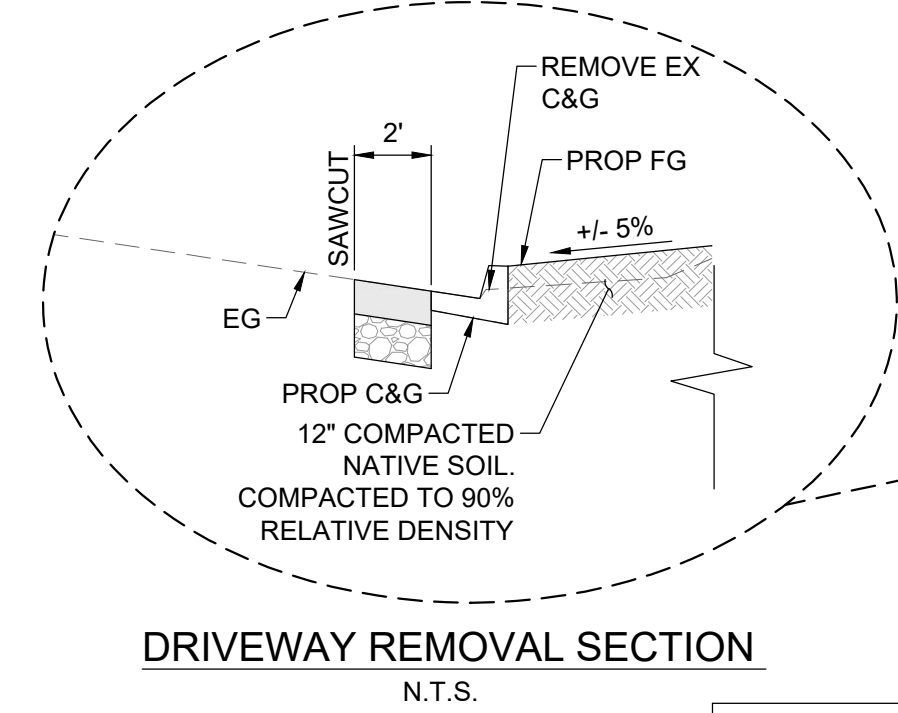
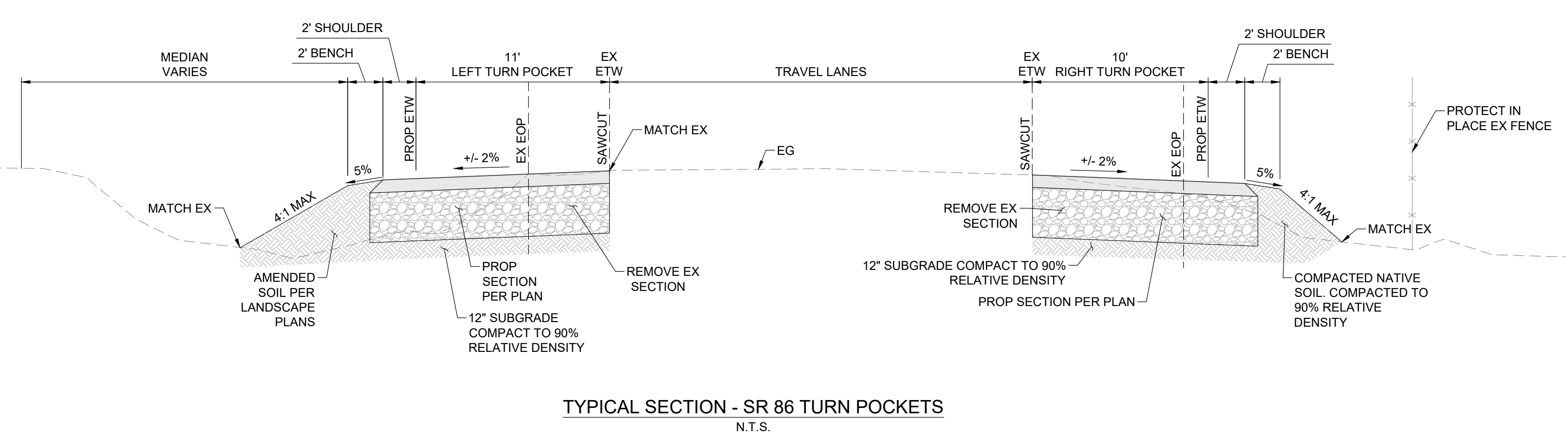
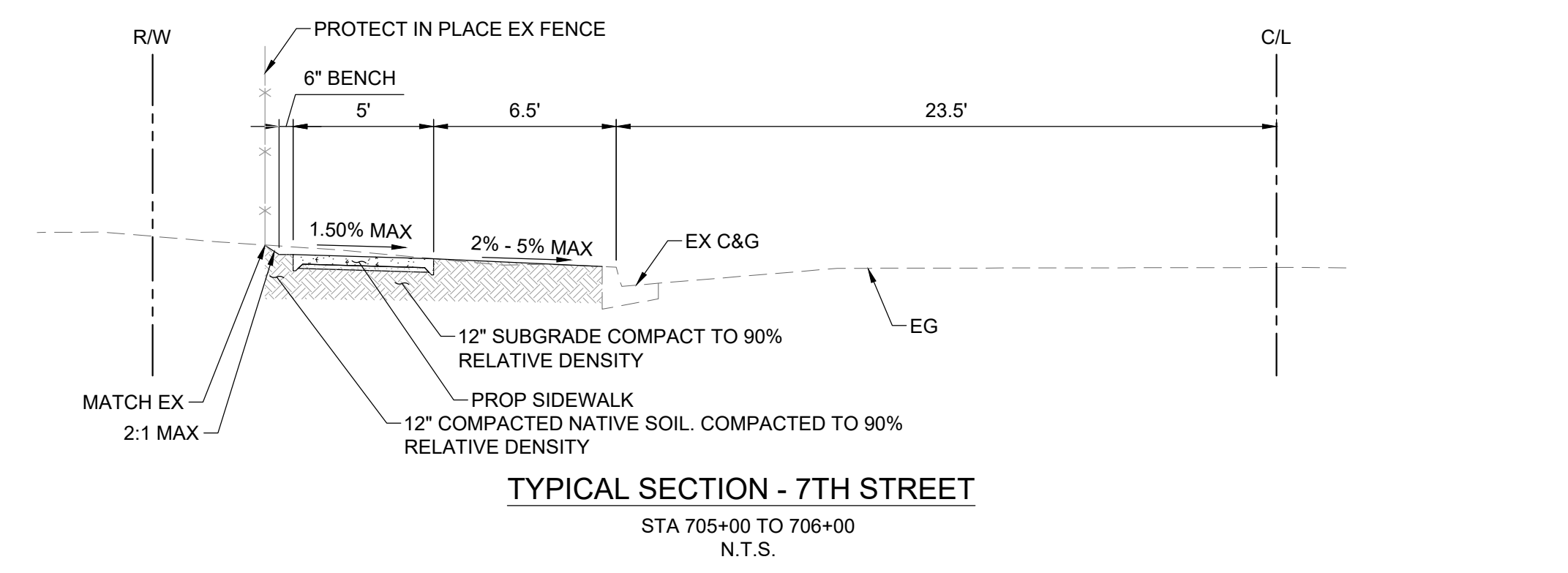
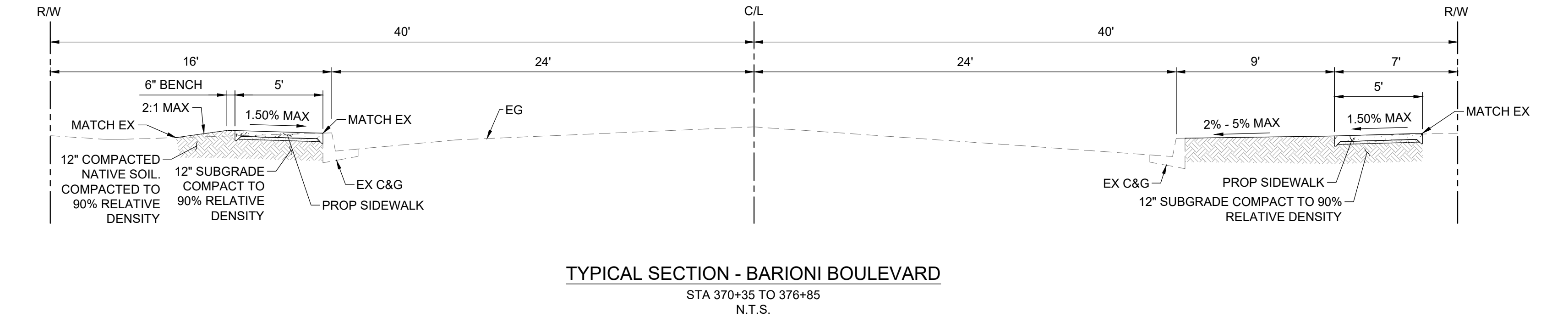
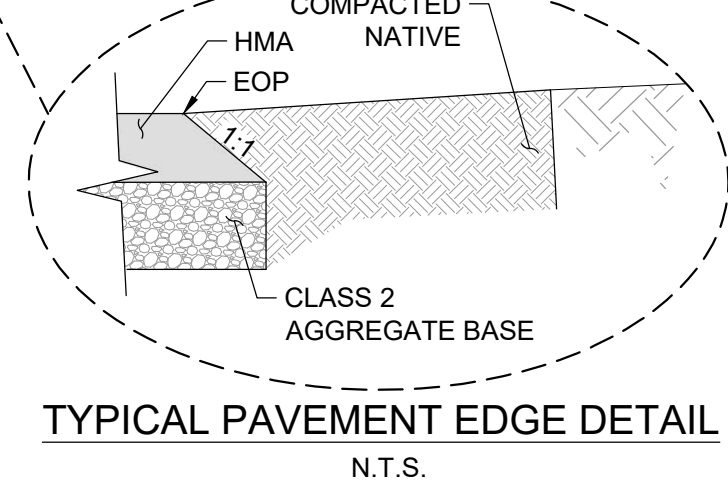
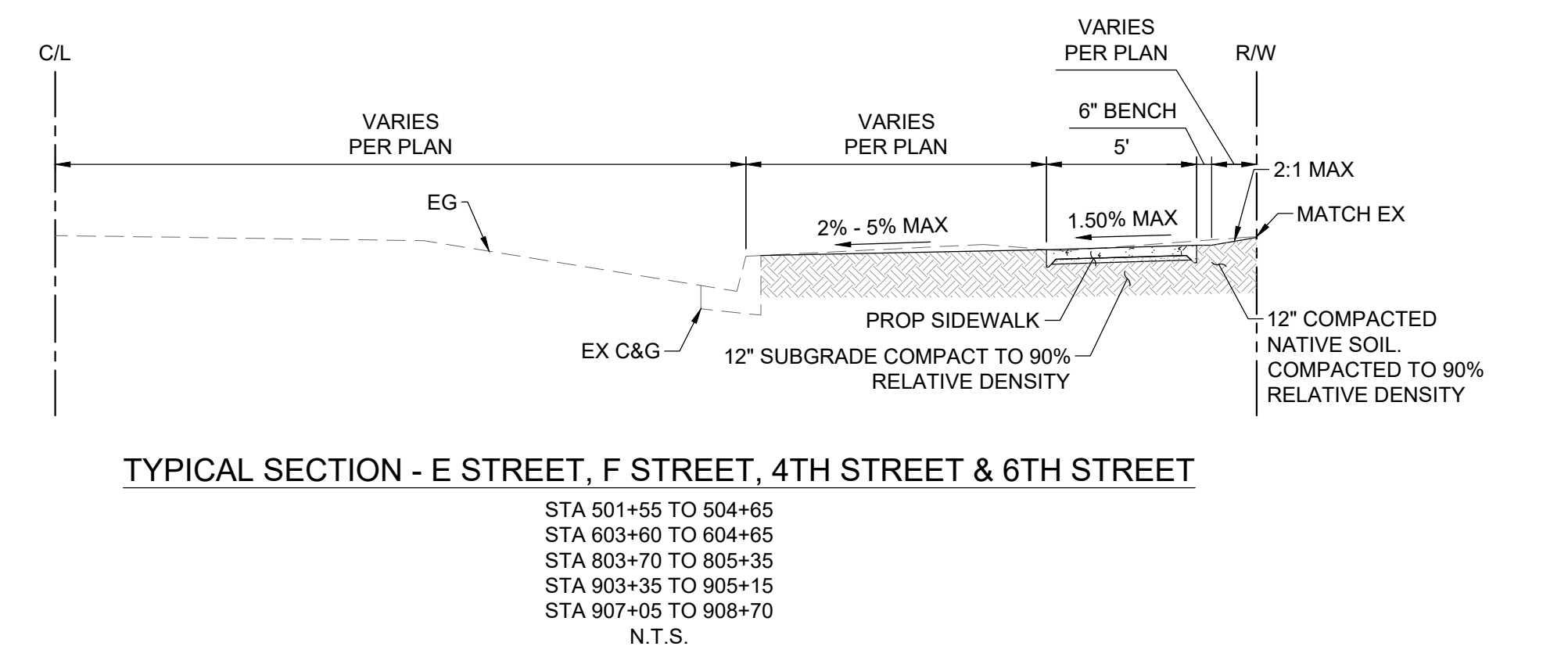
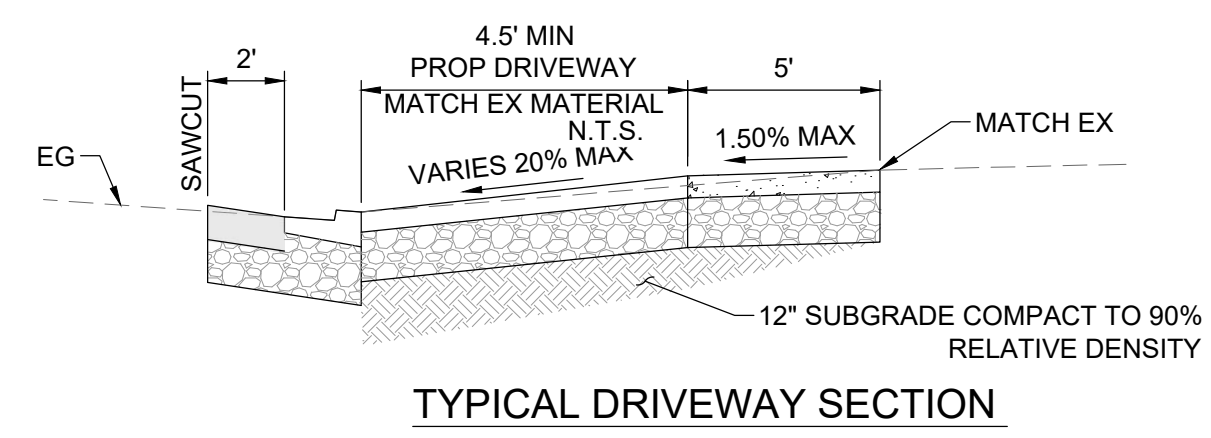
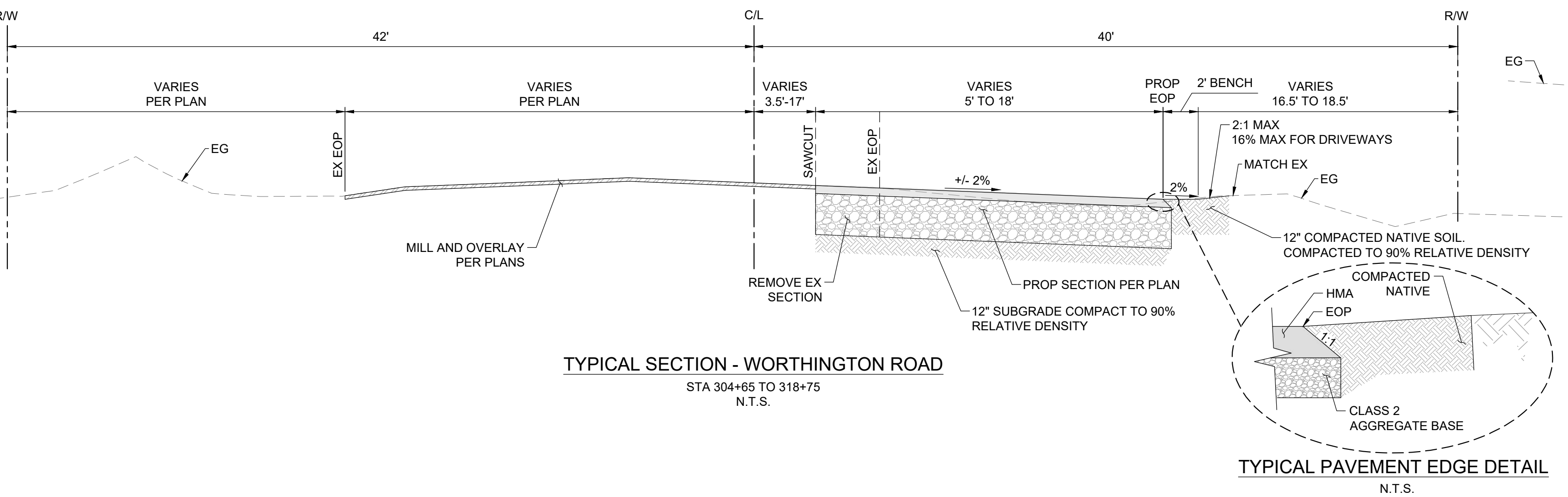
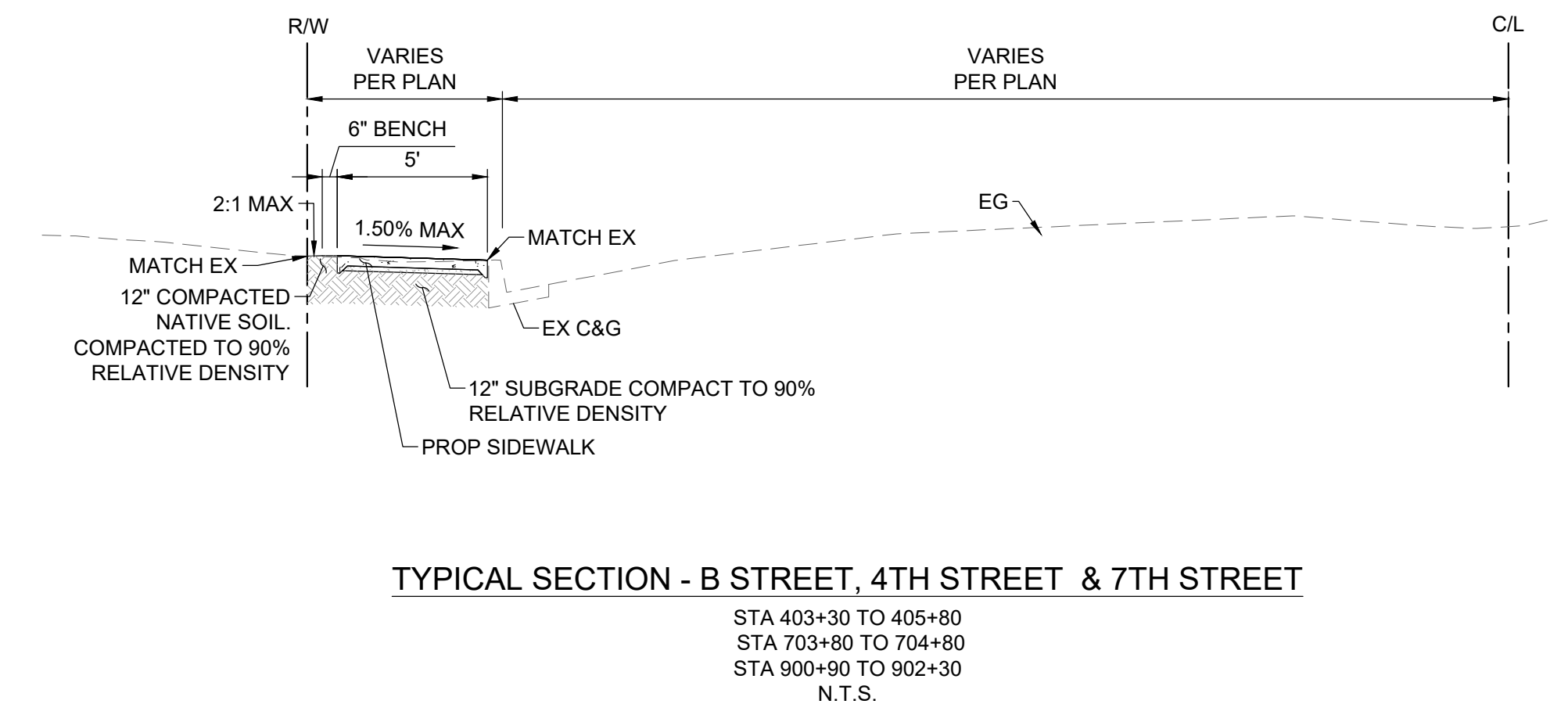
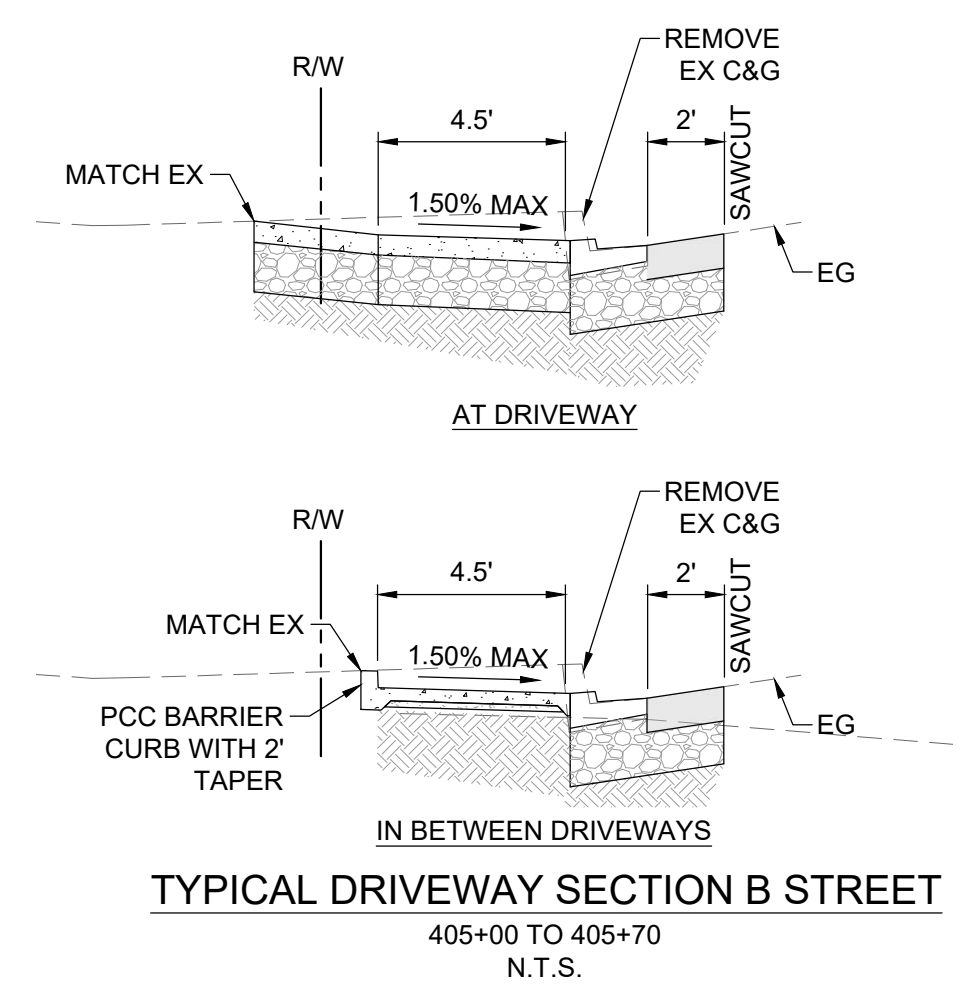
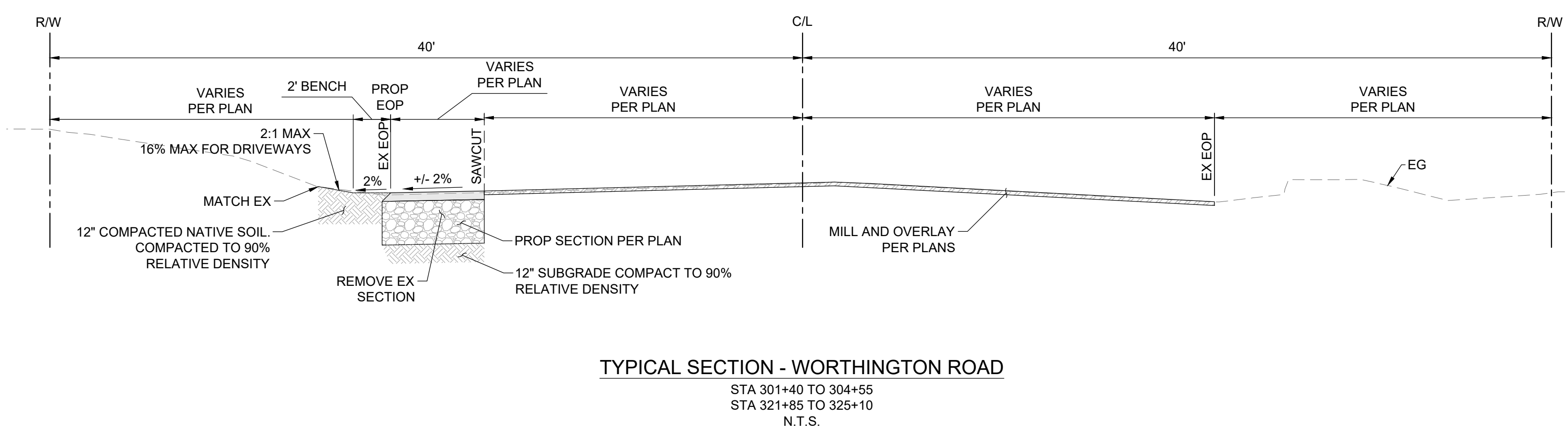
PREPARED UNDER THE DIRECT SUPERVISION OF:
Blanca Soto
BLANCA H. SOTO
06/21/2024
DATE

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: CONSTRUCTION DETAILS

SCALE: N/A	SHEET
DRAWN BY: BS	03
REVIEWED BY: RD	OF 52 SHEETS
JUNE 2024	JOB NO. CIP#823

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 CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. DATE:

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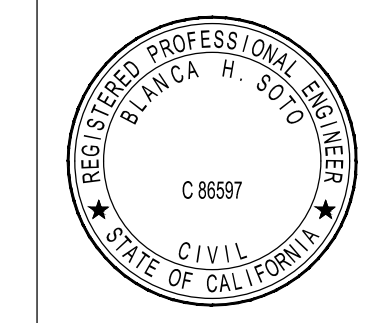
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 Imperial, CA 92251
 Ph: (760) 355-4371 Fax: (760) 355-4718

BENCHMARK:
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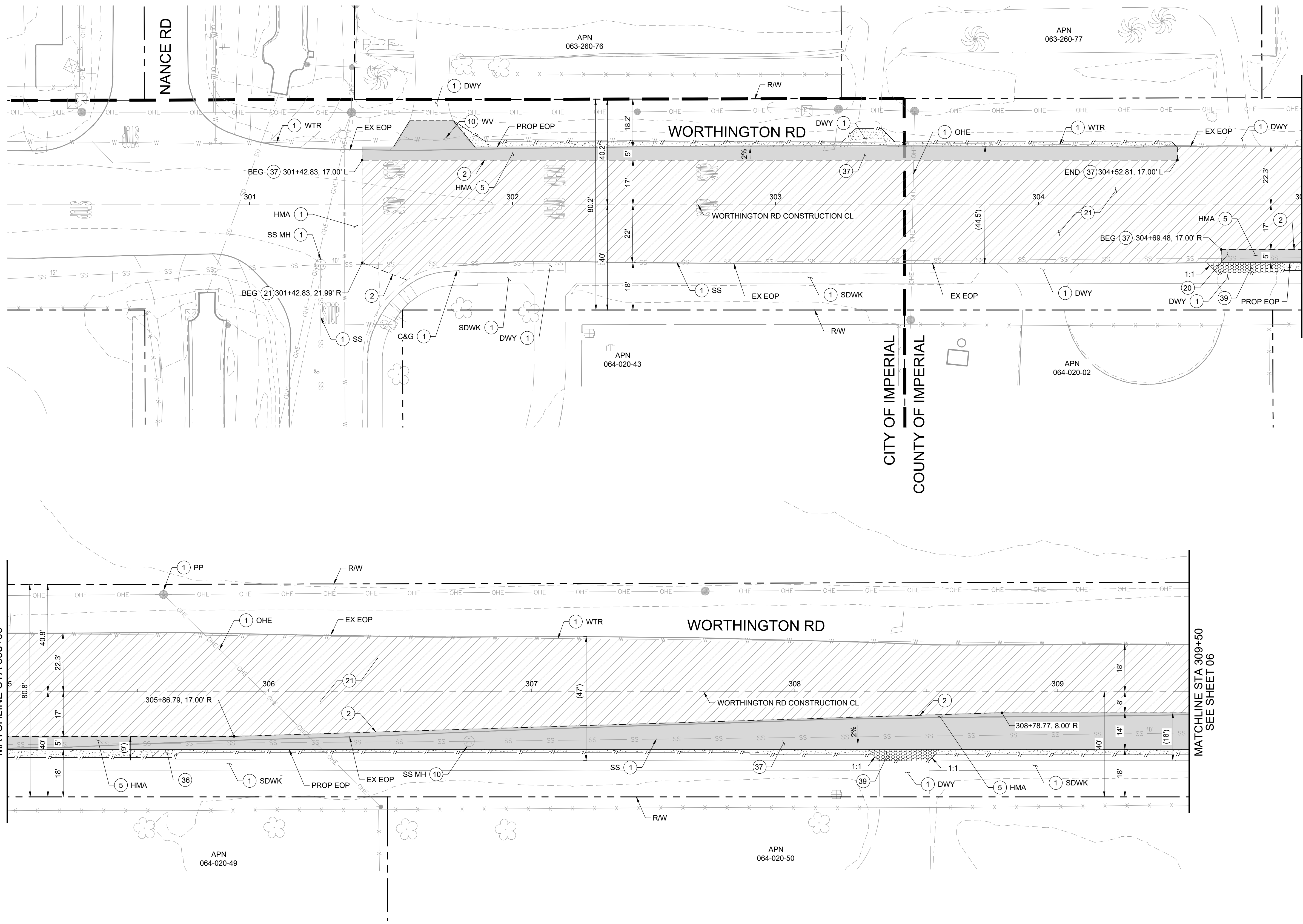
PREPARED UNDER THE DIRECT SUPERVISION OF:
 Blanca Soto
 BLANCA H. SOTO R.C.E. NO. 86597
 DATE: 06/21/2024 REG. EXP. 03/31/2025

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: TYPICAL SECTIONS

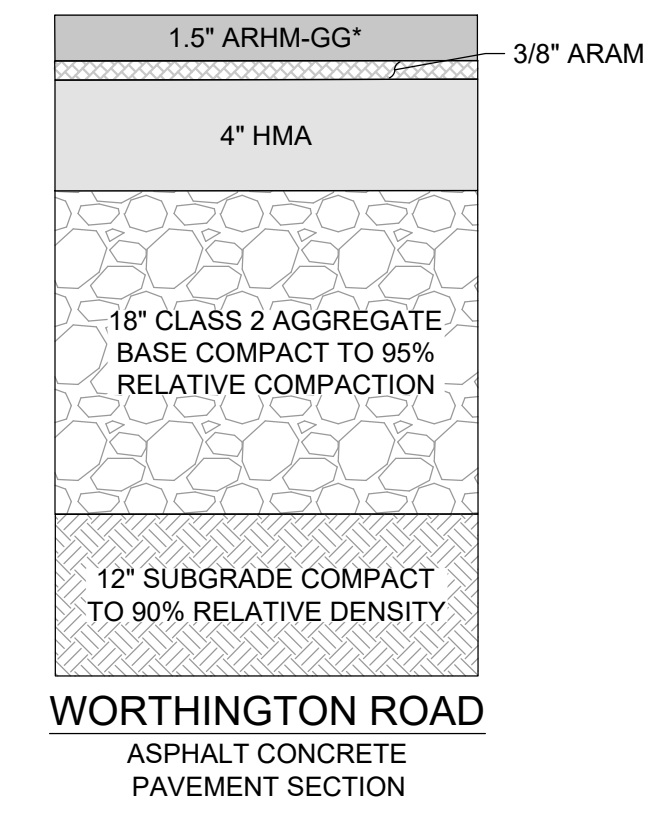
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 DRAWN BY: BS
 REVIEWED BY: RD
 SHEET: 04 OF 52 SHEETS
 JOB NO. CLP#823
 JUNE 2024

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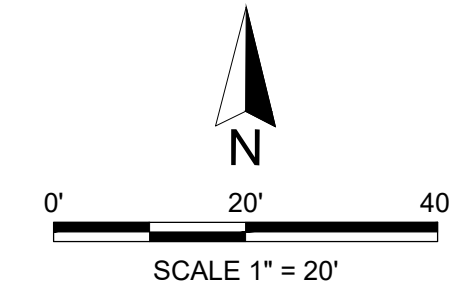


- CONSTRUCTION NOTES**
- PROTECT IN PLACE
 - SAWCUT PER DETAIL A ON SHEET 03
 - REMOVE AND DISPOSE
 - ADJUST TO GRADE
 - MILL AND OVERLAY PER DETAILS D, E, AND F ON SHEET 3
 - PLACE 12" COMPACTED NATIVE SOIL, COMPACTED TO 90% RELATIVE DENSITY
 - CONSTRUCT PAVEMENT SECTION PER DETAIL ON SHEET 05, WORTHINGTON ROAD ASPHALT CONCRETE PAVEMENT SECTION
 - CONSTRUCT 4" THICK CLASS 2 AGGREGATE BASE COMPACTED TO 95% OF ASTM D1557 MAXIMUM DRY DENSITY



- LEGEND:**
- RIGHT OF WAY LINE
 - SAWCUT LINE
 - DAYLIGHT LINE
 - EXISTING FENCE LINE
 - HMA PAVEMENT
 - PCC PAVING
 - MILL AND OVERLAY
 - LANDSCAPE PER LANDSCAPE PLANS
 - COMPACTED NATIVE SOIL
 - CLASS 2 AGGREGATE BASE

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BENCHMARK:
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PREPARED UNDER THE DIRECT SUPERVISION OF:
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Blanca H. SOTO
06/21/2024
DATE

86597
R.C.E. NO.
03/31/2025
REG. EXP.

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1

SHEET CONTENT: IMPROVEMENT PLANS WORTHINGTON ROAD

SCALE: N/A

DRAWN BY: BS

REVIEWED BY: RD

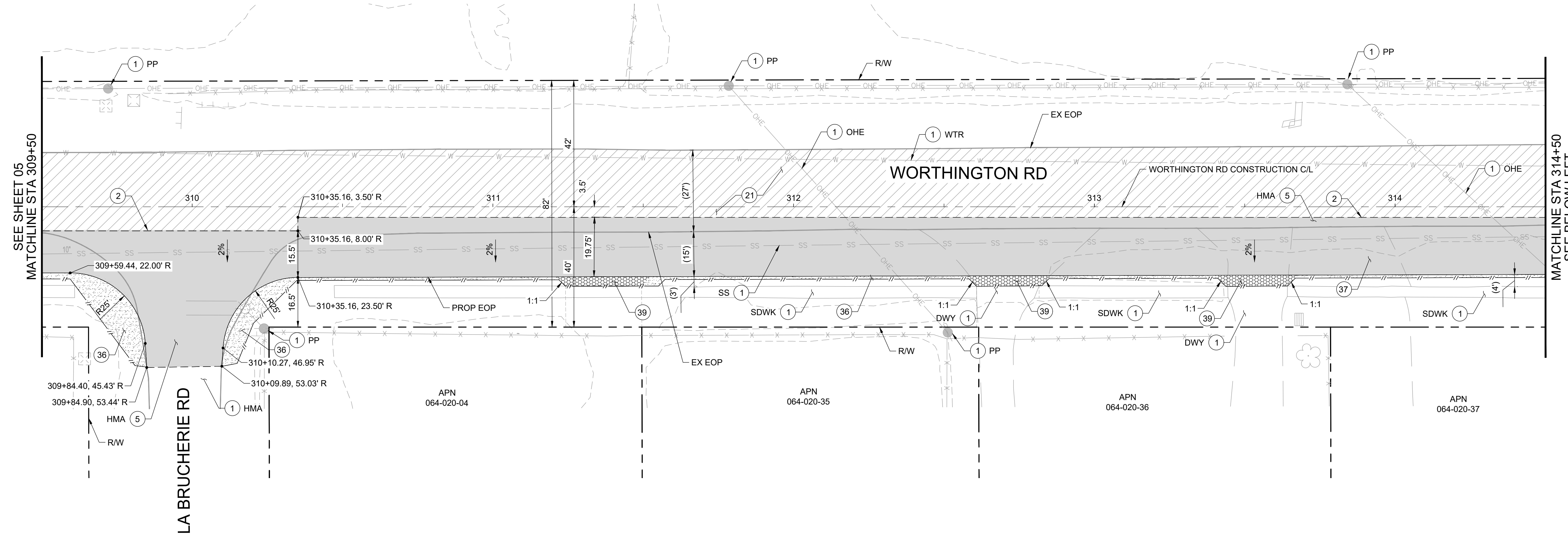
JUNE 2024

SHEET **05** OF 52 SHEETS

JOB NO. CLP#823

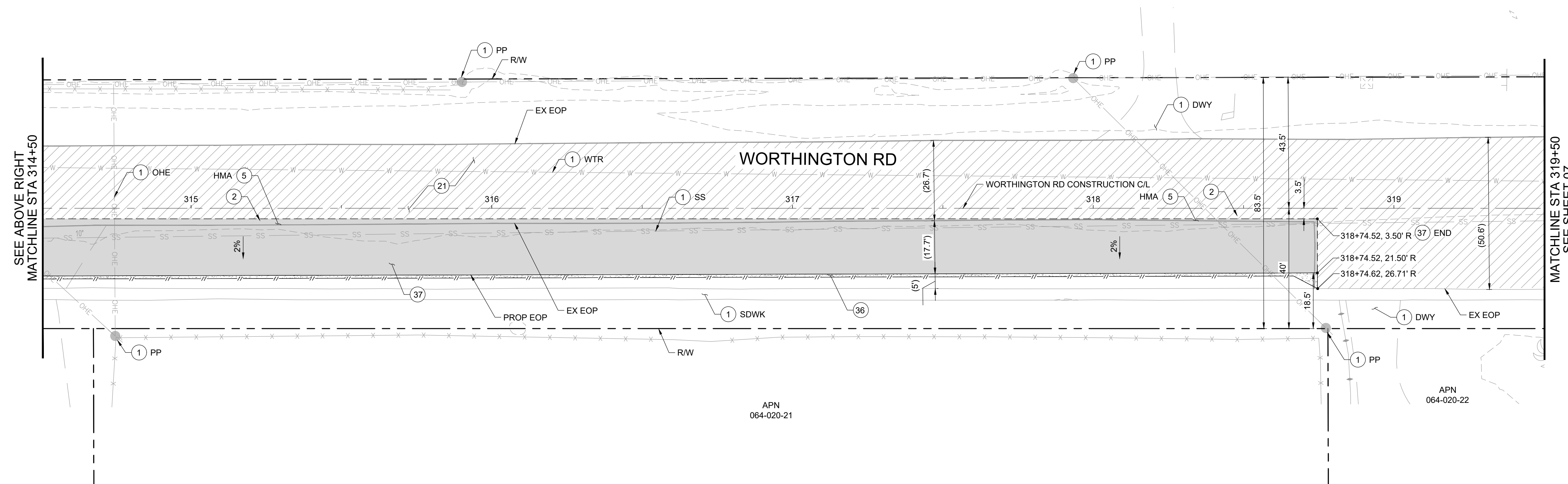
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CONSTRUCTION NOTES

- 1 PROTECT IN PLACE
- 2 SAWCUT PER DETAIL A ON SHEET 03
- 5 REMOVE AND DISPOSE
- 20 CONSTRUCT 4" HMA OVER 18" CLASS 2 AGGREGATE BASE
- 21 MILL AND OVERLAY PER DETAILS D, E, AND F ON SHEET 3
- 36 PLACE 12" COMPACTED NATIVE SOIL. COMPACTED TO 90% RELATIVE DENSITY
- 37 CONSTRUCT PAVEMENT SECTION PER DETAIL ON SHEET 05, WORTHINGTON ROAD ASPHALT CONCRETE PAVEMENT SECTION
- 39 CONSTRUCT 4" THICK CLASS 2 AGGREGATE BASE COMPACTED TO 95% OF ASTM D1557 MAXIMUM DRY DENSITY

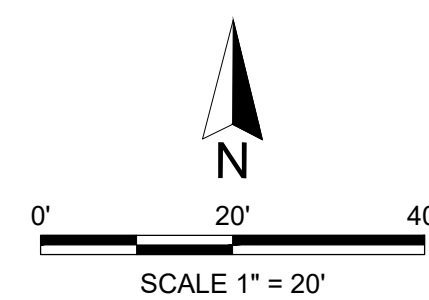


LEGEND:

- RIGHT OF WAY LINE
- SAWCUT LINE
- DAYLIGHT LINE
- EXISTING FENCE LINE
- HMA PAVEMENT
- PCC PAVING
- MILL AND OVERLAY
- LANDSCAPE PER LANDSCAPE PLANS
- COMPACTED NATIVE SOIL
- CLASS 2 AGGREGATE BASE

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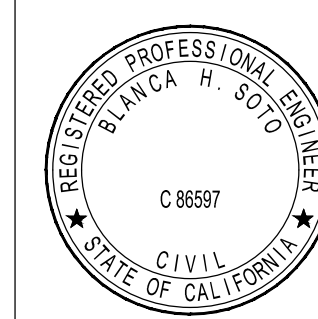
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BENCHMARK:

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Blanca Soto 86597
BLANCA H. SOTO R.C.E. NO.

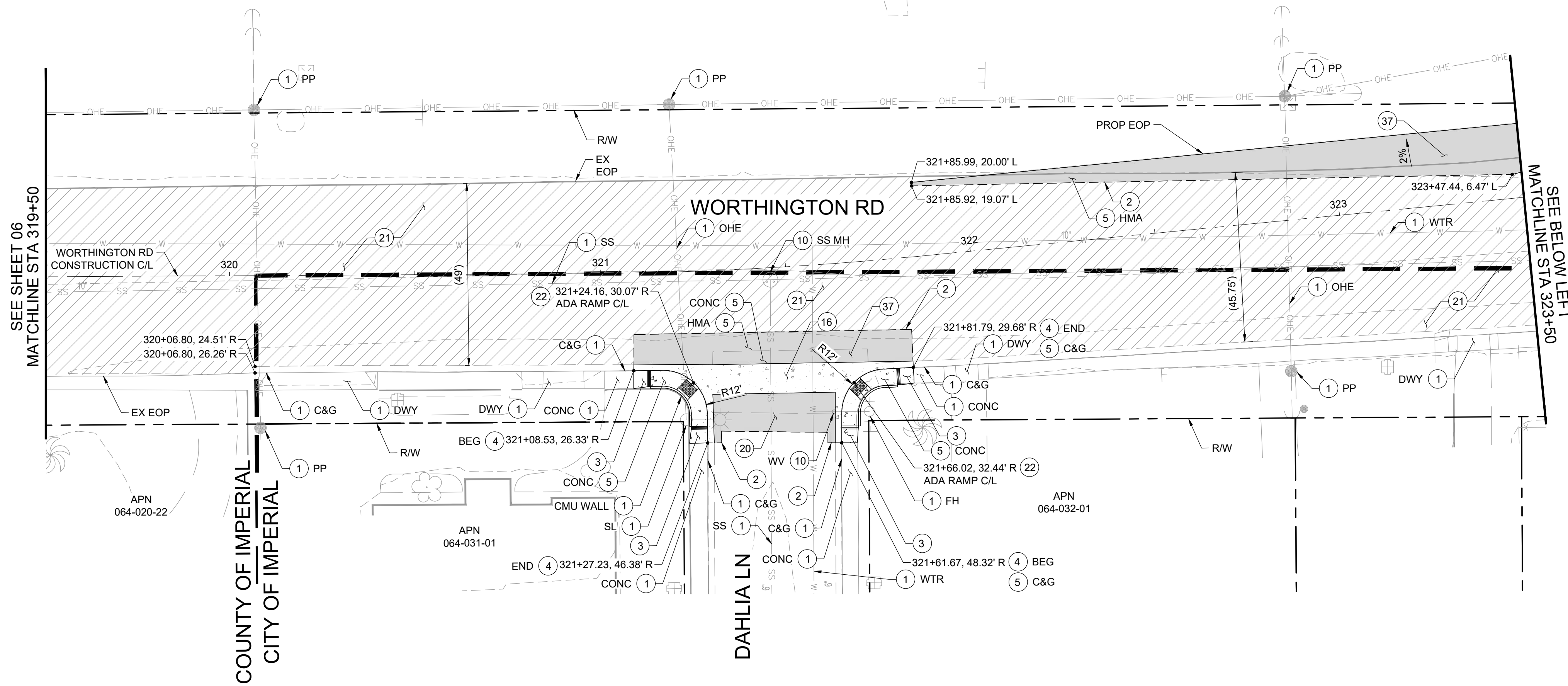
06/21/2024 03/31/2025
DATE REG. EXP.

PROJECT TITLE: CITY OF IMPERIAL
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1

SHEET CONTENT: IMPROVEMENT PLANS
WORTHINGTON ROAD

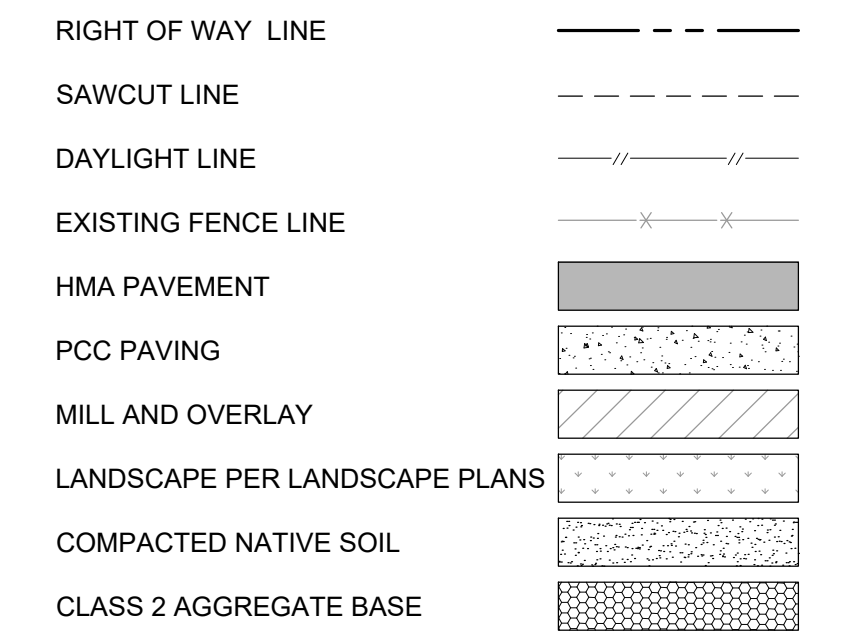
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DRAWN BY: BS	06
REVIEWED BY: RD	OF 52 SHEETS
JUNE 2024	JOB NO. CIP#823

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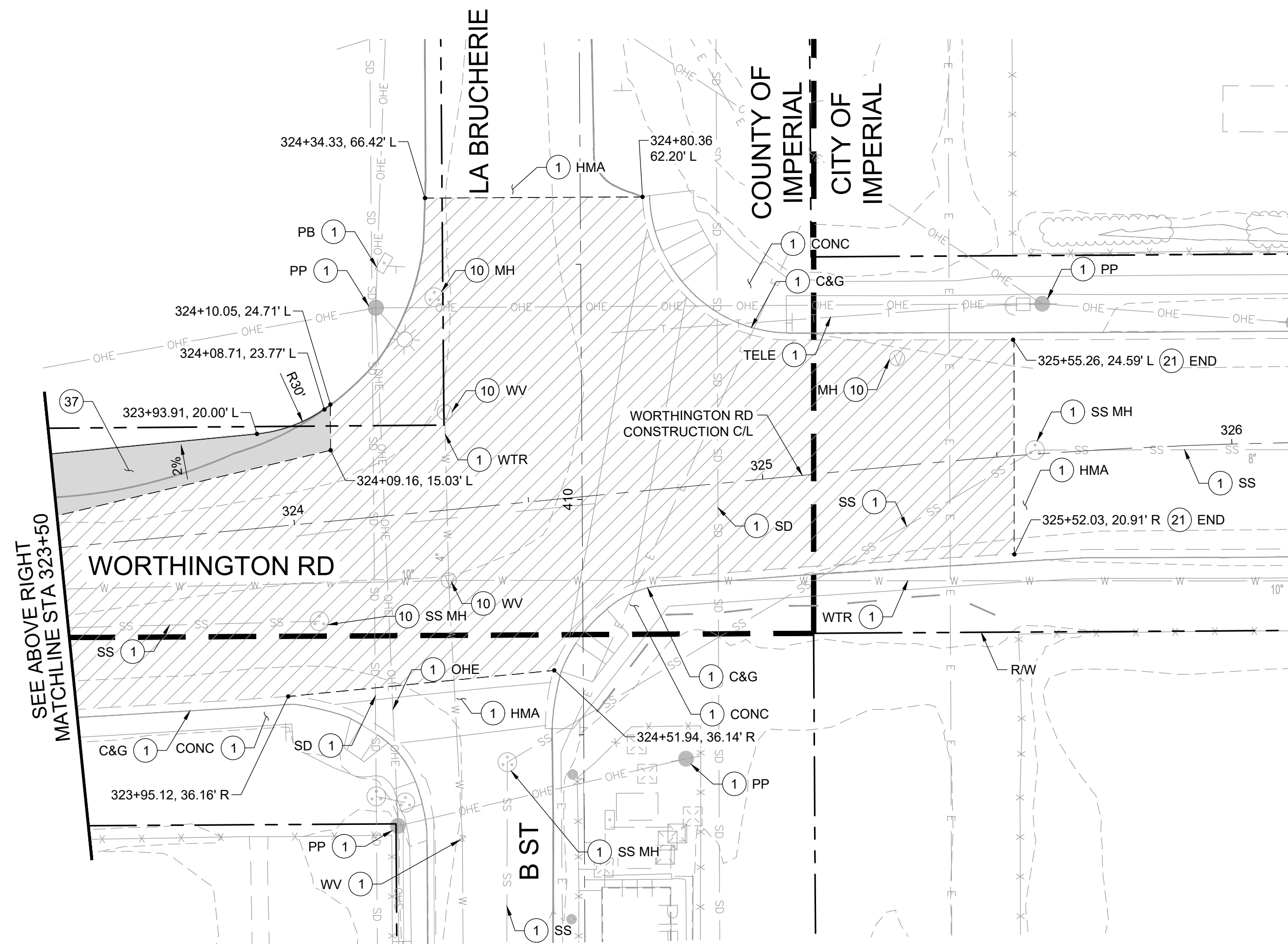
- 1 PROTECT IN PLACE
- 2 SAWCUT PER DETAIL A ON SHEET 03
- 3 CONSTRUCT PCC SIDEWALK PER CITY OF IMPERIAL STD. DET. NO. 407-A
- 4 CONSTRUCT PCC CURB AND GUTTER PER CITY OF IMPERIAL STD. DET. NO. 400. CONSTRUCT TRANSITION TO EXISTING PCC CURB AND GUTTER PER DETAIL B, SHEET 3
- 5 REMOVE AND DISPOSE
- 9 CONSTRUCT PCC SPANDREL PER CITY OF IMPERIAL STD. DET. NO. 410
- 10 ADJUST TO GRADE
- 16 CONSTRUCT PCC CROSS GUTTER PER CITY OF IMPERIAL STD. DET. NO. 411
- 20 CONSTRUCT 4" HMA OVER 18" CLASS 2 AGGREGATE BASE
- 21 MILL AND OVERLAY PER DETAILS D, E, AND F ON SHEET 3
- 22 CONSTRUCT PCC ADA RAMP PER CITY OF IMPERIAL STD. NO. 409-B
- 37 CONSTRUCT PAVEMENT SECTION PER DETAIL ON SHEET 05, WORTHINGTON ROAD ASPHALT CONCRETE PAVEMENT SECTION

LEGEND:



GENERAL NOTES:

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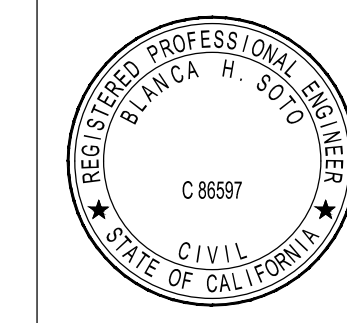
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PREPARED UNDER THE DIRECT SUPERVISION OF:

Blanca Soto
Blanca H. SOTO R.C.E. NO. 86597

DATE: 06/21/2024 REG. EXP. 03/31/2025

PROJECT TITLE: CITY OF IMPERIAL
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1

SHEET CONTENT: IMPROVEMENT PLANS
WORTHINGTON ROAD

SCALE: N/A

DRAWN BY: BS

REVIEWED BY: RD

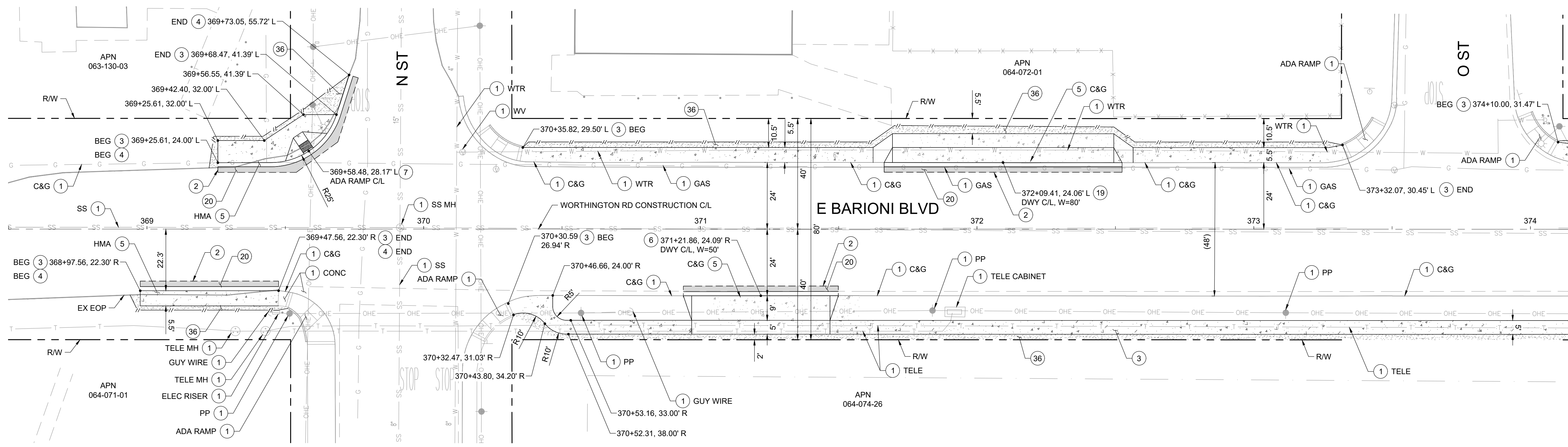
JUNE 2024

SHEET
07
OF 52 SHEETS

JOB NO.
CIP#823

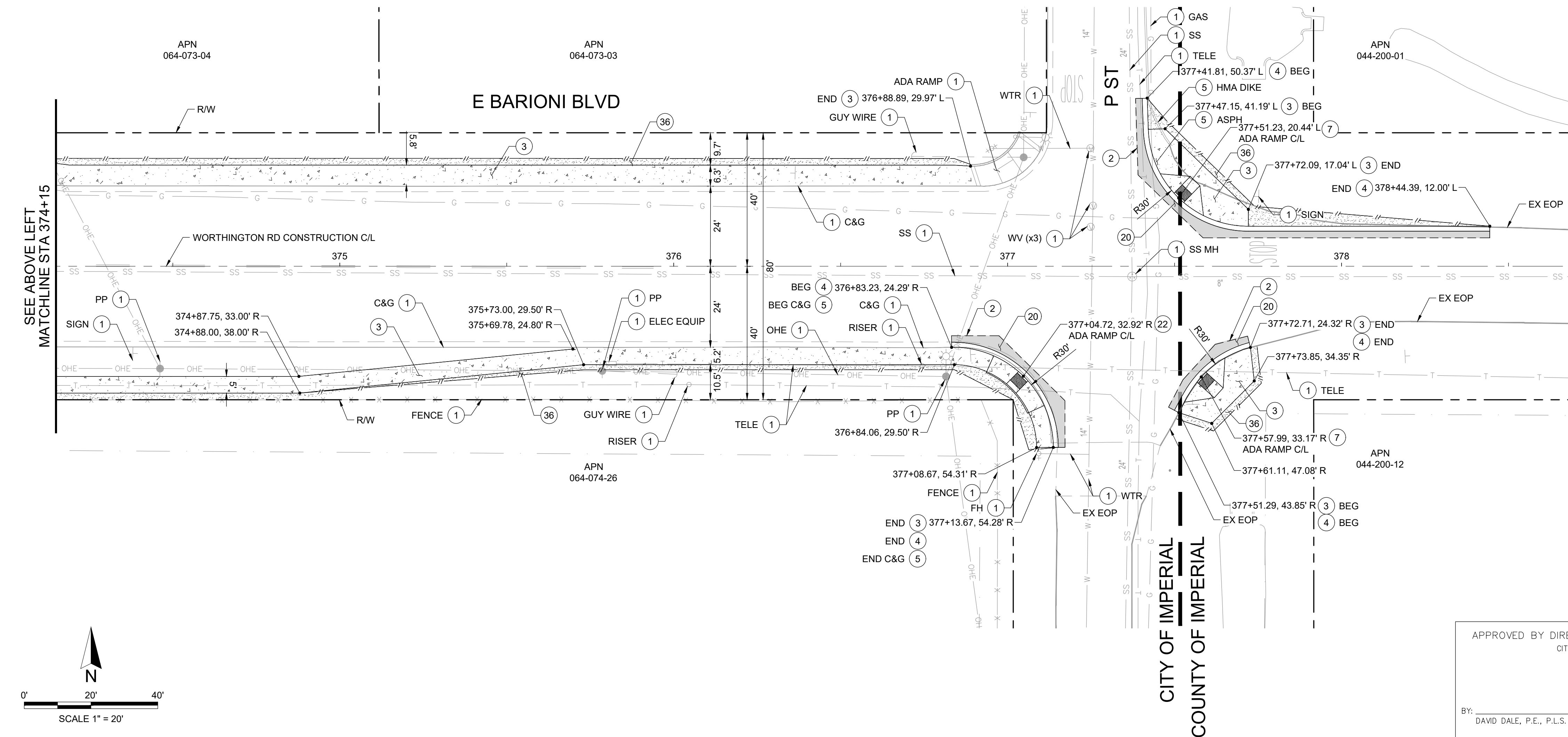
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Project: 2021-08-15, P:\Projects\2021-08-15\2021-08-15-01\2021-08-15-01.dwg, 15/08/2021, 10:27:11 AM



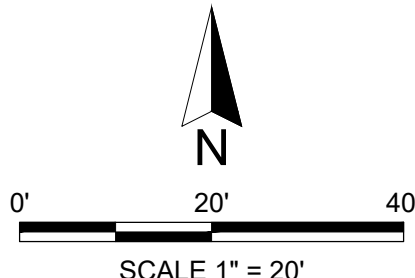
- CONSTRUCTION NOTES**
- 1 PROTECT IN PLACE
 - 2 SAWCUT PER DETAIL A ON SHEET 03
 - 3 CONSTRUCT PCC SIDEWALK PER CITY OF IMPERIAL STD. DET. NO. 407-A
 - 4 CONSTRUCT PCC CURB AND GUTTER PER CITY OF IMPERIAL STD. DET. NO. 400. CONSTRUCT TRANSITION TO EXISTING PCC CURB AND GUTTER PER DETAIL B, SHEET 3
 - 5 REMOVE AND DISPOSE
 - 6 CONSTRUCT PARKWAY PCC DRIVEWAY APPROACH PER CITY OF IMPERIAL STD. DET. NO. 404
 - 7 CONSTRUCT PCC TYPICAL CORNER ONE ADA RAMP PER CITY OF IMPERIAL STD. DET. NO. 409
 - 19 CONSTRUCT PCC DRIVEWAY APPROACH PER CITY OF IMPERIAL STD. DET. NO. 403
 - 20 CONSTRUCT 4" HMA OVER 18" CLASS 2 AGGREGATE BASE
 - 22 CONSTRUCT PCC ADA RAMP PER CITY OF IMPERIAL STD. DET. NO. 409-B
 - 36 PLACE 12" COMPACTED NATIVE SOIL, COMPACTED TO 90% RELATIVE DENSITY

MATCHLINE STA 374+15
SEE BELOW LEFT



- LEGEND:**
- RIGHT OF WAY LINE
 - SAWCUT LINE
 - DAYLIGHT LINE
 - EXISTING FENCE LINE
 - HMA PAVEMENT
 - PCC PAVING
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 6. THE CONTRACTOR SHALL DETERMINE THE LIMITS AND LAYOUT OF WORK. PRIOR TO DEMOLITION, THE LIMITS AND LAYOUT OF THE WORK SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BY EITHER SHOP DRAWING OR FIELD MARK OUTS.
 7. POWER POLE LOCATION ON PLANS ARE APPROXIMATE. CONTRACTOR TO MAINTAIN 6" BETWEEN EDGE OF SIDEWALK AND POWER POLE.



APPROVED BY DIRECTOR OF PUBLIC SERVICES
CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. DATE:

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NO.	REVISIONS:	APPROVED	DATE

CITY OF IMPERIAL
420 South Imperial Avenue
Imperial, CA 92251
Ph: (760) 355-4371 Fax: (760) 355-4718

BENCHMARK:
SEE SHEET 2 FOR BENCHMARK INFORMATION



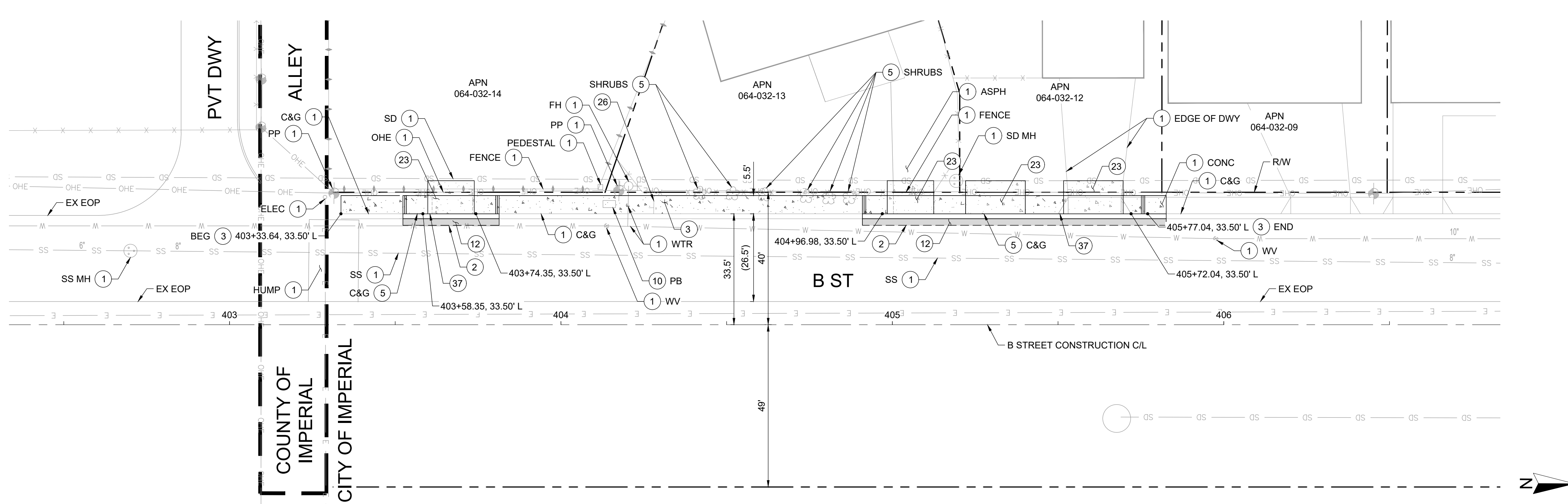
PREPARED UNDER THE DIRECT SUPERVISION OF:
Blanca Soto
BLANCA H. SOTO R.C.E. NO. 86597
DATE: 06/21/2024 REG. EXP. 03/31/2025

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: IMPROVEMENT PLANS E BARIONI ROAD

SCALE: N/A	SHEET 08
DRAWN BY: BS	OF 52 SHEETS
REVIEWED BY: RD	JOB NO. CIP#823
JUNE 2024	

UNAUTHORIZED CHANGES & USES: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

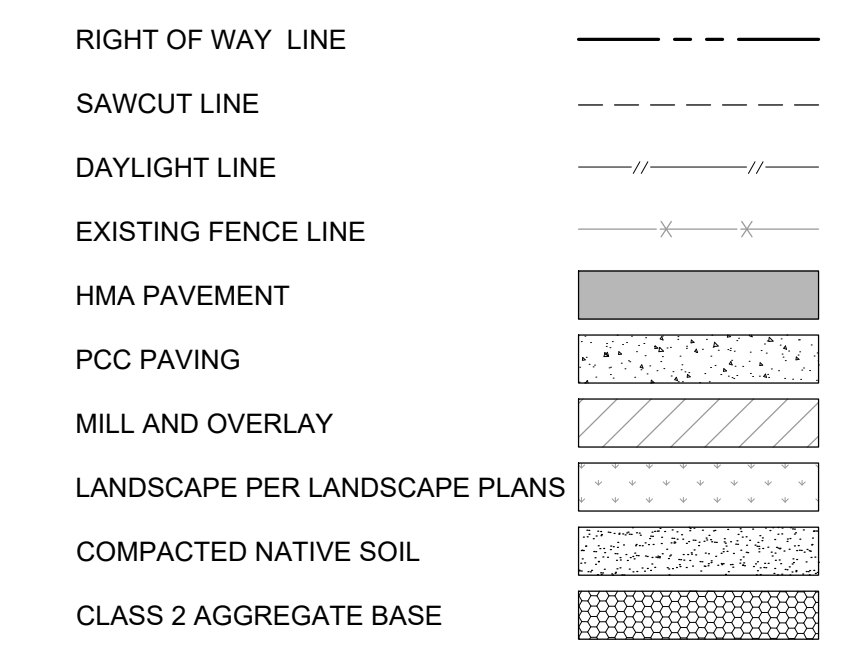
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CONSTRUCTION NOTES

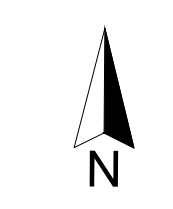
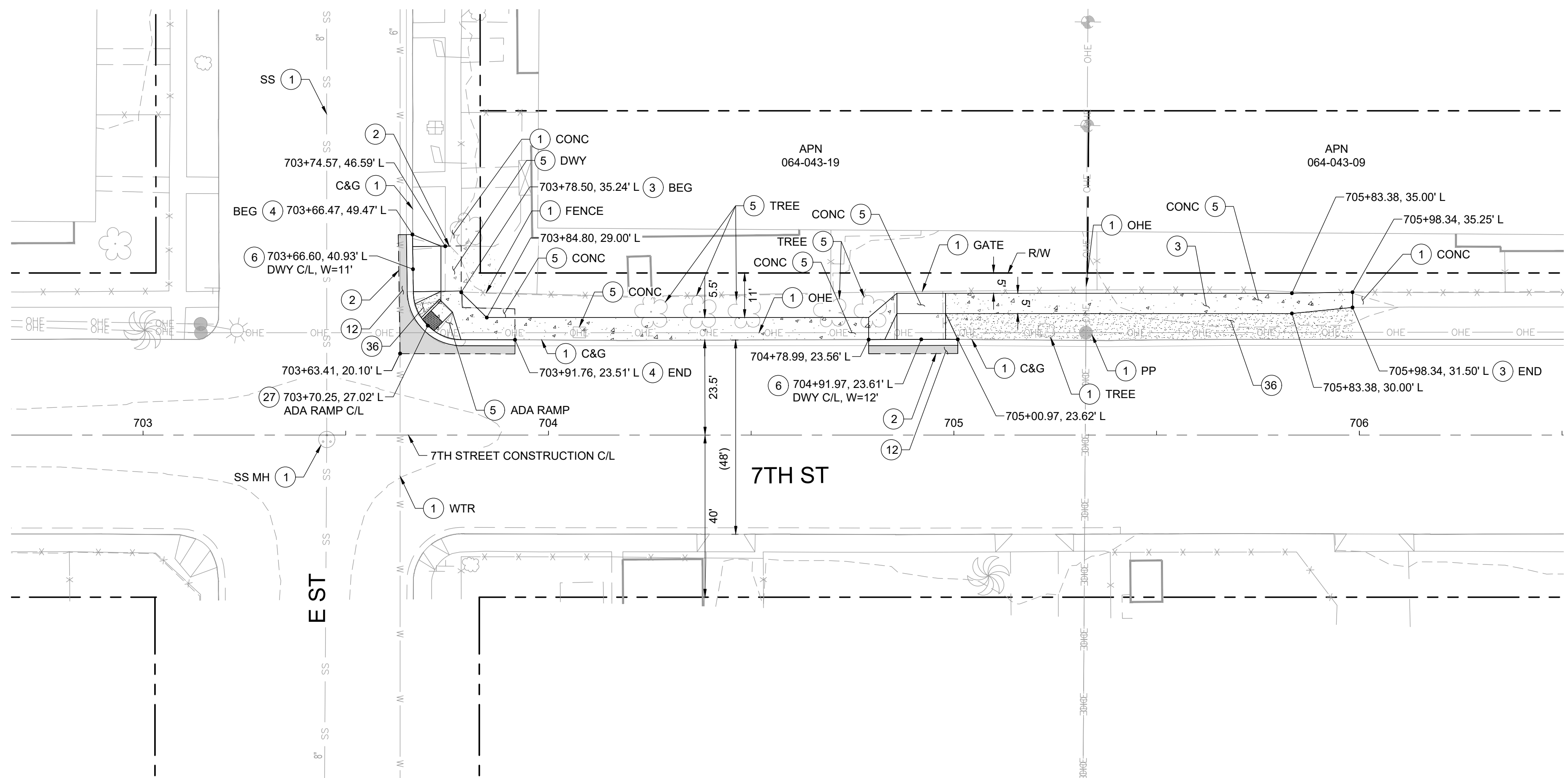
- 1 PROTECT IN PLACE
- 2 SAWCUT PER DETAIL A ON SHEET 03
- 3 CONSTRUCT PCC SIDEWALK PER CITY OF IMPERIAL STD. DET. NO. 407-A
- 4 CONSTRUCT PCC CURB AND GUTTER PER CITY OF IMPERIAL STD. DET. NO. 400. CONSTRUCT TRANSITION TO EXISTING PCC CURB AND GUTTER PER DETAIL B, SHEET 3
- 5 REMOVE AND DISPOSE
- 6 CONSTRUCT PARKWAY PCC DRIVEWAY APPROACH PER CITY OF IMPERIAL STD. DET. NO. 404
- 10 ADJUST TO GRADE
- 12 CONSTRUCT 3" HMA OVER 14" CLASS 2 AGGREGATE BASE
- 23 CONSTRUCT PCC DRIVEWAY APPROACH PER CITY OF IMPERIAL STD. DET. NO. 406
- 26 REMOVE AND REINSTALL EXISTING SIGN
- 27 CONSTRUCT MODIFIED PCC OBSTRUCTED ADA RAMP PER CITY OF IMPERIAL STD. DET. NO. 409-D
- 36 PLACE 12" COMPACTED NATIVE SOIL. COMPACTED TO 90% RELATIVE DENSITY
- 37 CONSTRUCT ROLLED CURB PER DETAIL I ON SHEET 52. CONSTRUCT TRANSITION TO EXISTING PCC CURB AND GUTTER PER DETAIL B, SHEET 3

LEGEND:



GENERAL NOTES:

- 1. SEE TITLE SHEET FOR IMPROVEMENT NOTES AND DEMOLITION NOTES.
- 2. VERIFY THE EXISTENCE AND HORIZONTAL/VERTICAL LOCATION OF ALL UTILITIES WITHIN THE PROJECT AREA THAT MAY CONFLICT WITH THE PROPOSED CONSTRUCTION. EXISTING UTILITIES MAY BE PRESENT EVEN IF NOT SHOWN ON PLAN.
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- 5. THE REMOVAL OF HMA INCLUDES ASPHALT AND BASE SECTION.
- 6. THE CONTRACTOR SHALL DETERMINE THE LIMITS AND LAYOUT OF WORK. PRIOR TO DEMOLITION, THE LIMITS AND LAYOUT OF THE WORK SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BY EITHER SHOP DRAWING OR FIELD MARK OUTS.
- 7. CONTRACTOR TO VERIFY WITH CITY ENGINEER PRIOR TO REMOVAL OF EXISTING TREES NEAR IMPROVEMENTS.
- 8. POWER POLE LOCATION ON PLANS ARE APPROXIMATE, CONTRACTOR TO MAINTAIN 6" BETWEEN EDGE OF SIDEWALK AND POWER POLE.



APPROVED BY DIRECTOR OF PUBLIC SERVICES
CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. DATE:

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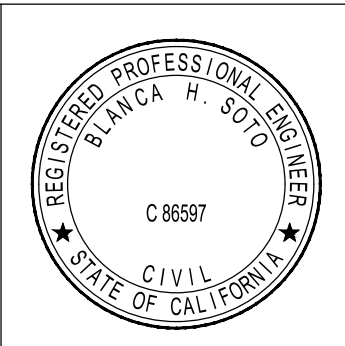
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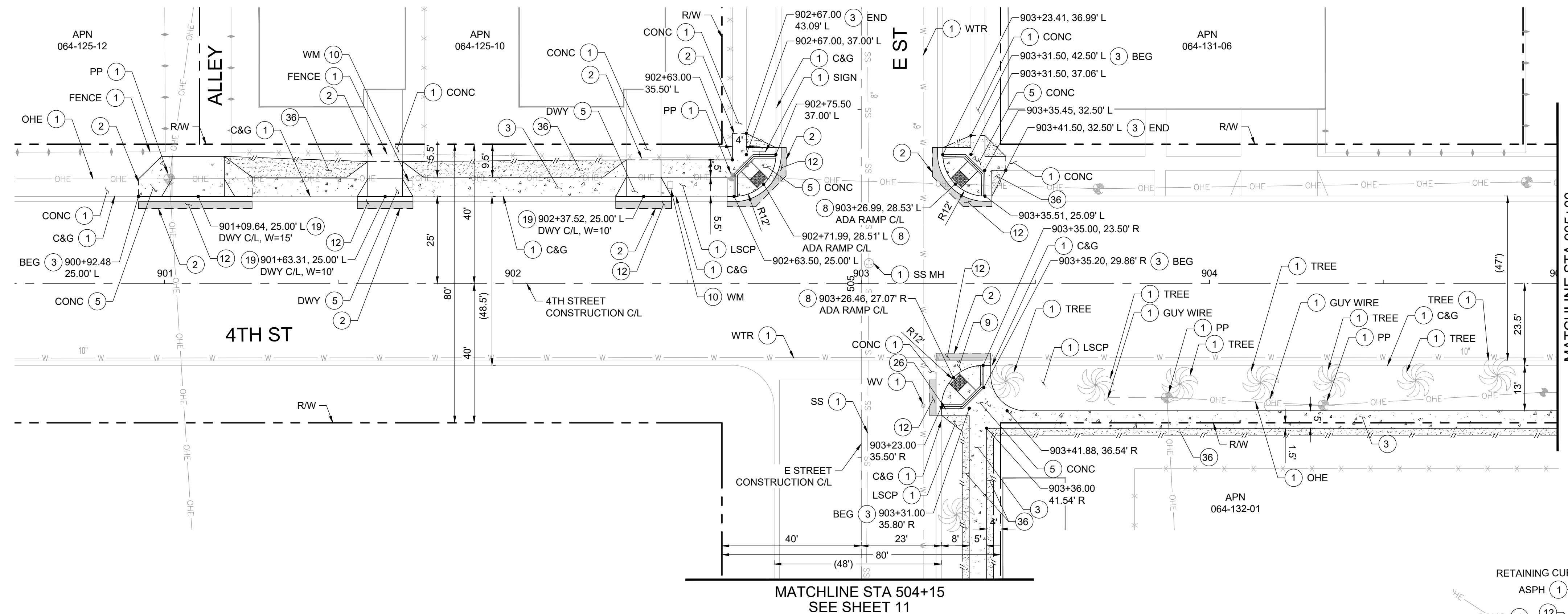
PREPARED UNDER THE DIRECT SUPERVISION OF:
Blanca Soto
BLANCA H. SOTO R.C.E. NO. 86597
DATE: 06/21/2024 REG. EXP. 03/31/2025

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: IMPROVEMENT PLANS B AND 7TH STREET

SCALE: N/A
DRAWN BY: BS
REVIEWED BY: RD
JUNE 2024
SHEET 09 OF 52 SHEETS
JOB NO. CIP#823

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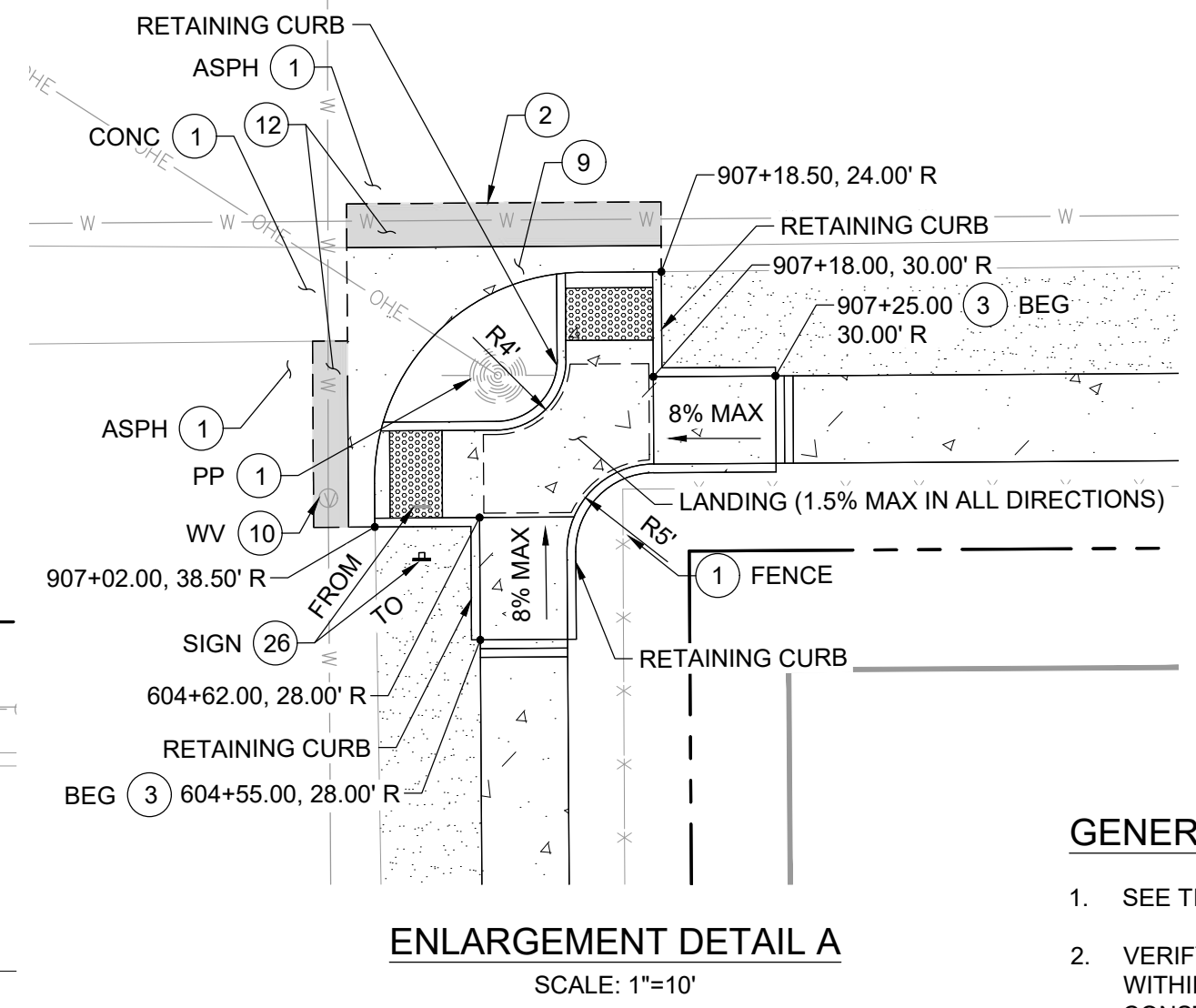
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MATCHLINE STA 504+15
SEE SHEET 11

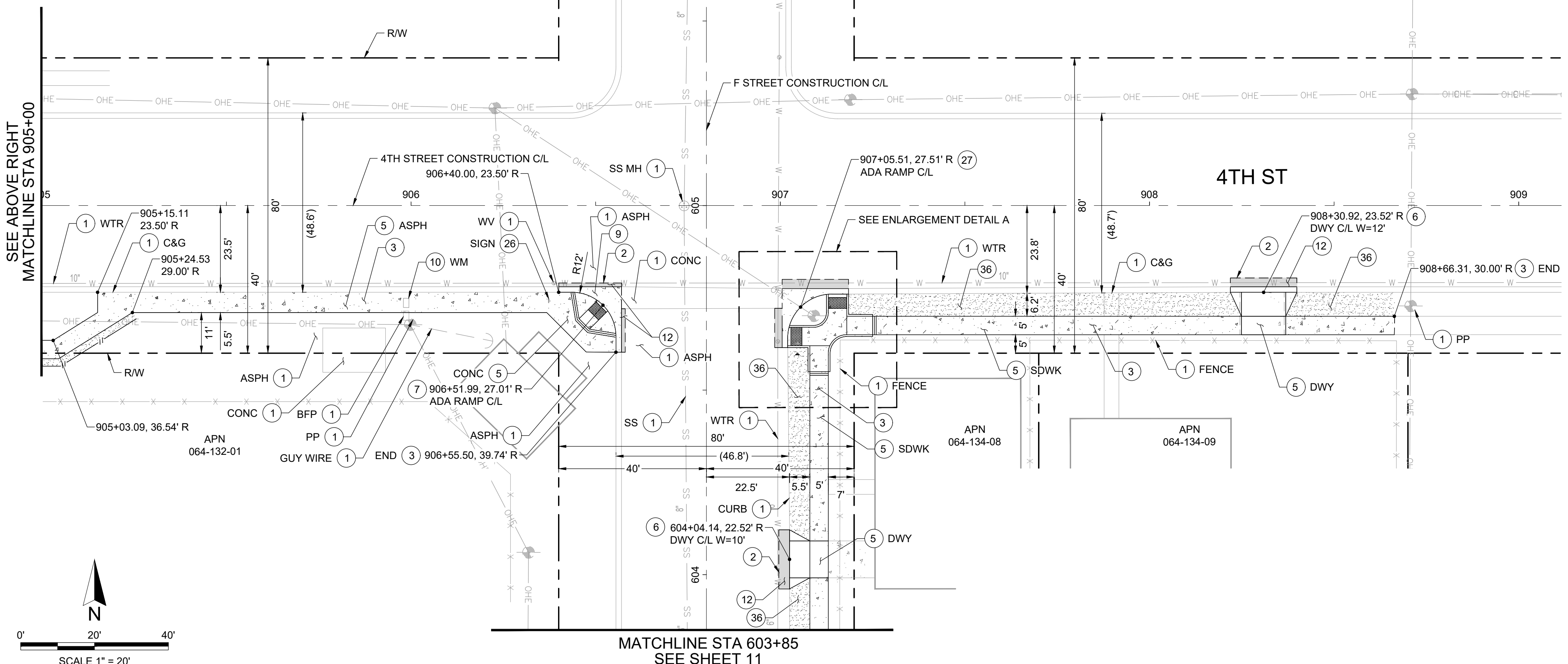
MATCHLINE STA 905+00
SEE BELOW LEFT

- ### CONSTRUCTION NOTES
- 1 PROTECT IN PLACE
 - 2 SAWCUT PER DETAIL A ON SHEET 03
 - 3 CONSTRUCT PCC SIDEWALK PER CITY OF IMPERIAL STD. DET. NO. 407-A
 - 5 REMOVE AND DISPOSE
 - 6 CONSTRUCT PARKWAY PCC DRIVEWAY APPROACH PER CITY OF IMPERIAL STD. DET. NO. 404
 - 7 CONSTRUCT PCC TYPICAL CORNER ONE ADA RAMP PER CITY OF IMPERIAL STD. DET. NO. 409
 - 8 CONSTRUCT PCC FULL CORNER ADA RAMP PER CITY OF IMPERIAL STD. DET. NO. 409-A
 - 9 CONSTRUCT PCC SPANDREL PER CITY OF IMPERIAL STD. DET. NO. 410
 - 10 ADJUST TO GRADE
 - 12 CONSTRUCT 3" HMA OVER 14" CLASS 2 AGGREGATE BASE
 - 19 CONSTRUCT PCC DRIVEWAY APPROACH PER CITY OF IMPERIAL STD. DET. NO. 403
 - 26 REMOVE AND REINSTALL EXISTING SIGN
 - 27 CONSTRUCT MODIFIED PCC OBSTRUCTED ADA RAMP PER CITY OF IMPERIAL STD. DET. NO. 409-D
 - 36 PLACE 12" COMPACTED NATIVE SOIL, COMPACTED TO 90% RELATIVE DENSITY

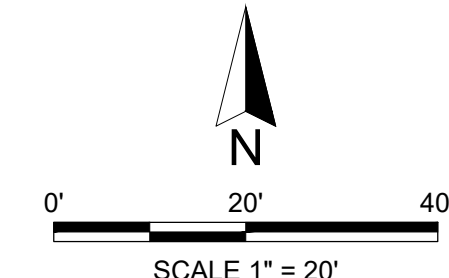


- ### LEGEND:
- RIGHT OF WAY LINE
 - SAWCUT LINE
 - DAYLIGHT LINE
 - EXISTING FENCE LINE
 - HMA PAVEMENT
 - PCC PAVING
 - MILL AND OVERLAY
 - LANDSCAPE PER LANDSCAPE PLANS
 - COMPACTED NATIVE SOIL
 - CLASS 2 AGGREGATE BASE

- ### GENERAL NOTES:
1. SEE TITLE SHEET FOR IMPROVEMENT NOTES AND DEMOLITION NOTES.
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 7. POWER POLE LOCATION ON PLANS ARE APPROXIMATE. CONTRACTOR TO MAINTAIN 6" BETWEEN EDGE OF SIDEWALK AND POWER POLE.



MATCHLINE STA 603+85
SEE SHEET 11



APPROVED BY DIRECTOR OF PUBLIC SERVICES
CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. DATE: _____

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Imperial, CA 92251
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BENCHMARK:
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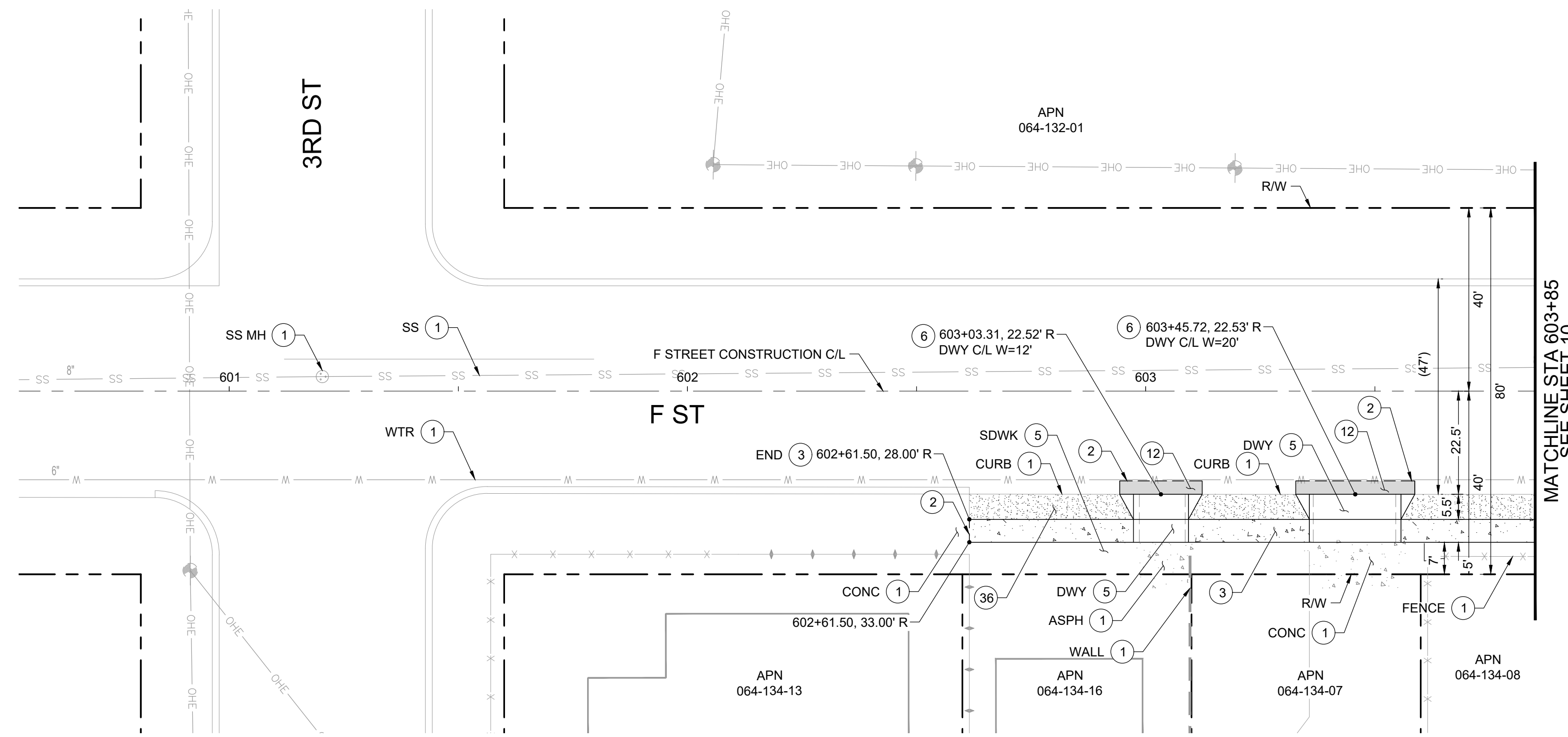
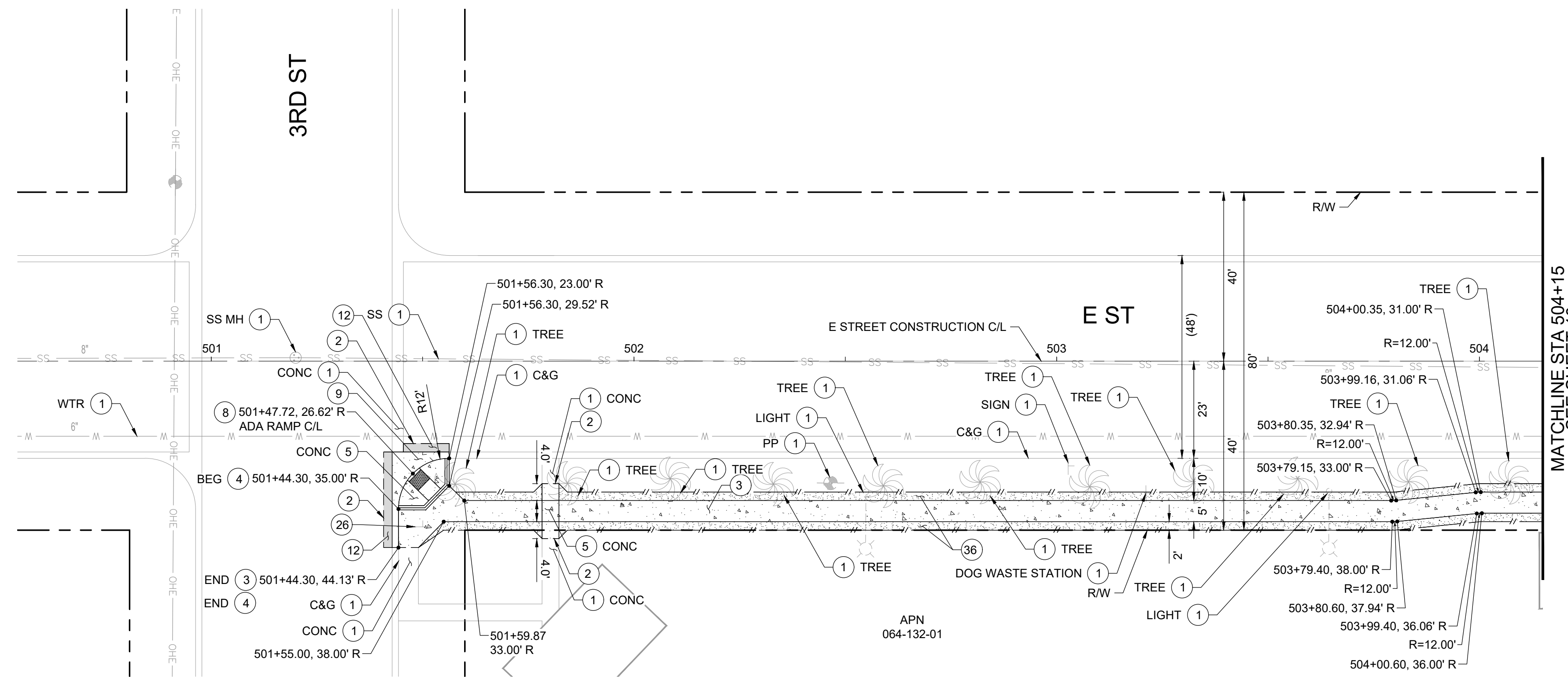


PREPARED UNDER THE DIRECT SUPERVISION OF:
Blanca Soto
BLANCA H. SOTO R.C.E. NO. 86597
DATE: 06/21/2024 REG. EXP. 03/31/2025

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: IMPROVEMENT PLANS 4TH STREET

SCALE: N/A
DRAWN BY: BS
REVIEWED BY: RD
JUNE 2024
SHEET 10 OF 52 SHEETS
JOB NO. CIP#823

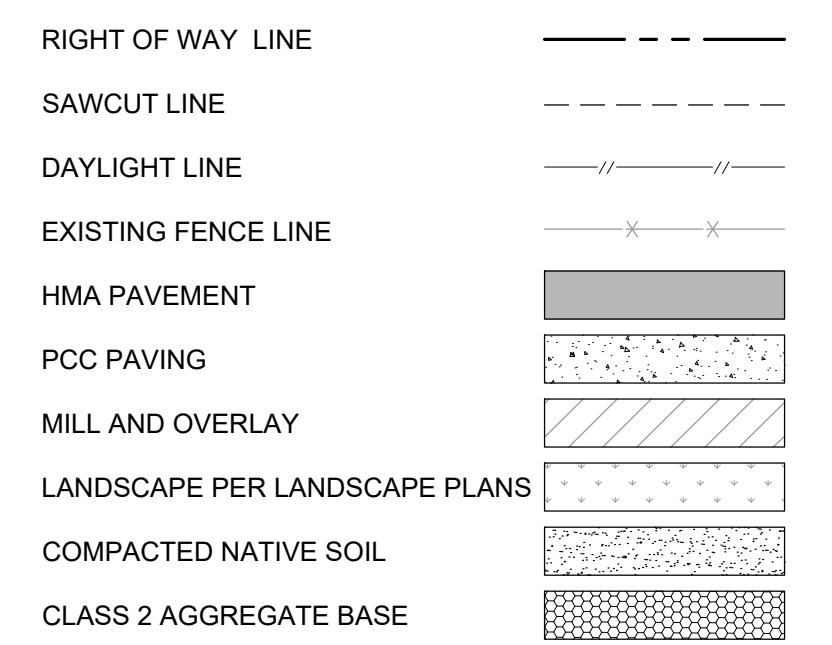
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CONSTRUCTION NOTES

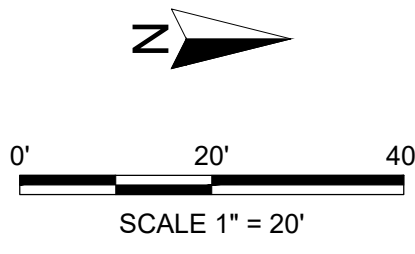
- 1 PROTECT IN PLACE
- 2 SAWCUT PER DETAIL A ON SHEET 03
- 3 CONSTRUCT PCC SIDEWALK PER CITY OF IMPERIAL STD. DET. NO. 407-A
- 4 CONSTRUCT PCC CURB AND GUTTER PER CITY OF IMPERIAL STD. DET. NO. 400. CONSTRUCT TRANSITION TO EXISTING PCC CURB AND GUTTER PER DETAIL B, SHEET 3
- 5 REMOVE AND DISPOSE
- 6 CONSTRUCT PARKWAY PCC DRIVEWAY APPROACH PER CITY OF IMPERIAL STD. DET. NO. 404
- 8 CONSTRUCT PCC FULL CORNER ADA RAMP PER CITY OF IMPERIAL STD. DET. NO. 409-A
- 9 CONSTRUCT PCC SPANDREL PER CITY OF IMPERIAL STD. DET. NO. 410
- 12 CONSTRUCT 3" HMA OVER 14" CLASS 2 AGGREGATE BASE
- 26 REMOVE AND REINSTALL EXISTING SIGN
- 36 PLACE 12" COMPACTED NATIVE SOIL. COMPACTED TO 90% RELATIVE DENSITY

LEGEND:



GENERAL NOTES:

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APPROVED BY DIRECTOR OF PUBLIC SERVICES
CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. DATE: _____

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CITY OF IMPERIAL
420 South Imperial Avenue
Imperial, CA 92251
Ph: (760) 355-4371 Fax: (760) 355-4718

BENCHMARK:
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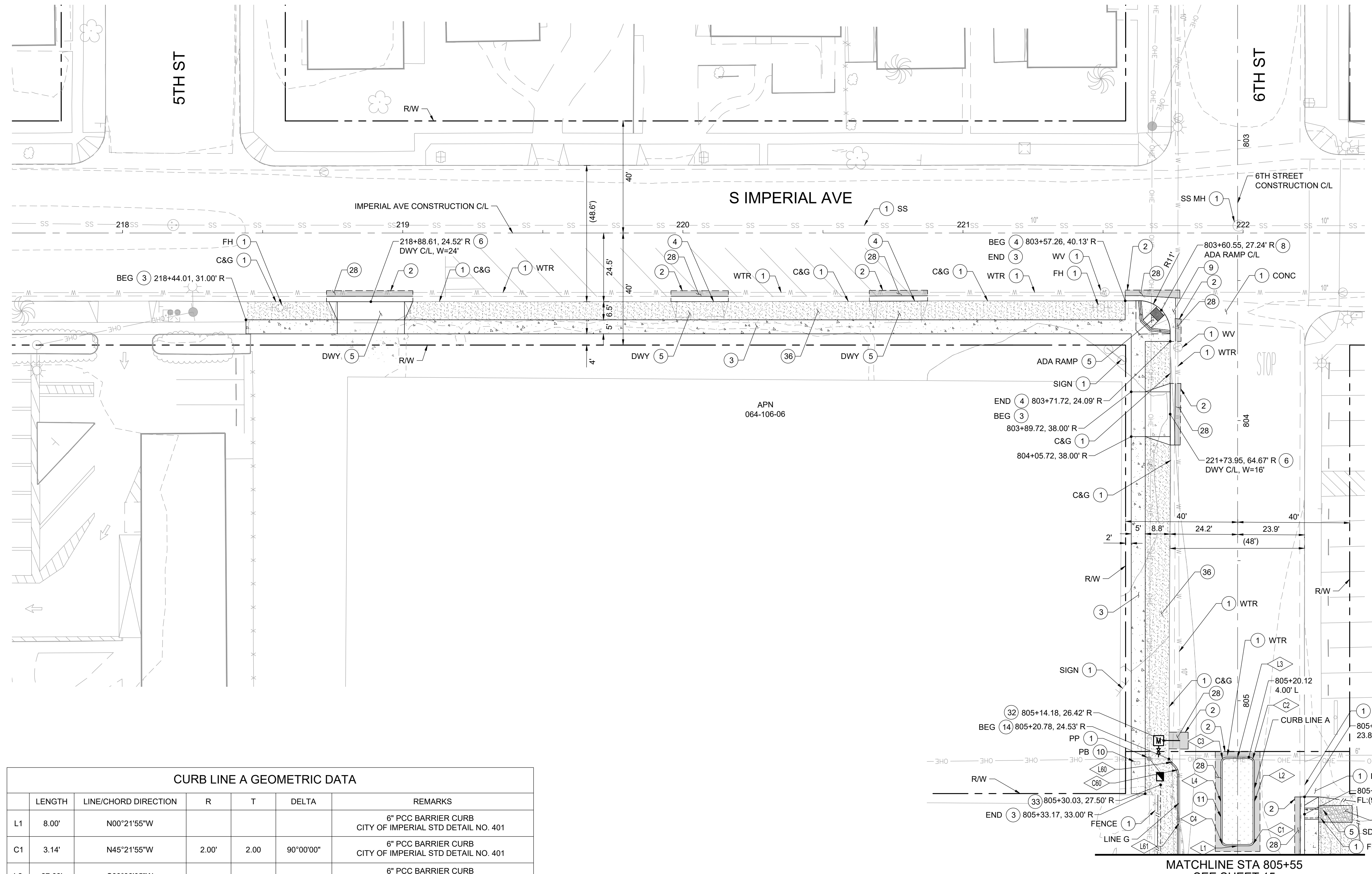
PREPARED UNDER THE DIRECT SUPERVISION OF:
Blanca Soto
BLANCA H. SOTO R.C.E. NO. 86597
DATE: 06/21/2024 REG. EXP. 03/31/2025

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: IMPROVEMENT PLANS E AND F STREET

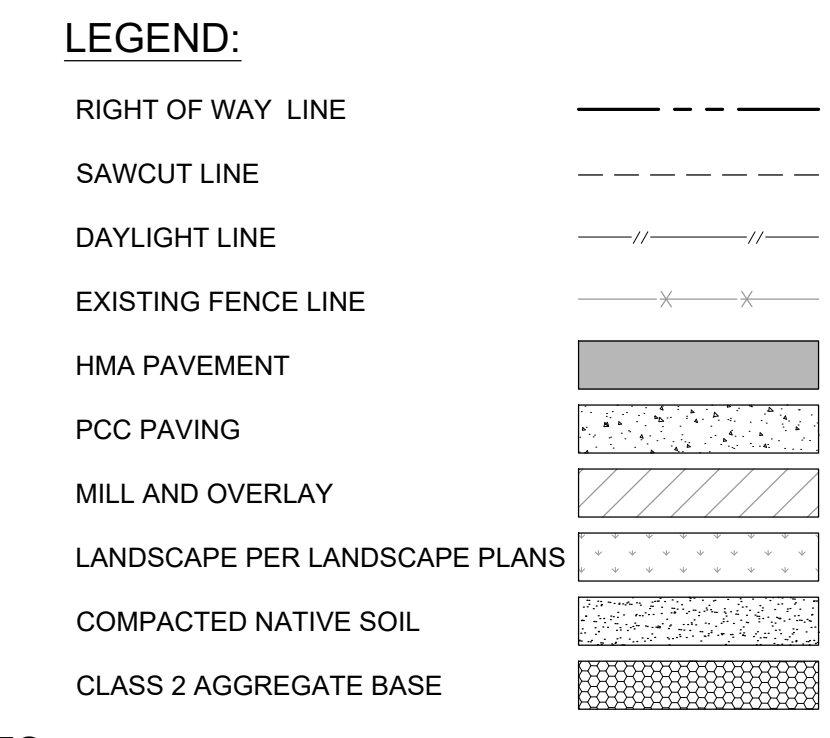
SCALE: N/A
DRAWN BY: BS
REVIEWED BY: RD
JUNE 2024
SHEET 11 OF 52 SHEETS
JOB NO. CIP#823

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- CONSTRUCTION NOTES**
- PROTECT IN PLACE
 - SAWCUT PER DETAIL A ON SHEET 03
 - CONSTRUCT PCC SIDEWALK PER CITY OF IMPERIAL STD. DET. NO. 407-A
 - CONSTRUCT PCC CURB AND GUTTER PER CITY OF IMPERIAL STD. DET. NO. 400. CONSTRUCT TRANSITION TO EXISTING PCC CURB AND GUTTER PER DETAIL B, SHEET 3
 - REMOVE AND DISPOSE
 - CONSTRUCT PARKWAY PCC DRIVEWAY APPROACH PER CITY OF IMPERIAL STD. DET. NO. 404
 - CONSTRUCT PCC FULL CORNER ADA RAMP PER CITY OF IMPERIAL STD. DET. NO. 409-A
 - CONSTRUCT PCC SPANDREL PER CITY OF IMPERIAL STD. DET. NO. 410
 - ADJUST TO GRADE
 - CONSTRUCT PCC BARRIER CURB PER CITY OF IMPERIAL STD. DET. NO. 401
 - CONSTRUCT HMA DIKE TYPE A PER CALTRANS STD. PLAN A87B
 - CONSTRUCT SIDEWALK UNDERDRAIN PER DETAIL C, SHEET 03
 - CONSTRUCT 4.5" HMA OVER 26" CLASS 2 AGGREGATE BASE
 - CONSTRUCT IRRIGATION WATER SERVICE LATERAL. CONTRACTOR TO FURNISH AND INSTALL METER BOX AND ALL APPURTENANCES NECESSARY FOR THE SERVICE. SEE DETAILS I, J, K, AND L ON SHEET 52 FOR SERVICE INSTALLATION, WATER METER BOX LOCATION, BACKFILL AND BEDDING DETAILS. CONTRACTOR TO COORDINATE WITH CITY OF IMPERIAL WATER AND WASTEWATER DEPARTMENT AND COMMUNITY DEVELOPMENT DEPARTMENT. SEE IRRIGATION PLANS FOR BACKFLOW AND POINT OF CONNECTION DETAILS.
 - ELECTRICAL SERVICE CABINET. SEE TRAFFIC SIGNAL PLAN
 - PLACE 12" COMPACTED NATIVE SOIL. COMPACTED TO 90% RELATIVE DENSITY

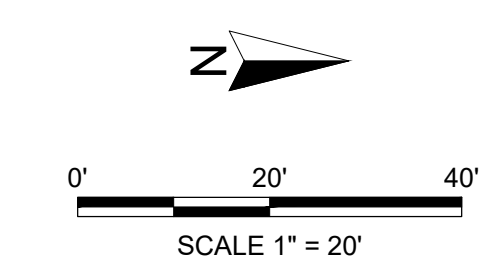


- GENERAL NOTES:**
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 - TOP OF MEDIAN CURB IS INTENDED TO SMOOTHLY FOLLOW THE EXISTING GRADE OF THE ROADWAY AND PROVIDE AN EXPOSED CURB FACE HEIGHT OF 6" ABOVE THE ROADWAY SURFACE, UNLESS OTHERWISE NOTED.
 - POWER POLE LOCATION ON PLANS ARE APPROXIMATE, CONTRACTOR TO MAINTAIN 6" BETWEEN EDGE OF SIDEWALK AND POWER POLE.

CURB LINE A GEOMETRIC DATA

	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L1	8.00'	N00°21'55"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C1	3.14'	N45°21'55"W	2.00'	2.00'	90°00'00"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L2	27.68'	S89°38'05"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C2	3.14'	S44°37'51"W	2.00'	2.00'	90°00'28"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L3	8.00'	S00°22'23"E				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C3	3.14'	S45°22'09"E	2.00'	2.00'	89°59'32"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L4	27.67'	N89°38'05"E				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C4	3.14'	N44°38'05"E	2.00'	2.00'	90°00'00"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401

SEE SHEET 15 FOR LINE G GEOMETRIC DATA TABLE



APPROVED BY DIRECTOR OF PUBLIC SERVICES
CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. DATE:

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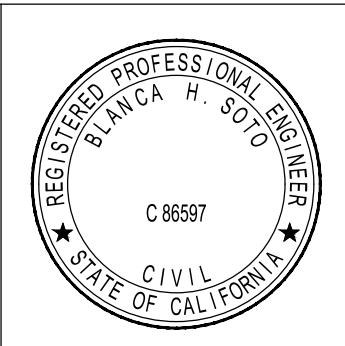
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BENCHMARK:

SEE SHEET 2 FOR BENCHMARK INFORMATION



PREPARED UNDER THE DIRECT SUPERVISION OF:

Blanca Soto 86597
BLANCA H. SOTO R.C.E. NO.

06/21/2024 03/31/2025
DATE REG. EXP.

PROJECT TITLE: CITY OF IMPERIAL
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1

SHEET CONTENT: IMPROVEMENT PLANS
6TH STREET

SCALE: N/A

DRAWN BY: BS

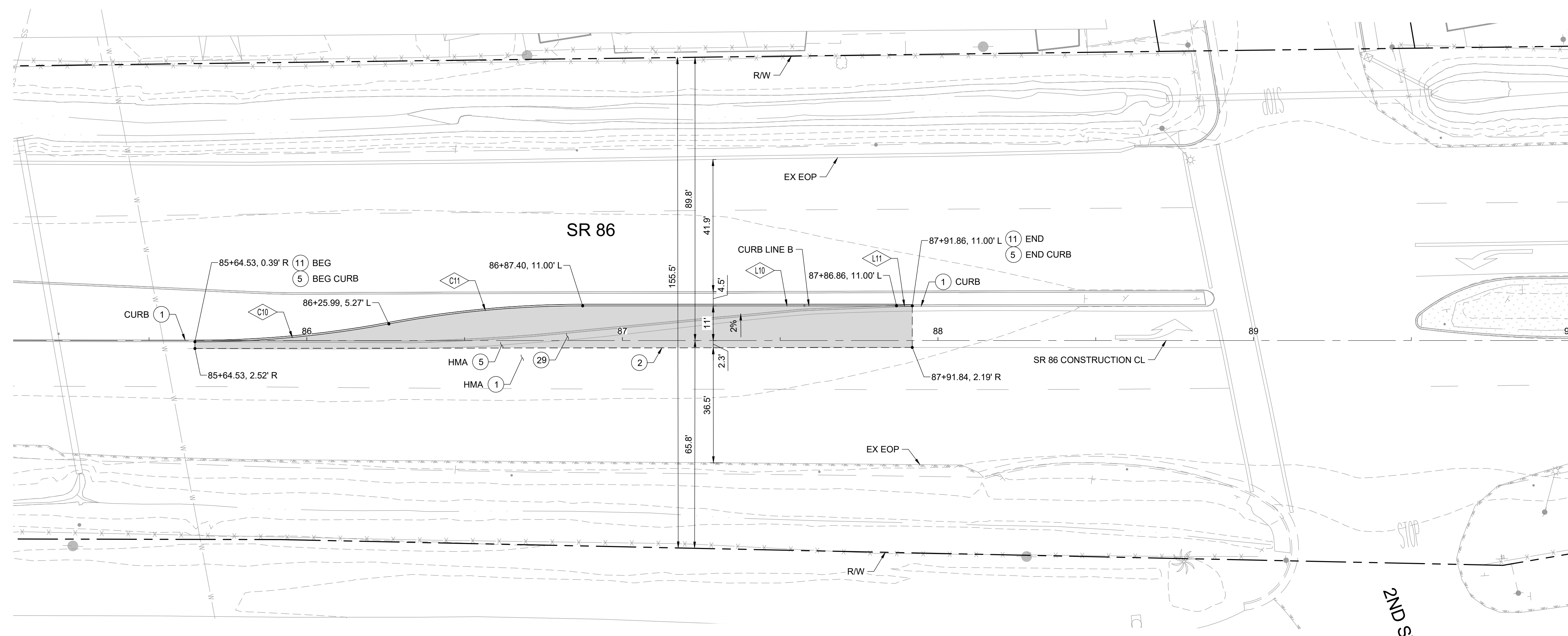
REVIEWED BY: RD

JUNE 2024

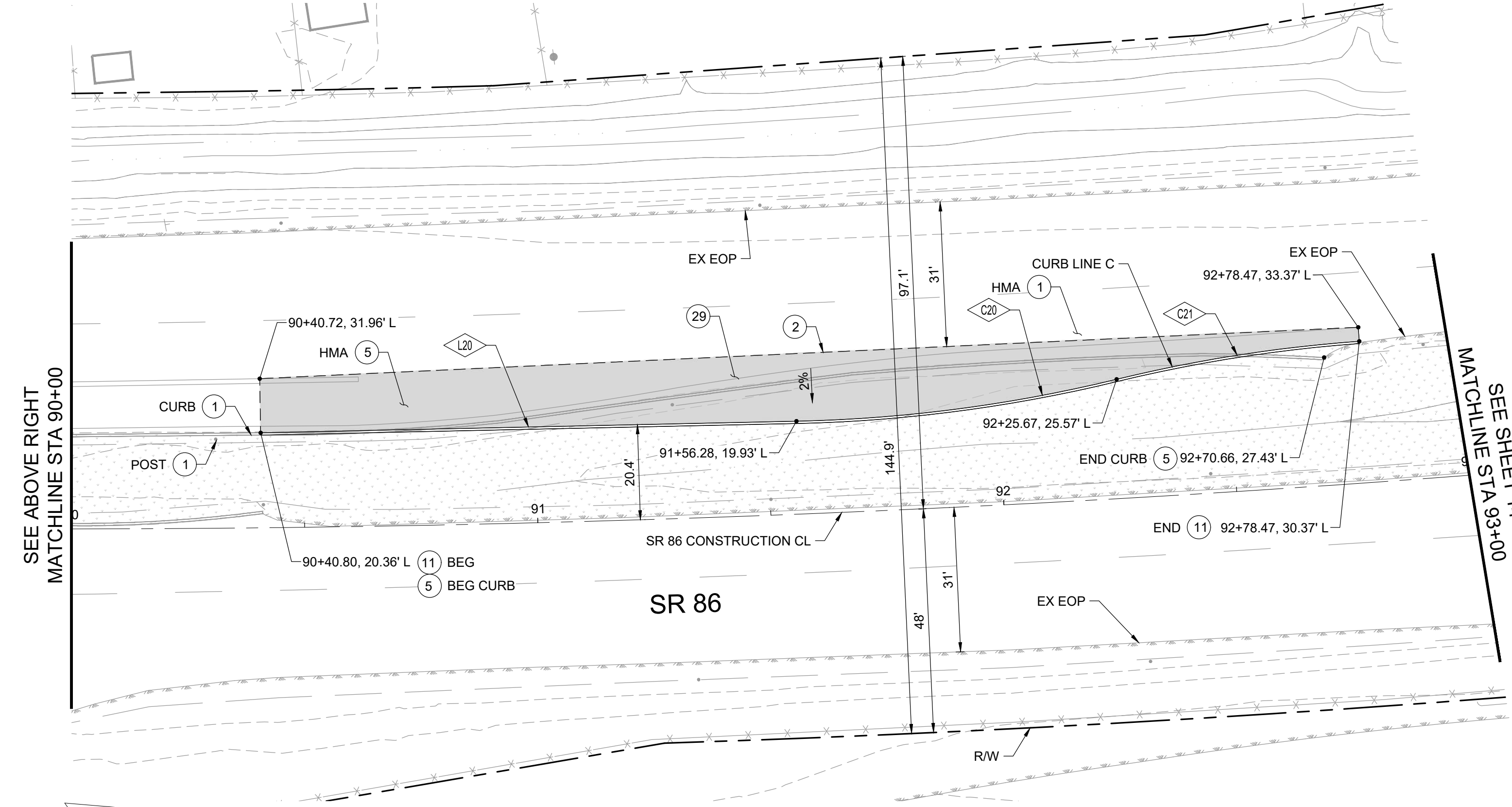
SHEET 12 OF 52 SHEETS

JOB NO. CIP#823

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- CONSTRUCTION NOTES**
- 1 PROTECT IN PLACE
 - 2 SAWCUT PER DETAIL A ON SHEET 03
 - 5 REMOVE AND DISPOSE
 - 11 CONSTRUCT PCC BARRIER CURB PER CITY OF IMPERIAL STD. DET. NO. 401
 - 29 CONSTRUCT 8.5" HMA OVER 34" CLASS 2 AGGREGATE BASE

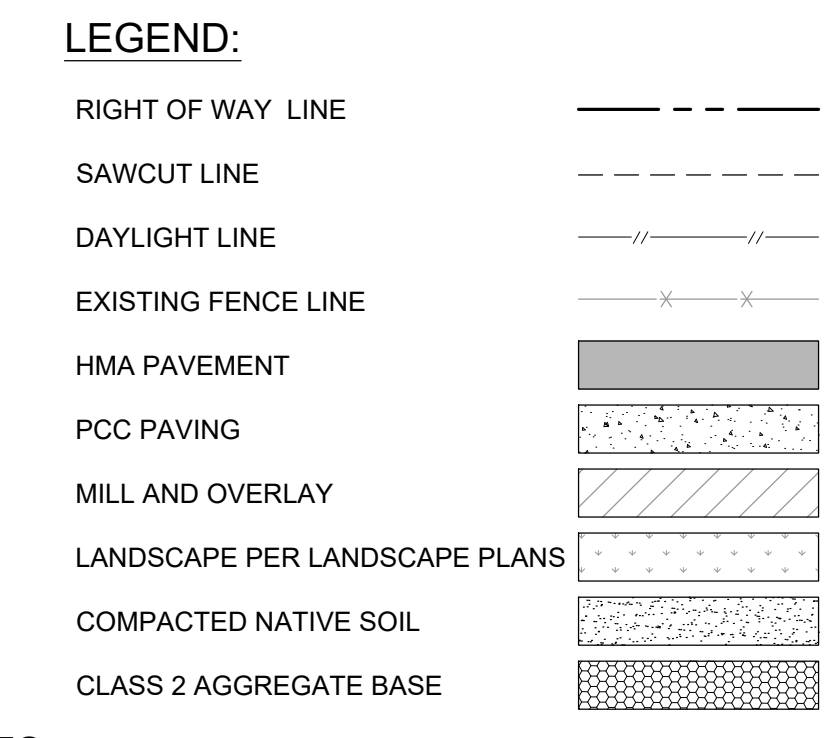


CURB LINE B GEOMETRIC DATA

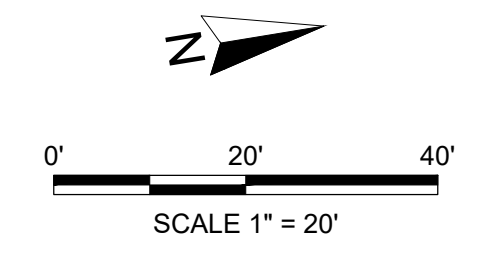
	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
C10	61.81'	S04°04'54"W	328.00'	31.00	10°47'50"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C11	61.77'	S04°00'46"W	332.00'	30.97	10°39'34"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L10	99.46'	S09°20'34"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L11	5.00'	S10°56'37"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401

CURB LINE C GEOMETRIC DATA

	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L20	114.89'	S08°05'55"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C20	69.36'	S01°53'22"W	320.00'	34.82	12°25'07"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C21	52.71'	S00°26'38"W	317.00'	26.42	9°31'39"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401



- GENERAL NOTES:**
- SEE TITLE SHEET FOR IMPROVEMENT NOTES AND DEMOLITION NOTES.
 - VERIFY THE EXISTENCE AND HORIZONTAL/VERTICAL LOCATION OF ALL UTILITIES WITHIN THE PROJECT AREA THAT MAY CONFLICT WITH THE PROPOSED CONSTRUCTION. EXISTING UTILITIES MAY BE PRESENT EVEN IF NOT SHOWN ON PLAN.
 - TO THE EXTENT POSSIBLE, CONTRACTOR SHALL PROTECT IN PLACE ALL SURVEY MONUMENTS DURING THE COURSE OF CONSTRUCTION. CONTRACTOR'S LAND SURVEYOR SHALL INDEPENDENTLY VERIFY/DETERMINE ANY AND ALL SURVEY MONUMENTS THAT MAY OR WILL BE DISTURBED OR DESTROYED BY THE CONTRACTOR'S ACTIVITIES. CONTRACTOR'S LAND SURVEYOR SHALL FILE WITH THE OFFICE OF THE COUNTY SURVEYOR CORNER RECORDS AND/OR RECORD(S) OF SURVEY PRIOR TO SUCH DISTURBANCE AND UPON RE-ESTABLISHMENT OF THE SURVEY MONUMENT(S).
 - AREAS OF FULL DEPTH REPLACEMENT LESS THAN 2' WIDE MAY UTILIZE FULL DEPTH HMA.
 - THE REMOVAL OF HMA INCLUDES ASPHALT AND BASE SECTION.
 - THE CONTRACTOR SHALL DETERMINE THE LIMITS AND LAYOUT OF WORK. PRIOR TO DEMOLITION, THE LIMITS AND LAYOUT OF THE WORK SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BY EITHER SHOP DRAWING OR FIELD MARK OUTS.



APPROVED BY DIRECTOR OF PUBLIC SERVICES
CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. _____ DATE _____

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CITY OF IMPERIAL

420 South Imperial Avenue
Imperial, CA 92251
Ph: (760) 355-4371 Fax: (760) 355-4718

BENCHMARK:

SEE SHEET 2 FOR BENCHMARK INFORMATION



PREPARED UNDER THE DIRECT SUPERVISION OF:

Blanca Soto
Blanca H. SOTO
06/21/2024
DATE

86597
R.C.E. NO.
03/31/2025
REG. EXP.

PROJECT TITLE: **CITY OF IMPERIAL
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1**

SHEET CONTENT: **IMPROVEMENT PLANS
SR 86 AT 2ND STREET**

SCALE: N/A

DRAWN BY: BS

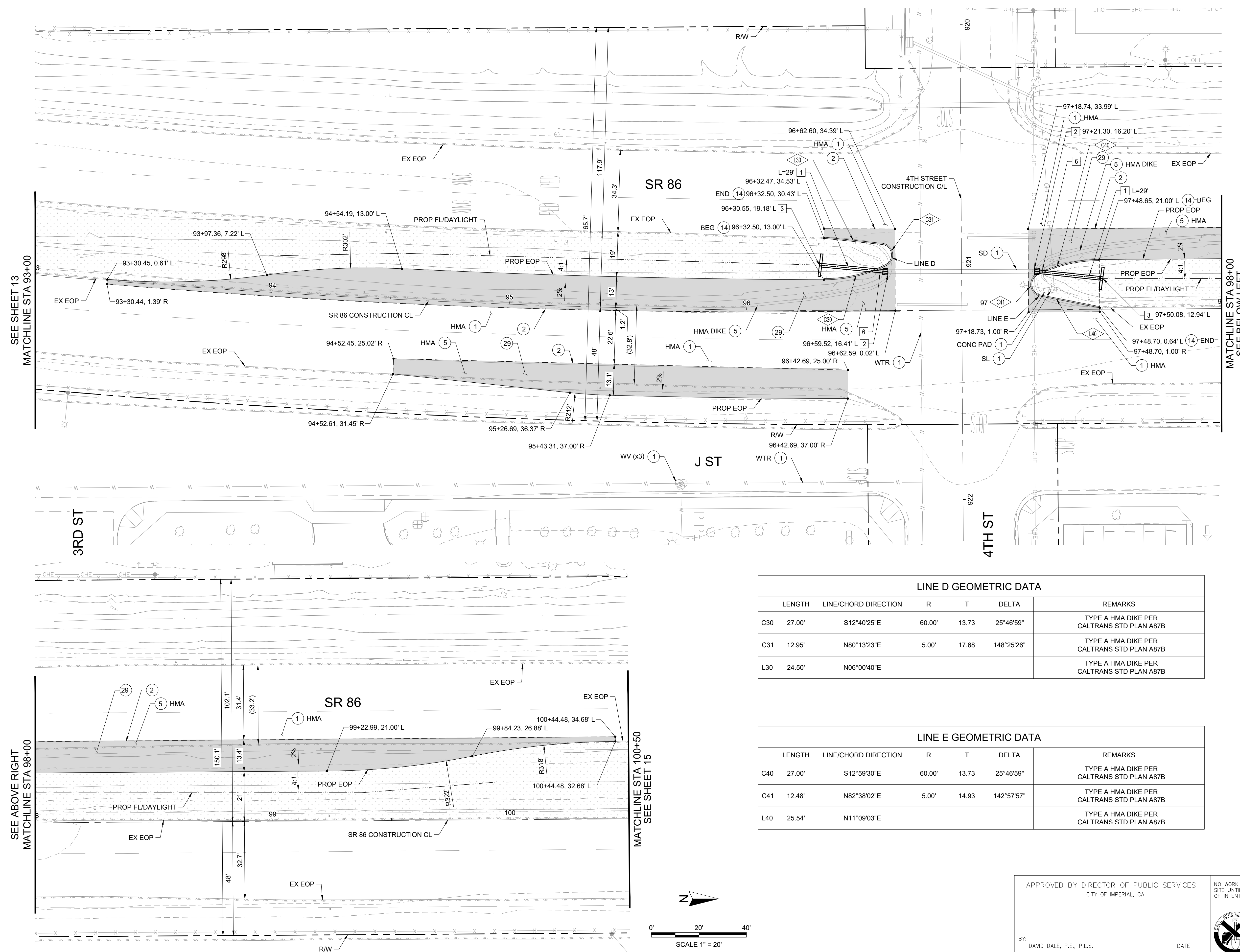
REVIEWED BY: RD

JUNE 2024

SHEET **13**
OF 52 SHEETS

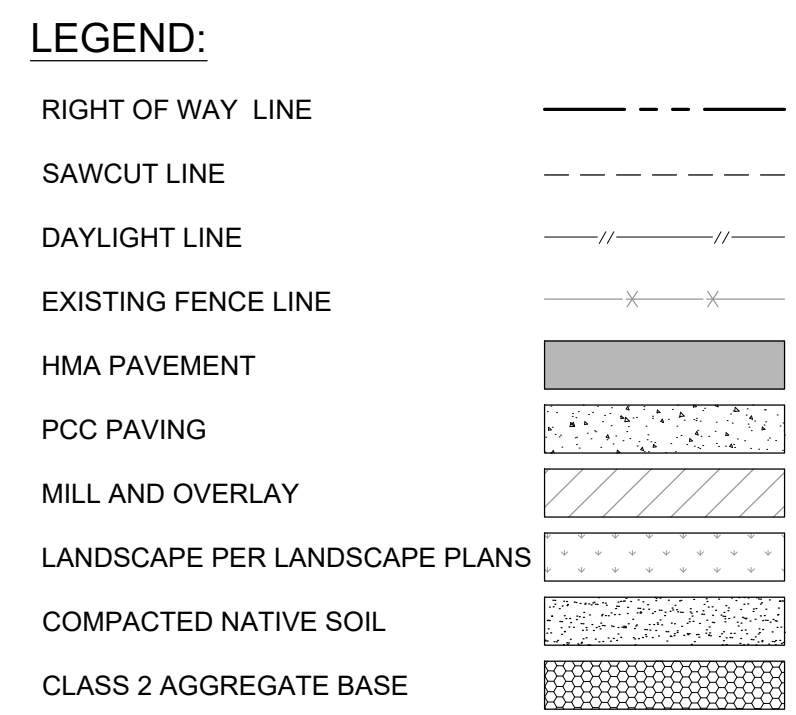
JOB NO.
CIP#823

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- CONSTRUCTION NOTES**
- 1 PROTECT IN PLACE
 - 2 SAWCUT PER DETAIL A ON SHEET 03
 - 5 REMOVE AND DISPOSE
 - 14 CONSTRUCT HMA DIKE TYPE A PER CALTRANS STD. PLAN A87B
 - 29 CONSTRUCT 8.5" HMA OVER 34" CLASS 2 AGGREGATE BASE

- STORM DRAIN CONSTRUCTION NOTES**
- 1 FURNISH AND INSTALL 18" RCP STORM DRAIN, 1350-D
 - 2 CONSTRUCT 18" CONCRETE PIPE COLLAR PER DETAIL G ON SHEET 3
 - 3 CONSTRUCT STRAIGHT HEADWALL PER CALTRANS STD PLAN D89B, H=3'-2"
 - 6 REMOVED DAMAGED PORTIONS OF THE EXISTING PIPE TO ENSURE PROPER CONSTRUCTION OF PIPE COLLAR. LIMITS ARE FOR REFERENCE ONLY, CONTRACTOR TO DETERMINE ACTUAL LIMITS OF REMOVAL.



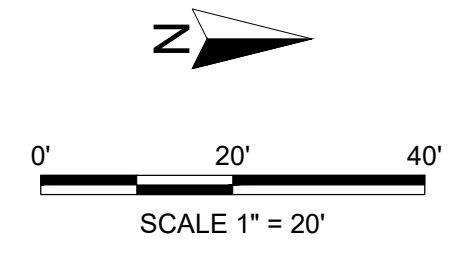
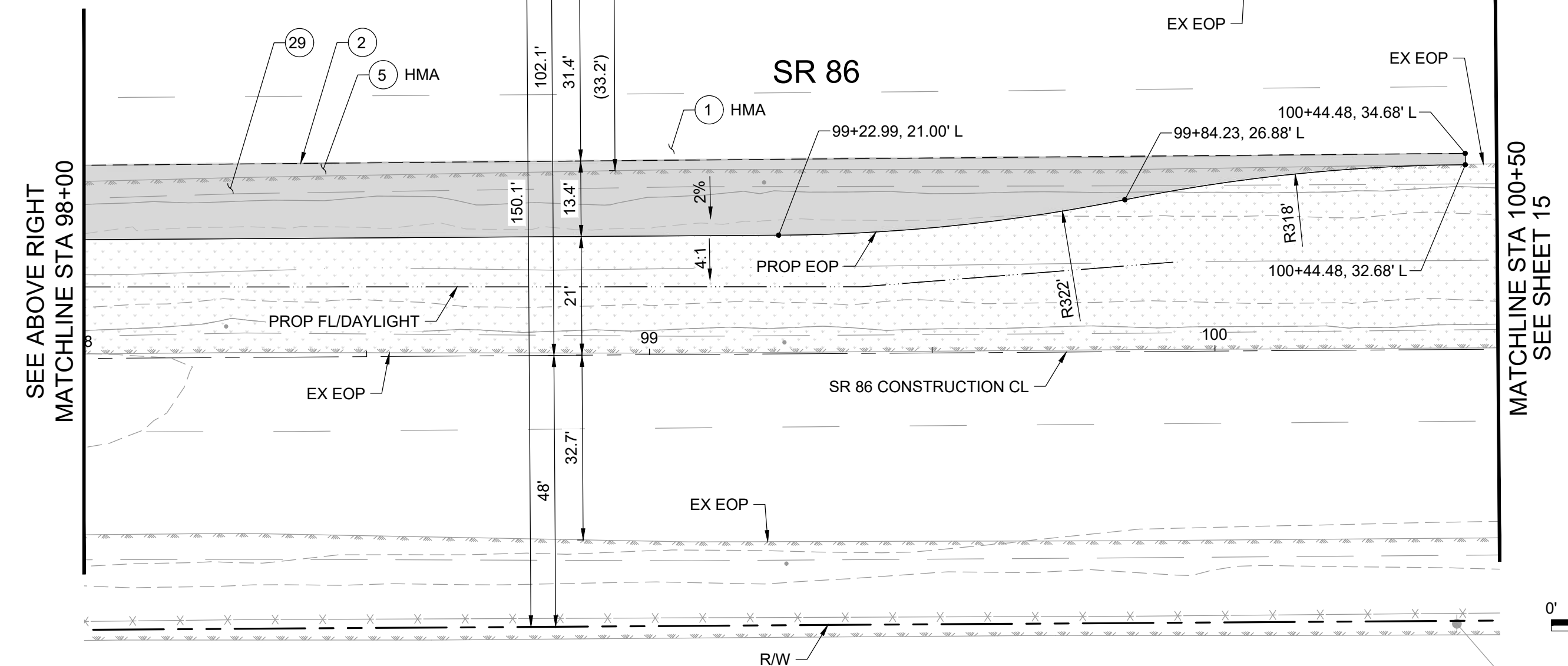
- GENERAL NOTES:**
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LINE D GEOMETRIC DATA

	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
C30	27.00'	S12°40'25"E	60.00'	13.73	25°46'59"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
C31	12.95'	N80°13'23"E	5.00'	17.68	148°25'26"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
L30	24.50'	N06°00'40"E				TYPE A HMA DIKE PER CALTRANS STD PLAN A87B

LINE E GEOMETRIC DATA

	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
C40	27.00'	S12°59'30"E	60.00'	13.73	25°46'59"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
C41	12.48'	N82°38'02"E	5.00'	14.93	142°57'57"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
L40	25.54'	N11°09'03"E				TYPE A HMA DIKE PER CALTRANS STD PLAN A87B



APPROVED BY DIRECTOR OF PUBLIC SERVICES
CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. DATE:

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Imperial, CA 92251
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BENCHMARK:
SEE SHEET 2 FOR BENCHMARK INFORMATION



PREPARED UNDER THE DIRECT SUPERVISION OF:
Blanca Soto
BLANCA H. SOTO R.C.E. NO. 86597
DATE: 06/21/2024 REG. EXP. 03/31/2025

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: IMPROVEMENT PLANS SR 86 AT 4TH STREET

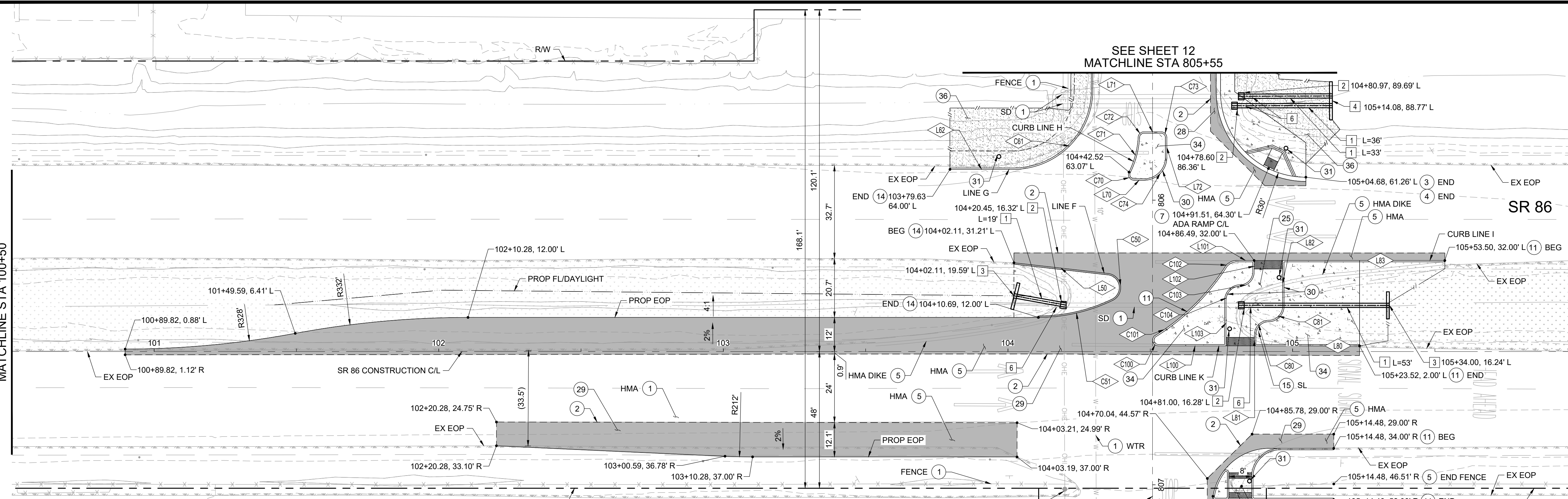
SCALE: N/A
DRAWN BY: BS
REVIEWED BY: RD
JUNE 2024

SHEET 14 OF 52 SHEETS
JOB NO. CLIP#823

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SEE SHEET 14
MATCHLINE STA 100+50

MATCHLINE STA 106+00
SEE SHEET 16



- CONSTRUCTION NOTES**
- 1 PROTECT IN PLACE
 - 2 SAWCUT PER DETAIL A ON SHEET 03
 - 3 CONSTRUCT PCC SIDEWALK PER CITY OF IMPERIAL STD. DET. NO. 407-A
 - 4 CONSTRUCT PCC CURB AND GUTTER PER CITY OF IMPERIAL STD. DET. NO. 400. CONSTRUCT TRANSITION TO EXISTING PCC CURB AND GUTTER PER DETAIL B, SHEET 3
 - 5 REMOVE AND DISPOSE
 - 7 CONSTRUCT PCC TYPICAL CORNER ONE ADA RAMP PER CITY OF IMPERIAL STD. DET. NO. 409
 - 11 CONSTRUCT PCC BARRIER CURB PER CITY OF IMPERIAL STD. DET. NO. 401
 - 12 CONSTRUCT 3" HMA OVER 14" CLASS 2 AGGREGATE BASE
 - 13 CONSTRUCT PCC MOD TYPICAL CORNER ONE ADA RAMP (WIDTH PER PLAN) PER CITY OF IMPERIAL STD. DET. NO. 409
 - 14 CONSTRUCT HMA DIKE TYPE A PER CALTRANS STD. PLAN A87B
 - 15 REMOVE AND SALVAGE
 - 24 CONSTRUCT TYPE A PCC ADA PASSAGEWAY PER CALTRANS STD PLAN A88B WITH YELLOW TRUNCATED DOMES
 - 25 CONSTRUCT TYPE B PCC ADA PASSAGEWAY PER CALTRANS STD PLAN A88B WITH YELLOW TRUNCATED DOMES
 - 28 CONSTRUCT 4.5" HMA OVER 26" CLASS 2 AGGREGATE BASE
 - 29 CONSTRUCT 8.5" HMA OVER 34" CLASS 2 AGGREGATE BASE
 - 30 CONSTRUCT TYPE A3-6 PIN-ON CURB PER CALTRANS STD. PLAN A87A
 - 31 SEE TRAFFIC SIGNAL PLANS
 - 34 CONSTRUCT PCC MEDIAN INFILL PER DETAIL H ON SHEET 3
 - 36 PLACE 12" COMPACTED NATIVE SOIL. COMPACTED TO 90% RELATIVE DENSITY

LINE F GEOMETRIC DATA

LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L50	S06°07'10"W				TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
C50	S79°58'54"W	5.00'	17.28	147°43'27"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
C51	N13°15'53"W	60.00'	13.73	25°46'59"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B

LINE G GEOMETRIC DATA

LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L60	S45°00'00"W				TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
C60	S67°19'03"W	5.00'	2.05	44°38'05"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
L61	S89°38'05"W				TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
C61	N45°22'09"W	28.00'	28.00	89°59'32"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
L62	N00°22'23"W				TYPE A HMA DIKE PER CALTRANS STD PLAN A87B

CURB LINE H GEOMETRIC DATA

LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L70	N00°22'19"W				TYPE A3-6 PIN-ON CURB CALTRANS STD PLAN A87A
C70	N57°43'03"E	2.00'	3.21	116°10'44"	TYPE A3-6 PIN-ON CURB CALTRANS STD PLAN A87A
C71	S75°35'35"E	32.00'	6.45	22°48'00"	TYPE A3-6 PIN-ON CURB CALTRANS STD PLAN A87A
C72	S43°40'45"E	2.00'	1.89	86°37'40"	TYPE A3-6 PIN-ON CURB CALTRANS STD PLAN A87A
L71	S00°21'55"E				TYPE A3-6 PIN-ON CURB CALTRANS STD PLAN A87A
C73	S44°38'05"W	2.00'	2.00	90°00'00"	TYPE A3-6 PIN-ON CURB CALTRANS STD PLAN A87A
L72	S89°38'05"W				TYPE A3-6 PIN-ON CURB CALTRANS STD PLAN A87A
C74	N45°22'07"W	8.00'	8.00	89°59'36"	TYPE A3-6 PIN-ON CURB CALTRANS STD PLAN A87A

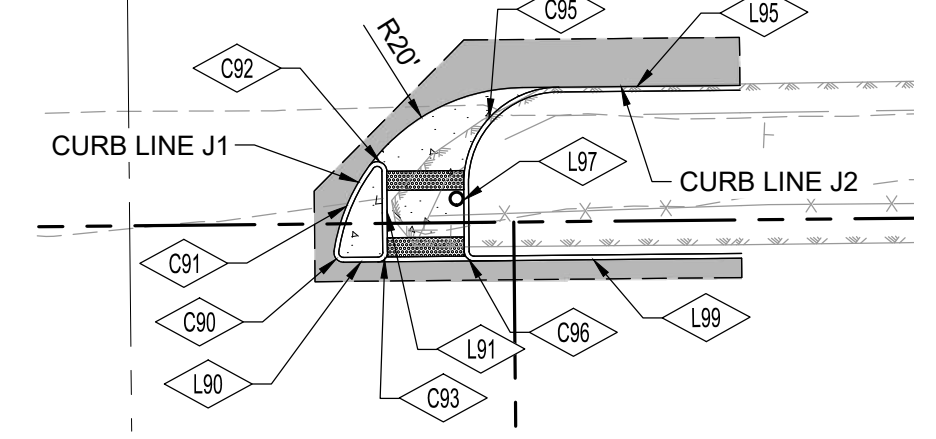
CURB LINE I GEOMETRIC DATA

LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
C80	N45°40'40"W	5.00'	4.95	89°23'27"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L81	S89°37'37"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L80	S00°22'23"E				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C81	N45°42'27"W	5.00'	4.95	89°27'01"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L82	S89°34'02"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L83	N00°22'23"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401

CURB LINE J1 GEOMETRIC DATA

LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L90	N00°22'23"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C90	N49°10'09"E	1.00'	1.17	99°05'05"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C91	S67°20'57"E	20.00'	4.96	27°52'43"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C92	S18°06'31"W	1.00'	2.99	143°02'12"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L91	S89°37'37"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C93	N45°22'23"W	1.00'	1.00	90°00'00"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401

- STORM DRAIN CONSTRUCTION NOTES**
- 1 FURNISH AND INSTALL 18" RCP STORM DRAIN, 1350-D
 - 2 CONSTRUCT 18" CONCRETE PIPE COLLAR PER DETAIL G ON SHEET 3
 - 3 CONSTRUCT STRAIGHT HEADWALL PER CALTRANS STD PLAN D89B. H=3'-2"
 - 4 CONSTRUCT DOUBLE CIRCULAR PIPE HEADWALL PER CALTRANS STD PLAN D89B. H=3'-2"
 - 5 REMOVED DAMAGED PORTIONS OF THE EXISTING PIPE TO ENSURE PROPER CONSTRUCTION OF PIPE COLLAR. LIMITS ARE FOR REFERENCE ONLY. CONTRACTOR TO DETERMINE ACTUAL LIMITS OF REMOVAL.



SEE SHEET 16 FOR CURB LINE J2 AND K GEOMETRIC DATA TABLE

APPROVED BY DIRECTOR OF PUBLIC SERVICES
CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. DATE: _____

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NO.	REVISIONS:	APPROVED	DATE

CITY OF IMPERIAL
420 South Imperial Avenue
Imperial, CA 92251
Ph: (760) 355-4371 Fax: (760) 355-4718

BENCHMARK:
SEE SHEET 2 FOR BENCHMARK INFORMATION



PREPARED UNDER THE DIRECT SUPERVISION OF:
Blanca Soto
Blanca H. Soto
DATE: 06/21/2024

PROJECT TITLE: CITY OF IMPERIAL
AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1

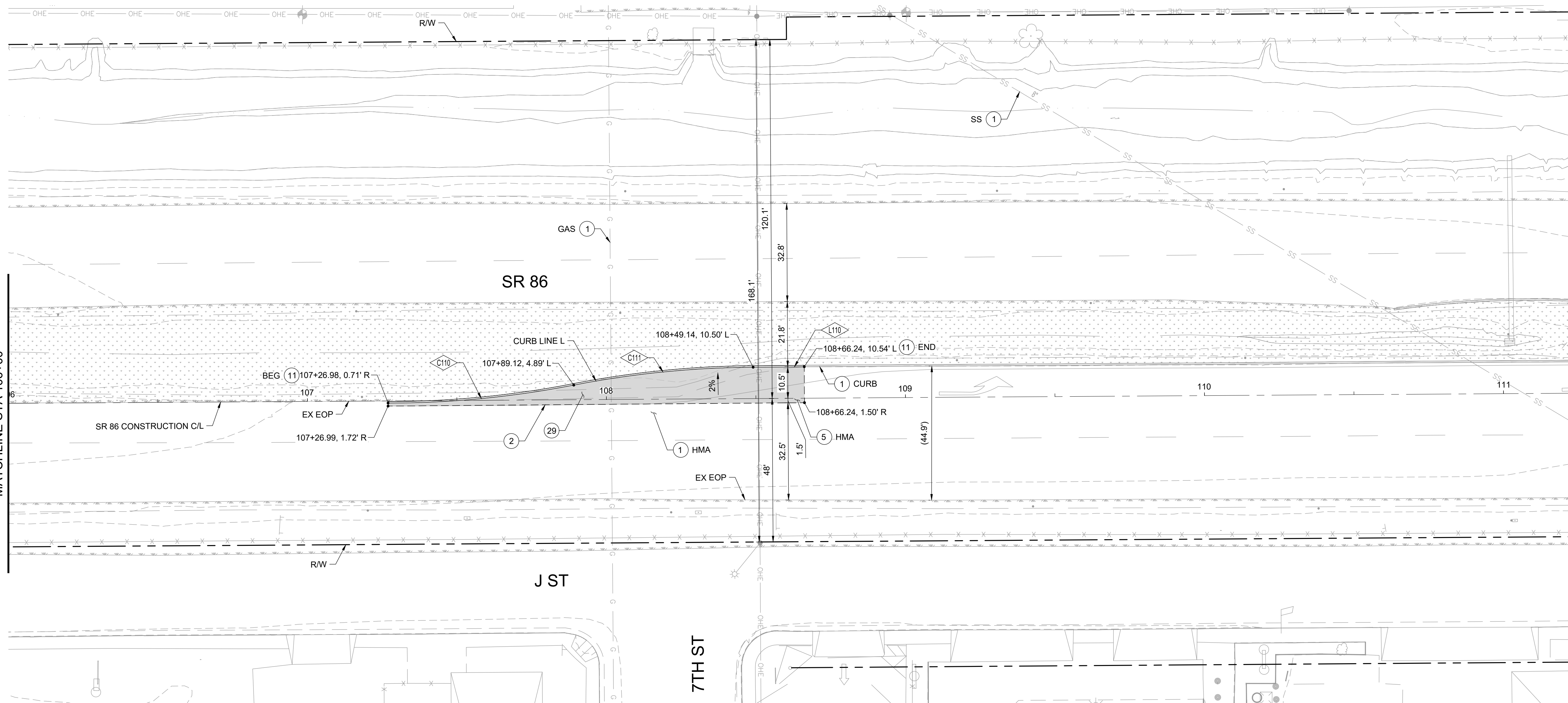
SHEET CONTENT: IMPROVEMENT PLANS
SR 86 AT 6TH STREET

SCALE: N/A
DRAWN BY: BS
REVIEWED BY: RD
JUNE 2024

SHEET 15 OF 52 SHEETS
JOB NO. CIP#823

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- CONSTRUCTION NOTES**
- 1 PROTECT IN PLACE
 - 2 SAWCUT PER DETAIL A ON SHEET 03
 - 5 REMOVE AND DISPOSE
 - 11 CONSTRUCT PCC BARRIER CURB PER CITY OF IMPERIAL STD. DET. NO. 401
 - 29 CONSTRUCT 8.5" HMA OVER 34" CLASS 2 AGGREGATE BASE

- LEGEND:**
- RIGHT OF WAY LINE
 - SAWCUT LINE
 - DAYLIGHT LINE
 - EXISTING FENCE LINE
 - HMA PAVEMENT
 - PCC PAVING
 - MILL AND OVERLAY
 - LANDSCAPE PER LANDSCAPE PLANS
 - COMPACTED NATIVE SOIL
 - CLASS 2 AGGREGATE BASE

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CURB LINE K GEOMETRIC DATA

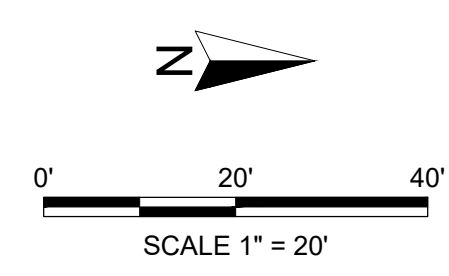
	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L100	23.78'	N00°22'23"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C100	5.17'	N73°43'58"E	2.00'	7.02	148°12'42"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C101	34.55'	S44°51'06"E	78.00'	17.56	25°22'49"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C102	4.99'	S28°57'27"E	5.00'	2.72	57°09'21"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L101	6.06'	S00°22'23"E				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L102	4.04'	S89°34'02"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C103	7.80'	N45°44'36"W	5.00'	4.95	89°22'44"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C104	7.79'	N45°42'49"W	5.00'	4.94	89°19'09"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L103	15.96'	S89°37'37"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401

CURB LINE J2 GEOMETRIC DATA

	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L95	18.87'	N00°22'23"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C95	15.71'	N45°22'23"W	10.00'	10.00	90°00'00"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L97	7.00'	S89°37'37"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C96	1.57'	S44°37'37"W	1.00'	1.00	90°00'00"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L99	27.87'	S00°22'23"E				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401

CURB LINE L GEOMETRIC DATA

	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
C110	62.48'	N05°31'29"W	324.00'	31.34	11°02'58"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C111	60.37'	N05°42'40"W	324.00'	30.27	10°40'34"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L110	17.10'	N00°22'23"W				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401



APPROVED BY DIRECTOR OF PUBLIC SERVICES
CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. _____ DATE _____

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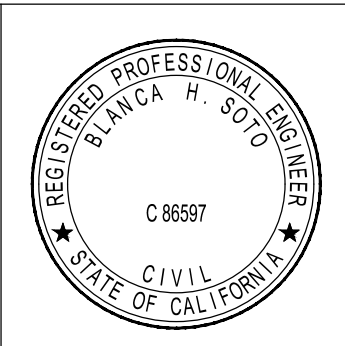
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NO.	REVISIONS:	APPROVED	DATE

CITY OF IMPERIAL
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Imperial, CA 92251
Ph: (760) 355-4371 Fax: (760) 355-4718

BENCHMARK:
SEE SHEET 2 FOR BENCHMARK INFORMATION



PREPARED UNDER THE DIRECT SUPERVISION OF:
Blanca Soto
BLANCA H. SOTO R.C.E. NO. 86597
DATE 06/21/2024 REG. EXP. 03/31/2025

PROJECT TITLE: CITY OF IMPERIAL
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1

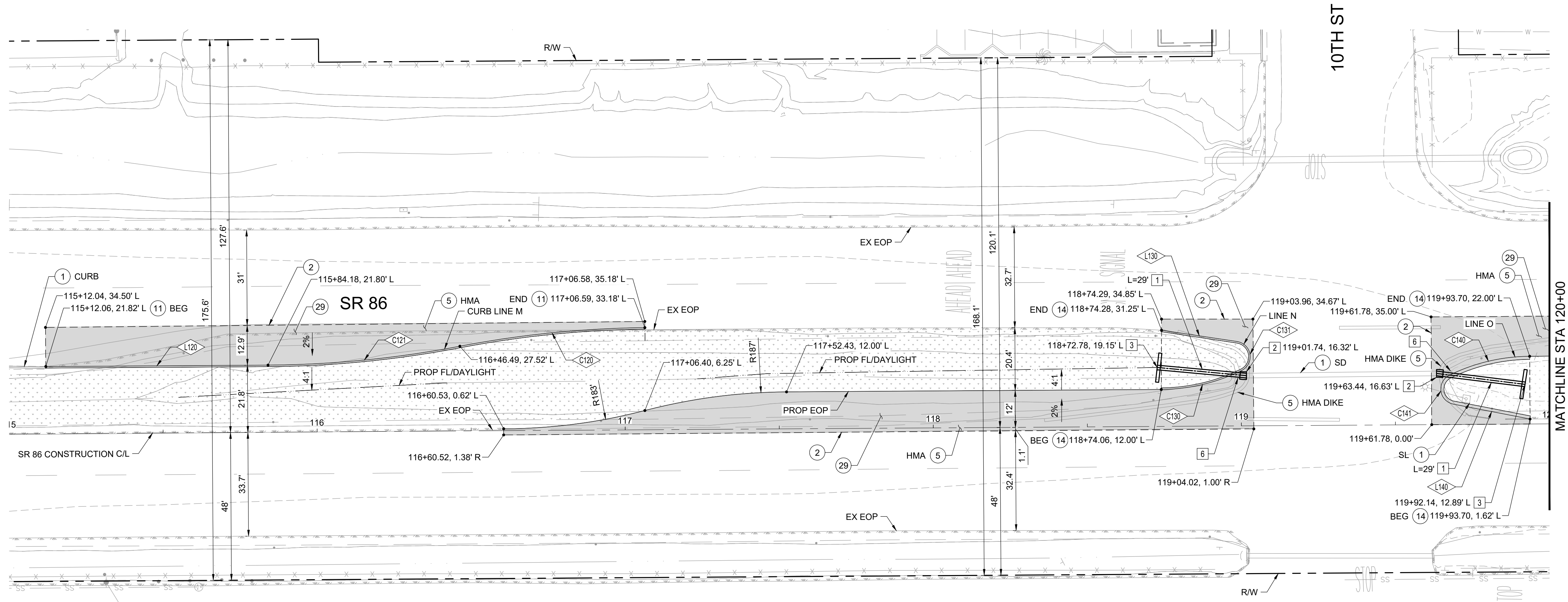
SHEET CONTENT: IMPROVEMENT PLANS
SR 86 AT 7TH STREET

SCALE: N/A
DRAWN BY: BS
REVIEWED BY: RD
JUNE 2024

SHEET
16
OF 52 SHEETS
JOB NO.
CIP#823

UNAUTHORIZED CHANGES & USES: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

P:\Projects\2024\1848\1848-01\Drawings\1848-01-01\1848-01-01.dwg, 06/21/2024, 10:23:14 AM

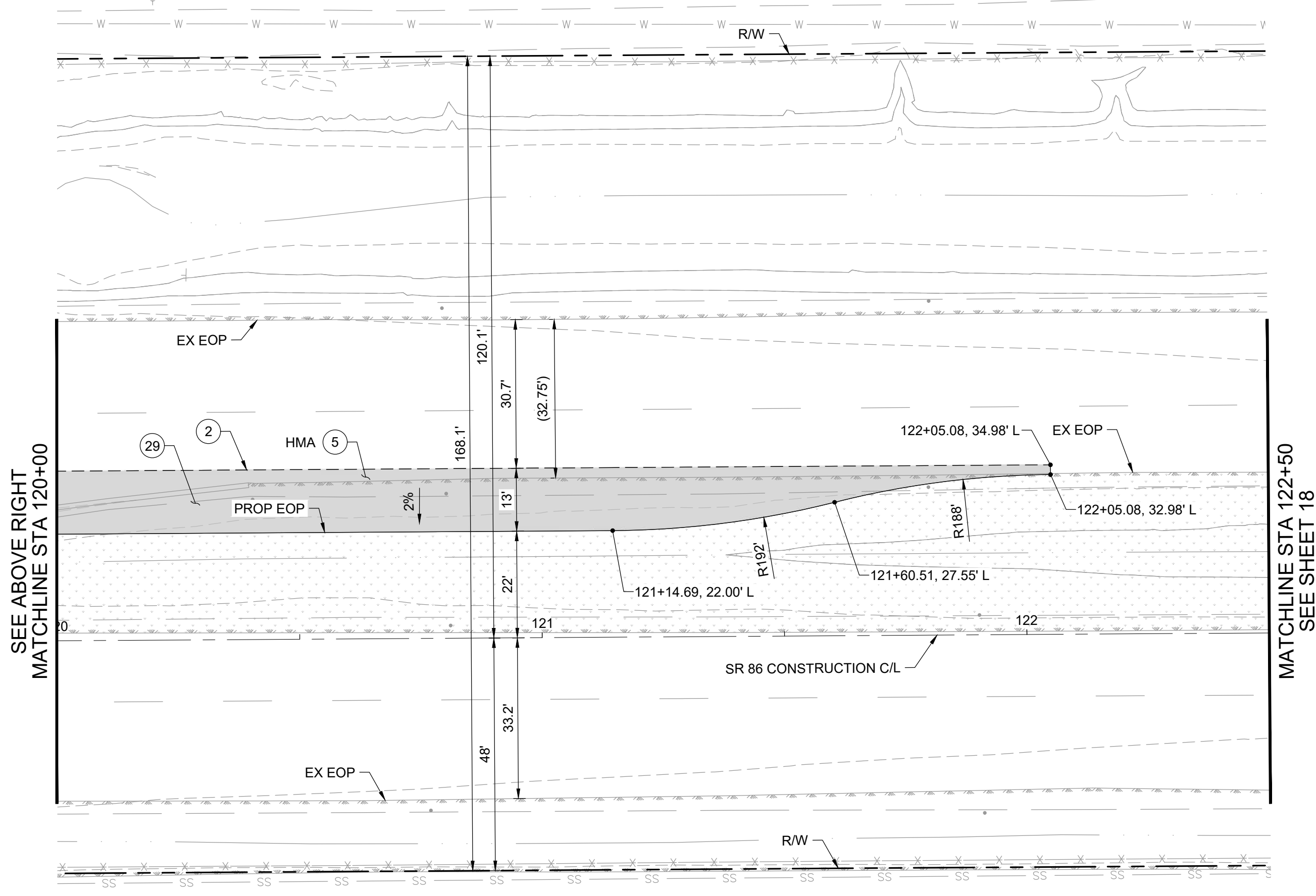


CONSTRUCTION NOTES

- 1 PROTECT IN PLACE
- 2 SAWCUT PER DETAIL A ON SHEET 03
- 5 REMOVE AND DISPOSE
- 11 CONSTRUCT PCC BARRIER CURB PER CITY OF IMPERIAL STD. DET. NO. 401
- 14 CONSTRUCT HMA DIKE TYPE A PER CALTRANS STD. PLAN A87B
- 29 CONSTRUCT 8.5" HMA OVER 34" CLASS 2 AGGREGATE BASE

STORM DRAIN CONSTRUCTION NOTES

- 1 FURNISH AND INSTALL 18" RCP STORM DRAIN, 1350-D
- 2 CONSTRUCT 18" CONCRETE PIPE COLLAR PER DETAIL G ON SHEET 3
- 3 CONSTRUCT STRAIGHT HEADWALL PER CALTRANS STD PLAN D89B, H=3'-2"
- 6 REMOVED DAMAGED PORTIONS OF THE EXISTING PIPE TO ENSURE PROPER CONSTRUCTION OF PIPE COLLAR. LIMITS ARE FOR REFERENCE ONLY. CONTRACTOR TO DETERMINE ACTUAL LIMITS OF REMOVAL.



CURB LINE M GEOMETRIC DATA

	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
C120	60.44'	S05°44'53"E	338.00'	30.30	10°14'44"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
C121	62.66'	S05°37'19"E	342.00'	31.42	10°29'52"	6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401
L120	72.14'	S00°22'23"E				6" PCC BARRIER CURB CITY OF IMPERIAL STD DETAIL NO. 401

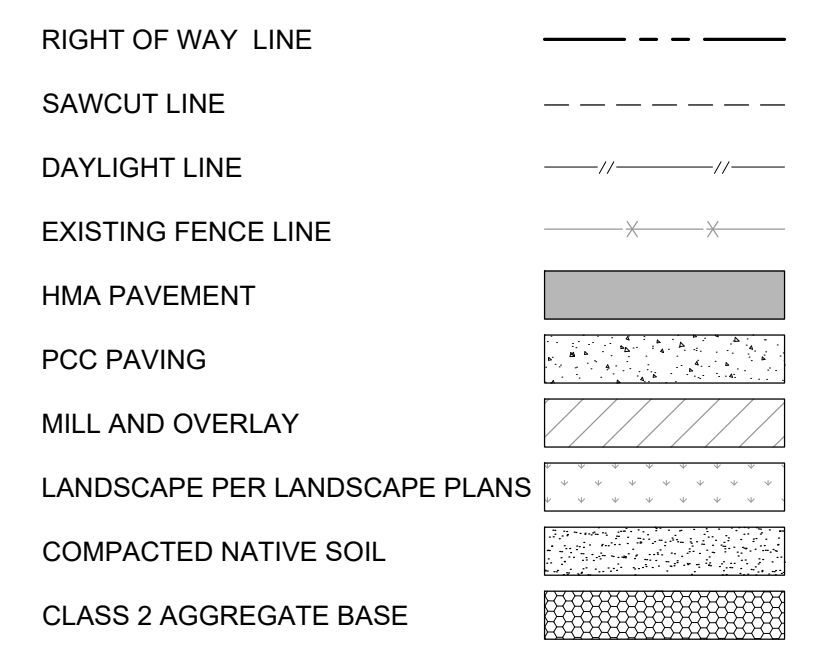
LINE N GEOMETRIC DATA

	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
C130	27.00'	N13°15'53"W	60.00'	13.73	25°46'59"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
C131	12.68'	S81°11'01"W	5.00'	16.01	145°19'13"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
L130	24.77'	S08°31'24"W				TYPE A HMA DIKE PER CALTRANS STD PLAN A87B

LINE O GEOMETRIC DATA

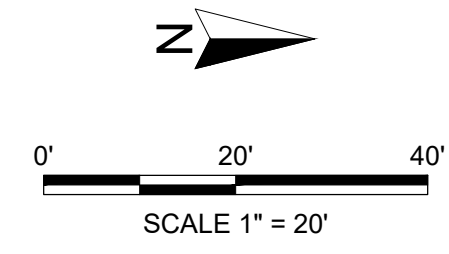
	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
C140	27.00'	S13°15'53"E	60.00'	13.73	25°46'59"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
C141	12.47'	N82°24'49"E	5.00'	14.88	142°51'36"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
L140	25.41'	N10°59'01"E				TYPE A HMA DIKE PER CALTRANS STD PLAN A87B

LEGEND:



GENERAL NOTES:

1. SEE TITLE SHEET FOR IMPROVEMENT NOTES AND DEMOLITION NOTES.
2. VERIFY THE EXISTENCE AND HORIZONTAL/VERTICAL LOCATION OF ALL UTILITIES WITHIN THE PROJECT AREA THAT MAY CONFLICT WITH THE PROPOSED CONSTRUCTION. EXISTING UTILITIES MAY BE PRESENT EVEN IF NOT SHOWN ON PLAN.
3. TO THE EXTENT POSSIBLE, CONTRACTOR SHALL PROTECT IN PLACE ALL SURVEY MONUMENTS DURING THE COURSE OF CONSTRUCTION. CONTRACTOR'S LAND SURVEYOR SHALL INDEPENDENTLY VERIFY/DETERMINE ANY AND ALL SURVEY MONUMENTS THAT MAY OR WILL BE DISTURBED OR DESTROYED BY THE CONTRACTOR'S ACTIVITIES. CONTRACTOR'S LAND SURVEYOR SHALL FILE WITH THE OFFICE OF THE COUNTY SURVEYOR CORNER RECORDS AND/OR RECORD(S) OF SURVEY PRIOR TO SUCH DISTURBANCE AND UPON RE-ESTABLISHMENT OF THE SURVEY MONUMENT(S).
4. AREAS OF FULL DEPTH REPLACEMENT LESS THAN 2' WIDE MAY UTILIZE FULL DEPTH HMA.
5. THE REMOVAL OF HMA INCLUDES ASPHALT AND BASE SECTION.
6. THE CONTRACTOR SHALL DETERMINE THE LIMITS AND LAYOUT OF WORK. PRIOR TO DEMOLITION, THE LIMITS AND LAYOUT OF THE WORK SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BY EITHER SHOP DRAWING OR FIELD MARK OUTS.



APPROVED BY DIRECTOR OF PUBLIC SERVICES
CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. DATE:

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
Call: TOLL FREE
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422-4133
TWO WORKING DAYS BEFORE YOU DIG.



NO.	REVISIONS:	APPROVED	DATE

CITY OF IMPERIAL
420 South Imperial Avenue
Imperial, CA 92251
Ph: (760) 355-4371 Fax: (760) 355-4718

BENCHMARK:
SEE SHEET 2 FOR BENCHMARK INFORMATION



PREPARED UNDER THE DIRECT SUPERVISION OF:
Blanca Soto
BLANCA H. SOTO
06/21/2024
DATE

PROJECT TITLE: CITY OF IMPERIAL
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1

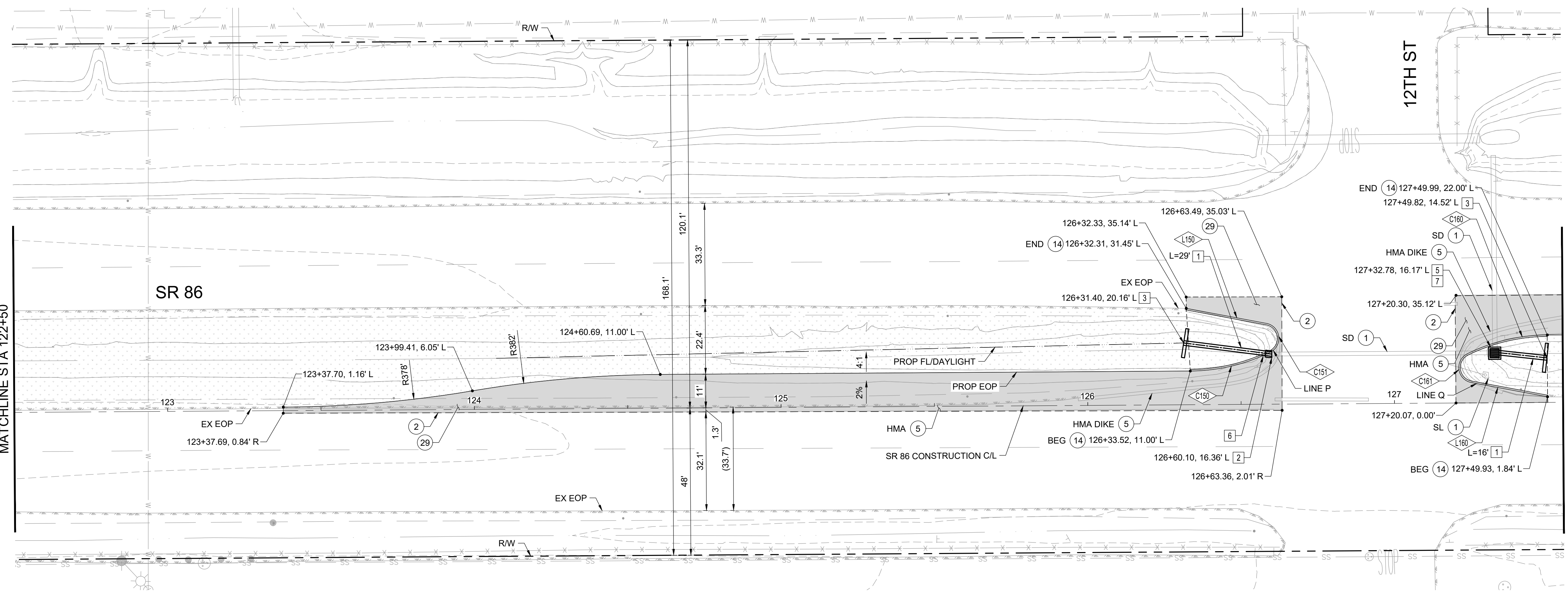
SHEET CONTENT: IMPROVEMENT PLANS
SR 86 AT 10TH STREET

SCALE: N/A
DRAWN BY: BS
REVIEWED BY: RD
JUNE 2024

SHEET
17
OF 52 SHEETS
JOB NO.
CIP#823

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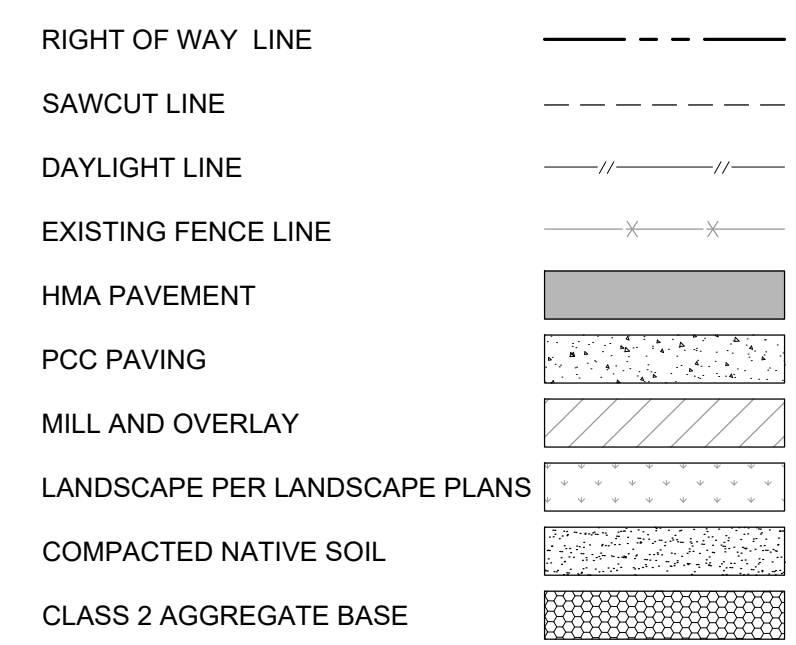
CONSTRUCTION NOTES

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- 1 FURNISH AND INSTALL 18" RCP STORM DRAIN, 1350-D
- 2 CONSTRUCT 18" CONCRETE PIPE COLLAR PER DETAIL G ON SHEET 3
- 3 CONSTRUCT STRAIGHT HEADWALL PER CALTRANS STD PLAN D89B, H=3'-2"
- 5 CONSTRUCT TYPE G-2 INLET WITH GRATE PER CALTRANS STD PLAN D73-B AND D77-A
- 6 REMOVED DAMAGED PORTIONS OF THE EXISTING PIPE TO ENSURE PROPER CONSTRUCTION OF PIPE COLLAR. LIMITS ARE FOR REFERENCE ONLY. CONTRACTOR TO DETERMINE ACTUAL LIMITS OF REMOVAL.
- 7 CONNECT EXISTING STORM DRAIN TO PROPOSED INLET

LEGEND:

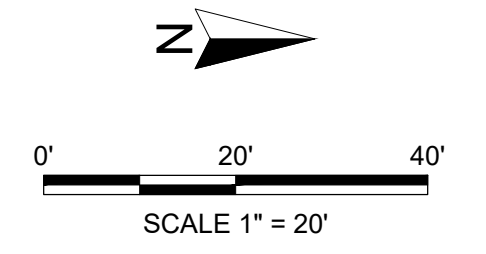
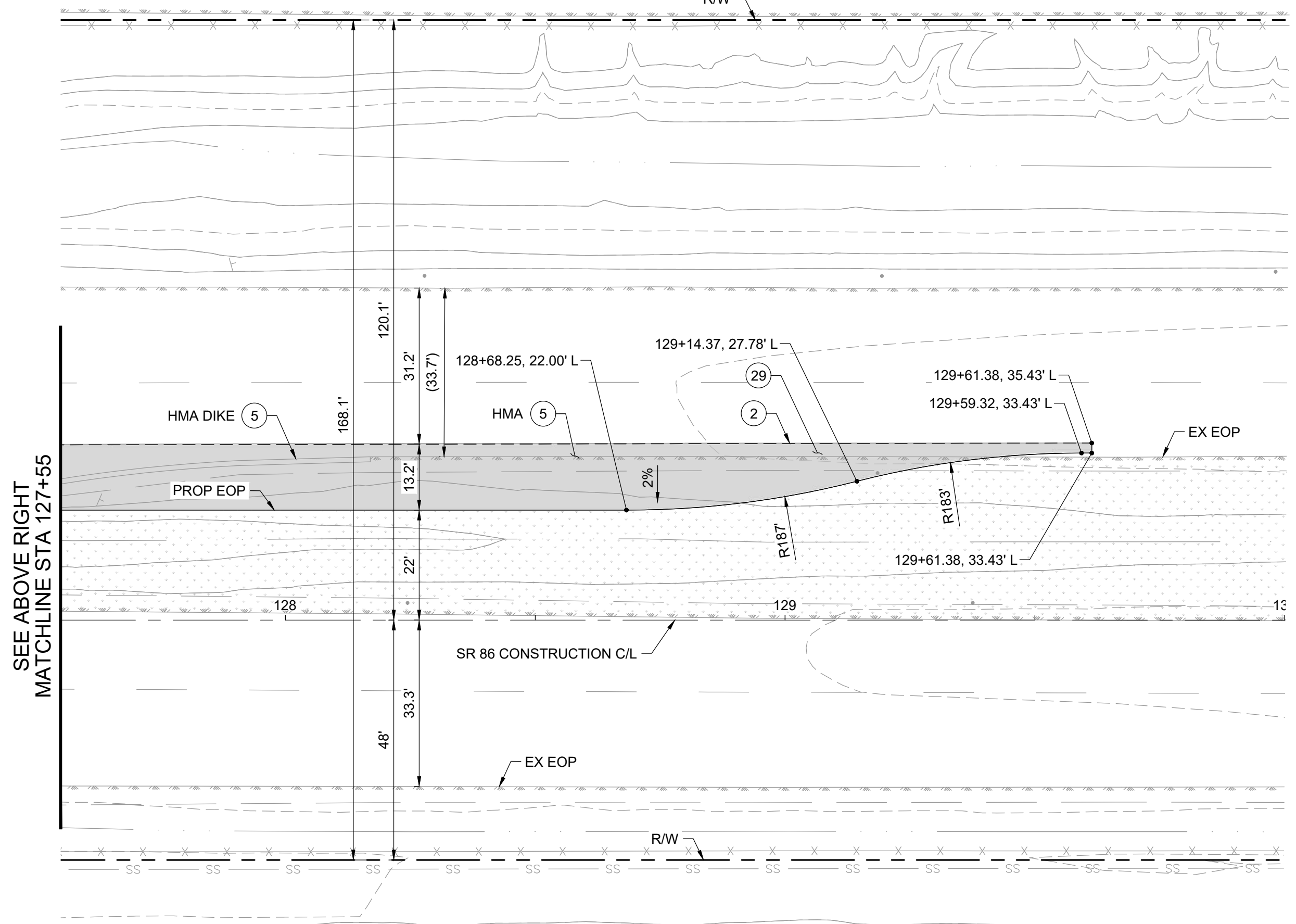


GENERAL NOTES:

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- 6. THE CONTRACTOR SHALL DETERMINE THE LIMITS AND LAYOUT OF WORK. PRIOR TO DEMOLITION, THE LIMITS AND LAYOUT OF THE WORK SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BY EITHER SHOP DRAWING OR FIELD MARK OUTS.

LINE P GEOMETRIC DATA						
	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
C150	27.00'	N13°15'53"W	60.00'	13.73	25°46'59"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
C151	12.50'	S82°13'51"W	5.00'	15.04	143°13'32"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
L150	26.57'	S10°37'05"W				TYPE A HMA DIKE PER CALTRANS STD PLAN A87B

LINE Q GEOMETRIC DATA						
	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
C160	27.00'	S13°12'28"E	60.00'	13.73	25°46'59"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
C161	12.51'	N82°13'59"E	5.00'	15.09	143°20'06"	TYPE A HMA DIKE PER CALTRANS STD PLAN A87B
L160	25.28'	N10°33'56"E				TYPE A HMA DIKE PER CALTRANS STD PLAN A87B



APPROVED BY DIRECTOR OF PUBLIC SERVICES
CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. _____ DATE _____

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TWO WORKING DAYS BEFORE YOU DIG.



NO.	REVISIONS:	APPROVED	DATE

CITY OF IMPERIAL
420 South Imperial Avenue
Imperial, CA 92251
Ph: (760) 355-4371 Fax: (760) 355-4718

BENCHMARK:
SEE SHEET 2 FOR BENCHMARK INFORMATION



PREPARED UNDER THE DIRECT SUPERVISION OF:
Blanca Soto
BLANCA H. SOTO R.C.E. NO. 86597
DATE 06/21/2024 REG. EXP. 03/31/2025

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: IMPROVEMENT PLANS SR 86 AT 12TH STREET

SCALE: N/A
DRAWN BY: BS
REVIEWED BY: RD
JUNE 2024
SHEET 18 OF 52 SHEETS
JOB NO. CIP#823

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TRAFFIC SIGNAL GENERAL NOTES:

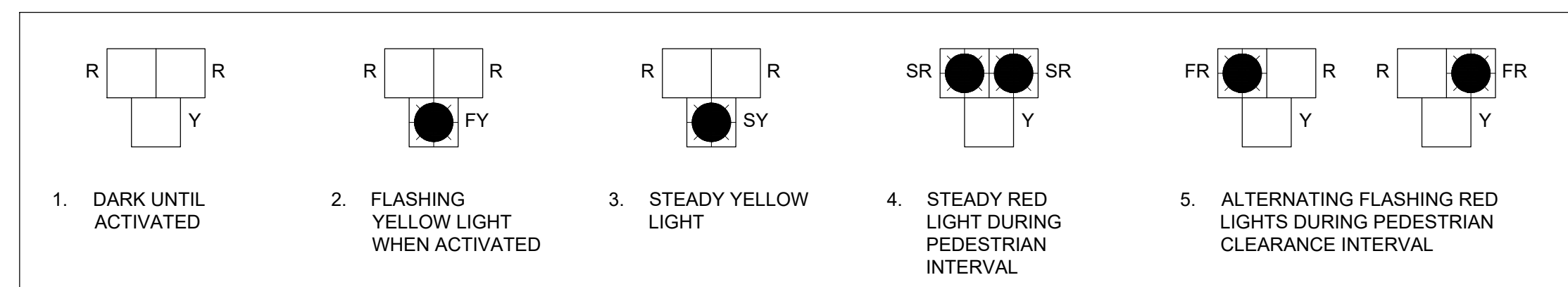
- THE PROPOSED IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THIS PLAN AND:
 - THE COUNTY OF IMPERIAL SPECIFICATIONS AND STANDARD DRAWINGS
 - CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, 2023 EDITION
 - CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS, 2023 EDITION
 - THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (REVISION 8), 2014 EDITION
 - STANDARD PLANS AND SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK), 2021 EDITION
- THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IS APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE LOCATION AND DEPTH OF ALL UTILITIES INCLUDING THOSE NOT SHOWN ON PLANS. VERIFICATION OF THE LOCATION AND DEPTH OF UNDERGROUND UTILITIES AND DIGGING FOR FOUNDATIONS SHALL BE DONE BY HAND EXCAVATION METHODS UNTIL CLEAR OF ALL UNDERGROUND FACILITIES. ALL UNDERGROUND UTILITIES SHALL BE PROTECTED DURING CONSTRUCTION AND EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE BORNE BY CONTRACTOR.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND NOTIFY ALL UTILITIES, AGENCIES, THE CITY OF IMPERIAL (760) 355-1152, AND IID ENERGY DEPARTMENT (760) 482-3428 AT LEAST TWO WORKING DAYS IN ADVANCE OF CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY LOCATIONS OF UNDERGROUND FACILITIES BY CONTACTING UTILITY REPRESENTATIVES AND BY CONTACTING THE UNDERGROUND SERVICE ALERT AT (800) 422-4133, AT LEAST TWO WORKING DAYS BEFORE EXCAVATION.
- UTILITY MARK-OUTS SHALL BE CONDUCTED USING A TEMPORARY PAINT THAT CAN BE REMOVED BY POWER WASH, IF NECESSARY.
- ROUTING AND LOCATIONS OF UNDERGROUND ELECTRICAL SYSTEMS IS DIAGRAMMATIC AND SUBJECT TO APPROVAL OF THE ENGINEER. UNDERGROUND ELECTRICAL LINES AND SUBSURFACE STRUCTURES MAY BE RELOCATED IF NECESSARY TO CLEAR OTHER EXISTING UNDERGROUND FACILITIES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONUMENT AND/OR BENCHMARKS WHICH WILL BE DISTURBED OR DESTROYED BY CONSTRUCTION. SUCH POINTS SHALL BE REFERENCED AND REPLACED WITH APPROPRIATE MONUMENTATION BY A LICENSED LAND SURVEYOR OR A REGISTERED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED BY THE LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER AS REQUIRED BY THE LAND SURVEYOR'S ACT.
- NEW POLE AND EQUIPMENT LOCATIONS ARE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR LAYOUT OF POLES, CABINETS, PULL BOXES, AND RELATED EQUIPMENT. THE CITY OF IMPERIAL ENGINEERING DEPARTMENT INSPECTORS SHALL FIELD VERIFY AND APPROVE THE EXACT EQUIPMENT LOCATIONS PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES DURING TRAFFIC SIGNAL INSTALLATION. A TRAFFIC CONTROL PLAN, INCLUDING THE LAYOUT OF CONSTRUCTION WARNING AND DETOUR SIGNS, WORKING HOURS, AND CONSTRUCTION SCHEDULE SHALL BE SUBMITTED AND APPROVED TO THE ENGINEERING DIVISION DEPARTMENT AS PART OF THE CITY'S CONSTRUCTION ENCROACHMENT PERMIT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. TWO WORKING DAY ADVANCE NOTIFICATION IS REQUIRED TO SCHEDULE A PRE-CONSTRUCTION MEETING AT THE JOB SITE PRIOR TO COMMENCEMENT OF WORK.
- ALL NEW TRAFFIC SIGNAL CONDUIT AND FITTINGS SHALL BE MINIMUM THREE INCH (3") SCHEDULE 80 PVC UNLESS OTHERWISE SHOWN ON THE PLANS. ALL NEW CONDUITS SHALL BE BURIED WITH A MINIMUM OF THIRTY INCHES (30") OF TOTAL COVER FROM THE TOP OF PIPE TO FINISHED GRADE. ALL NEW CONDUITS SHALL BE SEALED UPON COMPLETION. STREET CROSSINGS BY BORE METHOD SHALL BE APPROVED BY THE CITY ENGINEER. ALL DIRECTIONAL BORED RACEWAYS SHALL BE HDPE TYPICAL.
- THE CITY OF IMPERIAL WILL APPLY FOR NEW OR MODIFIED SERVICE WITH IID ENERGY DEPARTMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING SERVICE COORDINATION WITH IID ENERGY DEPARTMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION, RELOCATION, OR REPLACEMENT OF ALL NEW TRAFFIC SIGNAL SIGNING AS REQUIRED BY THE COMMUNITY DEVELOPMENT DIRECTOR. ALL NEW SIGNS SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA-MUTCD).
- AN "AS-BUILT" PLAN SET DRAWING SHALL BE SUBMITTED FOR ALL PUBLIC IMPROVEMENTS PRIOR TO THE ACCEPTANCE OF SAID IMPROVEMENTS.
- TRAFFIC SIGNAL CONSTRUCTION SHALL NOT COMMENCE UNTIL ALL MATERIALS, INCLUDING POLES, MAST ARMS, AND CONTROLLER ARE ON-HAND UNLESS APPROVED BY THE PROJECT INSPECTOR. THE CONTRACTOR SHALL NOT ERRECT ANY SIGNAL STANDARDS MORE THAN THREE WEEKS PRIOR TO SCHEDULED TRAFFIC SIGNAL TURN-ON.
- ALL NEW EQUIPMENT PER THESE PLANS AND SPECIFICATIONS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- ALL NEW SIGNAL HEADS SHALL BE TWELVE-INCH (12") IN DIAMETER L.E.D. WITH INCANDESCENT LOOK AND RETROREFLECTIVE BACKPLATES. ANCHOR BOLT NUT COVERS SHALL BE PROVIDED.
- NEW PEDESTRIAN SIGNALS SHALL BE COUNTDOWN LED TYPE. NEW PUSH BUTTONS SHALL BE 2 INCHES (2") WITH A MAXIMUM FORCE OF 5 FOOT-POUNDS OF PRESSURE AND A MAXIMUM HEIGHT OF 42 INCHES PER ADA REQUIREMENTS AND MEET ADA REQUIREMENTS WITH INTERNATIONAL SYMBOLS/SIGN. FASTENERS FOR PPB SIGN PLATE SHALL BE INSTALLED WITH ANTI-SEIZE COMPOUND.
- CONTRACTOR SHALL MAINTAIN A CLEAR FOUR FOOT PATH OF TRAVEL ON SIDEWALK FROM ALL APPROACHES WITHIN IMPROVEMENT LIMITS.
- NEW PULL BOXES SHALL BE MINIMUM SIZE #6 UNLESS OTHERWISE NOTED. HOME RUN PULL BOX SHALL BE SIZE #6E.

TRAFFIC SIGNAL CONSTRUCTION NOTES:

- PROTECT IN PLACE PER PLAN.
- FURNISH AND INSTALL NEW SIGN ON POLE PER PLAN.
- FURNISH AND INSTALL NEW SIGN ON MAST ARM PER CALTRANS STANDARD PLAN ES-7P.
- FURNISH AND INSTALL NEW OPTICOM 722 EMERGENCY VEHICLE PREEMPTION (EVP) DETECTOR ON SIGNAL MAST ARM PER DETAIL A. CONTRACTOR TO INSTALL OPTICOM 764 MULTIMODE EVP CARD IN CONTROLLER CABINET. FURNISH AND INSTALL MODEL 332 ALUMINUM CABINET, BATTERY BACKUP SYSTEM, AND FOUNDATION. BATTERY BACKUP SYSTEM SHALL BE SIDE MOUNTED TO THE CABINET. FURNISH AND INSTALL TYPE 2070XL CONTROLLER WITH OMNI SOFTWARE, 2010 ECLIP CONFLICT MONITOR, AND OUTDOOR RATED GIGABIT ETHERNET SWITCH. CABINET SHALL INCLUDE ALL ACCESSORIES NECESSARY TO PROVIDE THE PHASING AND PERFORM ALL FUNCTIONS INDICATED ON THE PLAN.
- FURNISH AND INSTALL DUAL SERVICE 120/240V, TYPE III-CF SERVICE EQUIPMENT ENCLOSURE PER CALTRANS STANDARD PLAN ES-2F AND IID REQUIREMENTS. INCLUDE PLUG-IN TYPE BREAKER. PROVIDE 100A-2P CB (MAIN), 50A-1P CB (SIGNAL-METERED), 30A-2P CB (LIGHTING-UNMETERED), AND 20A-1P CB (IRRIGATION).
- FURNISH AND INSTALL 3" C WITH PULL ROPE FROM SERVICE METER TO 7.5' WITHIN SERVICE POINT. COORDINATE WITH IID PRIOR TO INSTALLATION. IID TO PROVIDE FINAL CONNECTION.
- ADVANCE WARNING SIGN WITH FLASHING BEACON. SEE DETAIL C.
- FURNISH AND INSTALL INTUICOM OR APPROVED EQUAL POINT TO MULTI-POINT WIRELESS RADIO SYSTEM. MOUNTING HARDWARE, POE INJECTOR AND AUXILIARY EQUIPMENT. CONTRACTOR SHALL HAVE A MANUFACTURER REPRESENTATIVE ON SITE FOR THE INSTALLATION AND SYSTEM CONFIGURATION OF THE WIRELESS RADIO SYSTEM. WIRELESS INTERCONNECT SHALL BE BETWEEN IMPERIAL AVE/6TH ST TO IMPERIAL AVE/E. BARIONI BLVD TRAFFIC SIGNAL.

LEGEND:

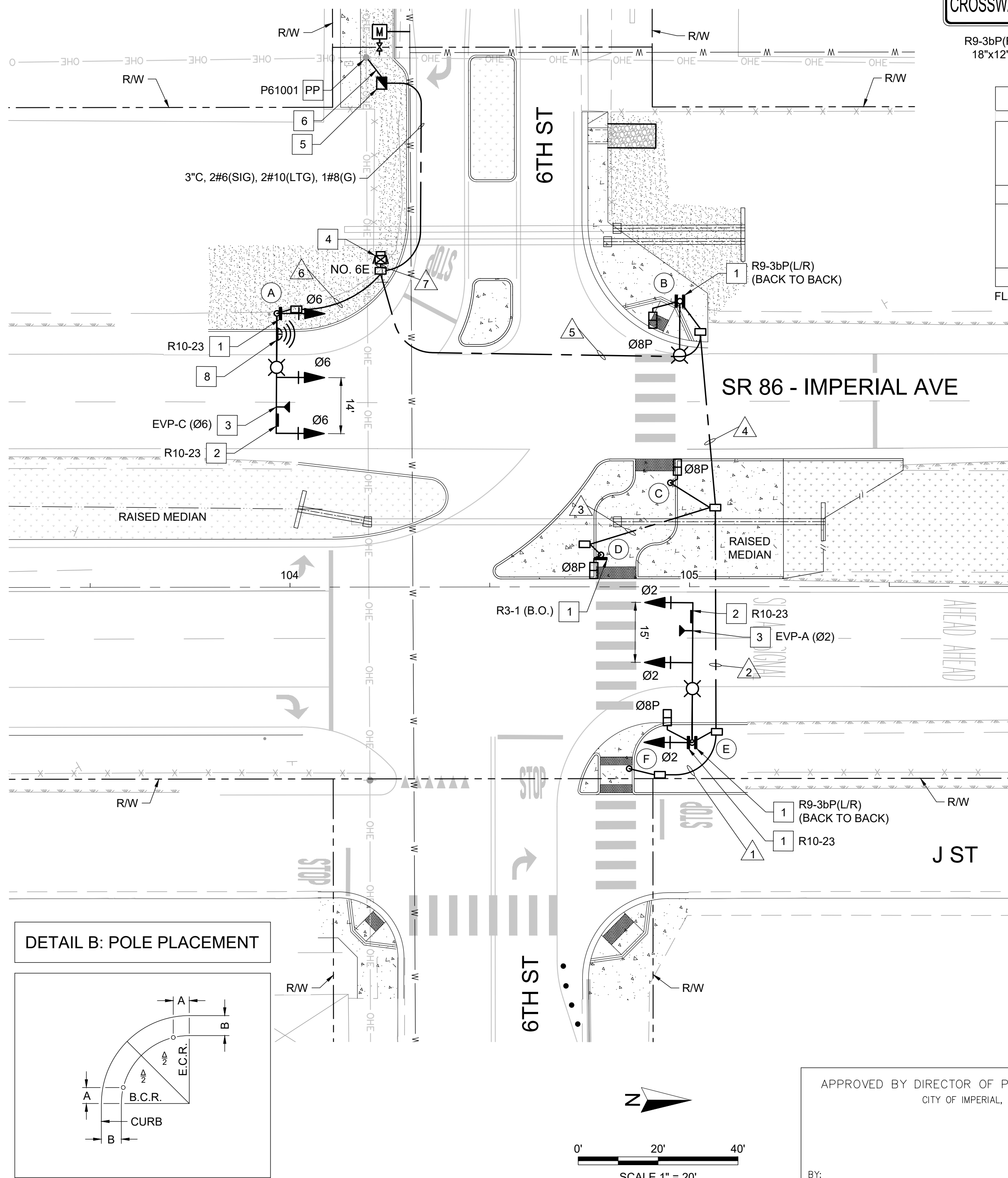
FY = FLASHING YELLOW SY = STEADY YELLOW SR = STEADY RED FR = FLASHING RED



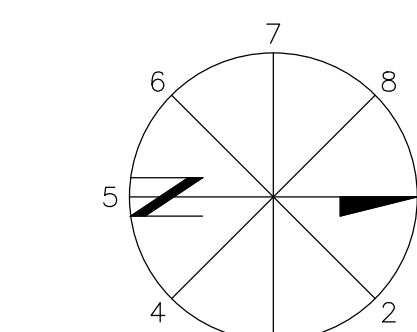
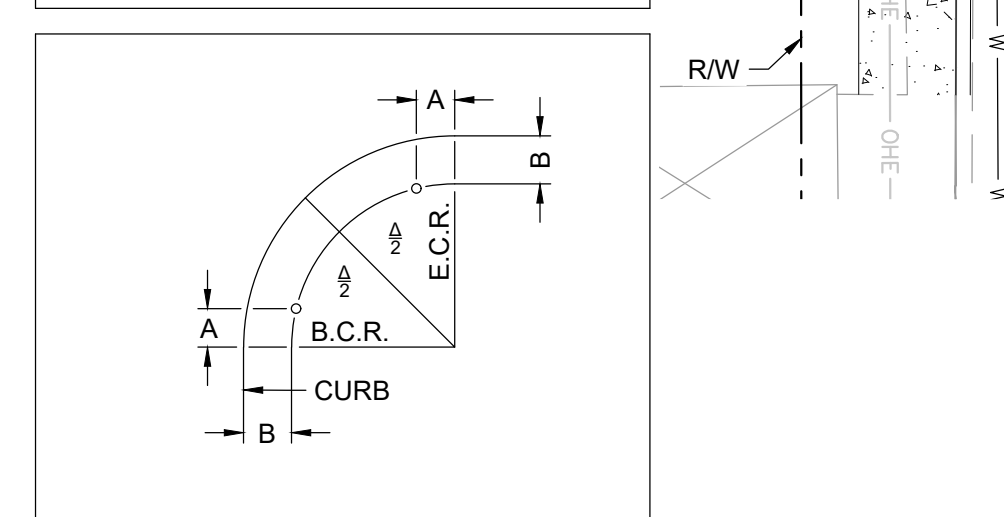
OPERATION SEQUENCE FOR PEDESTRIAN HYBRID BEACON (PHB)

NO.	STANDARD							MOUNTING AND PLACEMENT							
	TYPE	HEIGHT	SIG. M.A.	LUM. M.A.	LED	PLACEMENT		VEHICLE SIGNAL			PED SIGNAL		PUSH BUTTON		
						A	B	MOUNTING	INDICATION	PHASE	MOUNTING	PHASE	LOCATION	PHASE	
(A)	19-4-100	30'	30'	12'	139W	5'	4.5'	MAS MAS SV-1-T	FY,SY,SR,FR FY,SY,SR,FR	Ø6 Ø6 Ø6	-	-	-	-	-
(B)	15TS	30'	-	12'	139W	7'	9'	-	-	-	SP-1-T	Ø8P	5	Ø8P	
(C)	1-A	10'	-	-	-	-	6'	-	-	-	SP-1-T	Ø8P	5	Ø8P	
(D)	1-A	10'	-	-	-	-	6'	TV-1-T	B.O.	Ø8P	SP-1-T	Ø8P	1	Ø8P	
(E)	24-4-100	30'	35'	12'	139W	5'	5'	MAS MAS SV-1-T	FY,SY,SR,FR FY,SY,SR,FR	Ø2 Ø2 Ø2	SP-1-T	Ø8P	-	-	
(F)	2	5'	-	-	-	-	6.5'	-	-	-	-	-	5	Ø8P	

ALL LUMINAIRES SHALL BE BXSP-C-HT-3ME-F-40K-UL-SV-N-Q9 OR APPROVED EQUAL.

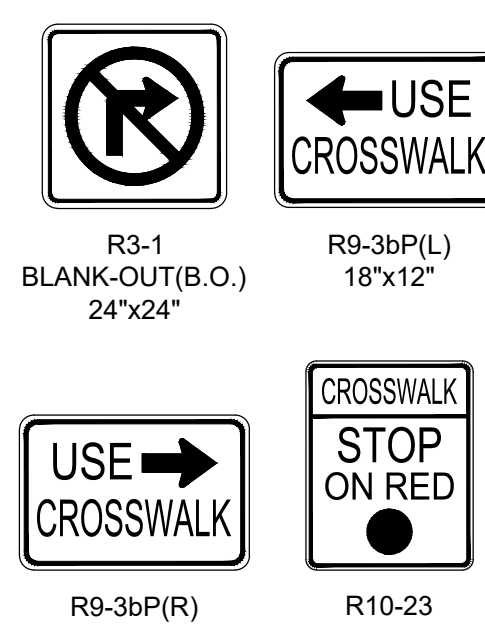


DETAIL B: POLE PLACEMENT



PPB LOCATION

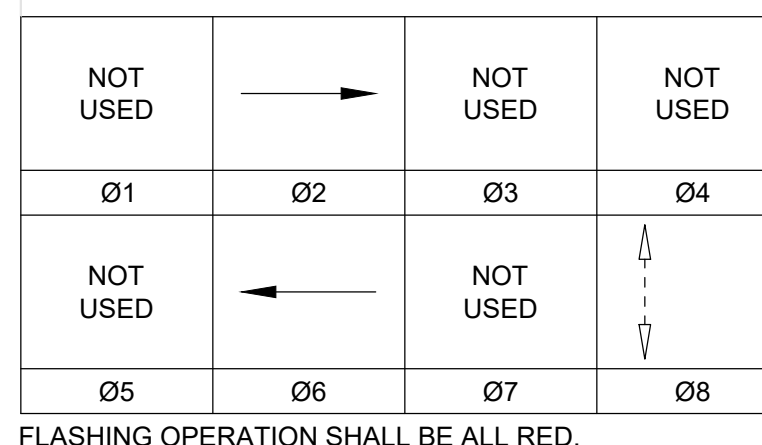
SIGN LEGEND:



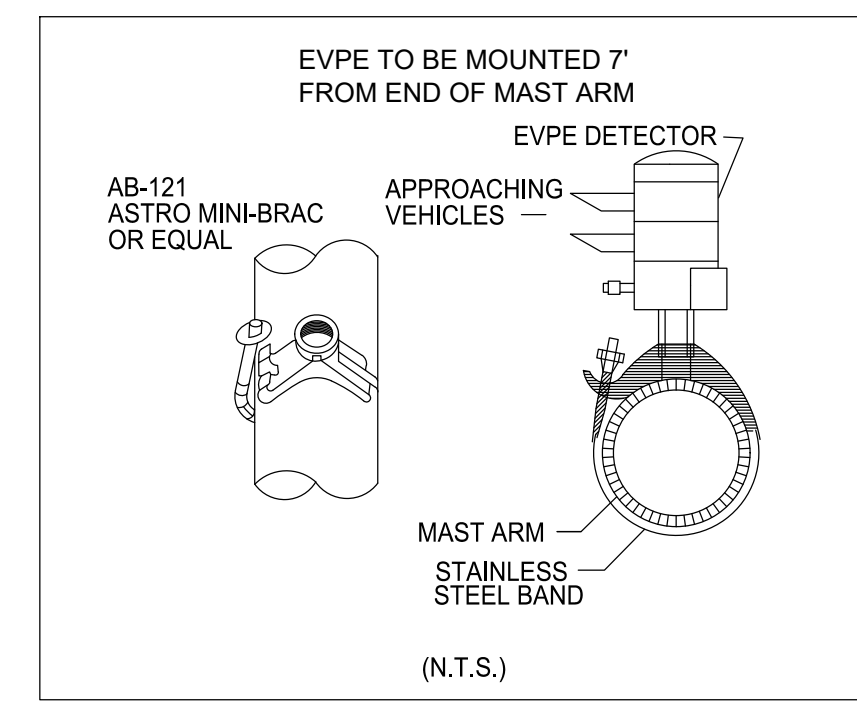
		CONDUIT & CONDUCTOR TABLE						
AWG SIZE OR CABLE TYPE	POLE OR CIRCUIT	CONDUIT SIZE AND RUN						
		1-3"	2-3"	1-3"	2-3"	2-3"	1-3"	2-3"
		1	2	3	4	5	6	7
3 COND	POLE (A)							
	POLE (B)					1	1	1
	POLE (C)				1	1	1	1
	POLE (D)			1	1	1	1	1
	POLE (E)		1	1	1	1	1	1
	POLE (F)	1						
12 COND		1	1	1	1	1	1	1
3 & 12 COND TOTALS		1	1	1	1	3	3	4
#6	SIGNAL SERVICE							2
#8	COMMON GROUND	1	1	1	1	1	1	1
#10	SAFETY LIGHTING CATSE INTERCONNECT		2		2	2	2	2
EVPE	EV DETECTION			1		1	1	2
TOTAL CONDUCTORS / CABLES		2	6	3	10	12	6	15
% CONDUIT FILL		3	6	10	15	19	11	24

NOTE: ALL NEW WIRING AND CONDUIT. PROVIDE ADDITIONAL SPARE 3" FOR FUTURE USE.

PHASE DIAGRAM



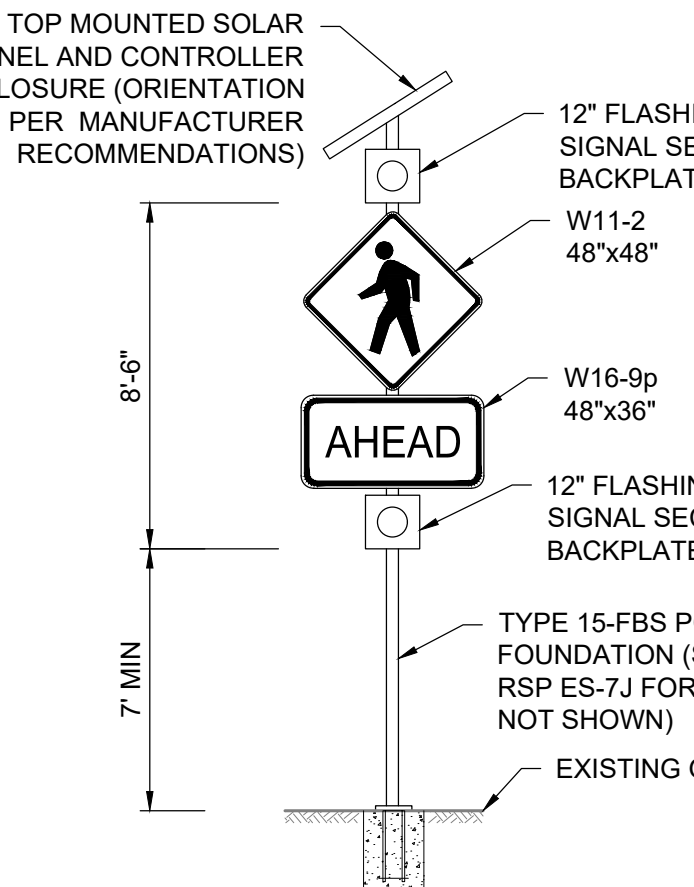
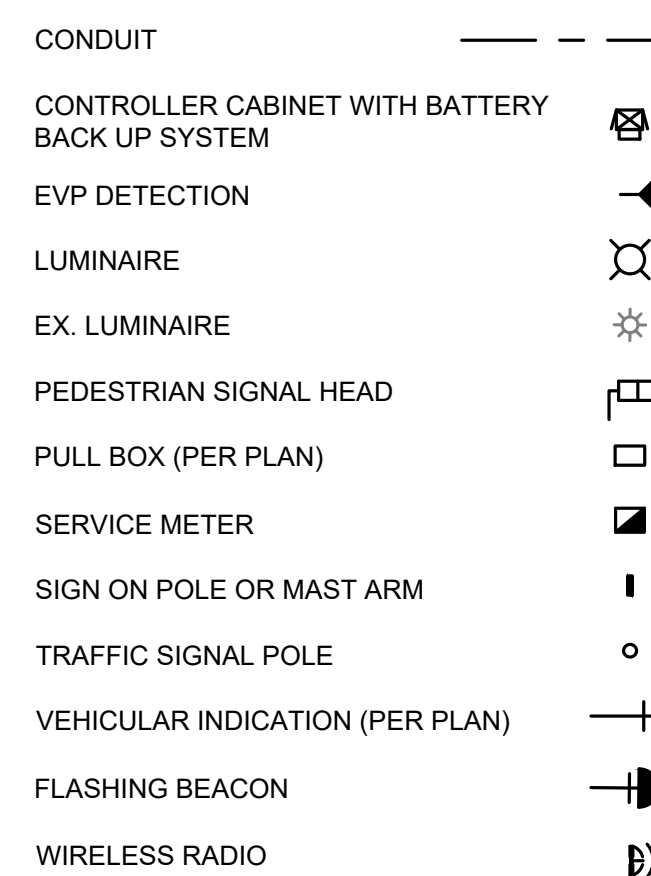
DETAIL A: OPTICAL DETECTOR ASSEMBLY



DETECTOR SCHEDULE

DETECTOR	PHASE	SLOT	TERMINAL
PPB	Ø8P	I13L	T8-88COM9
EVA	Ø2	J12U	T9-4&COM6
EVC	Ø6	J12L	T9-5&COM6
FLASH	FLASH	I14U	T8-10&COM12

EQUIPMENT LEGEND:



ADVANCED SOLAR-POWERED FLASHING BEACON ASSEMBLY

DETAIL C N.T.S.

APPROVED BY DIRECTOR OF PUBLIC SERVICES
CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. DATE: _____

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CITY OF IMPERIAL
420 South Imperial Avenue
Imperial, CA 92251
Ph: (760) 355-4371 Fax: (760) 355-4718

BENCHMARK:
SEE SHEET 2 FOR BENCHMARK INFORMATION

REGISTERED PROFESSIONAL ENGINEER
TOMO TAKAHASHI
C81522
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECT SUPERVISION OF:
TOMO TAKAHASHI
06/21/2024
DATE

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: SR86 - IMPERIAL AVE & 6TH ST TRAFFIC SIGNAL PLAN

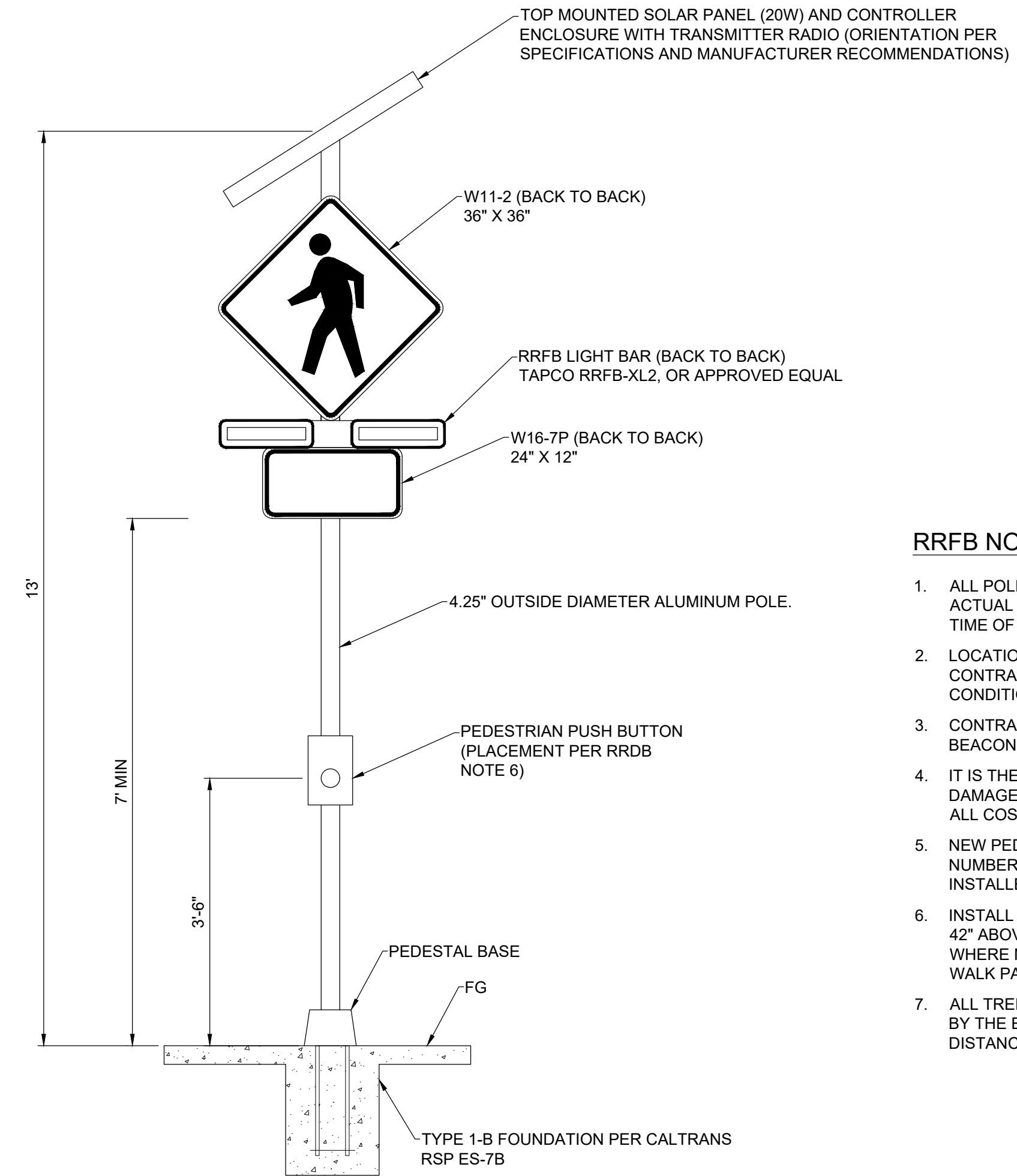
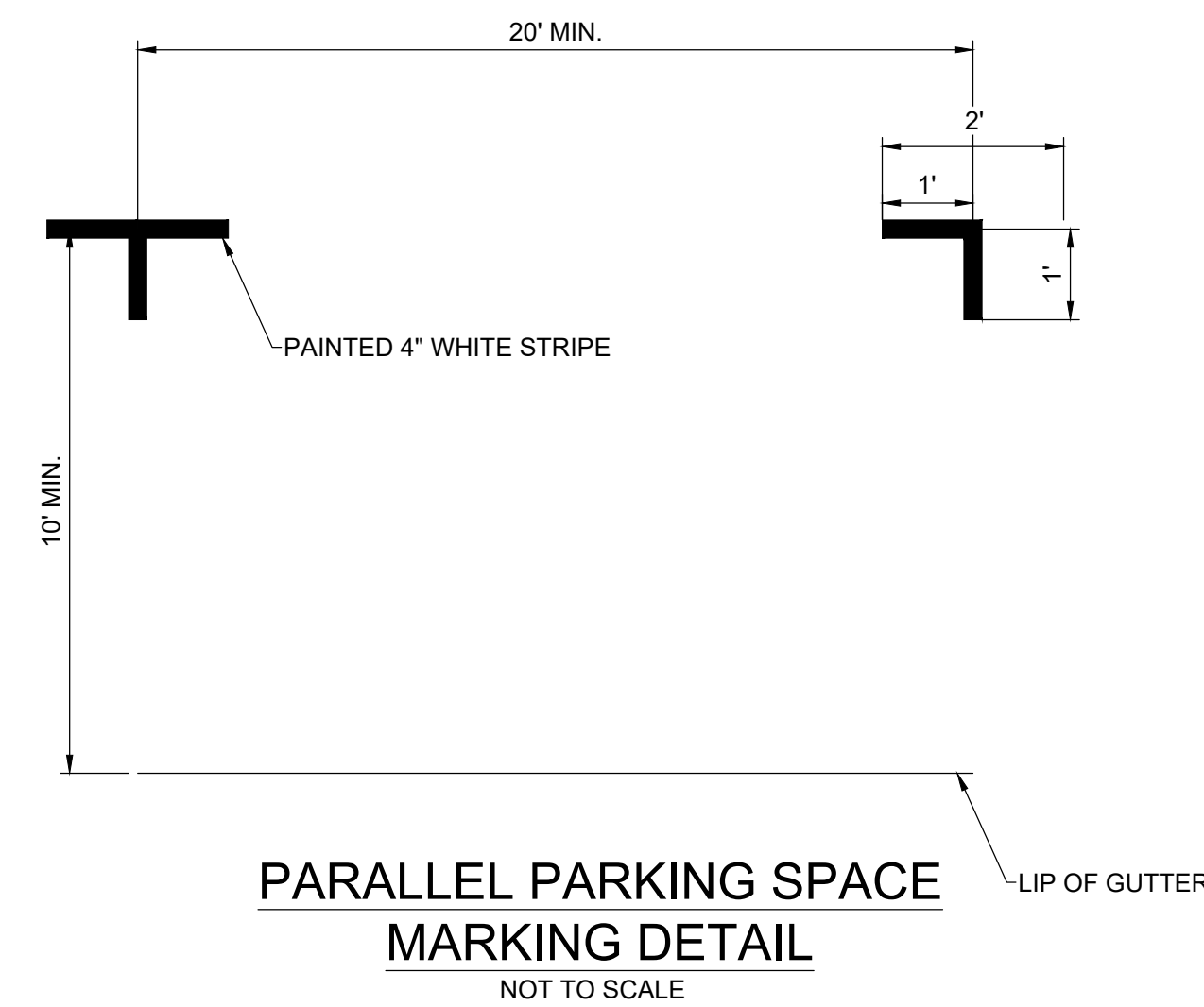
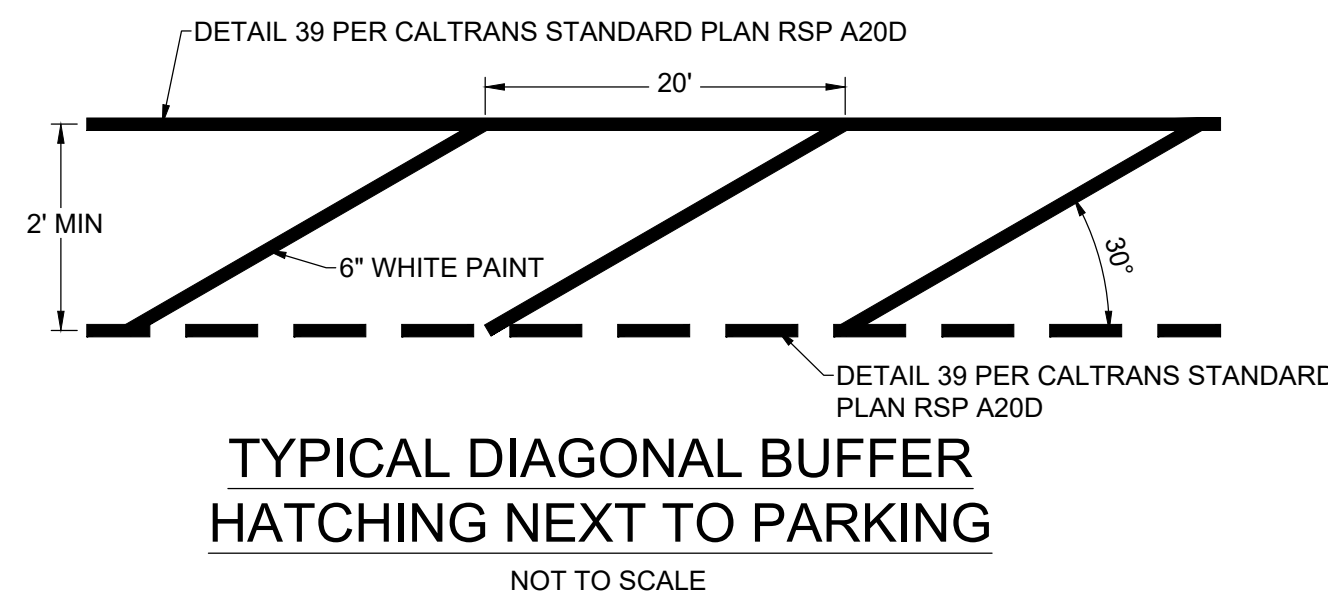
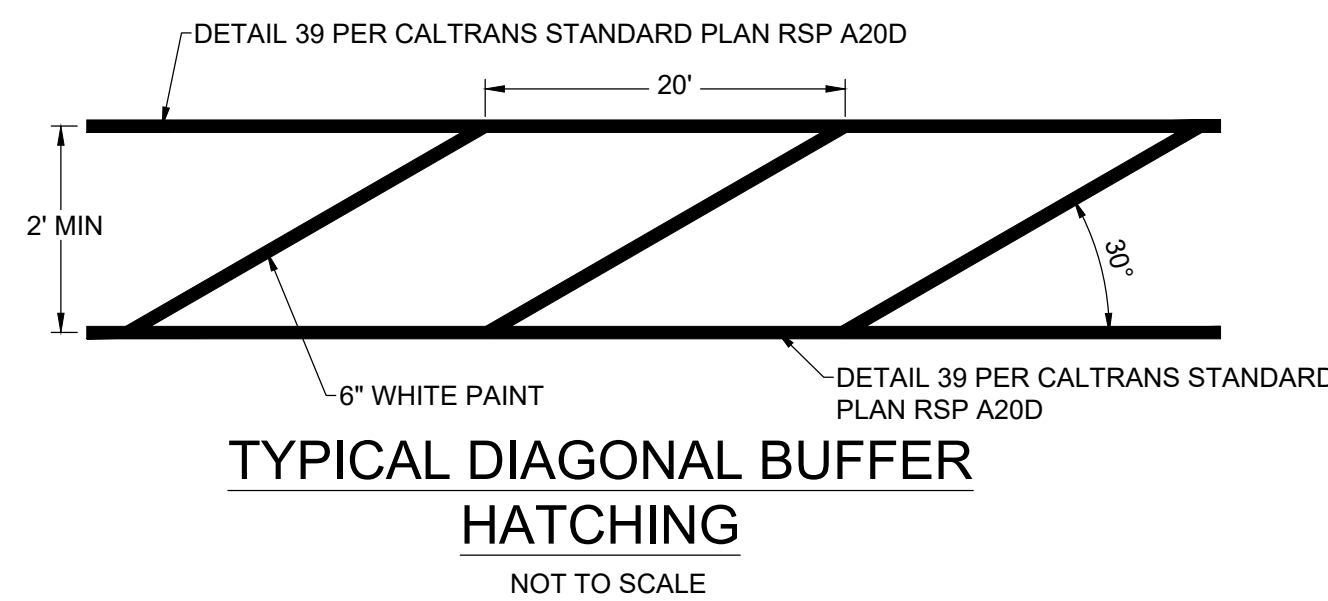
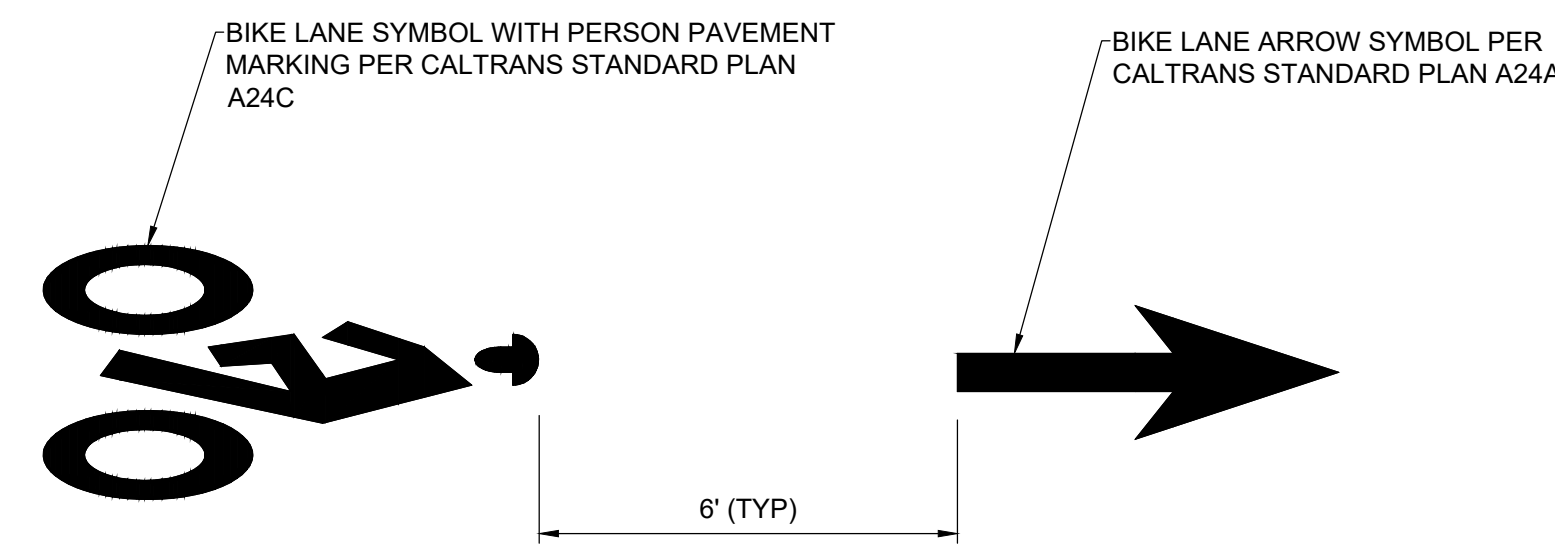
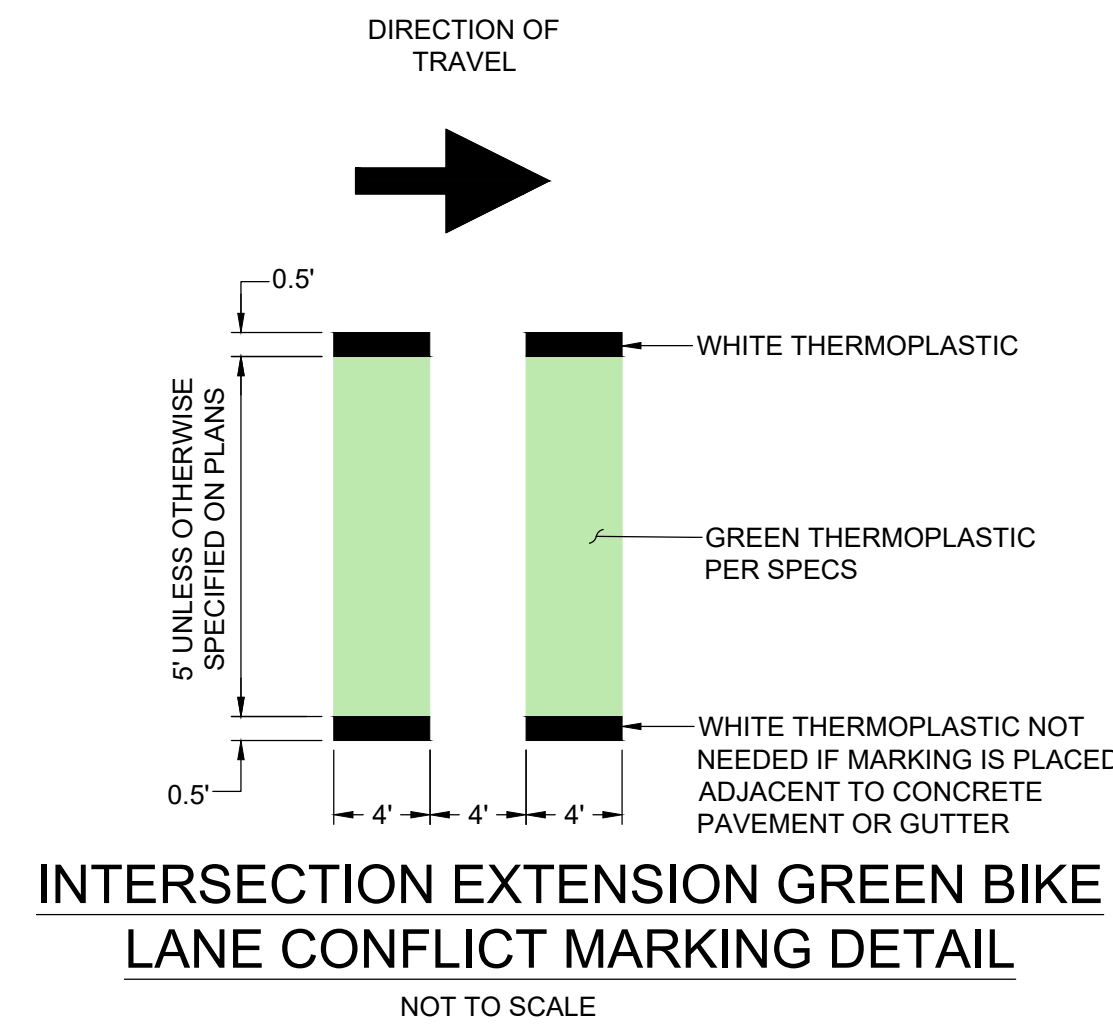
SCALE: N/A
DRAWN BY: BS
REVIEWED BY: RD
JUNE 2024

SHEET 19 OF 52 SHEETS
JOB NO. CIP#823



SIGNING AND MARKING GENERAL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL SIGNAGE AND STRIPING.
2. SIGNAGE, STRIPING AND PAVEMENT MARKINGS SHALL CONFORM TO THESE PLANS AND THE MOST RECENTLY ADOPTED EDITIONS OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND SPECIFICATIONS, THE CALIFORNIA DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD).
3. ALL SIGNAGE AND STRIPING IS SUBJECT TO THE APPROVAL OF THE ENGINEER OR HIS/HER REPRESENTATIVE, PRIOR TO INSTALLATION.
4. ANY DEVIATION FROM THESE SIGNAGE AND STRIPING PLANS SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY CHANGE IN THE FIELD.
5. ALL SIGNAGE AND STRIPING SHALL BE REFLECTIVE PER CALTRANS SPECIFICATIONS.
6. CONTRACTOR SHALL REMOVE ALL CONFLICTING PAINTED LINES, MARKINGS AND PAVEMENT LEGENDS (INCLUDING WATERBORNE BASED PAINT) WITHIN THE PROPOSED IMPROVEMENT AREA WET SANDBLASTING UNLESS OTHERWISE APPROVED BY THE ENGINEER. DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
7. LIMIT LINES AND CROSSWALKS SHALL BE FIELD LOCATED. CROSSWALKS SHALL HAVE 10' INSIDE DIMENSION UNLESS OTHERWISE SPECIFIED. LIMIT LINES SHALL BE PLACED A MINIMUM OF 4' FROM THE CROSSWALK.
8. STRIPING SHALL BE THERMOPLASTIC AND SHALL BE INSTALLED WITHIN 14 DAYS OF SLURRY SEAL/FINAL HMA SURFACE COURSE PLACEMENT OR PER MANUFACTURERS RECOMMENDATIONS.
9. ALL CROSSWALKS, LIMIT LINES, PAVEMENT ARROWS AND PAVEMENT LEGENDS SHALL BE THERMOPLASTIC UNLESS OTHERWISE SPECIFIED. ALL CROSSWALKS, LIMIT LINES, PAVEMENT ARROWS AND PAVEMENT LEGENDS INSTALLED FULLY OR PARTIALLY ON CONCRETE SHALL BE PREFORMED.
10. CONTRACTOR SHALL REMOVE ALL CONFLICTING SIGN POLES AND FOUNDATIONS UNLESS OTHERWISE APPROVED BY THE ENGINEER. DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
11. ALL SIGNS SHALL BE STANDARD SIZE.
12. SIGN POSTS SHALL BE SQUARE PERFORATED STEEL TUBING WITH BREAKAWAY BASE PER CITY OF IMPERIAL STANDARD DETAIL NO. 516.
13. WHEN A SIGN IS ATTACHED TO A POLE, IT SHALL BE MOUNTED IN ACCORDANCE WITH CALTRANS STANDARD PLAN RS4.
14. EXISTING SIGNS REMOVED BY THE CONTRACTOR SHALL BE DELIVERED TO THE CITY OF IMPERIAL PUBLIC WORKS YARD.
15. ALL SIGNS SHOWN ON THESE PLANS SHALL BE NEW SIGNS PROVIDED AND INSTALLED BY THE CONTRACTOR EXCEPT THOSE SIGNS SPECIFICALLY SHOWN AS EXISTING TO BE RELOCATED OR REMAIN.
16. THE BOTTOM OF TRAFFIC SIGNS SHALL BE A MINIMUM OF 7 FEET ABOVE THE FINISHED SURFACE. R4-7 AND OBJECT MARKER SIGNS SHALL BE A MINIMUM OF 2 FEET ABOVE THE FINISHED GRADE AS DIRECTED BY THE ENGINEER.
17. ALL NEW SIGNS SHALL BE CLEARLY VISIBLE AND NOT BLOCKED BY ANY OBSTRUCTIONS. THE CONTRACTOR IS RESPONSIBLE TO TRIM OR REMOVE ANY VEGETATION BLOCKING NEW SIGNS.
18. ALL NEW SIGNS SHALL MAINTAIN A MINIMUM 42" WALK PATH.
19. MAINTAIN A MINIMUM OF 12" CLEARANCE BETWEEN NEW SIGN POSTS AND FOUNDATIONS TO EXISTING UTILITIES.



RRFB NOTES:

1. ALL POLES, CONDUIT, AND PULL BOX LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND AS DIRECTED BY THE ENGINEER.
2. LOCATION OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS AND VERIFY ALL CONDITIONS ON THE JOB SITE PRIOR TO INSTALLING EQUIPMENT.
3. CONTRACTOR SHALL POT-HOLE EACH RECTANGULAR RAPID FLASHING BEACON (RRFB) POLE LOCATION PRIOR TO INSTALLATION.
4. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR ANY DAMAGES THAT OCCUR DURING INSTALLATION OF ELECTRICAL EQUIPMENT. ALL COSTS FOR ANY REPAIRS SHALL BE AT THE CONTRACTOR'S EXPENSE.
5. NEW PEDESTRIAN PUSH BUTTON HOUSING COLOR SHALL MATCH COLOR NUMBER 33538 OF FED-STD-595 WHERE PEDESTRIAN PUSH BUTTONS ARE INSTALLED.
6. INSTALL PEDESTRIAN PUSH BUTTON SUCH THAT CENTER OF PUSH BUTTON IS 42" ABOVE WALK PATH. INSTALL PUSH BUTTON ON EXTENSION BRACKETS WHERE NEEDED SUCH THAT PUSH BUTTON IS WITHIN A 10" REACH FROM WALK PATH.
7. ALL TREES AND SHRUBS SHALL BE TRIMMED OR REMOVED AS DETERMINED BY THE ENGINEER AS REQUIRED TO MAINTAIN VISIBILITY AND SIGHT DISTANCE.

APPROVED BY DIRECTOR OF PUBLIC SERVICES
CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. DATE:

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CITY OF IMPERIAL
420 South Imperial Avenue
Imperial, CA 92251
Ph: (760) 355-4371 Fax: (760) 355-4718

BENCHMARK:
SEE SHEET 2 FOR BENCHMARK INFORMATION



PREPARED UNDER THE DIRECT SUPERVISION OF:
Blanca Soto
BLANCA H. SOTO
06/21/2024
DATE

86597
R.C.E. NO.
03/31/2025
REG. EXP.

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1

SHEET CONTENT: SIGNAGE AND STRIPING NOTES AND DETAILS

SCALE: N/A

DRAWN BY: BS

REVIEWED BY: RD

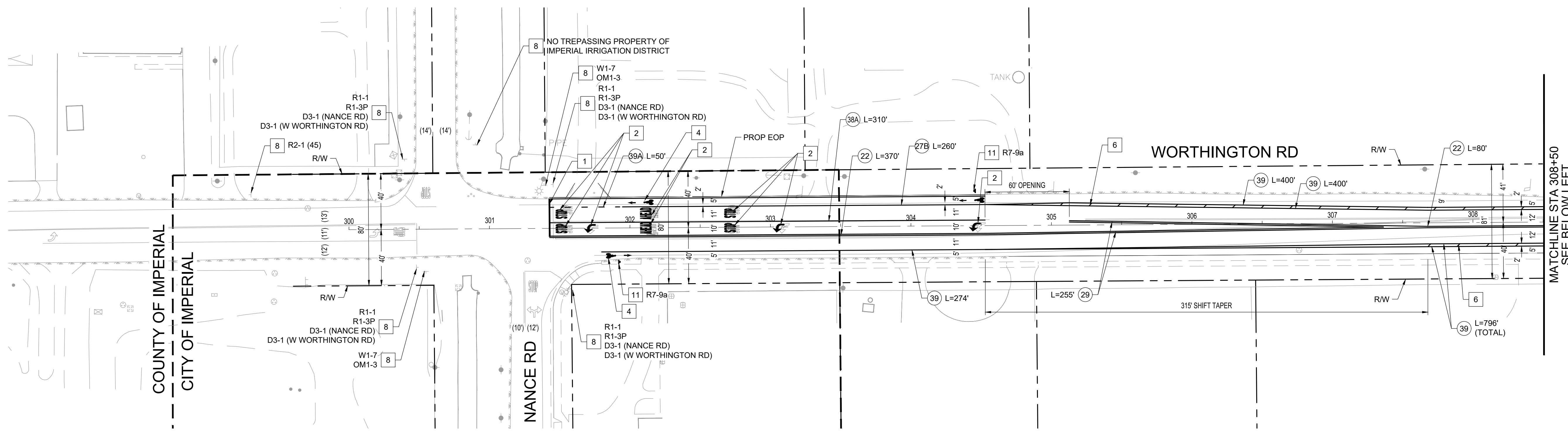
JUNE 2024

SHEET **20** OF 52 SHEETS

JOB NO. CIP#823

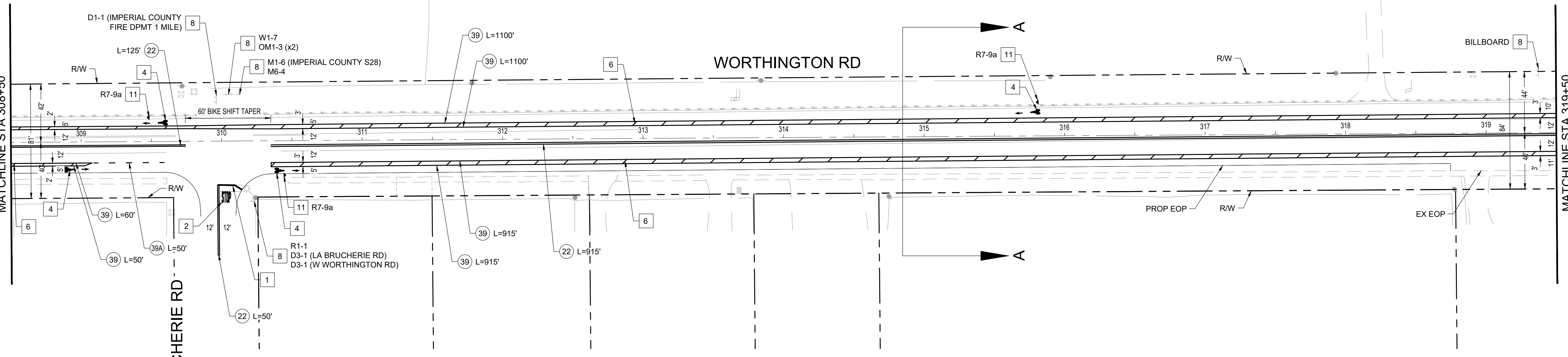
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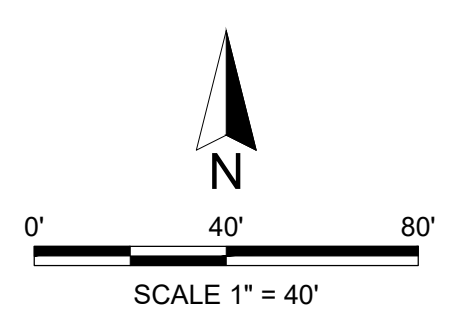
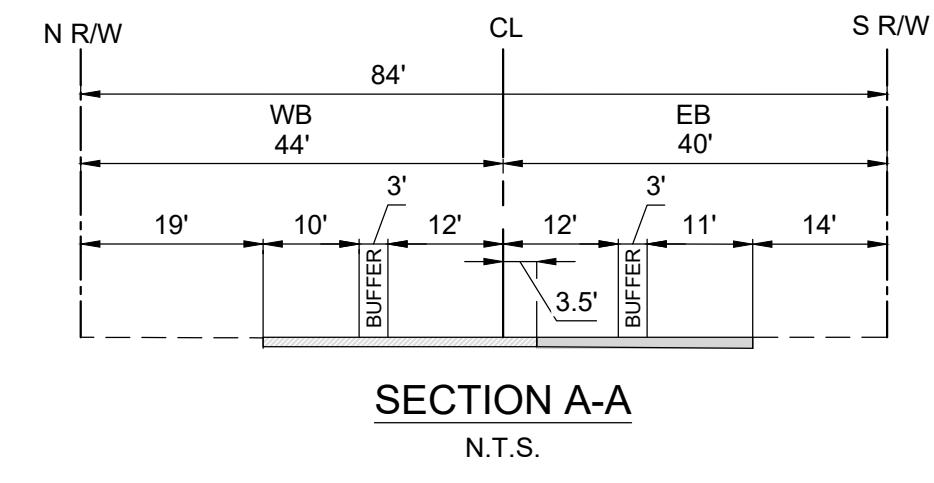
- SIGNING AND STRIPING NOTES**
- 1 INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE.
 - 2 INSTALL THERMOPLASTIC PAVEMENT MARKING PER CALTRANS STD. PLAN. SEE LEGEND.
 - 4 INSTALL THERMOPLASTIC BIKE LANE WITH ARROW PAVEMENT MARKING PER DETAIL ON SHEET 20.
 - 6 INSTALL BICYCLE LANE BUFFER STRIPING PER DETAIL ON SHEET 20.
 - 8 EXISTING SIGN TO REMAIN.
 - 11 FURNISH AND INSTALL NEW SIGN AND BREAK AWAY POST.

- STRIPING DETAILS**
- (22) INSTALL DOUBLE YELLOW CENTERLINE (DETAIL 22) PER CALTRANS STD. PLAN A20A.
 - (29) INSTALL DOUBLE LEFT EDGE LINE (DETAIL 29) PER CALTRANS STANDARD PLAN A20B.
 - (38A) INSTALL 8" WHITE CHANNELIZING LINE (DETAIL 38A) PER CALTRANS STD. PLAN A20D.
 - (39) INSTALL WHITE BIKE LANE LINE (DETAIL 39) PER CALTRANS STD. PLAN RSP A20D.
 - (39A) INSTALL WHITE INTERSECTION BIKE LANE LINE (DETAIL 39A) PER CALTRANS STD. PLAN RSP A20D.



- LEGEND**
- EXISTING SIGNS
 - PROPOSED SIGN
 - (XX) EXISTING LANE WIDTH
 - XX' NEW LANE WIDTH
 - (XX) STRIPING DETAIL PER LATEST CALTRANS STANDARD PLANS
 - (TS) TRAFFIC SIGNAL
 - ↑ TYPE IV ARROW PER CALTRANS STANDARD PLAN A24A
 - STOP PER CALTRANS STANDARD PLAN A24D
 - XING PER CALTRANS STANDARD PLAN A24D
 - PED PER CALTRANS STANDARD PLAN A24D
 - AHEAD PER CALTRANS STANDARD PLAN A24D

PROPOSED SIGN LEGEND



APPROVED BY DIRECTOR OF PUBLIC SERVICES
CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. DATE:

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Imperial, CA 92251
Ph: (760) 355-4371 Fax: (760) 355-4718

BENCHMARK:
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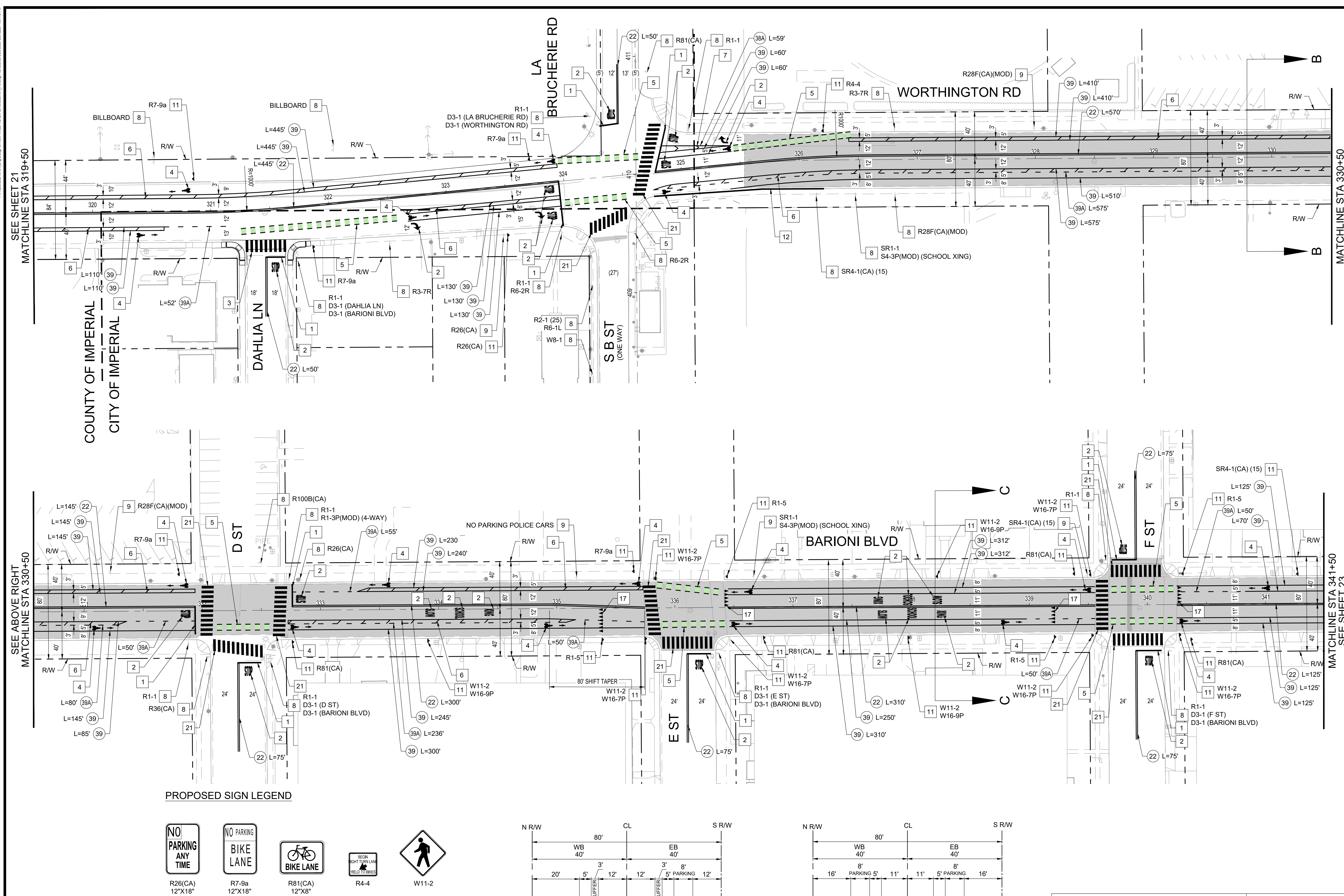


PREPARED UNDER THE DIRECT SUPERVISION OF:
Blanca Soto
BLANCA H. SOTO 86597 R.C.E. NO.
DATE: 06/21/2024 REG. EXP: 03/31/2025

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: SIGNAGE AND STRIPING PLANS

SCALE: N/A
DRAWN BY: BS
REVIEWED BY: RD
JUNE 2024
SHEET 21 OF 52 SHEETS
JOB NO. CLIP#823

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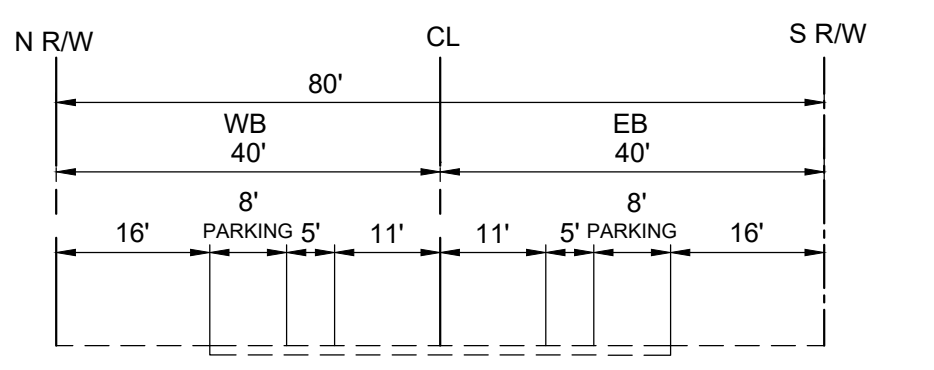
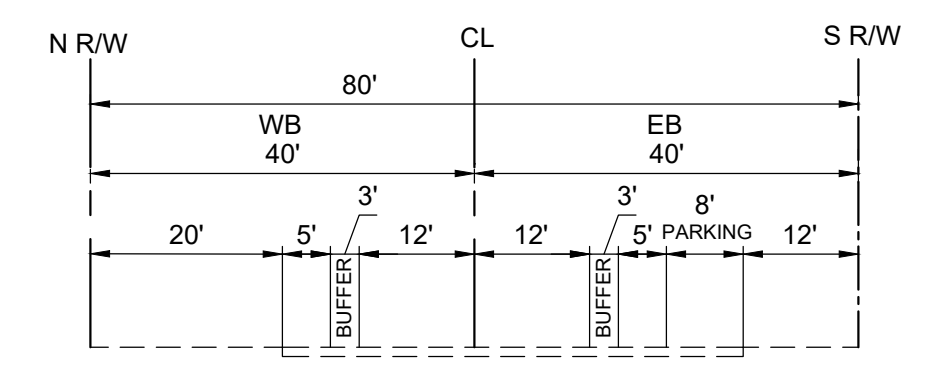
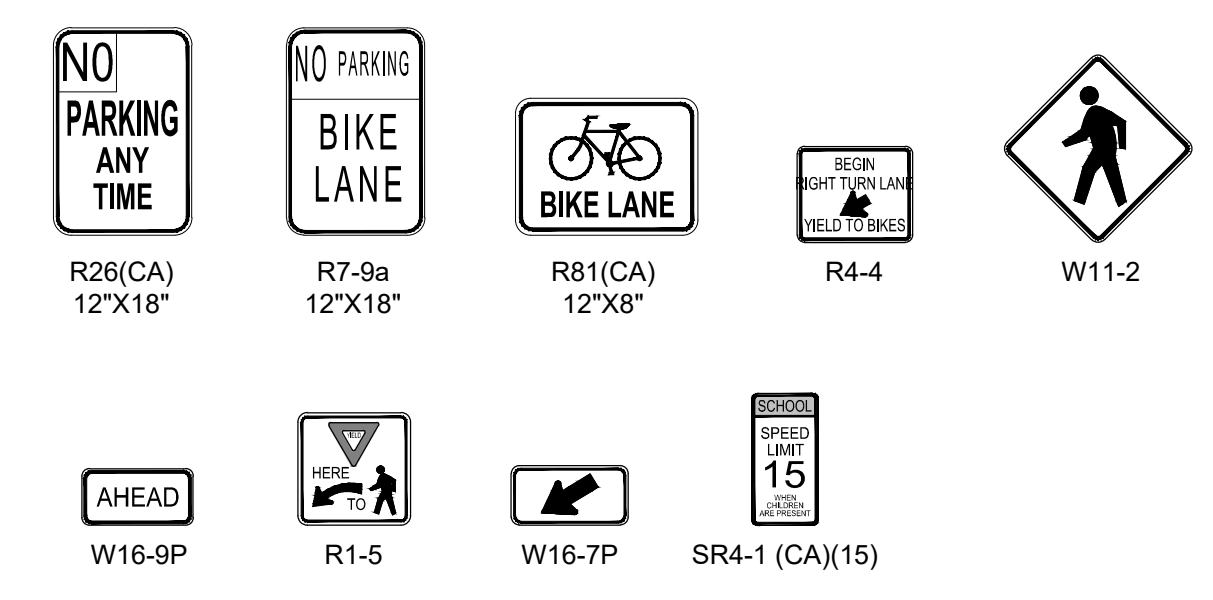


- ### SIGNING AND STRIPING NOTES
- 1 INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE.
 - 2 INSTALL THERMOPLASTIC PAVEMENT MARKING PER CALTRANS STD. PLAN. SEE LEGEND.
 - 4 INSTALL THERMOPLASTIC BIKE LANE WITH ARROW PAVEMENT MARKING PER DETAIL ON SHEET 20.
 - 5 INSTALL CONFLICT MARKING PER DETAIL ON SHEET 20.
 - 6 INSTALL BICYCLE LANE BUFFER STRIPING PER DETAIL ON SHEET 20.
 - 7 INSTALL 6" CHEVRON MARKINGS AT 45° AND 10 FEET CENTER TO CENTER.
 - 8 EXISTING SIGN TO REMAIN.
 - 9 EXISTING SIGN TO BE REMOVED.
 - 11 FURNISH AND INSTALL NEW SIGN AND BREAK AWAY POST.
 - 12 PAINT CURB RED.
 - 21 INSTALL 2'X10' YELLOW THERMOPLASTIC CONTINENTAL CROSSWALK AT 5' INTERVALS CENTER TO CENTER PER CALTRANS STANDARD PLAN A24F

- ### STRIPING DETAILS
- 22 INSTALL DOUBLE YELLOW CENTERLINE (DETAIL 22) PER CALTRANS STD. PLAN A2A.
 - 38A INSTALL 8" WHITE CHANNELIZING LINE (DETAIL 38A) PER CALTRANS STD. PLAN A2D.
 - 39 INSTALL WHITE BIKE LANE LINE (DETAIL 39) PER CALTRANS STD. PLAN RSP A2D.
 - 39A INSTALL WHITE INTERSECTION BIKE LANE LINE (DETAIL 39A) PER CALTRANS STD. PLAN RSP A2D.

- ### LEGEND
- EXISTING SIGNS
 - PROPOSED SIGN
 - EXISTING LANE WIDTH
 - NEW LANE WIDTH
 - STRIPING DETAIL PER LATEST CALTRANS STANDARD PLANS
 - TRAFFIC SIGNAL
 - TYPE IV ARROW PER CALTRANS STANDARD PLAN A24A
 - STOP PER CALTRANS STANDARD PLAN A24D
 - XING PER CALTRANS STANDARD PLAN A24D
 - PED PER CALTRANS STANDARD PLAN A24D
 - AHEAD PER CALTRANS STANDARD PLAN A24D
 - SLURRY SEAL

PROPOSED SIGN LEGEND



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CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. DATE:

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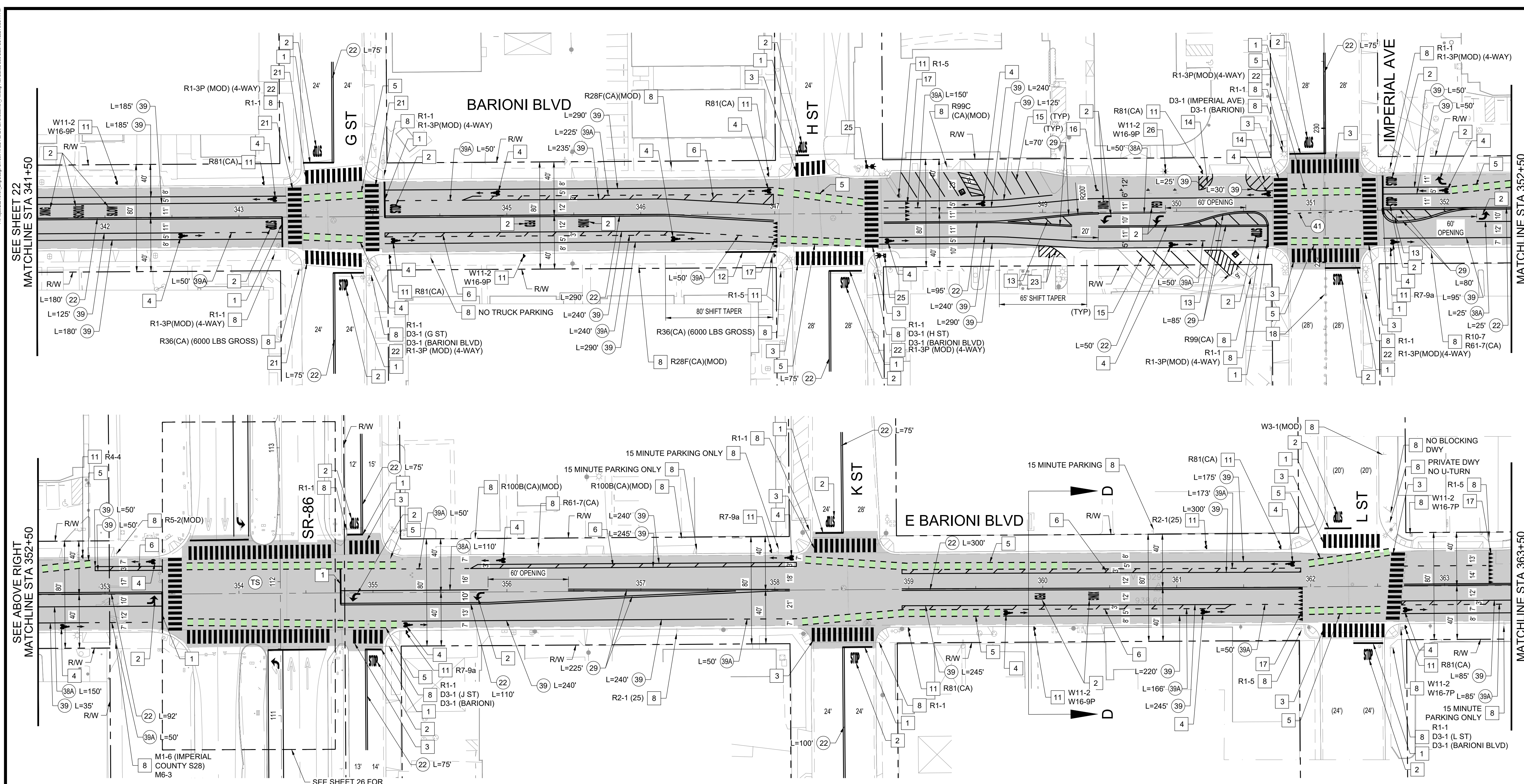
BENCHMARK:
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BLANCA H. SOTO
06/21/2024
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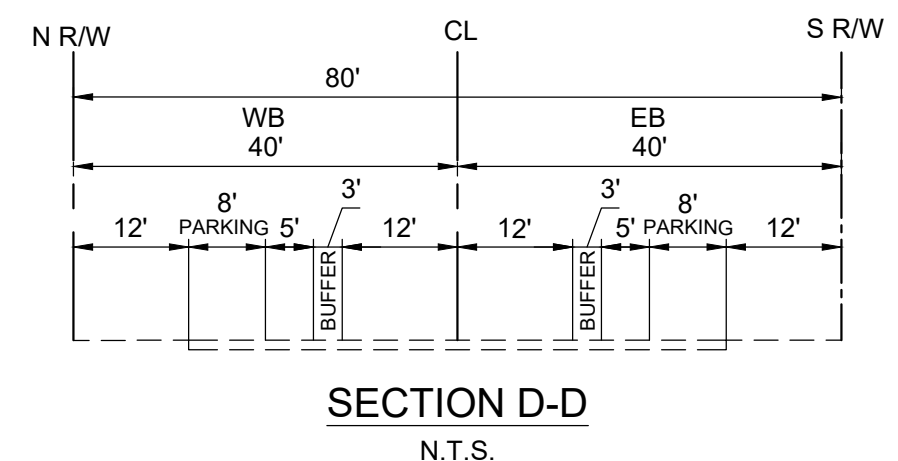
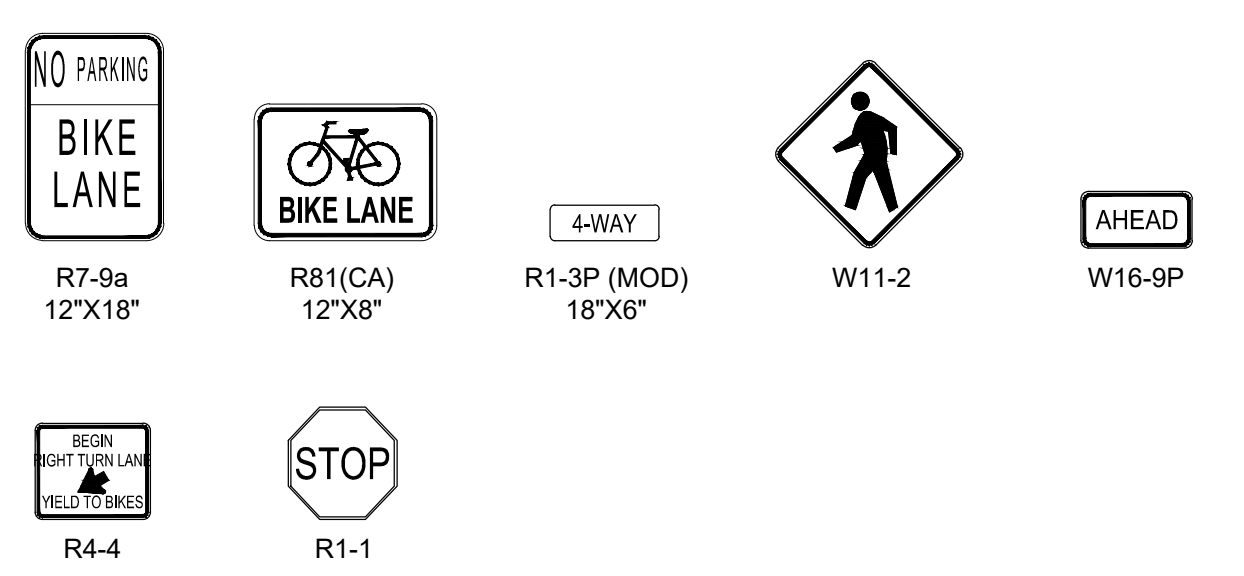
PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: SIGNAGE AND STRIPING PLANS

SCALE: N/A	SHEET 22
DRAWN BY: BS	OF 52 SHEETS
REVIEWED BY: RD	JOB NO. CIP#823
JUNE 2024	



- ### SIGNING AND STRIPING NOTES
- 1 INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE.
 - 2 INSTALL THERMOPLASTIC PAVEMENT MARKING PER CALTRANS STD. PLAN. SEE LEGEND.
 - 3 INSTALL 2'X10' WHITE THERMOPLASTIC CONTINENTAL CROSSWALK AT 5' INTERVALS CENTER TO CENTER PER CALTRANS STANDARD PLAN A24F.
 - 4 INSTALL THERMOPLASTIC BIKE LANE WITH ARROW PAVEMENT MARKING PER DETAIL ON SHEET 20.
 - 5 INSTALL CONFLICT MARKING PER DETAIL ON SHEET 20.
 - 6 INSTALL BICYCLE LANE BUFFER STRIPING PER DETAIL ON SHEET 20.
 - 8 EXISTING SIGN TO REMAIN.
 - 11 FURNISH AND INSTALL NEW SIGN AND BREAK AWAY POST.
 - 12 PAINT CURB RED.
 - 13 FURNISH AND INSTALL WHITE 12" DIAGONAL MARKINGS AT 45° AND 14 FEET CENTER TO CENTER.
 - 14 FURNISH AND INSTALL WHITE 12" DIAGONAL MARKINGS AT 45° AND 7 FEET CENTER TO CENTER.
 - 15 REPAINT ANGLED PARKING STALLS CONTRACTOR TO MATCH EXISTING
 - 16 INSTALL PARALLEL PARKING SPACES PER DETAIL ON SHEET 20.
 - 17 INSTALL YIELD LINE PER CALTRANS REVISED STANDARD PLAN RSP A24G.
 - 18 PROTECT EXISTING BOLLARDS IN PLACE.
 - 21 INSTALL 2'X10' YELLOW THERMOPLASTIC CONTINENTAL CROSSWALK AT 5' INTERVALS CENTER TO CENTER PER CALTRANS STANDARD PLAN A24F
 - 22 FURNISH AND INSTALL NEW SIGN ON EXISTING POST
 - 23 FURNISH AND INSTALL STRIPING, CONTRACTOR TO MATCH EXISTING
 - 25 FURNISH AND INSTALL TAPCO DOUBLE-SIDED SOLAR-POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEM (OR APPROVED EQUAL) ON POLE. SEE DETAIL ON SHEET 20
 - 26 INSTALL NEW SIGN ON EXISTING STREET LIGHT POLE

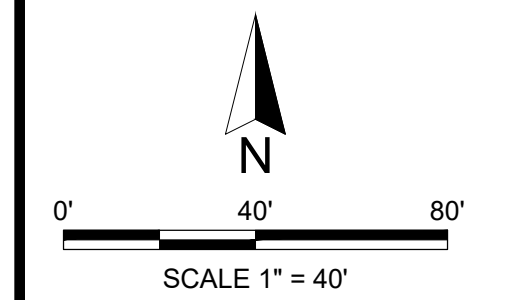
PROPOSED SIGN LEGEND



STRIPING DETAILS

- 22 INSTALL DOUBLE YELLOW CENTERLINE (DETAIL 22) PER CALTRANS STD. PLAN A20A.
- 29 INSTALL DOUBLE LEFT EDGE LINE (DETAIL 29) PER CALTRANS STANDARD PLAN A20B.
- 38A INSTALL 8" WHITE CHANNELIZING LINE (DETAIL 38A) PER CALTRANS STD. PLAN A20D.
- 39 INSTALL WHITE BIKE LANE LINE (DETAIL 39) PER CALTRANS STD. PLAN RSP A20D.
- 39A INSTALL WHITE INTERSECTION BIKE LANE LINE (DETAIL 39A) PER CALTRANS STD. PLAN RSP A20D.
- 41 INSTALL CENTER LINE EXTENSION THROUGH INTERSECTION (DETAIL 41) PER CALTRANS STANDARD PLAN A20D.

- ### LEGEND
- EXISTING SIGNS
 - PROPOSED SIGN
 - EXISTING LANE WIDTH
 - NEW LANE WIDTH
 - STRIPING DETAIL PER LATEST CALTRANS STANDARD PLANS
 - TRAFFIC SIGNAL
 - TYPE IV ARROW PER CALTRANS STANDARD PLAN A24A
 - STOP PER CALTRANS STANDARD PLAN A24D
 - XING PER CALTRANS STANDARD PLAN A24D
 - PED PER CALTRANS STANDARD PLAN A24D
 - AHEAD PER CALTRANS STANDARD PLAN A24D
 - SLURRY SEAL



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CITY OF IMPERIAL, CA

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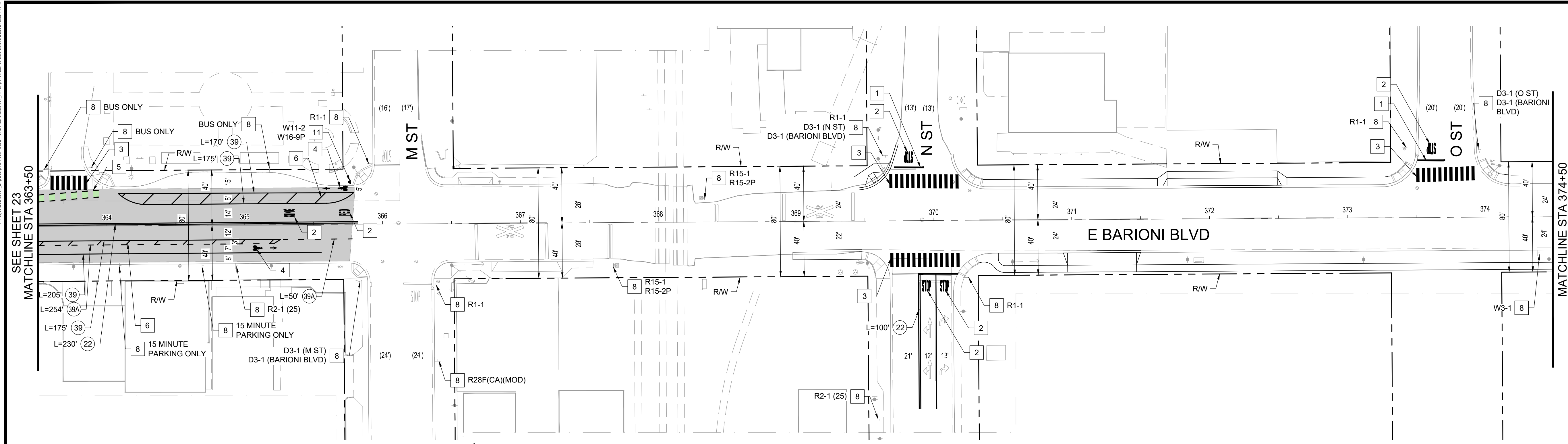
PREPARED UNDER THE DIRECT SUPERVISION OF:
Blanca Soto
BLANCA H. SOTO R.C.E. NO. 86597
DATE: 06/21/2024 REG. EXP. 03/31/2025

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: SIGNAGE AND STRIPING PLANS

SCALE: N/A	SHEET 23 OF 52 SHEETS
DRAWN BY: BS	JOB NO. CIP#823
REVIEWED BY: RD	DATE: JUNE 2024

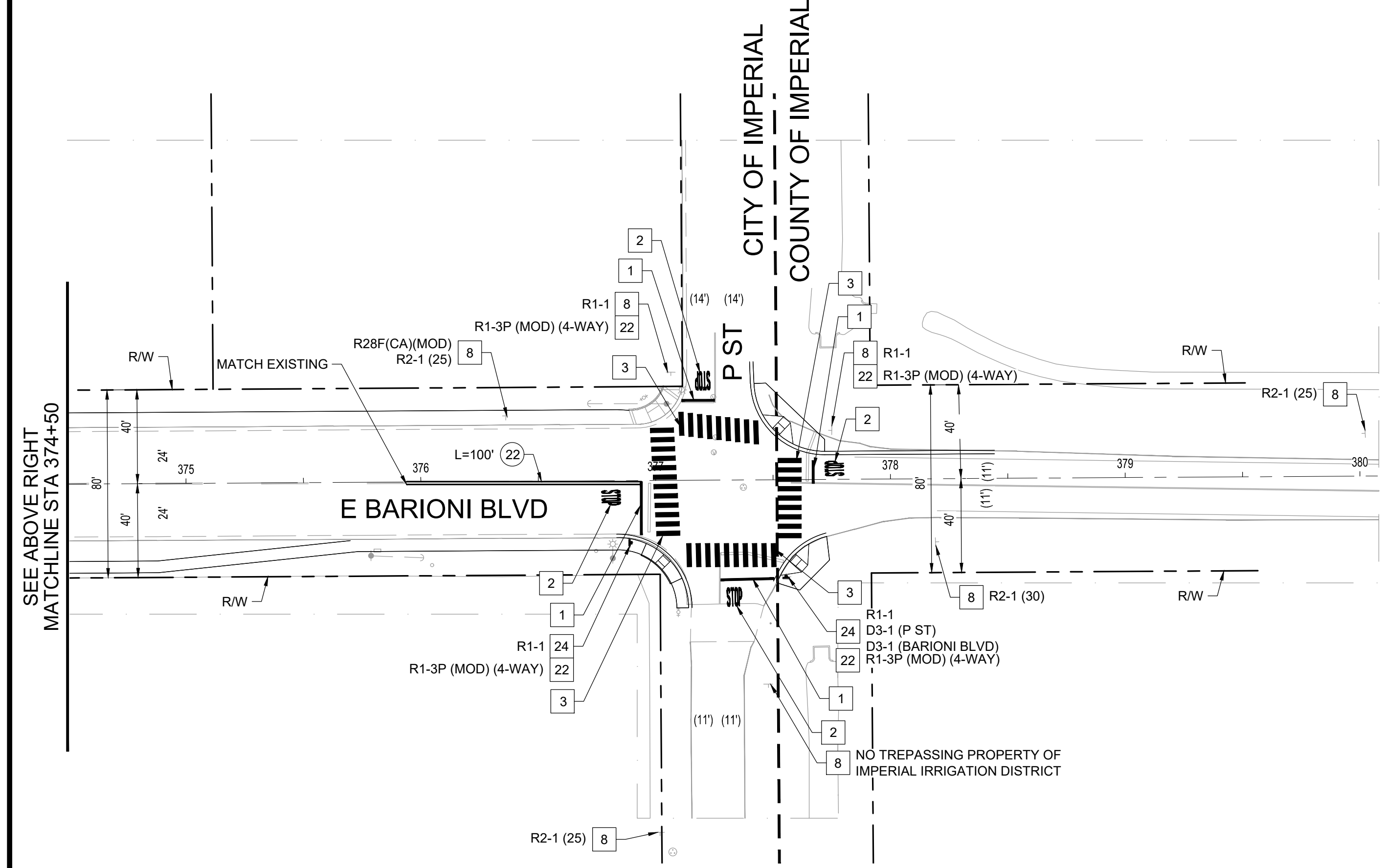
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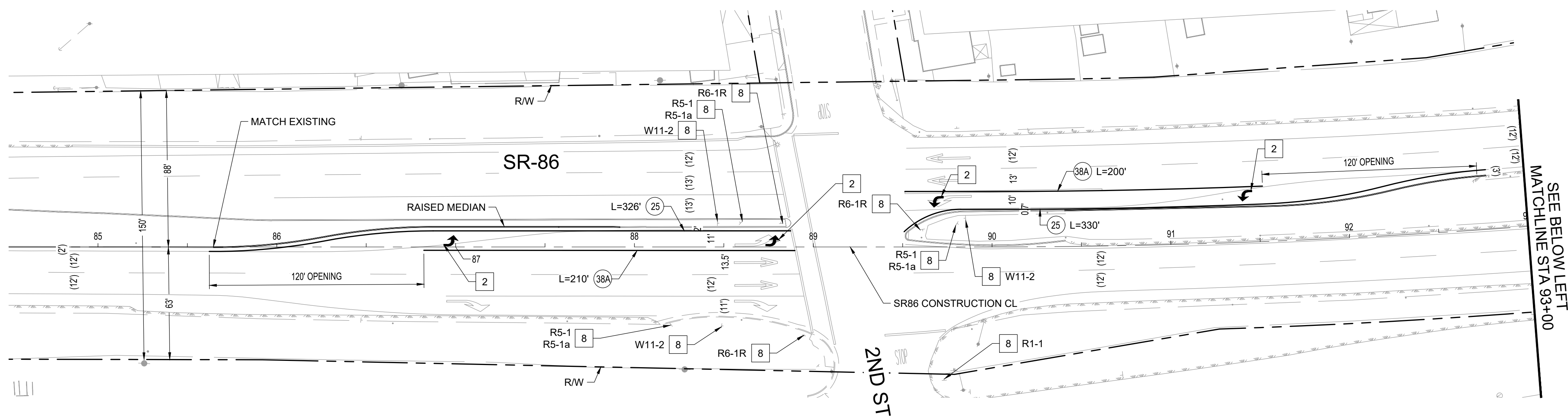


SIGNING AND STRIPING NOTES

- 1 INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE.
2 INSTALL THERMOPLASTIC PAVEMENT MARKING PER CALTRANS STD. PLAN. SEE LEGEND.
3 INSTALL 2'X10' WHITE THERMOPLASTIC CONTINENTAL CROSSWALK AT 5' INTERVALS CENTER TO CENTER PER CALTRANS STANDARD PLAN A24F.
4 INSTALL THERMOPLASTIC BIKE LANE WITH ARROW PAVEMENT MARKING PER DETAIL ON SHEET 20.
5 INSTALL CONFLICT MARKING PER DETAIL ON SHEET 20.
6 INSTALL BICYCLE LANE BUFFER STRIPING PER DETAIL ON SHEET 20.
8 EXISTING SIGN TO REMAIN.
11 FURNISH AND INSTALL NEW SIGN AND BREAK AWAY POST.
22 FURNISH AND INSTALL NEW SIGN ON EXISTING POST
24 REMOVE AND REINSTALL EXISTING POST AND SIGN(S).

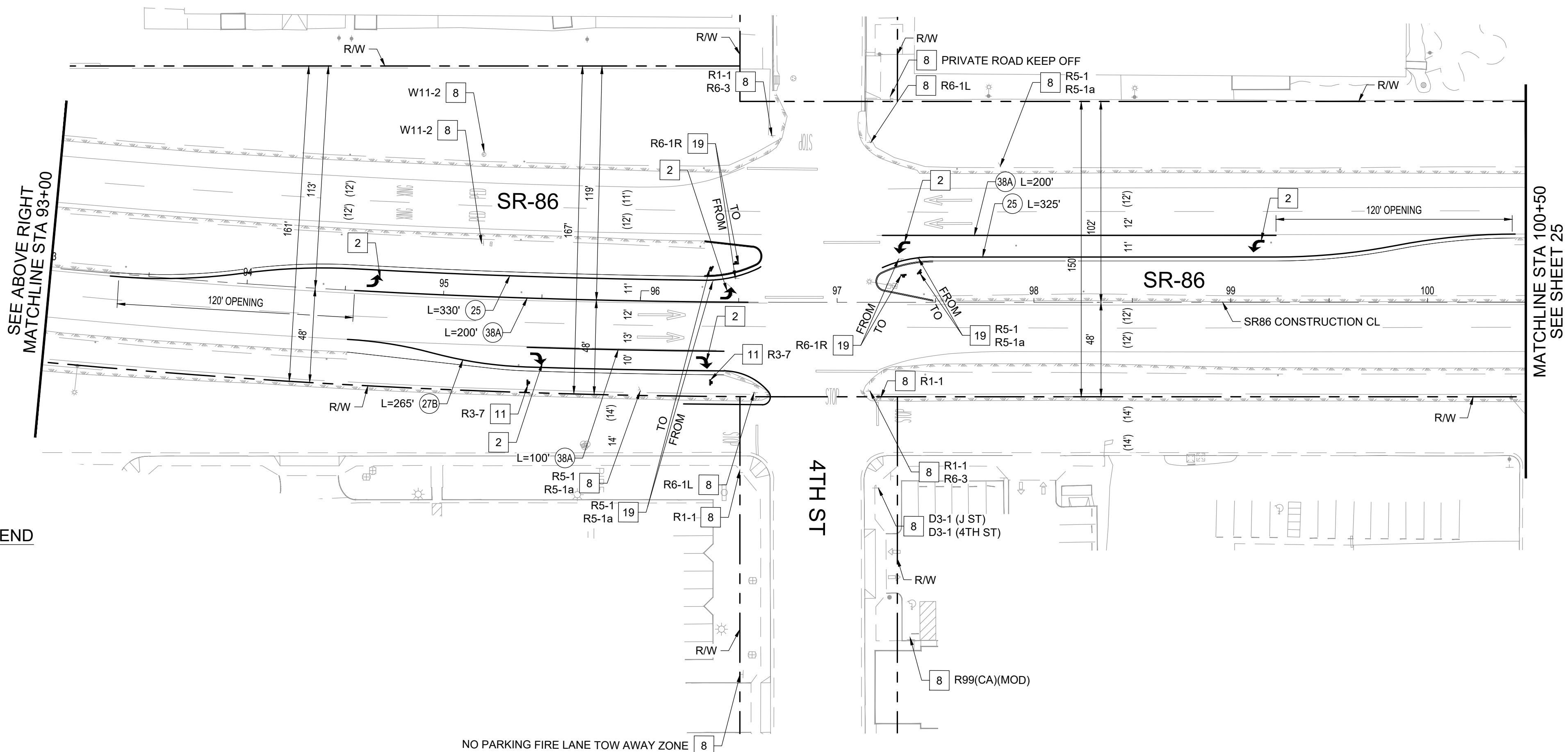


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SIGNING AND STRIPING NOTES

- 2 INSTALL THERMOPLASTIC PAVEMENT MARKING PER CALTRANS STD. PLAN. SEE LEGEND.
- 8 EXISTING SIGN TO REMAIN.
- 11 FURNISH AND INSTALL NEW SIGN AND BREAK AWAY POST.
- 19 EXISTING SIGN TO BE RELOCATED



STRIPING DETAILS

- (25) INSTALL LEFT EDGE LINE (DETAIL 25) PER CALTRANS STANDARD PLAN A20B.
- (27B) INSTALL RIGHT EDGE LINE (DETAIL 27B) PER CALTRANS STANDARD PLAN A20B.
- (38A) INSTALL 8" WHITE CHANNELIZING LINE (DETAIL 38A) PER CALTRANS STD. PLAN A20D.

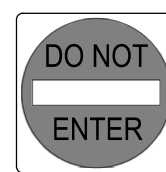
PROPOSED SIGN LEGEND



R3-7
30"X30"

RELOCATED SIGN LEGEND

R6-1R



R5-1
36"X36"



R5-1a
42"X30"

LEGEND

- EXISTING SIGNS
- PROPOSED SIGN
- (XX') EXISTING LANE WIDTH
- XX' NEW LANE WIDTH
- (XX) STRIPING DETAIL PER LATEST CALTRANS STANDARD PLANS
- (TS) TRAFFIC SIGNAL
- ↑ TYPE IV ARROW PER CALTRANS STANDARD PLAN A24A
- STOP PER CALTRANS STANDARD PLAN A24D
- XING PER CALTRANS STANDARD PLAN A24D
- PED PER CALTRANS STANDARD PLAN A24D
- AHEAD PER CALTRANS STANDARD PLAN A24D

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CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S.

DATE

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CITY OF IMPERIAL

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BENCHMARK:

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PREPARED UNDER THE DIRECT SUPERVISION OF:

Blanca Soto
BLANCA H. SOTO

06/21/2024
DATE

86597
R.C.E. NO.

03/31/2025
REG. EXP.

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1

SHEET CONTENT: SIGNAGE AND STRIPING PLANS

SCALE: N/A

DRAWN BY: BS

REVIEWED BY: RD

JUNE 2024

SHEET

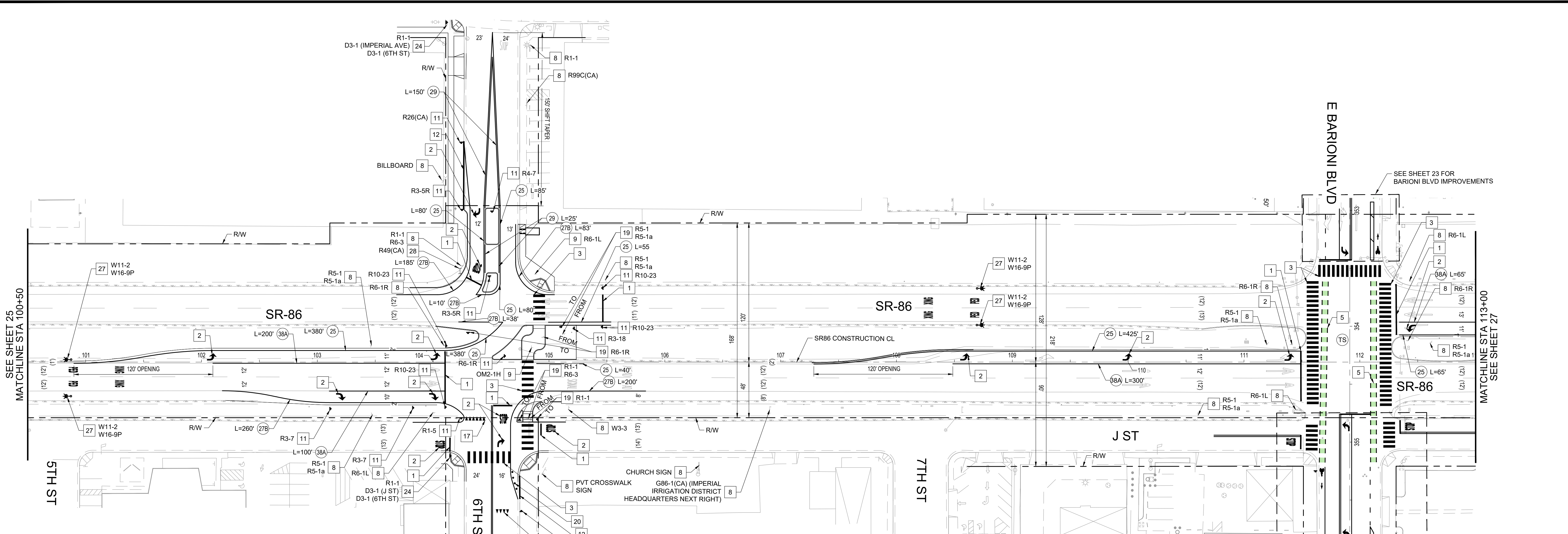
25

OF 52 SHEETS

JOB NO.
CIP#823

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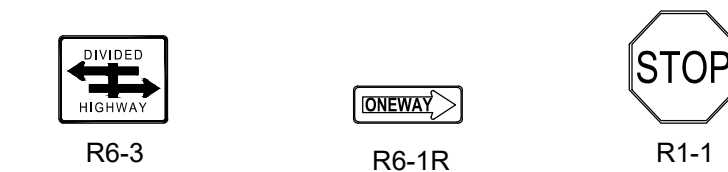
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PROPOSED SIGN LEGEND



RELOCATED SIGN LEGEND



SIGNING AND STRIPING NOTES

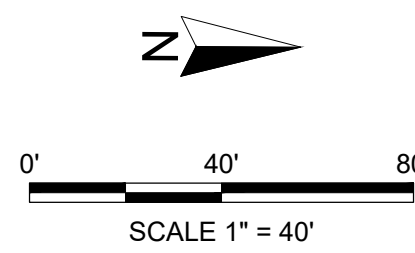
- INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE.
- INSTALL THERMOPLASTIC PAVEMENT MARKING PER CALTRANS STD. PLAN. SEE LEGEND.
- INSTALL 2'X10' WHITE THERMOPLASTIC CONTINENTAL CROSSWALK AT 5' INTERVALS CENTER TO CENTER PER CALTRANS STANDARD PLAN A24F.
- EXISTING SIGN TO REMAIN.
- EXISTING SIGN TO BE REMOVED.
- FURNISH AND INSTALL NEW SIGN AND BREAK AWAY POST.
- PAINT CURB RED.
- INSTALL YIELD LINE PER CALTRANS REVISED STANDARD PLAN RSP A24G.
- EXISTING SIGN TO BE RELOCATED
- FURNISH AND INSTALL CLASS 1 FLEXIBLE POST DELINEATOR PER CALTRANS STANDARD PLAN A73C
- REMOVE AND REINSTALL EXISTING POST AND SIGN(S).
- INSTALL SIGNS ON PROPOSED POLE PER SIGNAL PLAN
- FURNISH AND INSTALL NEW SIGN AND TYPE II PEDESTRIAN BARRICADE PER CALTRANS STD. PLAN ES-7Q

STRIPING DETAILS

- (22) INSTALL DOUBLE YELLOW CENTERLINE (DETAIL 22) PER CALTRANS STD. PLAN A20A
- (25) INSTALL LEFT EDGE LINE (DETAIL 25) PER CALTRANS STANDARD PLAN A20B.
- (27B) INSTALL RIGHT EDGE LINE (DETAIL 27B) PER CALTRANS STANDARD PLAN A20B.
- (29) INSTALL DOUBLE LEFT EDGE LINE (DETAIL 29) PER CALTRANS STANDARD PLAN A20B.
- (38A) INSTALL 8" WHITE CHANNELIZING LINE (DETAIL 38A) PER CALTRANS STD. PLAN A20D.

LEGEND

- EXISTING SIGNS
- PROPOSED SIGN
- EXISTING LANE WIDTH
- NEW LANE WIDTH
- STRIPING DETAIL PER LATEST CALTRANS STANDARD PLANS
- TRAFFIC SIGNAL
- TYPE IV ARROW PER CALTRANS STANDARD PLAN A24A
- STOP PER CALTRANS STANDARD PLAN A24D
- XING PER CALTRANS STANDARD PLAN A24D
- PED PER CALTRANS STANDARD PLAN A24D
- AHEAD PER CALTRANS STANDARD PLAN A24D



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 BLANCA H. SOTO
 06/21/2024
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PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
 SHEET CONTENT: SIGNAGE AND STRIPING PLANS

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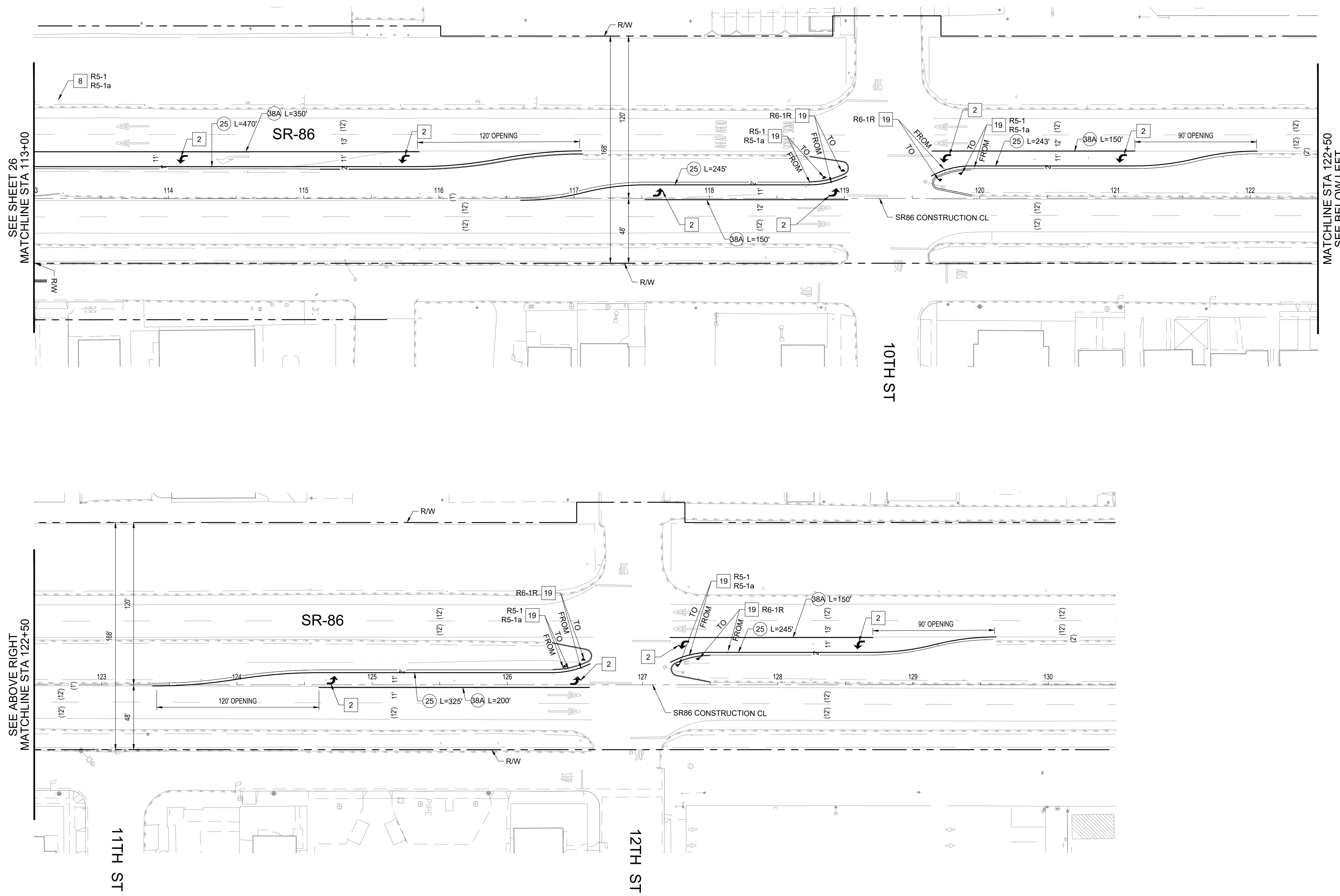
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SCALE: N/A
 DRAWN BY: BS
 REVIEWED BY: RD
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SHEET 26 OF 52 SHEETS
 JOB NO. CIP#823

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 BY: DAVID DALE, P.E., P.L.S. DATE: _____

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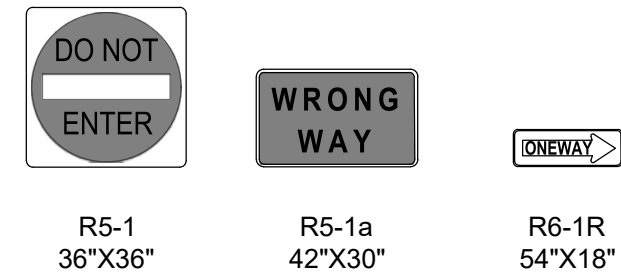
SIGNING AND STRIPING NOTES

- 2 INSTALL THERMOPLASTIC PAVEMENT MARKING PER CALTRANS STD. PLAN. SEE LEGEND.
- 8 EXISTING SIGN TO REMAIN.
- 19 EXISTING SIGN TO BE RELOCATED

STRIPING DETAILS

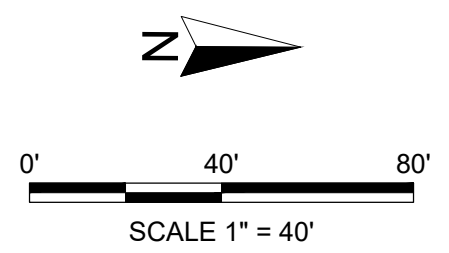
- 25 INSTALL LEFT EDGE LINE (DETAIL 25) PER CALTRANS STANDARD PLAN A20B.
- 38A INSTALL 8" WHITE CHANNELIZING LINE (DETAIL 38A) PER CALTRANS STD. PLAN A20D.

RELOCATED SIGN LEGEND



LEGEND

- EXISTING SIGNS
- ⊕ PROPOSED SIGN
- (XX) EXISTING LANE WIDTH
- xx' NEW LANE WIDTH
- (XX) STRIPING DETAIL PER LATEST CALTRANS STANDARD PLANS
- (TS) TRAFFIC SIGNAL
- ↑ TYPE IV ARROW PER CALTRANS STANDARD PLAN A24A
- STOP STOP PER CALTRANS STANDARD PLAN A24D
- XING XING PER CALTRANS STANDARD PLAN A24D
- PED PED PER CALTRANS STANDARD PLAN A24D
- AHEAD AHEAD PER CALTRANS STANDARD PLAN A24D



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BLANCA H. SOTO R.C.E. NO. 86597
DATE: 06/21/2024 REG. EXP. 03/31/2025

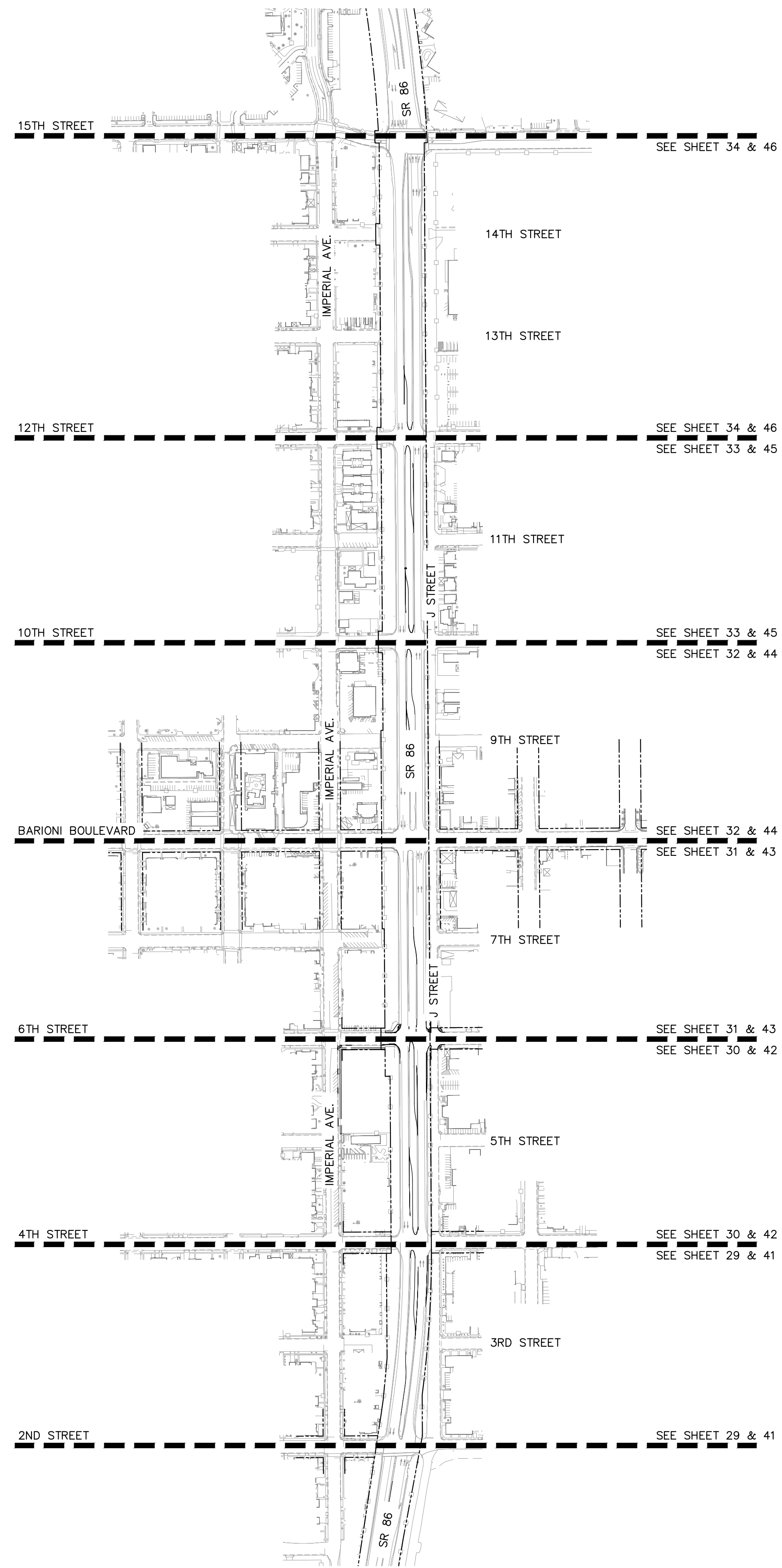
PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: SIGNAGE AND STRIPING PLANS

SCALE: N/A
DRAWN BY: BS
REVIEWED BY: RD
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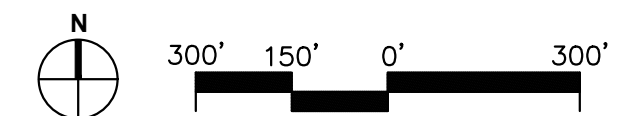
SHEET **27** OF 52 SHEETS
JOB NO. CIP#823

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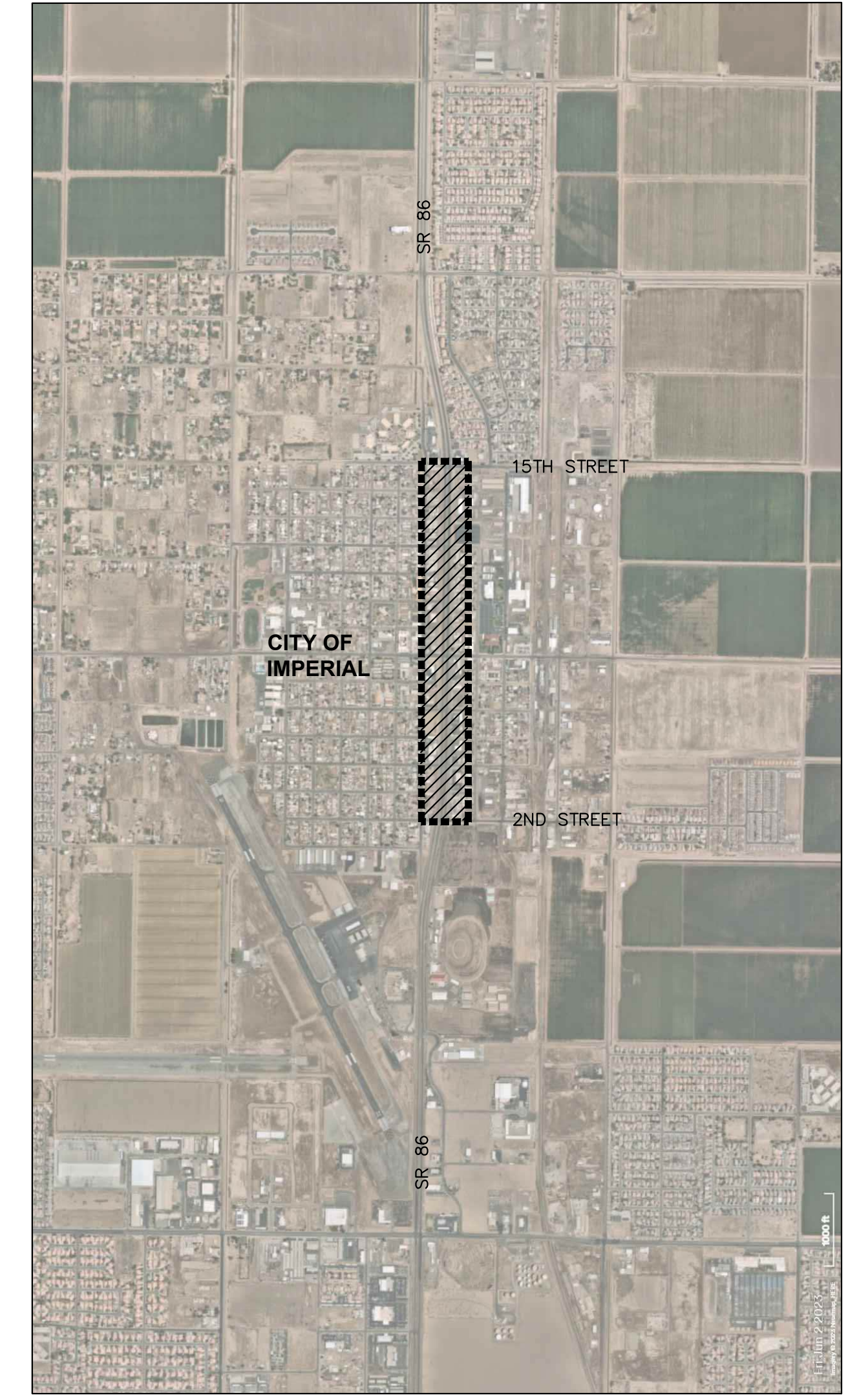


2ND TO 15TH - OVERALL SITE PLAN



INDEX

SHEET NO.	TITLE
28	LANDSCAPE COVER SHEET
29	IRRIGATION PLAN
30	IRRIGATION PLAN
31	IRRIGATION PLAN
32	IRRIGATION PLAN
33	IRRIGATION PLAN
34	IRRIGATION PLAN
35	IRRIGATION LEGEND
36	IRRIGATION NOTES, SCHEDULE AND CALCULATIONS
37	IRRIGATION DETAILS
38	IRRIGATION DETAILS
39	IRRIGATION DETAILS
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41	PLANTING PLAN
42	PLANTING PLAN
43	PLANTING PLAN
44	PLANTING PLAN
45	PLANTING PLAN
46	PLANTING PLAN
47	LANDSCAPE LEGENDS & NOTES
48	PLANTING DETAILS
49	PLANTING DETAILS



VICINITY MAP

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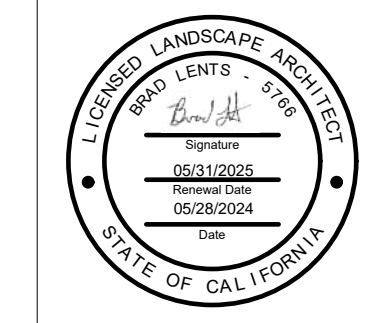


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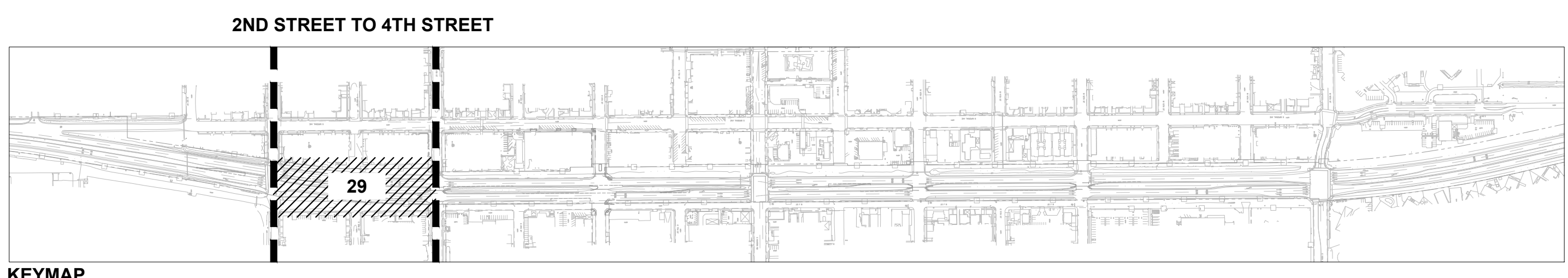
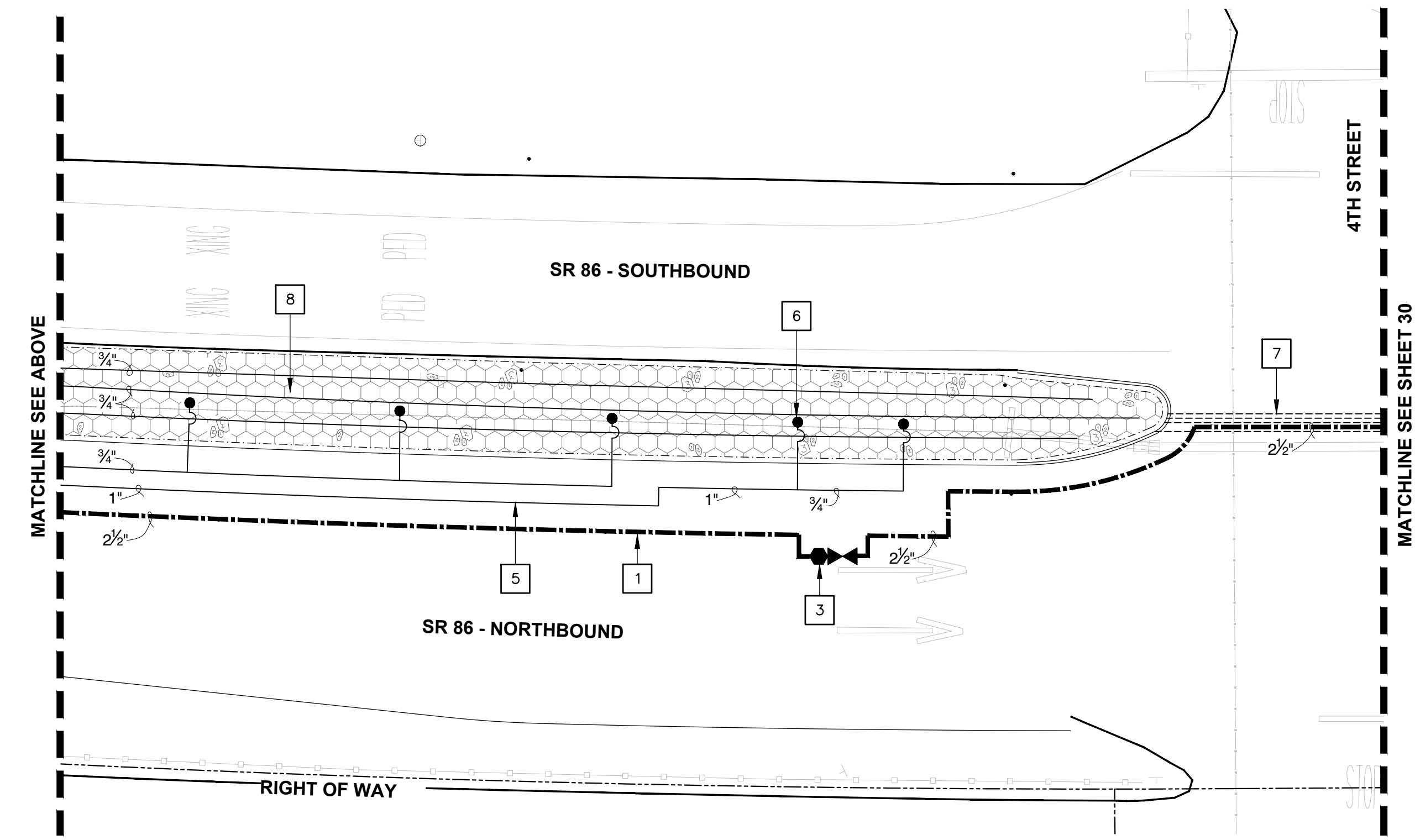
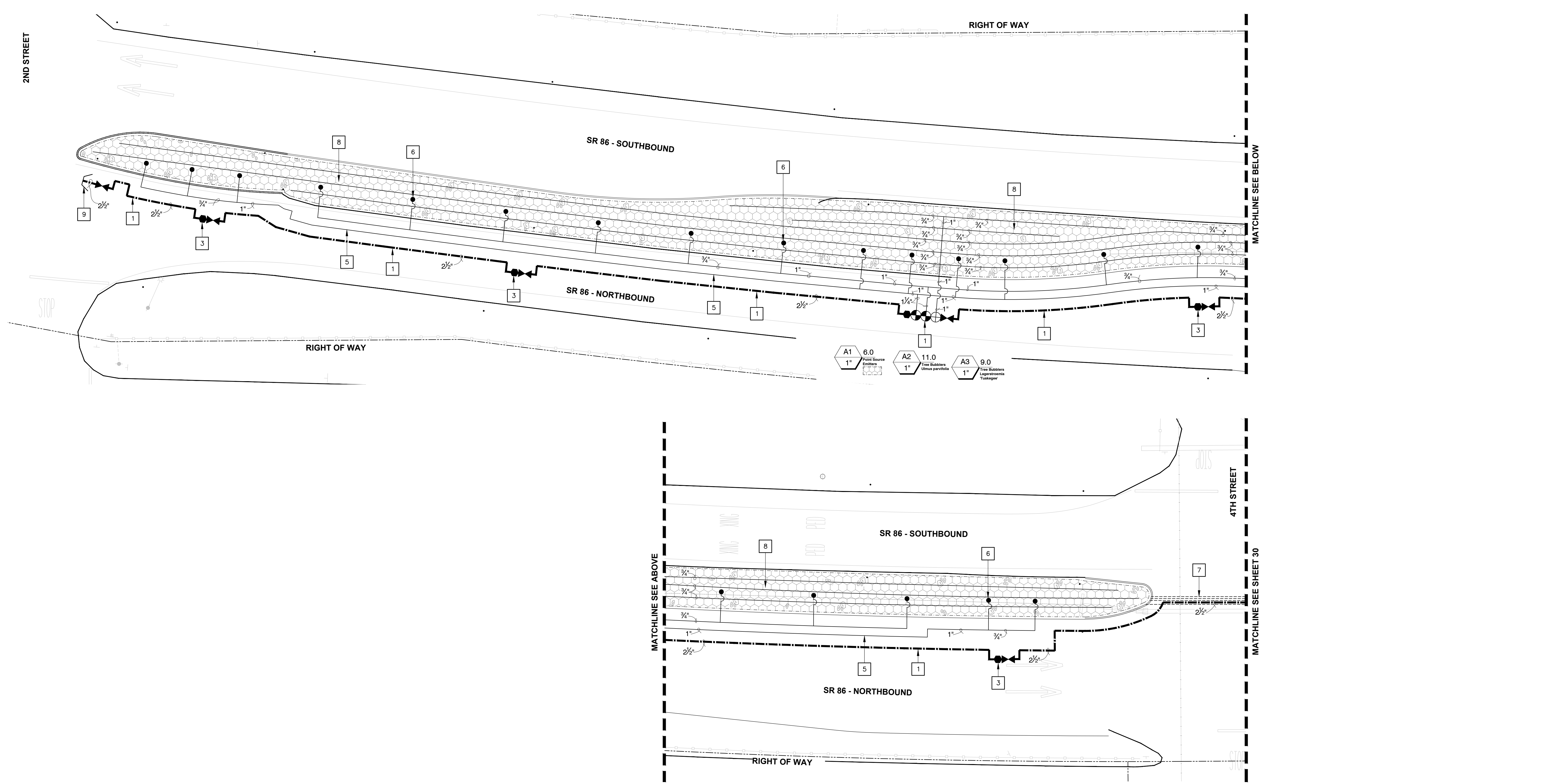
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Brad Lents
BRAD LENTS
DATE: 05/28/2024

PROJECT TITLE: CITY OF IMPERIAL
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1
SHEET CONTENT: LANDSCAPE COVER SHEET

SCALE:
DRAWN BY: AK & MS
REVISED BY: YZ
JUNE 2024
SHEET
28
OF 52 SHEETS
JOB NO.
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Imperial City of Imperial 4880 05/28/2024 11:14 AM



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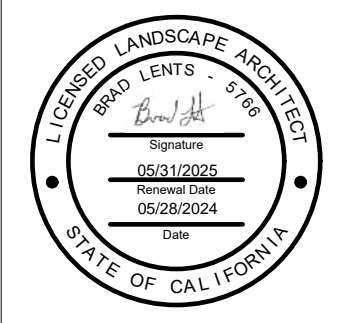


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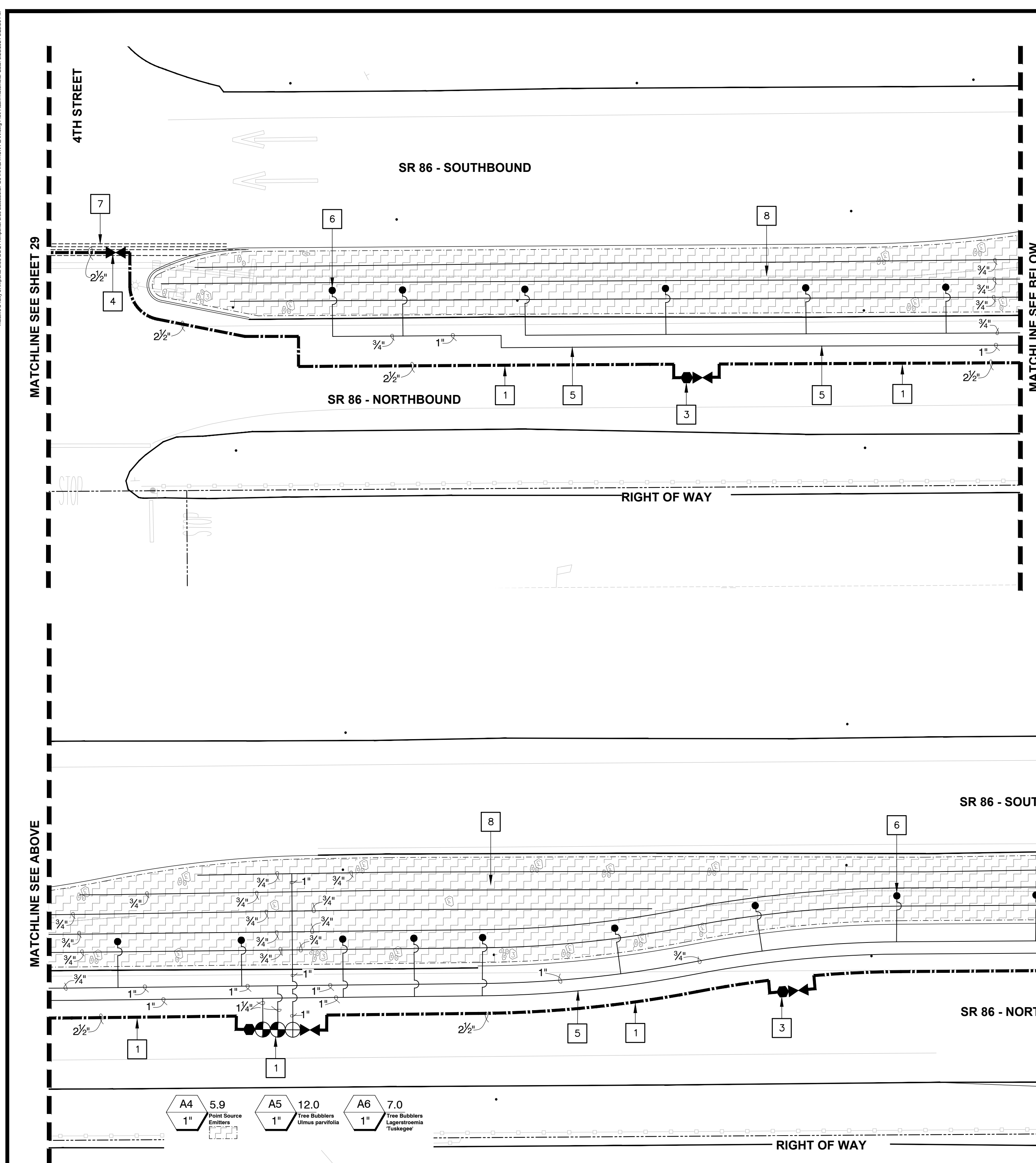
PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: IRRIGATION PLAN



SCALE:
 DRAWN BY: AK & MS
 REVISED BY: YZ
 SHEET 29 OF 52 SHEETS
 JOB NO. XXXXXXXX
 JUNE 2024

SEE SHEET 35 FOR IRRIGATION LEGEND
 SEE SHEET 36 FOR IRRIGATION SCHEDULE

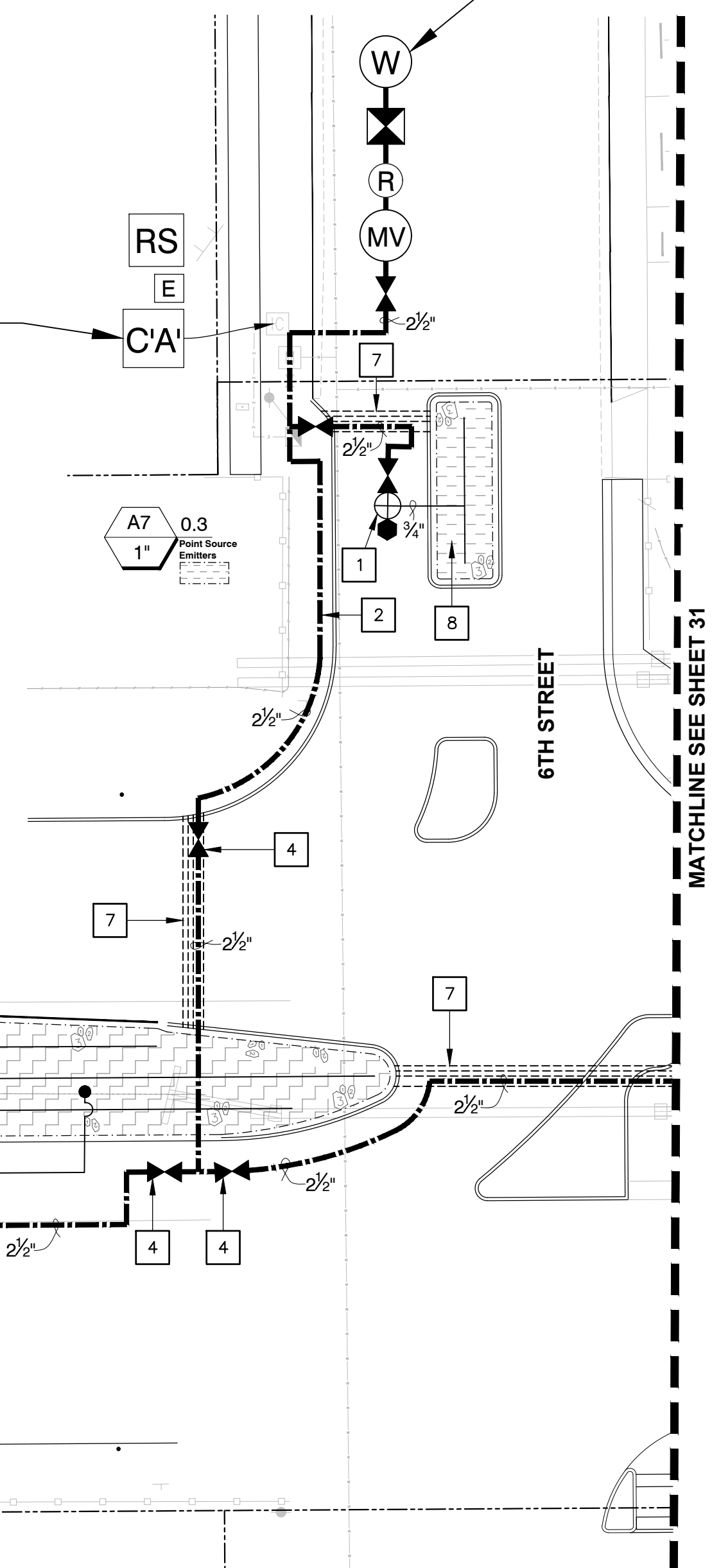
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IRRIGATION CONTROLLER 'A'
 CONTRACTOR SHALL INSTALL (1) 75-STATION HUNTER ACC2 DECODER CONTROLLER MODEL: A2C-75D-SS/PED-SS/SOLARSYNC-SEN/ICD-HP/ROAMXL-KIT (2-WIRE CONTROLLER DECODER SYSTEM) IN A STAINLESS STEEL PEDESTAL ENCLOSURE. INSTALL WITH HUNTER SOLAR SYNC. INSTALL CONTROLLER WITHIN THE CITY RIGHT-OF-WAY. FINAL LOCATION OF CONTROLLER AND SOLAR SYNC SHALL BE APPROVED BY AUTHORIZED CITY OF IMPERIAL REPRESENTATIVE PRIOR TO INSTALLATION. INSTALL PER MANUFACTURER'S SPECIFICATIONS. CONTRACTOR TO PROVIDE ELECTRICAL CONNECTION FOR THE CONTROLLER

POINT OF CONNECTION INFORMATION 'A'	
STREET STATION: E 6TH STREET STA 805+14.18	
POINT OF CONNECTION	1-1/2" POTABLE WATER IRRIGATION METER
METER ELEVATION	939
STATIC PRESSURE	72 psi
PEAK FLOW	16 gpm
CONTROLLER TYPE	CONTROLLER 'A' - ACC2 HUNTER DECODER CONTROLLER MODEL: A2C-75D-SS/PED-SS/SOLARSYNC-SEN/ICD-HP/ROAMXL-KIT (2-WIRE CONTROLLER DECODER SYSTEM) IN STAINLESS STEEL PEDESTAL ENCLOSURE.
STATIONS AVAILABLE	75 STATIONS
STATIONS USED	22 STATIONS
BACKFLOW DEVICE	1-1/2" FBECO B25Y INSTALLED 80 MESH Y-STRAINER

BOOSTER PUMP NOTE:
 CONTRACTOR SHALL PROVIDE A BID ALTERNATE FOR BOOSTER PUMP ASSEMBLY IF THE AVAILABLE PRESSURE IS INADEQUATE TO SUPPORT THE DESIGNED HYDRAULIC CRITERIA AT THE TIME OF CONSTRUCTION. DUE TO FLUCTUATING PRESSURE A BOOSTER PUMP MIGHT BE NEEDED. PROVIDE BOOSTER PUMP SUFFICIENT ENOUGH TO INSURE THAT THE IRRIGATION SYSTEM SHALL WORK PROPERLY. SHOULD PRESSURE BE DIFFERENT THEN SHOWN ON THE PLAN CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT FOR INSTRUCTIONS PRIOR TO PROCEEDING WITH INSTALLATION. SEE LEGEND ON SHEET 35 FOR BOOSTER PUMP INFORMATION.

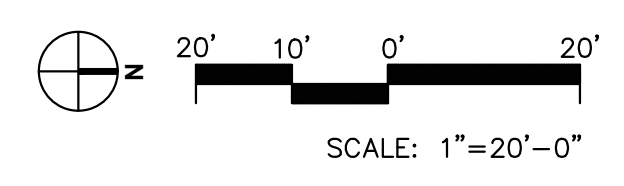
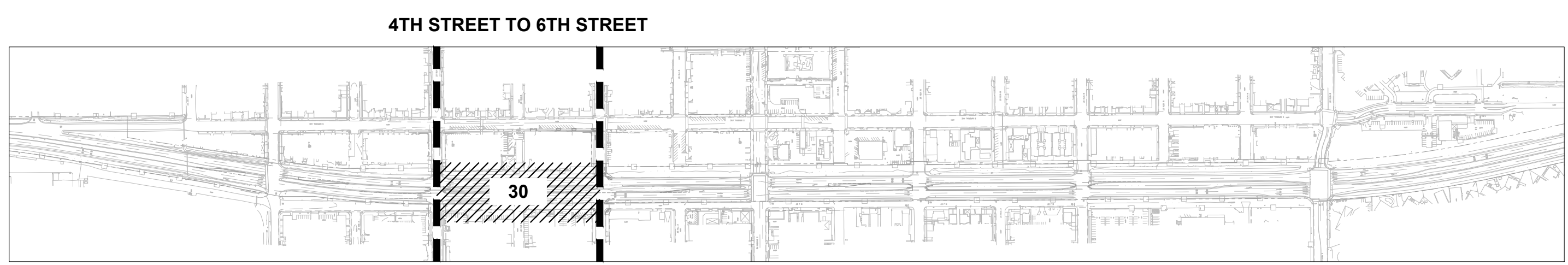


MATCHLINE SEE ABOVE

MATCHLINE SEE BELOW

MATCHLINE SEE SHEET 31

SEE SHEET 35 FOR IRRIGATION LEGEND
 SEE SHEET 36 FOR IRRIGATION SCHEDULE



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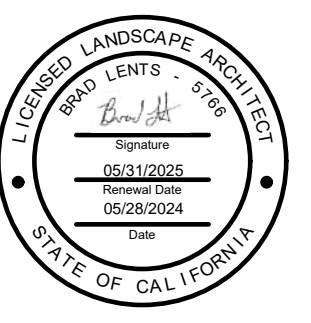


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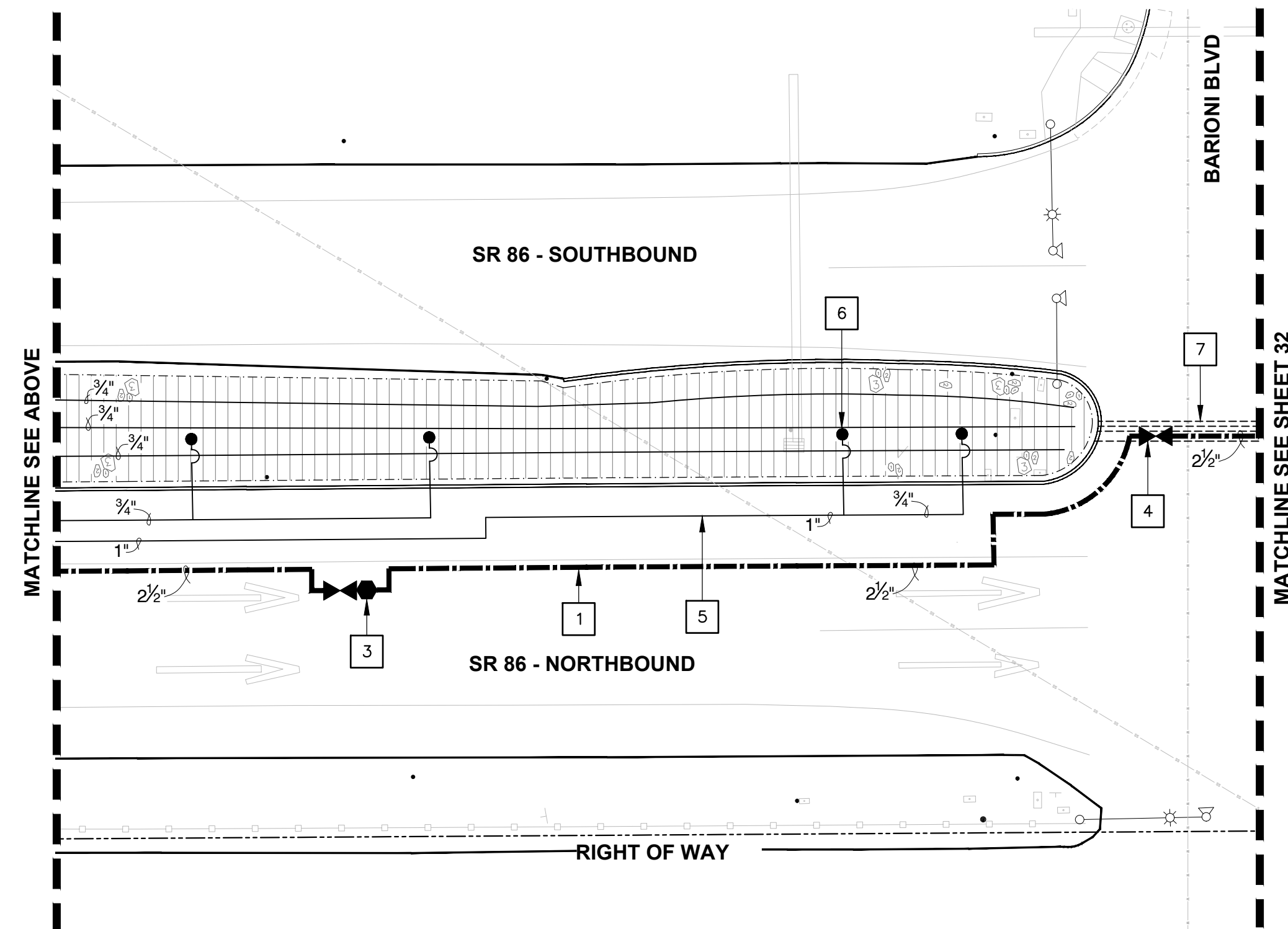
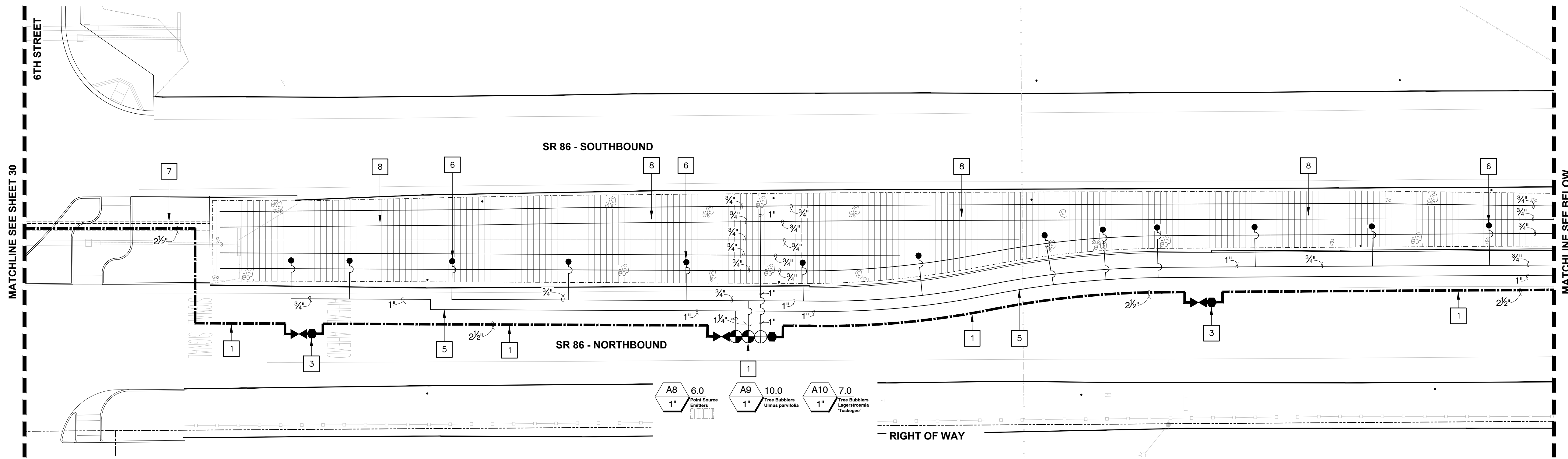
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 05/28/2024
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PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
 SHEET CONTENT: IRRIGATION PLAN

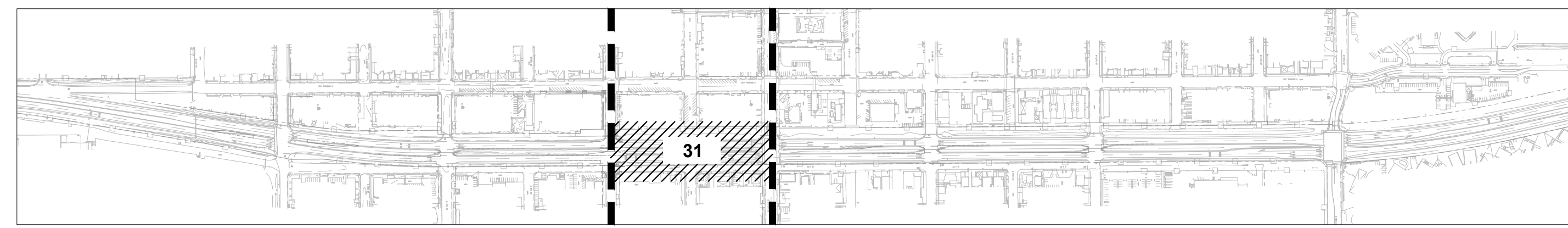
SCALE: DRAWN BY: AK & MS REVISIONS: YZ SHEET 30 OF 52 SHEETS
 JOB NO. XXXXXXXX
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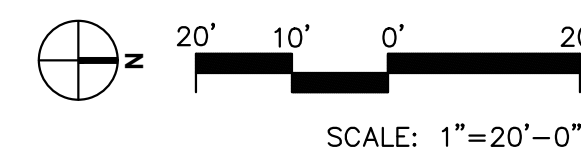


6TH STREET TO BARIONI BOULEVARD



KEYMAP
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SEE SHEET 35 FOR IRRIGATION LEGEND
SEE SHEET 36 FOR IRRIGATION SCHEDULE



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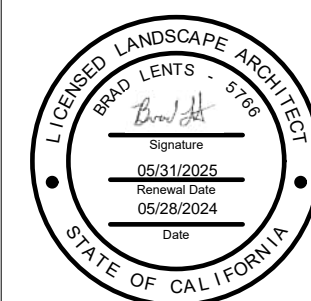


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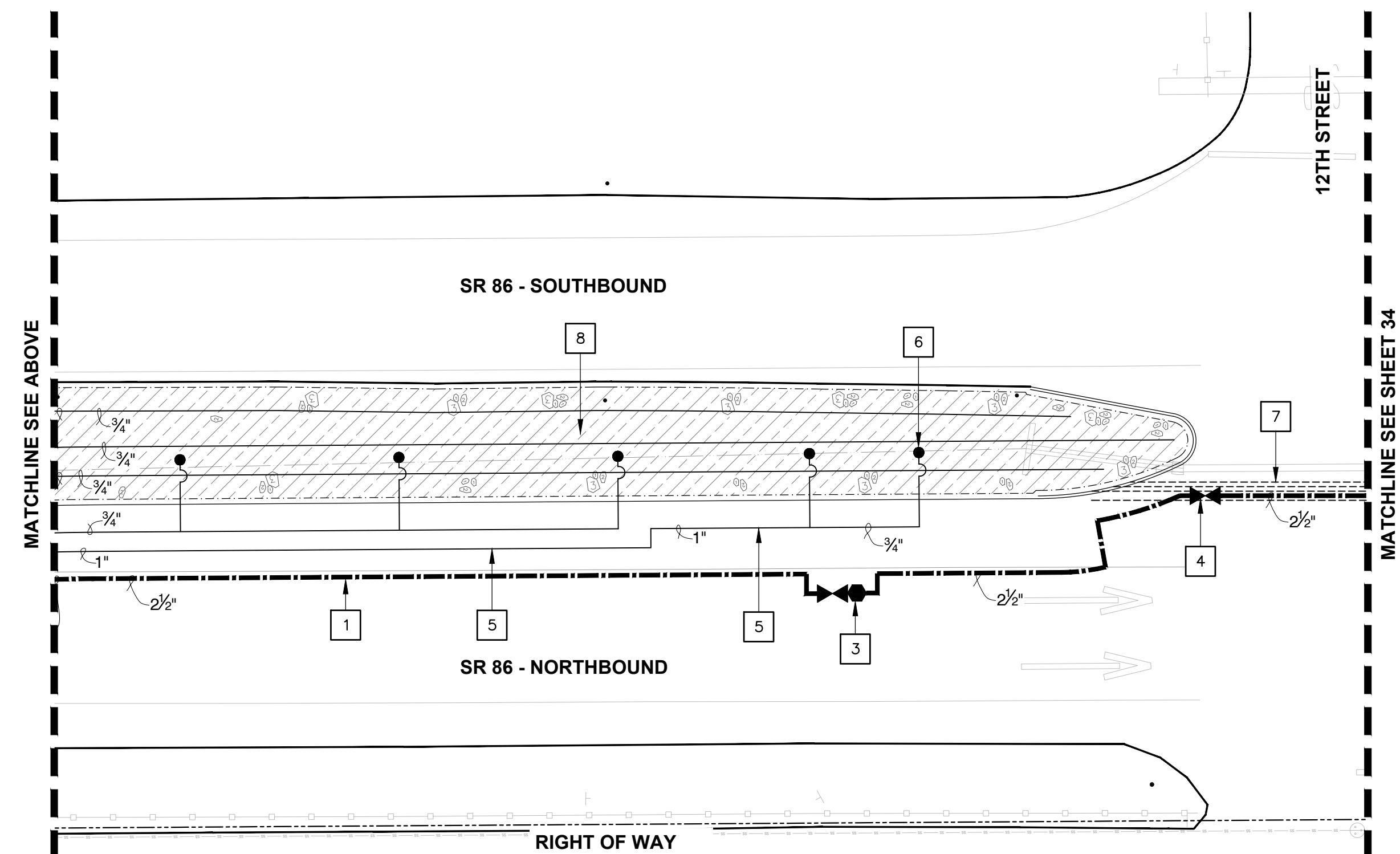
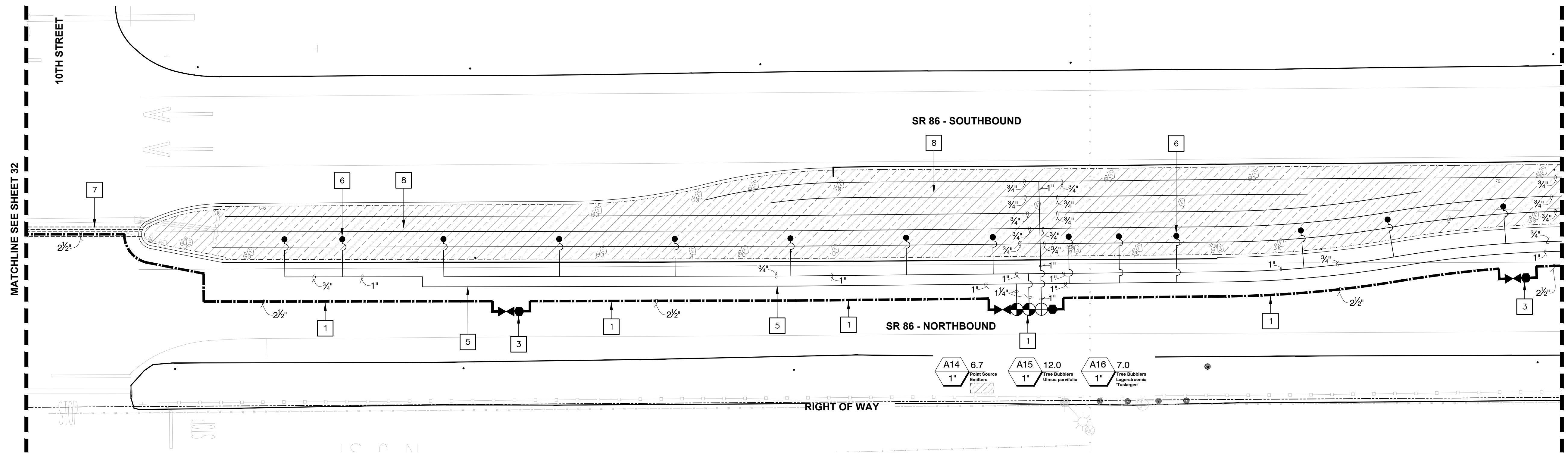
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PHASE 1
SHEET CONTENT: IRRIGATION PLAN

SCALE:
DRAWN BY: AK & MS
REVISED BY: YZ
JUNE 2024

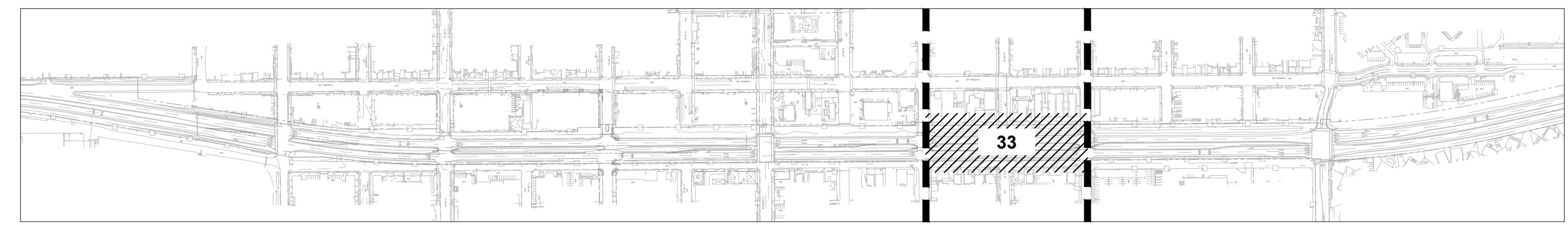
SHEET
31
OF 52 SHEETS
JOB NO.
XXXXXXXXX

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 10/20/24 12:00:11 PM



10TH STREET TO 12TH STREET



SEE SHEET 35 FOR IRRIGATION LEGEND
SEE SHEET 36 FOR IRRIGATION SCHEDULE

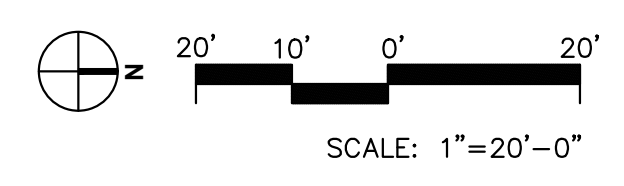
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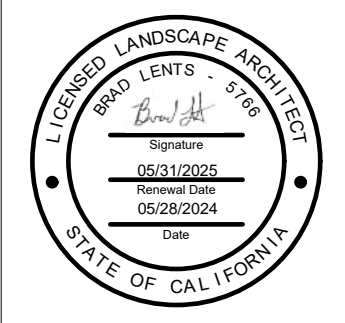


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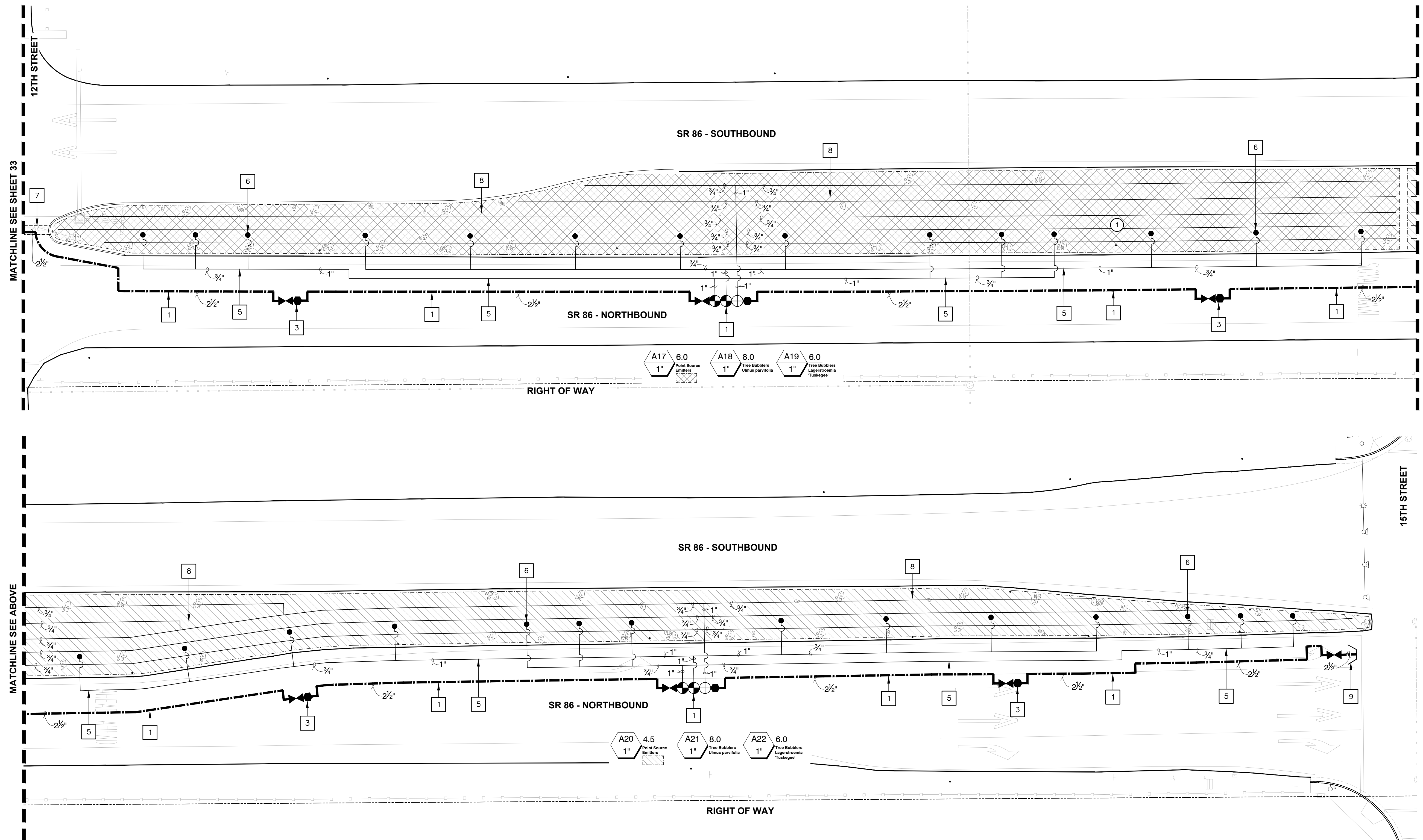
PROJECT TITLE: CITY OF IMPERIAL
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1
SHEET CONTENT: IRRIGATION PLAN

SCALE:
DRAWN BY: AK & MS
REVISED BY: YZ
JUNE 2024

SHEET
33
OF 52 SHEETS
JOB NO.
XXXXXXXX

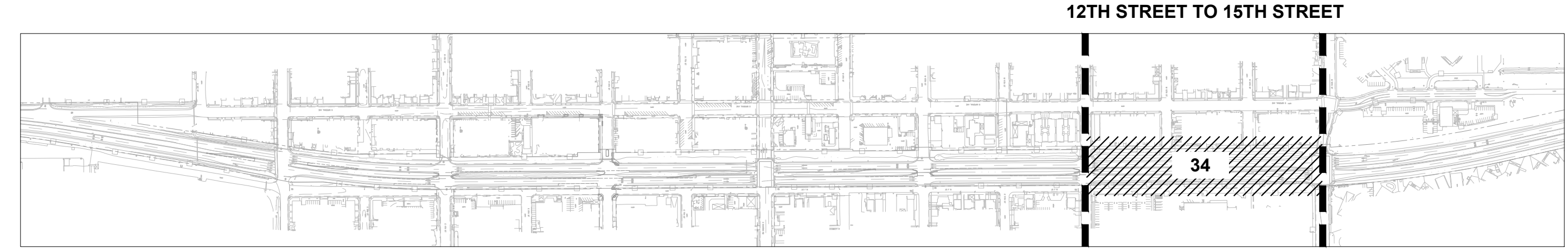
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Imperial City of Imperial ARPA AHSC-ARPA/HWY 86 Beautification Plan, Imperial, California
 Date: 05/28/2024 1:29:33 PM



MATCHLINE SEE ABOVE

MATCHLINE SEE BELOW



KEYMAP
N.T.S.

SEE SHEET 35 FOR IRRIGATION LEGEND
SEE SHEET 36 FOR IRRIGATION SCHEDULE

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LANDSCAPE ARCHITECTS

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CITY OF IMPERIAL, CA

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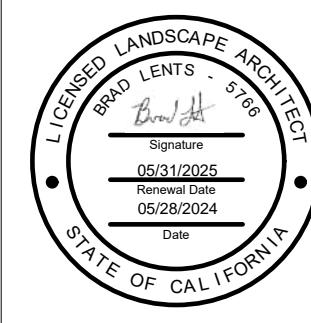


NO.	REVISIONS:	APPROVED	DATE



CITY OF IMPERIAL
420 South Imperial Avenue
Imperial, CA 92251
Ph: (760) 355-4371 Fax: (760) 355-4718

BENCHMARK:
BENCHMARK ELEVATION =
BENCHMARK DESCRIPTION:



PREPARED UNDER THE DIRECT SUPERVISION OF:
Brad Lents
BRAD LENTS
DATE: 05/28/2024

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IRRIGATION EQUIPMENT LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL	SIZE	NOTES	DETAIL
	POTABLE WATER METER			1-1/2"	APPROX. WHERE SHOWN, FIELD VERIFY. INSTALLED BY OTHERS PER CITY OF IMPERIAL DETAILS.	
	REDUCED PRESSURE BACKFLOW PREVENTER	FEBCO	825Y	1-1/2"	CONTRACTOR SHALL INSTALL WITH WILKINS 1-1/2" 500XLYSBR 80 MESH Y-STRAINER. IF PSI IS FOUND TO EXCEED 80 PSI, INSTALL 25-75 PSI REGULATOR DOWNSTREAM ON BACKFLOW ASSEMBLY. INSTALL WITH STRONG BOX SMOOTH TOUCH VANDAL RESISTANT BACKFLOW ENCLOSURE. ENCLOSURE SHALL BE LARGE ENOUGH TO ACCOMMODATE BACKFLOW ASSEMBLY. INSTALL PER MANUF. RECOMMENDATIONS. INSTALL PER CITY OF IMPERIAL APPROVED DETAIL.	
	PRESSURE REDUCING VALVE	WILKINS	500 SERIES	LINE SIZE	INSTALL DOWNSTREAM ON BACKFLOW ASSEMBLY IF PSI IS FOUND TO EXCEED 80 PSI. SEE REDUCED PRESSURE BACKFLOW PREVENTER ABOVE.	
	MASTER CONTROL VALVE (BRASS)	SUPERIOR	320 NO MINIMUM FLOW - MODEL: 3200150	1-1/2"	CONNECT TO CONTROLLER 'A'. INSTALL IN VALVE BOX WITH TAN LID. INSTALL ALL WIRES CONNECTING MASTER VALVE TO THE CONTROLLER IN A CONTINUOUS CONDUIT	
	FLOW SENSOR	FLOMEC	QC200-15	1-1/2"	CONNECT TO CONTROLLER 'A'. INSTALL WITH A 1-1/2" SCH. 80 PVC TEE. INSTALL IN VALVE BOX WITH GREEN LID. VALVE BOX SHALL BE LARGE ENOUGH TO ACCOMMODATE FLOW SENSOR ASSEMBLY. CONTRACTOR TO INPUT THE K VALUE AND OFFSET VALUE AT THE CONTROLLER. INSTALL ALL WIRE CONNECTING FLOW SENSOR TO THE CONTROLLER IN A CONTINUOUS CONDUIT. INSTALL PER MANUFACTURER'S SPECIFICATIONS.	
	REMOTE CONTROL VALVE	HUNTER	ICV-xxxG	SIZE PER PLAN	INSTALL IN VALVE BOX WITH TAN LID.	
	DRIP REMOTE CONTROL VALVE ASSEMBLY	HUNTER	ICZ-101-40-LF	SEE NOTES	ASSEMBLY SHALL INCLUDE: (1) HUNTER 1" ICV CONTROL VALVE, MODEL ICV-101G WITH 1"HFR-100-075 FILTER REGULATOR. INSTALL IN VALVE BOX WITH TAN LID. VALVE BOX SHALL BE LARGE ENOUGH TO ACCOMMODATE CONTROL VALVE ASSEMBLY.	
	QUICK COUPLER	RAIN BIRD	44-LRC	1"	INSTALL IN 10" ROUND VALVE BOX WITH TAN LID. INSTALL WITH ACME THREADS. BRAND LID WITH LETTERS "QC".	
	BALL VALVE	KBI	WLT-0000-T	LINE SIZE	INSTALL IN 10" ROUND VALVE BOX WITH TAN LID	
	CONTROLLER 'A'	HUNTER	ACC2 DECODER CONTROLLER MODEL: A2C-750-SS/ PED-SS/SOLARSYNC-SEN/ ICD-HP/ROAMXL-KIT (2-WIRE CONTROLLER DECODER SYSTEM)	75-STATIONS	INSTALL IN STAINLESS STEEL PEDESTAL ENCLOSURE. INSTALL WITH HUNTER SOLAR SYNC. INSTALL CONTROLLER WITHIN THE CITY RIGHT-OF-WAY. INSTALL WITH HUNTER ICD DECODERS. PROVIDE HAND HELD DECODER PROGRAMMER, HUNTER PART NUMBER ICD-HP AND TRANSMITTER, HUNTER PART NUMBER ROAMXL-KIT. FINAL LOCATION OF CONTROLLER AND SOLAR SYNC SHALL BE APPROVED BY AUTHORIZED CITY REPRESENTATIVE PRIOR TO INSTALLATION. INSTALL PER MANUFACTURER'S SPECIFICATIONS. SEE NOTE BELOW.	
NO SYMBOL	DECODER	HUNTER	ICD-100 ICD-200 ICD-400 ICD-SEN		DECODERS SHALL MATCH STATION OUTPUT QUANTITY. DO NOT LEAVE ANY OPEN STATIONS. OUTPUT FROM DECODER TO VALVE SHALL NOT EXCEED 150 FEET. INSTALL DECODERS IN VALVE BOXES AT EACH VALVE CLUSTER. ATTACH DECODER TO PVC PIPE STAKE.	
NO SYMBOL	WIRE	HUNTER	SEE NOTES	12 AWG	INSTALL (3) THREE WIRE PATHS GOING OUT OF THE CONTROLLER IN DIFFERENT DIRECTIONS TO THE ENDS OF MAINLINE. INSTALL 12-2 TWISTED PAIR WIRE IN PROTECTIVE JACKET AS FOLLOWS: ID-WIRE2 BLU 12AWG FOR PATH ONE. ID-WIRE2 YLW 12AWG FOR PATH TWO. ID-WIRE2 ORG 12AWG FOR PATH THREE.	SEE NOTES FOR DETAIL REFERENCE
	ELECTRICAL CONNECTION			120-VOLT	PROVIDED BY ELECTRICIAN. PLUG OR HARD WIRE CONTROLLER ONTO GFI ELECTRICAL OUTLET. LOCATION TO BE DETERMINED BY OWNER.	
	RAIN SENSOR	HUNTER	SOLAR SYNC-SEN		MOUNT PER MANUFACTURER'S SPECIFICATIONS ON A METAL 8' HIGH POLE. MOUNT IN AN AREA THAT WILL BE EXPOSED TO UNOBSTRUCTED RAINFALL, BUT NOT IN THE PATH OF SPRINKLER SPRAY.	
NO SYMBOL	CHECK VALVE	KBI	KC-SERIES		INSTALL WHERE REQUIRED TO PREVENT LOW HEAD DRAINAGE.	
SHOWN ON PLAN IN DIFFERENT HATCH SYMBOLS	POINT SOURCE EMITTERS	RAIN BIRD	SEE NOTES	SEE NOTES	XQ SERIES 1/4" DISTRIBUTION TUBING, 72" MAXIMUM LENGTH, WITH XB-05PC (0.5 GPH, 0.008 GPM) BLUE XERI-BUG EMITTERS. HATCH REPRESENTS TWO (2) EMITTERS PER SHRUB, PLACE EMITTERS AT EDGE OF ROOTBALL ON OPPOSITE SIDES OF SHRUB, TYPICAL. PROVIDE FLUSH CAP AT TUBING END.	
	PRESSURIZED MAINLINE	PVC	CLASS 315	2-1/2"	INSTALL AT 18" DEPTH. INSTALL TRUST BLOCKS ON MAINLINE AT DIRECTION CHANGES.	

IRRIGATION EQUIPMENT LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL	SIZE	NOTES	DETAIL
	NON-PRESSURIZED LATERAL	PVC	SCH. 40	SIZE PER PLAN	INSTALL AT 12" DEPTH.	
	SLEEVE	PVC	SEE NOTES	SIZE PER PAN	SLEEVE UNDER IMPROVEMENTS: UNDER VEHICLE PAVING INSTALL MAINLINE, WRING AND LATERALS IN SEPARATE PVC SCH. 80 SLEEVES AT 36" DEPTH. UNDER PEDESTRIAN PAVING INSTALL MAINLINE, WRING AND LATERALS IN SEPARATE PVC SCH. 40 SLEEVES AT 24" DEPTH. ALL SLEEVES SHALL BE TWICE THE DIAMETER OF THE PIPE. INSTALL SLEEVES AT LEAST 24" AWAY FROM THE EXISTING SD PIPE WHERE PRESENT.	
NOT SHOWN	BOOSTER PUMP (BID ALTERNATE)	BARRETT ENGINEERING PUMPS	SYSTEM MODEL: IBGA5-5-2-1.5/QP PUMP MODEL NUMBER: 5GA5-1 1/4"	1/2 HP	CONTRACTOR SHALL PROVIDE A BID ALTERNATE FOR BOOSTER PUMP ASSEMBLY IF THE AVAILABLE PRESSURE IS INADEQUATE TO SUPPORT THE DESIGNED HYDRAULIC CRITERIA AT THE TIME OF CONSTRUCTION. PROVIDE BID ALTERNATE FOR EACH POINT-OF-CONNECTION. DUE TO FLUCTUATING PRESSURE A BOOSTER PUMP MIGHT BE NEEDED. SHOULD PRESSURE BE DIFFERENT THEN SHOWN ON THE PLAN CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT FOR INSTRUCTIONS PRIOR TO PROCEEDING WITH INSTALLATION. CONTACT: DARYL GREEN AT GREEN PRODUCT SALES PHONE: 949-584-7311 E-MAIL: DGREEN@GPS-10.COM	
	CONTROLLER STATION MAXIMUM GPM POINT SOURCE EMITTER ZONE HATCH SYMBOL VALVE SIZE					
<p>NOTES:</p> <ol style="list-style-type: none"> ALL SPRAY HEADS ARE TO BE EQUIPPED WITH BUILT-IN CHECK VALVES. ALL SPRAY HEADS TO BE EQUIPPED WITH A PRESSURE COMPENSATING DEVICE. ALL HEADS ARE TO BE ADJUSTED TO PROVIDE BEST COVERAGE TO THE LANDSCAPED AREA WITHOUT OVER SPRAY ONTO BUILDINGS, WALLS, WALKWAYS AND PAVING. IRRIGATION SYSTEM IS DESIGNED TO OPERATE ONE VALVE AT A TIME. IF NECESSARY CONTRACTOR CAN COMBINE THE RUN TIME OF SOME VALVES TO ASSURE THE PROPER PERFORMANCE OF THE MASTER VALVE AND THE FLOW SENSOR. (FLOW SENSOR AND MASTER VALVE NEED MORE THEN 1 GPM TO OPERATE PROPERLY). CONTRACTOR CAN SET THE CONTROLLER TO OPERATE TWO OR MORE VALVES AT THE SAME TIME ONLY IF THE TOTAL COMBINED FLOW OF THE VALVES DO NOT EXCEED 16 GPM. CONTRACTOR SHALL CONTACT RAIN BIRD MANUFACTURER'S REP. AND SHALL SCHEDULE PRE-CONSTRUCTION MEETING TO REVIEW INSTALLATION DETAILS AND SPECIFICATIONS IN FIELD. CONTRACTOR SHALL CONTACT HUNTER SPECIFICATION MANAGER AND SHALL SCHEDULE PRE-CONSTRUCTION MEETING TO REVIEW INSTALLATION DETAILS AND SPECIFICATIONS IN FIELD. 						

IRRIGATION LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL	PSI	RADIUS	GPM	NOTES	DETAIL
	Bubbler	Hunter	PROS-06-PRS30-CV				Body Style	
	TREE BUBBLER	MSBN-50H	30	(2X) 0.50			INSTALL TWO (2) BUBBLERS AT EACH TREE LOCATION. INSTALL MULTI-STREAM BUBBLERS WITH HUNTER MSBN-50H NOZZLES ON A 6" POP-UP BODIES. USE BOTTOM INLET ONLY.	

NO.	REVISIONS:	APPROVED	DATE

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420 South Imperial Avenue
Imperial, CA 92251
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BENCHMARK DESCRIPTION:

SPURLOCK
LANDSCAPE ARCHITECTS

2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

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CITY OF IMPERIAL, CA

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PREPARED UNDER THE DIRECT SUPERVISION OF:
Brad Lents
BRAD LENTS
5766
LA NO.
05/28/2024
DATE
05/31/2025
REG. EXP.

PROJECT TITLE: CITY OF IMPERIAL
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1
SHEET CONTENT: IRRIGATION LEGEND

SCALE:
DRAWN BY: AK & MS
REVISED BY: YZ
JUNE 2024
SHEET
35
OF 52 SHEETS
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XXXXXXXX

IRRIGATION NOTES

- ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK. THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS AND AS-BUILT DRAWINGS BEFORE BEGINNING WORK.
- CONTRACTOR SHALL COORDINATE ALL IRRIGATION LINES AND CONTROLLER WIRES WITH PROPOSED LOCATIONS OF PLANT MATERIAL AND ROOT BARRIERS PRIOR TO INSTALLATION. ALL IRRIGATION SLEEVES SHALL BE COORDINATED AND INSTALLED PRIOR TO INSTALLATION OF ANY PAVING, WALL FOOTINGS / FOUNDATIONS, CURBS AND ETC.
- THIS DESIGN IS DIAGRAMMATIC. ALL EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARITY ONLY AND IS TO BE INSTALLED WITHIN PLANTING AREAS AS NECESSARY.
- DO NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE OWNER.
- INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL WATER AUTHORITY, CITY OF IMPERIAL, COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.
- ALL LATERALS, MAINLINE AND WIRE UNDER PEDESTRIAN PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE TWICE THE DIAMETER OF THE PIPE CARRIED. ALL LATERALS, MAINLINE AND WIRE UNDER VEHICLE PAVED AREAS TO BE INSTALLED IN A SCH. 80 SLEEVE TWICE THE DIAMETER OF THE PIPE CARRIED. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MINIMUM DEPTH AS SHOWN ON THE SLEEVING DETAILS. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF THE PAVING. ALL SLEEVES TO BE AS SHOWN ON THE PLANS.
- ALL HEADS ARE TO BE INSTALLED WITH THE NOZZLE, SCREEN AND ARCS SHOWN ON THE PLANS. ALL HEADS ARE TO BE ADJUSTED TO PREVENT OVERSPRAY ONTO BUILDING, WALLS, FENCES AND HARDSCAPE. THIS INCLUDES, BUT NOT LIMITED TO, ADJUSTMENT OF DIFFUSER PIN OR ADJUSTMENT SCREW, REPLACEMENT OF PRESSURE COMPENSATING SCREENS, REPLACEMENT OF NOZZLES WITH MORE APPROPRIATE RADIUS UNITS AND THE REPLACEMENT OF NOZZLES WITH ADJUSTABLE ARC UNITS.
- ALL HEADS INDICATED ON THE PLANS AT A SPACING LESS THAN 75% OF FULL OPEN THROW, AS PER MANUFACTURER'S RECOMMENDATIONS, ARE TO RECEIVE A PCS SCREEN OF APPROPRIATE SIZE TO REDUCE THE RADIUS TO MORE CLOSELY MATCH THE SPACING. REFER TO THE MANUFACTURER'S CHARTS PROVIDED WITH PCS SCREENS FOR SIZING OF SCREENS.
- PROVIDE CLEAN SAND BEDDING AND BACKFILL FOR PRESSURE MAINLINE PIPE (3 IN. BELOW AND 6 IN. ABOVE PIPE MINIMUM).
- IRRIGATION SYSTEMS ARE TO BE INSTALLED AS SHOWN ON THE PLANS & IN ACCORDANCE W/THE CRITERIA AND STANDARDS OF THE CITY OF IMPERIAL AS OF THE APPROVED DATE OF THESE PLANS.
- USE VARIABLE ARC NOZZLES AS REQUIRED TO ACHIEVE COMPLETE COVERAGE WITH MINIMAL OVERSPRAY
- SYSTEMS ARE DESIGNED FOR A MINIMUM OF 30 psi FOR SPRINKLER HEADS.
- ALL LATERAL END RUNS SHALL BE 3/4" SCH. 40, UNLESS OTHERWISE NOTED.
- ALL REMOTE CONTROL VALVES SHALL BE INSTALLED IN VALVE BOXES, ONE VALVE PER BOX. LOCATE ALL REMOTE CONTROL AND QUICK COUPLING VALVES ADJACENT TO WALKS OR CURBS.
- CHECK VALVES SHALL BE INSTALLED AS REQUIRED TO PREVENT ALL LOW HEAD DRAINAGE.
- CONTRACTOR SHALL VERIFY THAT THERE IS ADEQUATE PRESSURE AVAILABLE AT THE SITE FOR THE IRRIGATION SYSTEM TO WORK PROPERLY. IDEALLY THERE SHOULD BE 30 POUNDS OF PRESSURE AT LAST HEAD ON EVERY CIRCUIT. DESIGN ASSUMES 72 PSI AT THE POINT OF CONNECTION AS PROVIDED BY THE CITY OF IMPERIAL. SHOULD PRESSURE BE DIFFERENT THEN SHOWN ON THE PLAN CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT FOR INSTRUCTIONS PRIOR TO PROCEEDING WITH INSTALLATION.
- IF AVAILABLE PRESSURE EXCEEDS 80 PSI CONTRACTOR SHALL ADJUST PRESSURE AT PRESSURE REGULATOR.
- CONTRACTOR SHALL VERIFY PROPOSED LOCATION FOR BACKFLOW PREVENTER AND IRRIGATION CONTROLLER PRIOR TO INSTALLATION. CITY OF IMPERIAL BACKFLOW SPECIALIST TO APPROVE BACKFLOW PREVENTER LOCATION.

- INSTALL (1) HUNTER SOLAR-SYNC RAIN SHUT-OFF DEVICE, PER CONTROLLER, PER MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL PROVIDE LANDSCAPE AND IRRIGATION MAINTENANCE SCHEDULE TO THE LANDSCAPE ARCHITECT AT THE TIME OF FINAL INSPECTION.
- IRRIGATION SYSTEM IS DESIGNED TO OPERATE ONE VALVE AT A TIME. IF NECESSARY CONTRACTOR CAN COMBINE THE RUN TIME OF SOME VALVES TO ASSURE THE PROPER PERFORMANCE OF THE MASTER VALVE AND THE FLOW SENSOR. (FLOW SENSOR NEEDS MORE THEN 1 GPM TO OPERATE PROPERLY). CONTRACTOR CAN SET THE CONTROLLER TO OPERATE TWO OR MORE VALVES AT THE SAME TIME ONLY IF THE TOTAL COMBINED FLOW OF THE VALVES DO NOT EXCEED 16 GPM.
- CONTRACTOR SHALL PROVIDE IRRIGATION WATERING SCHEDULES FOR PLANT ESTABLISHMENT PERIOD, ESTABLISHED LANDSCAPING, TEMPORARILY IRRIGATED AREAS AND DIFFERENT SEASONS. IRRIGATION WATERING SCHEDULE SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT AT THE TIME OF FINAL INSPECTION.
- IRRIGATION AUDIT SHALL BE CONDUCTED BY A THIRD PARTY IF REQUIRED BY THE CITY.
- CONTRACTOR SHALL PROVIDE A BID ALTERNATE FOR BOOSTER PUMP ASSEMBLY IF THE AVAILABLE PRESSURE IS INADEQUATE TO SUPPORT THE DESIGNED HYDRAULIC CRITERIA AT THE TIME OF CONSTRUCTION. PROVIDE BID ALTERNATE FOR EACH POINT-OF-CONNECTION. DUE TO FLUCTUATING PRESSURE A BOOSTER PUMP MIGHT BE NEEDED. PROVIDE BOOSTER PUMP SUFFICIENT ENOUGH TO INSURE THAT THE IRRIGATION SYSTEM SHALL WORK PROPERLY. SHOULD PRESSURE BE DIFFERENT THEN SHOWN ON THE PLAN CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT FOR INSTRUCTIONS PRIOR TO PROCEEDING WITH INSTALLATION.

IRRIGATION SCHEDULE	
1	MAINLINE AND REMOTE CONTROL VALVES SHOWN IN HARDSCAPE FOR CLARITY ONLY. LOCATE IRRIGATION MAINLINE AND REMOTE CONTROL VALVES IN THE MEDIAN PLANTER AREA. INSTALL IRRIGATION MAINLINE AT 36" FROM THE EDGE OF PAVEMENT. SEE DETAIL 5, SHEET 37 FOR REMOTE CONTROL VALVE MANIFOLD INSTALLATION.
2	INSTALL IRRIGATION MAINLINE AT 18" FROM THE EDGE OF PAVEMENT.
3	QUICK COUPLER WITH BALL VALVE SHOWN IN HARDSCAPE FOR CLARITY ONLY. INSTALL QUICK COUPLER AND BALL VALVE IN THE MEDIAN PLANTER AREA AT 36" FROM EDGE OF PAVEMENT (TYP).
4	BALL VALVE SHOWN IN HARDSCAPE FOR CLARITY ONLY. INSTALL BALL VALVE IN THE MEDIAN PLANTER AREA (TYP).
5	LATERAL LINES SHOWN IN HARDSCAPE FOR CLARITY ONLY. INSTALL ALL LATERAL LINES IN THE MEDIAN PLANTER AREAS (TYP).
	TREE BUBBLER LOCATION SHOWN IS APPROXIMATE. SEE PLANTING PLAN FOR EXACT TREE LOCATION.
6	INSTALL TWO (2) MULTI-STREAM BUBBLERS WITH HUNTER MSBN-50H NOZZLES ON A 6" POP-UP BODIES AT EACH TREE LOCATION. USE BOTTOM INLET ONLY.
7	IRRIGATION MAINLINE AND WIRE SLEEVES (TYP). INSTALL PER SLEEVING DETAIL 4, SHEET 39. INSTALL SLEEVES AT LEAST 24" AWAY FROM THE EXISTING SD PIPE WHERE PRESENT.
8	POINT SOURCE EMITTER ZONES SHOWN IN DIFFERENT HATCH SYMBOLS (TYP.). INSTALL RAIN BIRD XQ SERIES 1/4" DISTRIBUTION TUBING, 72" MAXIMUM LENGTH, WITH XB-05PC (0.5 GPH, 0.008 GPM) BLUE XERI-BUG EMITTERS. HATCH REPRESENTS TWO (2) EMITTERS PER SHRUB, PLACE EMITTERS AT EDGE OF ROOTBALL ON OPPOSITE SIDES OF SHRUB, TYPICAL. PROVIDE FLUSH CAP AT TUBING END. INSTALL PER DETAIL 1, SHEET 40.
9	INSTALL IRRIGATION MAINLINE AND WIRE STUB-OUTS WITH A SHUT-OFF VALVE AT THIS APPROXIMATE LOCATION IN THE MEDIAN PLANTER AREA FOR POSSIBLE FUTURE EXPANSION. INSTALL MAINLINE STUB-OUT AND SHUT-OFF VALVE IN A STANDARD RECTANGULAR VALVE BOX WITH A TAN COLOR LID. INSTALL WIRES WITH WATER PROOF SPLICES 3M PART NUMBER DBRY-6 DISTRIBUTED BY PAIGE ELECTRIC IN A 10" ROUND VALVE BOX WITH A TAN COLOR LID.

PRESSURE LOSS CALCULATION FOR POINT-OF-CONNECTION 'A'

PROJECT: CITY OF IMPERIAL SR-86 MEDIAN IMPROVEMENTS								
LOCATION: CITY OF IMPERIAL, CA								
PRESS ZONE / SOURCE ELEV.:								
DATE OF PRESSURE CHECK: 12/5/23				BY: CITY OF IMPERIAL				
JOB NO.: CRA-214								
CLIENT NO.: 760.355.4371								
WATER AUTHORITY: CITY OF IMPERIAL								
CALC. DATE: 4/3/24				BY: MS				
VALVE NO. CHECKED: A21								
PRESS. AT POC: 72 PSI								
POC ELEVATION: 939				HIGHEST HEAD: 942				
PIPE SECTION	PIPE TYPE	PIPE SIZE	PIPE LENGTH	ACCUM. GPM	LOSS IN PSI			
1	SCH. 40	3/4"	50'	2.0	0.22			
2	SCH. 40	3/4"	50'	3.0	0.47			
3	SCH. 40	3/4"	50'	4.0	0.8			
4	SCH. 40	3/4"	50'	5.0	1.2			
5	SCH. 40	1"	50'	6.0	0.51			
6	SCH. 40	1"	50'	7.0	0.68			
7	SCH. 40	1-1/4"	20'	12.0	0.19			
A. TOTAL LATERAL SYSTEM LOSSES					4.07			
MAINLINE SYSTEM:								
PIPE SECTION	PIPE TYPE	PIPE SIZE	PIPE LENGTH	ACCUM. GPM	LOSS IN PSI			
1	CL. 315	2-1/2"	3,237'	12.0	1.9			
B. TOTAL MAINLINE SYSTEM LOSSES					1.9			
MISCELLANEOUS LOSSES:				SIZE:				
WATER METER				1-1/2"				0.4
CONTROL VALVE				1"				3.0
MASTER CONTROL VALVE				1-1/2"				0.45
BACKFLOW PREVENTER				1-1/2"				12
FLOW SENSOR				1-1/2"				0.5
C. TOTAL MISCELLANEOUS LOSSES					16.3			
D. TOTAL SYSTEM LOSSES (A+B+C)					22.3			
E. FITTING LOSSES (15% OF TOTAL LOSSES)					3.3			
F. HEAD LOSS / GAIN IN SYSTEM					1.3			
G. MINIMUM REQUIRED PRESSURE AT LAST HEAD					30			
H. DESIGN PRESSURE (D+E+F+G)					56.9			
I. AVAILABLE PSI					72			
J. RESIDUAL PSI (I-H)					15.1			
K. PUMP BOOST					SEE NOTE BELOW			
L. ADJUSTED RESIDUAL PSI (J+K)					15.1			

BOOSTER PUMP NOTE:
CONTRACTOR SHALL PROVIDE A BID ALTERNATE FOR BOOSTER PUMP ASSEMBLY IF THE AVAILABLE PRESSURE IS INADEQUATE TO SUPPORT THE DESIGNED HYDRAULIC CRITERIA AT THE TIME OF CONSTRUCTION. PROVIDE BID ALTERNATE FOR EACH POINT-OF-CONNECTION. DUE TO FLUCTUATING PRESSURE A BOOSTER PUMP MIGHT BE NEEDED. PROVIDE BOOSTER PUMP SUFFICIENT ENOUGH TO INSURE THAT THE IRRIGATION SYSTEM SHALL WORK PROPERLY. SHOULD PRESSURE BE DIFFERENT THEN SHOWN ON THE PLAN CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT FOR INSTRUCTIONS PRIOR TO PROCEEDING WITH INSTALLATION.

WATER USE CALCULATIONS

MAXIMUM APPLIED WATER ALLOWANCE CALCULATION - MAWA

$MAWA = (Eto)(0.62)[(0.45 \times LA) + (1 - 0.45 \times SLA)]$ where:
Eto = Reference Evapotranspiration (inches/year) - Imperial Valley, CA = 71.6
0.45 (non-residential) or 0.55 (residential) = ET Adjustment Factor
LA = Landscape Area (square feet)
0.62 = Conversion Factor (to gallons per square foot)
SLA = Special Landscape Area

$MAWA = (Eto)(0.62)[(0.45 \times LA) + (1 - 0.45 \times SLA)]$
 $MAWA = (71.6)(0.62)[(0.45 \times 103,862) + (0.55 \times 0)]$
MAWA = 2,074,695 Gallons per Year
MAWA = 2,074,695 / 748 = 2,773 HCF (Hundred-Cubic-Foot Per Year)

ESTIMATED TOTAL WATER USE CALCULATION - ETWU

$ETWU_{Hydrozone} = [(Eto)(0.62)][(PF)(HA)](IE) + SLA$ where:
Eto = Reference Evapotranspiration (inches/year) - Imperial Valley, CA = 71.6
PF = Plant Factor
IE = Irrigation Efficiency - 0.81 for Drip Devices and 0.75 for Overhead Spray Devices
HA = Hydrozone Area (square feet)
0.62 = Conversion Factor (to gallons per square foot)
SLA = Special Landscape Area

HYDROZONE 1 - TREE BUBBLERS

$ETWU = [(Eto)(0.62)][(PF)(HA)](IE) + SLA$
 $ETWU = [(71.6)(0.62)][(0.4)(2,420)](0.75) + 0$
ETWU = 57,292 Gallons per Year
ETWU = 57,292 / 748 = 77 HCF (Hundred-Cubic-Foot Per Year)

HYDROZONE 2 - DRIP

$ETWU = [(Eto)(0.62)][(PF)(HA)](IE) + SLA$
 $ETWU = [(71.6)(0.62)][(0.2)(101,442)](0.81) + 0$
ETWU = 1,111,854 Gallons per Year
ETWU = 1,111,854 / 748 = 1,486 HCF (Hundred-Cubic-Foot Per Year)

TOTAL FOR ALL HYDROZONES

$ETWU = HYDROZONE 1 + HYDROZONE 2$
 $ETWU = 57,292 + 1,111,854$
ETWU = 1,169,146 Gallons per Year
ETWU = 1,169,146 / 748 = 1,563 HCF (Hundred-Cubic-Foot Per Year)

CONCLUSION

The **ETWU (1,169,146 gallons per year)** is less than **MAWA (2,074,695 gallons per year)**. The water budget for City of Imperial SR-86 Median Improvements complies with MAWA.

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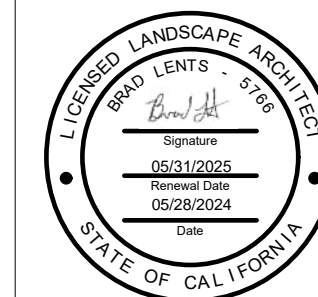
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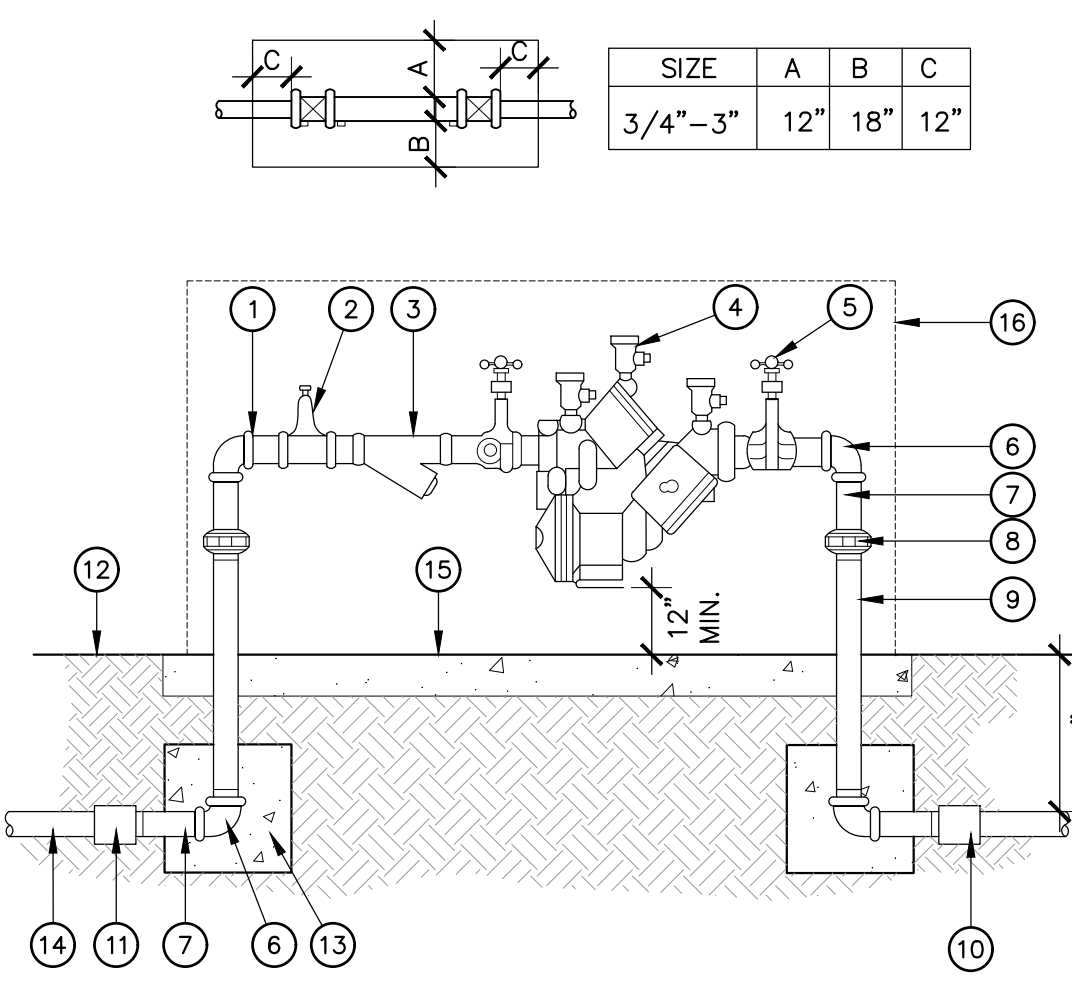
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LA NO.
05/31/2025
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PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: IRRIGATION NOTES, SCHEDULE AND CALCULATIONS

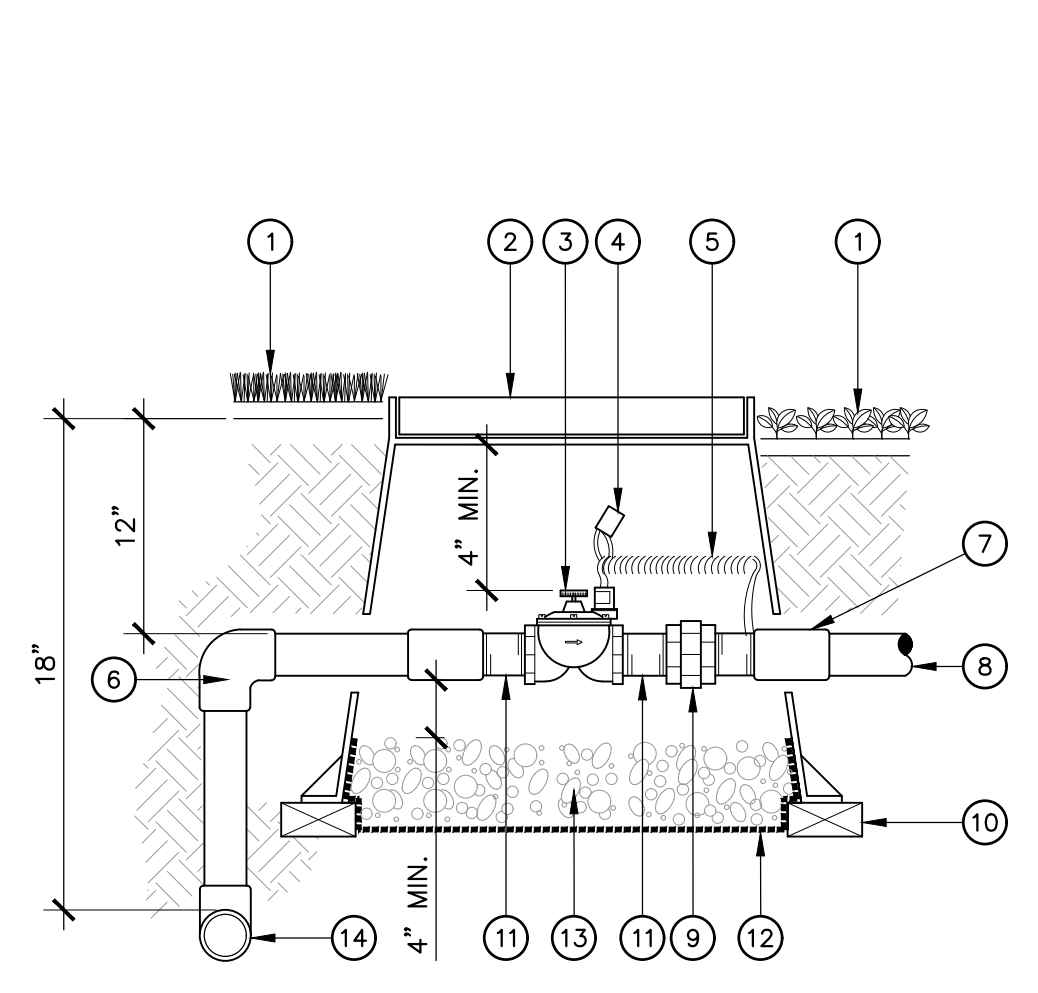
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SHEET
36
OF 52 SHEETS
JOB NO.
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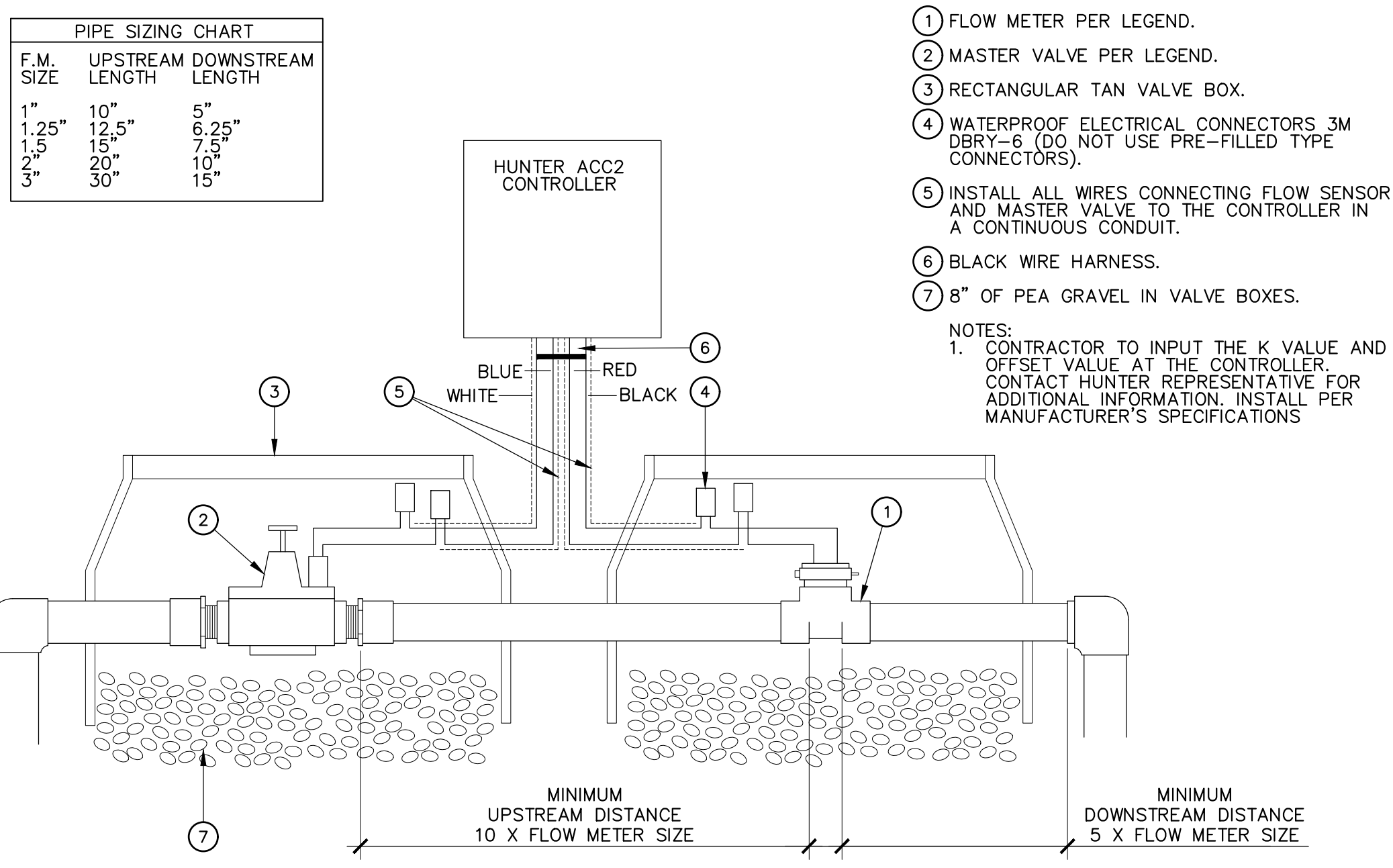
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- 1 3" BRASS NIPPLES (4)
 - 2 PRESSURE REGULATOR
 - 3 Y- STRAINER.
 - 4 R.P. BACKFLOW PREVENTER
 - 5 BALL VALVES (2)
 - 6 BRASS ELLS (2)
 - 7 BRASS NIPPLES (4)
 - 8 BRASS UNIONS (2)
 - 9 BRASS RISERS (2)
 - 10 S X T SCH. 40 PVC ADAPTER
 - 11 DIELECTRIC ADAPTER
 - 12 FINISHED GRADE
 - 13 CONCRETE FOOTINGS 2 CU. FT. EACH
 - 14 WATER SUPPLY: SOLID COPPER LOCATE AS CLOSE TO PROPERTY LINE AS POSSIBLE
 - 15 CONCRETE SLAB (4" THICK)
 - 16 STRONG BOX SMOOTH TOUCH VANDAL RESISTANT BACKFLOW ENCLOSURE. ENCLOSURE SHALL BE LARGE ENOUGH TO ACCOMMODATE BACKFLOW ASSEMBLY. INSTALL PER MANUF. RECOMMENDATIONS.
- NOTES:
1. DETAIL FOR REFERENCE ONLY. INSTALL PER CITY OF IMPERIAL APPROVED DETAIL. COORDINATE ALL INSTALLATION WITH CITY OF IMPERIAL INSPECTOR.
 2. CONTRACTOR MAY SUBSTITUTE TYPE K OR L COPPER PIPE FOR BRASS. THIS INSTALLATION IS TYPICAL. CLEARANCES SHALL APPLY TO ALL OTHER TYPES OF BACKFLOW PREVENTION DEVICES.



- 1 FINISHED GRADE 1" BELOW VALVE BOX TOP IN TURF AREAS. 2" BELOW VALVE BOX IN SHRUB BEDS.
 - 2 TAN PLASTIC RECTANGULAR VALVE BOX WITH LOCKING LID. BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE.
 - 3 CONTROL VALVE, SEE LEGEND FOR SPEC
 - 4 WATER PROOF WIRE CONNECTOR - 3M DBRY-6
 - 5 18" WIRE LOOP (WRAP 15 TIMES AROUND 1/2" DIA. PIPE TO FORM COIL - REMOVE PIPE.)
 - 6 PVC SCH.80 ELLS (2)
 - 7 PVC SCH 80 SLIPxPIPT ADAPTER, (2 REQUIRED)
 - 8 PVC LATERAL LINE - PIPE PER SPECS. ANGLE TO SPECIFIED DEPTH WITH 45 ELLS
 - 9 SCH. 80 UNION
 - 10 BRICK SUPPORTS - (1) ONE AT EACH CORNER
 - 11 3" SCH. 80 NIPPLE TYP. (3 TOTAL)
 - 12 LANDSCAPE FABRIC
 - 13 1 C.F.- PEA GRAVEL
 - 14 PVC MAINLINE PIPE FROM BACKFLOW PER SPECS.
- NOTES:
1. ALL WIRE TO BE INSTALLED AS PER LOCAL CODES. USE WATER PROOF WIRE CONNECTOR - DBRY-6.
 2. COMPACT SOIL AROUND VALVE BOX TO SAME DENSITY AS UNDISTURBED ADJACENT SOIL.
 3. ALL VALVE BOX LIDS (TAN COLOR) SHALL BE BRANDED WITH CONTROLLER ID AND STATION NUMBER. PROVIDE A STATION NUMBER TAG INSIDE THE VALVE BOX.
 4. INSTALL ALL WIRES CONNECTING MASTER VALVE TO THE CONTROLLER IN A CONTINUOUS CONDUIT.
 5. INSTALL PER HUNTER INDUSTRIES SPECIFICATIONS. CONTRACTOR SHALL CONTACT HUNTER SPECIFICATION MANAGER AND SCHEDULE PRE-CONSTRUCTION MEETING TO REVIEW INSTALLATION DETAILS AND SPECIFICATIONS IN FIELD.

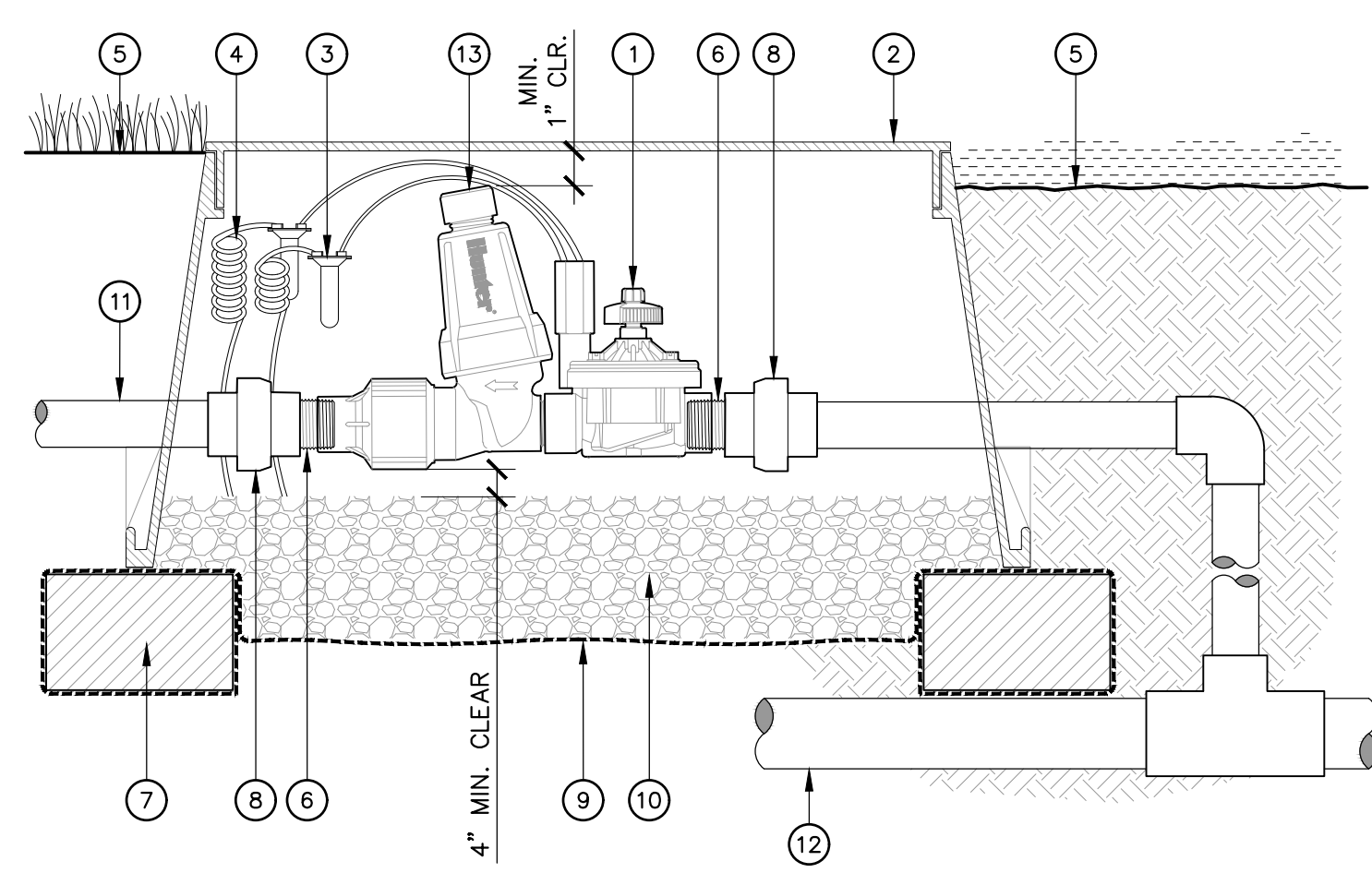


- 1 FLOW METER PER LEGEND.
 - 2 MASTER VALVE PER LEGEND.
 - 3 RECTANGULAR TAN VALVE BOX.
 - 4 WATERPROOF ELECTRICAL CONNECTORS 3M DBRY-6 (DO NOT USE PRE-FILLED TYPE CONNECTORS).
 - 5 INSTALL ALL WIRES CONNECTING FLOW SENSOR AND MASTER VALVE TO THE CONTROLLER IN A CONTINUOUS CONDUIT.
 - 6 BLACK WIRE HARNESS.
 - 7 8" OF PEA GRAVEL IN VALVE BOXES.
- NOTES:
1. CONTRACTOR TO INPUT THE K VALUE AND OFFSET VALUE AT THE CONTROLLER. CONTACT HUNTER REPRESENTATIVE FOR ADDITIONAL INFORMATION. INSTALL PER MANUFACTURER'S SPECIFICATIONS

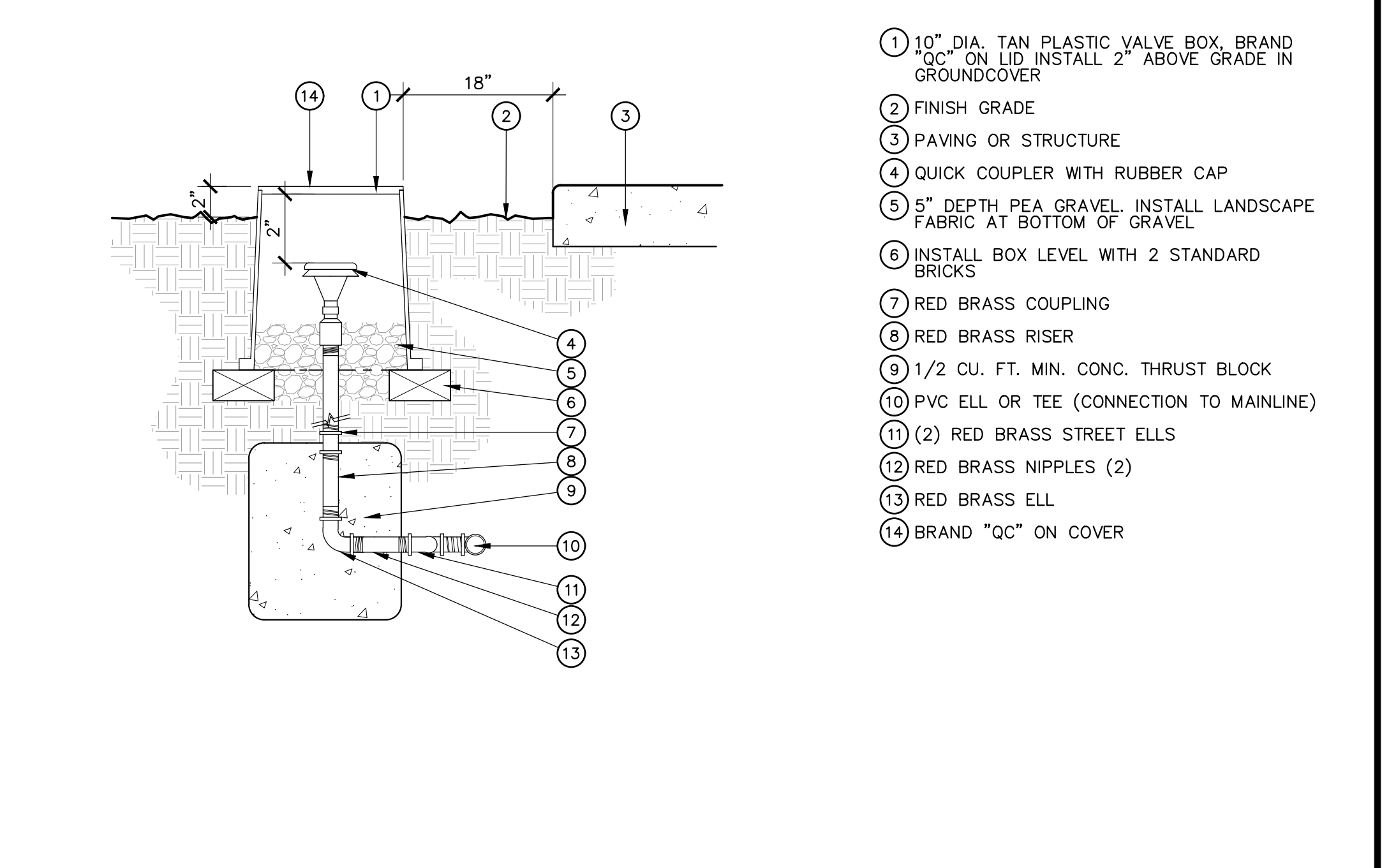
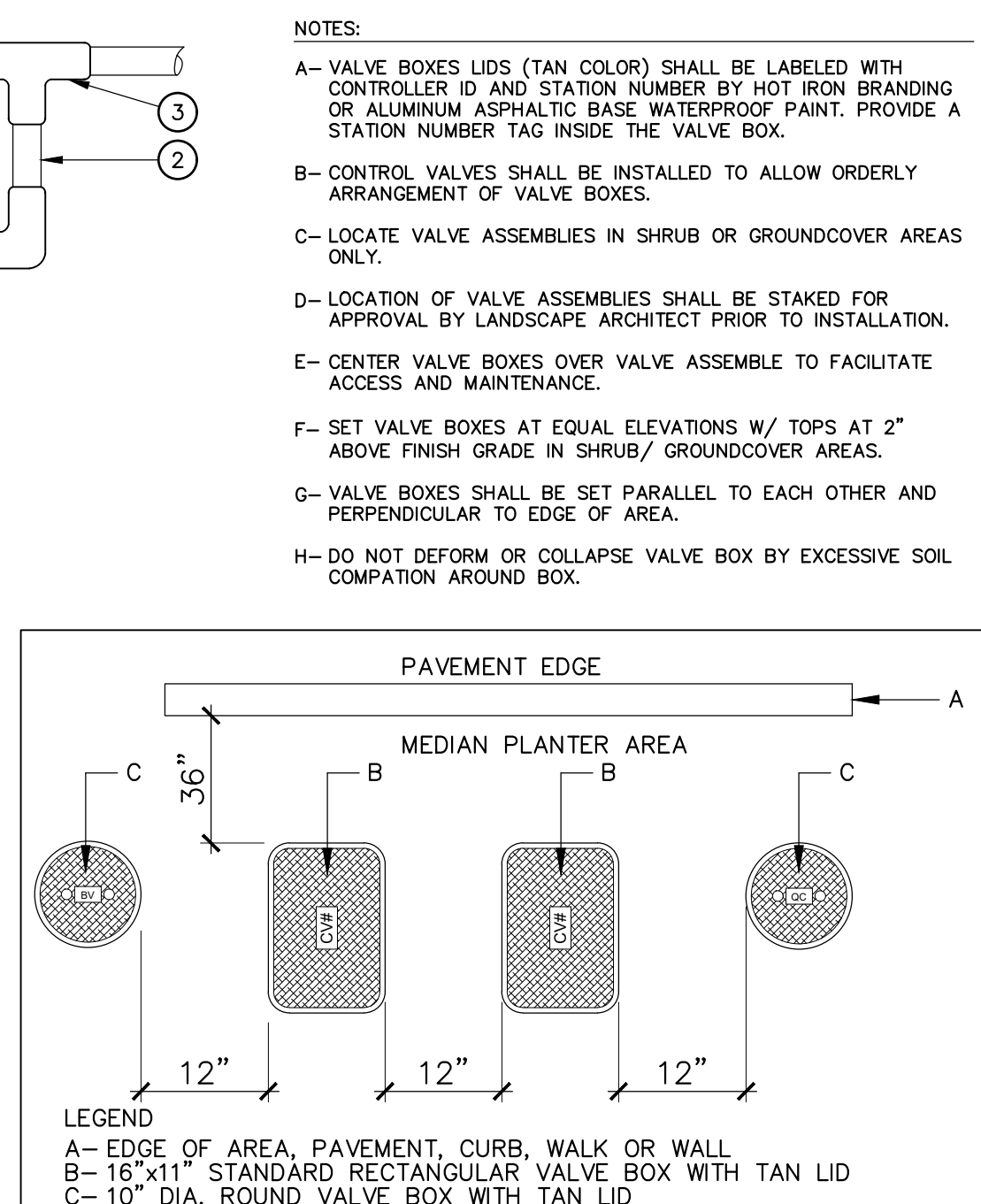
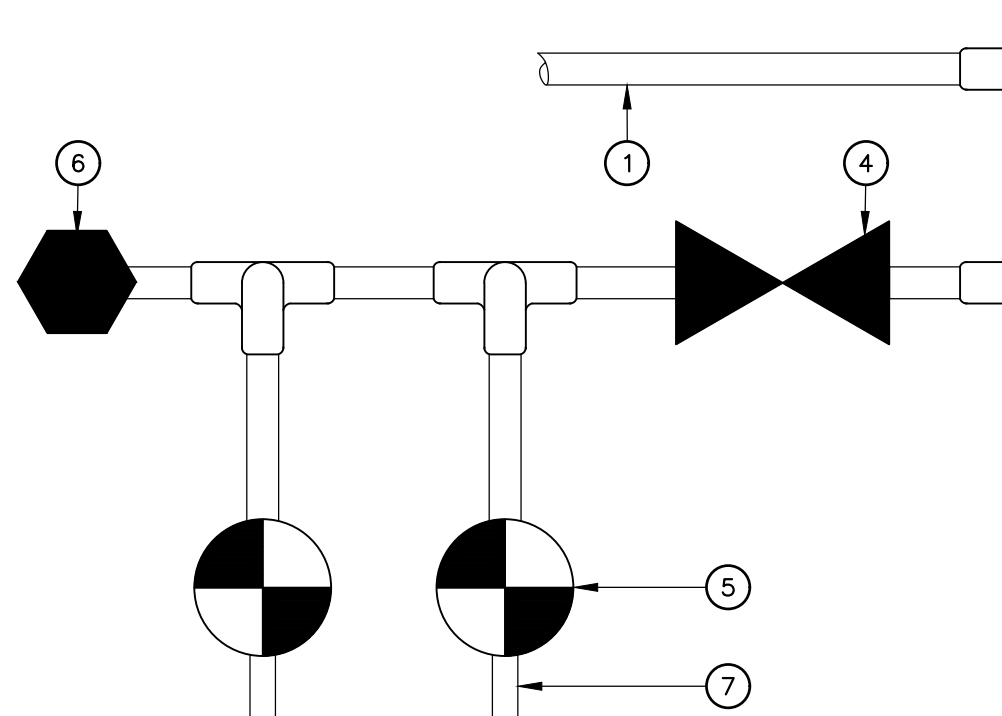
1 R.P. BACKFLOW PREVENTER NOT TO SCALE

2 MASTER AND REMOTE CONTROL VALVE NOT TO SCALE

3 FLOW SENSOR NOT TO SCALE



- 1 HUNTER REMOTE CONTROL VALVE (ICZ) WITH FILTER REGULATOR
 - 2 TAN PLASTIC RECTANGULAR VALVE BOX WITH LOCKING LID. BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. VALVE BOX SHALL BE LARGE ENOUGH TO ACCOMMODATE VALVE ASSEMBLY.
 - 3 WATER PROOF WIRE CONNECTOR - 3M DBRY-6.
 - 4 18"-24" COILED WIRE TO CONTROLLER
 - 5 FINISHED GRADE 1" BELOW VALVE BOX TOP IN TURF AREAS. 2" BELOW VALVE BOX IN SHRUB BEDS
 - 6 80 CLOSE NIPPLE, MATCH SIZE TO VALVE.
 - 7 BRICK SUPPORTS - (1) ONE AT EACH CORNER
 - 8 SCH. 80 UNION
 - 9 FILTER FABRIC - WRAP TWICE AROUND BRICK SUPPORT
 - 10 3/4" WASHED GRAVEL - 4" MIN. DEPTH
 - 11 PVC LATERAL LINE - PIPE PER SPECS. ANGLE TO SPECIFIED DEPTH WITH 45 ELLS
 - 12 MAINLINE LATERAL AND FITTINGS
 - 13 HUNTER FILTER REGULATOR PER LEGEND
- NOTES:
1. ALL WIRE TO BE INSTALLED AS PER LOCAL CODES. USE WATER PROOF WIRE CONNECTOR - DBRY-6.
 2. COMPACT SOIL AROUND VALVE BOX TO SAME DENSITY AS UNDISTURBED ADJACENT SOIL.
 3. ALL VALVE BOX LIDS (TAN COLOR) SHALL BE BRANDED WITH CONTROLLER ID AND STATION NUMBER. PROVIDE A STATION NUMBER TAG INSIDE THE VALVE BOX.
 4. INSTALL PER HUNTER INDUSTRIES SPECIFICATIONS. CONTRACTOR SHALL CONTACT HUNTER SPECIFICATION MANAGER AND SCHEDULE PRE-CONSTRUCTION MEETING TO REVIEW INSTALLATION DETAILS AND SPECIFICATIONS IN FIELD.



- 1 10" DIA. TAN PLASTIC VALVE BOX, BRAND "QC" ON LID INSTALL 2" ABOVE GRADE IN GROUND COVER
- 2 FINISH GRADE
- 3 PAVING OR STRUCTURE
- 4 QUICK COUPLER WITH RUBBER CAP
- 5 5" DEPTH PEA GRAVEL. INSTALL LANDSCAPE FABRIC AT BOTTOM OF GRAVEL
- 6 INSTALL BOX LEVEL WITH 2 STANDARD BRICKS
- 7 RED BRASS COUPLING
- 8 RED BRASS RISER
- 9 1/2 CU. FT. MIN. CONC. THRUST BLOCK
- 10 PVC ELL OR TEE (CONNECTION TO MAINLINE)
- 11 (2) RED BRASS STREET ELLS
- 12 RED BRASS NIPPLES (2)
- 13 RED BRASS ELL
- 14 BRAND "QC" ON COVER

4 DRIP REMOTE CONTROL VALVE ASSEMBLY NOT TO SCALE

5 VALVE MANIFOLD INSTALLATION (TYPICAL) NOT TO SCALE

6 QUICK COUPLER NOT TO SCALE

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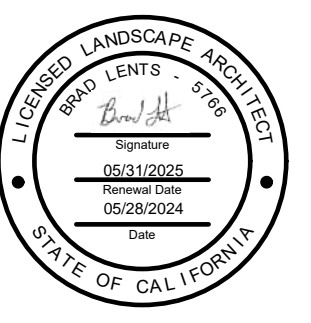


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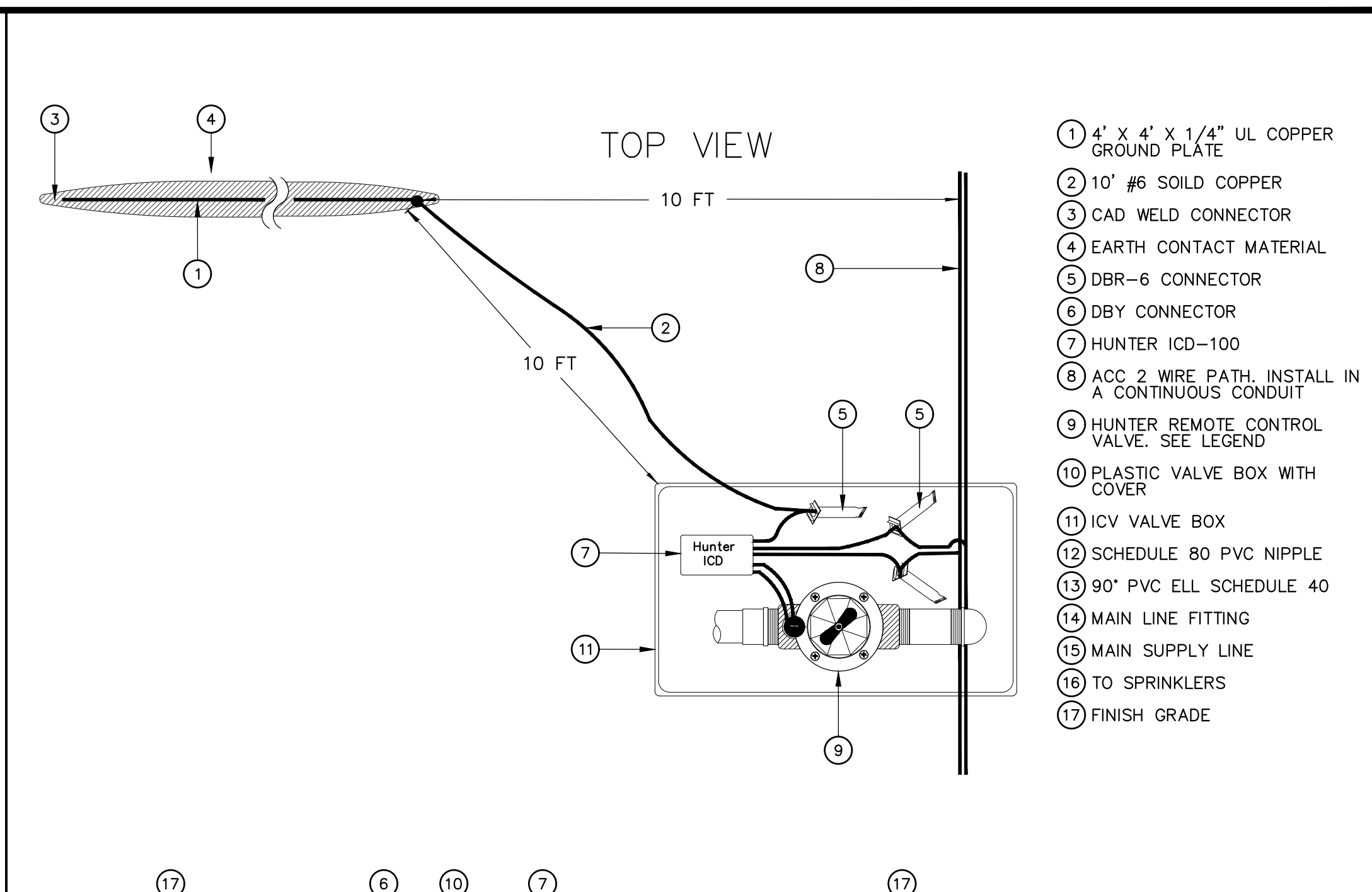
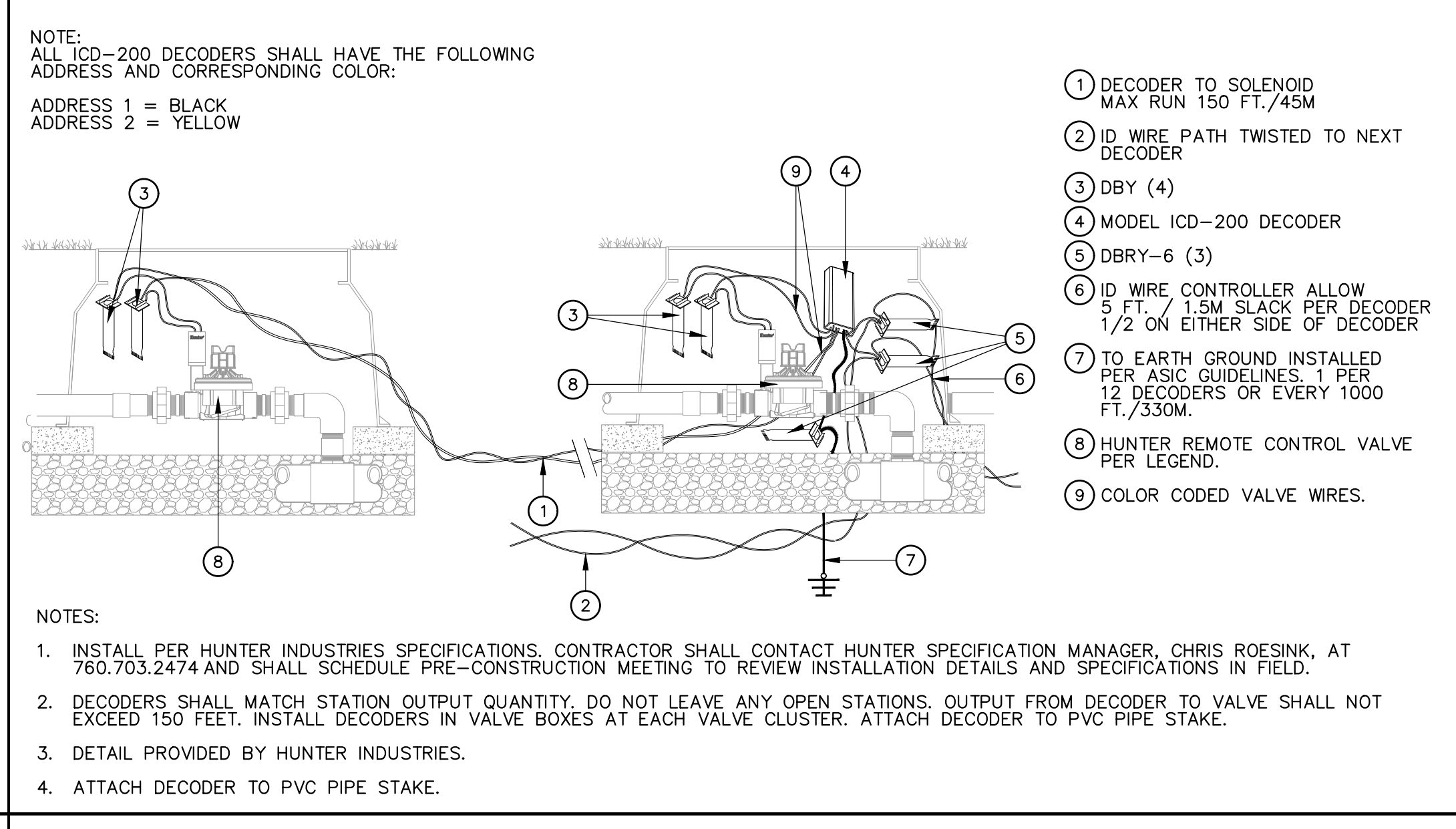
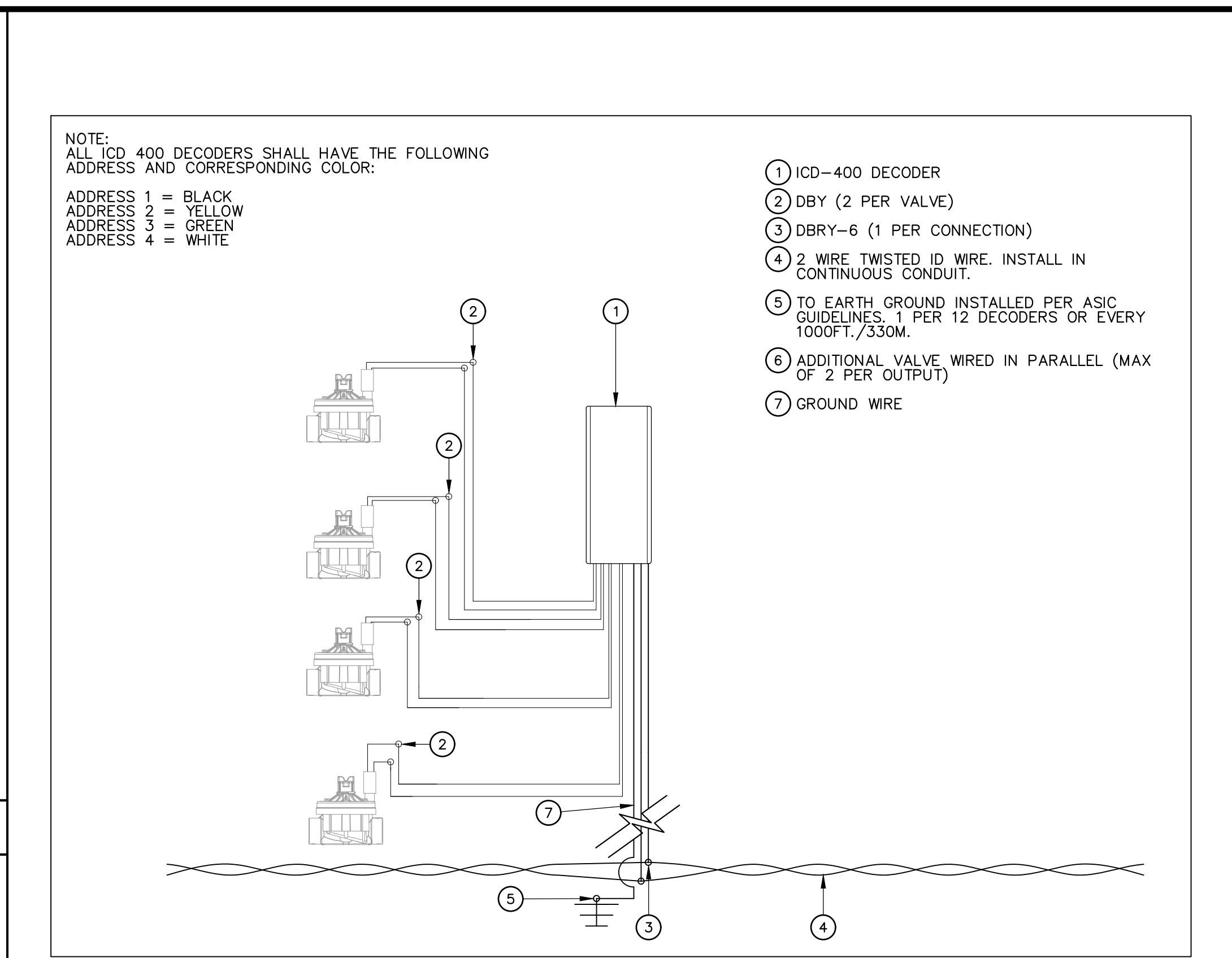
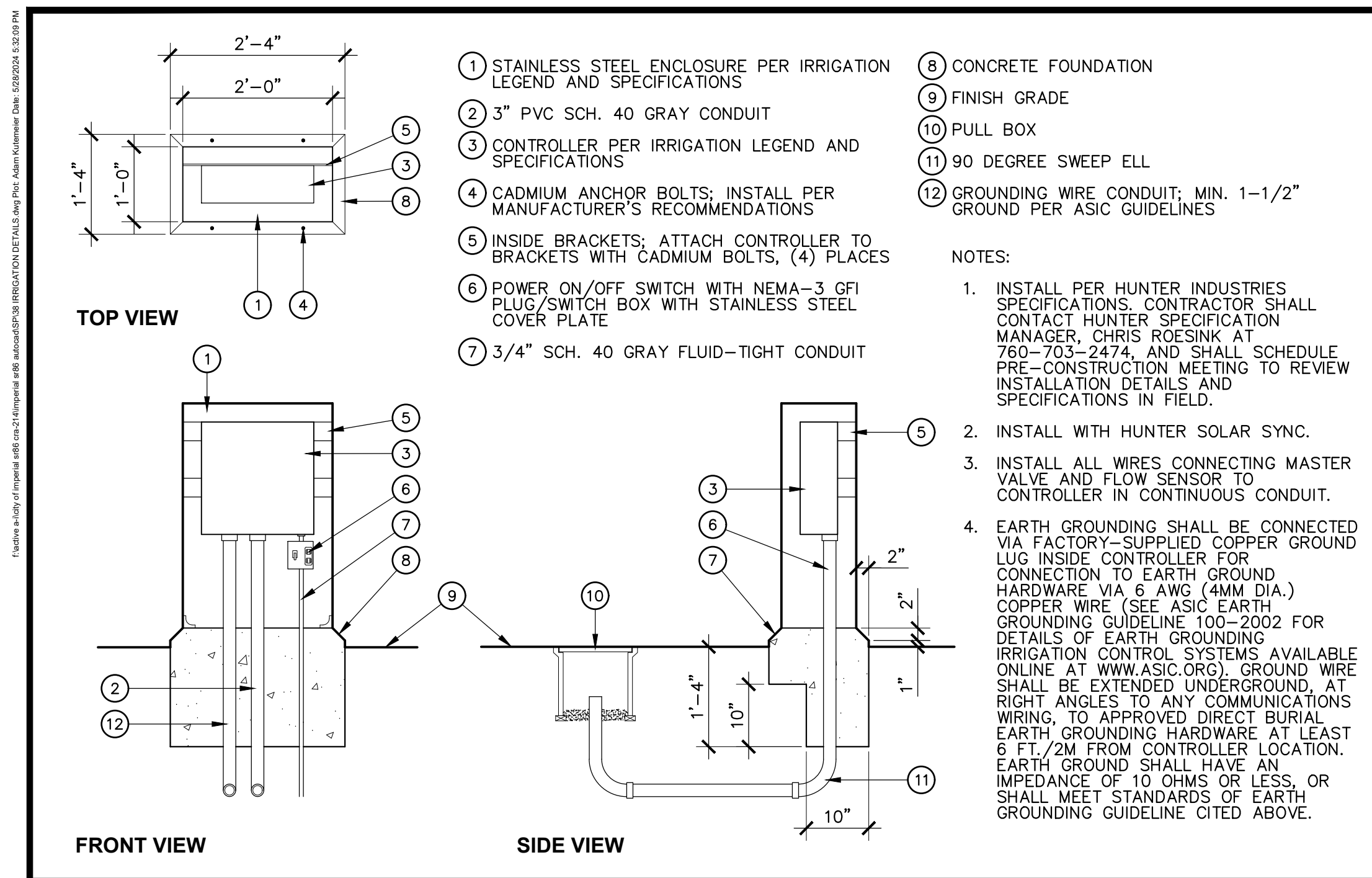


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BRAD LENTS
5766
LA NO.
05/31/2025
DATE REG. EXP.

PROJECT TITLE: CITY OF IMPERIAL
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1
SHEET CONTENT: IRRIGATION DETAILS

SCALE: DRAWN BY: AK & MS
REVISED BY: YZ
SHEET 37 OF 52 SHEETS
JOB NO. XXXXXXXX
JUNE 2024

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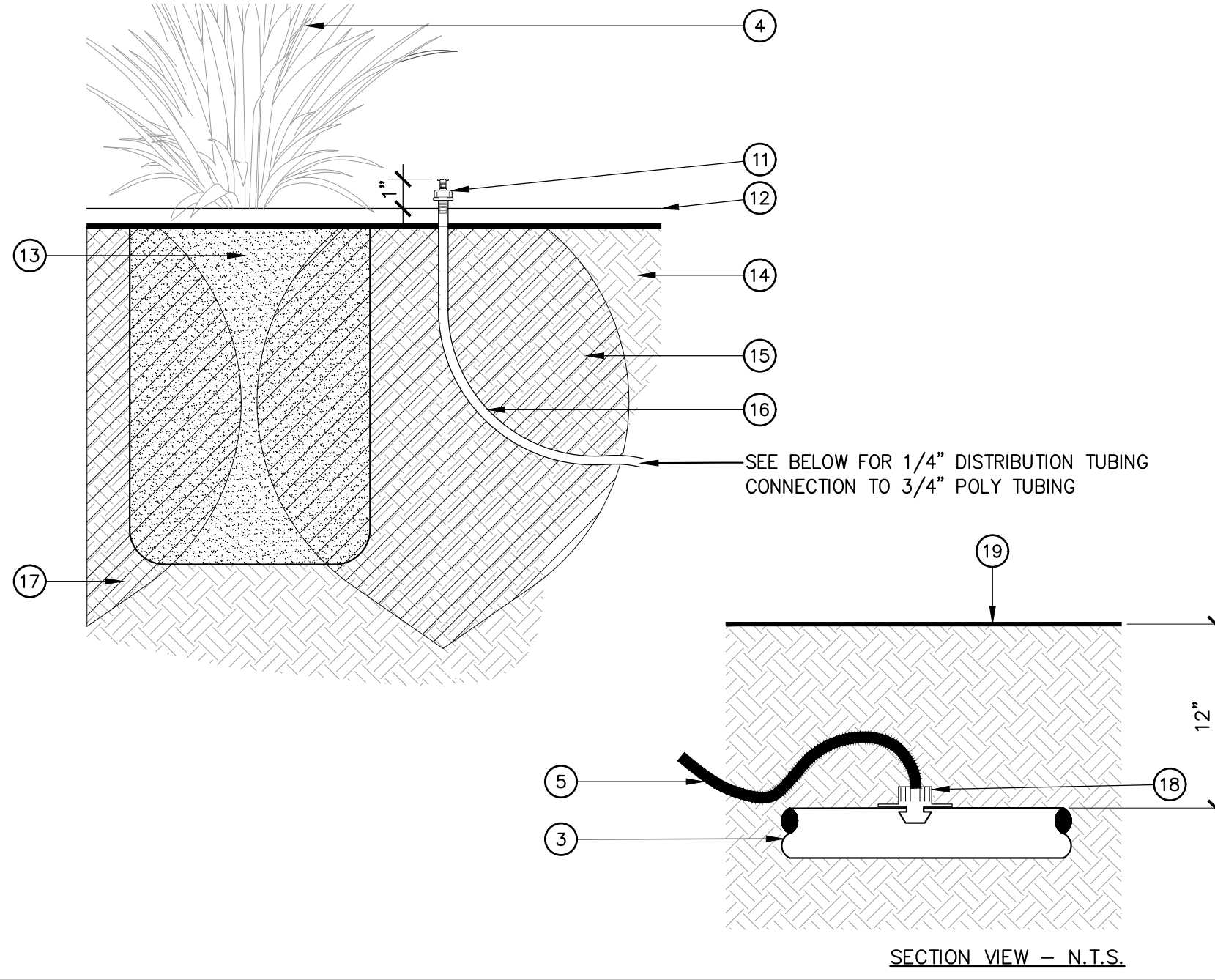
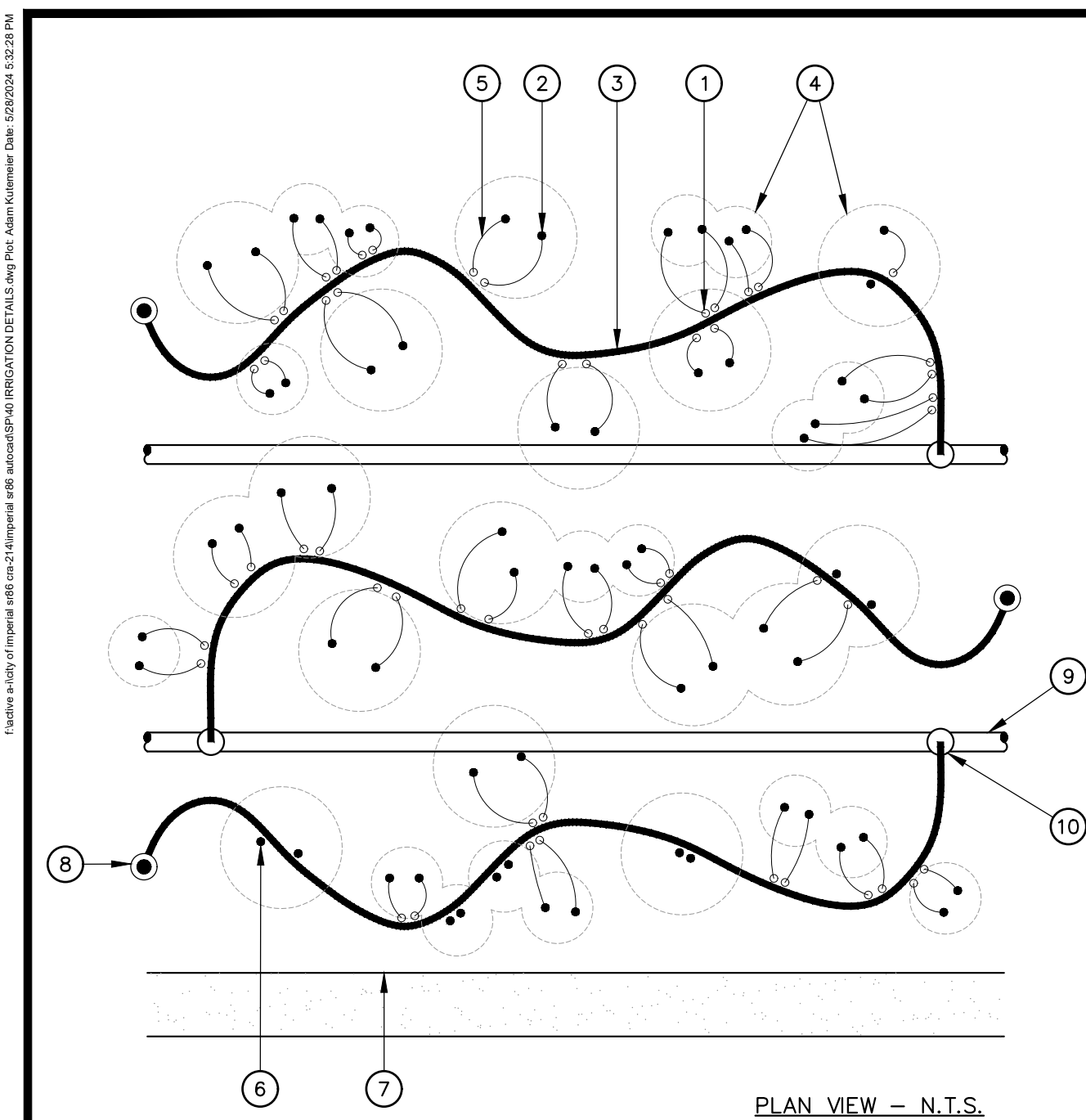
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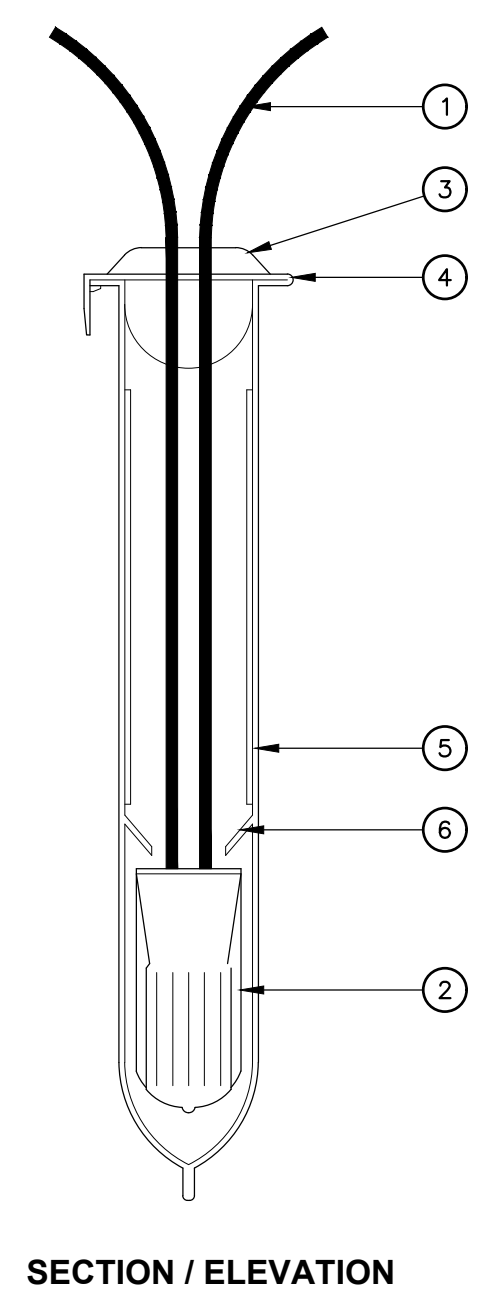
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- 1 BARB CONNECTOR INTO 3/4" POLY TUBING.
 - 2 EMITTER ON END OF 1/4" TUBING.
 - 3 3/4" POLY TUBING (25 FT MAX).
 - 4 PLANTS, SEE PLANTING PLAN.
 - 5 1/4" DISTRIBUTION TUBING TO PLANTS, 72" MAXIMUM LENGTH TYPICAL.
 - 6 EMITTER INTO 3/4" TUBING FINISHED GRADE.
 - 7 CURB OR PAVEMENT EDGE.
 - 8 FLUSH CAP AT TUBING END.
 - 9 PVC LATERAL LINE, 12" BELOW FINISHED GRADE.
 - 10 CONNECTION TO PVC LATERAL LINE.
 - 11 PRESSURE COMPENSATING DRIP EMITTER WITH A DIFFUSER BUG CAP, MODEL XB-05PC. INSTALL (2) TWO EMITTERS PER SHRUB.
 - 12 FINISHED GRADE OR TOP OF ROCK MULCH, SEE PLANTING PLANS.
 - 13 ROOT BALL OF PLANT FROM CONTAINER.
 - 14 AMENDED OR UN-AMENDED SITE SOIL.
 - 15 TYPICAL WETTED AREA FROM A DRIP EMITTER IN SOIL, FOR REFERENCE ONLY.
 - 16 RAIN BIRD XQ 1/4" DISTRIBUTION TUBING, CUT FLEXIBLE RISER TO LENGTH AS REQUIRED. 72" MAXIMUM LENGTH.
 - 17 WETTED AREA OF ADJACENT EMITTER.
 - 18 1/4" BARB CONNECTOR. INSTALL ON SIDE OF TUBING, SHOWN ON TOP FOR CLARITY.
 - 19 FINISHED GRADE.
- NOTES:
1. LOCATE DRIP EMITTER WITHIN 2" OF THE ROOT BALL OF THE PLANT.
 2. INSTALL PER RAIN BIRD SPECIFICATIONS.



- 1 LOW VOLTAGE WIRES - 4 MAXIMUM
 - 2 SCOTCHLOK ELECTRICAL SPRING CONNECTOR - WIRES SHALL BE PRE-STRIPPED OF 3/4" OF THE INSULATION PRIOR TO INSERTION INTO THE CONNECTOR - TWIST CONNECTOR ONTO WIRES TO SEAT FIRMLY.
 - 3 WIRES PASS THROUGH GROOVES IN TUBE LID TO ALLOW LID TO CLOSE. INSERT SCOTCHLOK CONNECTOR AND WIRES INTO TUBE UNTIL THE CONNECTOR PASSES THE LOCK TABS AND RESTS ON THE BOTTOM.
 - 4 CLOSE TUBE LID AFTER WIRE IS INSERTED INTO TUBE.
 - 5 POLY TUBE PRE-FILLED WITH MOISTURE-RESISTANT GREASE.
 - 6 LOCK TABS PREVENT WIRE REMOVAL ONCE CONNECTOR IS INSERTED.
- NOTES:
1. WIRE CONNECTOR SHALL BE A 3M DBR/Y-6 DIRECT BURY SPLICE KIT.
 2. KIT SHALL INCLUDE A SCOTCHLOK SPRING CONNECTOR, A UV-RESISTANT POLYPROPYLENE TUBE AND A MOISTURE-RESISTANT SEALING GEL. TUBE SHALL BE SUPPLIED PRE-FILLED WITH GEL.
 3. DIRECT BURY SPLICE KIT SHALL BE USED TO ELECTRICALLY CONNECT 2-3 #14 OR 2 #12 PRE-STRIPPED COPPER WIRES. LARGER OR GREATER QUANTITIES OF WIRES SHALL REQUIRE A LARGER APPROVED WIRE CONNECTOR.
 4. INSTALL PER HUNTER INDUSTRIES SPECIFICATIONS. CONTRACTOR SHALL CONTACT HUNTER SPECIFICATION MANAGER, CHRIS ROESINK, AT 760.703.2474 AND SHALL SCHEDULE PRE-CONSTRUCTION MEETING TO REVIEW INSTALLATION DETAILS AND SPECIFICATIONS IN FIELD.

1 POINT SOURCE EMITTER LAYOUT

NOT TO SCALE

2 WIRE CONNECTOR

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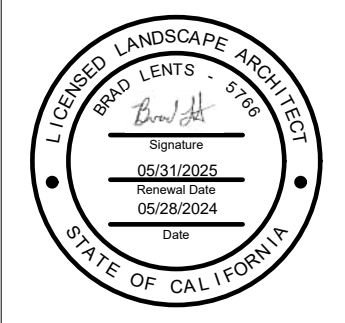
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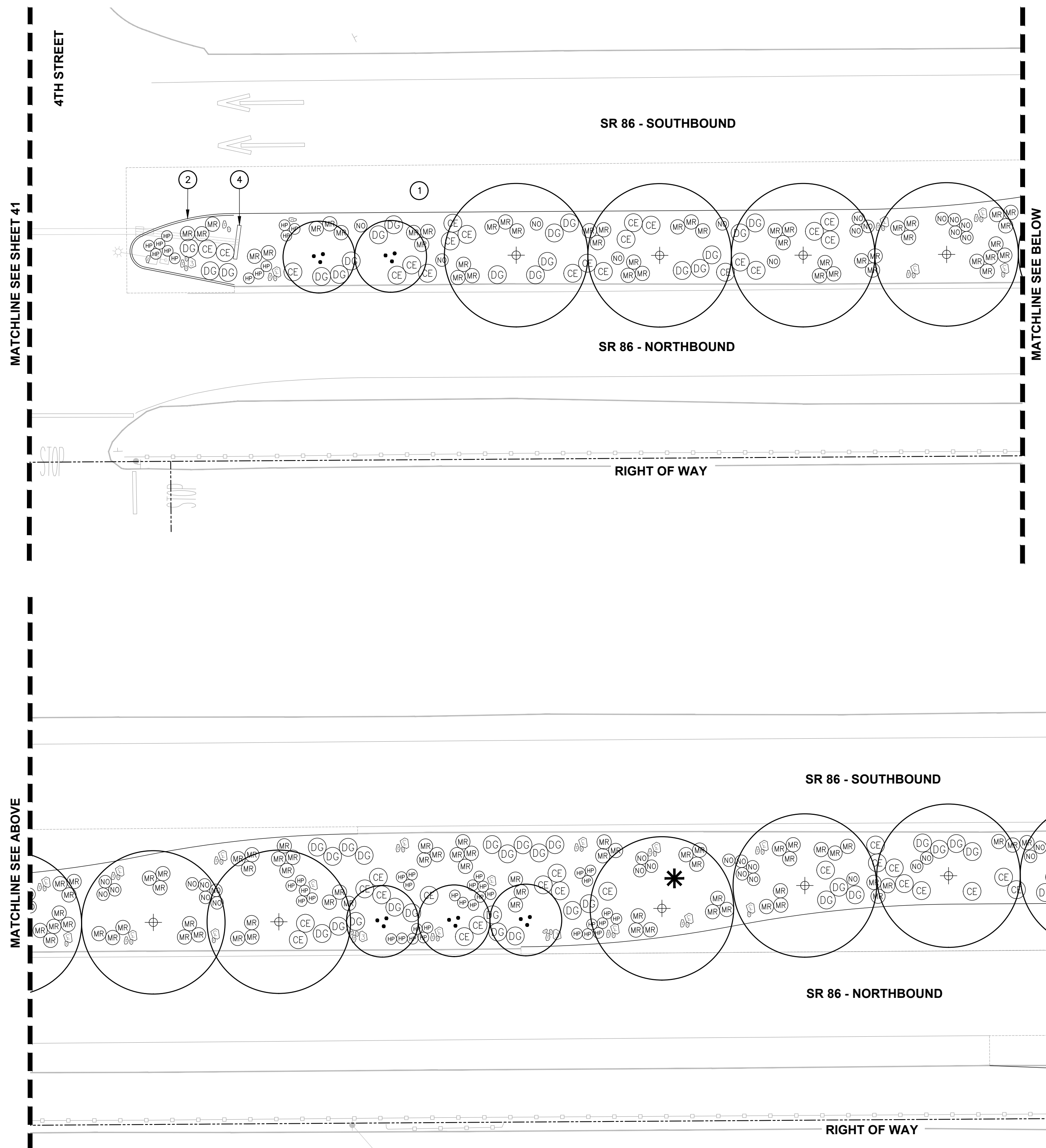


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SHEET 40
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Imperial City of Imperial 448 (02-2) Improvement #88 - Intermodal Planting Plan - 42 - Admin/Information Date: 05/28/2024 13:53:14 PM



HARDSCAPE LEGEND

SEE SHEET 47 FOR FULL LEGEND

SYMBOL	ROCK MULCHES/ BOULDERS	DETAIL
	3/4" ANGULAR ROCK MULCH	
	18"-36" DIA. ANGULAR BOULDERS	
	ROOT BARRIER	

MISCELLANEOUS SITE IMPROVEMENTS

	ASPHALT PAVING	PER CIVIL
	CURB/AC DIKE	PER CIVIL
	CATCH BASIN	PER CIVIL
	STORM DRAIN HEADWALL	PER CIVIL
	ACCESSIBLE RAMP	PER CIVIL
	CONCRETE PAVING	PER CIVIL

PARTIAL PLANTING LEGEND

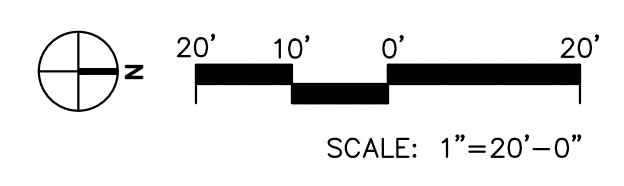
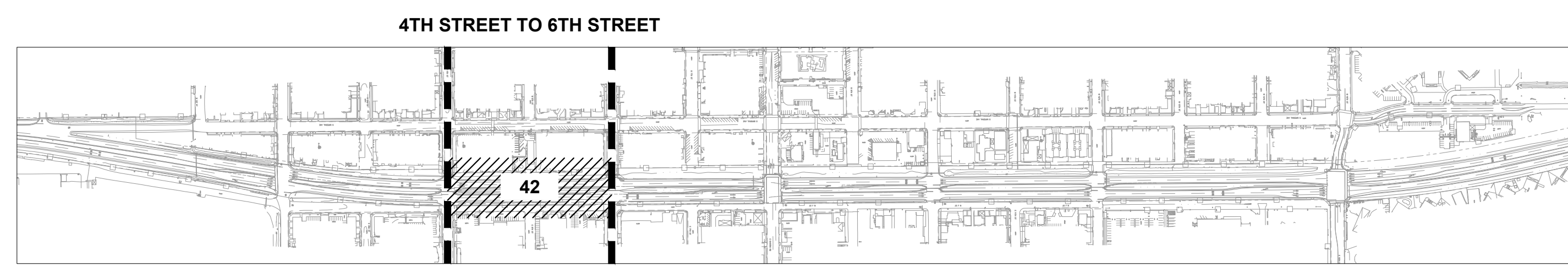
SEE SHEET 47 FOR FULL LEGEND

SYMBOL	BOTANICAL / COMMON NAME	CONTAINER
TREES		
	LAGERSTROEMIA INDICA X FAURIEI "TUSKEGEE" TUSKEGEE CRAPE MYRTLE	36" BOX
	ULMUS PARVIFOLIA "DRAKE" DRAKE LACEBARK ELM	36" BOX
SHRUBS		
	CALLIANDRA CALIFORNICA RED BAJA FAIRY DUSTER	5 GAL
	DALEA GREGGII TRAILING INDIGO BUSH	5 GAL
	HESPERALOE PARVIFLORA RED YUCCA	5 GAL
	MUHLENBERGIA RIGENS DEER GRASS	1 GAL
	NERIUM OLEANDER "LITTLE RED" LITTLE RED OLEANDER	5 GAL

* PERCOLATION/SOIL TEST LOCATION

NOTES:

- PROVIDE IRRIGATION TO ALL PLANTING AREAS
- ALL PLANTING AREAS TO RECEIVE A 3" LAYER ROCK MULCH PER SPECIFICATIONS UNLESS OTHERWISE NOTED. SEE HARDSCAPE LEGEND FOR TYPE AND SIZE.
- ROOT BARRIERS TO BE INSTALLED IN ALL INSTANCES WHERE A TREE WILL BE PLANTED WITHIN 5' OF ADJACENT CURBS, SIDEWALKS, WALLS OR ANY FLATWORK OR HARDSCAPE.



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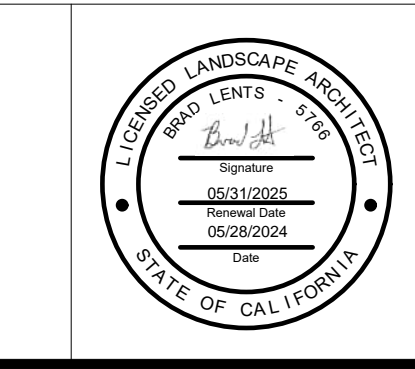
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BENCHMARK:
BENCHMARK ELEVATION =
BENCHMARK DESCRIPTION:



PREPARED UNDER THE DIRECT SUPERVISION OF:
Brad Lents
BRAD LENTS
5766
LA NO.
05/28/2024
DATE

PROJECT TITLE: CITY OF IMPERIAL
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1

SHEET CONTENT: PLANTING PLAN

SCALE:
DRAWN BY: AK & MS
REVISED BY: YZ
JUNE 2024

SHEET
42
OF 52 SHEETS
JOB NO.
XXXXXXXXX

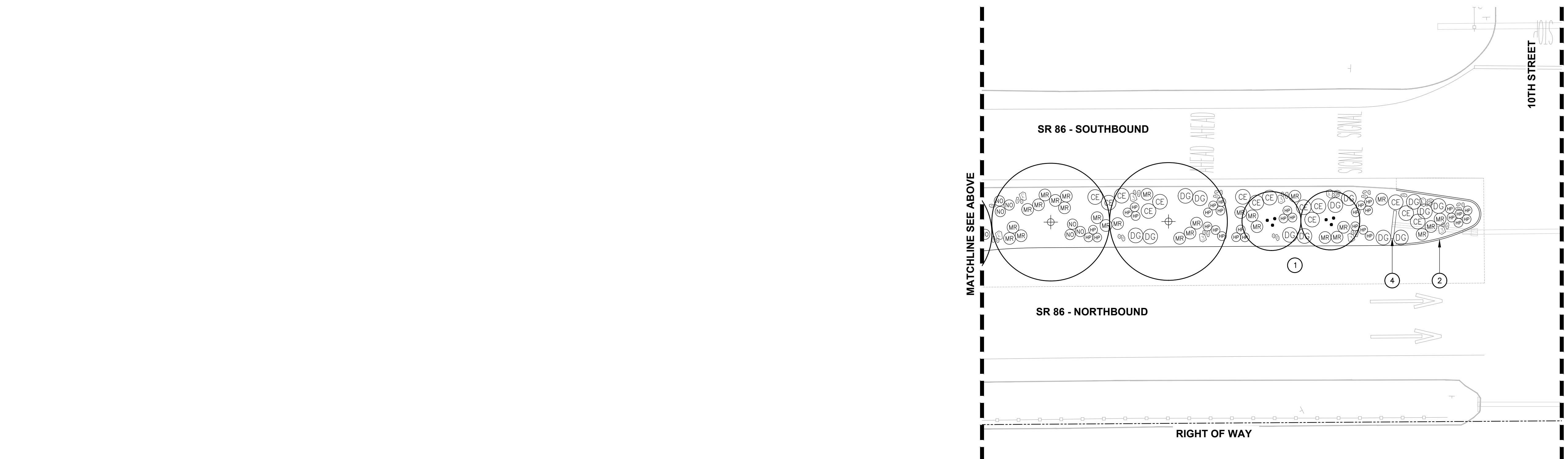
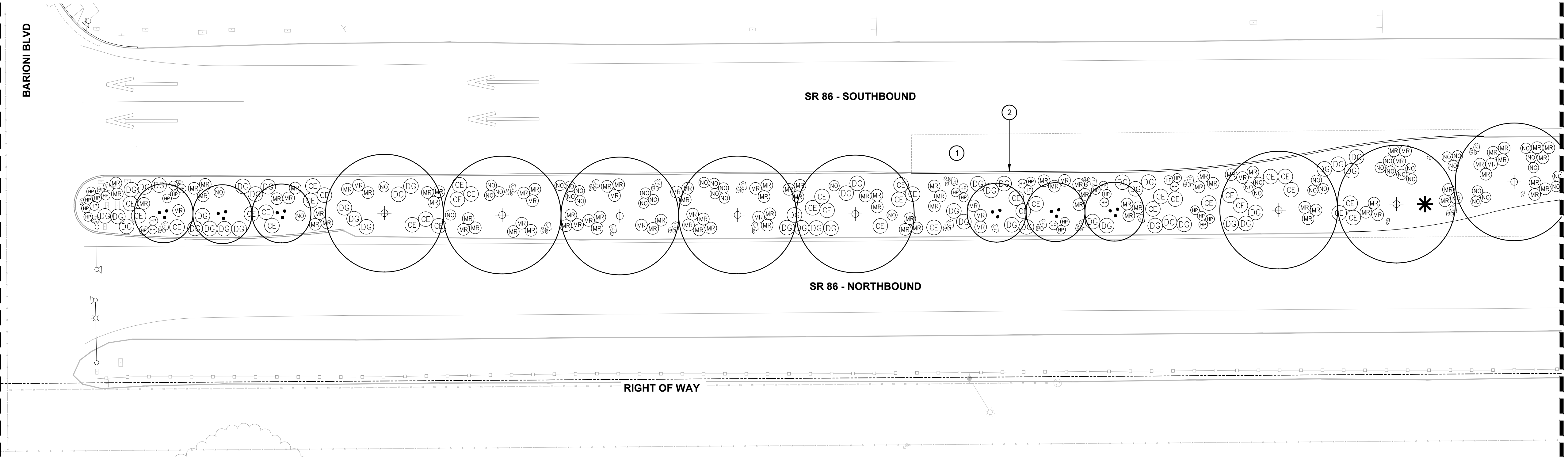
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Imperial Valley Regional Water District - 2024-2025 Planning - 44 - Barioni Boulevard to 10th Street - 05/28/2024 - 11:33 AM

MATCHLINE SEE SHEET 43

MATCHLINE SEE BELOW



HARDSCAPE LEGEND

SEE SHEET 47 FOR FULL LEGEND

SYMBOL	ROCK MULCHES/ BOULDERS	DETAIL
	3/4" ANGULAR ROCK MULCH	
	18"-36" DIA. ANGULAR BOULDERS	
	ROOT BARRIER	

MISCELLANEOUS SITE IMPROVEMENTS

	ASPHALT PAVING	PER CIVIL
	CURB/AC DIKE	PER CIVIL
	CATCH BASIN	PER CIVIL
	STORM DRAIN HEADWALL	PER CIVIL
	ACCESSIBLE RAMP	PER CIVIL
	CONCRETE PAVING	PER CIVIL

PARTIAL PLANTING LEGEND

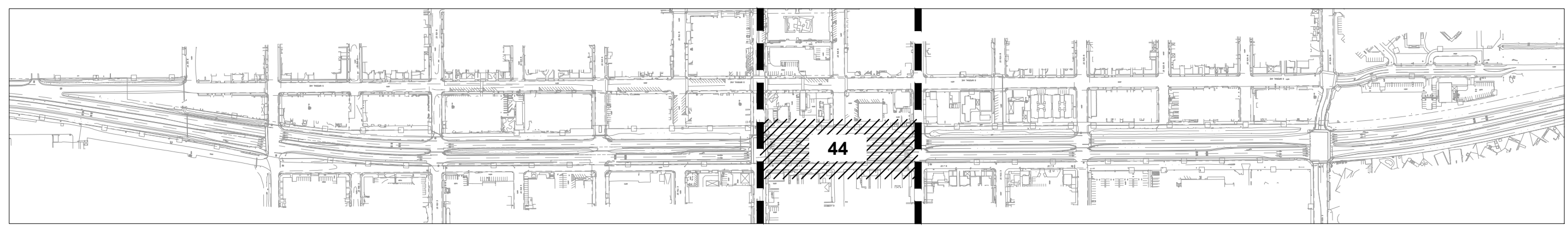
SEE SHEET 47 FOR FULL LEGEND

SYMBOL	BOTANICAL / COMMON NAME	CONTAINER
TREES		
	LAGERSTROEMIA INDICA X FAURIEI "TUSKEGEE" TUSKEGEE CRAPE MYRTLE	36" BOX
	ULMUS PARVIFOLIA "DRAKE" DRAKE LACEBARK ELM	36" BOX
SHRUBS		
	CALLIANDRA CALIFORNICA RED BAJA FAIRY DUSTER	5 GAL
	DALEA GREGGII TRAILING INDIGO BUSH	5 GAL
	HESPERALOE PARVIFLORA RED YUCCA	5 GAL
	MUHLENBERGIA RIGENS DEER GRASS	1 GAL
	NERIUM OLEANDER "LITTLE RED" LITTLE RED OLEANDER	5 GAL

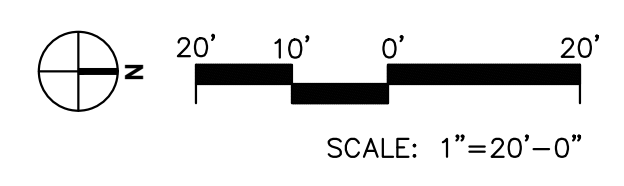
PERCOLATION/SOIL TEST LOCATION

- NOTES:**
- PROVIDE IRRIGATION TO ALL PLANTING AREAS
 - ALL PLANTING AREAS TO RECEIVE A 3" LAYER ROCK MULCH PER SPECIFICATIONS UNLESS OTHERWISE NOTED. SEE HARDSCAPE LEGEND FOR TYPE AND SIZE.
 - ROOT BARRIERS TO BE INSTALLED IN ALL INSTANCES WHERE A TREE WILL BE PLANTED WITHIN 5' OF ADJACENT CURBS, SIDEWALKS, WALLS OR ANY FLATWORK OR HARDSCAPE.

BARIONI BOULEVARD TO 10TH STREET



KEYMAP
N.T.S.



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LANDSCAPE ARCHITECTS

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619.681.0090
spurlock-land.com

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Brad Lents
BRAD LENTS
DATE: 05/28/2024

PROJECT TITLE: CITY OF IMPERIAL
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1
SHEET CONTENT: PLANTING PLAN

SCALE:	SHEET
DRAWN BY: AK & MS	44
REVISED BY: YZ	OF 52 SHEETS
JUNE 2024	JOB NO. XXXXXXXX

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HARDSCAPE LEGEND

SEE SHEET 47 FOR FULL LEGEND

SYMBOL	ROCK MULCHES/ BOULDERS	DETAIL	DESCRIPTION	MANUFACTURER	MODEL
	3/4" ANGULAR ROCK MULCH		3/4" ANGULAR ROCK MULCH, 3" THICK LAYER	LANDSCAPE ROCK SUPPLY 760-427-9522	COLOR: CRESTA
	18"-36" DIA. ANGULAR BOULDERS		ANGULAR BOULDERS: TYPE 1 - 18" DIA., TYPE 2 - 24" DIA., TYPE 3 - 36" DIA.	LANDSCAPE ROCK SUPPLY 760-427-9522	COLOR: RED GRANITE
	ROOT BARRIER			TYPAR 800-541-1222	MODEL: BIO BARRIER

MISCELLANEOUS SITE IMPROVEMENTS

①	ASPHALT PAVING	PER CIVIL
②	CURB/AC DIKE	PER CIVIL
③	CATCH BASIN	PER CIVIL
④	STORM DRAIN HEADWALL	PER CIVIL
⑤	ACCESSIBLE RAMP	PER CIVIL
⑥	CONCRETE PAVING	PER CIVIL

* PERCOLATION/SOIL TEST LOCATION

NOTES:

1. PROVIDE IRRIGATION TO ALL PLANTING AREAS
2. ALL PLANTING AREAS TO RECEIVE A 3" LAYER ROCK MULCH PER SPECIFICATIONS UNLESS OTHERWISE NOTED. SEE HARDSCAPE LEGEND FOR TYPE AND SIZE.
3. ROOT BARRIERS TO BE INSTALLED IN ALL INSTANCES WHERE A TREE WILL BE PLANTED WITHIN 5' OF ADJACENT CURBS, SIDEWALKS, WALLS OR ANY FLATWORK OR HARDSCAPE.

FULL PLANTING LEGEND

SYMBOL	BOTANICAL / COMMON NAME	CONTAINER	MATURE SIZE	FORM	WATER USE	QTY
TREES						
	LAGERSTROEMIA INDICA X FAURIEI "TUSKEGEE" TUSKEGEE CRAPE MYRTLE	36" BOX	20'-30' H X 20'-30' W	STANDARD	MODERATE	50
	ULMUS PARVIFOLIA "DRAKE" DRAKE LACEBARK ELM	36" BOX	40'-50'H X 30'-40'W	STANDARD	MODERATE	70

SYMBOL	BOTANICAL / COMMON NAME	CONTAINER	MATURE SIZE	O.C. SPACING	PAV OFFSET	WATER USE
SHRUBS						
	CALLIANDRA CALIFORNICA RED BAJA FAIRY DUSTER	5 GAL	5'-6' H X 5'-6' W	60"	42"	LOW
	DALEA GREGGII TRAILING INDIGO BUSH	5 GAL	2'H X 6'W	60"	42"	LOW
	HESPERALOE PARVIFLORA RED YUCCA	5 GAL	3-4'H X 3-4'W	36"	30"	LOW
	MUHLENBERGIA RIGENS DEER GRASS	1 GAL	4'-5' H X 4'-5' W	48"	36"	MODERATE
	NERIUM OLEANDER "LITTLE RED" LITTLE RED OLEANDER	5 GAL	4-5'H X 4-5'W	42"	36"	MODERATE

PLANTING NOTES

1. ALL LANDSCAPE AND IRRIGATION SHALL CONFORM TO THE STANDARDS OF THE CITY-WIDE LANDSCAPE REGULATIONS AND THE CITY OF IMPERIAL LANDSCAPE STANDARDS AND ALL OTHER LANDSCAPE RELATED CITY AND REGIONAL STANDARDS.
2. MAINTENANCE: ALL REQUIRED LANDSCAPE AREAS SHALL BE MAINTAINED BY OWNER. LANDSCAPE AND IRRIGATION AREAS IN THE PUBLIC RIGHT-OF-WAY SHALL BE MAINTAINED BY OWNER. THE LANDSCAPE AREAS SHALL BE MAINTAINED FREE OF DEBRIS AND LITTER, AND ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION. DISEASED OR DEAD PLANT MATERIAL SHALL BE SATISFACTORILY TREATED OR REPLACED PER THE CONDITIONS OF THE PERMIT.
3. MULCH: ALL REQUIRED PLANTING AREAS AND ALL EXPOSED SOIL AREAS WITHOUT VEGETATION SHALL BE COVERED WITH MULCH TO A MINIMUM DEPTH OF 3 INCHES.
4. TREES SHALL BE MAINTAINED SO THAT ALL BRANCHES OVER PEDESTRIAN WALKWAYS ARE 6 FEET ABOVE THE WALKWAY GRADE AND BRANCHES OVER VEHICULAR TRAVEL WAYS ARE 16 FEET ABOVE THE GRADE OF TRAVEL WAY..
5. ALL PRUNING SHALL COMPLY WITH THE STANDARDS OF THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) FOR TREE CARE OPERATIONS AND INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) FOR FREE PRUNING. TOPPING OF TREES IS NOT PERMITTED.
6. IF ANY REQUIRED LANDSCAPE INDICATED ON THE APPROVED CONSTRUCTION DOCUMENT PLANS IS DAMAGED OR REMOVED, IT SHALL BE REPAIRED AND/OR REPLACED IN KIND AND EQUIVALENT SIZE PER THE APPROVED DOCUMENTS TO THE SATISFACTION OF THE DEVELOPMENT SERVICES DEPARTMENT WITHIN 30 DAYS OF DAMAGE.

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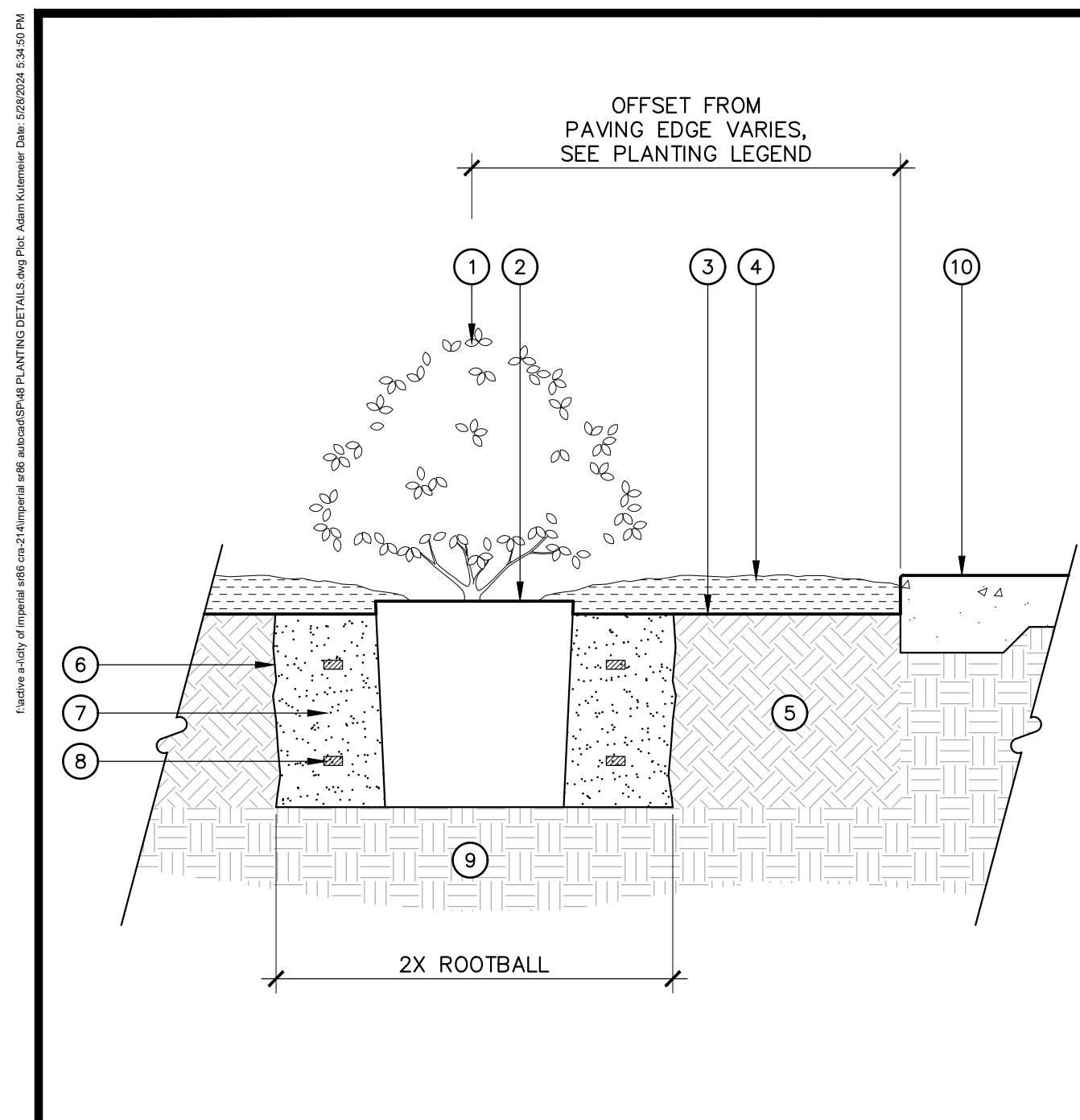
Brad Lents
BRAD LENTS
5766
LA NO.
05/28/2024
DATE
05/31/2025
REG. EXP.

PROJECT TITLE: CITY OF IMPERIAL
AHSC-ARPA/HWY 86 BEAUTIFICATION
PHASE 1

SHEET CONTENT: LANDSCAPE LEGENDS & NOTES

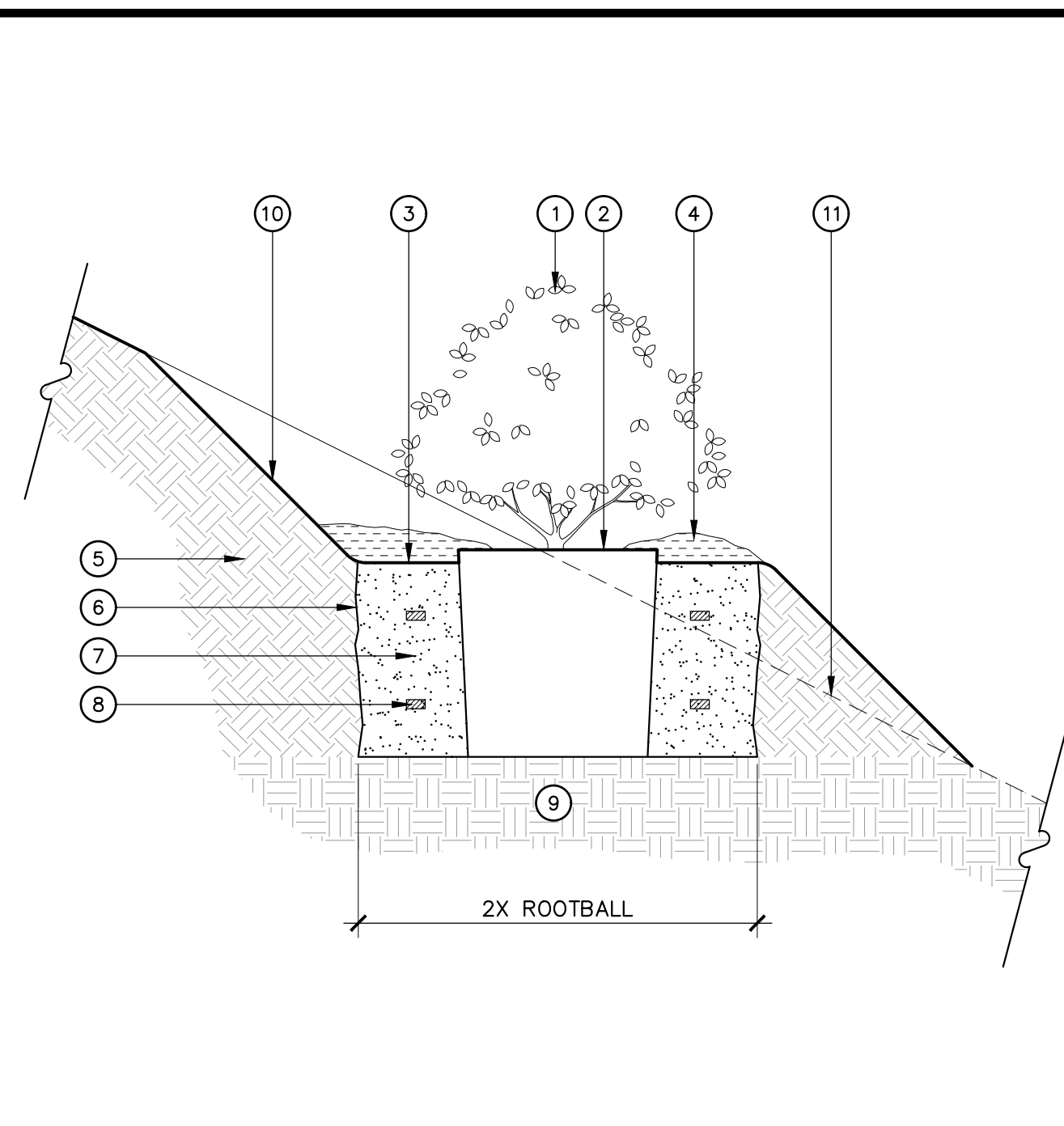
SCALE:	SHEET
DRAWN BY: AK & MS	47
REVISED BY: YZ	OF 52 SHEETS
JUNE 2024	JOB NO. XXXXXXXX

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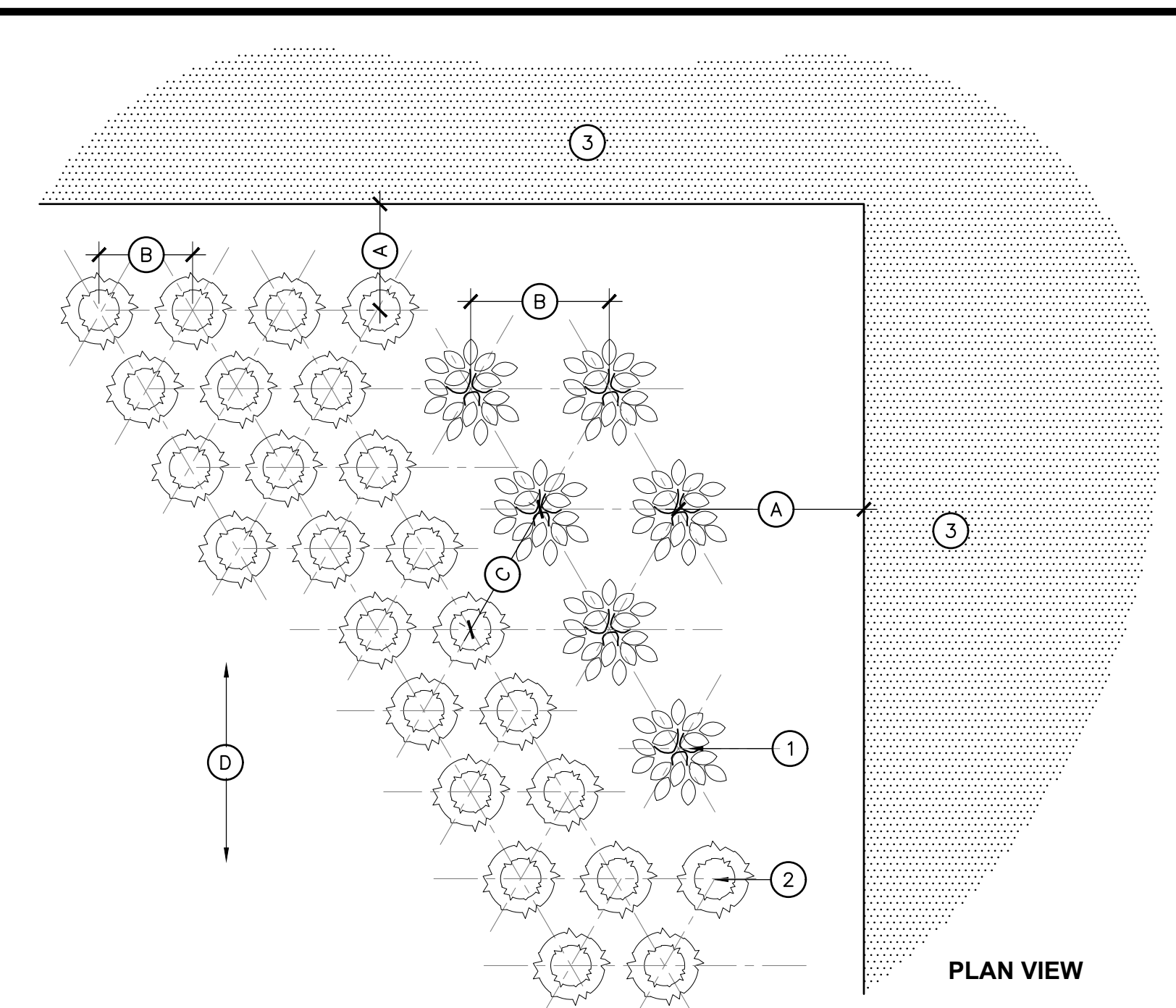
- ① SHRUB PER PLANTING PLAN AND LEGEND
 - ② ROOTBALL; SET CROWN 1" ABOVE FINISH GRADE
 - ③ FINISH GRADE OF PLANTING AREA
 - ④ MULCH PER PLAN AND SPECIFICATIONS; KEEP 3"-4" FROM TRUNK AND STEMS AND TAPER AT ROOTBALL
 - ⑤ AMENDED PLANTING SOIL PER SPECIFICATIONS
 - ⑥ PLANT PIT; SCARIFY ALL SIDES
 - ⑦ AMENDED BACKFILL MIX PER SPECIFICATIONS
 - ⑧ PLANT TABLETS PER SPECIFICATIONS
 - ⑨ NATIVE SOIL
 - ⑩ ADJACENT PAVING PER HARDSCAPE PLAN
- NOTE:
1. REFER TO PLANT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

1 SHRUB - LEVEL SCALE: NTS



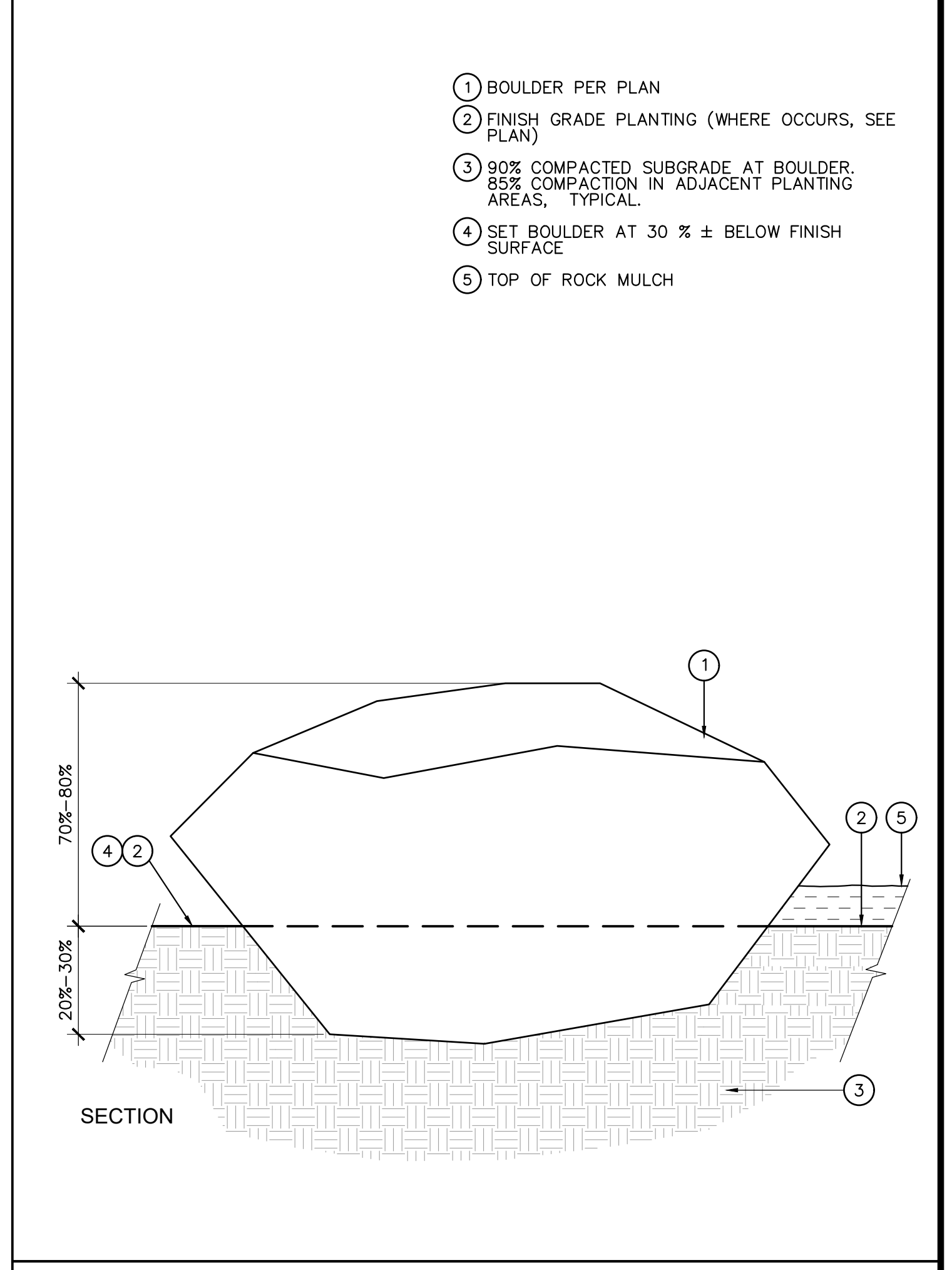
- ① SHRUB PER PLANTING PLAN AND LEGEND
 - ② ROOTBALL; SET CROWN 1" ABOVE FINISH GRADE
 - ③ FINISH GRADE OF PLANTING AREA
 - ④ MULCH PER PLAN AND SPECIFICATIONS; KEEP 3"-4" FROM TRUNK AND STEMS AND TAPER AT ROOTBALL
 - ⑤ AMENDED PLANTING SOIL PER SPECIFICATIONS
 - ⑥ PLANT PIT; SCARIFY ALL SIDES
 - ⑦ AMENDED BACKFILL MIX PER SPECIFICATIONS
 - ⑧ PLANT TABLET PER SPECIFICATIONS
 - ⑨ NATIVE SOIL
 - ⑩ LAYBACK SLOPE UPHILL OF PLANT PIT
 - ⑪ EXISTING SLOPE BEYOND
- NOTE:
1. REFER TO PLANT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

2 SHRUB ON SLOPE SCALE: NTS



- ① PLANT TYPE 1
- ② PLANT TYPE 2
- ③ ADJACENT PAVING, WALL, OR OTHER OBSTRUCTION
- A OFFSET DISTANCE FROM CENTER OF PLANT TO PAVING, AND CURBS. DISTANCE VARIES PER PLANT TYPE, REFER TO LEGEND
- B ON CENTER SPACING BETWEEN INDIVIDUAL PLANTS; DISTANCE VARIES PER PLANT TYPE, REFER TO LEGEND
- C WHERE DISTINCT PLANT TYPES ARE ADJACENT, PROVIDE THE GREATER O.C. SPACING DISTANCE
- D ORIENTATION OF TRIANGULAR SPACING TO SLOPES

3 PLANT SPACING OFFSET SCALE: NTS



- ① BOULDER PER PLAN
- ② FINISH GRADE PLANTING (WHERE OCCURS, SEE PLAN)
- ③ 90% COMPACTED SUBGRADE AT BOULDER, 85% COMPACTED IN ADJACENT PLANTING AREAS, TYPICAL.
- ④ SET BOULDER AT 30% ± BELOW FINISH SURFACE
- ⑤ TOP OF ROCK MULCH

4 BOULDER SCALE: NTS

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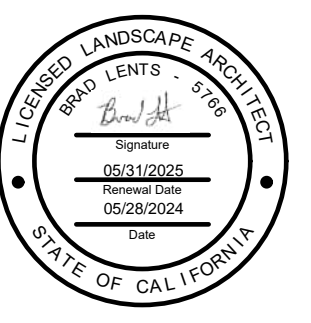


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BRAD LENTS
DATE: 05/28/2024

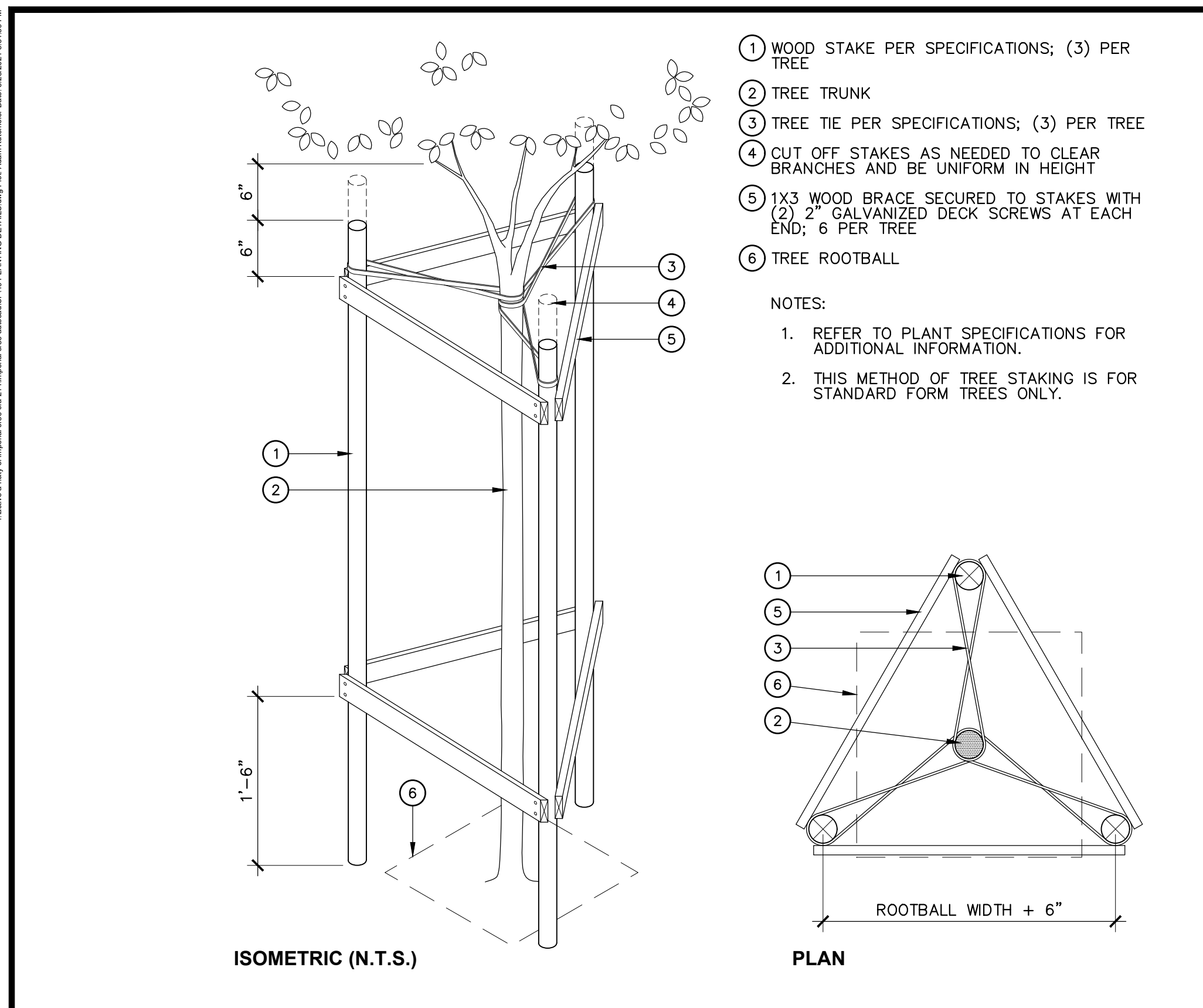
PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: PLANTING DETAILS

SCALE:
DRAWN BY: AK & MS
REVISED BY: YZ
JUNE 2024

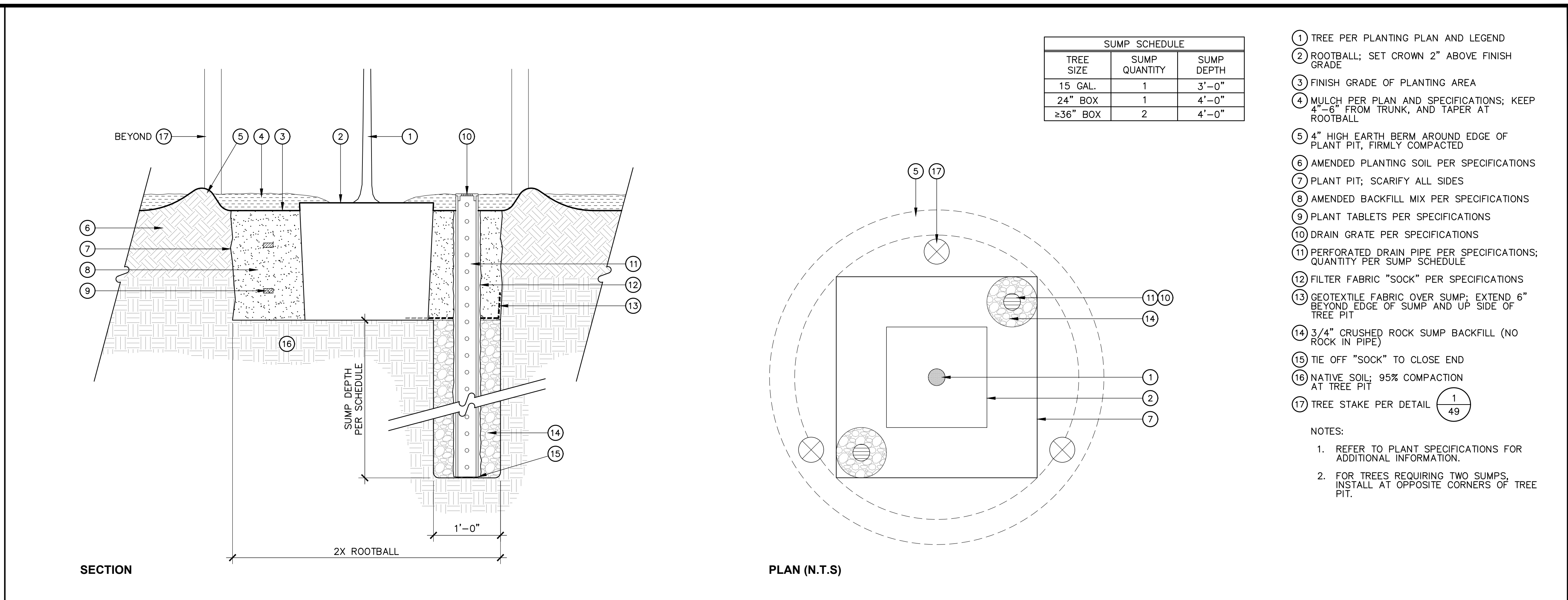
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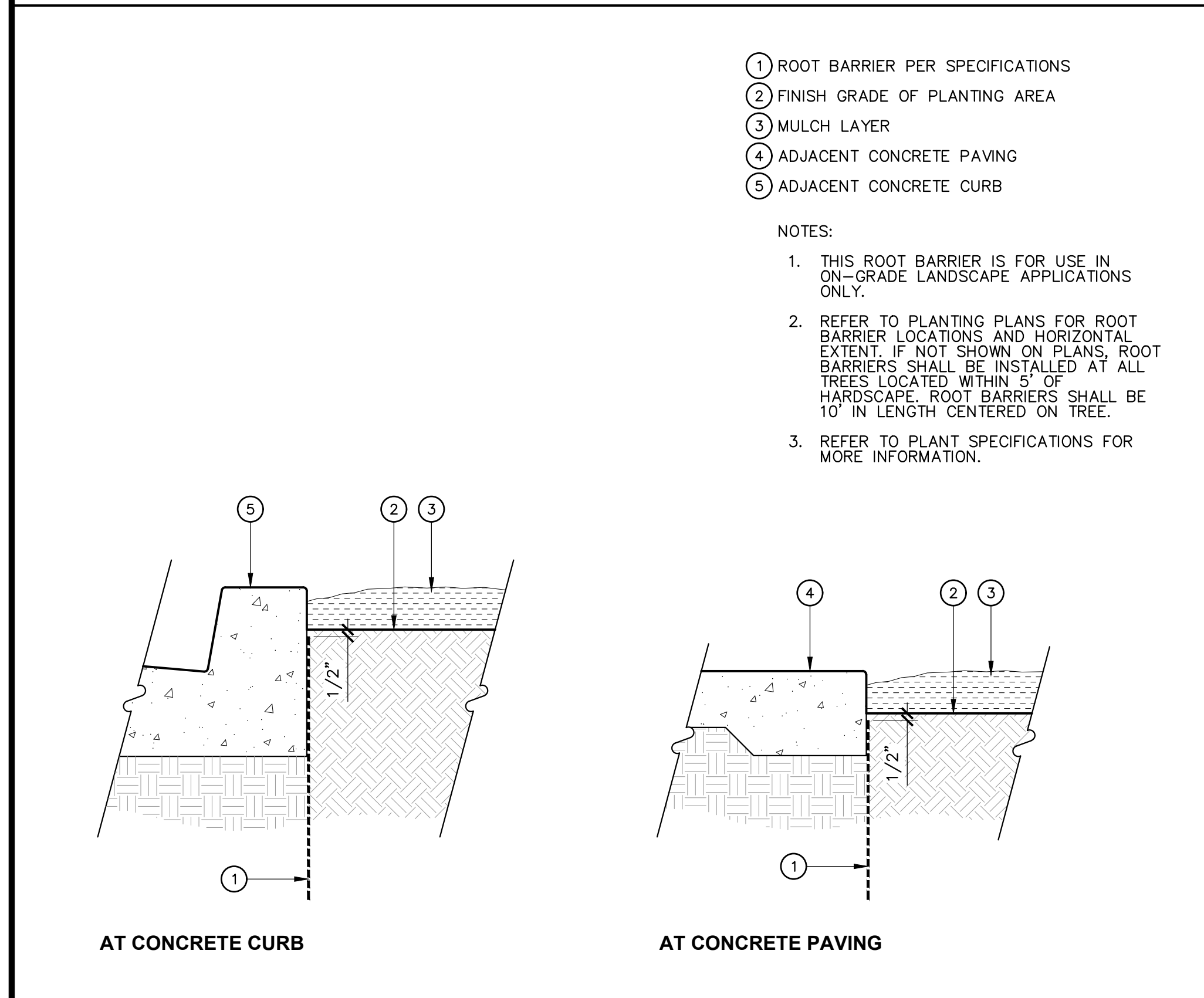
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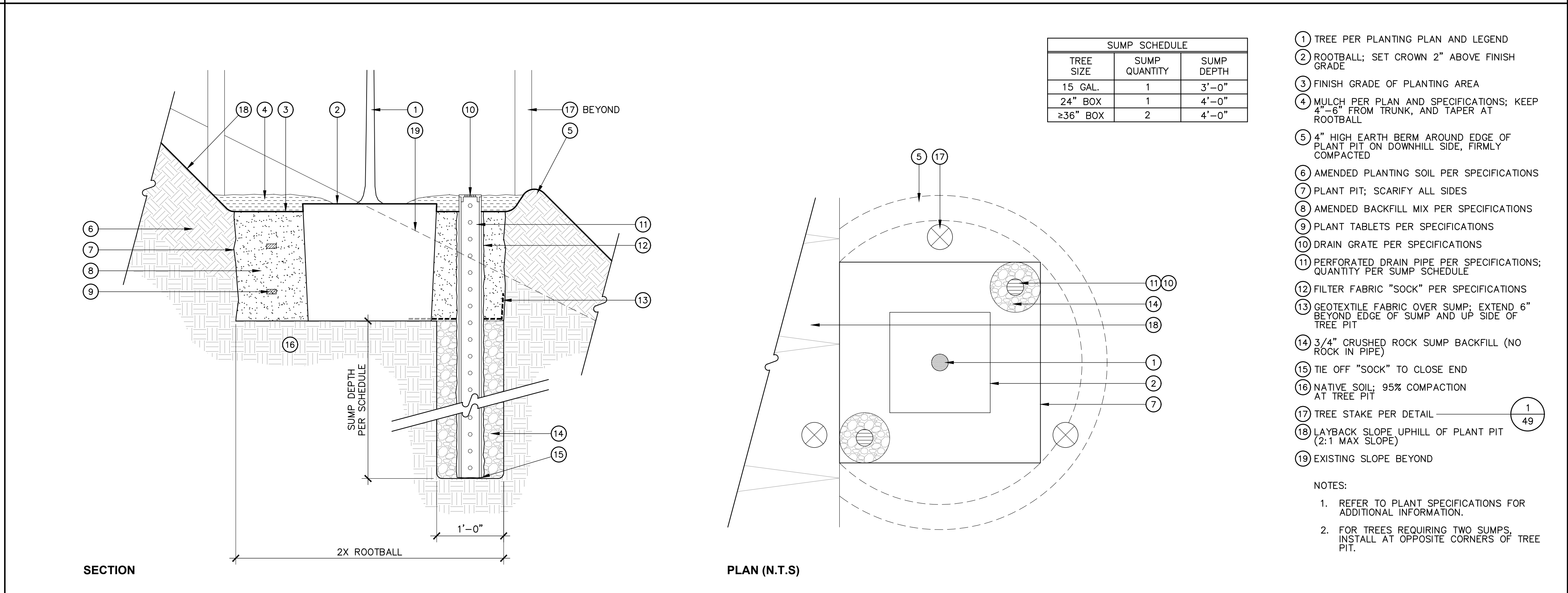
1 TREE STAKING SCALE: NTS



2 TREE - LEVEL SCALE: NTS



3 ROOT BARRIER SCALE: 1 1/2" = 1'-0"



4 TREE - SLOPE SCALE: NTS

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PROJECT TITLE: **CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1**

SHEET CONTENT: **PLANTING DETAILS**

SCALE: _____

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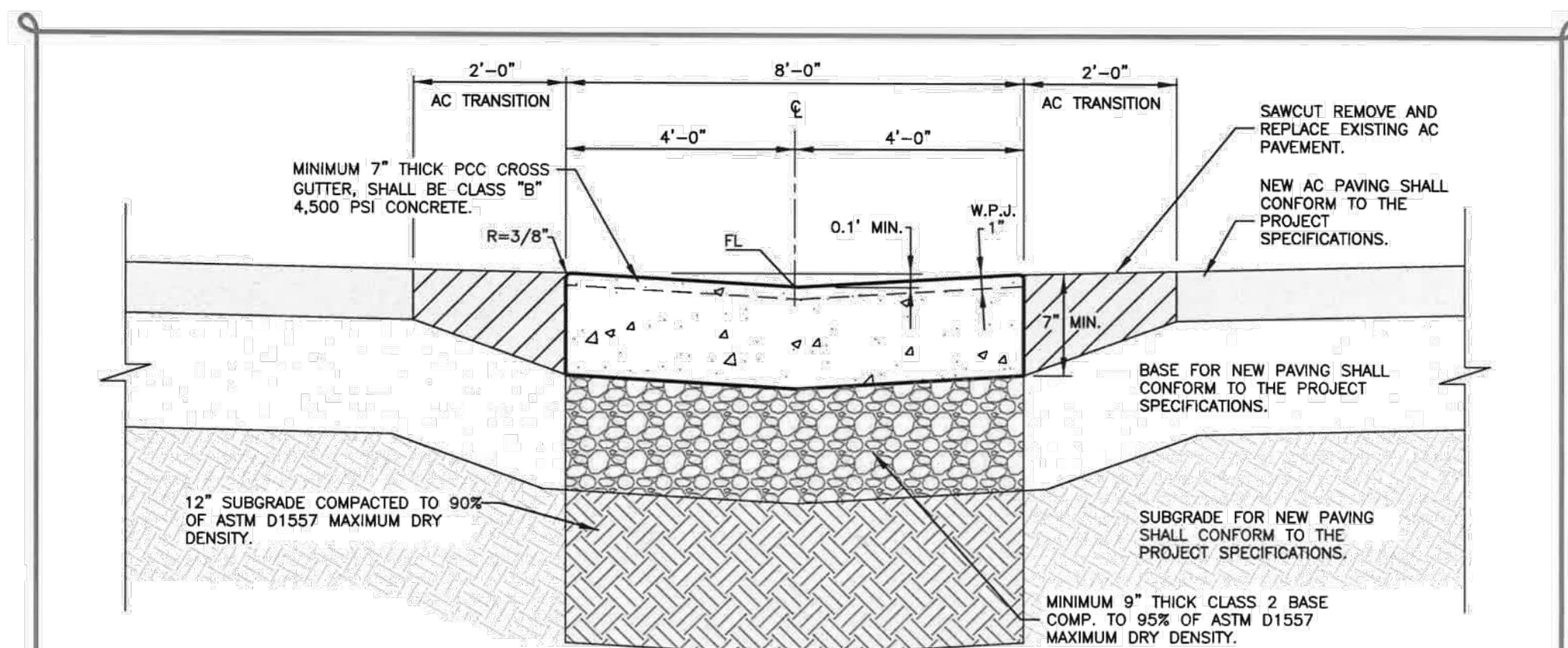
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SHEET **49** OF 52 SHEETS

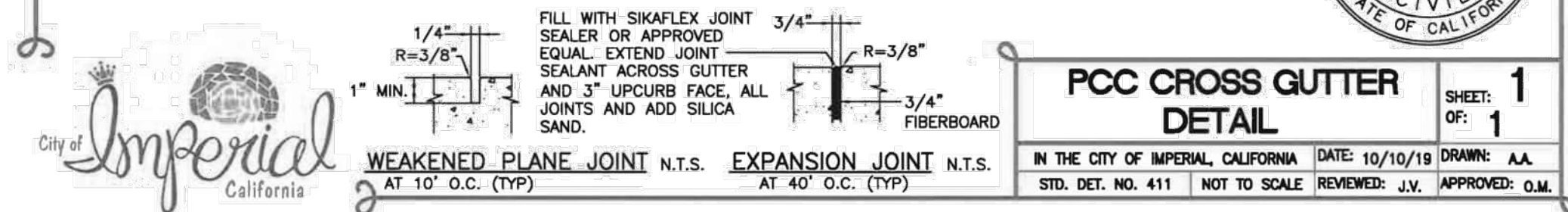
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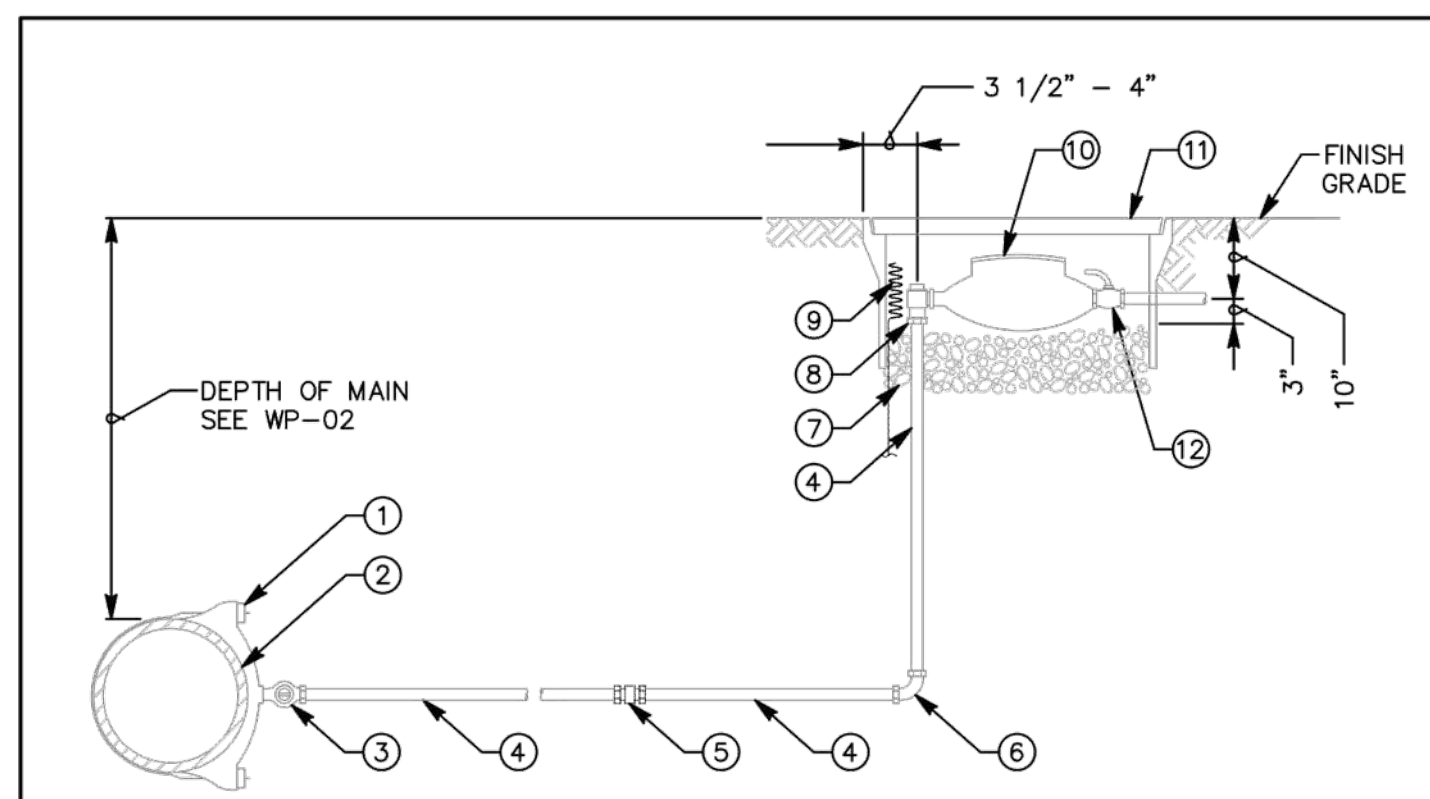
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- NOTES:**
- EXPANSION JOINTS TO BE INSTALLED @ 40' O.C.
 - WEAKENED PLANE JOINTS TO BE PROVIDED @ 10' O.C.
 - SUBGRADE TO BE 6" THK COMPACTED 90% OF ASTM D1557 MAX. DRY DENSITY AND MAINTAIN A MOISTURE CONTENT OF (16% ± 2%) FOR ALL LOCATIONS UNDERNEATH CONCRETE.
 - ALL METAL FORM STAKES MUST HAVE PROTECTIVE DEVICES SUCH AS "MUSHROOMS" INSTALLED AT ALL TIMES DURING ITS USE, TO ADEQUATELY ENSURE PUBLIC SAFETY.
 - VALLEY GUTTER SHALL BE CLASS "B" CONCRETE WHICH SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI IN ACCORDANCE WITH ASTM C39/C39M-99 AND SHALL CONTAIN 1- LBS. OF POLYPROPYLENE FIBER PER CUBIC YARD. POLYPROPYLENE FIBERESH CO., FORTA MOND, O.A.E.
 - APPLY ONE COAT OF W.R. MEADOWS SEALTIGHT 1100 RESIN-BASED, WATER EMULSION CONCRETE CURING COMPOUND OVER ALL CONCRETE SURFACE.
 - COMPACTION TEST FOR CLASS II BASE AND HUMIDITY TEST FOR SUBGRADE ARE REQUIRED BY THE CITY OF IMPERIAL.



PCC CROSS GUTTER DETAIL
 SHEET OF: 1
 IN THE CITY OF IMPERIAL, CALIFORNIA (DATE: 10/10/19) DRAWN: A.A.
 STD. DET. NO. 411 NOT TO SCALE REVIEWED: J.V. APPROVED: O.M.

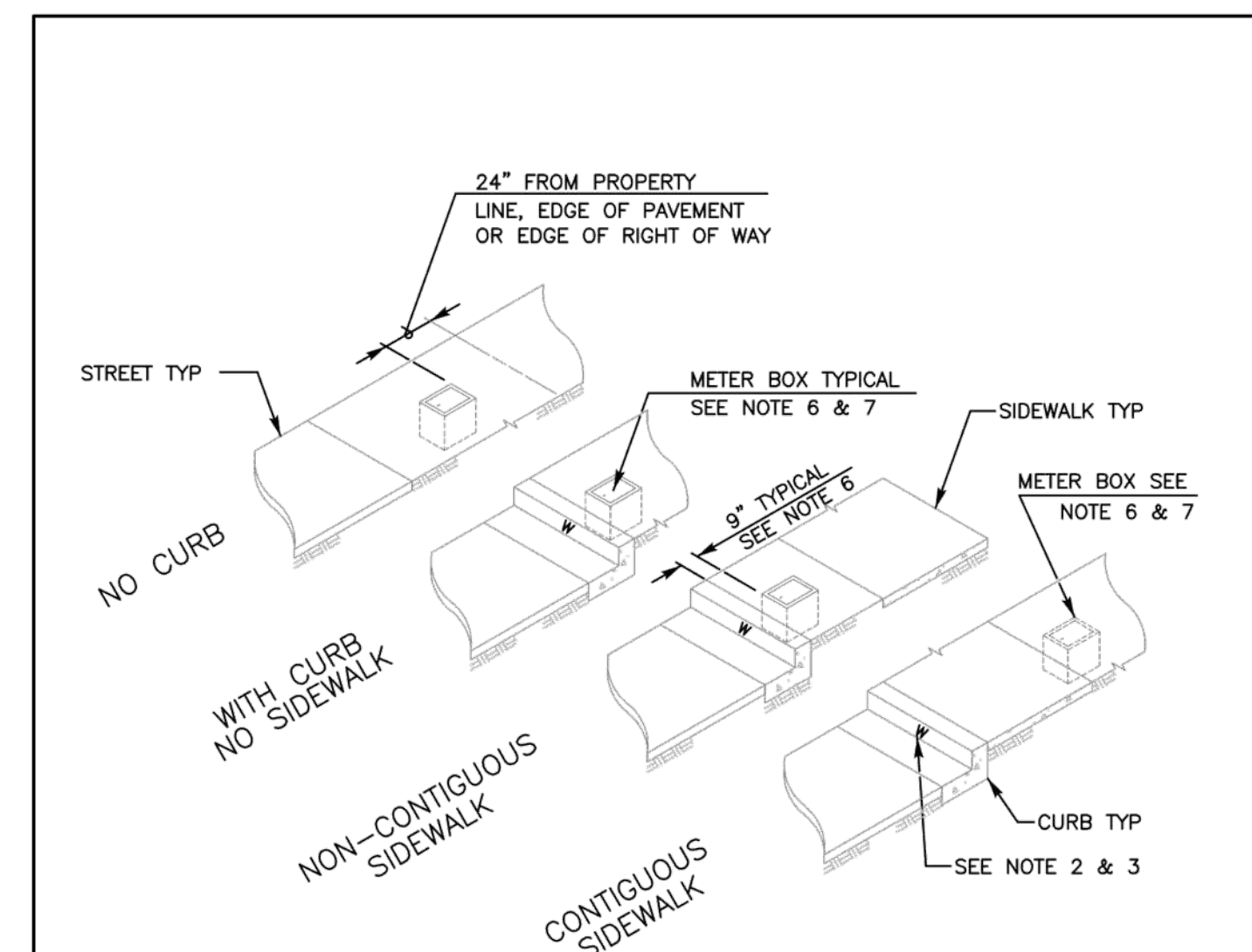


- NOTES:**
- REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
 - INSTALL CORPORATION STOP WITH KEY IN THE SIDE POSITION
 - SET TOP OF METER BOX FLUSH WITH SIDEWALK, CURB, OR FINISH GRADE
 - LOCATE METER BOX AS SHOWN ON WS-03
 - INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01
 - WATER LATERALS INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY SPECIFICATIONS
 - SILVER SOLDER JOINTS SHALL NOT BE USED
 - ON STEEL MAINS USE WELD ON COUPLINGS, ON DUCTILE IRON MAINS USE DUCTILE IRON SERVICE SADDLES (INSULATING BUSHINGS ARE REQUIRED)
 - MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

LEGEND ON PLANS

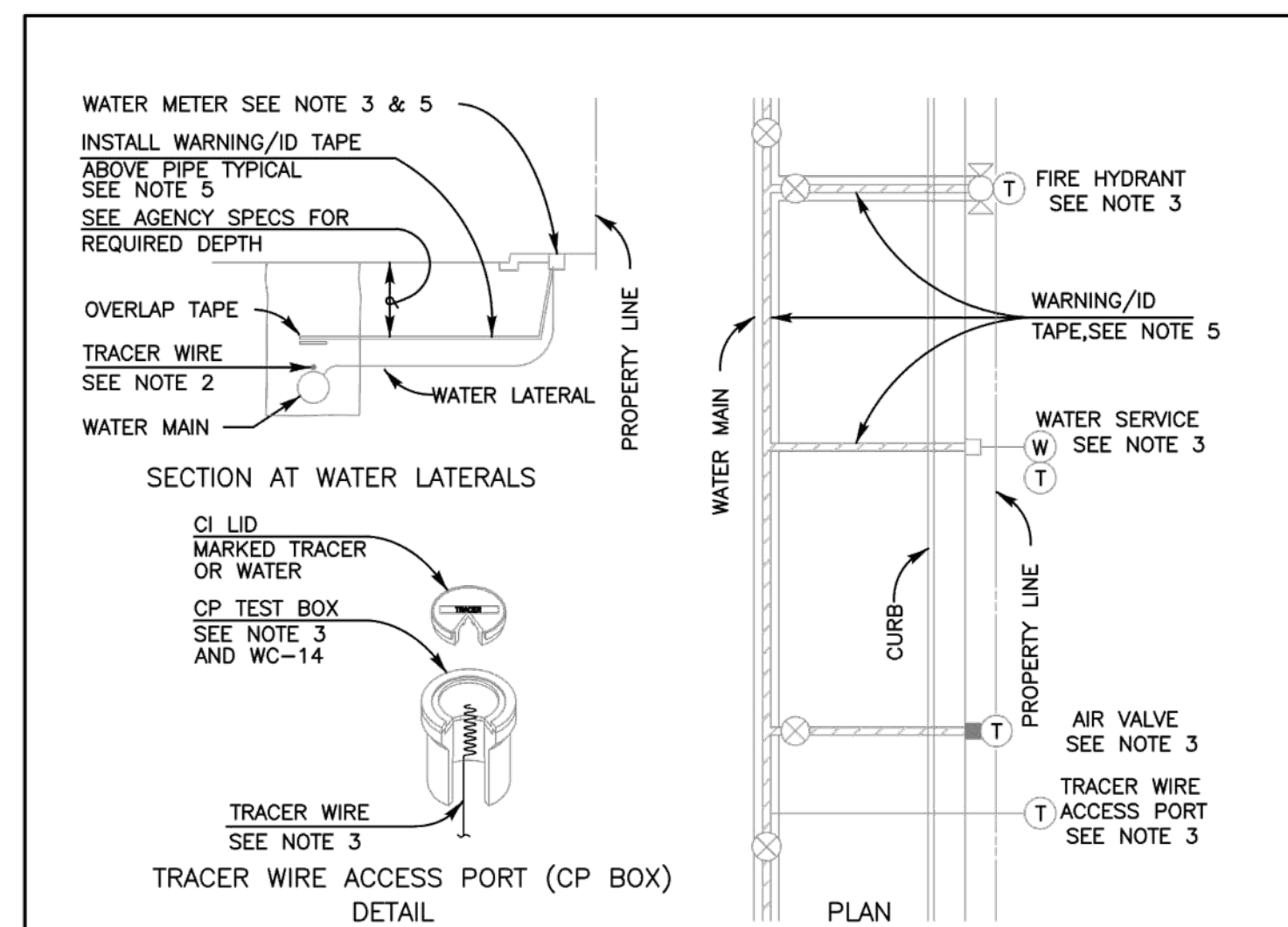
ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
1	SIZE x 2" SERVICE SADDLE	7	3/8" ROCK, 4" TO 6" DEEP
2	WATER MAIN	8	2" BRONZE ANGLE METER STOP WITH LOCKWING
3	2" BRONZE CORPORATION STOP	9	TRACER WIRE (AS REQUIRED), SEE WP-01
4	2" x REQUIRED LENGTH COPPER PIPE TYPE "K" SOFT/RIGID OR UNLESS OTHERWISE SPECIFIED BY AGENCY OF JURISDICTION	10	WATER METER FURNISHED AND INSTALLED BY THE WATER AGENCY OF JURISDICTION
5	2" BRONZE COMPRESSION COUPLING COPPER TO COPPER (IF REQUIRED)	11	METER BOX WITH LID, 17"x 30"
6	2" BRONZE COMPRESSION ELL	12	CUSTOMER SHUT-OFF VALVE (LOCKABLE)

I 1.5" WATER SERVICE INSTALLATION



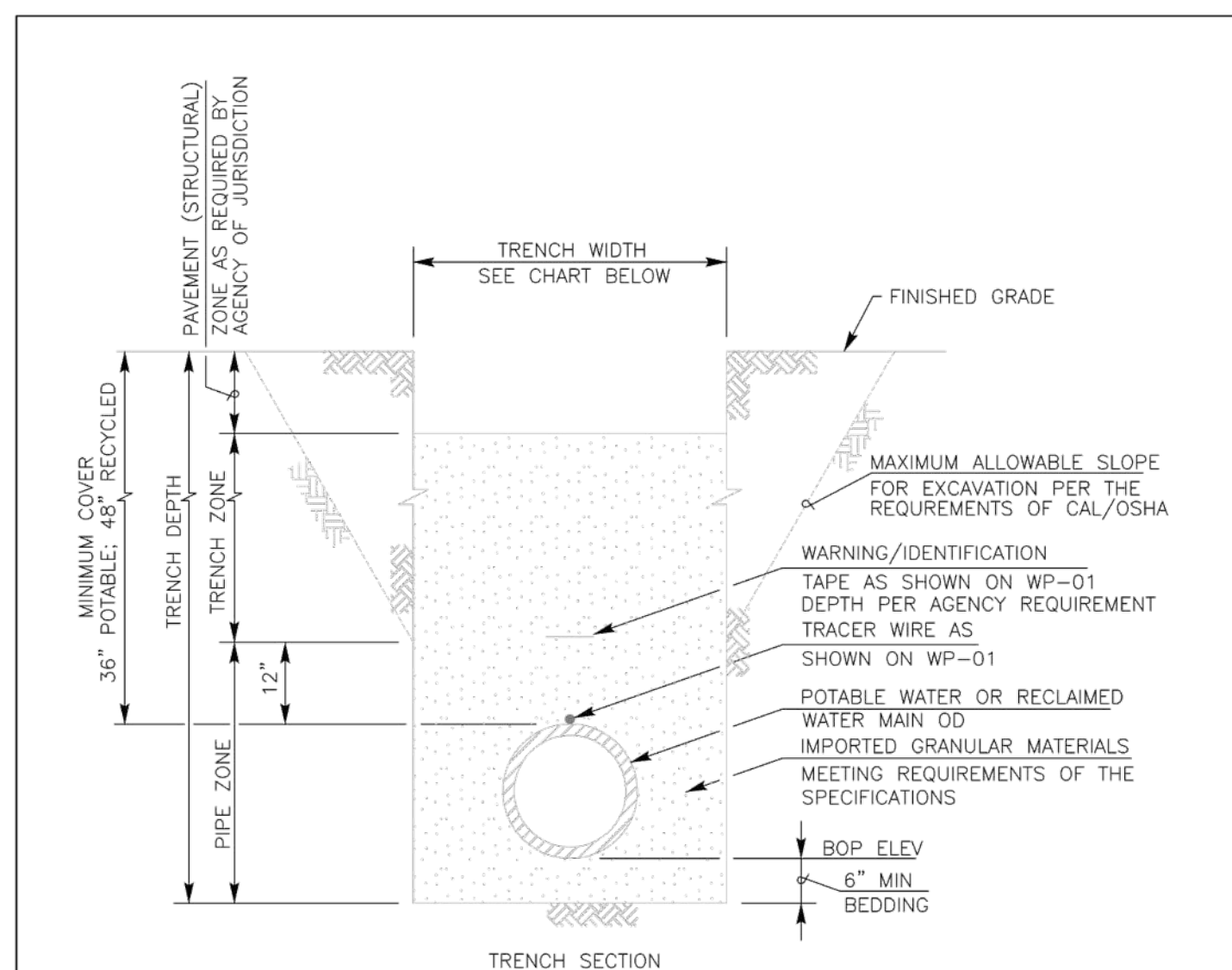
- NOTES:**
- REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
 - STAMP OR CHISEL A 2" HIGH "W" IN CURB FACE TO IDENTIFY POTABLE WATER SERVICE LOCATION
 - STAMP OR CHISEL A 2" HIGH "RW" IN CURB FACE TO IDENTIFY RECYCLED WATER SERVICE LOCATION
 - METER BOXES ARE NOT TO BE INSTALLED IN DRIVEWAYS, SIDEWALKS OR WITHIN PAVED ROADWAYS
 - MULTIPLE METER BOXES SHALL BE INSTALLED WITH A MINIMUM OF 9" BETWEEN BOXES
 - METER BOX SHALL BE INSTALLED 9" FROM THE BACK OF BERM, CURB, OR SIDEWALK (TYP)
 - AN EASEMENT MAY BE NEEDED DEPENDING ON LOCATION OF METER BOX
 - METER BOXES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY'S SPECIFICATIONS
 - MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

J WATER METER BOX LOCATION FOR WATER SERVICE



- NOTES:**
- REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
 - WHERE SPECIFIED, TRACER WIRE AND OR WARNING ID TAPE, TO RUN CONTINUOUSLY ALONG THE ENTIRE LENGTH OF WATER MAINS. WIRE SHALL BE SECURED TO THE PIPE AND MAINTAINED ON PIPE CENTERLINE DURING TRENCH BACKFILL
 - TRACER WIRE ACCESS PORTS SHALL BE INSTALLED WITHIN THE CONCRETE SPLASH PAD OF ALL FIRE HYDRANTS IN ACCORDANCE WITH THE STANDARD DRAWINGS. TRACER WIRE MAY TERMINATE WITHIN METER BOX, BLOWOFF BOX OR AIR VALVE PER AGENCY'S SPECIFICATIONS. TRACER WIRE MAY TERMINATE IN A CP TEST BOX ONLY IF NO OTHER APPURTENANCE EXISTS WITHIN THE REQUIRED 1,000' INTERVAL. ALL BURIED WIRES THAT REQUIRE TRENCHING TO A TEST BOX LOCATION SHALL BE INSTALLED, WITHOUT SPLICE, IN A CONDUIT IN THE TRENCH AT A MINIMUM DEPTH OF 24"
 - WIRE SPLICE CONNECTORS SHALL BE SILICONE FILLED TYPE
 - WARNING/IDENTIFICATION TAPE SHALL BE INSTALLED ABOVE THE PIPE AS SPECIFIED AND RUN CONTINUOUSLY ALONG THE ENTIRE LENGTH OF THE PIPE AND ALL RELATED APPURTENANCES FOR PIPE BEDDING AND TRENCH BACKFILL SEE WP-02
 - MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

K WARNING/IDENTIFICATION TAPE AND TRACER WIRE INSTALLATIONS



- NOTES:**
- REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
 - PAVING OR PAVEMENT REPAIR TO BE DONE IN ACCORDANCE TO CITY OR COUNTY STANDARDS
 - EXCAVATE BELL HOLES AT EACH PIPE JOINT TO PERMIT PROPER ASSEMBLY AND INSPECTION OF THE ENTIRE JOINT
 - ALL PIPELINE TRENCHES SHALL BE EXCAVATED SO THAT THE DISTANCE BETWEEN TRENCH WALLS AT THE TOP OF PIPE SHALL BE AS SHOWN BELOW:

TRENCH WIDTH

NOMINAL PIPE INSIDE DIAMETER	MINIMUM DISTANCE	MAXIMUM DISTANCE
4" & SMALLER	18"	28"
6" & 8"	24"	32"
10" & 12"	28"	36"
16" THRU 36"	OD PLUS 24"	OD PLUS 36"

L PIPE BEDDING AND TRENCH BACKFILL

APPROVED BY DIRECTOR OF PUBLIC SERVICES
 CITY OF IMPERIAL, CA

BY: DAVID DALE, P.E., P.L.S. DATE:

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert
 Call: TOLL FREE 1-800-422-4133
 TWO WORKING DAYS BEFORE YOU DIG.



NO.	REVISIONS:	APPROVED	DATE



CITY OF IMPERIAL
 420 South Imperial Avenue
 Imperial, CA 92251
 Ph: (760) 355-4371 Fax: (760) 355-4718

BENCHMARK:
 SEE SHEET 2 FOR BENCHMARK INFORMATION



PREPARED UNDER THE DIRECT SUPERVISION OF:
 Blanca Soto
 BLANCA H. SOTO R.C.E. NO. 86597
 DATE: 06/21/2024 REG. EXP. 03/31/2025

PROJECT TITLE: CITY OF IMPERIAL AHSC-ARPA/HWY 86 BEAUTIFICATION PHASE 1
SHEET CONTENT: CITY OF IMPERIAL STANDARD DETAILS

SCALE: N/A
 DRAWN BY: BS
 REVIEWED BY: RD
 SHEET NO. 52 OF 52 SHEETS
 JOB NO. CIP#823
 JUNE 2024

UNAUTHORIZED CHANGES & USES: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.