

**CITY OF COSTA MESA  
PUBLIC WORKS AGREEMENT FOR  
CITY PROJECT NO. 25-10  
STATE FUNDED, PROJECT NO. CRASL-5312(106)**

THIS PUBLIC WORKS AGREEMENT ("Agreement"), dated September 2<sup>nd</sup>, 2025 ("Effective Date"), is made by the CITY OF COSTA MESA, a political subdivision of the State of California ("CITY"), and Hardy & Harper, Inc., a California corporation ("CONTRACTOR").

WHEREAS, CITY desires to construct the public improvements described below under Paragraph 1, Scope of Work (the "Project"); and

WHEREAS, CITY has determined that CONTRACTOR is the lowest responsible bidder; and

WHEREAS, CITY now desires to contract with CONTRACTOR to furnish construction and related services for the Project; and

WHEREAS, CITY and CONTRACTOR desire to set forth their rights, duties and liabilities in connection with the services to be performed.

NOW, THEREFORE, for and in consideration of the covenants and conditions contained herein, the parties hereby agree as follows:

1. SCOPE OF WORK.

The scope of work generally consists of street improvements along Fairview Road between Fair Drive and Newport Boulevard (the "Work").

The Work is further described in the "Contract Documents" referred to below.

The Project is known as the Fairview Road Improvement Project (Fair Drive to Newport Boulevard), City Project No. 25-10 (the "Project") and State Funded, Project No. CRASL-5312(106).

2. CONTRACT DOCUMENTS.

The complete Agreement consists of the following documents relating to the Project:

- (a) This Agreement;
- (b) CONTRACTOR's bid, attached hereto as Exhibit A and incorporated herein;

(c) Bid package, including, but not limited to, notice inviting bids, Program Supplement No. 00000A510 to Administering Agency-State Agreement for State Funded Projects No. 12-5312S21, Master Agreement Administering Agency-State Agreement State-Funded Projects, all addenda to notice inviting bids, complete plans, profiles, detailed drawings and specifications, general provisions and special provisions. The bid package is attached hereto as Exhibit B and incorporated herein;

(a) Faithful Performance Bond and Labor and Material Bond, including agent's Power of Attorney for each bond, attached hereto as Exhibit C;

(b) Drug-Free Workplace Policy, attached hereto as Exhibit D and incorporated herein; and

(c) Provisions of the most current edition of The Greenbook: Standard Specifications for Public Works Construction ("The Greenbook"). Provisions of The Greenbook are incorporated by this reference as if fully set forth herein.

The documents comprising the complete Agreement will be referred to as the "Contract Documents."

All of the Contract Documents are intended to complement one another, so that any Work called for in one and not mentioned in another is to be performed as if mentioned in all documents.

In the event of an inconsistency in the Contract Documents, the terms of this Agreement shall prevail over all other Contract Documents. The order of precedence between the remaining Contract Documents shall be as set forth in The Greenbook.

The Contract Documents constitute the entire agreement between the parties and supersede any and all other writings and oral negotiations.

### 3. CITY'S REPRESENTATIVE.

The CITY's Representative is Ramin Nikoui, referred to herein as the Project Manager ("Project Manager").

### 4. CONTRACTOR'S PROJECT MANAGER; PERSONNEL.

(a) Project Manager. CONTRACTOR's Project Manager must be approved by City. Such approval shall be at CITY's sole discretion.

(b) Personnel. CITY has the right to review and approve any personnel who are assigned to perform work under this Agreement. CONTRACTOR shall remove personnel from performing work under this Agreement if requested to do so by CITY.

This Paragraph 4 is a material provision of the Agreement.

5. SCHEDULE.

All Work shall be performed in accordance with the schedule approved on behalf of CITY by the Project Manager, and in accordance with the time of performance set forth in Paragraph 11 (Time of Performance).

6. EQUIPMENT - PERFORMANCE OF WORK.

CONTRACTOR shall furnish all tools, equipment, apparatus, facilities, labor and materials necessary to perform and complete the Work in a good and workmanlike manner in strict conformity with the Contract Documents.

The equipment, apparatus, facilities, labor and material shall be furnished and such Work performed and completed as required in the plans and specifications to the satisfaction of the Project Manager or his or her designee, and subject to his or her approval.

7. COMPENSATION.

CITY shall pay CONTRACTOR in accordance with the fee schedule set forth in CONTRACTOR's bid. CONTRACTOR's total compensation shall not exceed Two Million Eight Hundred Sixty Thousand Dollars (\$2,860,000.00).

8. ADDITIONAL SERVICES.

CONTRACTOR shall not receive compensation for any services provided outside the scope of the Contract Documents unless such additional services, including change orders, are approved in writing by CITY prior to CONTRACTOR performing the additional services.

It is specifically understood that oral requests or approvals of such additional services, change orders or additional compensation and any approvals from CITY shall be barred and are unenforceable.

9. PAYMENTS TO CONTRACTOR.

On or before the last Monday of each and every month during the performance of the Work, CONTRACTOR shall meet with the Project Manager or his or her designee to determine the quantity of pay items incorporated into the improvement during that month. A "Progress Payment Order" will then be jointly prepared, approved, and signed by the Project Manager and the CONTRACTOR setting forth the amount to be paid and providing for a five percent (5%) retention. Upon approval of the progress payment order by the Project Manager, or his or her designee, it shall be submitted to CITY's Finance Department and processed for payment by obtaining approval from the City Council to issue a warrant.

Within three (3) days following City Council's approval to issue a warrant, CITY shall mail to CONTRACTOR a warrant for the amount specified in the progress payment order as the amount to be paid. The retained five percent (5%) shall be paid to CONTRACTOR thirty-five (35) days after the recording of the Notice of Completion of the Work by the CITY with the Orange County Clerk-Recorder and after CONTRACTOR has furnished releases of all claims against CITY by persons who furnished labor or materials for the Work, if required by CITY.

Upon the request of CONTRACTOR and at its expense, securities equivalent to the amount withheld pursuant to the foregoing provisions may be presented to CITY for substitution for the retained funds. If CITY approves the form and amount of the offered securities it will release the retained funds and will hold the securities in lieu thereof. CONTRACTOR shall be entitled to any interest earned on the securities.

In the event that claims for property damage or bodily injury are presented to CITY arising out of CONTRACTOR's or any subcontractor's work under this Agreement, CITY shall give notice thereof to CONTRACTOR, and CONTRACTOR shall have thirty-five (35) days from the mailing of any such notice to evaluate the claim and to settle it by whole or partial payment, or to reject it, and to give notice of settlement or rejection to CITY. If CITY does not receive notice within the above-mentioned 35-day period that the claim has been settled, and if the Project Manager, after consultation with the City Attorney, determines that the claim is meritorious, CITY may pay the claim or a portion of it in exchange for an appropriate release from the claimant, and may deduct the amount of the payment from the retained funds that would otherwise be paid to CONTRACTOR upon completion of the Work; provided, however, that the maximum amount paid for any one claim pursuant to this provision shall be One Thousand Dollars (\$1,000.00), and the maximum amount for all such claims in the aggregate paid pursuant to this provision shall be Five Thousand Dollars (\$5,000.00).

#### 10. PROMPT PAYMENT OF SUBCONTRACTORS.

CONTRACTOR agrees to pay each subcontractor under this Agreement for satisfactory performance of its contract no later than seven (7) days from the receipt of each payment the CONTRACTOR receives from CITY.

CONTRACTOR agrees further to release retainage payments to each subcontractor within thirty (30) days after the subcontractor's work is satisfactorily completed.

Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the CITY.

#### 11. TIME OF PERFORMANCE.

CONTRACTOR shall commence Work by the date specified in CITY's Notice to



Proceed, unless a later date is agreed upon in writing by the parties. The Work shall be completed within Ninety-Five (95) working days from the first day of commencement of the Work.

12. TERMINATION.

(a) Termination for Convenience. CITY may terminate this Agreement at any time, with or without cause, by providing thirty (30) days' written notice to CONTRACTOR.

(b) Termination for Breach of Contract.

- (i) If CONTRACTOR refuses or fails to prosecute the Work or any severable part of it with such diligence as will ensure its timely completion, or if CONTRACTOR fails to complete the Work on time, or if CONTRACTOR, or any subcontractor, violates any of the provisions of the Contract Documents, the Project Manager may give written notice to CONTRACTOR and CONTRACTOR's sureties of the CITY's intention to terminate this Agreement; and, unless within five (5) days after the serving of that notice, such conduct shall cease and arrangements for the correction thereof be made to the satisfaction of the CITY, this Agreement may be terminated at the option of CITY effective upon CONTRACTOR's receipt of a second notice sent by the CITY indicating that the CITY has exercised its option to terminate.
- (ii) If CONTRACTOR is adjudged bankrupt or files for any relief under the Federal Bankruptcy Code or State insolvency laws, this Agreement shall automatically terminate without any further action or notice by CITY.
- (iii) If CONTRACTOR is in breach of any material provision of this Agreement, CITY may immediately terminate this Agreement by providing written notice to CONTRACTOR of same.

13. LIQUIDATED DAMAGES.

In the event the Work is not completed, for any reason, within the time required including any approved extensions of time, and to the satisfaction of the Project Manager, CITY may, in addition to any other remedies, equitable and legal, including remedies authorized by Paragraph 12 (Termination) of this Agreement, charge to CONTRACTOR or its sureties, or deduct from payments or credits due CONTRACTOR, a sum equal to Five Thousand Two Hundred Dollars (\$5,200.00) as liquidated damages for each calendar day beyond the date provided for the completion of such work.

The parties hereto agree that the amount set forth above, as liquidated damages constitutes a fair and reasonable estimate of the costs the CITY would suffer for each day that the CONTRACTOR fails to meet the performance schedule. The parties hereby agree and acknowledge that the delays in the performance schedule will cause CITY to

incur costs and expenses not contemplated by this Agreement.

14. PERFORMANCE BY SURETIES.

In the event CONTRACTOR fails or refuses to perform the Work, CITY may provide CONTRACTOR with a notice of intent to terminate as provided in Paragraph 12 (Termination), of this Agreement. CITY shall immediately give written notice of such intent to terminate to CONTRACTOR and CONTRACTOR's surety or sureties, and the sureties shall have the right to take over and perform this Agreement; provided, however, that the sureties must, within five (5) days after CITY's giving notice of termination, (a) give the CITY written notice of their intention to take over the performance of this Agreement; (b) provide adequate assurances, to the satisfaction of the CITY, that the Work shall be performed diligently and in a timely manner; and (c) must commence performance thereof within five (5) days after providing notice to the CITY of their intention to take over the Work. Upon the failure of the sureties to comply with the provisions set forth above, CITY may take over the Work and complete it, at the expense of CONTRACTOR, and the CONTRACTOR and the sureties shall be liable to CITY for any excess costs or damages including those referred to in Paragraph 13 (Liquidated Damages), incurred by CITY. In such event, CITY may, without liability for so doing, take possession of such materials, equipment, tools, appliances, Contract Documents and other property belonging to CONTRACTOR as may be on the site of the Work and reasonably necessary therefor and may use them to complete the Work.

15. DISPUTES PERTAINING TO PAYMENT FOR WORK.

Should any dispute arise respecting whether any delay is excusable, or its duration, or the value of the Work done, or of any Work omitted, or of any extra Work which CONTRACTOR may be required to do, or respecting any payment to CONTRACTOR during the performance of this Agreement, such dispute shall be decided by the Project Manager, and his or her decisions shall be final and binding upon CONTRACTOR and its sureties.

16. SUPERINTENDENCE BY CONTRACTOR.

At all times during performance of the Work, CONTRACTOR shall give personal superintendence or have a competent foreman or superintendent on the worksite, with authority to act for CONTRACTOR.

17. INSPECTION BY CITY.

CONTRACTOR shall at all times maintain proper facilities and provide safe access for inspection by CITY to all parts of the Work and to all shops on or off-site where the Work or portions of the Work, are in preparation. CITY shall have the right of access to the premises for inspection at all times. However, CITY shall, at all times, comply with CONTRACTOR's safety requirements on the job site.

18. CARE OF THE WORK AND OFF-SITE AUTHORIZATION.

CONTRACTOR warrants that it has examined the site of the Work and is familiar with its topography and condition, location of property lines, easements, building lines and other physical factors and limitations affecting the performance of this Agreement. CONTRACTOR, at CONTRACTOR's sole cost and expense, shall obtain any permission, and all approvals, licenses, or easements necessary for any operations conducted off the premises owned or controlled by CITY. CONTRACTOR shall be responsible for the proper care and protection of all materials delivered to the site or stored off-site and for the Work performed until completion and final inspection and acceptance by CITY. The risk, damage or destruction of materials delivered to the site or to Work performed shall be borne by CONTRACTOR.

19. CONTRACT SECURITY AND GUARANTEE.

CONTRACTOR shall furnish, concurrently with the execution of this Agreement, the following: (1) a surety bond in an amount equal to one hundred percent (100%) of the contract price as security for the faithful performance of this Agreement, and (2) a separate surety bond in an amount equal to at least one hundred percent (100%) of the contract price as security for the payment of all persons furnishing labor or materials in connection with the Work under this Agreement. Sureties for each of the bonds and the forms thereof shall be satisfactory to CITY. In addition, such sureties must be authorized to issue bonds in California; sureties must be listed on the latest revision to the U.S. Department of the Treasury Circular 570; and must be shown to have sufficient bonding capacity to provide the bonds required by the Contract Documents.

CONTRACTOR shall provide a certified copy of the certificate of authority of the surety issued by the Insurance Commissioner; a certificate from the clerk of the county in which the court or officer is located that the certificate of authority of the surety has not been surrendered, revoked, canceled, annulled, or suspended or, in the event that it has, that renewed authority has been granted; and copies of the surety's most recent annual statement and quarterly statement filed with the Department of Insurance pursuant to Article 10 (commencing with Section 900) of Chapter 1 of Part 2 of Division 1 of the Insurance Code.

CONTRACTOR guarantees that all materials used in the Work and all labor performed shall be in conformity with the Contract Documents including, but not limited to, the standards and specifications set forth in the most current edition of The Greenbook. CONTRACTOR shall, at its own expense, make any and all repairs and replacements that shall become necessary as the result of any failure of the Work to conform to the aforementioned Contract Documents, and/or standard specifications; provided, however, that CONTRACTOR shall be obligated under this provision only to the extent of those failures or defects of which CONTRACTOR is given notice within a period of twelve (12) months from the date that the Notice of Completion is recorded.

The rights and remedies available to CITY pursuant to this provision shall be

cumulative with all rights and remedies available to CITY pursuant to statutory and common law, which rights and remedies are hereby expressly reserved, and neither the foregoing guarantee by CONTRACTOR nor its furnishing of the bonds, nor acceptance thereof by CITY, shall constitute a waiver of any rights or remedies available to CITY against CONTRACTOR.

20. INDEMNIFICATION.

CONTRACTOR agrees to protect, defend, indemnify and hold harmless CITY and State of California Department of Transportation ("STATE") and their elected and appointed boards, officers, agents, and employees from any and all claims, liabilities, expenses, or damages of any nature, including attorneys' fees, for injury to or death of any person, and for injury or damage to any property, including consequential damages of any nature resulting therefrom, arising out of or in any way connected with the performance of this Agreement. The defense obligation provided for hereunder shall apply without any advance showing of negligence or wrongdoing by the CONTRACTOR, its employees, and/or authorized subcontractors, but shall be required whenever any claim, action, complaint, or suit asserts as its basis the negligence, errors, omissions or misconduct of the CONTRACTOR, its employees, and/or authorized subcontractors, and/or whenever any claim, action, complaint or suit asserts liability against the CITY and STATE, its elected officials, officers, agents and employees based upon the work performed by the CONTRACTOR, its employees, and/or authorized subcontractors under this Agreement, whether or not the CONTRACTOR, its employees, and/or authorized subcontractors are specifically named or otherwise asserted to be liable. Notwithstanding the foregoing, the CONTRACTOR shall not be liable for the defense or indemnification of the CITY and STATE for claims, actions, complaints or suits arising out of the sole active negligence or willful misconduct of the CITY and STATE. This provision shall supersede and replace all other indemnity provisions contained either in the CITY's specifications or CONTRACTOR's proposal, which shall be of no force and effect.

CONTRACTOR shall comply with all of the provisions of the Workers' Compensation insurance laws and Safety in Employment laws of the State of California, including the applicable provisions of Divisions 4 and 5 of the California Labor Code and all amendments thereto and regulations promulgated pursuant thereto, and all similar State, Federal or local laws applicable; and CONTRACTOR shall indemnify and hold harmless CITY and STATE from and against all claims, liabilities, expenses, damages, suits, actions, proceedings and judgments, of every nature and description, including attorney fees, that may be presented, brought or recovered against CITY and STATE for or on account of any liability under or failure to comply with any of said laws which may be incurred by reason of any Work performed under this Agreement by CONTRACTOR or any subcontractor or others performing on behalf of CONTRACTOR.

CITY and STATE do not, and shall not, waive any rights against CONTRACTOR which it may have by reason of the above hold harmless agreements, because of the acceptance by CITY and STATE or the deposit with CITY and STATE by CONTRACTOR of any or all of the insurance policies described in Paragraph 21 (Insurance) of this

## Agreement.

The hold harmless agreements by CONTRACTOR shall apply to all liabilities, expenses, claims, and damages of every kind (including but not limited to attorneys' fees) incurred or alleged to have been incurred, by reason of the operations of CONTRACTOR or any subcontractor or others performing on behalf of CONTRACTOR, whether or not such insurance policies are applicable. CONTRACTOR shall require any and all tiers of subcontractors to afford the same degree of indemnification to the CITY and STATE and their elected and appointed boards, officers, agents, and employees that is required of CONTRACTOR and shall incorporate identical indemnity provisions in all contracts between CONTRACTOR and all tiers of its subcontractors.

In the event that CONTRACTOR and CITY and STATE are sued by a third party for damages caused or allegedly caused by negligent or other wrongful conduct of CONTRACTOR, or by a dangerous condition of CITY's and STATE'S property created by CONTRACTOR or existing while the property was under the control of CONTRACTOR, CONTRACTOR shall not be relieved of its indemnity obligation to CITY and STATE by any settlement with any such third party unless that settlement includes a full release and dismissal of all claims by the third party against the CITY and STATE.

## 21. INSURANCE.

(a) Minimum Scope and Limits of Insurance. CONTRACTOR shall not commence work under this Agreement until it has obtained all insurance required under this Paragraph 21 and CITY has approved the insurance as to form, amount, and carrier, nor shall CONTRACTOR allow any subcontractor to commence any Work until all similar insurance required of the subcontractor has been obtained and approved.

CONTRACTOR shall obtain, maintain, and keep in full force and effect during the life of this Agreement all of the following minimum scope of insurance coverages with an insurance company admitted to do business in California, rated "A," Class X, or better in the most recent Best's Key Insurance Rating Guide, and approved by CITY:

- (i) Commercial general liability, including premises-operations, products/completed operations, broad form property damage, blanket contractual liability, independent contractors, personal injury or bodily injury with a policy limit of not less than One Million Dollars (\$1,000,000.00) per occurrence. If such insurance contains a general aggregate limit, it shall apply separately to this Agreement or shall be twice the required occurrence limit.
- (ii) Business automobile liability for owned vehicles, hired, and non-owned vehicles, with a policy limit of not less than One Million Dollars (\$1,000,000.00) combined single limit per accident for bodily injury and property damage.

- (iii) Workers' compensation insurance as required by the State of California, with Statutory Limits, and Employer's Liability insurance with a limit of no less than One Million Dollars (\$1,000,000.00) per accident for bodily injury or disease. CONTRACTOR agrees to waive, and to obtain endorsements from its workers' compensation insurer waiving subrogation rights under its workers' compensation insurance policy against the CITY and STATE, its officers, agents, employees, and volunteers arising from work performed by CONTRACTOR for the CITY and STATE and to require each of its subcontractors, if any, to do likewise under their workers' compensation insurance policies.
- (iv) 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:
  - (1) 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;
  - (2) Pay on behalf of wording as opposed to reimbursement;
  - (3) Concurrency of effective dates with primary policies;
  - (4) Policies shall "follow form" to underlying primary policies; and
  - (5) Insureds under primary policies shall also be insureds under the umbrella or excess policies.

(b) Endorsements. The commercial general liability insurance policy and business automobile liability policy shall contain or be endorsed to contain the following provisions:

- (i) Additional insureds: The City of Costa Mesa and the State of California Department of Transportation, their elected and appointed boards, officers, officials, agents, employees, and volunteers are additional insureds with respect to: liability arising out of activities performed by or on behalf of the CONTRACTOR pursuant to its contract with the City; products and completed operations of the CONTRACTOR; premises owned, occupied or used by the CONTRACTOR; automobiles owned, leased, hired, or borrowed by the CONTRACTOR."
- (ii) Notice: "Said policy shall not terminate, nor shall it be canceled nor the coverage reduced, until thirty (30) days after written notice is given to CITY."

- (iii) **Other Insurance:** "CONTRACTOR's insurance coverage shall be primary insurance as respects the City of Costa Mesa, its officers, officials, agents, employees, and volunteers. Any other insurance maintained by the City of Costa Mesa shall be excess and not contributing with the insurance provided by this policy."

(c) Reporting Provisions. Any failure of CONTRACTOR to comply with the reporting provisions of the policies shall not affect coverage provided to the City of Costa Mesa, its officers, officials, agents, employees, and volunteers.

(d) Insurance Applies Separately. CONTRACTOR's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

(e) Deductible or Self-Insured Retention. If any of such policies provide for a deductible or self-insured retention to provide such coverage, the amount of such deductible or self-insured retention shall be approved in advance by CITY. No policy of insurance issued as to which the CITY is an additional insured shall contain a provision which requires that no insured except the named insured can satisfy any such deductible or self-insured retention.

(f) Proof of Insurance. Prior to commencement of the Work, CONTRACTOR shall furnish CITY, through the Project Manager, proof of compliance with the above insurance requirements in a form satisfactory to City's Risk Management.

(g) Non-Limiting. Nothing in this Paragraph 21 shall be construed as limiting in any way, the indemnification provision contained in this Agreement, or the extent to which Consultant may be held responsible for payments of damages to persons or property.

## 22. PREVAILING WAGE REQUIREMENTS.

(a) Prevailing Wage Laws. CONTRACTOR is aware of the requirements of Chapter 1 (beginning at Section 1720 et seq.) of Part 7 of Division 2 of the California Labor Code, as well as Title 8, Section 16000 et seq. of the California Code of Regulations ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on "public works" and "maintenance" projects. This Project is a "public works" project and requires compliance with the Prevailing Wage Laws. CONTRACTOR shall defend, indemnify and hold the CITY, its elected officials, officers, employees and agents free and harmless from any claim or liability arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

(b) Payment of Prevailing Wages. CONTRACTOR shall pay the prevailing wage rates for all work performed under this Agreement. When any craft or classification is omitted from the general prevailing wage determinations, CONTRACTOR shall pay the wage rate of the craft or classification most closely related to the omitted classification. A copy of the general prevailing wage rate determination is on file in the Office of the City

Clerk and is incorporated into this Agreement as if fully set forth herein. CONTRACTOR shall post a copy of such wage rates at all times at the project site(s).

(c) Legal Working Day. In accordance with the provisions of Labor Code Section 1810 et seq., eight (8) hours is the legal working day. CONTRACTOR and any subcontractor(s) of CONTRACTOR shall comply with the provisions of the Labor Code regarding eight (8)-hour work day and 40-hour work week requirements, and overtime, Saturday, Sunday, and holiday work. Work performed by CONTRACTOR's or any subcontractor's employees in excess of eight (8) hours per day, and 40 hours during any one week, must include compensation for all hours worked in excess of eight (8) hours per day, or 40 hours during any one week, at not less than one and one-half times the basic rate of pay. CONTRACTOR shall forfeit as a penalty to CITY Twenty-Five Dollars (\$25.00), or any greater penalty set forth in the Labor Code, for each worker employed in the execution of the Work by CONTRACTOR or by any subcontractor(s) of CONTRACTOR, for each calendar day during which such worker is required or permitted to the work more than eight (8) hours in one calendar day or more than 40 hours in any one calendar week in violation of the Labor Code.

(d) Apprentices. CONTRACTOR shall comply with the provisions of Labor Code Section 1777.5 concerning the employment of apprentices on public works projects. CONTRACTOR shall be responsible for ensuring compliance by its subcontractors with Labor Code Section 1777.5.

(e) Payroll Records. Pursuant to Labor Code Section 1776, CONTRACTOR and any subcontractor(s) shall keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by CONTRACTOR or any subcontractor in connection with this Agreement. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following: (1) The information contained in the payroll record is true and correct; and (2) The employer has complied with the requirements of Sections 1771, 1881, and 1815 of the Labor Code for any work performed by his or her employees on this Project. The payroll records shall be certified and shall be available for inspection at all reasonable hours in accordance with the requirements of Labor Code Section 1776. CONTRACTOR shall also furnish each week to CITY's Project Administration Division a statement with respect to the wages of each of its employees during the preceding weekly payroll period.

(f) Registration with DIR. CONTRACTOR and any subcontractor(s) of CONTRACTOR shall comply with the provisions of Labor Code Section 1771 and Labor Code Section 1725.5 requiring registration with the DIR.

## 23. COMPLIANCE WITH ALL LAWS.

CONTRACTOR shall, at its own cost and expense, comply with all applicable local, state, and federal laws, regulations, and requirements in the performance of this



Agreement, including but not limited to laws regarding health and safety, labor and employment, and wage and hours.

24. ADDITIONAL CONTRACT PROVISIONS – State. Contractor shall comply with all of the terms and conditions of the documents included in Exhibit “A”, specifically Program Supplement No. 00000A510 to Administering Agency-State Agreement for State Funded Projects No. 12-5312S21 and Master Agreement Administering Agency-State Agreement State-Funded Projects, attached hereto and incorporated herein by this reference as though set forth in full. Specifically, Contractor shall comply and adhere to the requirements in Exhibit “E”.

25. DRUG-FREE WORKPLACE POLICY.

CONTRACTOR, upon notification of the award of this Agreement, shall establish a Drug-Free Awareness Program to inform employees of the dangers of drug abuse in the workplace, the penalties that may be imposed upon employees for drug abuse violations occurring in the workplace, and the employee assistance programs available to employees. Each employee engaged in the performance of a CITY contract must be notified of this Drug-Free Awareness Program, and must abide by its terms. CONTRACTOR shall conform to all the requirements of CITY’s Policy No. 100-5, attached hereto. Failure to establish a program, notify employees, or inform the CITY of a drug-related workplace conviction will constitute a material breach of contract and cause for immediate termination of the contract by the CITY.

26. NON-DISCRIMINATION.

In performing this Agreement, CONTRACTOR will not engage in, nor permit its agents to engage in, discrimination in employment of persons because of their race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status or sex, or sexual orientation, except as permitted pursuant to Section 12940 of the Government Code. Violation of this provision may result in the imposition of penalties referred to in Section 1735 of the California Labor Code.

27. PROVISIONS CUMULATIVE.

The provisions of this Agreement are cumulative and in addition to, and not in limitation of, any other rights or remedies available to CITY.

28. NOTICES.

It shall be the duty and responsibility of CONTRACTOR to notify all tiers of subcontractors and material men of the following special notice provision; namely, all preliminary 20-day notices or stop notices shall be directed only to the City Clerk and to no other department, and shall be either personally delivered or sent by certified mail, postage prepaid.

All other notices shall be in writing and delivered in person or sent by certified mail, postage prepaid. Notices required to be given to CITY pursuant to this Agreement shall be addressed as follows:

City of Costa Mesa  
77 Fair Drive  
Costa Mesa, CA 92626  
Attn: Seung Yang

Notices required to be given to CONTRACTOR shall be addressed as follows:

Hardy & Harper  
32 Rancho Circle  
Lake Forest, CA 92630  
Attn: Michael Amundson, Vice President

Notices required to be given to CONTRACTOR's sureties shall be addressed as follows:

Fidelity and Deposit Company of Maryland  
777 South Figueroa Street, Suite 3900  
Los Angeles, CA 90017  
Attn: Dwight Reilly, Attorney-in-Fact

29. INDEPENDENT CONTRACTOR.

The parties hereto acknowledge and agree that the relationship between CITY and CONTRACTOR is one of principal and independent contractor and no other. All personnel to be utilized by CONTRACTOR in the performance of this Agreement shall be employees of CONTRACTOR and not employees of the CITY. CONTRACTOR shall pay all salaries and wages, employer's social security taxes, unemployment insurance and similar taxes relating to employees and shall be responsible for all applicable withholding taxes. Nothing contained in this Agreement shall create or be construed as creating a partnership, joint venture, employment relations, or any other relationship except as set forth between the parties. The parties specifically acknowledge and agree that CONTRACTOR is not a partner with CITY, whether general or limited, and no activities of CITY or CONTRACTOR or statements made by CITY or CONTRACTOR shall be interpreted by any of the parties hereto as establishing any type of business relationship other than an independent contractor relationship.

30. PERS ELIGIBILITY INDEMNIFICATION.

In the event that CONTRACTOR or any employee, agent, or subcontractor of CONTRACTOR providing services under this Agreement claims or is determined by a court of competent jurisdiction or the California Public Employees' Retirement System (PERS) to be eligible for enrollment in PERS as an employee of the CITY, CONTRACTOR shall indemnify, defend, and hold harmless CITY for the payment of any

employee and/or employer contributions for PERS benefits on behalf of CONTRACTOR or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of CITY.

Notwithstanding any other agency, state or federal policy, rule, regulation, law or ordinance to the contrary, CONTRACTOR and any of its employees, agents, and subcontractors providing service under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any claims to, any compensation, benefit, or any incident of employment by CITY, including but not limited to eligibility to enroll in PERS as an employee of CITY and entitlement to any contribution to be paid by CITY for employer contribution and/or employee contributions for PERS benefits.

31. VALIDITY.

The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any of the other provisions of this Agreement.

32. GOVERNING LAW.

This Agreement shall be governed by and construed in accordance with the laws of the State of California. Any legal action relating to or arising out of this Agreement shall be subject to the jurisdiction of the County of Orange, California.

33. NO THIRD PARTY BENEFICIARY RIGHTS.

This Agreement is entered into for the sole benefit of the CITY and CONTRACTOR and no other parties are intended to be direct or incidental beneficiaries of this Agreement and no third party shall have any right in, under or to this Agreement.

34. ASSIGNABILITY.

This Agreement may not be transferred or assigned by either party, or by operation of law, to any other person or persons or business entity, without the other party's written permission. Any such transfer or assignment, or attempted transfer or assignment, without written permission, may be deemed by the other party to constitute a voluntary termination of this Agreement and this Agreement shall thereafter be deemed terminated and void.

35. WAIVER.

No waiver of any provision of this Agreement shall be effective unless in writing and signed by a duly authorized representative of the party against whom enforcement of a waiver is sought referring expressly to this Paragraph. The waiver of any right or remedy in respect to any occurrence or event shall not be deemed a waiver of any right or remedy in respect to any other occurrence or event, nor shall any waiver constitute a continuing waiver.

36. HEADINGS.

Section and subsection headings are not to be considered part of this Agreement, are included solely for convenience, and are not intended to modify or explain or to be a full or accurate description of the content thereof.

37. CONSTRUCTION.

The parties have participated jointly in the negotiation and drafting of this Agreement and have had an adequate opportunity to review each and every provision of the Agreement and submit the same to counsel or other consultants for review and comment. In the event an ambiguity or question of intent or interpretation arises with respect to this Agreement, this Agreement shall be construed as if drafted jointly by the parties and in accordance with its fair meaning. There shall be no presumption or burden of proof favoring or disfavoring any party by virtue of the authorship of any of the provisions of this Agreement.

38. COUNTERPARTS.

This Agreement may be executed in one or more counterparts by the parties hereto. All counterparts shall be construed together and shall constitute one Agreement.

39. CORPORATE AUTHORITY.

The persons executing this Agreement on behalf of the parties hereto warrant that they are duly authorized to execute this Agreement on behalf of said parties and that by doing so, the parties hereto are formally bound to the provisions of this Agreement.

[Signature page follows.]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by and through their respective authorized officers, as of the date first above written.

CITY OF COSTA MESA  
A municipal corporation

\_\_\_\_\_  
Cecilia Gallardo-Daly  
Interim City Manager

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

CONTRACTOR

\_\_\_\_\_  
Signature

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

\_\_\_\_\_  
Michael Amundson, Vice President

ATTEST:

\_\_\_\_\_  
Brenda Green  
City Clerk

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

APPROVED AS TO FORM:

\_\_\_\_\_  
Kimberly Hall Barlow  
City Attorney

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

APPROVED AS TO INSURANCE:

\_\_\_\_\_  
Ruth Wang  
Risk Management

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

APPROVED AS TO PURCHASING:

\_\_\_\_\_  
Carol Molina  
Finance Director

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

DEPARTMENTAL APPROVAL:

\_\_\_\_\_  
Raja Sethuraman  
Public Works Director

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

\_\_\_\_\_  
Paul Martin  
Project Manager

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

**EXHIBIT A**  
**CONTRACTOR'S BID**

CITY OF COSTA MESA  
ORANGE COUNTY, CALIFORNIA

---

NOTICE TO BIDDERS, PROPOSAL, CONTRACT, AND  
SPECIAL PROVISIONS FOR

**FAIRVIEW ROAD IMPROVEMENT PROJECT**  
***(FROM FAIR DRIVE TO NEWPORT BOULEVARD)***

**CITY PROJECT NO. 25-10**  
**STATE PROJECT NO. CRASL-5312(106)**

---

Prepared Under the Direction of



*S. Yang*

**Seung Yang, P.E.**

City Engineer

Copy No. \_\_\_\_\_

Checked by \_\_\_\_\_



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**CITY OF COSTA MESA  
ORANGE COUNTY, CALIFORNIA  
NOTICE INVITING BIDS**

**NOTICE IS HEREBY GIVEN** that the City of Costa Mesa ("City") invites sealed bids, to be submitted electronically only, for the following project:

**FAIRVIEW ROAD IMPROVEMENT PROJECT (FAIR DRIVE TO NEWPORT BOULEVARD),  
CITY PROJECT NO. 25-10  
STATE FUNDED, PROJECT NO. CRASL-5312(106)**

1. **BID SUBMISSION AND OPENING:** Bids must be submitted electronically via the City of Costa Mesa's PlanetBids portal before the deadline of **4:00 P.M., Monday, May 5, 2025**, at which time or shortly thereafter the City will open bids electronically. The bid results will be posted online via PlanetBids. No paper bids or any other form of submittal will be accepted. Any bid received after the scheduled closing time for the receipt of bids will be rejected. The City is not responsible for and accepts no liability in the event a response is late due to any network, internet, or any other technical difficulty or interruption. It shall be the sole responsibility of the bidder to ensure that his/her/its bid is received by the deadline.

To access the bid documents and bid on this project, potential vendors and bidders must first register through the City's PlanetBids portal at:

<https://www.planetbids.com/portal/portal.cfm?CompanyID=45476>.

2. **SCOPE OF WORK AND BID DOCUMENTS:** The scope of work generally consists of street improvements along Fairview Road between Fair Drive and Newport Boulevard. Work includes, but is not limited to, removal and replacement of asphalt and concrete parkways (e.g., curb & gutter, sidewalk, driveways, curb ramps, cross gutters, etc.), grind and overlay of the asphalt pavement, installation of a new HAWK signal mid-block along Fairview Road, median landscaping, bus stop relocation and construction, etc. The contractor shall begin work within **TEN (10) DAYS** after the contract has been approved by the City of Costa Mesa. The work shall be diligently prosecuted to completion within **NINETY-FIVE (95) WORKING DAYS**.

The plans, specifications, and bid documents for this project can be obtained via the City's PlanetBids portal at: <https://www.planetbids.com/portal/portal.cfm?CompanyID=45476>.

It is the bidder's responsibility to ensure that the most current version of the solicitation, including any addenda, has been downloaded. Bids received without the applicable addenda will be rejected as incomplete.

3. **PRE-BID MEETING OR JOB WALK:** None.
4. **BID CONTENTS:** All bids must be submitted on the proposal form included in the bid documents. No bid will be considered unless it is made on the proposal form furnished by the City and made in accordance with the provisions of the bid requirements.
5. **BID SECURITY:** Each bidder **must** submit a certified check, cashier's check, or a bid bond, made payable to or in favor of the City of Costa Mesa, in an amount equal to at least ten percent (10%) of the total amount of the bid, to the Costa Mesa City Clerk prior to the bid submission deadline. No bid will be considered unless such certified check, cashier's check, or bid bond is received by the City Clerk **PRIOR** to the bid submission deadline.
6. **CONTRACTOR'S LICENSE:** A valid **California Contractor's License Class "A" (General Engineering Contractor)** issued by the California Contractors State License Board is required at the

time the contract is awarded pursuant to California Public Contract Code section 3300. Each bidder must also be qualified as required by law at the time of the bid opening.

7. **REGISTRATION WITH THE DEPARTMENT OF INDUSTRIAL RELATIONS:** Pursuant to Labor Code sections 1725.5 and 1771.1, no contractor or subcontractor shall 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 unless registered and qualified pursuant to Labor Code section 1725.5.
8. **PREVAILING WAGES:** In addition, this project is a “public work” subject to prevailing wage requirements. Pursuant to provisions of Sections 1770 et seq. of the California Labor Code, all works employed on the project shall be paid not less than the general prevailing rate of per diem wages, as determined by the Director of the Department of Industrial Relations (DIR) for work of a similar character in the locality in which the work is performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work. Copies of the prevailing rate of per diem wages are on file with Costa Mesa Public Services Department and are available to any interested party upon request. The applicable State prevailing wages are also set forth on the Department of Industrial Relations’ website: <http://www.dir.ca.gov>; these rates are subject to predetermined increases. The prime contractor shall post a copy of the DIR’s determination of the prevailing rate of per diem wages at each job site. This project is subject to compliance monitoring and enforcement by the DIR.
9. **PAYMENT (LABOR & MATERIAL) BOND AND PERFORMANCE BOND:** A Payment (Labor & Material) Bond and a Performance Bond, each in the amount of 100% of the contract amount, will be required of the successful bidder prior to or after the award of the contract.
10. **RETENTION:** The City withholds five percent (5%) of each progress payment as retention. Pursuant to Public Contract Code section 22300, the successful bidder may substitute certain securities for money withheld by the City to ensure performance of the contract. At the request and expense of the contractor, securities equivalent to the amount withheld shall be deposited with the public agency, or with a state or federally chartered bank in this state as the escrow agent, who shall then pay those moneys to the contractor. Securities will be returned to the contractor upon satisfactory completion of the contract.
11. **NON-DISCRIMINATION:** The bidding process and contract are subject to State and Federal non-discrimination requirements, including but not limited to the requirement that no person or business shall discriminate on the basis of race, color, national origin, ancestry, religious creed, physical disability, mental disability, medical condition, marital status, sex, gender, gender expression, gender identity, sexual orientation, age, or military or veteran status in its solicitation, selection, hiring, or treatment of individuals or businesses in connection with the bidding process or work performed for the City in connection with the project.
12. **CITY’S RIGHT TO REJECT BIDS:** The City of Costa Mesa reserves the right, in its sole discretion, to reject any or all bids, or to waive any minor irregularities or informalities in any bid.
13. **ADDITIONAL REQUIREMENTS:** This project is subject to local, State, and Federal regulations and requirements, as detailed in the bid documents.

For all inquiries, please contact Anna Baca, Public Works Department, via e-mail at [anna.baca@costamesaca.gov](mailto:anna.baca@costamesaca.gov).

Brenda Green, City Clerk  
City of Costa Mesa  
Dated: March 27, 2025

### **INFORMATION FOR BIDDERS**

1. **PREPARATION OF BID FORM:** The City of Costa Mesa (City) requires that bids be submitted on the proposal available on *PlanetBids* at such time and place as is stated in the Notice Inviting Bids. All information requested in the bid forms must be provided. All bids shall be submitted electronically via the City's public bidding platform, *PlanetBids* **only**. No other form of submittal shall be accepted. It is the sole responsibility of the Bidder to see that his bid is received in proper time. Any bid received after the scheduled closing time for receipt of bids will be **rejected**. Each Bidder is responsible for acknowledging all addenda.
2. **QUALIFICATION OF BIDDERS:** Each Bidder shall submit a list of Construction Project References indicating Public Works and/or similar construction projects completed or in progress within the last 24 months. Forms for this purpose are furnished with the bid package.
3. **BID SECURITY / BID BOND:** Each bid shall be accompanied by one of the following: cash, cashier's check made payable to the City, a certified check made payable to the City, or a Bidder's Bond executed by an admitted surety insurer, made payable to the City, in an amount not less than 10% of the maximum amount of the bid. This original bid security / bid bond must be submitted to the City Clerk's Office *at least one hour **prior*** to the bid submission deadline. Any and all **late** submittals of the bid security / bid bond **shall** be rejected, and it is the bidder's responsibility, *not* the delivery service, to ensure said bid security / bid bond is delivered timely to the City Clerk's office. The Bidder's Bond shall be signed by both, the Bidder and the Surety; and both signatures shall be notarized. The bid security shall be given as a guarantee that the Bidder, if awarded the work, shall execute the contract in conformity with the Contract Documents and shall provide the surety bond or bonds as specified therein within fourteen (14) calendar days after a written Notice of Intent to Award Contract is deposited in the mail. In the case of refusal or failure to enter into said contract, the check or bond, as the case may be, shall be forfeited to the City.
4. **NONCOLLUSION AFFIDAVIT:** Each bid shall be accompanied by a notarized Noncollusion Affidavit on a form which is included in the Contract Documents.
5. **SIGNATURE:** Via the *PlanetBids* platform, the bid must be *electronically* or *digitally* signed in the name of the Bidder and must be person or persons duly authorized to sign the bid on behalf of the Bidder.
6. **CORRECTIONS:** Any corrections made to the submitted bid must be made electronically via *PlanetBids*.
7. **DELIVERY OF PROPOSAL:** Proposals shall be submitted electronically via PlanetBids: <https://www.planetbids.com/portal/portal.cfm?CompanyID=45476>. No other form of submittal shall be accepted by the City.
8. **BID DEPOSIT RETURN:** Deposits of three of more low bidders, the number being



at the discretion of the City, will be held for sixty (60) calendar days or until posting by the successful bidder of the Bonds and Certificates of Insurance required and return of executed copies of the Agreement, whichever first occurs, at which time the deposits will be returned.

9. TAXES: No mention shall be made in the proposal of Sales Tax, Use Tax or any other tax, as all amounts bid will be deemed and held to include any such taxes which may be applicable.
10. WITHDRAWAL OF BIDS: Any bidder may withdraw his bid either personally, by written request, or by telegraphic request confirmed in the manner specified above at any time prior to the scheduled closing time for receipt of bids.
11. AGREEMENT AND BONDS: The Agreement form, which the successful bidder, as Contractor, will be required to execute, and the forms and amounts of surety bonds and Certificates of Insurance which he will be required to furnish prior to the execution of the Agreement, are included in the Contract Documents and should be carefully examined by the Bidder. The successful Bidder will be required to submit **THREE (3)** executed copies of the Agreement, the Performance Bond, the Payment (Labor & Material) Bond and the Certificates of Insurance. Payment and performance bonds shall be issued by a surety who is listed in the latest revision of U.S. Department of Treasury Circular 570 and Code of Civil Procedure Section 995.120. The Performance Bond and the Payment (Labor & Material) Bond shall be signed by both, the Bidder and the Surety; and both signatures shall be notarized.
12. FORFEITURE FOR FAILURE TO POST SECURITY AND EXECUTE AGREEMENT: In the event the Bidder to whom the Notice of Intent to Award Contract is given fails or refuses to post the required bonds and Certificates of Insurance and return executed copies of the Agreement within fourteen (14) calendar days after notification, the City may declare the Bidder's bid deposit or bond forfeited as damages caused by the failure of the bidder to post such security and execute such copies of the Agreement, and may give Notice of Intent to Award Contract to the next lowest responsive and responsible bidder, or may call for new bids.
13. BIDDERS INTERESTED IN MORE THAN ONE BID: No person, firm or corporation shall be allowed to make, or file or be interested in more than one bid for the same work unless alternate bids are specifically called for.
14. EXAMINATION OF SITE AND CONTRACT DOCUMENTS: Each bidder shall visit the site of the proposed work and fully acquaint himself with the conditions relating to the construction and labor so that he may fully understand the facilities, difficulties, and restrictions attending the execution of the work under the contract. Bidders shall thoroughly examine and be familiar with the drawings and specifications. The failure or omission of any bidder to receive or examine any contract document, form, instrument, addendum, or other document or to visit the site and acquaint himself with conditions there existing shall in no way relieve any bidder from any obligation with respect to his bid or to the contract. The submission of a bid shall be taken as prima facie evidence of compliance with this section.

15. INTERPRETATION OF PLANS AND DOCUMENTS: If any Bidder contemplating submitting a bid for the proposed contract is in doubt as to the true meaning of any part of the drawings, specifications, or other Contract Documents, or finds discrepancies in, or omissions from the drawings and specifications, it may submit to the Engineer a written request for an interpretation or correction thereof. The Bidder submitting the Request for Interpretation (RFI) shall be responsible for its prompt delivery and on the form included within this IFB (Page B-6) Any interpretation or correction of the Contract Documents will be made only by addendum duly issued and a copy of such addendum will be mailed or delivered to each person receiving a set of the Contract Documents. No person is authorized to make any oral interpretation of any provision in the Contract Documents to any Bidder, and no Bidder is authorized to rely on any such unauthorized oral interpretation.
16. ADDENDA: The effect of all addenda to the Contract Documents shall be considered in the bid package and said addenda shall be made part of the Contract Documents and shall be returned with the bid package. Failure to submit any such addenda with the bid package may render the bid irregular and result in its rejection by the City.
17. QUESTIONS TO THE ENGINEER: Questions regarding the bid documents (i.e. Plans, Specifications, Contract Documents, Bid Forms, etc.) will be received by the Engineer up to five (5) working days prior to the bid opening as specified in the Notice Inviting Bids. Questions asked of the Engineer after this time will not be addressed.
18. EQUIVALENT MATERIALS: Requests for the use of equivalents to those specified, must be submitted to the City. Only substitutions approved prior to bid due date via addenda Product Substitutions, will be considered. No substitutions will be considered after bid due date and contract award. It is the sole responsibility of the successful bidder to prove to the City that such a material is truly an equivalent.
19. EVIDENCE OF RESPONSIBILITY: Upon the request of the City, a bidder whose bid is under consideration for the award of the contract shall submit promptly to the City satisfactory evidence showing the Bidder's financial resources, its construction experience, and its organization and plant facilities available for the performance of the contract.
20. 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 or 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 Plans, Specifications and other Contract Documents, and to full compliance therewith. Additionally, any Bidder submitting a proposal shall, by such action thereby, agree to pay at least the minimum prevailing per diem wages as provided in Section 1773, et. seq. of the Labor Code for each craft, classification or type of workman required as set forth by the Director of Industrial Relations of the State of California.

21. ANTI-DISCRIMINATION: It is the policy of the City that in connection with all work performed under contracts, there be no discrimination against any prospective or active employee engaged in the work because of race, color, ancestry, national origin, religious creed, sex, age, or marital status. The Contractor agrees to comply with applicable Federal and California laws including, but not limited to, the California Fair Employment Practice Act, beginning with Government Code Section 12900, and Labor Code Section 1735. In addition, the Contractor agrees to require like compliance by any subcontractors employed on the work by him/her.
22. DRUG-FREE WORKPLACE POLICY: Contractor, upon notification of contract award, shall establish a Drug-Free Awareness Program to inform employees of the dangers of drug abuse in the workplace, the penalties that may be imposed upon employees for drug abuse violations occurring in the workplace, and the employee assistance programs available to employees. Each employee engaged in the performance of a City contract must be notified of this Drug-Free Awareness Program, and must abide by its terms. Contractor shall conform to all the requirements of City's Policy No. 100-5. Failure to establish a program, notify employees, or inform the City of a drug-related workplace conviction will constitute a material breach of contract and cause for immediate termination of the contract by the City.
23. BID PROTEST PROCEDURES: Any bid protest must be submitted in writing before 5:00 PM of the 5<sup>th</sup> business day following bid openings. The initial protest document shall contain a complete statement of the basis for the protest. The protest shall refer to the specific portion of the document which forms the basis for the protest. The protest shall include the name, address and telephone number of the person representing the protesting party. The party filing the protest shall concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest which may be adversely affected by the outcome of the protest. Such parties shall include all other Bidders or proposers who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest. Upon receipt of a bid protest, the matter shall be reviewed by the Public Services Director, whose decision shall be final. This procedure supersedes the procedure of appeal outlined in City of Costa Mesa Municipal Code Section 2-303.
24. ASSEMBLY BILL 626: Assembly Bill 626 (AB 626), adds section 9204 to the Public Contract Code creating a claims resolution process applicable to any claim (as defined) by a contractor against a public entity filed in connection with a public works project. Section 9204 applies to public works contracts entered into on and after January 1, 2017. The legislation was supposed to sunset (end) on January 1, 2020, unless extended by subsequent legislation. The summary of Section 9204 is specified as follows:

In the event of any dispute or controversy with the City over any matter whatsoever,

the Contractor shall not cause any delay or cessation in or of Work, but shall proceed with the performance of the Work in dispute. The Contractor shall retain any and all rights provided that pertain to the resolution of disputes and protests between the parties. The Disputed Work will be categorized as an “unresolved dispute” and payment, if any, shall be as later determined by agreement or a court of law. The Contractor shall keep accurate, detailed records of all Disputed Work, claims and other disputed matters.

All claims arising out of or related to the Contract Documents or this Project, and the consideration and payment of such claims, are subject to the Government Claims Act (Government Code Section 810 et seq.) with regard to filing claims. All such claims are also subject to the dispute procedures set forth in Public Contract Code Section 9204 and Public Contract Code Section 20104, et seq. (Article 1.5), to the extent each is applicable. This Contract hereby incorporates those provisions as through fully set forth herein. Thus, the Contractor or any Subcontractor must file a claim in accordance with the Government Claims Act as a prerequisite to filing a construction claim in compliance with Section 9204 and Section 20104 et seq. (if applicable), and must then adhere to Section 20104, et seq. and Section 9204, as applicable, pursuant to the definition of “claim” as individually defined therein.

**SECTION C**  
**PROPOSAL**  
**FOR THE**  
**FAIRVIEW ROAD IMPROVEMENT PROJECT (FAIR DRIVE TO NEWPORT BLVD.),**  
**CITY PROJECT NO. 25-10**  
**STATE FUNDED PROJECT NO. CRASL-5312(106)**

The Honorable City Council  
City of Costa Mesa  
77 Fair Drive  
Costa Mesa, CA 92626

Dear Council Members:

In compliance with the NOTICE INVITING BIDS FOR THE **FAIRVIEW ROAD IMPROVEMENT PROJECT (FAIR DRIVE TO NEWPORT BOULEVARD), STATE FUNDED PROJECT NO. CRASL – 5312 (106), CITY PROJECT NO. 25-10**, a copy which is hereto attached, the undersigned has carefully examined the location of the proposed Work, the Plans, Specifications and other Contract Documents and is therefore satisfied as to the conditions to be encountered, as to the character, quality and quantity of work to be performed and materials to be furnished and as to the requirements of the specifications and the Contract. It is mutually agreed that the submission of a proposal shall be considered prima facie evidence that the BIDDER has made such examination.

If awarded the Contract, the undersigned agrees to commence the Work under the Contract **WITHIN TEN (10) DAYS AFTER DATE OF CONTRACT, AND COMPLETE SAID WORK WITHIN NINETY - FIVE (95) WORKING DAYS** from the first day of commencement of such work unless legal extension is granted in accordance with the terms set forth in the specifications, and to perform and complete the Work as shown on the Plans and in accordance with the Specifications and other Contract Documents, and to furnish all labor, materials, tools and equipment necessary to complete the Work in-place therefor, in the manner and time herein prescribed at the following prices, to wit:

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Bidder's Initials

## BID SCHEDULE PROPOSAL

ITEM #	BID ITEM DESCRIPTION	APPROX. QTY.	UNIT	UNIT PRICE (in figures)	ITEMS TOTAL (in figures)
1	Mobilization (5% Maximum)	1	L.S.	\$	\$
2*	Additional Work Items	1	F.A.	\$150,000	\$150,000
3	Preparation And Implementation Of Erosion Control And Best Management Practice	1	L.S.	\$	\$
4	Unclassified Excavation (Fill)	400	C.Y.	\$	\$
5	Variable Cold Mill 2-inches	325,000	S.F.	\$	\$
6	Asphalt Concrete (AC) Pavement	400	TON	\$	\$
7	Asphalt Rubber Hot Mix (ARHM-G) Surface Course	4,100	TON	\$	\$
8	Construct Crushed Miscellaneous Base (CMB)	800	TON	\$	\$
9	Construct Variable Height Portland Cement Concrete (PCC) Curb 0-inches to 8-inches over 6-inch Crushed Miscellaneous Base (CMB)	100	L.F.	\$	\$
10	Construct 8-inch Portland Cement Concrete (PCC) Curb & Gutter over 6-inch Crushed Miscellaneous Base (CMB)	100	L.F.	\$	\$
11	Construct 4-inch Portland Cement Concrete (PCC) Sidewalk over 4-inch Crushed Miscellaneous Base (CMB)	1,400	S.F.	\$	\$
12	Construct 4-inch Portland Cement Concrete (PCC) Curb Ramp over 4-inch Crushed Miscellaneous Base (CMB) including "Federal Yellow" Truncated Domes	4,800	S.F.	\$	\$
13	Construct 6-inch Drive Approach over 6-inch Crushed Miscellaneous Base (CMB)	600	S.F.	\$	\$
14	Adjust and Reset Existing Survey Monuments and Ties per California Licensed Land Surveyor	10	EA	\$	\$
15	Traffic Signing, Striping, Pavement Legends & RPMs	1	L.S.	\$	\$
16	Furnish and Install Pull Boxes	10	EA	\$	\$
17	Temporary Traffic Control - Pedestrian Control, Construction Phasing/Staging, Public Convenience & Safety	1	L.S.	\$	\$
18	Median Clearing and Grubbing	1	L.S.	\$	\$
19**	Median Landscaping	1	L.S.	\$	\$
19A	Landscape Maintenance (90 days)	1	L.S.	\$	\$
20**	Median Irrigation	1	L.S.	\$	\$

Bidder's Initials

<b>BID SCHEDULE PROPOSAL (Continued)</b>					
<b>ITEM #</b>	<b>BID ITEM DESCRIPTION</b>	<b>EST. QTY.</b>	<b>UNIT</b>	<b>UNIT PRICE (in figures)</b>	<b>ITEMS TOTAL (in figures)</b>
21	Construct 9-inch Portland Cement Concrete (PCC) Bus Pad over 12-inch Crushed Miscellaneous Base (CMB)	2,000	S.F.	\$	\$
22	Construct Portland Cement Concrete (PCC) Bus Boarding Islands and Portland Cement Concrete (PCC) Median Cut-Through	3,000	S.F.	\$	\$
23	Construct 8-inch Portland Cement Concrete (PCC) Spandrel over 8-inch Crushed Miscellaneous Base (CMB)	600	S.F.	\$	\$
24	Furnish and Install Traffic Loops	5	EA	\$	\$
25**	Furnish and Install Pedestrian Hybrid Beacon (HAWK Signal) as Shown on Plans.	1	L.S.	\$	\$
26**	Perform Traffic Signal Modification (at Fairview Rd. & Wilson St.)	1	L.S.	\$	\$
27	Furnish and Install White Flexible K-71 Posts	200	EA	\$	\$
28	Furnish and Install Green Preformed Thermoplastic Markings	11,500	S.F.	\$	\$
29A	Adjust Orange County Sanitation District (OCSD) PVC Lined Manhole Covers to Grade	9	EA	\$	\$
29B	Adjust Orange County Sanitation District (OCSD) Unlined Manhole Covers to Grade	16	EA	\$	\$
30	Adjust Costa Mesa Sanitation District (CMSD) Manhole Covers to Grade	6	EA	\$	\$
31	Adjust Storm Drain Manhole Frame & Cover to Grade	12	EA	\$	\$
32	Adjust Utility and Water Valves to Grade	26	EA	\$	\$
<b>TOTAL BID PROPOSAL FIGURES:</b>				\$	
<b>TOTAL BID PROPOSAL (Words):</b>					

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Bidder's Initials

**PROPOSAL BID SCHEDULE  
(CONTINUED)**

**NOTES:**

1. The accuracy of estimate quantities as shown is not guaranteed; the Bidder shall make his/her own estimate from the drawings and field review for verification. If the unit price and the total amount are different, the unit price will control the bid. Payment shall be based on actual work done and/or actual quantities used.
2. The City reserves the right to delete one or more bid items and/or to increase or decrease bid items' quantities, at no additional cost to the City.
3. (\*) Allowance is for unforeseen work not included in the contract documents and to be included in the total bid amount as identified as follows. Use of the allowance will be at the sole discretion of the City and must be authorized in writing at the discretion of the City. This Bid item will cover unforeseen work that is not included in the contract documents. Any money used from the project allowance will be authorized via an Allowance Disbursement Form at the City's sole discretion. Any amount of money remaining in the Allowance line item upon completion of the Project will be deducted from the Contract by Deductive Change Order for the full amount(s) remaining therein. The Contractor has no beneficial interest in, and/or claim to, the Allowances and hereby disclaims any and all such interests.
4. (\*\*) Schedule of Values shall be submitted before 4:00 PM of the 5th business day following the bid opening. Price includes the indirect cost and markup.
5. FA designates force account. Payment shall be made on a time and materials basis, only if directed by the Engineer.
6. (F) Designates Final Pay Item. When an item of work is designated as "FINAL PAY ITEM" in the Specifications, the estimated quantity for that item of work shall be the final pay quantity, unless the dimensions of any portion of that item are revised by the Engineer, or the item or any portion of the item is eliminated. If the dimensions of any portion of the item are revised, and the revisions result in an increase or decrease in the estimated quantity of that item of work, the final pay quantity for the item will be revised in the amount represented by the changes in the dimensions. If a final pay item is eliminated, the estimated quantity for the item will be eliminated. If a portion of a final pay item is eliminated, the final pay quantity will be revised in the amount represented by the eliminated portion of the item of work.  
The estimated quantity for each item of work designated as "FINAL PAY ITEM" in the Specifications, shall be considered as approximate only, and no guarantee is made that the quantity which can be determined by computations, based on the details and dimensions shown on the plans, will equal the estimated quantity. No allowance will be made in the event that the quantity based on computations does not equal the estimated quantity. In case of discrepancy between the quantity shown in the Engineer's Estimate for a final pay item and the quantity or summation of quantities for the same item shown on the plans, payment will be based on the quantity shown in the Engineer's Estimate.
7. Bidder declares that it has read and understands Items 14 & 15 of Information for Bidders (Page B-2 and B-3).

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Bidder's Initials



**GENERAL PROVISIONS**  
**PART 1**  
**SECTION 1 – GENERAL**

**1-2 GENERAL**

[Add the following:].

Except as hereinafter provided, the provisions of the latest edition of the Standard Specifications for Public Works Construction ("Green Book"), and all amendments thereto, adopted by the Joint Cooperative Committee of Southern California Chapter, American Public Works Association, Southern California District and Associated Contractors of California; hereinafter referred to as Standard Specifications, are adopted as the "Standard Specifications of the City of Costa Mesa" and shall be considered as a part of these specifications. Copies of the Standard Specifications are available from the publisher:

*BNi Building News*  
*1612 S. Clementine Street*  
*Anaheim, California 92802*  
*(714) 517-0971*

Where specified in these specifications, the latest edition of the California Building Code, based on the latest edition of the International Building Code, the latest edition of the "Standard Specifications and Standard Plans of the State of California, Department of Transportation, Division of Highways," "Standard Plans of the Orange County Environmental Management Agency," and "Los Angeles County Flood Control District, Design Manual, Standard Drawings" shall apply or unless otherwise noted in these specifications or at the direction of the ENGINEER.

Where referenced in these Specifications, the latest edition of the "City of Costa Mesa Standard Drawings" and the "Work Area Traffic Control Handbook (WATCH)" published by Building News, Inc., shall also apply.

All of the Contract Documents are intended to be complementary. Work required by one of the Contract Documents and not by others shall be done as if required by all. This Contract shall supersede any prior agreement of the parties.

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

The following modifications are made to the "Standard Specifications." If there is a conflict between the "Standard Specifications" and these modifications, these modifications shall have first precedence.

## **1-2 TERMS AND DEFINITIONS**

[Add or redefine the following:].

- |  |   |
|--|---|
| (a) AGENCY   | The City of Costa Mesa, California, hereinafter referred to as "CITY."  |
| (b) BOARD  | The City Council of the City of Costa Mesa, California, hereinafter referred to as "BOARD."   |
| (c) CONTRACT<br>DOCUMENTS                                | Documents including but not limited to the following:<br>The proposal form P-1 through P-9b, Notice Inviting Bids, Standard Specifications, General Provisions, Special Provisions, Plans, Bonds, Insurance Certificates, Agreement, and all Addenda setting forth any modifications of the documents as further specified in contract agreement. |
| (d) ENGINEER   | The administrating officer of the City of Costa Mesa or his authorized representative hereinafter referred to as ENGINEER.  |
| (e) BIDDER   | Any individual, firm, partnership, corporation, or combination thereof, submitting a bid proposal for the work contemplated in the contract documents, acting directly or through a duly authorized representative, hereinafter referred to as BIDDER.  |
| (f) COMMUNITY<br>WORKFORCED<br>AGREEMENT (if applicable) | The agreement between the City of Costa Mesa, the Los Angeles/Orange Counties Building and Construction Trades Council, and the signatory Craft Councils and Local Unions entered into on February 1, 2022, that governs onsite labor on the project.   |
| (f) LEGAL ADDRESS OF<br>CONTRACTOR                       | The legal address of the Contractor shall be the address given on the Contractor's bid and is hereby designated as the place to which all notices, letters or other communications to the Contractor shall be mailed or delivered.  |

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(GENPROVS)

- (g) LABORATORY                      An established laboratory approved and authorized by the ENGINEER for testing materials and work involved in the contract.

### **1-3        ABBREVIATIONS**

CALTRANS	State of California, Department of Transportation, Division of Highways
CWA	The Community Workforce Agreement (if applicable)
O.C.E.M.A.	Orange County Environmental Management Agency
L.A.C.F.C.D.	Los Angeles County Flood Control District

### **1-6        BIDDING AND SUBMISSION OF THE BID**

#### **1-6.1     General**

[Add the following:].

Proposal shall be made and submitted on proposal forms P-1 through P-9a in accordance with the Notice Inviting Bids. In addition to the required signatures in the spaces provided in the proposal forms, each BIDDER shall initial each sheet of the proposal forms at the bottom right hand corner.

No person, firm, partnership, corporation, or combination thereof shall be allowed to make or file or be interested in more than one bid for the same work, unless alternate bids are called for. A person, firm, partnership, corporation, or combination thereof who has submitted a sub-proposal to a BIDDER or who has quoted prices on materials to a BIDDER is not thereby disqualified from submitting a sub-proposal to or quoting prices to the other bidders. If, on the opening of bids, more than one bid appears in which the same person, firm, partnership, corporation or combination thereof is interested as a principal,

all such bids shall be rejected.

Proposals with interlineations, alterations, or erasures shall be initialed by the BIDDER'S authorized agent. Alternative proposals, special conditions, or other limitations or provisions affecting the bid, except as such called for in the contract documents, will render the bid informal and may cause its rejection.

All proposals must give the prices bid for the various items of work and must be signed by the BIDDER, who shall give his address. Each bid shall have thereon the affidavit of the BIDDER that such bid is genuine and not sham nor collusive, nor made in the interest nor behalf of any other person not therein named and that the BIDDER has not directly nor indirectly induced or solicited any other BIDDER to put in a sham bid, nor induced nor solicited any person, firm, partnership, corporation, or combination thereof to refrain from bidding, and that the BIDDER has not in any manner sought by collusion to secure himself an advantage over any other BIDDER.

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 of the Labor Code. 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.

#### **1-6.1.1 Request for Interpretation**

If any person contemplating submitting a bid is in doubt as to the meaning of any part of the Plans, Specification, or other proposed Contract Documents, or finds discrepancies in, or omissions from the drawings or specifications, (It, he, she) may make a request to the ENGINEER, in writing, for an interpretation or correction thereof pursuant to the provisions in the Information for Bidders section of these specifications. The person submitting such a request shall be responsible for its prompt delivery. All such interpretations of the Contract Documents will be made only by addenda duly issued, and a copy of each such addendum will be mailed or delivered to each person receiving a set of Contract Documents at (its, his, her) last address of record. The CITY will not be responsible for any other explanations or interpretations of the Contract Documents.

#### **1-6.1.2 Soil Conditions**

The BIDDER shall inspect the soil conditions before submitting a bid. By submitting a bid, the BIDDER acknowledges that he is satisfied with the quality of the work area including but not restricted to the conditions affecting, handling and storage of materials, disposal of excess materials, and the soil conditions.

### **1-6.1.3 Return of Bid Security**

Any BIDDER may withdraw its bid, either personally, or by telegraphic or written request, at any time prior to the scheduled closing time for the receipt of bids. It is the sole responsibility of the BIDDER to see that any such telegraphic or written request is delivered to the City Clerk prior to said closing time. Bid security of such BIDDERS will be returned promptly to the BIDDER.

The bid security of the BIDDER whose bid is accepted will be held by the CITY until the contract has been executed and the accompanying insurance certificates, performance bond and labor and materials bond are approved and filed, whereupon the bid security will then be returned to the BIDDER.

The bid security of the second and third lowest BIDDERS will be retained until the contract is awarded to and executed by the BIDDER whose bid is accepted, or until 45 days after the opening of bids, whichever period is shorter. The bid security of all BIDDERS other than the three lowest will be returned promptly after the opening of bids.

If a BIDDER fails or refuses promptly to execute the agreement to do the work or fails or refuses to comply with insurance and bonding requirements, the bid security shall be forfeited to the CITY and shall be collected and paid into the General Fund of the CITY.

### **1-6.2 Subcontractor Listing**

[Add the following:].

The ENGINEER, as duly authorized officer, may consent to subcontractor substitution requested by the Contractor subject to the limitations and notices prescribed in Section 4107 of the Public Contract Code.

The Prime Contractor agrees to pay each Subcontractor under this prime contract for satisfactory performance of its contract no later than 7 days from the receipt of each payment the Prime Contractor receives from AGENCY.

The Prime Contractor agrees further to release retainer payments to each Subcontractor within 30 days after the subcontractor's work is satisfactorily completed.

## **1-7 AWARD AND EXECUTION OF THE CONTRACT**

### **1-7.1 General**

[Add the following:].

The award of contract, if awarded, will be to the lowest responsive and responsible bidder whose proposal complies with all requirements of the Notice Inviting Bids and Section 1-

6 of these specifications. The BIDDER, upon notification as the "apparent low bidder," shall comply with the CITY'S insurance and bonding requirements by submitting the required insurance certificates and bonds (tree sets) within **fourteen (14) days after the mailing of a Notice of Intent to Award to the BIDDER that the contract is ready for execution**. The contract will be awarded within thirty (30) days of receipt of properly approved insurance certificates and bonds pursuant to CITY requirements spelled out in these specifications. BIDDER must take particular note of "insurance requirements" contained in these specifications and sample agreement included within the contract documents, and should provide that information to his insurance broker in order that a properly executed certificate is submitted. The CITY, however, reserves the right to reject any or all bids and to waive any informality in the bids received.

#### **1-7.1.1 Execution of Agreement**

The Agreement shall be signed by the successful BIDDER and returned to the CITY no later than fourteen (14) days from Notice of Intent to Award of the Contract by the CITY. Failure to comply with insurance and bonding requirements as specified in the Agreement and in Section 1-7.1 of these General Provisions shall be considered grounds for the revocation and rejection of the bid and forfeiture of bid security. No proposal shall be considered binding upon the CITY until the execution of the agreement by the CITY. In case of conflict, the agreement shall have precedence over all other written specifications.

#### **1-7.2 Contract Bonds**

[Add the following:].

The "Faithful Performance Bond" and the "Labor and Material Bond" as specified in this section shall be for one hundred percent (100%) of the Contract price. The Labor and Material Bond shall be maintained by the Contractor in full force and effect for at least seven (7) months following the filing of the Notice of Completion. The Faithful Performance Bond shall also be kept by the Contractor in full force and effect for at least one (1) year following the filing of the Notice of Completion.

CONTRACTOR shall provide, if requested by the City the following:

A certified copy of the certificate of authority of the surety issued by the Insurance Commissioner.

A certificate from the clerk of the county in which the court or officer is located that the certificate of authority of the surety has not been surrendered, revoked, canceled, annulled, or suspended or, in the event that it has, that renewed authority has been granted.

Copies of the surety's most recent annual statement and quarterly statement filed with the Department of Insurance pursuant to Article 10 (commencing with Section 900) of Chapter 1 of Part 2 of Division 1 of the Insurance Code.

## **SECTION 2 – SCOPE OF THE WORK**

### **2-1 WORK TO BE DONE**

[Replace in its entirety with the following:].

The scope of work generally consists of street improvements along **Fairview Road** between Fair Drive and Newport Boulevard. Work includes, but is not limited to, removal and replacement of asphalt and concrete parkways (e.g., curb & gutter, sidewalk, driveways, curb ramps, cross gutters, etc.), grind and overlay of the asphalt pavement, installation of a new HAWK signal mid-block along Fairview Road, median landscaping, bus stop relocation and construction, etc.; and all other work as required as shown on the Plans and specified within these Contract Documents. The CONTRACTOR shall furnish all labor, materials, tools, equipment and incidentals necessary to perform and complete the Work as shown on the Plans and these Contract Documents, and to the satisfaction of the ENGINEER.

### **2-2 PERMITS**

[Add the following:].

All permits and licenses shall be obtained in sufficient time to prevent delays to the work.

In the event that the CITY has obtained permits, licenses or other authorizations applicable to the work, the Contractor shall comply with the provisions of said permits, licenses and other authorizations.

The Contractor shall secure or maintain in force during the period covered by any Agreement resulting from this solicitation all licenses and permits required by law for the operation of their business.

### **2-5 THE CONTRACTOR'S EQUIPMENT AND FACILITIES**

#### **2-5.1 General**

[Add the following:].

The Contractor shall only use the proper construction equipment to protect the City streets from breaking up and deterioration. Haul trucks shall be limited to a gross vehicle weight of 10 tons or less.

#### **2-5.1.1 RIGHT-OF-WAY**

[Add the following to this subsection:].

When the contractor arranges for temporary use of private property for additional work areas and facilities required for the Contractor's convenience, to meet requirements, or other reason(s), the Contractor shall provide the City with written agreement authorizing use of said property.

#### **2-5.2 Temporary Utility Services**

[Add the following:].

The Contractor shall provide for his employees an adequate supply of clean, potable drinking water, which shall be dispensed through approved sanitary facilities.

If water is needed during construction, Contractor shall contact Mesa Consolidated Water District or the Irvine Ranch Water District to obtain necessary permits, instructions, and meters prior to commencing work. The Contractor is required to make any and all necessary installations and connections. All water shall be metered. The Contractor shall pay for all deposits and fees involved.

#### **2-5.4 Haul Routes**

[Add the following:].

In order to protect the City streets from deterioration due to hauling of materials, the Contractor shall submit to the ENGINEER (at the pre-construction meeting) for approval, a proposed route for the hauling of materials for disposal. Upon approval, the Contractor shall strictly adhere to that route only, unless written permission from the ENGINEER is obtained to change the route.

#### **Waste Hauler Requirements**

The California Green Building Standards Code, 2016 Edition, California Code of Regulations, Title 24, Part 11, impacting waste diversion as documented in the City of Costa Mesa's Municipal Code Chapter 4 of Title 8, requires that all construction and demolition related projects divert 65% of project waste generated from the landfill. Consequently, permitted building projects relating to construction and demolition, newly constructed buildings, additions, alterations, interior and exterior demolitions, etc., are required to divert a minimum of 65% of nonhazardous construction and demolition waste from the landfill by recycling, reuse, or salvage. Generally, these materials include brick, drywall, other masonry, cardboard, green waste, paper, carpet, lumber, plastic, concrete, and/or metals. Asphalt, concrete, excavated soil and land-clearing debris should be 100% diverted from disposal. The County provides a suggested list of locations that are meeting and/or exceeding the 65% diversion requirement and may be used for recycling construction and demolition material.



The City of Costa Mesa requires that all hauling activity in Costa Mesa comply with one of the waste hauling options for your construction and demolition related project:

- Use Franchise Waste Hauler
- Self-Haul Permit - <https://www.costamesaca.gov/city-hall/city-departments/public-services/waste-collection-and-recycling>

A Construction and Demolition Reporting Form as provided in the Miscellaneous Document Section of these Specifications must be completed and submitted by the Contractor to the CITY prior to the release of retention monies.

## **2-7 CHANGES INITATED BY THE AGENCY**

### **2-7.1 GENERAL**

[Add the following:].

ENGINEER shall be the duly authorized officer of the CITY who may grant the changes prescribed in this section.

## **2-8 EXTRA WORK**

[Add the following:].

The extra work as defined in this section of the Standard Specifications and any work done by the Contractor beyond the lines and grades shown on the plans shall only be performed when ordered in writing by the ENGINEER. In absence of such written order, any such work by the Contractor shall be considered unauthorized and will not be paid. Work so done may be ordered to be removed at the Contractor's expense.

## **2-9 CHANGED CONDITIONS**

[Add the following:].

The Contractor shall promptly act to supply all information to the ENGINEER for proper evaluation. Failure to do so shall constitute a waiver of any payment for delays suffered by the Contractor.

## **SECTION 3 – CONTROL OF THE WORK**

### **3-1 ASSIGNMENT**

[Replace the 1<sup>st</sup> sentence with the following:].

No contract or portion thereof may be assigned without written consent of the BOARD.

### **3-4 AUTHORITY OF THE BOARD AND THE ENGINEER**

[Add the following:].

When any of the various units or operations of the work have been suspended, the Contractor shall give at least 24 hours advance notice of the time when he or his subcontractor will start or resume any of such units or operations. That notice is to be given during working hours, exclusive of Saturdays, Sundays or holidays, for the purpose of permitting the ENGINEER to make necessary assignments to his representative on the work.

Any work performed in conflict with said notice, without the presence or approval of the ENGINEER, or work covered up without notice, approval or consent may be rejected or ordered to be uncovered for examination at Contractor's expense and shall be removed at Contractor's expense, if so ordered by the ENGINEER or his representative on the work. Any unauthorized or defective work, defective material or workmanship or any unfaithful or imperfect work that may be discovered before the final payment and final acceptance of work shall be corrected immediately by the Contractor without extra charge even though it may have been overlooked in previous inspections and estimates or may have been caused due to failure to inspect the work.

All authorized alterations affecting the requirements and information given on the approved plans shall be in writing. No changes shall be made on any plan or drawing by the Contractor after the same has been approved by the ENGINEER, except by direction of the ENGINEER in writing. Deviations from the approved plans, as may be required by critical conditions of construction, must be authorized in writing by the ENGINEER.

All instructions, rulings and decisions of the ENGINEER shall be in writing and are binding on all parties unless a formal protest is made as provided in the following paragraph:

If the Contractor considers any work demanded of him to be outside the requirements of the contract, or if he considers any instruction, ruling or decision of the ENGINEER or ENGINEER'S representative to be unfair, the Contractor shall, within ten (10) days after any such demand is made, or instruction, ruling or decision is given, file a written protest with the ENGINEER, stating clearly and in detail his objections and reasons therefor. Except for such protests and objections as are made of record, in the manner and within the time above stated, the Contractor shall be deemed to have waived and does hereby waive all claims for extra work, damages and extensions of time on account of demands, instructions, rulings and decisions of the ENGINEER.

Upon receipt of any such protest from the Contractor, the ENGINEER shall review the demand, instruction, ruling or decision objected to and shall promptly advise the Contractor, in writing, of his final decision, which shall be binding on all parties, unless within the ten (10) days thereafter the Contractor shall file with the BOARD a formal protest against said decision of the ENGINEER. The BOARD shall consider and render a final decision on any such protest within thirty (30) days of receipt of same. If the BOARD fails to consider and render a final decision on any such protest within thirty (30)

days of receipt of the same, the protest shall be deemed denied.

### **3-5 INSPECTION**

[Add the following:].

If the Contractor requests and receives approval from the ENGINEER to receive inspection services from the CITY outside of a normal eight (8) hour day/forty (40) hour work week or on Saturday, Sunday, or CITY holidays, the Contractor shall arrange with the CITY and ENGINEER for the special inspection services and Contractor shall pay for such special inspection services at a fee established by the ENGINEER to defray the cost for such service.

All work, which has been inspected and deemed defective in its construction or does not meet all of the requirements of the plans and/or specifications by the ENGINEER shall be remedied, or removed and replaced by the Contractor in an acceptable manner, and no compensation will be allowed for such correction.

Any work done beyond the limits of the lines and grades shown on the plans or established by the ENGINEER or extra work done without written authority will be considered as unauthorized and not be paid.

Upon failure on the part of the Contractor to comply with any order of the ENGINEER made under the provisions of this article, the ENGINEER shall have authority to cause defective work to be remedied, or removed and replaced, and unauthorized work to be removed, and to deduct the costs and thereof from any monies due or to come due the Contractor.

Payment will not be made for materials wasted or disposed of in a manner not called for under the Contract. This includes rejected material not unloaded from vehicles, material rejected after it has been placed and material placed outside the limits of the project. No compensation will be allowed for disposing of rejected or excess material.

### **3-6 THE CONTRACTOR'S REPRESENTATIVE**

[Add the following:].

Contractor shall file with the ENGINEER the addresses and telephone numbers where its designated representative may be reached during hours when the work is not in progress.

Instructions and information given by the ENGINEER to the Contractor's authorized representative or at the address or telephone numbers filed in accordance with this section shall be considered as having been given to the Contractor.

The Contractor shall have on the work site at all times a competent English-speaking superintendent, as his agent, capable of reading and thoroughly understanding the plans and specifications and other related documents.

### **3-7 CONTRACT DOCUMENTS**

#### **3-7.1 General**

[Add the following:].

Contractor will obtain from the ENGINEER, free of charge, copies of plans, general provisions, special provisions and additions to the Standard Specifications that are reasonably necessary for the execution of work.

Contractor shall, at its own expense, obtain copies of the Standard Specifications and Standard Plans and Specifications of CALTRANS, for his general use.

If after the Contract is awarded it appears that the work to be done, or any matter relative thereto, is not sufficiently detailed or explained in the specifications and plans, the Contractor shall apply to the ENGINEER for such further explanations as may be necessary and shall conform to such explanation or interpretation as part of the Contract.

All scaled dimensions are approximate. Before proceeding with the work, the Contractor shall carefully check and verify all dimensions and quantities and shall immediately inform the ENGINEER or his representative of any discrepancies.

The Contractor shall maintain a control set of plans and specifications at all times throughout the construction period. As approved by the Engineer, 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 As-Built conditions. Updates to the control set shall be submitted to the Engineer prior to each monthly progress payment. Upon completion of all work, the Contractor shall submit the control set As-Built Plans. Additionally, the Contractor shall provide the following:

Street Improvements: Any deviations from the contract plans such as: alignments, and appurtenance locations shall be noted (drawing sketch) on the control plan and a copy submitted to the Engineer no later than (5) working days from the occurrence.

Storm Drain Improvements: Any deviations from the contract plans such as: alignments, elevations, modifications to pipe/structures sizing/material.

Sewer Improvements: Any deviations from the contract plans such as: alignments, elevations, modifications to pipe/structures sizing/material. Contractor shall also provide

CCTV inspection recordings/videos in format required by Engineer.

Water Improvements: Any deviations from the contract plans such as: alignments and appurtenance locations shall be noted (drawing sketch) on the control plan and a copy submitted to the Engineer no later than (5) working days from the occurrence.

Traffic Improvements: Any deviations from the contract plans such as: location of poles, pull boxes and runs, depth of conduits, number of conductors, and other appurtenant work, for future reference.

Within (15) days of completion of all work, the Contractor shall submit the control set of as-built plans to the Engineer. **Final payment will not be made until this requirement is met.**

### **3-7.2 Precedence of the Contract Documents.**

If there is a conflict between any of the Contract Documents, the document highest in the order of precedence shall control. The order of precedence, from highest to lowest, shall be as follows:

- a) Permit issued by jurisdictional regulatory agencies.
- b) Change Orders and Supplemental Agreements; whichever occurs last.
- c) Contract/Agreement.
- d) Addenda.
- e) Bid/Proposal.
- f) Technical Provisions.
- g) Special Provisions.
- h) Plans.
- i) Standard Plans.
- j) Standard Specifications.
- k) Reference Specifications.

Detail drawings shall take precedence over general drawings. The precedence of the notice inviting bids and instruction to bidders shall be as specified in the Special Provisions.

### **3-10 SURVEYING**

[Replace with the following:].

#### **3-10.1 General**

The following supersedes the provisions of this subsection:

The Contractor shall be responsible for directly obtaining the services of a California

Licensed Land Surveyor to be in responsible charge of all survey work performed under this contract.

The Contractor shall be responsible for the scheduling of all survey requests.

The Contractor's Surveyor shall provide construction staking for project improvements. Any 25 FT of curb & gutter, driveway, bus pad, and cross gutter to be removed shall be staked and provide cut sheets to engineer prior to the removal to verify the flow line. A copy of the cut sheets shall be provided to the AGENCY for verification. Also a copy of all updated control set by the Contractor's Surveyor; showing coordinates, elevation, and description shall be submitted, for quality management (as-built checks by Agency).

The AGENCY will provide construction plans and specifications for the project. Construction stakes shall be set per the provided plans and specifications. The Contractor's Surveyor shall notify the AGENCY immediately of any discrepancy or design errors discovered on the plans during staking or when verifying join points.

The Contractor's Surveyor shall research existing County and City records for centerline survey monuments within the project area. Prior to construction, all monuments shall be tied-out and a Corner Record shall be recorded with the County Surveyor per Section 8771 of the Business and Professions Code of the State of California. After completion of construction, any monument disturbed or lost during construction shall be reset, in conformance with Section 8771. Each centerline intersection shall be drawn on a single Corner Record. A copy of all Corner Records shall be submitted to the AGENCY prior to a Notice of Completion being filed.

### **3-10.3 Line and Grade**

Unless otherwise provided in the Special Provisions, lines and grades for construction shall be the responsibility of the Contractor, with the following provisions:

All work under this Contract shall be built in accordance with the lines and grades shown on the plans. Field survey for establishing the lines and grades and for the control of construction shall be the responsibility of the Contractor. All such surveys, including construction staking, shall be under the supervision of a California-licensed land surveyor or by a California-licensed civil engineer allowed by law. Staking shall be performed on all items ordinarily requiring grade and alignment, at intervals normally accepted by the agencies and the trade involved.

The Contractor shall provide a copy of the office calculations and grade sheets to the City Inspector. The Contractor shall be responsible for any error in the finished work and shall notify the ENGINEER within one (1) working day of any discrepancies or design errors discovered during staking.

Unless a separate bid item is provided, the payment for surveying, construction staking,

professional services, office calculations, furnishing all labor, materials, equipment, tools and incidentals, and for doing all work involved shall be considered as included in the various items of work, and no additional compensation will be allowed.

### **3-12 WORK SITE MAINTENANCE**

#### **3-12.1 General**

[Replace 2<sup>nd</sup> paragraph with the following:].

Unless the construction dictates otherwise, and unless otherwise approved by the ENGINEER, Contractor shall furnish and operate a self-loading motor sweeper with a functional water spray nozzle system at least once each working day to keep paved areas in the Work zone and along all haul routes acceptably clean whenever construction, including restoration, is incomplete.

[Add the following to this subsection:].

The contractor shall keep the work site clean and free from rubbish and debris at the end of every working day. In addition, the Contractor shall be fully responsible for removing any graffiti placed on new improvements or Contractor's equipment daily immediately at the start of the work day.

#### **3-12.2 Air Pollution Control**

[Add the following:].

Failure of the Contractor to comply with the ENGINEER'S dust control orders may result in an order to suspend work until the condition is corrected and, after giving notice to the Contractor, the ENGINEER may order the condition corrected by others. All costs thus incurred shall be deducted from the amount to be paid to Contractor. No additional compensation will be allowed as a result of such suspension.

No separate payment will be made for any work performed nor material used to control dust resulting from Contractor's performance of the work or from public traffic, either inside or outside the right-of-way. Full compensation for such dust control will be considered to be included in the prices paid for the various items of Work involved.

The contractor shall ensure that any cold-milled street is paved within 48 hours of milling. The contractor is solely responsible for implementing all necessary dust mitigation measures. Any claims arising from dust-related issues shall be the sole responsibility of the contractor, who shall defend, indemnify, and hold the City harmless from any such claims, liabilities, or damages.

### **3-12.3 Noise Control**

The Contractor shall comply with all local sound control and noise level rules, regulations and ordinances which apply to any work performed pursuant to the contract. Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the Manufacturer. The noise level from the Contractor's operations shall not exceed 85 dba at a distance of 50 feet. This requirement in no way relieves the Contractor from responsibility for complying with local ordinances regulating noise level.

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

#### **3-12.4.1 General**

[Add the following:].

All surplus materials shall be removed from the site of the Work within five (5) days after completion of the Work causing the surplus materials.

#### **3-12.4.2 Storage in Public Streets**

[Add the following to this subsection:].

Storage of equipment and materials on City residential streets or in the public right of way during non-working hours shall not be permitted, and may only be placed in the public right of way for purposes of use that day.

Overnight stockpiling of construction debris or excavated materials is not allowed. Contractor must obtain written approval from the Engineer prior to storage of construction materials and equipment on the street where improvements are planned, but at minimum, adequate flashing barricades shall be provided.

No area is available within the contract limits for the exclusive use of the Contractor. However, temporary storage of equipment and materials on City of Santa Ana property may be arranged with the Engineer, subject to the prior demands of the City of Costa Mesa. Use of the Contractor's work areas and other City of Costa Mesa-owned property shall be at the Contractor's own risk, and the City of Costa Mesa shall not be held liable for damage to or loss of materials or equipment located within such areas.

The Contractor shall remove equipment, materials, and rubbish from the work areas and other City of Costa Mesa – owned property that the Contractor occupies at the conclusion of each working day.



### 3-12.6 Water Pollution Control

#### 3-12.6.1 General

[Add the following:].

Discharge of storm water from construction sites that disturb land equal to or greater than one (1) acre must be in compliance with the state General Construction Activity Permit (Construction Permit). The latest permit provisions of the Construction Permit shall apply. The Contractor is required to contact the Santa Ana Regional Water Quality Control Board (Regional Board) for all information contained in the Construction Permit. In the event project construction occurs during the transition of revised Construction Permits, the Contractor shall incorporate the necessary modifications specified by the revised Construction Permit within the time period specified in the new Construction Permit.

Project Soil Disturbance is: **less than 1 acre** (No General Construction Permit required)

Construction activity subject to the Construction Permit includes clearing, grading, disturbance to the ground such as stockpiling, work area, or excavation that results in soil disturbances of at least one acre of total land area. Construction activity that results in soil disturbances of less than one acre is subject to the Construction Permit if the construction activity is a part of a larger common plan of development that encompasses one or more acres of soil disturbance or if it is determined that discharges from the project pose a significant threat to water quality.

The CONTRACTOR shall have an account with the State for SMARTS (Storm Water Multiple Application and Report Tracking System). The CONTRACTOR shall contact the CITY with their user ID so that the CITY will grant the CONTRACTOR access as a Data Submitter.

The CONTRACTOR shall complete the NOI within SMARTS <https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.xhtml>. The CONTRACTOR will notify the CITY when the NOI is ready for the CITY to submit to the State. The CONTRACTOR shall pay all fees associated with the NOI process. The CONTRACTOR shall also complete all required reports within SMARTS as required by the General Permit and the Project's Storm Water Pollution Prevention Plan (SWPPP).

The CONTRACTOR shall complete the Annual Report and NOT within SMARTS. Once the CITY has been notified, the CITY will review and submit to the State for processing.

A copy of the latest permit is available at:

[https://www.waterboards.ca.gov/water\\_issues/programs/stormwater/constructionpermits.html](https://www.waterboards.ca.gov/water_issues/programs/stormwater/constructionpermits.html)

The CONTRACTOR is hereby directed to read the Construction Permit thoroughly and comply with the requirements as specified therein.

### **3-12.6.2 Best Management Practices (BMPs)**

[Add the following:].

The Contractor shall install and maintain the appropriate Best Management Practices (BMPs) to protect water quality within the project limits through the duration of the Project.

The Contractor shall be responsible for any damage to any portion of the Work occasioned by failure to provide proper drainage control prior to the completion and acceptance of the Work.

Payment for furnishing, installing and maintaining BMPs inclusive of sweeping the Project site as required or directed by the ENGINEER shall be included in the other various bid items associated with the work and no additional payment will be allowed thereof.

### **3-12.6.3 Storm Water Pollution Prevention Plan (SWPPP)**

[Add the following:].

If a General Construction Permit is required pursuant to Section 3-12.6.1 of these General Provisions, the following Storm Water Pollution Prevention Plan (SWPPP) requirements shall be adhered to:

The Contractor is responsible for the preparation and implementation of a SWPPP as required by the Construction Permit. The Contractor is responsible for completing all parts of the SWPPP including, REAPs, monitoring, sampling, rain gauge records, weather reports, submitting pictures of every third storm, non-authorized discharge reports, Ad-Hoc reports, Annual Reports, post construction BMPs and other requirements of the SWPPP.

The completed SWPPP must be signed by a QSD (Qualified SWPPP Developer). The completed SWPPP must be submitted to the resident engineer for City review and acceptance, prior to uploading to SMARTS. The Contractor will be responsible for uploading an electronic format of the SWPPP into SMARTS. The SWPPP must be signed by the City before construction begins. A copy of the SWPPP must be available at the site at all times and must be implemented and revised in accordance with the Construction Permit throughout the duration of the project.

Contractor must have QSP (Qualified SWPPP Practitioner). Contractor shall perform site inspections before and after the storm event, and once each 24-hour period during extended storm event, to identify BMP effectiveness and implement repairs or BMP modifications as soon as possible. Sampling of potential pollutant discharges shall be

conducted by trained personnel and required laboratory test conducted by laboratory accredited by the California Department of Health Services Environmental Laboratory Accreditation Program.

Contractor shall be responsible for any penalties assessed against the City if the penalty assessed is due to Contractor's violation of the Construction Permit requirement, or Contractor's failure to fully implement and monitor SWPPP as required.

### **Erosion and Sediment Control Plans**

Erosion and Sediment Control Plans shall be prepared by the Contractor as part of the SWPPP that identify adequate controls to prevent erosion and discharge of sediment off-site. Payment for the Erosion and Sediment Control Plans shall be included as part of the SWPPP.

When SWPPP is required, after award of the contract and prior to Contractor commencing work, the Contractor shall submit an Erosion and Sediment Control Plan, hereinafter referred to as ESCP, for review by the Engineer. The ESCP shall include erosion and sediment control BMPs for all activities occurring on the construction site and at any temporary storage yards that hold equipment and/or materials. The ESCP, at a minimum, shall be prepared per the applicable guidelines outlined in the California Storm Water Quality Association (CASQA) Best Management Practices Handbook. The Contractor shall make any necessary revisions to the ESCP as directed by the Engineer and the contractor shall not commence work until the ESCP has been approved by the Engineer. The ESCP must be prepared by a licensed Civil Engineer; however the AGENCY may waive the requirement of licensed Civil Engineer if the Contractor can satisfactorily prove to the Engineer that the person preparing the ESCP is qualified in the field of erosion and sediment control.

The Contractor shall keep a copy of the ESCP at the construction site at all times, for the duration of the contract, and the Contractor shall implement all BMPs as shown in the ESCP, unless granted approval by the Engineer. Failure to implement BMPs properly may result in enforcement actions taken against the Contractor, by the AGENCY. The ESCP shall remain in effect until project completion and final stabilization of the construction site.

Extra erosion and sediment control BMPs shall be available on-site in order to replace failed BMPs or to be implemented during storm events. The Contractor shall mitigate ALL non- stormwater discharges from the construction site, unless granted approval by the AGENCY. The area adjacent to the construction site shall remain free of sediment and shall be swept regularly to be kept clean.

#### **3-12.6.4 Dewatering**

[Add the following:].

Unless otherwise directed in these Special Provisions, the Contractor shall provide and maintain ample means and devices with which to promptly remove and properly dispose of water entering the excavations or other parts of the work at all times during construction. 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. The methods may include sump pumps, deep wells, well points, suitable rock or gravel placed below the required bedding for draining and pumping purposes, temporary pipelines, and other means.

Standby pumping equipment shall be on the job site. A minimum of one standby unit shall be available for immediate installation should any well unit fail. The design and installation of well points or deep wells shall be suitable for the accomplishment of the work. Drawings or details indicating the proposed dewatering system shall be submitted to the CITY for review.

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 treatment facilities operations. No water shall be drained into work built or under construction without prior consent of the ENGINEER.

Water shall be disposed of in such a manner as not to be a menace to the public health and such disposal shall be performed in accordance with Environmental Protection Agency and State Water Quality Control Board standards (NPDES permit). Any testing and reports required under NPDES permit shall be performed by the Contractor and submitted to the appropriate agency for approval at no additional cost to the CITY.

### **3-13.3 WARRANTY**

[Replace 2<sup>nd</sup> sentence of 1<sup>st</sup> paragraph with the following:].

The warranty period shall start on the date the Work is accepted by the Board.

[Add the following:].

The Contractor hereby guarantees that the entire work constructed by him under the Contract will meet fully all requirements as to quality of workmanship and materials. The Contractor hereby agrees to make, at his own expense, any repairs or replacements made necessary by defects in materials or workmanship that became evident within one (1) year after the date of the completion, and to restore to full compliance with the requirements of these Contract Documents, including any test requirements set forth herein for any part of the work constructed hereunder, which during said one (1) year period is found to be deficient with respect to any provisions of the Contract Documents.

The Contractor shall make all repairs and replacements promptly upon receipt of written orders for the same from the City's Representative. If the Contractor fails to make the repairs and replacements promptly, the City may do the work and the Contractor and his sureties shall be liable to the City for the cost thereof.

The guarantees and agreements set forth herein shall be secured by a Labor and Material Bond and acceptance of the work by the City. Said bond shall be in the form approved by the City Attorney and executed by a surety company or companies satisfactory to the City in the amount of one hundred percent (100%) of the Contract. Said bond shall remain in force for a period of seven (7) months after the date of Notice of Completion and acceptance. The Contractor shall provide the Faithful Performance Bond furnished under the Contract to remain in force and effect for said amount until the expiration of said one (1) year period.

## **SECTION 4 – CONTROL OF MATERIALS**

### **4-1 GENERAL**

Should the Contractor fail to correct deficiencies or public nuisances that have been created because of his/her operation, then these will be considered to be of an emergency nature, and will call for the AGENCY to move in on the project to take corrective action. Such work will be done on a force account basis with an additional callout charge. There is a minimum two-hour charge for labor on any callout plus an additional callout charge of \$300.

### **4-4 TESTING**

[Add the following:].

All tests of materials furnished by the Contractor shall be made in accordance with commonly recognized standards of national organizations and such special methods and tests as are prescribed in these specifications. No materials shall be used until they have been approved by the ENGINEER.

The Contractor shall at his expense furnish the CITY, in triplicate, certified copies of all required factory and mill test reports. Any materials shipped by the Contractor from a factory or mill prior to having satisfactorily passed such testing and inspection by a representative of the CITY shall not be incorporated in the work, unless the ENGINEER shall have notified the Contractor, in writing, that such testing and inspection will not be required.

At the option of the ENGINEER, the source of supply of each of the materials shall be approved by the ENGINEER before delivery is started and before such material is used in the work.

Unless otherwise provided in the Special Provisions, the CITY will complete and pay for the initial soils, compaction, and material tests. Any subsequent soil, compaction, and material tests deemed necessary due to the failure of initial tests will be at the Contractor's expense and deducted from the payment due.

## **SECTION 5 – LEGAL RELATIONS AND RESPOSIBILITIES**

### **5-1 LAWS AND REGULATIONS**

[Add the following:].

The Contractor shall protect and indemnify the CITY, the BOARD, the ENGINEER, and all of its or their officers, agents and servants against any claim or liability arising from or based on the violation of any existing or future State, Federal and local laws, ordinances, regulations, orders or decrees, whether by himself or his employees. If any discrepancy or inconsistency is discovered in the plans, drawings, specifications or contract for the work in relation to any such law, ordinance, regulation, order or decree, the Contractor shall forthwith report the same to the ENGINEER in writing.

### **5-2 SPECIAL NOTICES**

[Add the following:].

Per Section 1771.4(a)(2) of the California Labor Code, Contractors are required to post job site notices, as prescribed by regulation.

In addition to the special notices requirement to be served by Personnel Delivery or Certified Mail, special notices may also be served by the utilization of FedEx or UPS express service with a confirmed delivery receipt. Service shall be effective on the date of the receipt of the delivery confirm issued by FedEx or UPS.

### **5-3 LABOR**

#### **5-3.2 Prevailing Wages**

[Add the following to this subsection:].

Certified Payroll Records shall be submitted to the Engineer every two weeks beginning with the actual start day of construction, and shall be consecutively numbered until the completion of the work. Progress payments will be withheld pending receipt of any outstanding reports.

The Contractor shall assure that a qualified supervisor is present at all times when work is being performed.

#### **5-3.3 Payroll Records**

[Add the following:].

In order to verify compliance with the Labor Code, Contractor shall furnish to the ENGINEER, weekly, for the duration of the contract period, copies of his payroll statements showing wages paid to each employee during the preceding week and the employee work classification. Use of Form DH-C-347, Payroll Statement of Compliance, is an acceptable method of fulfilling the above requirement.

Any stop orders issued by the Department of Industrial Relations against Contractor or any subcontractor that affect Contractor's performance of work, including any delay, shall be Contractor's sole responsibility. Any delay arising out of or resulting from such stop orders shall be considered Contractor caused delay subject to any applicable liquidated damages and shall not be compensable by the City. Contractor shall defend, indemnify and hold the City, its officials, officers, employees and agents free and harmless from any claim or liability arising out of stop orders issued by the Department of Industrial Relations against Contractor or any subcontractor.

#### **5-3.5 Apprentices**

[Replace with the following:].

Attention is directed to the provisions of Sections 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under it. The Contractor and any subcontractor under it shall comply with the requirements of those Sections in the employment of apprentices.

Information relative to apprenticeship standards, wage schedules and other requirements may be obtained from the Director of Industrial Relations, Ex-officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

#### **5-4 INSURANCE**

[Replace with the following:].

The minimum amounts and types of insurance coverages are as stated in the Agreement (sample copy attached). Prior to bid submittal the BIDDER shall keep fully informed of the latest insurance requirements of the City of Costa Mesa and shall comply with all other provisions of Section 5-4 of the Standard Specifications.

Below are approved endorsements which satisfy the basic insurance requirements contained in contracts entered into by City of Costa Mesa. These have been approved by the City Attorney's office. The terms of any specific contract with the City are controlling. Prior to the commencement of any work, the CITY requires that the ENGINEER receive Certificates of Insurance in **DUPLICATE** for liability coverage of at least \$1,000,000 combined single limit, per occurrence and in the aggregate.

Each insurance policy required by the CITY of the Contractor shall contain the following endorsements:

1. Additional Insureds

"The City of Costa Mesa and its elected and appointed boards, officers, agents, and employees are additional insureds with respect to the subject project and agreement."

2. Notice

"Said policy shall not terminate, nor shall it be canceled nor the coverage reduced, until thirty (30) days after written notice is given to City."

3. Other Insurance

"Any other insurance maintained by the City of Costa Mesa shall be excess and not contributing with the insurance provided by this policy."

If any of such policies provide for a deductible or self-insured retention to provide such coverage, the amount of such deductible or self-insured retention shall be approved in advance by City. No policy of insurance issued as to which the City is an additional insured shall contain a provision which requires that no insured except the named insured can satisfy any such deductible or self-insured retention.

**5-7 SAFETY**

**5-7.1 Work Site Safety**

**5-7.1.1 General**

[Add the following:].

Material or other obstructions shall not be placed within fifteen feet (15') of fire hydrants. Fire hydrants shall be made readily accessible to the Fire Department at all times.

**5-7.8 Steel Plate Cover**

**5-7.8.1 General**

[Add the following:].

When backfilling operation of an excavation in the travel way, whether transverse or longitudinal cannot be properly completed within a work day, steel plate bridging with a non-skid surface and shoring may be required to preserve unobstructed traffic flow.



All steel plate covers utilized for the project must be slide resistant. A non-slip coating will be required on the side of the steel plate that that will be utilized for the driving or walking surface.

## **SECTION 6 – PROSECUTION AND PROGRESS OF THE WORK**

### **6-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF THE WORK**

#### **6-1.1 Construction Schedule**

[Replace the 1<sup>st</sup> Paragraph with the following:].

The Contractor's proposed Construction Work Schedule shall be submitted to the ENGINEER for approval within ten (10) working days after the date of the BOARD's execution of the Contract Agreement. The Construction Work 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. The Construction Work Schedule shall provide sufficient detail to delineate the main milestones start and end dates for each activity with chronological relationships of all the activities of Work showing the number of working days required to complete the entire project within the Contract Days. The schedule shall also incorporate the requirements of Section 402-5 of the Standard Specifications to complete the Work within the Contract Days. Prior to issuing the Notice to Proceed, the ENGINEER will schedule a preconstruction meeting with the Contractor to review the proposed Construction Work Schedule, delivery dates, activity milestone dates, arrange utility coordination, discuss construction methods and staging, and clarify inspection procedures.

The Contractor shall submit progress reports to the ENGINEER by the tenth day of each month. The report shall include an updated Construction Work Schedule. All revisions shall be completed within three days after review by the ENGINEER. The Contractor shall submit requests for changes in the schedule to the CITY for approval at least three (3) working days prior to performing any work. Any deviations from the original approved Construction Work Schedule shall be explained and identified in the updated Construction Work Schedule. Progress payments will be withheld pending receipt of any outstanding reports.

**The Contractor shall furnish the ENGINEER with a 3-week look ahead schedule in a tabular format at every weekly construction meeting. The 3-week look ahead schedule shall utilize the main milestones within the approved Baseline Construction Schedule with updates and include sub-activities.**

[Add the following:].

#### **6-1.3 DAILY REPORT SUBMITTAL**

Contractor shall submit daily reports to the CITY at the end of each working day. All forms shall be provided by the CITY. Any cost for this item shall be included in the various items of work and no other compensation will be allowed.

### **6-3 TIME OF COMPLETION**

#### **6-3.1 General**

[Replace the 1<sup>st</sup> Sentence with the following:].

The Contractor shall begin the Work within **ten (10) Working Days** after the date the Contract is executed by CITY unless a later start date is agreed upon by the CITY and Contractor within a written Notice-to-Proceed. The Work shall be completed within **ninety-five (95) Working Days** from the date set in the Notice-to-Proceed or the first day of commencement of Work, whichever occurs first.

### **6-5 USE OF IMPROVEMENT DURING CONSTRUCTION**

[Add the following:].

Should it become necessary, due to developed conditions, to occupy any portion of the Work before Contract is fully completed, such occupancy shall not constitute acceptance by the CITY of work by Contractor.

#### **6-5.1 WORK DAYS, WORKING HOURS AND HOLIDAYS**

[Add the following to this subsection:]

The workday shall have a regular starting time of 8:30 a.m. and shall end at 3:30 p.m. No work shall be allowed prior to the regular starting time or after 3:30 p.m. time, unless approved by the Engineer. Any work after 3:30 p.m. on a normal workday shall be subject to an overtime inspection charge of \$100/hour.

Lane closures will be allowed within the working hours set forth in the Special Provisions and construction drawings. The contractor shall be required to open all traffic lanes to vehicular traffic at all other times. Limitations to the hours for lane closures may be less than the working hours set forth herein.

Unless a separate bid item is provided, full compensation for conforming to the requirements of this subsection shall be considered as included in the contract bid price paid for various other items of work, and no additional compensation will be allowed.

Working hours within the intersections shall be limited to 8:30 a.m. and 3:30 p.m. Contractor shall maintain travel lanes and turn lanes as shown on the traffic control plans.

No work shall be allowed from 8:30a.m. and 3:30 p.m. Friday (or 3:30 p.m. the day before

a holiday) until 7:00 a.m. the next working day. **No work shall be permitted on weekends (unless specified in the plans and/or special provisions), holidays, or during the Orange County Fair and holiday moratorium periods.** The City observed holidays are: New Years Day, Martin L. King Holiday, Presidents Day, Memorial Day, 4th of July, Labor Day, Veterans Day, Thanksgiving, the Friday after Thanksgiving, and Christmas. The observance date shall concur with Federal guidelines.

## **6-6 SUSPENSION OF THE WORK**

### **6-6.1 General**

[Add the following to this subsection:].

Should suspension of work be ordered by reason of the failure of the contractor to carry out orders or to perform any provisions of the contract; or by reason of weather conditions being unsuitable for performing any item or items of work; the contractor, at its expense, shall do all the work necessary to provide a safe, smooth, and unobstructed passageway through construction for use by public traffic during the period of such suspension. In the event that the contractor fails to perform the work above specified, the City will perform such work and the cost thereof will be deducted from payment due or to become due to the contractor.

If a suspension of work is ordered by the Engineer, due to the failure on the part of the contractor to carry out orders given or to perform any provision of the contract, the days on which the suspension order is in effect shall be considered working days.

## **6-7 TERMINATION OF THE CONTRACT FOR DEFAULT**

### **6-7.3 Notice of Termination for Default**

[Replace the 1<sup>st</sup> Paragraph with the following:].

The ENGINEER will make the determination if the Contractor had failed to commence satisfactory corrective action within 5 working days after the receipt of the notice to cure, or to diligently continue satisfactory and timely correction of the default thereafter, and will take action as allowed by the Contract Documents.

### **6-7.4 RESPONSIBILITIES OF SURETY**

[Add the following:].

Within 3 working days of receipt of the written notice of termination for default, the Surety shall provide the services needed to maintain the project in accordance with the Contract Documents. The services shall maintain the existing traffic control in place and the maintenance of the project site until the Engineer's review and acceptance of the Surety's plan for course of action.

## **6-9 LIQUIDATED DAMAGES**

[Replace the 1<sup>ST</sup> Paragraph with the following:].

The CONTRACTOR shall pay to the CITY the sum of **\$3,000** per calendar day, for each and every calendar day's delay in finishing the Work in excess of the number of Working Days prescribed within these General Provisions and the Agreement, or per the direction of the Engineer. Liquidated damages are calculated per Chapter 12 of the latest edition of the Caltrans Local Assistance Procedures Manual (LAPM). Execution of the contract under these specifications shall constitute agreement by the Agency and Contractor that **\$3,000** per calendar day is the minimum value of the costs and actual damage caused by failure of the Contractor to complete the Work within the allotted time. Such sum is liquidated damages and shall not be construed as a penalty, and may be deducted from payments due the Contractor if such delay occurs.

In addition to the liquidated damages specified, if the Contractor fails to complete the work within the time specified for completion, plus any authorized time extensions, the Agency shall have the right to charge to the Contract all or any part, as it may deem proper, of the actual costs of inspection, supervision and other overhead expenses that are directly chargeable to the project and that accrue after the expiration of such specified time for completion plus authorized extensions. This charge will be addition to the payment of liquidated damages.

## **SECTION 7 – MEASUREMENT AND PAYMENT**

### **7.2 LUMP SUM WORK**

[Add the following to this subsection:].

Contractor shall submit for approval a schedule of values for all lump sum work. Failure to submit may delay payment for said work.

### **7.3 PAYMENT**

#### **7-3.1 General**

[Replace the 1<sup>ST</sup> Paragraph with the following:].

Payment for the various items listed on the Bid Proposal, as further specified herein, shall constitute full compensation to the Contractor for furnishing all material, tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of Work and as specified and shown on the drawings, including all costs for compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the California Division of Industrial Safety and the Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor. No separate payment will be made for any item that is not specifically set forth in the Bid Proposal. Costs arising from violations of regulations will be paid by the offending party to the extent that there will be no additional cost to the CITY.

**When no bid item is provided for work/improvement shown or indicated on the plans and specifications, payment for such work/improvement will be considered to be included in various applicable items of work.**

### **7-3.2 Partial and Final Payment**

[Replace the 1<sup>st</sup> Paragraph in its entirety with the following:].

The closure date for the purpose of making partial progress payments will be the last day of each month. The Contractor may request, in writing, that such monthly closure date be changed. The ENGINEER may approve such request when it is compatible with the CITY's payment procedure.

[Replace the 2<sup>nd</sup> Paragraph in its entirety with the following:].

Each month, the Contractor shall meet with the Engineer, a minimum of three (3) working days prior to the submittal of the progress payment to the AGENCY, to finalize and receive approval regarding the measurement of the Work performed through the closure date and the estimated value of the progress payment based on the Contract Unit Prices or as provided for in the Standard Specifications. Any progress payment submitted without such approval will be considered incomplete and returned to the Contractor and no payment shall be considered until such approval is obtained.

[Replace the 3<sup>rd</sup> Paragraph in its entirety with the following:].

The amount retained and deducted by the BOARD shall be 5% of the progress estimates for all progress payments. No reduction in the amount of retention will be allowed. However, after 50% of the work has been completed, if the BOARD finds that satisfactory progress is being made, it may make any of the remaining progress payments in full for actual work completed. The final payment of the retention amount to the Contractor shall be made thirty-five (35) days after the date of the recording of the Notice of Completion of the work after it is accepted by the CITY. The 5% withheld from each progress payment shall not include monies withheld for stop notices or other withholding by the CITY. The monies withheld for stop notice and other withholdings shall be in addition to the 5% withheld for retention. The amount of any liquidated damages will be deducted from earned progress payments due the Contractor.

[Add to end of Section the following:].

Contractor shall comply with the requirements of Division 2, Part 1, Chapter 7, Section 7107 of the California Public Contract Code.

The lead time for processing invoices for the monthly progress payments approved by the ENGINEER for inclusion on the warrant list of the CITY is governed by the rules and

regulations established by the Finance Department of the CITY. Monthly payments will be processed and paid in accordance with the rules and regulations established or revised by the said Finance Department.

The Contractor shall submit all weight tickets or volumes of all materials used in the construction to the ENGINEER for checking and verification prior to any payment. Failure to do so will postpone the payment to the Contractor, until the matter is resolved satisfactorily.

The weight or volume from submitted tickets must correspond to the work done in the field; if not, the City shall reject the work without compensation to the Contractor, and/or the Contractor shall be directed to replace that work at no additional costs to the City.

After completion of the Contract, the BOARD shall, upon recommendation of the ENGINEER, accept the Work as completed and authorize the Final Payment.

The Final Payment shall be the entire sum found to be due the Contractor after deducting therefrom all previous payments and all amounts to be kept and all amounts to be retained under the provisions of the Contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

No certificate given or payment made under the Contract, except the final certificate or Final Payment, shall be conclusive evidence of full or substantial performance of this Contract; and no payment shall be construed to be an acceptance of any defective work or improper material.

The acceptance of Final Payment by the Contractor shall release the CITY, the BOARD, and the ENGINEER from any and all claims or liabilities on account of work performed by the Contractor under the Contract or any alterations thereof.

The Contractor shall record, on the set of contract documents maintained at the job site, deviations which have been made from the Contract Documents or approved shop drawings – including buried or concealed construction and utility features which are revealed during the course of construction. Special attention shall be given to recording the horizontal and vertical location of all buried utilities that differ from the locations indicated, or which were not indicated on the Contract Documents. Said record documents shall be supplemented by detailed sketches as necessary or directed, to indicate fully the work as actually constructed.

Requests for partial payments shall not be approved until the record documents are brought up to date. Also, request for final compensation shall not be approved until all the variations between the work as constructed and as originally shown in the Contract Documents have been properly recorded and delivered to the City, after approved by the Engineer.

[Add the following:].

### **7-3.2.1 Prompt Progress Payment to Subcontractors**

Contractor shall comply with the requirements of Division 2, Part 1, Chapter 7, Section 7200 of the California Public Code.

The CONTRACTOR agrees to pay each subcontractor under this Agreement for satisfactory performance of its contract no later than 7 days from the receipt of each payment the CONTRACTOR receives from CITY.

The CONTRACTOR agrees further to release retainage payments to each subcontractor within 7 days after the retention payment is received by the CONTRACTOR.

Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the CITY. Any violation of this provision shall subject the violating prime contractor or subcontractor to the penalties, sanctions and other remedies specified in Section 7108.5 of the Business and Professions Code. This clause applies to both DBE and non-DBE prime contractors and subcontractors.

**City will be strictly monitoring the Contractor for prompt payment to all subcontractors.**

[Add the following:].

### **7-3.2.2 Prompt Pay Monitoring and Enforcement of Progress Payments**

The City of Costa Mesa will use the following monitoring and enforcement mechanisms to ensure that all subcontractors, including DBE's, are promptly paid.

- A. The City will strictly monitor the prime contractor or subcontractor(s) for prompt release of progress payments for all subcontracted work as follows:
  - 1. The effective date of release is the date the City releases the check to the prime contractor by mailing or hand delivery at the City of Costa Mesa (has to be requested in writing ahead of time).
  - 2. Prime contractor or subcontractor(s) to provide verification in writing that the subcontracts have been paid within 7 days or the time period agreed, from the effective date of release.
  - 3. City may contact subcontractor(s) to confirm receipt of progress payment amount and if it was received within 7 days or the time period agreed from the effective date of release.

- B. If the prime contractor or subcontractor(s) is found to be in default of Federal or State Codes concerning prompt payment to subcontractors, City will enforce the following besides the disciplinary action, sanctions and penalties imposed per the codes:
1. City will withhold 150% of the monies due to the subcontractor(s) from the prime contractor's next progress payment.
  2. City may also elect to make the payment(s) directly to the subcontractor(s) without the prime contractor's approval for the remainder of the contract.

### **7-3.3 Delivered Materials**

[Replace in its entirety with the following:].

The cost of materials and equipment delivered, but not incorporated in said work, will not be included in the progress payment estimate unless otherwise provided in these Specifications. All materials shall be nontoxic and shall not contain asbestos and hazardous substances as established by applicable laws.

Materials delivered, but not in place, will not be classed as work done, except as otherwise provided in these Specifications.

### **7-3.4 Mobilization**

[Replace in its entirety with the following:].

Mobilization shall consist of all preparatory work and operations. It shall include, but not be limited to, the movement of personnel, equipment, materials and incidentals to the project site necessary for work on the project. The mobilization shall include all other work and operations, which must be performed.

Mobilization shall also include the time, materials, and labor to move the necessary construction equipment to and from the job site and the project administration costs during the entire contract period.

This work shall include, but not be limited to protect-in-place and/or relocation of the facility to accommodate the construction of an improvement; including resetting curb drains through new curbing.

The Contractor shall provide supervisory personnel to keep the construction site in a safe condition and all other related work as required at all times. These requirements shall also apply to all non-working days during construction period. The Contractor is responsible for securing an adequate storage site for equipment and materials.



The Contractor shall have on the work site at all times, as his agent, a competent English speaking superintendent capable of reading and thoroughly understanding the plans, specifications, and other related documents.

A minimum of one week before the start of construction, the Contractor shall video all areas where construction is to take place. The video shall be supplied to the Engineer before construction begins. Videos will serve as a record of the existing conditions for disputes that may arise from restoration and should therefore be taken along the line of construction and site access and staging areas at sufficient detail as necessary to clearly depict details of existing conditions. Videos shall be a DVD or digital, in color, indexed and catalogued in such a manner that each photographed area is readily identifiable and shall also indicate the date and time (hours, minutes and seconds) when it was made. The Contractor shall also video any unusual conditions encountered during construction that are not already a matter of photographic record. In any areas where existing conditions cannot be determined by means of videos, the areas shall be restored as approved by the Engineer at the Contractor's expense. All videos shall become the property of the City.

Payment for mobilization shall be considered as included in the other items of work and no additional compensation will be allowed therefore.

#### **7-3.4.1 Travel Route for Trucking and Equipment**

Plans indicating the travel route for the Contractor's equipment movement in and out of the work site must be submitted concurrently with the Haul Route Plan (Section 2-5.4) to the ENGINEER at the pre-construction meeting for approval prior to commencement of any work. The travel route plans, which meet the City's requirements, will be approved and returned to the Contractor; otherwise, further revisions are required until they are acceptable to the City. The approved travel plans shall be strictly adhered to by the Contractor during all phases of the construction.

Any deviation from these requirements is not permitted. All the Contractor's operations will be ceased at once if the Contractor violates any of these requirements. No further payments will be made to the Contractor until problems are resolved according to the City's requirements.

#### **7-3.4.2 Construction Sequence/Order of Work**

In order to minimize the inconveniences to the residents and businesses, the contractor shall construct the Project and sequence the work where no two adjacent streets are closed at one time, and/or the nearest parking is no more than 300' from the intersection

of the street being closed to traffic. The Contractor shall maintain adjacent streets open for ingress and egress and for parking.

## **7-4 PAYMENT FOR EXTRA WORK**

### **7-4.1 General**

[Add the following to this subsection:].

For such extra work the contractor shall receive payment as agreed upon in writing, or shall be paid on force account. Work involving contract unit prices, the contractor shall not exceed any of the quantities in the proposal unless prior authorization from the engineer is obtained in writing.

Material charges shall be substantiated by valid copies of vendor's invoices. Such invoices shall be submitted with the daily extra work reports, or if not available, they shall be submitted with subsequent daily extra work reports. When these daily extra work reports are agreed upon and signed by both parties, said reports shall become the basis of payment for the work performed.

### **7-4.2 Basis for Establishing Costs.**

#### **7-4.2.1 Labor**

[Add the following:].

The compensation for employer's payments of payroll taxes; workers compensation insurance; liability insurance; health and welfare; pension; vacation; apprenticeship funds; other direct costs resulting from Federal, State, or local laws; and for assessments or benefits required by lawful collective bargaining agreements to be applied to the actual cost for wages shall be **23 percent** for regular time and overtime.

### **7-4.3 Markups**

#### **7-4.3.1 Work by the Contractor**

[Replace in its entirety with the following:].

The allowance for overhead and profit to be added to the Contractor's costs shall be as follows:

Labor:	20%
Materials:	15%
Contractor Owned Equipment	15%
Equipment Rental	10%*
Other Items and Expenditures	10%

To the sum of the costs and markups provided for in this section, 1 percent shall be added as compensation for bonding.

\* Equipment Rental rates shall be based on the latest applicable Caltrans Equipment Rental Rates.

#### **7-4.3.2 Work by a Subcontractor**

[Replace in its entirety with the following:].

When all or any part of the extra work is performed by a Subcontractor, the markup established in 7-4.3.1 shall be applied to the Subcontractor's actual cost of such work. A markup of ten (10) percent on the first \$5,000 of the subcontracted portion of the extra work and a markup of five (5) percent on work added in excess of \$5,000 of the subcontracted portion of the extra work may be added by the Contractor.

No markups will be allowed for second tier or higher subcontractors.

### **7-6 SUMMARY OF PUBLIC CONTRACT CODE § 9204**

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

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

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

#### Initial Review

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

#### Meet & Confer

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

and undisputed portions of the claim within 10 business days of the meet and confer. The City will pay the undisputed portion within 60 days of issuing this statement.

#### Mediation

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

#### Miscellaneous Provisions

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

## **SPECIAL PROVISIONS**

### **PART 1-8**

### **PART 1**

### **GENERAL**

#### **100-1 GENERAL**

**BID ITEM NO. 1: MOBILIZATION (5% MAXIMUM)**

**BID ITEM NO. 2: ADDITIONAL WORK ITEMS**

**BID ITEM NO. 3: PREPARATION AND IMPLEMENTATION OF EROSION CONTROL AND BEST MANAGEMENT PRACTICE**

#### **Additions/Modifications to Standard Specifications**

The following additions are made to the latest edition of the "Standard Specifications for Public Works Construction" (The "Greenbook"), and the General Provisions stated within the "Standard Specifications" of this Project. Should there be a conflict between any of these provisions; the Special Provisions shall have precedence.

All work shall be performed in conformance with the latest edition of the Uniform Building Code as adopted by the City of Costa Mesa. The electrical, plumbing, and fire codes, and other regulations as adopted by the City of Costa Mesa Building Official shall apply to this project.

Where referenced in these specifications, the latest edition of the "City of Costa Mesa Standard Drawings" and the "Work Area Traffic Control Handbook (WATCH)" published by Building News, Inc., shall also apply.

**If the item of work is identified within the Proposal section of these Specifications, then the following bid item descriptions will provide the corresponding bid item numbering within each corresponding section of the Standard Specifications under the Subsection entitled "Measurement and Payment" or "Payment". All other sections and subsections shall conform to the Standard Specifications unless modified herein.**

The unit prices and lump sum amounts to be paid for under the bid items listed in the Proposal shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary for the completion of the work and for performing all work contemplated and embraced under the Contract, in accordance with the Plans and Contract Documents. This shall include the Contractor's costs involved with bonding, insurance, worker's compensation, overhead, financing, obtaining required permits and permit fees, mobilization, traffic control, public convenience and safety, protective barricading/fencing, sanitary facilities, storage of equipment and materials, security against theft and vandalism, project site maintenance, dust and runoff control, clean-up including all costs for compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the California Division of

Industrial Safety and the Occupational Safety and Health Administration (OSHA) of the U. S. Department of Labor, and all other items related to the work.

Payment for compliance with the following provisions shall be included in the various bid items of work unless otherwise modified in the special provisions section. No additional compensation will be allowed.

No separate payments will be made for any items that are not specifically set forth in the Bid Proposal. Payments for any such items are included in various bid items of work.

Costs arising from violations of regulations will be paid by the offending party to the extent that there will be no additional cost to the City.

Payment for unit price work shall be made for the actual quantities of Contract Items removed, constructed, or disposed of in accordance with the Plans and these Specifications. Measurement of Unit Price work shall be specified in the Standard Specifications, Section 7-1, "Measurement of Quantities for Unit Price Work." Payment for Lump Sum work shall be paid for at the price indicated in the Bid, in accordance with the Standard Specifications, Section 7-2, "Lump Sum Work."

**Payment for all work shall be included in the various bid items. No additional compensation shall be made therefore. Work associated with each bid item shall include, but not be limited, to the bid descriptions set forth herein.**

**Bid Item 1: Mobilization (5% Maximum)**

Mobilization shall comply with Section 7-3.4 of the General Provisions.

*Add the following:*

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. Mobilization shall additionally include the establishment of any temporary facilities, utilities, construction fencing and barricades, and the provision and installation of project signs.

Mobilization shall also include the time, materials, and labor to move the necessary construction equipment to and from the job site and the project administration costs during the entire contract period.

Mobilization shall include all work shown on the plans, which is not compensated in a bid item of work. This work shall include, but not be limited to protect-in-place and/or relocation of the facility to accommodate the construction of an improvement, restoration and adjustment of existing improvements, and establishing the location and depth of city traffic signal conduit, by potholing as necessary, where significant excavation may occur.

Underground facilities on these plans are for reference only. It is the contractor's responsibility to determine the exact location of potentially conflicting conduit.

The Contractor shall obtain bonds, insurance, and financing for entire project prior to beginning work.

The Contractor shall provide supervisory personnel to keep the construction site in a safe condition and all other related work as required at all times. These requirements shall also apply to all non-working days during construction period. The Contractor is responsible for securing an adequate storage site for equipment and materials.

The Contractor shall have on the work site at all times, as his agent, a competent English-speaking superintendent capable of reading and thoroughly understanding the plans, specifications, and other related documents.

A minimum of one week before the start of construction, the Contractor shall video all areas where construction is to take place. The video shall be supplied to the Engineer before constructions begins. Videos will serve as a record of the existing conditions for disputes that may arise from restoration and should therefore be taken along the line of construction and site access and staging areas at sufficient detail as necessary to clearly depict details of existing conditions. Videos shall be a DVD or digital, in color, indexed and catalogued in such a manner that each photographed area is readily identifiable and shall also indicate the date and time (hours, minutes and seconds) when it was made. The Contractor shall also video any unusual conditions encountered during construction that are not already a matter of photographic record. In any areas where existing conditions cannot be determined by means of videos, the areas shall be restored as approved by the Engineer at the Contractor's expense. All videos shall become the property of the City.

#### **Payment for Bid Item No. 1: Mobilization (5% Maximum)**

Full compensation for the requirements of Mobilization (5% Maximum) will be paid for at the **contract LUMP SUM (LS) price bid**, and shall include mobilization and demobilization for the entire contract period, securing a storage yard to store all equipment and materials to be used on the job, temporary, handling of sewage, disposal of waste materials, restoration of the site, all labor, tools, equipment, materials, warranties, providing as-built plans, work schedules, providing bonds, insurance, financing, permits and permit fees, public notifications, public notifications & coordination, moving equipment to the job site and all incidentals required to complete the work. It shall be considered full compensation for obtaining all business licenses and permits, as required for the entire project, from all related agencies, including, but not limited to, utility companies, private and public agencies and the CITY; and complying with the requirements specified in those licenses and permits; coordination, field office facility, all required submittals specified within these Specifications, and incidentals necessary to perform all related items of work. Progress payments for Mobilization and Demobilization bid item shall be paid for in accordance with the completion percentage of the Project to the Contractor and shall include the cost of such mobilization/demobilization and administration during the entire Contract period.

Progress payments for Mobilization and Demobilization bid item shall be paid for in accordance with the completion percentage of the Project to the Contractor and shall

include the cost of such mobilization/demobilization and administration during the entire Contract period. No additional compensation will be allowed.

The maximum price for this bid item **shall not exceed 5 percent (5%)** of the total contract price at the time of award. No additional compensation will be allowed therefore.

### **100-3 CONTROL OF THE WORK**

#### **Bid Item No. 2: Preparation and Implementation of Erosion Control and Best Management Practice**

##### **100-3.1 WATER POLLUTION CONTROL AND BEST MANAGEMENT PRACTICES**

Contractor shall follow the water pollution control and Best Management Practices (BMPs) guidelines enumerated in Section 3-12.6 of the "Standard Specifications for Public Works Construction" (The "Greenbook"), and also Section 3-12.6 of the General Provisions stated within the "Standard Specifications" of this Project and these contract bid documents.

Per the Federal Clean Water Act, the Contractor is required to eliminate pollution to waters of the United States in regard to this project. This project will require the Contractor to implement Best Management Practices (BMP's).

The Contractor shall submit an Erosion Control Plan (ECP). Erosion and Sediment Control Plans shall be prepared by the Contractor as part of the contract shall outline specific BMP's to be used during construction to ensure that sediment from storm runoff and construction activities does not enter storm drains. Some of the primary water pollution control measures anticipated for this project include, but are not limited to, covering all storm drain inlets in the project vicinity with water permeable fabric and gravel bags prior to performing any removal or paving operations; properly fueling and cleaning all equipment/vehicles; maintaining an ample supply of gravel/sand bags on-hand when excavating new PCC ramp/curb/gutter improvements in the event of rain; properly containing chemicals required to install the detectable warning mats; properly covering all incoming material trucks and all outgoing debris hauling vehicles; providing restroom facilities for workers; and regular street sweeping of the Work Area and Haul Routes to the satisfaction of the Engineer.

The requirements of all of the following agencies shall be met and maintained and where there is a conflict between requirements, the most stringent requirement shall govern.

1. Regional Water Quality Control Board
2. Orange County Flood Control District

The Contractor shall submit a Best Management Practice (BMP) Plan for containing any wastewater or storm water runoff from the project site including, but not limited to the following:

1. No placement of construction materials where they could enter storm drain



- system, which includes gutters that lead to catch basins.
2. Checking construction vehicles for leaking fluids.
  3. Providing a controlled area for cleaning or rinse-down activities.
  4. Monitoring construction activities.
  5. Minimizing usage of water when saw-cutting and vacuum the residue.
  6. Providing measures to capture or vacuum-up water contaminated with construction debris.
  7. Removing any construction related debris on a daily basis.
  8. Protecting work areas from erosion.

The BMP will be approved by the Engineer prior to any work. The City of Costa Mesa will monitor the adjacent storm drains and streets for compliance. Failure of the Contractor to follow BMP plan will result in immediate cleanup by City and back-charging the Contractor for all costs plus 15 percent. It is assumed that the Contractor will apply for the "Small Construction Rainfall Erosivity Waiver" as defined in the General Permit. Filing of the waiver does not relieve the Contractor of submitting BMP's to be used on site during construction, nor does it relieve the Contractor from conforming to the storm water requirements of the State Water Resources Control Board. The Contractor shall complete the electronic Notice of Intent (NOI) and Sediment Risk form through the State Water Board's SMARTS system, certifying that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five. In the event that the Rainfall Erosivity Waiver is not granted by the State Water Resource Control Board, the Engineer shall be notified immediately.

The Contractor shall confirm that all of the BMP's have been adequately detailed to address the anticipated construction operations. The proposed ECP shall be submitted to the City prior to the start of any earthwork.

### **Payment for Bid Item No. 3: Prepare and Implement Erosion Control and Best Management Practice**

Measurement and Payment for the preceding shall be at the lump sum (LS) price to Prepare and Implement ECP and BMP and shall be considered full compensation for all costs incurred by the Contractor for Preparation and submittal of the Erosion Control Plan, Implementing Best Management Practices, and the costs of any required permits. Additional compensation shall not be allowed. **If applicable, the payment will include preparation and filing of the Notice of Intent (NOI) and "Small Construction Rainfall Erosivity Waiver" as specified herein and as described in the SSPWC**, all National Pollutant Discharge Elimination System (NPDES) and all related activities, clean-up and incidentals required to complete the work in place.

Payment for this item, including all NPDES related activities, shall be paid as a percentage of completed work to date. **Payment shall be made as the work proceeds and shall constitute full compensation for the completion of the work. It shall be paid as follow: 1/3 at start of construction, 1/3 at 50% completion of the work and 1/3 at 100% completion of the work.**

### **100-4 ADDITIONAL WORK ITEMS**

## **100-4.1 GENERAL**

This work item entails work beyond the Scope of Work established within the Plans, Specifications, and Standard Specifications as directed by the ENGINEER with a specified Contract allowance

### **Bid Item No. 2: Additional Work Items**

This work item entails work beyond the Scope of Work established within the Plans, Specifications, and Standard Specifications as directed by the ENGINEER with a specified Contract allowance

Allowance to be included in the total bid amount is identified as follows. Use of the allowance will be at the sole discretion of the City and must be authorized in writing at the discretion of the City. Any money used from the project allowance will be authorized via an Allowance Disbursement Form at the City's sole discretion. Any amount of money remaining in the Allowance line item upon completion of the Project will be deducted from the Contract by Deductive Change Order for the full amount(s) remaining therein. The Contractor has no beneficial interest in, and/or claim to, the Allowances and hereby disclaims any and all such interests.

Additional work items include work that will only be used at the discretion of the Engineer. At the discretion of the Engineer, the Contractor shall provide all labor, tools, equipment, materials and incidentals for the extra work beyond the scope of work established within the Contract documents. Work may include, but not be limited to, delivery of additional newsletters; disposal of materials, potholing, furnishing and installation of informational signs, and related work, and will only be performed, if required, and approved by the Engineer. The Contractor acknowledges that this allowance will only be used at the discretion of the City. Contractor shall be paid at force account or at agreed prices for all work performed within this allowance.

### **Bid Item No. 2: Measurement and Payment**

"Additional Work Items Allowance" shall be paid per **Force Account (FA)** for all work performed pursuant to Section 7-4.2 of these Specifications and shall, include all labor, tools, equipment, materials and incidentals as required to complete the work as directed by the ENGINEER.

### **Bid Item No. 4: Unclassified Excavation (Fill)**

Measurement and Payment for all the preceding shall be at the unit price bid per cubic yard (CY) price. This item includes all sawcut, removal and disposal of PCC, AC, aggregate base, and native soil including Petromat/pavement reinforcing fabric, macadam, abandoned concrete and/or steel culverts, unsuitable materials, irrigation improvements, plants, root pruning, removal of existing base material and other unclassified excavation necessary to establish the finished subgrade elevations for the improvements, as detailed in the plans. The unit price bid shall include subgrade preparation and compaction; including all labor, tools, material, equipment and incidentals required to complete the work. No further compensation will be allowed. The Unclassified

Excavation bid items are a Final Pay quantity and no additional compensation will be allowed. Payment for any over-excavation shall be per Section 3-3 "Extra Work" as modified by the General Provisions.

**Bid Item No. 5: Variable Cold Mill 2-inches**

Measurement and Payment for the requirements of Cold Mill Existing Pavement 2" Minimum shall be at the contract unit price bid per Square Foot (SF) and will be based on the actual area of surface planed regardless of the number of passes required. The contract price paid per square yard shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in cold milling the existing A.C., P.C.C., pavement reinforcing fabric/Petromat, macadam, or other miscellaneous improvements, removal of old AC/slurry lip overage from gutter pan, and disposing of material removed, per Typical Sections and Details shown on Plans, , as specified in these special provisions and as directed by the Engineer. No additional compensation will be allowed, therefore.

**Bid Item No. 6: Asphalt Concrete (AC) Pavement**

Measurement and Payment to construct "AC Pavement" shall be made at the unit price bid per tonnage (Ton). The unit price bid shall include subgrade preparation, surface preparation, AC Type Specified herein inclusive of the added AC depth to meet existing grade before cold milling operations, tack coat, temporary AC tapers, and all labor, material, saw cutting, transitioning, hauling, spreading, compacting, grading, equipment and incidentals required to complete the Work in accordance with these Specifications, as shown on the Plans, and no further compensation will be allowed.

Temporary asphalt concrete work where required by the ENGINEER for traffic control or other purposes shall be considered included in the price bid for the various items of work and no further compensation will be allowed.

**Bid Item No. 7: Asphalt Rubber Hot Mix (ARHM-G) Asphalt Concrete Course**

Measurement and payment for "Type "GG-C" Asphalt Rubber Hot Mix (ARHM-G) Surface Course" shall be made at the unit price bid per Tonnage (TON), based upon certified weigh master tickets. The unit price bid shall include, surface preparation, ARHM specified herein, tack coat, temporary AC tapers, rock dust blotter, sweeping, and all labor, material, saw cutting, transitioning, hauling, spreading, compacting, grading, equipment and incidentals required to complete the Work in accordance with these Specifications, as shown on the Plans, and no further compensation will be allowed.

Temporary asphalt concrete work where required by the ENGINEER for traffic control or other purposes shall be considered included in the price bid for the various items of work and no additional compensation will be allowed

**Bid Item No. 8: Construct Crushed Miscellaneous Base (CMB)**

Measurement and Payment for Construct CMB shall be per the unit price bid per tonnage (Ton) and shall include full compensation for furnishing all labor, materials, tools,

equipment, hauling, spreading, compacting, grading, and incidentals for completing all work as required. No additional compensation shall be allowed.

**Bid Item No. 9 Construct Variable Height Retaining Curb 0" to 8" over 6" CMB**

Measurement and payment to Construct Variable Height Retaining Curb 0" to 8" over 6" CMB ), shall be per the unit price bid per lineal foot (LF) of curb and shall include sub-grade preparation, full compensation for furnishing all labor, equipment, and materials for crushed miscellaneous base (CMB) ,forms, backfilling behind curbs, grading behind curbs, restoring form areas and all other work as required to complete the work. No other compensation will be allowed

**Bid Item No. 10: Construct 8" Curb and Gutter over 6" CMB**

Measurement and payment to Construct 8" Curb and Gutter over 6" CMB shall be per the unit price bid per lineal foot (LF) of curb and gutter and shall include sub-grade preparation, full compensation for furnishing all labor, equipment, and materials for crushed miscellaneous base (CMB), forms, backfilling behind curbs, grading behind curbs, restoring form areas and all other work as required to complete the work. New curb and gutter along bus pads shall be included in this bid item. No other compensation will be allowed.

**Bid Item No. 11: Construct 4" PCC Sidewalk over 4" of CMB**

Measurement and payment to Construct 4" PCC Sidewalk over 4" of CMB, shall be per the unit price bid per square foot (SF) and shall include sub-grade preparation, full compensation for furnishing all labor, equipment, and materials for crushed miscellaneous base (CMB) , forms, temporary AC pavement, backfilling behind sidewalk, grading behind sidewalk, restoring form areas and all other work as required to complete the work No additional compensation will be allowed.

**Bid Item No. 12: Construct an 8" drive approach over 8" CMB**

Measurement and payment to construct an 8" drive approach over 8" CMB shall be per the unit price bid per Square Foot (FT). Unit prices shall include excavation, sub-grade preparation, forms, temporary AC pavement, and all other work as required to complete the work. No additional compensation will be allowed.

**Bid Item No. 13: Construct 8-inch Drive Approach over 8-inch Crushed Miscellaneous Base (CMB)**

Measurement and payment to construct an 8" drive approach over 8" CMB shall be per the unit price bid per Square Foot (FT). Unit prices shall include excavation, sub-grade preparation, forms, temporary AC pavement, and all other work as required to complete the work. No additional compensation will be allowed.

**Bid Item No. 14: Adjust and Reset Existing Survey Monuments and Ties per California Licensed Land Surveyor**

Resetting of survey monuments shall be executed in accordance with Standard Specifications for Public Works Construction Section 309. The Contractor is responsible for locating and tying existing survey monuments and centerline points prior to construction, reestablishing such monuments or points after construction, and filing Corner Records (Pre-construction and Post-construction) with the County Surveyor before the project may be considered for acceptance by the agency.

Measurement and Payment for Reset Survey Monument shall be at the unit bid price per each item and include supplying all labor, materials, equipment and incidentals to complete the work per plans and specifications and no additional compensation shall be allowed.

**Bid Item No. 15: Signing and Striping**

Measurement and payment for the "Signing and Striping" shall be per the unit price bid per Lump Sum (LS) and "Signing and Striping" shall include full compensation for traffic control, preparation, cat tracking, striping, legends, RPMs, signs, all work required to complete the bid item, and the furnishing of all labor, materials, tools and appurtenances necessary to complete all work involved as specified on the plans and specifications and no additional compensation will be allowed, therefore.

**Bid Item No. 16: Furnish and Install Pull Boxes**

Measurement and Payment for "Bid Item No. 16: Furnish and Install Pull Boxes" shall be per the unit price bid per Each (EA), and shall be considered full compensation for providing all labor, materials, tools, equipment, other work and incidentals to accomplish the work in accordance with the Plans, Specifications, pursuant to Caltrans Standard Plans and Specifications, and no additional compensation shall be allowed.

**Bid Item No. 17: Temporary Traffic Control - Pedestrian Control, Construction Phasing/Staging, Public Convenience & Safety**

Full compensation for the requirements of Temporary Traffic & Pedestrian Control, Construction Phasing & Public Convenience & Safety will be paid for at the **contract LUMP SUM (LS) price bid**, and shall include all labor, tools, equipment, materials and incidentals necessary to provide measures to protect and maintain traffic and pedestrians, twenty-four (24) hours per day during the life of the Contract, including preparation and processing of a traffic and pedestrian control and construction phasing plans for City approval prior to the start of construction, temporary pavement, detours, the furnishing of such personnel, flaggers, traffic control supervisor, including the furnishing of daily records of traffic control activities, barricades, four (4) portable changeable message signs (PCMS), temporary pavement markings and striping (paint and tape), barrier rails, non-climb fencing, flashers, bridges, plates, furnishing, installing signs, coordination, notifications, signage, and all other incidentals required to complete the work as may be required to ensure the safety of the traveling public and pedestrians in accordance with these Special Provisions. A traffic and pedestrian control plan for each phase of construction must be submitted and approved prior to commencing any work in that phase of the construction. No additional compensation will be allowed therefore.

Progress payments shall be pro-rated in proportion to the total value of work completed to

date as a function of the total awarded contract amount.

**Bid Item No. 18: Median Clearing and Grubbing**

Measurement and payment for the preceding shall be at the lump sum (LS) price for Median Clear & Grub and Unit price shall include labor, equipment, and materials as required to complete the work. No additional compensation will be allowed.

**Bid Item No. 19: Median Landscaping**

Work of this section completed in accordance with the Contract Documents will be paid for at Lump Sum (LS) unit price as listed in the Schedule of Quantities and Prices. This price shall be full compensation for furnishing all labor, materials, tools, equipment, supplies, supervision, and incidentals necessary to complete the work of this section as described by the Contract Documents. Lump Sum, partial payment will be in accordance with the Schedule of Values submitted by the Contractor.

**Bid Item No. 19A: Landscape Maintenance (90 Days)**

Work of this section completed in accordance with the Contract Documents will be paid for at the Lump Sum (LS) unit price as listed in the Schedule of Quantities and Prices. This price shall be full compensation for furnishing all labor, materials, tools, equipment, supplies, supervision, and incidentals necessary to complete the work of this section as described by the Contract Documents. Lump Sum partial payment will be in accordance with the Schedule of Values submitted by the Contractor.

**Bid Item No. 20: Median Irrigation**

Work of this section completed in accordance with the Contract Documents will be paid for at the applicable unit price as listed in the Schedule of Quantities and Prices. This price shall be full compensation for furnishing all labor, materials, tools, equipment, supplies, supervision and incidentals necessary to complete the work of this section as described by the Contract Documents. For Lump Sum, partial payment will be in accordance with the Schedule of Values submitted by the Contractor.

**Bid Item No. 21: Construct 9-inch Portland Cement Concrete (PCC) Bus Pad over 12-inch Crushed Miscellaneous Base (CMB)**

Measurement and payment to construct a 9" bus pad over 12" CMB shall be per the unit price bid per Square Foot (SF). Unit prices shall include excavation, sub-grade preparation, forms, temporary AC pavement, and all other work as required to complete the work. No additional compensation will be allowed.

**Bid Item No. 22: Construct Portland Cement Concrete (PCC) Bus Boarding Islands and Portland Cement Concrete (PCC) Median Cut-Through**

Measurement and payment to Construct PCC Bus Boarding Islands and PCC Median Cut Through shall be per the Square Foot (SF). Unit prices shall include excavation, sub-grade preparation, forms, metal hand railings, restoring form areas, temporary AC

pavement, and all other work as required to complete the work. All proposed curbs are part of the PCC Islands & Median Cut Through quantity. No additional compensation will be allowed.

**Bid Item No. 23: Construct 8-inch Portland Cement Concrete (PCC) Spandrel over 8-inch Crushed Miscellaneous Base (CMB)**

Measurement and payment to construct an 8" PCC Spandrel over 8" CMB shall be per the unit price bid per Square Foot (SF). Unit prices shall include excavation, sub-grade preparation, forms, temporary AC pavement, and all other work as required to complete the work. No additional compensation will be allowed.

**Bid Item No. 24: Furnish and Install Traffic Loops**

Measurement and Payment for "Bid Item No. 24: Furnish and Install Traffic Loops" shall be per the unit price bid per Each (EA) inductive loop detector installed, and shall be considered full compensation for providing all labor, materials, sawcut, epoxy and AC fill, new 2" stub outs (curb termination conduit) as required, home-run connections, tools, equipment, other work, testing detection connectivity, and incidentals to accomplish the work for full signal loop operation in accordance with the Plans, Specifications, pursuant to Caltrans Standard Plans and Specifications, and no additional compensation shall be allowed.

**Bid Item No. 25: Furnish and Install Pedestrian Hybrid Beacon (HAWK Signal) and Bid Item No. 26: Traffic Signal Modification (Fairview/Wilson)**

Measurement and Payment to Furnish and Install "Bid Item No. 25: Furnish and Install Pedestrian Hybrid Beacon (HAWK Signal)" and "Bid Item No. 26: Traffic Signal Modification (Fairview/Wilson)" shall be per the Lump Sum (LS) price and additional compensation shall not be allowed. The Lump Sum price shall include full compensation for furnishing all labor, material, appurtenances, tools, equipment and incidentals, potholing of all new traffic signal pole foundations, and for doing all work involved as specified on the Plans and these Specifications.

**Bid Item No. 27: Furnish and Install Flexible White K-71 Posts**

Measurement and payment for the "Furnish and Install Flexible White K-71 Posts" shall be per the unit price bid per each (EA) and shall include full compensation for all work required to complete the bid item, and the furnishing of all labor, materials, tools and appurtenances necessary to complete all work involved as specified on the plans and specifications and no additional compensation will be allowed, therefore.

**Bid Item No. 28: Furnish and Install Green Preformed Thermoplastic Markings**

Measurement and payment for the "Furnish and Install Green Preformed Thermoplastic Markings" shall be per the unit price bid per square foot and shall include full compensation for all work required to complete the bid item, and the furnishing of all labor, materials, tools and appurtenances necessary to complete all work involved as specified on the plans and specifications and no additional compensation will be allowed, therefore.

**Bid Item No. 29A and 29B: Adjust Orange County Sanitation District (OCSD) Manhole Covers to Grade**

Payment for “Adjust Costa Mesa Sanitation District (OCSD) Manhole Covers to Grade” shall be per the unit price bid per Each (EA) and shall include removal and disposal of existing improvements, adjusting the manhole to grade, and providing all labor, tools, equipment, materials, and incidentals necessary for doing the work in compliance with Orange County Sanitation District (OCSD standards, the Standard Specifications, these Special Provisions, as shown on the Plans, and to the provisions of the City of Costa Mesa Standard Plans, and no additional compensation shall be allowed.

**Bid Item 30: Adjust Costa Mesa Sanitation District (CMSD) Manhole Frame & Cover to Grade**

Full compensation for the requirements of Adjust Manhole Frame & Cover to Grade will be paid for at the **contract unit price bid per EACH (EA)**, and shall include all labor, tools, equipment and materials necessary to complete the work involved in adjusting existing Costa Mesa Sanitary District (CMSD) sanitary sewer manhole frames and covers to new finished grade in conformance with Costa Mesa Sanitary District Standard Drawing No. S-105 and Specifications, as required, including lowering and temporary A.C. ramping, replacing damaged manhole rings and covers as directed by the Engineer, and all incidentals. No additional compensation will be allowed.

**Bid Item No. 31: Adjust Utility and Water Valves to Grade**

Payment for “**Adjust Utility and Water Valves to Grade**” shall be per the unit price bid per each (EA) and shall include removal and disposal of existing improvements, adjusting the water valve to grade, providing all labor, tools, equipment, materials, and incidentals necessary for doing the work in compliance with Mesa Water District (MWD), Irvine Ranch Water District (IRWD), etc., standards, the Standard Specifications for Public Works Construction, as shown on the Plans, and to the provisions of the City of Costa Mesa Standard Plans and no additional compensation will be allowed.

**Bid Item 32: Adjust Storm Drain Manhole Frame & Cover to Grade**

Full compensation for the requirements of Adjust Storm Drain Manhole Frame & Cover to Grade will be paid for at the contract unit price bid per EACH (EA), and shall include all labor, tools, equipment and materials necessary to complete the work involved in adjusting existing storm drain manhole frames and covers to new finished grade in conformance with SPPWC Std. Plan No. 205-3, including temporary A.C. ramping, replacing damaged manhole rings and covers as directed by the Engineer, and all incidentals. No additional compensation will be allowed.



## **PART 2**

### **SECTION 200 - ROCK MATERIALS**

**BID ITEM NO. 4: UNCLASSIFIED EXCAVATION**

**BID ITEM NO. 5: VARIABLE COLD MILL 2"**

**BID ITEM NO. 6: ASPHALT CONCRETE (AC) PAVEMENT**

**BID ITEM NO. 7: ASPHALT RUBBER HOT MIX (ARHM-G) SURFACE COURSE**

**BID ITEM NO. 8: CONSTRUCT CRUSHED MISCELLANEOUS BASE (CMB)**

**BID ITEM NO. 9: CONSTRUCT VARIABLE HEIGHT PCC RETAINING CURB 0" TO 8" OVER 6" CMB**

**BID ITEM NO. 10: CONSTRUCT 8" CURB AND GUTTER OVER 6" CMB**

**BID ITEM NO. 11: CONSTRUCT 4" PCC SIDEWALK OVER 4" CMB**

**BID ITEM NO. 12: CONSTRUCT 4" PCC CURB RAMP OVER 4" CMB INCLUDING "FEDERAL YELLOW" TRUNCATED DOMES**

**BID ITEM NO. 13: CONSTRUCT 6" PCC DRIVE APPROACH OVER 6" CMB**

**BID ITEM NO. 21: CONSTRUCT 9-INCH PORTLAND CEMENT CONCRETE (PCC) BUS PAD OVER 12-INCH CRUSHED MISCELLANEOUS BASE (CMB)**

**BID ITEM NO. 22: CONSTRUCT PORTLAND CEMENT CONCRETE (PCC) BUS BOARDING ISLANDS AND PORTLAND CEMENT CONCRETE (PCC) MEDIAN CUT-THROUGH**

**BID ITEM NO. 23: CONSTRUCT 8-INCH PORTLAND CEMENT CONCRETE (PCC) SPANDREL OVER 8-INCH CRUSHED MISCELLANEOUS BASE (CMB)**

### **200-1 ROCK PRODUCTS**

#### **200-1.2 CRUSHED ROCK AND ROCK DUST**

##### **200-1.2.1 GENERAL** - *Add the following:*

Rock dust blotter shall conform to the requirements of Rock Dust per Table 200-1.2.1(A) of the SSPWC.

### **200-1.5 SAND**

##### **200-1.5.1 GENERAL** - *Add the following to the end of the section:*

Sand bedding and shall conform to the requirements in this Section, and shall consist of washed granular material with a sand equivalent greater than or equal to 30.

Sand for structure backfill material shall have a sand equivalent of not less than 20 conforming to the gradation requirements shown in Table 217-3 of the Standard Specifications, as directed by the Engineer.

### **200-2 UNTREATED BASE MATERIAL**

##### **200-3 GENERAL** - *Add the following:*

Untreated base shall be crushed miscellaneous base, as shown on the plans.

## **200-2 CRUSHED AGGREGATE BASE**

### **200-2.2.1 GENERAL**

Crushed aggregate base shall of the 2021 Edition of the Standard Specifications for Public Works Construction.

Crushed aggregate base for pipe bedding in trenches shall consist entirely of crushed rock and rock dust conforming to the requirements Section 217 of the Standard Specifications and these Special Provisions.

#### **200-2.4.1 GENERAL** - *Add the following:*

Crushed Miscellaneous Base material and construction shall conform to Subsections 200-2.4 and 301-2 of the Standard Specifications, and as directed by the Engineer. Contractor shall install Crushed Miscellaneous Base (CMB) with line and grades to match final subgrade elevations as shown on the plans.

#### **200-2.4.2 GRADING** - *Add the following to the end of the section:*

The sieve size shall be  $\frac{3}{4}$ " (fine).

### **200-2.5 PROCESSED MISCELLANEOUS BASE** - *Add the following:*

#### **200-2.5.3 QUALITY REQUIREMENTS** - *Add the following:*

The minimum R-value requirement will not be waived.

#### **200-2.5.5 TESTING** - *Subsection 200-2.5.5 is hereby added to Section 200 of the Standard Specifications as follows:*

The Contractor shall be required to provide testing of materials for compliance with the requirements for processed miscellaneous base and shall bear all costs for testing of materials for compliance.

**Measurement and Payment for Construct CMB** shall be per the unit price bid per tonnage (Ton) and shall include full compensation for furnishing all labor, materials, tools, equipment, hauling, spreading, compacting, grading, and incidentals for completing all work as required. No additional compensation shall be allowed.

## **SECTION 201 - CONCRETE, MORTAR, AND RELATED MATERIALS**

### **201-1 PORTLAND CEMENT CONCRETE**

#### **201-1.1 REQUIREMENTS**

##### **201-1.1.2 CONCRETE SPECIFIED BY CLASS AND ALTERNATE CLASS** - *Add the following:*

Concrete for curb & gutter shall be Class 560-C-3250.

Concrete standard class specified in the Standard Specifications shall apply for all other concrete materials, including but not limited to sidewalks, local depressions, curb ramps and storm drain structures.

#### **201-1.4 MIXING**

##### **201-1.4.1 GENERAL** - *Add the following to the end of the section:*

Mixed concrete delivered to the site shall be by Transit Mixer as called for in Section 201-1.4.3 "Transit Mixer" of the Standard Specifications.

#### **201-3 EXPANSION JOINT FILLER AND JOINT SEALANTS**

##### **201-3.1 GENERAL**

The Contractor shall furnish and install crack seal, as required by the Engineer on all streets within the project limits. Materials, composition and grading, and mix design shall be in accordance with the requirements of Section 203-3 of the Standard Specifications, except as indicated in these special provisions.

##### **201-3.7 TYPE "D" JOINT SEALANT (HOT – POURED RUBBER-ASPHALT JOINT SEALANT)**

Crack seal material shall be Crafcro Polyflex Type 2 or approved equal.

Immediately prior to crack sealing, the Contractor shall sweep and clean the pavement surfaces of all vegetation, dirt, oil deposits, and other objectionable materials. All pavement cracks wider than 1/8" shall be cleaned using a wand and compressed air. The compressor used shall be a minimum of 90 cfm and equipped with a device to remove moisture from the compressed air. Air cleaning shall be performed immediately before the application of the crack sealant and shall remove all dust, dirt, oil and other foreign matter.

Sealant shall be applied at the recommended pour temperature using either a wand equipped with an applicator disk or a squeegee. The joint shall be filled to the top without the formation of voids. The top of the finish joint shall be between 1/4" and 3/8" below the finish surface.

The Contractor will be responsible for determining the extent of the crack sealing. He shall ensure that sufficient crack sealing is performed to prevent reflective cracking through to the new street surface. Prior to any crack sealing to be performed, the Contractor shall meet with the City's representatives in the field to discuss the extent and adequacy of the work as well as the street surface preparation to receive crack sealant.

#### **201-4 CONCRETE CURING MATERIALS**

**201-4.1.1 GENERAL** - Concrete curing compound shall be Type 1-D.

## **SECTION 203 - BITUMINOUS MATERIALS**

### **203-6 ASPHALT CONCRETE**

#### **203-6.1 GENERAL**

Dense graded asphalt concrete material (DGAC) for Base Course pavement within the roadway shall be Type III-B2-PG-64-10 (3/4" sieve size).

### **203-11 ASPHALT RUBBER HOT MIX (ARHM) WET PROCESS**

**203-11.2 MATERIALS** - *The following is hereby added to Subsection 203-11.2:*

The Asphalt Rubber Hot Mix Surface Course shall be Gap-Graded ARHM-GG-C-PG 64-16 (1/2" sieve size) and at least 2-inches thick

**203-11.2.3. CRUMB RUBBER MODIFIER (CRM)** - *The following is hereby added to Subsection 203-11.2.3:*

Scrap Tire CRM used on this project shall be one hundred percent (100%) California waste tires. ARHM shall use a minimum of 20 pounds of scrap rubber per ton of mix.

**203-11.5.d HAND HELD VISCOMETER TEST** - *The following is hereby added to Subsection 203-11.5.d:*

Contractor shall have available a Haake Viscometer. Contractor shall take viscosity readings at least every hour at the point where asphalt-rubber enters the feed to the ARHM plant. Temperature of readings shall be constant at 375 degrees Fahrenheit. Contractor shall log results including time and temperature, and shall notify the Engineer at the plant 15 minutes prior to each test. Samples shall be taken at a point where the material has not been exposed to material that is not fully isolated from the feed to the ARHM plant during times of production.

Contractor shall prepare a log of weights of asphalt, asphalt modifier, natural rubber, and tire rubber used in each tank of asphalt-rubber produced. The log of weights shall be made available to the Engineer on request.

## PART 3

### CONSTRUCTION METHODS

#### SECTION 300 – EARTHWORK

[Add the following:]

#### **300-0 EARTHWORK IN STATE RIGHT-OF-WAY**

##### **300-0.1 GENERAL**

Unclassified excavation shall conform to all Sections 300-1 "Clearing and Grubbing", 300-2, "Unclassified Excavation" and 300-4 "Unclassified Fill" of the Standard Specifications and shall consist of all unclassified excavation required to construct the new roadway section, parkway, and offsite improvements in conformance with the line and grades set forth on the plans.

**Measurement and payment to Construct 4" PCC Sidewalk over 4" of CMB (Bid Item No. 10), shall be per the unit price bid per square foot (SF) and shall include sub-grade preparation, forms, temporary AC pavement, backfilling behind sidewalk, grading behind sidewalk, restoring form areas and all other work as required to complete the work No additional compensation will be allowed.**

All earthworks performed within the State of California Department of Transportation ("Caltrans") Right-of-Way shall conform to the requirements of Section 19 of the latest edition of the "Standard Specifications and Standard Plans of the State of California, Department of Transportation, Division of Highways" with the appropriate Caltrans, City, and other applicable agency encroachment permits procured.

#### **300-1 CLEARING AND GRUBBING**

##### **300-1.1 GENERAL**

[Add or redefine the following:]

No burning will be permitted.

No accumulation of flammable material shall remain on or adjacent to the right-of-way. The roadway and adjacent areas shall be left with a neat and finished appearance.

In order to protect the public streets from deterioration due to hauling of materials, the Contractor shall submit, prior to the pre-job meeting, for approval a proposed route for hauling of materials for disposal. Upon approval, the Contractor shall strictly adhere to that route, unless written permission from the Engineer is obtained to change the route. Section 300-1, "Clearing and Grubbing," of the Standard Specifications is supplemented by the following:

Contractor shall field verify existing grades and shall accept site as is, for no other grading shall be performed by the CITY.

### **300-1.3 REMOVAL AND DISPOSAL OF MATERIALS**

#### **300-1.3.1 GENERAL**

All materials removed shall be disposed of in a legal manner at an appropriate Disposal Site.

- 300-1.3.2 Requirements

**A. *Bituminous Pavement***

Saw cutting of edges to be joined is required.

**B. *Miscellaneous***

In addition to the work outlined in Section 300-1.1 of the Standard Specifications, the following items of work are included under Clearing & Grubbing unless otherwise covered by specific bid item.

1. Maintaining dust control at all times by watering during the entire time of the project, whether extended or not, including developing a water supply and furnishing and placing all water for all work done in the contract, including water used for extra work.
2. Application of soil sterilant, if applicable, or as directed by the ENGINEER.
3. Protection of utilities, structures, improvements and other facilities within the construction zone, except those specifically shown on the plans to be removed or relocated.
4. Removal and disposal of existing natural and artificial objectionable material within the limits of construction.
5. Verification of existing locations and elevations as shown on the plans or directed by the ENGINEER.
6. Replacement of disturbed traffic signs, street names, mailboxes, property owner signs, fences, landscaping, protection of temporary construction fences and all appurtenances, striping and markings as required to the satisfaction of the ENGINEER. Also, includes the installation of safe pedestrian pathway by installing orange netting or other approved method of safely directing pedestrians through a protected path.
7. This item shall also be interpreted to include the removal or relocation of any additional items in conflict with the proposed work not specifically mentioned herein or covered by specific bid item as directed in the field by the Engineer, which may be found within the work limits whether shown or not shown on the plans to be removed or relocated.
8. All surplus material three (3) inches or smaller shall be uniformly spread and compacted in the street sub grade. No material greater than three (3) inches in any dimension shall be used in the top twelve (12) inches of the sub grade. No nesting of rocks shall be allowed.
9. Unclassified fill shall consist of all fill unless separately designated. Construction of unclassified fill included preparing the area on which fill is to be placed, and the depositing, conditioning, and compaction of fill material.

10. Complete all demolition and removal work associated with the removal of AC, underlying PCC, PCC curb/gutter, as designated on the drawings for removal, unless otherwise defined.
11. Any structural or non-structural demolition work involved for the construction of the project and Contractor shall be responsible for disposing in a legal manner.
12. Determining and maintaining a straight edge in areas where AC joins existing edge of pavement.
13. No burning will be permitted.
14. No accumulation of flammable material shall remain on or adjacent to the right-of-way.

### **300-2 UNCLASSIFIED EXCAVATION**

Unclassified excavation shall include removals of the following materials within the project limits to the required subgrade depth: asphalt concrete, aggregate base, native material, cement/lime treated material; slurry backfill; abandoned foundations or utilities, and other materials which may be encountered within the project limits and are not included in a separate bid item, such as the concrete removal items.

Unclassified excavation shall include the regarding of slopes at a maximum 4:1 slope, except as noted elsewhere on the plans or these specifications.

Excavated and removed materials (including PCC, AC, CMB, CTB, slurry backfill, dirt, ivies, plants, trees, roots, stumps, branches, grass, bricks, fences, woods, etc.) shall be removed from the job site the same day as excavated.

All existing pavement joining new construction shall be sawcut in a straight line. Contractor shall exercise due caution to avoid any damage to the existing utilities and improvements to be protected in-place. Any damage caused by Contractor and/or his equipment shall be repaired or replaced as called out in Section 7-9, "Protection and Restoration of Existing Improvements" of the Standard Specifications at Contractor's expense.

It is the Contractor's responsibility to cover all subsurface exploration as required and submit a complete bid covering the cost for exploration and removals to the grades required.

The Contractor shall protect and support existing improvements not designated to be removed adjoining and adjacent new improvements including walls, fences, brick work, PCC, drainage pipes, structures and other improvements.

If, in the opinion of the Engineer, the existing materials of areas beneath the regular excavation depth are unsuitable, and/or contaminated, the Contractor may be ordered to over-excavate those areas to a depth to be determined by the Engineer. A combination of stabilization fabric crushed miscellaneous base and/or asphalt concrete shall be used to replace materials over-excavated as directed by the Engineer.

The Contractor shall contact Transportation Services at (714) 754-5184 two (2) days prior to any excavation work that would damage traffic signal loops, for adjustments to the

signal timing.

**300-2.1 GENERAL - Add the following:**

Unclassified excavation shall consist of all excavation, including roadways, bituminous pavement, macadam, P.C.C. concrete pavement, aggregate base materials, Petromat or pavement reinforcing fabric, steel or welded wire mesh reinforcement, native materials, abandoned concrete or steel culverts or other utilities, brick, concrete or other miscellaneous pavers, cement or lime treated base materials, and other miscellaneous improvements within the roadway section.

All roots and stumps shall be removed and/or ground to eight (8) inches below subgrade within the roadway section. The locations and dimensions of excavation areas are as shown on the plans and/or directed in the field by the Engineer.

Saw cutting of edges of bituminous pavement or P.C.C. improvements to be joined is required prior to final paving, restorations and repairs, unless otherwise directed by the Engineer.

The asphalt pavement shall be sawcut and removed to clean, straight lines at the designated lines of removal marked in the field or as designated by the Engineer.

Contractor shall exercise due caution to avoid any damage to the existing improvements to be protected in place. Any damage caused by Contractor and/or his equipment shall be repaired or replaced as called out in Section 400 of the Standard Specifications at Contractor's expense.

Saw cuts along removal limits shall be to a minimum depth as shown on plans. All excavated materials shall become the property of the Contractor and shall be disposed of at a suitable and legal disposal site. Arrangements for such disposal sites shall be made by the Contractor and approved by the City's representative, when such areas are within the City right-of-way.

Unclassified excavation shall include the removal of unclassified fill material encountered within the proposed roadway section. Unclassified fill may consist of broken concrete, broken asphalt pavement, brick, rubble, and debris.

All unclassified fill material found within the new roadway section shall be removed and paid in accordance with the bid item #9, as authorized by the Engineer. If the unclassified fill material is encountered within the subgrade preparation area, the removal of said unclassified excavation shall be paid for at the unit price for bid item #9, as authorized by the Engineer.

All removed material becomes the property of the Contractor and shall be hauled away and properly disposed.

**The Contractor's attention is directed to the fact the thickness of the existing asphalt concrete pavement is approximate and may vary from this thickness. In addition, substantially thicker sections of pavement may be occasionally encountered, especially where utility trench, pothole and past localized**



**reconstruction patches are encountered.**

If a significant deviation in pavement thickness is encountered by the contractor during the removal process, that may significantly impact the Contractor's cost of removal, the Contractor shall immediately notify the Engineer. The Engineer will review the field condition(s) encountered and determine the appropriate remediation. The Engineer shall have sole authority to decide the method and amount of additional compensation due the Contractor, if any.

Unless directed by the Engineer, backfilling and compacting is considered included in each respective bid item and no additional compensation will be allowed therefore.

**300-2.1.1 REQUIREMENTS** - *Subsection 300-2.1.1 is hereby added to Section 300 of the Standard Specifications as follows:*

Concrete shall be removed to neatly sawed edges with saw cuts made to a minimum depth of 1-1/2 inches. Concrete pavement shall be removed to neatly sawed straight lines either parallel to the curb or at right angles to the curb face. If the saw cut in concrete pavement fall within 3 feet of a construction joint, expansion joint, or edge, the concrete shall be removed to the joint or edge. Curb and gutter shall be sawed to a depth of 1-1/2 inches on a neat line at right angles to the curb face. All concrete removal shall be sawcut at the required dimension.

**300-2.9 PAYMENT** - *The first sentence of Subsection 300-2.9 of the Standard Specifications is hereby deleted and replaced with the following:*

Full compensation for the requirements of unclassified excavation will be measured and paid for at as depicted in Part 1 of these Special Provisions.

**300-4 UNCLASSIFIED FILL**

**300-4.10 MEASUREMENT AND PAYMENT** - *Subsection 300-4.10 of the Standard Specifications is hereby deleted in its entirety and replaced with the following:*

**SECTION 301 – SUBGRADE PREPARATION, TREATED MATERIALS, AND PLACEMENT OF BASE MATERIALS**

**301-1 SUBGRADE PREPARATION**

**301-1.3 RELATIVE COMPACTION** - *The first paragraph of Subsection 301-1.3 of the Standard Specifications is hereby deleted and replaced with the following:*

When pavement is to be placed directly on subgrade material or when base or subbase material, curb, gutter, alley pavement, driveways, access ramps or sidewalks are to be placed on the subgrade material, the top 6 inches of such subgrade material shall be compacted to a **relative compaction of 95 percent**.

## **301-2 UNTREATED BASE**

### **301-2.4 MEASUREMENT AND PAYMENT**

*Delete the text of this subsection of the Standard Specifications entirely and replace with the following:*

**Payment for Crushed Miscellaneous Base under sidewalks, curb and gutter, curb ramps, driveways, bus pads, cross gutter, convenience strip and other miscellaneous PCC improvements, shall be considered as included in the unit price bid for the various items of work involved, as described in Part 1 of these Special Provisions. No additional compensation will be allowed, therefore.**

## **SECTION 302 – ROADWAY SURFACING**

### **302-5 ASPHALT CONCRETE PAVEMENT**

[Add the following within each Subsection:].

#### **302-5.1 GENERAL**

Asphalt Concrete (AC) shall conform to Standard Specifications for Public Works Construction Section 203-6, with Section 92, "Asphalt" of Caltrans Standard Specifications and Special Provisions, and as modified herein.

- AC base course shall be Type III-B2-PG-64-10 (3/4" sieve size).
- AC leveling course (if applicable) shall be Type III-C3-PG-64-10 (1/2" sieve size) (up to 0.10 foot thick). Unless otherwise directed by the ENGINEER, the finished surface of the new leveling course shall be 0.10-foot-thick measured from the top of milled surface to top of compacted leveling course at the center/crown of roadway.

All areas for reconstruction and leveling shall be marked in the field by the ENGINEER.

The Contractor is not allowed to drive his/her fully loaded trucks on the new asphalt concrete mat.

Contractor shall protect and preserve the entire existing pavement outside construction limits in the same condition as existing. Contractor shall replace and/or repair the damaged area to the satisfaction of the Engineer at no cost to the City.

The Contractor shall remove the existing AC pavement section and the subgrade down to the elevation as depicted on the Plans. All work shall comply with the applicable sections of the Standard Specifications as required.

Sub-grade preparation shall conform to Standard Specifications for Public Works Construction Section 301-1.

Unless otherwise directed by the ENGINEER, the finished surface of the new leveling

course shall be 2-inches thick at the center/crown of roadway, tapering to 0 inches thick approximately one foot from the edge of the gutter lip.

The Contractor shall remove the native subgrade and install and compact the new aggregate base section to the required elevation as specified on the Plans. The aggregate base material shall be  $\frac{3}{4}$ " CMB and conform to Standard Specifications for Public Works Construction Section 200-2.4 "Crushed Miscellaneous Base".

The existing AC pavement shall be saw-cut to full depth to provide a clean, neat, and straight pavement break. Then the joint between the existing pavement and the new pavement shall be sealed. A layer of tack coat shall be applied to all vertical-cut faces and between subsequent HMA lifts.

All excavated material shall be hauled and disposed of by the Contractor in accordance with these Special Provision and Standard Specifications.

The Contractor can elect to bring the entire AC Base Course to the existing finished grade prior to cold milling operations.

Prior to placing asphalt concrete, all existing surfaces shall be cleaned by blowing air, water and/or broom, and the crack seal applied as part of the cold milling operation shall be set and inspected. The surface shall be free of water, dust, and all foreign materials before any tack coat is applied.

The Tack Coat shall be applied to all exposed surfaces.

Unless otherwise directed by the ENGINEER, the finished surface of the new leveling course shall be 2-inches thick at the center/crown of roadway, tapering to 0 inches thick approximately one foot from the edge of the gutter lip.

Finished surface of the new pavement shall be flush with the edge of the gutter, if there is a bike lane or crosswalk with curb ramps (A.D.A. path of travel). The finished surface of the new pavement shall be  $\frac{3}{8}$ " higher than the edge of the gutter for all other conditions.

The Contractor shall be responsible for maintaining location of and access to, all water valves, water line gate valves and manholes during construction.

Contractor shall schedule paving operations to ensure that construction equipment does not drive over new A.C. material.

At least 24 hours of "cool off" time shall occur between A.C. lifts.

Contractor shall protect and preserve the entire existing pavement outside construction limits in the same condition as existing. Contractor shall replace and/or repair the damaged area to the satisfaction of the ENGINEER at no cost to the City.

Unless otherwise noted below, there are no special equipment requirements, the contractor shall comply with all provisions of the latest edition of the Standard Specifications for Public Works Construction.

### **302-5.4 TACK COAT**

Tack coat shall be Grade SS-1h emulsified asphalt applied at a rate of 0.10 gallons per square yard shall be uniformly applied to all exposed surfaces of existing pavement, preceding the placement of asphalt concrete leveling or base course.

Prior to placing asphalt concrete, all existing surfaces shall be cleaned by blowing air, water and/or broom, and the crack seal applied as part of the cold milling operation shall be set and inspected. The surface shall be free of water, dust, and all foreign materials before any tack coat is applied.

The Tack Coat shall be applied to all exposed surfaces.

### **302-5.5 DISTRIBUTION AND SPREADING - *The following is hereby added to this subsection:***

The Contractor shall provide automatic screed control as directed by Engineer. Distribution and spreading shall conform to 302-5.5, except that at the time of placement in the paving machine, the temperature of DGAC shall be 290 degrees Fahrenheit and be high enough that pavement temperature after two passes with the breakdown roller exceeds 240 degrees Fahrenheit.

To avoid picking up loose rock in the paving area, the tires of all trucks must be lightly oiled, with linseed oil or soy bean oil or approved equal. Diesel fuel will not be allowed on the project at all for oil down of any equipment.

Contractor shall maintain a functioning infrared heat measurement device in close proximity to each paving machine at all times. Contractor shall provide a pavement temperature reading, with an infrared heat measurement instrument when requested by the Engineer. Inaccessibility of a heat measurement shall be cause for termination of paving operation.

### **302-5.5.1 SURFACE PREPARATION**

Prior to placing asphalt concrete, all existing surfaces shall be cleaned by blowing air, water and/or broom. All striping and markings shall be removed by grinding or by some other approved method before placing asphalt concrete surface course, and skin patching. The surface shall be free of water, dust, and all foreign materials before any tack coat is applied.

Prior to the application of new AC surface course, the Contractor shall locate and tie-out all manholes and valve covers before commencing work.

Asphalt concrete shall be compacted to achieve at least 95 percent of the relative compaction.

The Contractor is not allowed to drive his/her fully loaded trucks on the new asphalt concrete mat.

### **302-5.6 ROLLING**

Initial or breakdown compaction shall consist of a minimum of three coverages of a layer of asphalt concrete. A pass shall be a movement of a roller in both directions over the same path.

A coverage shall be as many passes as are necessary to cover the entire width being paved. Overlap between passes during any coverage made to insure compaction without displacement of material, in accordance with good rolling practice, shall be considered a part of the coverage being made and not a part of a subsequent coverage.

Each coverage shall be completed before subsequent coverages are started.

Pneumatic rollers shall not be used without prior approval of the Engineer. The top layer of each lane, once commenced, shall be placed without interruption. The Contractor shall roll the newly laid asphalt concrete in such a manner that will not create a joint between two passes; joints shall be flush. If such joint exists, the Contractor shall be required to replace or repair that section as directed by the Engineer at no cost to the City. Six (6) inches of newly laid asphalt concrete to be joined by an adjacent pass shall not be rolled until adjacent pass has been laid.

Subgrade preparation shall conform to Section 301-1 of the Greenbook, and shall be included in the unit price bid for "Asphalt Concrete."

Asphalt concrete shall be placed with a paving machine equipped with a Preco attachment or an approved equal device for use in obtaining constant cross-slope and maximum joint quality.

At all locations where new asphalt concrete pavement is joining or overlaying existing asphalt pavement, the Contractor shall provide straight neat lines and transition the last twenty (20) feet of new pavement to form a smooth transition with the existing pavement.

Contractor shall protect and preserve the entire existing pavement outside construction limits in the same condition as existing. Contractor shall replace and/or repair the damaged area to the satisfaction of the Engineer at no cost to the City.

Rolling along a joint shall be such that the widest part of the roller is on the hot side of the joint.

Rubber tire rollers shall be used on any asphalt concrete leveling course.

Roller drum wheels shall be filled per manufacturer's recommendations.

### **302-5.7 JOINTS - *The following is hereby added to this subsection:***

Join lines between successive runs shall be within 6 inches of lane lines or a minimum of 12 feet outside of the outer most lane line.

### **302-5.8 MANHOLES - *The following is hereby added to this subsection:***

Asphalt-Rubber Hot Mix (ARHM) shall be used as final cap around adjusted manholes and valves.

**302-5.10 Crack Repair.** The following is hereby added to this subsection (if applicable):

After completion of the cold milling operations, cracks ¼ inch and greater shall be cleaned for the entire crack depth using sandblasting, brushing, and air blowing techniques as required to provide a crack free from all debris, dust, loose material and moisture. Gouging or plowing may be required to remove incompressible debris deep in the crack. The cleaned crack shall be filled with granulated tire rubber, plasticizer and filler, as manufactured by Crafcro as Road Saver 211, or approved equal. All crack filler material shall be in conformance with the following specifications. The crack sealant placed shall be slightly below the pavement surface to avoid over-application and minimize bumps and wicking through the AC surface during compaction. Deep cracks should be filled with sand and covered with a thin layer of sealant.

All holes shall be cleaned of loose materials and filled with Asphalt Concrete Type B PG 70-10 RAP (Max. 10% RAP) and compacted to a smooth even surface with the adjacent existing pavement.

## **302-9 ASPHALT RUBBER HOT MIX (ARHM)**

### **302-9.1 GENERAL**

[Add the following:].

Asphalt Rubberized Hot Mix (ARHM) shall conform to Section 203-11 of the Standard Specifications and as modified herein.

- The Asphalt Rubber Hot Mix Surface Course shall be Gap-Graded ARHM-GG-C-PG 64-16 (1/2" sieve size) and at least 0.15 foot thick

All PCC surfaces, to be crossed by trucks used to haul ARHM, that are within 500 feet of the work limits shall be covered with sand or other durable covering prior to applying tack coat.

Contractor shall have sufficient power brooms on site during all periods of distribution and spreading to provide for cleanup of haul routes and work areas. Power broom shall provide miscellaneous cleanup of ARHM spoils as directed by the Engineer.

All raised pavement markers shall be removed prior to the placement of any asphalt concrete overlay.

Power brooms used ahead of paving operations after acceptance of cold milling shall only sweep areas that are accepted as completed for cold milling. Power brooms shall not be operated more than 80 percent full of sweepings. Power brooms that have swept areas not accepted as completed for cold milling shall not enter onto areas that are accepted as completed for cold milling.

Finished surface of the new pavement shall be flush with the edge of the gutter for entire project area.

Contractor shall schedule paving operations to ensure that construction equipment does not drive over new AC material.

The Contractor is not allowed to drive his/her fully loaded trucks on the new ARHM mat.

Contractor shall protect and preserve the entire existing pavement outside construction limits in the same condition as existing. Contractor shall replace and/or repair the damaged area to the satisfaction of the ENGINEER at no cost to the City.

Unless otherwise specified herein, there are no special equipment requirements to perform the work and the contractor shall comply with all equipment specifications of the Standard Specifications.

**302-9.2 Tack Coat.** *The first sentence in subsection 302-5.4 of the Standard Specifications is hereby deleted and replaced with the following:*

Tack coat shall be Grade SS-1h emulsified asphalt applied at a rate of 0.10 gallons per square yard shall be uniformly applied to all exposed surfaces of existing pavement, preceding the placement of ARHM surface course.

Prior to placing the ARHM surface course, all receiving surfaces shall be cleaned by blowing air, water and/or broom. The surface shall be free of water, dust, and all foreign materials before any tack coat is applied.

The Tack Coat shall be applied to all exposed surfaces.

### **302-9.3 DISTRIBUTION AND SPREADING**

Distribution and spreading shall conform to 302-5.5, except that at the time of placement in the paving machine, the temperature of ARHM-GG shall be 290 degrees Fahrenheit and be high enough that pavement temperature after two passes with the breakdown roller exceeds 240 degrees Fahrenheit.

To avoid picking up loose rock in the overlay area, the tires of all trucks must be lightly oiled, with linseed oil or soy bean oil or approved equal. Diesel fuel will not be allowed on the project at all for oil down of any equipment.

Contractor shall maintain a functioning infrared heat measurement device in close proximity to each paving machine at all times. Contractor shall provide a pavement temperature reading, with an infrared heat measurement instrument, when requested by the Engineer. **Inaccessibility of a heat measurement shall be cause for termination of paving operation.**

At least 24 hours of "cool off" time shall occur between A.C. lifts.

All temporary striping and markings shall be removed by grinding or by some other approved method before placing asphalt concrete surface course, and skin patching.

Asphalt concrete shall be placed with a paving machine equipped with a Preco attachment or similar device for use in obtaining constant cross-slope and maximum joint quality.

**302-9.4 ROLLING** - *The second sentence of Subsection 302-9.4 is hereby deleted and replaced with the following:*

Two complete passes with the breakdown roller shall be provided. Initial breakdown rolling shall be performed close enough to the paving machine and at a pavement temperature high enough such that the pavement temperature after two passes exceeds 240 degrees Fahrenheit.

To ensure optimum quality control, the use of more than one paver must be approved in advance by the Engineer, and will generally require one foreman, one sweeper, and a full complement of rollers per Subsection 302-5.6 of the Standard Specifications, and this Subsection 302-9.5 for each paving machine. An extra breakdown roller shall be on site at all times, free of defects.

A vibratory roller shall be used for initial breakdown rolling. The vibratory roller for initial breakdown rolling and all other rollers shall have an adjustable range of vibration set at low vibration.

Intermediate rolling shall be provided such that a total of six passes are performed before pavement temperature drops below 200 degrees Fahrenheit.  
A finish roller shall be provided in addition to intermediate rolling.

Initial or breakdown compaction shall consist of a minimum of three coverages of a layer of asphalt concrete. A pass shall be a movement of a roller in both directions over the same path.

A coverage shall be as many passes as are necessary to cover the entire width being paved. Overlap between passes during any coverage made to insure compaction without displacement of material, in accordance with good rolling practice, shall be considered a part of the coverage being made and not a part of a subsequent coverage.

Each coverage shall be completed before subsequent coverages are started.

The top layer of each lane, once commenced, shall be placed without interruption. The Contractor shall roll the newly laid asphalt concrete in such a manner that will not create a joint between two passes; joints shall be flush. If such joint exists, the Contractor shall be required to replace or repair that section as directed by the Engineer at no cost to the City. Six (6) inches of newly laid asphalt concrete to be joined by an adjacent pass shall not be rolled until adjacent pass has been laid.

Pneumatic rollers **shall not be used** without prior approval of the ENGINEER.



### **302-9.6 MANHOLES (AND OTHER STRUCTURES)** [Add the following:]

The Contractor shall be responsible for maintaining location of and access to, all water valves, water line gate valves and manholes during construction.

Prior to the application of new AC surface course, the Contractor shall locate and tie-out all manholes and valve covers before commencing work and comply with these Special Provisions.

The Contractor is directed to Section 403 within these Special Provisions with respect to raising, adjusting or reconstructing utilities to grade.

**302-9.7 Rock Dust Blotter.** *Subsection 302-9.7 of the Standard Specifications is hereby deleted and replaced with the following:*

Rock dust blotter material shall be required immediately after the completions of the “finish rolling” and prior to opening to traffic to prevent bleeding and tracking of the asphalt rubber material.

Lack of uniformity of application of rock dust shall be cause to terminate paving operations.

Rock dust blotter conforming to 200-1.2 shall be uniformly applied using a mechanical spreader at a rate of 3 pounds per square yard regardless of the pavement temperature, to prevent tracking of the ARHM.

24 hours after paving, the Contractor shall hand sweep all sidewalks, driveways, curbs, gutters, and access ramps; and shall mechanically sweep all roadway surfaces. The mechanical sweeper shall be self-propelled mobile sweeper. Payment for the sweeping shall be included in the lump-sum price bid for SWPPP and no additional compensation will be allowed therefore.

### **302-9.5 JOINTS**

At all locations where new asphalt concrete pavement is joining or overlaying existing asphalt pavement, the Contractor shall provide straight neat lines and transition the last twenty (20) feet of new pavement to form a smooth transition with the existing pavement.

## **SECTION 303 – CONCRETE AND MASONRY CONSTRUCTION**

### **303-5 CONCRETE CURBS, WALKS, GUTTERS, CROSS GUTTERS, ALLEY INTERSECTIONS, ACCESS RAMPS, AND DRIVEWAYS**

#### **303-5.1 REQUIREMENTS**

##### **303-5.1.1 GENERAL**

[Replace the entire Subsection with the following:].

Concrete curbs, walks, gutters, spandrels, cross gutters, alley intersections, access ramps, and driveways shall be constructed of Portland cement concrete and comply with Section 201-1 of the Standard Specifications. The following class of concrete shall be used per each type of improvement:

- Curb and Gutter, Spandrels, Cross Gutters, Alley Intersections, Sidewalks, Access Ramps and Driveways, etc. – **560-C-3250**.

The following AC type and Crushed Miscellaneous Base (CMB) shall be used with respect to each type of improvement:

- Asphalt Concrete Base Course shall conform to Section 302-5 of these Special Provisions.
- Crushed Miscellaneous Base (CMB) shall be  $\frac{3}{4}$ " fine and comply with Section 200-2.4 of the Standard Specifications.
- AC Sidewalk – Surface Course (Type III-C3-PG64-10 ( $\frac{1}{2}$ " sieve size)) in conformance with Section 203-6 of the Standard Specifications.

Curing compound shall be applied in accordance with the provisions of the GREENBOOK.

### **CITY Standard Drawings**

The following CITY Standard Drawings shall apply or per the direction of the ENGINEER:

- Curb and Gutter shall conform to Nos. 312 and 314.
- Concrete Sidewalk shall conform to Nos. 411, 412, and 413, (and 414 where necessary). 4" Min PCC/4" CMB.
- Driveways shall conform to Nos. 313, 513, and 514.
- Cross-gutters shall conform to No. 415 or per Standard Plan No. 122-2 or 123-2 in the "Standard Plans for Public Works Construction," also known as the A.P.W.A. Standard Plans.

### **Caltrans Standard Plans**

The following Caltrans Standard Plans shall apply:

- Americans with Disabilities Act (ADA) Access Ramps - Construction shall conform to Caltrans Standard Drawing No. A88A adjusted to meet the latest ADA regulations and requirements. The width of the wheel chair access ramp "W" shall be a minimum of five (5') foot wide.

#### **303-5.1.1 a) ADA ACCESS RAMPS**

The Contractor shall inspect the location of the Access Ramps to be re-constructed prior to beginning the work to determine the appropriate Caltrans Standard Plan Ramp Case to be constructed. If the work entails removing and replacement of existing concrete

sidewalk outside the ramp work limit area as identified in these Specifications or as shown on the Plans, he/she shall notify the ENGINEER prior to initiating the work.

The Contractor shall construct all necessary variable height-retaining curb at the back of the curb ramp as well as other retaining curb, if required, pursuant to the appropriate Caltrans Standard Plan ADA Ramp Case as determined by the Contractor and accepted by the ENGINEER. The Contractor shall relocate all street signs effected by the ramp construction to a condition equal to or better than existing.

The detectable warning surface shall be Armor-Tile replaceable truncated domes or approved equal. Contractor shall submit a sample of the detectable warning surface to the ENGINEER for approval, prior to the start of construction. The color shall be **yellow**. The truncated dome mat shall be installed across the entire width of the bottom of the access ramp and shall be installed per the manufacturer's installation recommendations, or as directed by the ENGINEER.

The Contractor shall ensure safe passage by pedestrians during the ADA ramp construction and afford one safe crossing of the street at all times. The Contractor shall set-up all required signage and barricades within the work zone to provide safe pedestrian passage.

#### AC Tie-in

The Contractor shall saw cut, remove, and reconstruct a minimum of a two (2) foot width (slot patch) of adjoining structural section of the pavement to the limits of the ADA Ramp construction (BCR joint to ECR joint). The AC structural section to be replaced shall be 8" AC Base Course/8" CMB or 12" full depth AC Base Course with compaction as required by the Standard Specifications.

If there is an asphalt concrete adjoining sidewalk to be reconstructed to tie into the new concrete ramp, a one-foot (1') adjoining pavement section shall be removed and replaced with a structural section of 4" AC Surface Course/4" CMB.

#### Curb and Gutter

The Contractor shall sawcut and remove existing curb and gutter, and construct either Type "C-6" curb and gutter or "C-8" curb and gutter pursuant to the existing curb and gutter condition conforming to the CITY Standard Drawing No. 312, rolled curb and gutter and/or modified curb and gutter at locations marked in the field by the ENGINEER or as designed on the Plans.

SPECIAL NOTE: In order to comply with ADA requirements cross slope of gutter plate and AC at wheelchair ramp locations shall not exceed 5% grade in the gutter pan.

SPECIAL NOTE: Curing compound shall be applied in accordance with the provisions of the GREENBOOK.

Removal of the Concrete Curb and Gutter and AC shall conform to Section 401 "Removal" of the Standard Specifications.

#### Existing Landscape Areas

All existing landscaping/irrigation/backfill removed, as part of the access ramp construction shall be replaced in-kind and made a part of the work in conformance with these Special Provisions and Standard Specifications at no additional cost to the CITY.

#### Other Existing Facilities and Obstructions (e.g., Bus Pads)

The Contractor shall protect all existing improvements within the work area not designated to be removed in-place and intact and shall replace any existing improvements damaged by his/her operations at no additional cost to the CITY.

The Contractor shall locate and protect the traffic signal home-run within the slot patch and ramp area and coordinate with the City with respect to the signal loop replacement work as shown on the plans or as required. If the Contractor damages the existing signal loop conductor/conduit or other wiring to the signal pull box, all damage to said existing improvements shall be repaired/replaced to an in-kind condition pursuant to the required specifications and the system shall be restored for full operation at no cost to the City.

The Contractor shall mark, protect, adjust, and re-set all utility boxes/vaults within the reconstructed area. Additionally, the Contractor shall replace any existing marked, labeled or stamped concrete on the face of curb of existing utilities, which include, but not limited, to water, sewer, gas, etc.

#### **303-5.1.1 b) CURB AND GUTTER**

Per CITY Standards, weakened plane joints are required every ten feet (10') and felt paper every forty feet (40'). Transitional curb and gutter shall be ten feet (10') from one type to the other. No construction joints will be permitted.

#### **303-5.1.1 c) CONCRETE SIDEWALK**

The Contractor shall reconstruct existing concrete sidewalk and/or construct new concrete sidewalk around obstructions, meandering sidewalk, and other miscellaneous concrete construction conforming to these Special Provisions and as shown on the Plans. The Contractor may be directed to reconstruct concrete walkways within private properties in order to join new improvements. Prior to initiating the work outside the City rights-of-way, the City will obtain the necessary right of access documents from the private property owner.

If there is an asphalt concrete adjoining sidewalk to be reconstructed to tie into the new concrete sidewalk, a one-foot (1') adjoining pavement section shall be removed and replaced with a structural section of 4" AC Surface Course/4" CMB.

The Contractor shall inspect the location of the concrete sidewalk work area to be re-constructed prior to beginning the work. If the work entails removing and replacement of existing concrete sidewalk outside the work limit area as depicted within these Specifications or as shown on the Plans, he/she shall notify the ENGINEER prior to initiating the work.

#### Existing Landscape Areas

All existing landscaping/irrigation/backfill removed as part of the concrete walkway construction shall be replaced in-kind and made a part of the work in conformance with these Special Provisions, Standard Specifications, and as directed by the ENGINEER at no additional cost to the CITY.

The Contractor shall place new sod or seed and top soil to match the existing grass species in the areas adjoining the newly constructed concrete improvements that were disturbed by his/her operations. The Contractor may be directed by the ENGINEER to sod or seed other areas as necessary in conformance with these Specifications.

Top Soil shall be Modified Class "A" Topsoil and shall consist of 80% content of Class "A" Topsoil per the Standard Specifications and 20% content of processed wood product of type "I" organic soil amendment per the Standard Specifications.

The Contractor shall protect all existing improvements within the work area not designated to be removed in-place and intact and shall replace any existing improvements damaged by his/her operations. Any damage beyond the construction limit shall be repaired at the Contractor's expense per Section 400-1 of the Standard Specifications.

The Contractor shall protect and support existing irrigation lines and sprinkler heads in place and intact. The Contractor shall adjust the heads to the proper level upon completion of the new sidewalk replacement.

The Contractor shall furnish and install all new pipe sizes to match existing, but no less than ½" schedule 40, PVC pipe, to tie into existing pipes. New sprinkler heads shall be equal to or better than existing inclusive of all appurtenances. All work shall conform to the applicable sections of the Standard Specifications and as directed by the ENGINEER.

The Contractor may salvage and reuse sprinkler heads that are still in reusable and functional condition for use at locations from which they were removed.

The Contractor shall cut interfering portions of existing irrigation lines and cap all ends for future reconnection at the time that the work is started at each location. All repair and replacement of the irrigation system shall be done within five (5) days or sooner after disconnection. During disconnection period of existing irrigation systems, the Contractor shall maintain the existing grass, trees, shrubs, and other existing landscape in a live condition with a temporary irrigation system and/or shall water the landscaped areas by hand. Homeowner's water supply shall not be used without written consent from each homeowner.

The Contractor shall modify, relocate or replace and/or extend all encountered irrigation lines or sprinkler heads so as to give full coverage to landscape area.

The Contractor may be directed to extend the existing sprinkler system or place a P.V.C. sleeve under the new sidewalk improvements into the landscaped area between the curb and sidewalk and other locations as necessary as determined in the field by the ENGINEER.

Prior to accepting work, the Contractor must turn the system on, and it must work properly in the presence of and to the satisfaction of the Engineer and property owner. The Contractor shall replace any damaged and dead grass or landscaping beyond construction limits resulting from Contractor's operation or insufficient water supplies at no cost to the CITY.

#### Other Existing Facilities and Obstructions

Contractor shall adjust to grade existing water meter boxes (WM) to the new grade of the sidewalk. The water meter and water line shall be protected in place. Broken water meter boxes shall be removed and replaced by the Contractor, contact Mesa Water District to obtain and pickup new WM box. WM box shall be furnished to the Contractor at no cost.

The Contractor shall protect in-place the existing mail boxes or relocate them if they do not meet U.S. Post Office standards (see the Standard Plans section, if applicable). The Contractor shall provide a new post in case the existing one cannot be saved as determined by the ENGINEER in the field.

The Contractor shall relocate any street signs, which interfere, or conflict with construction of the sidewalk. A minimum 4-foot wide path of travel shall be required.

Sidewalk obstruction flare construction shall be per City Standard Drawing No. 413 or as shown on the Plans or as depicted within these Specifications.

At certain addresses, the Contractor will be directed to remove concrete and/or other improvements in the right-of-way. Upon the completion of the removal of existing concrete improvements within the parkway, including the underlying aggregate base for which no replacement is required, the Contractor shall backfill the void with Modified Class "A" Topsoil for placing new sod or seed as directed in those respective bid items.

#### **303-5.1.1 d) CONCRETE CROSS-GUTTER**

Contractor shall sawcut and remove existing improvements and reconstruct cross-gutter conforming to City of Costa Mesa Standard Drawing No. 415 or per Standard Plan No. 122-2 or 123-2 in the "Standard Plans for Public Works Construction," also known as the A.P.W.A. Standard Plans, and applicable sections of the Standard Specifications, as directed by the ENGINEER.

Eight (8) inches of Crushed Miscellaneous Base (CMB) shall be required under all new cross gutters.

Concrete shall be class 560-C-3250. (High early strength concrete mix)

Crushed Miscellaneous base material and construction shall conform to Subsections 200 and 301 of the The "Greenbook," and as directed by the Engineer. The sieve size shall be  $\frac{3}{4}$ " (fine).

New improvements shall be constructed to grades as indicated on the plans to provide a proper flow line with the existing improvements as indicated on the plans.

### **303-5.1.1 e) CONCRETE DRIVEWAY APPROACH**

Contractor shall sawcut and remove existing improvements and construct P.C.C. Driveway Approach per City of Costa Mesa Standard Drawing Nos. 313, 513, and 514 and also to Standard Plan No. 110-2, Type "B" in the "Standard Plans for Public Works Construction," also known as the A.P.W.A. Standard Plans. All work shall conform to the applicable portions of Section 303-5 of the Standard Specifications. Six (6) inches of Crushed Miscellaneous Base (CMB) shall be required under all new driveways.

The Contractor shall adjust all existing utility boxes and conduit, or water meter boxes within the new driveway approach, to its new finished grade, and the adjustment shall be included in the bid price per square foot of Residential Driveway or Commercial Driveway. Removals and/or relocations necessary for driveway construction are to be paid as part of this bid item, except where a separate bid item exists for a stated removal or relocation item of work.

Concrete shall be class 560-C-3250.

Crushed Miscellaneous base material and construction shall conform to Subsections 200 and 301 of the The "Greenbook," and as directed by the ENGINEER. The sieve size shall be  $\frac{3}{4}$ " (fine).

If there is existing asphalt concrete adjoining into the new concrete driveway approach, a one-foot (1') adjoining pavement section shall be removed and replaced with a structural section of 6" AC Surface Course/6" CMB.

Asphalt concrete for slot paving shall be  $\frac{3}{4}$ " for base course and  $\frac{1}{2}$ " for surface course, which is covered in Section 400-4 of Standard Specifications (latest edition).

Soils and aggregate tests shall conform to State of California test methods which may be substituted for designated ASTM test methods as noted herein. Laboratory maximum density tests shall be per Method 2 of Subsection 211-2.1. The correction for oversize materials as stated in Test Method No. California 216 shall be replaced with Note 2 of ASTM D1557.

New improvements shall be constructed to grades as indicated on the plans to match existing improvements and field condition with proper grade to form a safe and smooth riding surface.

**It will be the responsibility of the Contractor to complete all initiated repairs by the end of the Friday of each working week unless specified otherwise by the City Engineer.**

### **303-5.7 Repairs and Replacements.**

All work which is defective in its construction or deficient in any of the requirements of these Special Provisions shall be remedied, or removed and replaced by the Contractor in a manner acceptable to the City and no compensation will be allowed for such correction.

The minimum length for removal and replacement of unsatisfactory work shall be score line to score line for sidewalk. Sawcutting is required for all removals of defective concrete work at no additional cost.

Upon failure on the part of the Contractor to comply forthwith with any order the City makes under the provisions of this Section, the City shall have authority to cause defective work to be removed and replaced and deduct the costs thereof from any monies due or to become due the Contractor.

### **303.5-8 Backfilling and Cleanup.**

The construction of any improvement in place shall mean that in addition to the requirements under Section 303-5.8 of the Standard Specifications relating to "Backfilling and Clean up," the Contractor shall be responsible for backfilling the area excavated for the purpose of setting forms. Said backfill shall be considered part of the bid price for the various contract items of work, and no further compensation shall be paid therefore. Said backfill shall be done immediately following the removal of forms.

If no new construction is to be placed in the location where concrete has been removed, then the area shall be backfilled and graded to match existing grade.

During all phases of construction, the Contractor shall maintain a clean work site. The contractor shall be responsible for the removal and disposal of all concrete, asphalt, tree roots, and any other debris resulting from the work performed. Full compensation shall be considered as included in the prices for the various items.

### **Bid Item No. 4: Unclassified Excavation**

Unclassified excavation shall conform to all Sections 300-1 "Clearing and Grubbing", 300-2, "Unclassified Excavation" and 300-4 "Unclassified Fill" of the Standard Specifications and shall consist of all unclassified excavation required to construct the new roadway section, parkway, and offsite improvements in conformance with the line and grades set forth on the plans.

Unclassified excavation shall include removals of the following materials within the project limits to the required subgrade depth: asphalt concrete, aggregate base, native material, cement/lime treated material; slurry backfill; abandoned foundations or utilities, and other materials which may be encountered within the project limits and are not included in a separate bid item, such as the concrete removal items.

Unclassified excavation shall include the regarding of slopes at a maximum 4:1 slope, except as noted elsewhere on the plans or these specifications.



Excavated and removed materials (including PCC, AC, CMB, CTB, slurry backfill, dirt, ivies, plants, trees, roots, stumps, branches, grass, bricks, fences, woods, etc.) shall be removed from the job site the same day as excavated.

All existing pavement joining new construction shall be sawcut in a straight line. Contractor shall exercise due caution to avoid any damage to the existing utilities and improvements to be protected in-place. Any damage caused by Contractor and/or his equipment shall be repaired or replaced as called out in Section 7-9, "Protection and Restoration of Existing Improvements" of the Standard Specifications at Contractor's expense.

It is the Contractor's responsibility to cover all subsurface exploration as required and submit a complete bid covering the cost for exploration and removals to the grades required.

The Contractor shall protect and support existing improvements not designated to be removed adjoining and adjacent new improvements including walls, fences, brick work, PCC, drainage pipes, structures and other improvements.

If, in the opinion of the Engineer, the existing materials of areas beneath the regular excavation depth are unsuitable, and/or contaminated, the Contractor may be ordered to over-excavate those areas to a depth to be determined by the Engineer. A combination of stabilization fabric crushed miscellaneous base and/or asphalt concrete shall be used to replace materials over-excavated as directed by the Engineer.

The Contractor shall contact Transportation Services at (714) 754-5184 two (2) days prior to any excavation work that would damage traffic signal loops, for adjustments to the signal timing.

Measurement and Payment for all the preceding shall be at the unit price bid per cubic yard (CY) price. This item includes all sawcut, removal and disposal of PCC, AC, aggregate base, and native soil including Petromat/pavement reinforcing fabric, macadam, abandoned concrete and/or steel culverts, unsuitable materials, irrigation improvements, plants, root pruning, removal of existing base material and other unclassified excavation necessary to establish the finished subgrade elevations for the improvements, as detailed in the plans. The unit price bid shall include subgrade preparation and compaction; including all labor, tools, material, equipment and incidentals required to complete the work. No further compensation will be allowed. The Unclassified Excavation bid items are a Final Pay quantity and no additional compensation will be allowed. Payment for any over-excavation shall be per Section 3-3 "Extra Work" as modified by the General Provisions.

#### **Bid Item No. 5: Variable Cold Mill 2"**

The type of pavement and depth to be cold milled shall be as shown on the Plans or specified in the Special Provisions. The pavement might contain fabric or steel reinforcement within the depth to be cold milled. The surface after cold milling shall be

uniformly grooved or ridged. The outside lines of the milled pavement shall be neat and uniform.

The Contractor shall remove existing asphalt concrete overlay or slurry seal material within one foot of the edge of concrete gutters adjacent to any area to be cold milled. The removal procedure and equipment to be used shall be approved by the Engineer.

The milled pavement shall be true to grade and cross section. When the straightedge specified in 302-5.6.2 is laid on the finished surface parallel to the centerline of the roadway, the surface shall not vary from the edge of the straightedge more than 3/8 inch (10 mm) at any point, except at intersections or at changes of grade. Any areas that are not within tolerance shall be brought to grade within one Working Day following initial cold milling.

Cold milling operations shall be performed without damage to the remaining pavement. Whenever cold milling is adjacent to existing concrete curbs, gutters or pavement, the Contractor shall protect these improvements from damage. Concrete curbs, gutters or pavement damaged during cold milling operations shall be repaired as directed by the Engineer. Replaced sections of concrete curb, gutter or pavement shall be a minimum of 5 feet (1.5 m) in length or to the next joint.

**The contractor shall ensure that any cold-milled street is paved within 48 hours of milling. The contractor is solely responsible for implementing all necessary dust mitigation measures. Any claims arising from dust-related issues shall be the sole responsibility of the contractor, who shall defend, indemnify, and hold the City harmless from any such claims, liabilities, or damages.**

Milling machines shall be specifically designed and constructed for cold milling of asphalt concrete, concrete, or composite pavement.

Milling machines shall conform to the following:

- a) The cutting drum shall be a minimum of 60 inches (1500 mm) wide, except for those mounted on a skid-steer loader, and shall be equipped with carbide-tipped cutting teeth placed in a variable pattern to produce the desired finish.
- b) Be self-propelled and capable of removing the pavement to the depth shown on the Plans.
- c) Be equipped with a conveyor system that will immediately convey the milled material into a transport vehicle for disposal as specified in the Special Provisions.
- d) Be capable of spraying water at the cutting drum to minimize dust.
- e) Be designed so that the operator can observe the milling operation, at all times, without leaving the controls.
- f) Be adjustable for slope and depth.
- g) Be capable of milling, in one pass, to the maximum depth recommended by the manufacturer without producing fumes or smoke.

Milling machines used for milling to specified elevation shall conform to 404-2.1 and the following:

- a) Be equipped with automatic grade controls that reference the existing pavement elevations or independent grade references.

Milling machines used for profile milling shall conform to 404-2.1 and the following:

- a) Be equipped with a minimum 20-foot (6 m) paving ski with spring loaded feet attached to the bottom at not more than 18-inch (0.5 m) increments. The upper portion of the ski shall be one piece and manufactured such that the ski does not flex or bend by more than 3/16 inch (5 mm) when supported off of the surface of the pavement by an attachment located at the ski's longitudinal center of gravity. The grade control system of the milling machine shall be referenced to the center of the ski.

Profile milling is the controlled removal of a portion of the existing pavement to a nominal depth using longitudinal grade controls to remove surface irregularities in the pavement and improve ride ability. The grade shall be as shown on the Plans. During profile milling operations, the center of the ski shall be on a line coincident with the transverse centerline of the milling machine's cutting drum. A ski shall be attached to each side of the milling machine cutting drum during the first pass, and on one side of the milling machine on subsequent, adjacent passes with a joint matching grade control on the other side. The resultant milled surface shall not deviate from the grade shown on the Plans, using the straightedge specified in 302-5.6.2, by more than 1/4 inch (6 mm) at any point.

Work site maintenance shall conform to 3-12. A motorized street sweeper shall follow within 50 feet (15 m) of the cold milling machine unless otherwise approved by the Engineer.

Unless otherwise specified, millings shall be considered the property of the Contractor and shall be disposed of off the Work site by the Contractor.

Structures and vertical joints within the cold-milled areas that are transverse to through traffic shall be ramped in conformance with 302-5.7 and 306-1.5.1 temporary asphalt concrete as shown on the Plans or specified in the Special Provisions. Ramps shall be constructed the same day as the existing pavement is cold milled and removed prior to placement of the permanent paving pavement.

Measurement and Payment for the requirements of Variable Cold Mill 2" shall be at the contract unit price bid per Square Foot (SF) and will be based on the actual area of surface planed regardless of the number of passes required. The contract price paid per square yard shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in cold milling the existing A.C., P.C.C., pavement reinforcing fabric/Petromat, macadam, or other miscellaneous improvements, removal of old AC/slurry lip overage from gutter pan, and disposing of material removed, per Typical Sections and Details shown on Plans, , as specified in these special provisions and as directed by the Engineer. **The quantity to be paid for will be the actual area of surface cold planed, irrespective of number for passes required to obtain the depth shown on the plans** No additional compensation will be allowed, therefore.

#### **Bid Item No. 6: AC Pavement**

Asphalt Concrete (AC) shall conform to Standard Specifications for Public Works

Construction Section 203-6, with Section 92, "Asphalt" of Caltrans Standard Specifications and Special Provisions, and as modified herein.

- AC base course shall be Type III-B2-PG-64-10 (3/4" sieve size).

All areas for reconstruction and leveling shall be marked in the field by the ENGINEER. The Contractor is not allowed to drive his/her fully loaded trucks on the new asphalt concrete mat.

Contractor shall protect and preserve the entire existing pavement outside construction limits in the same condition as existing. Contractor shall replace and/or repair the damaged area to the satisfaction of the Engineer at no cost to the City.

The Contractor shall remove the existing AC pavement section and the subgrade down to the elevation as depicted on the Plans and as directed and authorized by the Engineer. All work shall comply with the applicable sections of the Standard Specifications as required.

Sub-grade preparation shall conform to Standard Specifications for Public Works Construction Section 301-1.

The Contractor shall remove the native subgrade and install and compact (95% Relative Compaction) the new aggregate base section to the required elevation as specified on the Plans. The aggregate base material shall be 3/4" CMB and conform to Standard Specifications for Public Works Construction Section 200-2.4 "Crushed Miscellaneous Base".

The existing AC pavement shall be saw-cut to full depth to provide a clean, neat, and straight pavement break. Then the joint between the existing pavement and the new pavement shall be sealed. A layer of tack coat shall be applied to all vertical-cut faces and between subsequent HMA lifts.

All excavated material shall be hauled and disposed of by the Contractor in accordance with these Special Provision and Standard Specifications.

The Contractor can elect to bring the entire AC Base Course to the existing finished grade prior to cold milling operations.

Prior to placing asphalt concrete, all existing surfaces shall be cleaned by blowing air, water and/or broom, and the crack seal applied as part of the cold milling operation shall be set and inspected. The surface shall be free of water, dust, and all foreign materials before any tack coat is applied.

The Tack Coat shall be applied to all exposed surfaces.

Measurement and Payment to construct "AC Pavement" shall be made at the unit price bid per tonnage (Ton). The unit price bid shall include subgrade preparation, surface preparation, AC Type Specified herein inclusive of the added AC depth to meet existing

grade before cold milling operations, tack coat, temporary AC tapers, and all labor, material, saw cutting, transitioning, hauling, spreading, compacting, grading, equipment, pavement reinforcing fabric (Petromat), abandoned concrete and/or steel culverts, unsuitable materials, irrigation improvements, plants, root pruning, removal of existing base material and other unclassified excavation necessary to establish the finished subgrade elevations for the roadway improvements, as directed by the Engineer, and incidentals required to complete the Work in accordance with these Specifications, as shown on the Plans, and no further compensation will be allowed. **This item may or may not be used, and shall not be subject to the SSPWC 25% limitation on quantity changes.** No further compensation will be allowed.

Temporary asphalt concrete work where required by the ENGINEER for traffic control or other purposes shall be considered included in the price bid for the various items of work and no further compensation will be allowed.

#### **Bid Item No. 7: Asphalt Rubber Hot Mix (ARHM-G) Surface Course**

Asphalt Rubberized Hot Mix (ARHM) shall conform to Standard Specifications for Public Works Construction Section 203-11 and as modified herein.

- The Asphalt Rubber Hot Mix Surface Course shall be Gap-Graded ARHM-GG-C-PG 64-16 (1/2" sieve size) and at least 2-inches thick.

Finished surface of the new pavement shall be flush with the edge of the gutter for entire project area.

Contractor shall schedule paving operations to ensure that construction equipment does not drive over new AC material.

The Contractor is not allowed to drive his/her fully loaded trucks on the new ARHM mat.

Contractor shall protect and preserve the entire existing pavement outside construction limits in the same condition as existing. Contractor shall replace and/or repair the damaged area to the satisfaction of the ENGINEER at no cost to the City.

Unless otherwise specified herein, there are no special equipment requirements to perform the work, and the contractor shall comply with all equipment specifications of the Standard Specifications.

Tack coat shall be per Standard Specifications for Public Works Construction Section 302-9.2.

Prior to placing the ARHM surface course, all receiving surfaces shall be cleaned by blowing air, water and/or broom. The surface shall be free of water, dust, and all foreign materials before any tack coat is applied.

The Tack Coat shall be applied to all exposed surfaces.

Distribution and spreading shall be per Standard Specifications for Public Works Construction Section 302-9.3.

At least 24 hours of "cool off" time shall occur between A.C. lifts.

All temporary striping and markings shall be removed by grinding or by some other approved method before placing asphalt concrete surface course, and skin patching.

Asphalt concrete shall be placed with a paving machine equipped with a Preco attachment or similar device for use in obtaining constant cross-slope and maximum joint quality and fed by material transfer vehicle (Roadtec Shuttle Buggy MTV, or similar).

Manhole and other structures within the street section shall be per Standard Specifications for Public Works Construction Section 302-9.6

The Contractor shall be responsible for maintaining location of and access to, all water valves, water line gate valves and manholes during construction.

Prior to the application of new AC surface course, the Contractor shall locate and tie-out all manholes and valve covers before commencing work and comply with these Special Provisions.

The Contractor is directed to Standard Specifications for Public Works Construction Section 403 with respect to raising, adjusting or reconstructing utilities to grade.

Rolling shall be per Standard Specifications for Public Works Construction Section 302-5.6.

Initial or breakdown compaction shall consist of a minimum of three coverages of a layer of asphalt concrete. A pass shall be a movement of a roller in both directions over the same path.

A coverage shall be as many passes as are necessary to cover the entire width being paved. Overlap between passes during any coverage made to ensure compaction without displacement of material, in accordance with good rolling practice, shall be considered a part of the coverage being made and not a part of a subsequent coverage.

Each coverage shall be completed before subsequent coverages are started.

The top layer of each lane, once commenced, shall be placed without interruption. The Contractor shall roll the newly laid asphalt concrete in such a manner that will not create a joint between two passes; joints shall be flush. If such joint exists, the Contractor shall be required to replace or repair that section as directed by the Engineer at no cost to the City. Six (6) inches of newly laid asphalt concrete to be joined by an adjacent pass shall not be rolled until adjacent pass has been laid. Pneumatic rollers shall not be used without prior approval of the ENGINEER.

Joints shall be per Standard Specifications for Public Works Construction Section 302-9.5.

At all locations where new asphalt concrete pavement is joining or overlaying existing asphalt pavement, the Contractor shall provide straight neat lines and transition the last twenty (20) feet of new pavement to form a smooth transition with the existing pavement.

**Asphalt Material Transfer Device (Shuttle Buggy):**

A self-propelled material transfer device, capable of moving independent of the paver or attached to the paver shall be used when paving all surface asphalt through lanes on collector and arterial streets. The size of the material transfer device shall be suitable for the type of paving operation performed and shall be subject to the approval of the City Engineer. The material transfer device shall be equipped to perform additional mixing of the material, uniformly heat the material, and transfer the material into the paver at a uniform temperature. Paver hopper inserts shall be required when spillage of the Hot Mix Asphalt (HMA) occurs during transfer of the material.

Measurement and payment for "Asphalt Rubber Hot Mix (ARHM-G) Surface Course" shall be made at the unit price bid per Tonnage (TON), based upon certified weigh master tickets. The unit price bid shall include, surface preparation, ARHM specified herein, tack coat, temporary AC tapers, rock dust blotter, sweeping, and all labor, material, saw cutting, transitioning, hauling, spreading, compacting, grading, equipment and incidentals required to complete the Work in accordance with these Specifications, as shown on the Plans, and no further compensation will be allowed.

Temporary asphalt concrete work where required by the ENGINEER for traffic control or other purposes shall be considered included in the price bid for the various items of work and no additional compensation will be allowed.

**Bid Item No. 8: Construct Crushed Miscellaneous Base**

Crushed miscellaneous base shall consist of broken and crushed asphalt concrete or Portland cement concrete and may contain crushed aggregate base or other rock materials.

The material shall be free of any detrimental quantity of deleterious material as defined in Standard Specifications for Public Works Construction Section 200-1.1.

The material retained on the No. 4 (4.75 mm) sieve shall contain no more than 15 percent gravel particles as defined in Standard Specifications for Public Works Construction Section 200-1.3. The material may contain no more than 3 percent brick by weight as determined by California Test 202 modified as follows: Brick material retained on a No. 4 (4.75 mm) sieve shall be identified visually and separated manually. Brick quantification shall be based on total weight of dry sample.

Grading shall be per Standard Specifications for Public Works Construction Section Table 200-2.4.2.

The material shall conform to Standard Specifications for Public Works Construction Section Table 200-2.4.3.

The Engineer may waive the percentage wear requirements, provided the material has a minimum durability of 40 in accordance with California Test 229. Untreated base shall be crushed miscellaneous base conforming to 200-2.4, as shown on the Plans or in the Bid. Base material shall not be crushed at the Work site. Base material shall have a fine gradation.

Measurement and Payment for Construct CMB shall be per the unit price bid per tonnage (Ton) and shall include full compensation for furnishing all labor, materials, tools, equipment, hauling, spreading, compacting, grading, and incidentals for completing all work as required. No additional compensation shall be allowed.

Bid Items Nos. 9, 10, 11, 12, 13, 21, 22, & 23 include CMB in their bid items and are not included in Bid Item No.7 CMB.

**Bid Item No. 9: Construct Variable Height PCC Retaining Curb 0" to 8" Over 6" CMB**

Concrete improvements shall be in conformance with City of Costa Mesa Standard Drawings, SPPWC Standard Drawings, details shown on the project plans, and Standard Specification for Public Works Construction Sections 201, "Concrete, Mortar, and Related Materials", 202-1 "Brick" and 303-5, "Concrete Curbs, Walks, Gutters, Cross Gutters, Alley Intersections, Access Ramps, and Driveways".

Subgrade for concrete improvements shall conform to Standard Specification for Public Works Construction Section 301-1 "Subgrade Preparation". 4-inches of CMB shall be placed under the variable curb Standard Specification for Public Works Construction Subsection 200-2.4 "Crushed Miscellaneous Base" and Section 301-2 "Untreated Base".

Concrete shall be class 560-C-3250. Forms shall be provided for excavating, backfilling and compacting. Forming work shall conform to Section 303-5.2, "Forms" and include any removal, replacement, grading, excavation and saw-cutting necessary for curb and gutter construction.

For curb constructed adjacent to existing private landscaping improvements Contractor shall regrade to a slope at 4:1 maximum from the back of curb to meet existing adjacent surface grades, unless otherwise noted on the plans or specifications. Approximate daylight lines are shown on the plans. Low areas required to meet new or existing grades shall be filled; uncontaminated excavation materials may be used at Engineers approval. Any existing landscaping or irrigation improvements shall be replaced in kind. The grading behind the curb shall be included in the cost of the retaining curb bid item.

Measurement and payment to Construct Variable Height Retaining Curb 0" to 8" over 6" CMB, shall be per the unit price bid per lineal foot (LF) of curb and shall include sub-grade preparation, forms, backfilling behind curbs, grading behind curbs, restoring form areas and all other work as required to complete the work. No other compensation will be allowed.

**Bid Item No. 10: Construct 8" Curb and Gutter Over 6" CMB**



Concrete improvements shall be in conformance with City of Costa Mesa Standard Drawings, SPPWC Standard Drawings, details shown on the project plans, and Standard Specification for Public Works Construction Sections 201, "Concrete, Mortar, and Related Materials", 202-1 "Brick" and 303-5, "Concrete Curbs, Walks, Gutters, Cross Gutters, Alley Intersections, Access Ramps, and Driveways".

Brick improvements shall be in conformance with Standard Specification for Public Works Construction Sections 202-1 "Brick" and 303-4, "Masonry Construction" of the Standard Specifications.

Subgrade for concrete improvements shall conform to Standard Specification for Public Works Construction Section 301-1 "Subgrade Preparation". 4-inches of CMB shall be placed under curb & gutter per Standard Specification for Public Works Construction Subsection 200-2.4 "Crushed Miscellaneous Base" and Section 301-2 "Untreated Base".

Concrete shall be class 560-C-3250. Forms shall be provided for excavating, backfilling and compacting. Forming work shall conform to Standard Specification for Public Works Construction Section 303-5.2, "Forms" and include any removal, replacement, grading, excavation and saw-cutting necessary for curb and gutter construction.

For curb constructed adjacent to existing private landscaping improvements Contractor shall regrade to a slope at 4:1 maximum from the back of curb to meet existing adjacent surface grades, unless otherwise noted on the plans or specifications. Approximate daylight lines are shown on the plans. Low areas required to meet new or existing grades shall be filled; uncontaminated excavation materials may be used at Engineers approval. Any existing landscaping or irrigation improvements shall be replaced in kind. The grading behind the curb shall be included in the cost of the retaining curb bid item.

Measurement and payment to Construct 8" Curb and Gutter over 6" CMB shall be per the unit price bid per lineal foot (LF) of curb and gutter and shall include sub-grade preparation, forms, backfilling behind curbs, grading behind curbs, restoring form areas and all other work as required to complete the work. New curb and gutter along bus pads shall be included in this bid item. No other compensation will be allowed.

#### **Bid Item No. 11: Construct 4" PCC Sidewalk Over 4" CMB**

Concrete improvements shall be in conformance with City of Costa Mesa Standard Drawings, SPPWC Standard Drawings, details shown on the project plans, and Standard Specification for Public Works Construction Sections 201, "Concrete, Mortar, and Related Materials", 302-6 "Portland Cement Concrete Pavement and 303-5, "Concrete Curbs, Walks, Gutters, Cross Gutters, Alley Intersections, Access Ramps, and Driveways". In addition, stamped and color concrete shall be in conformance with Standard Specification for Public Works Construction Sections 303-6 "Stamped Concrete" and 303-7 "Colored Concrete". Concrete shall be class 560-C-3250.

Subgrade for concrete improvements shall conform to Standard Specification for Public Works Construction Section 301-1 "Subgrade Preparation". 4-inches of CMB shall be placed under sidewalks, ramps, median concrete, and staircases. 6-inches of CMB shall be placed under driveways and offsite concrete pavement. 12-inches of CMB shall be

placed under bus turnout. CMB shall be placed per Standard Specification for Public Works Construction Sections 200-2.4 "Crushed Miscellaneous Base" and 301-2 "Untreated Base".

For the PCC improvements constructed adjacent to existing private landscaping improvements Contractor shall regrade to a slope at 3:1 maximum from the PCC improvement to meet existing adjacent surface grades, regrading beyond the above ratio where necessary. Low areas required to meet new or existing grades shall be filled; uncontaminated excavation materials may be used at Engineers approval. The grading behind the PCC improvements shall be included in the cost of the PCC improvement item.

Once the work is started, the Contractor shall perform and complete work at each location within three (3) working days. Sidewalk thickness shall be 4" except at driveway approaches where it shall be 8" and shall be medium broom finished.

The Contractor shall saw-cut and remove existing concrete sidewalk within construction limits where encountered for constructing new sidewalk and this work shall be included in the separate bid items. The remaining PCC pavement adjacent to new sidewalk shall be protected in-place, any damage caused by the Contractor shall be replaced at no cost to the City.

Pull boxes, traffic signal boxes, meter boxes, valve covers, hand holes, conduits and conductors shall be adjusted to finish grade and approved by the Engineer prior to placement of PCC. Shallow conduit sweeps, and conductors shall be lowered. Broken, cracked, or damaged pull boxes, hand holes and lids shall be replaced prior to placement of sidewalk.

At all times the Contractor shall provide a safe and walkable temporary sidewalk with a minimum width of 48" clearance adjoining excavated areas within parkway limits for wheelchair and pedestrians to travel around construction areas. If such clearance is not possible, barricading, plating, filling, or other measures shall be required.

Weakened plane and expansion joints shall be constructed in PCC improvements in accordance with the plans and specifications, City Standard drawings, and Standard Specification for Public Works Construction Subsection 303-5.4 "Joints". Crack Control Joints shall be constructed per plans as directed by the Engineer. Saw-cut joints shall be consistent in width and depth, true, straight, continuous, and evenly spaced.

Measurement and payment to Construct 4" PCC Sidewalk over 4" of CMB, shall be per the unit price bid per square foot (SF) and shall include sub-grade preparation, forms, temporary AC pavement, backfilling behind sidewalk, grading behind sidewalk, restoring form areas and all other work as required to complete the work No additional compensation will be allowed.

**Bid Item No. 12: Construct 4" PCC Curb Ramp Over 4" CMB Including "Federal Yellow" Truncated Domes**

Concrete improvements shall be in conformance with City of Costa Mesa Standard

Drawings, SPPWC Standard Drawings, details shown on the project plans, and Standard Specification for Public Works Construction Sections 201, "Concrete, Mortar, and Related Materials", 302-6 "Portland Cement Concrete Pavement and 303-5, "Concrete Curbs, Walks, Gutters, Cross Gutters, Alley Intersections, Access Ramps, and Driveways". In addition, stamped and color concrete shall be in conformance with Standard Specification for Public Works Construction Sections 303-6 "Stamped Concrete" and 303-7 "Colored Concrete". Concrete shall be class 560-C-3250.

Metal hand railings for ramps and staircases shall conform to SPPWC Standard Drawing 606-4, details shown on the project plans and Standard Specification for Public Works Construction Sections 206-5 "Metal Railings" and 304-2 "Metal Railings".

Detectable warning devices shall be cast-in-place and installed per manufacturer's recommendations. Color shall be approved by Engineer.

Subgrade for concrete improvements shall conform to Standard Specification for Public Works Construction Section 301-1 "Subgrade Preparation". 4-inches of CMB shall be placed under ramps. CMB shall be placed per Standard Specification for Public Works Construction Sections 200-2.4 "Crushed Miscellaneous Base" and 301-2 "Untreated Base".

For the PCC improvements constructed adjacent to existing private landscaping improvements Contractor shall regrade to a slope at 3:1 maximum from the PCC improvement to meet existing adjacent surface grades, regrading beyond the above ratio where necessary. Low areas required to meet new or existing grades shall be filled; uncontaminated excavation materials may be used at Engineers approval. The grading behind the PCC improvements shall be included in the cost of the PCC improvement item.

Once work is started, the Contractor shall perform and complete work at each location within three (3) working days. Curb ramp thickness shall be 4" and shall be medium broom finished.

The Contractor shall saw-cut and remove existing asphalt concrete or existing concrete sidewalk within construction limits where encountered for constructing new curb ramp and this work shall be included in the separate bid items. The remaining PCC pavement adjacent to new curb ramp shall be protected in-place, any damage caused by the Contractor shall be replaced at no cost to the City.

Pull boxes, traffic signal boxes, meter boxes, valve covers, hand holes, conduits and conductors shall be adjusted to finish grade and approved by the Engineer prior to placement of PCC. Shallow conduit sweeps, and conductors shall be lowered. Broken, cracked, or damaged pull boxes, hand holes and lids shall be replaced prior to placement of sidewalk.

At all times the Contractor shall provide a safe and walkable temporary sidewalk with a minimum width of 48" clearance adjoining excavated areas within parkway limits for wheelchair and pedestrians to travel around construction areas. If such clearance is not possible, barricading, plating, filling, or other measures shall be required.

Weakened plane and expansion joints shall be constructed in PCC improvements in accordance with the plans and specifications, City Standard drawings, and Subsection 303-5.4 "Joints" of Standard Specifications. Crack Control Joints shall be constructed per plans as directed by the Engineer. Saw-cut joints shall be consistent in width and depth, true, straight, continuous, and evenly spaced.

Measurement and payment to Construct 4" PCC Curb Ramp over 4" CMB including "federal yellow" truncated domes (All Cases), shall be per the Square Foot (SF). Unit prices shall include excavation, sub-grade preparation, forms, metal hand railings, restoring form areas, temporary AC pavement, and all other work as required to complete the work. All proposed curb and gutter at curb returns within the BCR to ECR will be part of the curb ramp quantity. All proposed concrete built behind the curb ramp from BCR to BCR will be part of the curb ramp quantity. If retaining curb is present at the back of sidewalk, all concrete falling within the limits of said retaining curb shall be assumed to be part of the curb ramp quantity even if it extends past the BCR and ECR. No additional compensation will be allowed.

**Bid Item No. 13: Construct 6" PCC Drive Approach Over 6" CMB**

Concrete improvements shall be in conformance with City of Costa Mesa Standard Drawings, SPPWC Standard Drawings, details shown on the project plans, and Standard Specification for Public Works Construction Sections 201, "Concrete, Mortar, and Related Materials", 302-6 "Portland Cement Concrete Pavement and 303-5, "Concrete Curbs, Walks, Gutters, Cross Gutters, Alley Intersections, Access Ramps, and Driveways". In addition, stamped and color concrete shall be in conformance with Standard Specification for Public Works Construction Sections 303-6 "Stamped Concrete" and 303-7 "Colored Concrete". Concrete shall be class 560-C-3250.

Subgrade for concrete improvements shall conform to Standard Specification for Public Works Construction Section 301-1 "Subgrade Preparation". 6-inches of CMB shall be placed under driveways. CMB shall be placed per Standard Specification for Public Works Construction Sections 200-2.4 "Crushed Miscellaneous Base" and 301-2 "Untreated Base".

For the PCC improvements constructed adjacent to existing private landscaping improvements Contractor shall regrade to a slope at 3:1 maximum from the PCC improvement to meet existing adjacent surface grades, regrading beyond the above ratio where necessary. Low areas required to meet new or existing grades shall be filled; uncontaminated excavation materials may be used at Engineers approval. The grading behind the PCC improvements shall be included in the cost of the PCC improvement item.

Once work is started, the Contractor shall perform and complete work at each location within three (3) working days. Driveway approaches where it shall be 8" and shall be medium broom finished.

The Contractor shall saw-cut and remove existing concrete sidewalk within construction limits where encountered for constructing new drive approach and this work shall be included in the separate bid items. The remaining asphalt concrete or PCC pavement adjacent to new drive approach shall be protected in-place, any damage caused by the

Contractor shall be replaced at no cost to the City.

Pull boxes, traffic signal boxes, meter boxes, valve covers, hand holes, conduits and conductors shall be adjusted to finish grade and approved by the Engineer prior to placement of PCC. Shallow conduit sweeps, and conductors shall be lowered. Broken, cracked, or damaged pull boxes, hand holes and lids shall be replaced prior to placement of sidewalk.

At all times the Contractor shall provide a safe and walkable temporary sidewalk with a minimum width of 48" clearance adjoining excavated areas within parkway limits for wheelchair and pedestrians to travel around construction areas. If such clearance is not possible, barricading, plating, filling, or other measures shall be required.

Weakened plane and expansion joints shall be constructed in PCC improvements in accordance with the plans and specifications, City Standard drawings, and Subsection 303-5.4 "Joints" of Standard Specifications. Crack Control Joints shall be constructed per plans as directed by the Engineer. Saw-cut joints shall be consistent in width and depth, true, straight, continuous, and evenly spaced.

Measurement and payment to construct an 6" drive approach over 6" CMB shall be per the unit price bid per Square Foot (FT). Unit prices shall include excavation, sub-grade preparation, forms, temporary AC pavement, and all other work as required to complete the work. No additional compensation will be allowed.

**Bid Item No. 21: Construct 9" PCC Bus Pad Over 12" CMB**

Concrete improvements shall be in conformance with City of Costa Mesa Standard Drawings, SPPWC Standard Drawings, details shown on the project plans, and Standard Specification for Public Works Construction Sections 201, "Concrete, Mortar, and Related Materials", 302-6 "Portland Cement Concrete Pavement and 303-5, "Concrete Curbs, Walks, Gutters, Cross Gutters, Alley Intersections, Access Ramps, and Driveways". In addition, stamped and color concrete shall be in conformance with Standard Specification for Public Works Construction Sections 303-6 "Stamped Concrete" and 303-7 "Colored Concrete". Concrete shall be class 560-C-3250.

Subgrade for concrete improvements shall conform to Standard Specification for Public Works Construction Section 301-1 "Subgrade Preparation". 6-inches of CMB shall be placed under driveways. CMB shall be placed per Standard Specification for Public Works Construction Sections 200-2.4 "Crushed Miscellaneous Base" and 301-2 "Untreated Base".

For the PCC improvements constructed adjacent to existing private landscaping improvements Contractor shall regrade to a slope at 3:1 maximum from the PCC improvement to meet existing adjacent surface grades, regrading beyond the above ratio where necessary. Low areas required to meet new or existing grades shall be filled; uncontaminated excavation materials may be used at Engineers approval. The grading behind the PCC improvements shall be included in the cost of the PCC improvement item.

Once work is started, the Contractor shall perform and complete work at each location

within three (3) working days. Driveway approaches where it shall be 8" and shall be medium broom finished.

The Contractor shall saw-cut and remove existing concrete sidewalk within construction limits where encountered for constructing new drive approach and this work shall be included in the separate bid items. The remaining asphalt concrete or PCC pavement adjacent to new drive approach shall be protected in-place, any damage caused by the Contractor shall be replaced at no cost to the City.

Pull boxes, traffic signal boxes, meter boxes, valve covers, hand holes, conduits and conductors shall be adjusted to finish grade and approved by the Engineer prior to placement of PCC. Shallow conduit sweeps, and conductors shall be lowered. Broken, cracked, or damaged pull boxes, hand holes and lids shall be replaced prior to placement of sidewalk.

At all times the Contractor shall provide a safe and walkable temporary sidewalk with a minimum width of 48" clearance adjoining excavated areas within parkway limits for wheelchair and pedestrians to travel around construction areas. If such clearance is not possible, barricading, plating, filling, or other measures shall be required.

Weakened plane and expansion joints shall be constructed in PCC improvements in accordance with the plans and specifications, City Standard drawings, and Subsection 303-5.4 "Joints" of Standard Specifications. Crack Control Joints shall be constructed per plans as directed by the Engineer. Saw-cut joints shall be consistent in width and depth, true, straight, continuous, and evenly spaced.

Measurement and payment to construct a 9" bus pad over 12" CMB shall be per the unit price bid per Square Foot (SF). Unit prices shall include excavation, sub-grade preparation, forms, temporary AC pavement, and all other work as required to complete the work. No additional compensation will be allowed.

#### **Bid Item No. 22: Construct PCC Bus Boarding Islands & PCC Median Cut Through**

Concrete improvements shall be in conformance with City of Costa Mesa Standard Drawings, SPPWC Standard Drawings, details shown on the project plans, and Standard Specification for Public Works Construction Sections 201, "Concrete, Mortar, and Related Materials", 302-6 "Portland Cement Concrete Pavement and 303-5, "Concrete Curbs, Walks, Gutters, Cross Gutters, Alley Intersections, Access Ramps, and Driveways". In addition, stamped and color concrete shall be in conformance with Standard Specification for Public Works Construction Sections 303-6 "Stamped Concrete" and 303-7 "Colored Concrete". Concrete shall be class 560-C-3250.

Metal hand railings for ramps and staircases shall conform to SPPWC Standard Drawing 606-4, details shown on the project plans and Standard Specification for Public Works Construction Sections 206-5 "Metal Railings" and 304-2 "Metal Railings".

Detectable warning devices shall be cast-in-place and installed per manufacturer's recommendations. Color shall be approved by Engineer.

The Bus Boarding Island consists of "Type A" Curb over 6" CMB, 4" PCC over 4" CMB, Stamped concrete areas of 4" PCC stamped concrete (sand color) over 4" sand and Curb ramps consisting of 4" PCC over 4" CMB. Median cut-through (Type A passage ways) consists of 4" PCC over 4" CMB. Median Cut Through shall be per Caltrans Standards.

Subgrade for concrete improvements shall conform to Standard Specification for Public Works Construction Section 301-1 "Subgrade Preparation". 6-inches of CMB shall be placed under ramps. CMB shall be placed per Standard Specification for Public Works Construction Sections 200-2.4 "Crushed Miscellaneous Base" and 301-2 "Untreated Base".

For the PCC improvements constructed adjacent to existing private landscaping improvements Contractor shall regrade to a slope at 3:1 maximum from the PCC improvement to meet existing adjacent surface grades, regrading beyond the above ratio where necessary. Low areas required to meet new or existing grades shall be filled; uncontaminated excavation materials may be used at Engineers approval. The grading behind the PCC improvements shall be included in the cost of the PCC improvement item.

Once work is started, the Contractor shall perform and complete work at each location within three (3) working days. Curb ramp thickness shall be 4" and shall be medium broom finished.

The Contractor shall saw-cut and remove existing asphalt concrete or existing concrete sidewalk within construction limits where encountered for constructing new curb ramp and this work shall be included in the separate bid items. The remaining PCC pavement adjacent to new curb ramp shall be protected in-place, any damage caused by the Contractor shall be replaced at no cost to the City.

Pull boxes, traffic signal boxes, meter boxes, valve covers, hand holes, conduits and conductors shall be adjusted to finish grade and approved by the Engineer prior to placement of PCC. Shallow conduit sweeps, and conductors shall be lowered. Broken, cracked, or damaged pull boxes, hand holes and lids shall be replaced prior to placement of sidewalk.

At all times the Contractor shall provide a safe and walkable temporary sidewalk with a minimum width of 48" clearance adjoining excavated areas within parkway limits for wheelchair and pedestrians to travel around construction areas. If such clearance is not possible, barricading, plating, filling, or other measures shall be required.

Weakened plane and expansion joints shall be constructed in PCC improvements in accordance with the plans and specifications, City Standard drawings, and Subsection 303-5.4 "Joints" of Standard Specifications. Crack Control Joints shall be constructed per plans as directed by the Engineer. Saw-cut joints shall be consistent in width and depth, true, straight, continuous, and evenly spaced.

Measurement and payment to Construct PCC Bus Boarding Islands and PCC Median Cut Through shall be per the Square Foot (SF). Unit prices shall include excavation, sub-grade preparation, forms, metal hand railings, restoring form areas, temporary AC pavement, and all other work as required to complete the work. All proposed curbs are

part of the PCC Islands & Median Cut Through quantity. No additional compensation will be allowed.

**Bid Item No. 22: Construct PCC Bus Boarding Islands & PCC Median Cut Through**

Concrete improvements shall be in conformance with City of Costa Mesa Standard Drawings, SPPWC Standard Drawings, details shown on the project plans, and Standard Specification for Public Works Construction Sections 201, "Concrete, Mortar, and Related Materials", 302-6 "Portland Cement Concrete Pavement and 303-5, "Concrete Curbs, Walks, Gutters, Cross Gutters, Alley Intersections, Access Ramps, and Driveways". In addition, stamped and color concrete shall be in conformance with Standard Specification for Public Works Construction Sections 303-6 "Stamped Concrete" and 303-7 "Colored Concrete". Concrete shall be class 560-C-3250.

Metal hand railings for ramps and staircases shall conform to SPPWC Standard Drawing 606-4, details shown on the project plans and Standard Specification for Public Works Construction Sections 206-5 "Metal Railings" and 304-2 "Metal Railings".

Detectable warning devices shall be cast-in-place and installed per manufacturer's recommendations. Color shall be approved by Engineer.

The Bus Boarding Island consists of "Type A" Curb over 6" CMB, 4" PCC over 4" CMB, Stamped concrete areas of 4" PCC stamped concrete (sand color) over 4" sand and Curb ramps consisting of 4" PCC over 4" CMB. Median cut-through (Type A passage ways) consists of 4" PCC over 4" CMB. Median Cut Through shall be per Caltrans Standards.

Subgrade for concrete improvements shall conform to Standard Specification for Public Works Construction Section 301-1 "Subgrade Preparation". 6-inches of CMB shall be placed under ramps. CMB shall be placed per Standard Specification for Public Works Construction Sections 200-2.4 "Crushed Miscellaneous Base" and 301-2 "Untreated Base".

For the PCC improvements constructed adjacent to existing private landscaping improvements Contractor shall regrade to a slope at 3:1 maximum from the PCC improvement to meet existing adjacent surface grades, regrading beyond the above ratio where necessary. Low areas required to meet new or existing grades shall be filled; uncontaminated excavation materials may be used at Engineers approval. The grading behind the PCC improvements shall be included in the cost of the PCC improvement item.

Once work is started, the Contractor shall perform and complete work at each location within three (3) working days. Curb ramp thickness shall be 4" and shall be medium broom finished.

The Contractor shall saw-cut and remove existing asphalt concrete or existing concrete sidewalk within construction limits where encountered for constructing new curb ramp and this work shall be included in the separate bid items. The remaining PCC pavement adjacent to new curb ramp shall be protected in-place, any damage caused by the Contractor shall be replaced at no cost to the City.



Pull boxes, traffic signal boxes, meter boxes, valve covers, hand holes, conduits and conductors shall be adjusted to finish grade and approved by the Engineer prior to placement of PCC. Shallow conduit sweeps, and conductors shall be lowered. Broken, cracked, or damaged pull boxes, hand holes and lids shall be replaced prior to placement of sidewalk.

At all times the Contractor shall provide a safe and walkable temporary sidewalk with a minimum width of 48" clearance adjoining excavated areas within parkway limits for wheelchair and pedestrians to travel around construction areas. If such clearance is not possible, barricading, plating, filling, or other measures shall be required.

Weakened plane and expansion joints shall be constructed in PCC improvements in accordance with the plans and specifications, City Standard drawings, and Subsection 303-5.4 "Joints" of Standard Specifications. Crack Control Joints shall be constructed per plans as directed by the Engineer. Saw-cut joints shall be consistent in width and depth, true, straight, continuous, and evenly spaced.

Measurement and payment to Construct PCC Bus Boarding Islands and PCC Median Cut Through shall be per the Square Foot (SF). Unit prices shall include excavation, subgrade preparation, forms, metal hand railings, restoring form areas, temporary AC pavement, and all other work as required to complete the work. All proposed curbs are part of the PCC Islands & Median Cut Through quantity. No additional compensation will be allowed.

### **Bid Item No. 23: Construct 8" PCC Spandrel Over 8" CMB**

Concrete improvements shall be in conformance with City of Costa Mesa Standard Drawings, SPPWC Standard Drawings, details shown on the project plans, and Standard Specification for Public Works Construction Sections 201, "Concrete, Mortar, and Related Materials", 302-6 "Portland Cement Concrete Pavement and 303-5, "Concrete Curbs, Walks, Gutters, Cross Gutters, Alley Intersections, Access Ramps, and Driveways". In addition, stamped and color concrete shall be in conformance with Standard Specification for Public Works Construction Sections 303-6 "Stamped Concrete" and 303-7 "Colored Concrete". Concrete shall be class 560-C-3250.

Subgrade for concrete improvements shall conform to Standard Specification for Public Works Construction Section 301-1 "Subgrade Preparation". 6-inches of CMB shall be placed under driveways. CMB shall be placed per Standard Specification for Public Works Construction Sections 200-2.4 "Crushed Miscellaneous Base" and 301-2 "Untreated Base".

For the PCC improvements constructed adjacent to existing private landscaping improvements Contractor shall regrade to a slope at 3:1 maximum from the PCC improvement to meet existing adjacent surface grades, regrading beyond the above ratio where necessary. Low areas required to meet new or existing grades shall be filled; uncontaminated excavation materials may be used at Engineers approval. The grading behind the PCC improvements shall be included in the cost of the PCC improvement item.

Once work is started, the Contractor shall perform and complete work at each location

within three (3) working days. Driveway approaches where it shall be 8" and shall be medium broom finished.

The Contractor shall saw-cut and remove existing concrete sidewalk within construction limits where encountered for constructing new drive approach and this work shall be included in the separate bid items. The remaining asphalt concrete or PCC pavement adjacent to new drive approach shall be protected in-place, any damage caused by the Contractor shall be replaced at no cost to the City.

Pull boxes, traffic signal boxes, meter boxes, valve covers, hand holes, conduits and conductors shall be adjusted to finish grade and approved by the Engineer prior to placement of PCC. Shallow conduit sweeps, and conductors shall be lowered. Broken, cracked, or damaged pull boxes, hand holes and lids shall be replaced prior to placement of sidewalk.

At all times the Contractor shall provide a safe and walkable temporary sidewalk with a minimum width of 48" clearance adjoining excavated areas within parkway limits for wheelchair and pedestrians to travel around construction areas. If such clearance is not possible, barricading, plating, filling, or other measures shall be required.

Weakened plane and expansion joints shall be constructed in PCC improvements in accordance with the plans and specifications, City Standard drawings, and Subsection 303-5.4 "Joints" of Standard Specifications. Crack Control Joints shall be constructed per plans as directed by the Engineer. Saw-cut joints shall be consistent in width and depth, true, straight, continuous, and evenly spaced.

Measurement and payment to construct an 8" PCC Spandrel over 8" CMB shall be per the unit price bid per Square Foot (SF). Unit prices shall include excavation, sub-grade preparation, forms, temporary AC pavement, and all other work as required to complete the work. No additional compensation will be allowed.

## **SECTION 314 – TRAFFIC STRIPING, CURB AND PAVEMENT MARKINGS, AND PAVEMENT MARKERS**

[Replace the entire Section with the following:].

**Bid Item No. 15: SIGNING AND STRIPING**

**Bid Item No. 27: FURNISH AND INSTALL WHITE FLEXIBLE K-71 POSTS**

**Bid Item No. 28: FURNISH AND INSTALL GREEN PREFORMED THERMOPLASTIC MARKINGS**

### **General**

All pavement striping, signage, pavement markers and delineators shall be in accordance with Section 81 "Miscellaneous Traffic Control Devices" of the latest edition of the Caltrans Standard Specifications (including the Revised Standard Specifications) as modified within these Special Provisions. All striping and pavement markings shall be in accordance to Section 84 "Markings" of the latest edition of the Caltrans Standard

Specifications (including the Revised Standard Specifications) as modified within these Special Provisions, and comply with the latest Caltrans Standard Plans, and the latest edition of the 2014 California Manual on Uniform Traffic Control Devices (CA MUTCD), and as specified by the ENGINEER.

The Contractor shall furnish all material, services, labor and equipment necessary for the required pavement preparations, layout and completing the pavement markings.

These special provisions set minimum requirements on material characteristics of the pavement marking products. Requirements concerning application and contractor warranties shall be maintained to secure acceptable performances.

## **81 MISCELLANEOUS TRAFFIC CONTROL DEVICES**

### **81-2 DELINEATORS**

#### **81-2.01 GENERAL**

##### **81-2.01C SUBMITTALS**

[Add the following:].

The contractor shall provide submittal sheets for approval prior to ordering the materials.

##### **81-2.02 MATERIALS**

###### **81-2.02A GENERAL**

[Add the following:].

The traffic posts in the bicycle buffer shall be US Reflector flexible 29" tall K-71 traffic posts (7.5" diameter). The post shall be white color only. Each K-71 post shall be equipped with two 4" bands of flexible white 3M high intensity retroreflective sheeting.

The K-71 posts shall be installed using manufacturer specified nylon reinforcement composite screens (for asphalt installation), metal pavement anchor sleeves, and anti-debris set screws, and no equivalent materials or exclusion of materials during installation may be made. For the 2-part adhesive for bonding the metal anchor sleeve within the drilled hole and nylon reinforcement screen, the contractor shall use Hilti HY-200 11.2 OZ. Injectable Mortar (4A-ADH-HY200R-112-1, SKU:654728851743), with replacement nozzle, and no other equivalent adhesive shall be used unless specified by the manufacturer as equal or the newest specification and approved by City Representative.

Prior experience with this product has demonstrated that more adhesive is required than is stated on the manufacturer's installation instructions. Contractor shall order at least 25% more adhesive than is recommended by the manufacturer in order to fill the hole to at least 85%-90% of the height of the drilled hole.

All installation materials shall be checked by City Representative and City Inspector prior to start of installation.

### **81-2.03 CONSTRUCTION**

[Replace entire section with the following:].

The contractor shall surface mount the delineators using a 2-part epoxy and/or anchor bolts per manufacturer's specifications and per direction of City Maintenance staff and the City Representative.

The contractor shall procure all materials required and strictly follow each step of the manufacturer's installation instructions (per installation video) to ensure proper tight bonding and anchoring to prevent the K-71 posts from uplifting after contact with vehicles. Contractor shall use more than the manufacturer recommended amount of adhesive to ensure a proper bond/anchoring to the asphalt pavement. Contractor should have all equipment required for installation including but not limited to T-bar, manual adhesive dispenser, rotary hammer drill with 7/8-inch drill bit, compatible compressor with air hose, nozzle and fittings, a wire brush and a generator.

After anchor sleeve has been installed and while the adhesive is curing (before installation of the post), the contractor shall clean the pavement areas surrounding the hole to be clear of any spilled or residual adhesive that would prevent full contact of the K-71 post's base with the pavement surface.

The installation includes but is not limited to the following steps. Contractor shall not skip any of these steps:

- a. Mark areas for installation
- b. Adjust drill depth setting to the length of the anchor sleeve.
- c. Drill 7/8" diameter hole to a depth of 5.9" to 6" MAXIMUM using a 7/8" carbide bit.
- d. Using an air compressor, insert air tube nozzle to the bottom of hole and remove dust and debris.
- e. Use a wire brush to clean hole to ensure proper adhesive bond.
- f. After using wire brush, use air compressor again to remove excess fine dust from the hole.
- g. To help verify the depth of the drilled hole using an anchor sleeve, remove the plastic cap and insert a 1/2" machine bolt as a grab bolt.
- h. While holding the grab bolt, lower the anchor sleeve into hole and ensure the top of the sleeve is 1/8" to 1/4" deep MAXIMUM below asphalt surface. If hole is drilled too deep, use small rocks or pebbles to adjust hole depth to proper height.
- i. When mixing adhesive from a new cartridge, ensure a proper adhesive mix by ejecting several ounces onto a disposable surface.
- j. Insert nozzle into bottom of hole (not halfway) and inject resin while pulling back on the cartridge filling the hole and sleeve to about 50% of the height of the hole. Insert reinforcement composite screen into hole until flush or 1/4" below surface. Reinsert nozzle into the hole and screen and continue to fill from the bottom to about 90% of the height of the hole.
- k. Insert metal anchor bolt. NOTE: do not remove the plastic cap. The cap protects the anchor sleeve from filling with adhesive.

- l. Lift and push anchor bolt repeatedly while inserting it in the hole to help work the adhesive in to the side walls. Adhesive should spill out the top of the hole, if not then enough adhesive was added. Please note: It is very important to progressively pull and push the sleeve when you are inserting it into the cavity. It forces the adhesive to saturate the dry asphalt if there is any fine drilling powder residue left on the walls.
- m. Using a piece of carton or cloth, spread the adhesive around top of hole but clean off plastic cap and surrounding pavement of any spilled or residual adhesive.
- n. Let adhesive cure and remove plastic cap with a hole punch or screwdriver.
- o. Install K-71 post using the T-bar by ensuring the base anchor bolt is protruding from the base. Insert T-Bar socket onto hex bolt at base of K-71 post, align bolt with ground anchor. Once bolt is aligned with ground anchor, spin T-bar until post is snug and gripped into place.

Written technical instructions can be found at: <http://endotocorp.com/assets/k71-post-installation-pavement-v1.pdf>

## **81-3 PAVEMENT MARKERS**

### **81-3.02 MATERIALS**

#### **81-3.02A GENERAL**

[Add the following:].

#### **Blue "Fire Hydrant" Raised Pavement Markers**

The Contractor shall furnish and install blue reflective raised pavement markers on new pavement at existing fire hydrant locations. The new marker location shall be in accordance with the Typical Hydrant Marker Location Standard Drawing and the following requirements:

1. Two-way Streets or Roads: Markers shall be placed six (6) inches from edge of painted centerline on the side nearest the fire hydrant. If the street has no centerline, the marker shall be placed six (6) inches from the approximate center of the roadway on the side nearest the hydrant. See Figures 1 through 3 of the above-mentioned standards.
2. Streets with Left-Turn Lane at Intersection: Markers shall be placed six (6) inches from edge of painted white channelizing line nearest the hydrant. See Figure 4 of the above-mentioned standard.
3. Streets with Continuous Two-Way Left-Turn Lane: Markers shall be placed six (6) inches from the edge of the painted yellow barrier line on the side nearest the fire hydrant. See Figure 5 of the above-mentioned standard.

#### **81-3.04 PAYMENT**

[Add the following:].

Measurement and payment for miscellaneous traffic control devices shall be per the unit price bid per Lump Sum (LS). The unit price for each item shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all work involved as specified on the Plans and these Specifications.

## **81-8 EXISTING PAVEMENT MARKERS AND DELINEATORS**

### **81-8.03 CONSTRUCTION**

#### **81-8.03B REMOVE PAVEMENT MARKERS**

[Add the following:].

All blue “fire hydrant” pavement markers that are removed shall be reinstalled by the contractor.

When striping is removed, any corresponding pavement markers within or adjacent to the stripe, or within the gaps of dashed striping shall be removed.

#### **81-8.04 PAYMENT**

[Add the following:].

Measurement and payment for existing pavement markers and delineators shall be per the unit price bid per Lump Sum (LS). The lump sum price shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all work involved as specified on the Plans and these Specifications.

## **82 SIGNS AND MARKERS**

### **82-2 SIGN PANELS**

#### **82-2.02 MATERIALS**

##### **82-2.02A GENERAL**

[Add the following:].

All sign face reflective sheeting shall be diamond grade retroreflective with protective overlay film.

Prior to ordering sign panel, the contractor shall provide signing submittal for City Representative’s review showing all proposed signs and sign sizes. Proposed warning sign colors shall be provided as yellow or FYG.

[Add the following section:].

##### **82-2.03C REMOVE AND SALVAGE SIGN AND SIGNPOST**

Sign panels and signposts to be salvaged shall be delivered the same day to the city. The salvaged sign panels and posts shall be delivered to the City's corporation yard, located at 2310 Placentia Avenue, Costa Mesa 92627. Prior to delivery, please call Juan Santos at 714-697-5545.

## **82-2.04 PAYMENT**

[Replace section with the following:].

Measurement and payment for the signs and markers shall be per the unit price bid per Lump Sum (LS) and additional compensation shall not be allowed. The Lump Sum price shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all work involved as specified on the Plans and these Specifications.

### **82-3 Roadside Signs**

## **82-3.02A GENERAL**

[Add the following:].

Signs and shall posts shall conform to the California Manual on Uniform Traffic Control Devices (CA MUTCD), latest edition.

Unless otherwise noted on the plans, all new or relocated signs shall be installed on 1 $\frac{3}{4}$ " square perforated steel posts with breakaway connections. Signs shall follow the CA MUTCD regarding clearances from the bottom of the lowest sign to the finished surface.

## **82-3.02B METAL POSTS**

[Add the following:].

Metal posts shall be 1 $\frac{3}{4}$ " square perforated steel posts (Telespar) with breakaway anchor.

## **82-3.03 CONSTRUCTION**

### **82-3.02A GENERAL**

[Add the following:].

Installation of signposts, including mounting height and required clearances, shall conform to the California Manual on Uniform Traffic Control Devices (CA MUTCD), latest edition.

Anchor shall not extend beyond 2" from top of adjacent finished grade where installed and shall conform to OC Public Works Standard Plan 1417 for signpost installation.

## **82-3.04 PAYMENT**

[Replace the entire section with the following:].

Measurement and payment for the signs and markers shall be per the unit price bid per Lump Sum (LS) and additional compensation shall not be allowed. The lump sum unit price shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all work involved as specified on the Plans and these Specifications.

## **82-9 EXISTING ROADSIDE SIGNS AND MARKERS**

### **82-9.04 PAYMENT**

[Replace the entire section with the following:].

Measurement and payment for signs and markers shall be per the unit price bid per Lump Sum (LS). The unit price for each shall include full compensation for furnishing all labor, material, tools, equipment and incidentals, and for doing all work involved as specified on the Plans and these Specifications.

## **84 MARKINGS**

### **84-1 GENERAL**

#### **84-1.01 GENERAL**

[Add the following:]

Markings must also comply with the Caltrans Standard Plans and Revised Standard Plans, latest edition.

The contractor shall record the existing Striping and Markings for the entire project limits on the Plans and provide to the City Representative prior to removal operations.

Contractor shall restore pavement traffic striping and marking damaged during construction to original condition.

The installed material shall be highly visible to the motorists both day and night.

Unless otherwise noted, all traffic stripes shall be 6-inch width minimum and shall comply with the most recent Caltrans Standard Plans.

### **84-2 TRAFFIC STRIPES AND PAVEMENT MARKINGS**

#### **84-2.02 MATERIALS**

##### **84-2.02A GENERAL**

Paint, thermoplastic and glass beads for traffic stripes and pavement markings will be furnished by the Contractor, including cat tracks and dribble lines, unless otherwise noted in the Plans or these special provisions.



## **84-2.02C THERMOPLASTIC**

[Replace entire section with the following:]

Thermoplastic must comply with State Specification PTH-02ALKYD.

All stop bars, crosswalks, legends, and arrows shall be installed using thermoplastic, and conform exactly to the City of Costa Mesa stencil types except fabricated preformed thermoplastic applications.

Thermoplastic shall be Alkyd Thermoplastic Pavement material that is applied to a road surface in a molten state by extrusion of the designated thickness and width. The thermoplastic shall be mixed with glass beads and shall, upon cooling, be reflectorized with additional glass beads and shall be allowed to completely cool to prevent deformation by traffic.

### **Preformed Green Colored Thermoplastic**

All preformed green thermoplastic pavement markings shall be either bright green Ennis Flint PreMark Vizigrip or approved equal. Preformed green thermoplastic shall be non-slip, non-skid and retroreflective. Contractor shall turn in submittal sheets to City Representative for approval prior to ordering. Preformed green thermoplastic shall be installed by strictly following manufacturer's specifications. Preformed Green Thermoplastic shall not be installed on concrete unless approved by the City Representative.

Green coloring in thermoplastic used for bicycle lanes, bike boxes, bicycle lane conflict zones, green-back sharrows, bicycle paths, or other bicycle facilities shall conform to the requirements set forth in the April 2011 FHWA Interim Approval for Optional Use of Green Colored Pavement for Bike Lanes (IA-14) as well as the June 2016 FHWA update: Official Interpretation #9(09)-86 (I) on Chromaticity Requirements for Green-Colored Pavement.

## **84-2.02G PAINT**

[Add the following:].

Waterborne traffic paint shall adhere to State Specification PTWB-01R2 (June 2022). Paint shall be Ennis Flint High Build Fast Dry Paint.

## **84-2.03 CONSTRUCTION**

### **84-2.03A GENERAL**

[Add the following:].

In order to ensure maximum possible adhesion, the pavement surface upon which the pavement markings are to be placed shall be properly cleaned from grease, oil, mud, dust, dirt, grass, loose gravel, and other deleterious material prior to the application of the thermoplastic pavement markings, and prime sealer.

The Contractor shall furnish and apply traffic stripes and pavement markings shown on the plans or where directed by the City Representative. The Contractor shall be responsible for the completeness and accuracy of all layout alignment and spotting. The Contractor shall layout or “cat track” proposed marking for approval by the City Representative or his designee prior to performing actual marking placement. No work shall commence without said approval.

The Contractor shall request a meeting in the field with the City Representative prior to start of cat-tracking in order to review the proposed striping and discuss the City’s cat-tracking requirements. The Contractor shall “cat track” for striping and markings no later than 24 hours after the application of the slurry/ACSC (if applicable). Solid and dashed bike lane striping as well as bike lane buffers and crosshatch markings in those buffers, shall be cat-tracked as to be able to see the beginning and ends of the transitions of all detail 39 and Detail 39A striping as well as the locations of all crosshatch markings. The bike lane and bike buffer shall be cat-tracked in such a way as to be able to see the continuous facility. If the bicycle lanes and buffer (including crosshatch markings in the buffer) are not cat-tracked to the satisfaction of the City Representative, the Contractor shall re-do the cat-tracking until the City Representative is satisfied and the City Representative will not review the cat-tracking otherwise.

The Contractor shall mark, or otherwise delineate, the new traffic lanes and pavement markings directly after the removal of the existing striping and markings. The Contractor shall modify the cat-tracking as directed by and to the satisfaction of the City Representative prior to striping and no additional cost shall be allowed for striping revisions directed by the City Representative.

Newly placed traffic stripes and pavement markings shall be protected from damage by public traffic or other causes until the paint or thermoplastic (hot-applied or preformed) is thoroughly dry.

Green preformed pavement markings adjacent to crosswalks shall be installed as to avoid tire tracking of vehicles crossing the intersection and wearing out the markings.

Thermoplastic and paint shall be placed as close as possible to utility structures without covering them.

The Contractor shall perform all layout, alignment, and spotting of control points spaced at 100 feet on tangents and 50 feet on curves.

Thermoplastic, preformed or hot applied, shall not be installed on concrete unless approved by the City Representative.

Unless otherwise specified on the plans, all traffic stripes (single, double, or pairs) shall be 6” minimum width and comply with latest edition of Caltrans Standard Plans.

#### Pavement Marking Guarantee

The pavement marking material furnished and installed under this contract shall be

guaranteed by the Contractor against failure due to blistering, bleeding, excessive cracking, staining, discoloration, oil content of pavement materials, smearing or spreading under heat, deterioration due to contact to oil or gasoline drippings, chipping, spoiling, poor adhesion, and loss of reflectivity resulting from defective materials or methods of application for a period of one year.

### **84-2.03C APPLICATION OF TRAFFIC STRIPES AND PAVEMENT MARKINGS**

#### **84-2.03C (1) GENERAL**

[Add the following:].

The Contractor shall apply the first application of paint for traffic striping and shall install thermoplastic (hot-applied or preformed) markings no sooner than seven (7) calendar days following the application of new slurry/ACSC or fourteen days (14) if installed during Summer (if applicable). Green preformed thermoplastic markings shall be installed no sooner than twenty-one (21) days following application of new slurry/ACSC (if applicable).

Any painted curb removed or damaged during construction shall be repainted in kind (i.e. red, yellow, green, etc.).

The completed pavement markings shall have clean and well-defined edges. The maximum deviation from the designated position of the stripe marking shall not exceed ½" in any 100-foot length of stripe, including gaps. Pavement markings shall conform to the shapes and dimensions of the markings as designated on the State Standard plans.

Advance spotting of angle points, end points and other control points shall be performed by the Contractor and be approved by the City Representative.

Any damage to the newly placed marking due to the failure of the Contractor to protect the work shall be repaired by the Contractor at no additional cost.

The contractor shall not place pavement markings and markers on any manhole, valve, anode, detector handhole, or monument rim and cover. For lane striping, placement of markings or markers shall discontinue on the rim and cover and shall continue along the same alignment, as shown in the drawings.

Any cover marked during the construction of the project shall be restored to its original condition or replaced, in kind, at the contractor's expense.

#### **84-2.03B (2) THERMOPLASTIC**

##### **84-2.03B(2)(A) GENERAL**

[Remove the following:]

Apply thermoplastic in a single uniform layer by spray or extrusion methods.

[Add the following:]

Apply thermoplastic by extrusion methods or using preformed markings according to the plans, these special provisions, and per direction of City Representative. Thermoplastic shall not be installed when the temperature of the pavement is less than 55 degrees Fahrenheit to prevent weak bonding. The contractor may preheat the surface of the asphalt to above 55 degrees Fahrenheit if approved by City Representative.

Prior to installing the thermoplastic on concrete, the Contractor shall use concrete binder and prepare concrete surface for binder to facilitate proper adhesion of thermoplastic onto concrete.

All pavement marking arrows and words shall be thermoplastic unless otherwise noted on the plans or directed and approved by the City Representative.

All white lines that are adjacent to green preformed thermoplastic such as detail 39A (conflict zones) or detail 38/38A (for bike boxes), etc. shall be thermoplastic.

Preformed thermoplastic including green non-slip and non-skid preformed thermoplastic for bicycle facilities on asphalt or on concrete shall be installed per manufacturer's specifications. If using a radiant heater and if the corundum sinks below manufacturer's specifications, additional hand casted corundum shall be added to the surface before the preform thermoplastic cools. If installed on concrete, contractor shall perform a porosity test to determine if the concrete has proper porosity. If the concrete fails the porosity test, the portion of the concrete where the green preformed markings will be installed shall be water blasted, allowed to thoroughly dry and then the contractor shall install concrete binder per manufacturer's specifications to facilitate proper adhesion to concrete.

Newly placed thermoplastic pavement markings shall be protected from damage by public traffic or other causes until the thermoplastic (hot-applied or preformed) is thoroughly cool and dry. Thermoplastic that is deformed, marked, or damaged by traffic due to improper installation or because the thermoplastic was not allowed to cool will be removed and reinstalled at the expense of the contractor and to no additional cost for the City.

#### **84-2.03B(2)(C) SPRAYABLE THERMOPLASTIC**

[Remove section 84-2.03B(2)(C) in its entirety].

#### **84-2.03B (6) PAINT**

[Remove the following:].

Apply painted traffic stripes and pavement markings in 1 coat on existing pavement surfaces, at an approximate rate of 107 sq ft/gal.

Apply painted traffic stripes and pavement markings in 2 coats on a new pavement surface. The 1<sup>st</sup> coat of paint must be completely dry before applying the 2<sup>nd</sup> coat.

[Add the following:].

Apply painted traffic stripes in two coats. The first coat shall be 7-10 mils wet and the second coat shall be 24-25 mils wet. The contractor shall apply the 1<sup>st</sup> coat 14 days after new asphalt has been installed to allow for proper cure and at least 3 days before the first and second coats.

Newly placed painted traffic stripes and pavement markings shall be protected from damage by public traffic or other causes until the paint is thoroughly dry.

All white lines that are adjacent to green preformed thermoplastic such as detail 39A (conflict zones) or detail 38/38A (for bike boxes), etc. shall not be paint and shall be thermoplastic.

#### **84-2.04 PAYMENT**

[Remove the following:].

A double traffic stripe consisting of two 6-inch-wide yellow stripes are measured as 2 traffic stripes except for painted traffic stripes and sprayable thermoplastic traffic stripes.

A double sprayable thermoplastic traffic stripe consisting of two 6-inch-wide yellow stripes are measured as single traffic stripe.

[Add the following:].

Measurement and payment for thermoplastic paint stripe shall be per the unit price bid per Lump Sum (LS) and additional compensation shall not be allowed. Payment for thermoplastic striping and pavement markings, and symbols shall include full compensation for traffic control, and the furnishing of all labor, materials, tools and appurtenances necessary to complete all work involved as specified on the plans and specifications and no additional compensation will be allowed, therefore.

#### **84-9 EXISTING MARKINGS**

##### **84-9.03B REMOVE TRAFFIC STRIPES AND PAVEMENT MARKINGS**

[Replace in its entirety with the following:].

All striping and pavement markings must be removed to the fullest extent possible from the pavement by wet sandblasting with immediate cleanup of residue. No “blacking out” or temporary covering will be allowed. Such removal shall be by a vacuum attachment operating concurrently with the blast cleaning operations without damaging the pavement and subgrade.

All pavement markers to be removed shall be removed without damaging the pavement and without removing pavement to a depth of more than 1/8 inch. Remove pavement markings such that the old message cannot be identified. Water must not puddle in the ground areas. Fog seal ground areas on asphalt concrete pavement when striping and markings are removed on new pavement per discretion of City Representative.

Accumulations of sand or other material that might interfere with drainage or might constitute a hazard to traffic will not be permitted and shall be removed immediately. Traffic stripes and markings shall be removed before any change is made in the traffic pattern and before painting new stripes and markings.

Where blast cleaning is used for the removal of traffic stripes and pavement markings or for removal of objectionable material, and such removal operation is being performed within ten feet of a lane occupied by public traffic, the residue including dust shall be removed immediately after contact between the sand and the surface being treated.

After removal of existing markers and striping, temporary markers and striping must immediately be in place until such time where the final markers and striping can be placed.

#### **84-9.04 PAYMENT**

[Replace in its entirety with the following:].

Measurement and payment for existing markings shall be per the unit price bid per Lump Sum (LS). The lump sum unit price shall include full compensation for traffic control, and the furnishing of all labor, materials, tools and appurtenances necessary to complete all work involved as specified on the plans and specifications and no additional compensation will be allowed, therefore.

PAYMENT – Measurement and payment for the “Signing and Striping” shall be per the unit price bid per Lump Sum (LS) and “Signing and Striping” shall include full compensation for traffic control, preparation, cat tracking, striping, legends, RPMs, signs, all work required to complete the bid item, and the furnishing of all labor, materials, tools and appurtenances necessary to complete all work involved as specified on the plans and specifications and no additional compensation will be allowed, therefore.

Measurement and payment for the “Furnish and Install Flexible White K-71 Posts” shall be per the unit price bid per each (EA) and shall include full compensation for all work required to complete the bid item, and the furnishing of all labor, materials, tools and appurtenances necessary to complete all work involved as specified on the plans and specifications and no additional compensation will be allowed, therefore.

Measurement and payment for the “Furnish and Install Green Preformed Thermoplastic Markings” shall be per the unit price bid per square foot and shall include full compensation for all work required to complete the bid item, and the furnishing of all labor, materials, tools and appurtenances necessary to complete all work involved as specified on the plans and specifications and no additional compensation will be allowed, therefore.

## **SPECIAL PROVISIONS**

### **PART 4**

#### **EXISTING IMPROVEMENTS**

**BID ITEM NO. 5: VARIABLE COLD MILL 2"**

**BID ITEM NO. 14: ADJUST AND RESET EXISTING SURVEY MONUMENTS AND TIES PER CALIFORNIA LICENSED LAND SURVEYOR**

**BID ITEM NO. 29A ORANGE COUNTY SANITATION DISTRICT (OCSD) PVC-LINED MANHOLE COVERS TO GRADE**

**BID ITEM NO. 29B ORANGE COUNTY SANITATION DISTRICT (OCSD) UNLINED MANHOLE COVERS TO GRADE**

**BID ITEM NO. 30: ADJUST COSTA MESA SANITATION DISTRICT (CMSD) MANHOLES TO GRADE**

**BID ITEM NO. 32: ADJUST UTILITIES AND WATER VALVES TO GRADE**

**BID ITEM NO. 31 ADJUST STORM DRAIN MANHOLES TO GRADE**

#### **400-1 GENERAL**

##### **400-1.1 REMOVAL AND RESTORATION OF EXISTING IMPROVEMENTS**

Contractor shall remove and restore all existing improvements including but not limited to, removing and installing mailboxes, fences, walls, driveways, bricks, pavers, relocation of existing drain pipe, removing tree roots and restoring planters, sprinklers, and landscaping and irrigation system.

Contractor shall restore or replace to a condition equal to or better than existing condition. All replacement and restoration work shall be coordinated with the City and completed to satisfaction of the City.

##### **400-2 PERMANENT SURVEY MARKERS** *Replace with the following:*

Unless otherwise provided in the Special Provisions, 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 removal, relocating or resetting, the Contractor shall, prior to any construction work and under the supervision of a California-licensed Land Surveyor or Civil Engineer licensed to practice surveying, inventory all existing survey monuments and ties and establish sufficient temporary ties and bench marks to enable the points to be reset after completion of construction by the Contractor's Surveyor or Civil Engineer licensed to practice surveying. A copy of this inventory shall be submitted to the Engineer.

Submitted documents shall include field notes and sketches which must contain existing information of centerline control points, survey monuments and swing ties to be replaced such as existing L.S. No. or R.C.E. No., Per Parcel Map No. \_\_\_\_, or Tract Map No. \_\_\_\_, and other related information; they must be sealed and signed by the civil engineer or land surveyor registered by the State of California. The monument resetting work shall comply with the Subdivision Map Act, Orange County, California State requirements, and applicable CITY Codes.

*[Add the following Subsection:]*

#### **400-2.1 CITY STANDARD DRAWINGS**

- Standard Drawing No. 613 or 615.

Any ties, monuments and benchmarks disturbed during construction shall be reset per City standards after construction and the tie notes submitted to the City on 8½" x 11" loose leaf paper. The Contractor and its sureties shall be liable, at Contractor's expense, for any resurvey required due to its negligence in protecting existing ties, monuments, benchmarks or any such horizontal and vertical controls.

#### **400-2.2 Survey Monuments**

Reset tie monument shall have at least four (4) control points.

The Contractor shall obtain prior approval from the ENGINEER before setting new survey monuments and ties.

New survey monuments shall be set on new pavement surface with a 2.5" (minimum) P.K. nail, spike, or equal and brass washer with an R.C.E. or a L.S. tag. Four (4) new control lead and tack swing ties shall be set on top of curb for each new survey monument. If existing notches of a monument are on the manhole ring, said notches must be ground out after a new PCC collar is constructed around the manhole. The Contractor shall provide four points (monuments) of four-foot tangent over ties. Requirements shall be per the preceding paragraph.

If the Contractor fails to reset ties and monuments and fails to set new centerline ties, the CITY will hire private professional engineers or land surveyors to perform the work and will deduct such cost from the contract. The deduction shall include the cost of the CITY personnel time involved.

The Contractor must submit a corner record for each monument to the County of Orange for approval. The Contractor shall submit all approved monument corner records to the CITY before final payment.

The Contractor shall also submit to the CITY field notes and sketches for all existing control ties and monuments to be protected in place. These documents must be signed and sealed by either the Professional Licensed Land Surveyor or Civil Engineer registered in California.

#### **400-3 PAYMENT** *Replace the last sentence with the following:*

Full compensation for the requirements of Adjust and Reset Existing Survey Monuments and Ties per California Licensed Land Surveyor shall be paid for at the contract unit price bid **per EACH (EA)** as described in Part 1 of these Special Provisions. No additional compensation will be allowed therefore.



## **SECTION 402 – UTILITIES**

### **402-1 LOCATION**

#### **402-1.1 GENERAL** *Add the following:*

Locations of utilities shown on plans are approximate only and are based on a search of available records.

Attention is directed to the possibility of utility mains or laterals within the project limits. The CONTRACTOR shall have the locations of the various utility facilities within reconstruction areas marked on the surface prior to construction and protect them during the removal and reconstruction procedures. The CONTRACTOR shall contact the City Transportation Services Department to locate traffic signal conduit within the reconstruction areas.

Prior to commencing any other work, CONTRACTOR shall carefully excavate and determine precise locations and depths of all utilities, including service connections, shown on the plans and marked in the field, which may affect or be affected by Contractor's operations. This work shall be done in accordance with Section 402-1.1 of the Standard Specifications. CONTRACTOR shall not be compensated for any delays or extra work brought about by his failure to perform the above-mentioned work. CONTRACTOR shall be responsible for any damage to existing utilities shown on the plans pursuant to its location operations as required under this subsection of the Standard Specifications.

Upon completion of the Project, the CONTRACTOR shall be required to remove, to the satisfaction of the ENGINEER, all utility locator markings and utility tie-out paint markings that either the CONTRACTOR, the CITY or utility companies make during the course of the work from the surfaces of sidewalks, driveway approaches, curb and gutters, using the removal method acceptable to the ENGINEER. Any damage to the existing improvements due to CONTRACTOR'S removal operation, shall be included in the various applicable items of work, and no additional compensation will be allowed therefor.

The CONTRACTOR shall notify and coordinate with the owners of the utility companies at least two (2) working days in advance of any work to be done by said utility companies' forces (See Subsection 402-4 of these Special Provisions for utility contact information).

#### **402-1.2 PAYMENT** - *Replace with the following:*

Full compensation for the requirements of utility location, notifications, coordination and scheduling of utility work (including utility work to be done by utility forces), performed by the Contractor, shall be included in the contract unit prices bid for the various items of work requiring utility location to be performed by others, and no further compensation will be allowed.

#### **402-2 PROTECTION** - *Add the following:*

The Contractor shall be responsible for protecting and supporting all existing utilities and

maintaining the location of and access to all gate valves during construction. When damage to existing utilities is caused by the Contractor's operations, the Contractor shall, at his expense, repair or replace damaged facilities promptly, in accordance with all applicable sections of the Standard Specifications and the standards of each affected utility. Should the Contractor fail to perform the required repairs or replacements, the cost of performing such repairs or replacement by others shall be deducted from any monies due or to become due the Contractor.

#### **402-2.1 PAYMENT**

Payment for utility protection by the Contractor shall be included in the contract unit prices bid for the various items of work requiring utility protection and no further compensation will be allowed.

#### **402-4 RELOCATION** *Add the following:*

Any miscellaneous utilities to be relocated by the Contractor, as indicated on the Plans, shall be relocated in a workmanlike manner, and all such work shall be done only at such times which are acceptable to the utility owner. The Contractor shall schedule its relocation work in cooperation with the utility owner and shall be responsible for any costs resulting from the Contractor's failure to do the work at times which are acceptable to the owner. The Contractor shall notify owners of the following companies at least two (2) working days in advance of any work:

<b>AT&amp;T (right-of-way)</b> Valentina Gipson 3939 E Coronado St, Rm 2030 Anaheim, CA 92807 (o) 714-618-9132 Email: <a href="mailto:yk3921@att.com">yk3921@att.com</a>	<b>Cost Mesa Sanitary District</b> Javier Ochiqui, Management Analyst 290 Paularino Avenue Costa Mesa, CA 92626 (o) 949-645-8400 Email: <a href="mailto:jochiqui@cmsdca.gov">jochiqui@cmsdca.gov</a>
<b>AT&amp;T</b> Rhonda Clary-Byers (engineer for Costa Mesa) or Doug DiPaolo 3939 E. Coronado St. Anaheim, CA 92807 (o) 714-618-9116 (o) 714-618-9125 Email: <a href="mailto:rc1315@att.com">rc1315@att.com</a> Email: <a href="mailto:dd2634@att.com">dd2634@att.com</a>	<b>Costa Mesa Sanitation District</b> Nabila Guzmán, Construction Notices 290 Paularino Avenue Costa Mesa, CA 92626 (o) 949-645-8400, ext. 230 Email: <a href="mailto:nguzman@cmsdca.gov">nguzman@cmsdca.gov</a>
<b>Mesa Water District</b> Phil Lauri 1965 Placentia Ave. (inter-office mail okay) Costa Mesa, CA 92627 (o) 949-207-5449 (c) 949-631-1200 (24-hour) Email: <a href="mailto:phill@mesawater.org">phill@mesawater.org</a>	<b>Orange County Water District (OCWD)</b> Chris Olsen P.O. Box 8300 Fountain Valley, CA 92728 (o) 714-378-3200 (c) 714-378-3240 (24-hour) Email: <a href="mailto:colsen@ocwd.com">colsen@ocwd.com</a> Email: <a href="mailto:utilityrequest@ocwd.com">utilityrequest@ocwd.com</a>

<b>Mpower Communications, Inc.</b> Mark Denning 2698 White Road Irvine, CA 92614 (o) 949-864-0296 (c) 949-547-6455 Email: <a href="mailto:mdenning@telepacific.com">mdenning@telepacific.com</a>	<b>CA Regional Water Quality – Santa Ana Region</b> Mark Smythe 3737 Main St., Suite 500 Riverside, CA 92501 (o) 951-782-4130 (c) 951-543-8523 Email: <a href="mailto:msmythe@waterboards.ca.gov">msmythe@waterboards.ca.gov</a>
<b>Orange County Sanitation District (OCSD)</b> Rudy Davila P.O. Box 8127 Fountain Valley, CA 92728 (o) 714-593-7348 (c) 714-593-3301 (24-hour) Email: <a href="mailto:RDavila@ocsd.com">RDavila@ocsd.com</a>	<b>Irvine Regional Water District</b> Kelly Lew 15600 Sand Canyon Ave. Irvine, CA 92618 (o) 949-453-5586 (p) 949-729-7300 (24-hour) Email: <a href="mailto:lew@irwd.com">lew@irwd.com</a>
<b>Irvine Regional Water District</b> Brad Jackson (Area Construction Inspector) 15600 Sand Canyon Ave. Irvine, CA 92618 (o) 949-632-0627 (p) 949-729-7300 (24-hour) Email: <a href="mailto:jackson@irwd.com">jackson@irwd.com</a>	<b>SCE (Senior Compliance)</b> Susan Morgan (o) 909-835-7527 (c) 909-835-7527 Email: <a href="mailto:susan.morgan@sce.com">susan.morgan@sce.com</a> <i>*No pre-construction meeting notices BUT Susan Morgan and Mónica Balderas would like to attend all UTILITY MEETINGS and be made aware of any fee schedule changes.</i>
<b>Irvine Ranch Water Dist. – Development Services*</b> Christian Kessler, P.E. 15600 Sand Canyon Ave. Irvine, CA 92618 (o) 949-453-5300 (p) 949-453-5441 Email: <a href="mailto:kessler@irwd.com">kessler@irwd.com</a> <i>*utility requests</i>	<b>SCE (Service Planner – Orange Coast S/C)</b> Damon Humphrey 7333 Bolsa Ave. Westminster, CA 92683 (o) 714-895-0534 Email: <a href="mailto:damon.humphrey@sce.com">damon.humphrey@sce.com</a>
<b>Metropolitan Water District of So. California</b> Civil Engineering Substructures Section Shoreh Zareh P.O. Box 54153 Los Angeles, CA 90054 (o) 213-217-7474 (c) 626-844-5610 (24-hour) Email: <a href="mailto:szareh@mw2o.com">szareh@mw2o.com</a>	<b>SCE (Service Planner – Orange Coast S/C)</b> Mónica Balderas 7333 Bolsa Ave. Westminster, CA 92683 (o) 714-329-2778 Email: <a href="mailto:monica.balderas@sce.com">monica.balderas@sce.com</a>
<b>Metropolitan Water District of So. California</b> Civil Engineering Substructures Section Kieran Callanan P.O. Box 54153 Los Angeles, CA 90054 (o) 213-217-7474 (c) 626-844-5610 (24-hour) Email: <a href="mailto:kcallanan@mw2o.com">kcallanan@mw2o.com</a>	<b>*Reminder*</b> After facilities are identified on the plans, send the plans to Gail Gardner, and she will forward to SCE's planning department.  Send to: <a href="mailto:gail.gardner@sce.com">gail.gardner@sce.com</a>

<b>SCE (Utility Notice Requests)</b> Kasy Chapman 7333 Bolsa Ave. Westminster, CA 92683 (o) 714-895-0109 (c) 800-611-1911 (24-hour) Email: <a href="mailto:kasey_chapman@sce.com">kasey_chapman@sce.com</a>	<b>Southern California Gas Co.</b> Wilson Baldelomar P.O. Box 3334, SC8321 Anaheim, CA 92803 (o) 714-634-5091 (p) 800-603-7060 (24-hour) Email: <a href="mailto:wbaldelomar@semprautilities.com">wbaldelomar@semprautilities.com</a>
<b>SCE (Base Maps)</b> Kimberly Gurule 1444 E. McFadden Ave., Bldg. "D" Santa Ana, CA 92705 (o) 714-796-9932 Email: <a href="mailto:maprequests@sce.com">maprequests@sce.com</a> <i>*No pre-construction meeting notices to this address – map requests ONLY.</i>	<b>Southern California Gas Co.</b> Wilson Baldelomar P.O. Box 3334, SC8321 Anaheim, CA 92803 (o) 714-634-5091 (p) 800-603-7060 (24-hour) Email: <a href="mailto:wbaldelomar@semprautilities.com">wbaldelomar@semprautilities.com</a>
<b>Southern California Gas Co. (Transmission)</b> P.O. Box 2300 Chatsworth, CA 91313-2300 (o) 818-701-4546 Email: <a href="mailto:SoCalGasTransmissionUtilityRequest@semprautilities.com">SoCalGasTransmissionUtilityRequest@semprautilities.com</a>	<b>Verizon Business Investigations</b> 2400 N. Glenville Dr. Richardson, TX 75082 (o) 972-729-6016 (o) 469-886-4238 Email: <a href="mailto:investigations@verizon.com">investigations@verizon.com</a> *2nd Email: <a href="mailto:chuck.czumak@verizon.com">chuck.czumak@verizon.com</a> Contact Verizon Business for issues involving: --- Brooks Fiber Properties, Inc. --- MCI metro Access Transmission Svcs. --- MCI Telecommunications Svcs --- MFS Telecom, Inc. --- SourtherNet, Inc. / WorldComNetwork Svc. --- Intermedia Communications, Inc. --- XO Communications
<b>Southern California Gas Co.</b> Richard Clendineng P.O. Box 3334, SC8321 Anaheim, CA 92803 (o) 714-634-3262 Email: <a href="mailto:rclendineng@semprautilities.com">rclendineng@semprautilities.com</a>	<b>Charter Communications</b> Don Simons Construction Manager, Zone 8 7142 Chapman Ave. Garden Grove, CA 92841 (o) 714-591-4871 Email: <a href="mailto:don.simons@charter.com">don.simons@charter.com</a>
<b>Southern California Gas Co.</b> Peter Serrano P.O. Box 3334, SC8321 Anaheim, CA 92803 (o) 714-634-5067 Email: <a href="mailto:pserrano@semprautilities.com">pserrano@semprautilities.com</a>	<b>Charter Communications</b> Utility Research Requests E-mail: <a href="mailto:DL-SOCAL-CHARTER-ENGINEERING@CHARTER.COM">DL-SOCAL-CHARTER-ENGINEERING@CHARTER.COM</a>
<b>Spectrum Time Warner Cable</b> José Román 12051 Industry St. Garden Grove, CA 92841 (o) 714-591-4846 (c) 657-263-3641 Email: <a href="mailto:jose.roman@charter.com">jose.roman@charter.com</a>	<b>XO Communications</b> Matt Bergine Engineer IV Specialist-Network Engineering & Operations (o) 949-417-7841 (c) 714-822-6207 Email: <a href="mailto:matt.bergine@verizon.com">matt.bergine@verizon.com</a>

<b>Spectrum Time Warner Cable</b> Main Number 7142 Chapman Ave. Garden Grove, CA 92841 (o) 714-709-3390	<b>XO Communications</b> Switchboard (o) 703-547-2000
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<b>OCTA – Stops &amp; Zones</b> Kyle Poff 550 S. Main St. Orange, CA 92863 (o) 714-560-5833 Email: <a href="mailto:kpoff@octa.net">kpoff@octa.net</a> <b>OCTA (Detour Coordination)</b> Dispatch: 714-265-4330	<b>Newport-Mesa Unified School District</b> Tim Marsh, Administrative Director, Facilities Support Svcs. (o) 714-4247527 Email: <a href="mailto:tmarsh@nmusd.us">tmarsh@nmusd.us</a> <b>Newport-Mesa Unified School District</b> Mary Gray Email: <a href="mailto:mgray@nmusd.us">mgray@nmusd.us</a>
<b>OC Fair &amp; Event Center</b> Jerry Eldridge, Director of Facilities (o) 714-474-5983 Email: <a href="mailto:JEldridge@ocfair.com">JEldridge@ocfair.com</a>	<b>DIGALERT.ORG</b> (24-HR) 811 2 days before digging.

Where existing utility main lines and conduits (excluding sewer main lines) and all utility service lines (excluding sewer laterals) are to be relocated or declared abandoned by the affected utility companies, the Contractor shall be responsible for contacting the respective utility representatives for coordinating the relocations and for determining the abandonments. The Contractor shall proceed with excavation in such a manner that will allow utility companies adequate and reasonable time to relocate service lines. The Contractor shall not be compensated for any delays caused by failure to coordinate the above work with utility companies.

## SECTION 403 – MANHOLE AND VALVE ADJUSTMENT AND RECONSTRUCTION

### 403-1 GENERAL *Replace with the following:*

Contractor shall adjust existing manholes and water valves to grade conforming to all applicable sections of the latest edition of the Standard Specifications, Mesa Water District (MWD) Standards & Specifications, Costa Mesa Sanitary District Standards & Specifications, and City of Costa Mesa Standard Plans.

The Contractor shall notify affected utility owners at least 5 working days in advance of the need to commence work required prior to paving operations and again for work required after paving operations. The Contractor shall mark locations of utility vaults where utility companies specifically state adjustments shall be made after paving. If it is found to impractical for the utility owner to complete remodeling or adjustment to structures, as evaluated by the ENGINEER, then the Contractor shall be absolved of further responsibility in connection therewith, and the structure shall be adjusted to grade by the utility owner under permit or ordinance procedure established by the CITY for utility cuts in pavement.

The manhole and valve box locations and distance from curb to center shall be marked on the curb face by the Contractor.

Unless otherwise specified in the Plans, Special Provisions, or Technical Provisions, existing surface and subsurface utility structures owned by telephone, TV cable, gas, and electric agencies shall be raised to grade at the expense of the respective utility owner.

The Contractor shall be solely responsible for coordinating utility work with any utility companies not listed in the bid schedule. This includes initiating contact, facilitating agency involvement, ensuring compliance with all applicable regulations and project requirements, and performing any necessary coordination to ensure the work is completed.

### **403-3 MANHOLES AND VALVES IN ASPHALT CONCRETE PAVEMENT**

#### **403-3.1 STORM DRAIN AND SANITARY SEWER MANHOLES**

All Storm Drain (SD) and Sanitary Sewer (SS) Manholes are to be protected from debris prior to construction and shall be thoroughly cleaned of any construction debris, which may have entered the manhole due to the Contractor's operations.

Work shall include the removal or furnishing of grade rings as necessary to adjust the manhole to grade.

The method of adjusting manholes in areas for resurfacing shall be as follows:

The asphalt pavement immediately adjacent to the manhole shall be removed, the manhole shaft extended with adjustment ring(s) to proper grade, the manhole frames and covers replaced, the manhole frames set in concrete, and the pavement replaced with a minimum of 2 inches of asphalt concrete. The finished grade of the cover shall be  $\frac{1}{4}$  inches below the finish grade of the asphalt pavement. The asphalt pavement material shall conform to the surrounding pavement and AC pavement requirements of these Special Provisions.

Existing SD and SS manholes shall be adjusted to new pavement grade **48 hours** after paving operation.

The Concrete for the SD and SS manholes shall be **560-C-3250**.

Contractor shall notify the Costa Mesa Public Works Department for coordination of SD manhole adjustments and Costa Mesa Sanitary District (CMSD) or Orange County Sanitation District (OCSD) for coordination of SS manhole adjustments and Mesa Water District (MWD) for water manhole adjustments, at least two working days prior to beginning work.

#### **403-3.2 WATER VALVES**

Water valves shall be protected in place and shall be accessible at all times during construction.

Valve covers shall be marked as to their location by the contractor prior to the placement of the pavement. The contractor shall furnish new valve cans if existing cans are damaged during operation. Existing covers shall be adjusted to new pavement grade **48 hours** after paving operation.

Contractor shall notify the respective water district at least 2 working days prior to beginning work. All work adjusting water valve cans and covers to grade shall be inspected and approved by Mesa Water District (MWD).

Valve boxes shall be checked with a valve key for proper operation.

The Concrete for the valve covers and collars shall be **560-C-3250**.

The Contractor shall be responsible for maintaining location of, and access to, all water line gate valves during construction operations. The Contractor may salvage and utilize all existing caps or sleeves, but shall be required to furnish all sleeve extensions. Any lost caps or sleeves shall be replaced by the Contractor at his cost.

All existing broken water sleeves shall be removed and replaced by the Contractor who shall contact the respective utility to pick up new sleeves for replacement.

#### **403-4 MEASUREMENT AND PAYMENT**

Full compensation for the requirements of Adjust Manhole Frame & Cover to Grade will be paid for at the **contract unit price bid per EACH (EA)** as described in Part 1 of these Special Provisions. No additional compensation will be allowed therefore.

Full compensation for the requirements of Adjust Storm Drain Manhole Frame & Cover to Grade will be paid for at the **contract unit price bid per EACH (EA)** as described in Part 1 of these Special Provisions. No additional compensation will be allowed therefore.

Full compensation for the requirements of Adjust Water Valve Can & Cover to Grade

will be paid for at the **contract unit price bid per EACH (EA)** as described in Part 1 of these Special Provisions. No additional compensation will be allowed therefore.

Full compensation for the requirements of Adjust and Reset Existing Survey Monuments and Ties, Well Monument Can & Cover to Grade will be paid for at the **contract unit price bid per EACH (EA)** as described in Part 1 of these Special Provisions. No additional compensation will be allowed therefore.

## **SECTION 404 – COLD MILLING**

### **404-1 GENERAL** *Add the following:*

Cold milling of existing asphalt is required to remove damaged pavement and to permit new asphalt pavements to adhere to the existing surface and shall be performed per Plans and in accordance with Section 404, “Cold Milling” of the Standard Specifications, and as modified herein.

The existing asphalt concrete pavement shall be cold milled from the finished surface to depths per Typical Sections and Details as shown on the plans. The final cold milling depth shall result in a uniform surface conforming to the Typical Section(s) and Details shown on the plans, except as otherwise directed by the ENGINEER.

Except as otherwise called for on the Plans, all A.C. pavement cuts shall be cut to neat, clean, and straight lines to the satisfaction of, and as directed by, the ENGINEER.

Burning or heat planing will not be permitted. The planed pavement shall provide a maximum bond surface suitable for resurfacing.

The cold milled material shall be the responsibility of the Contractor to remove and dispose of from the Project limits in accordance with all laws and regulations.

### **404-1.1 CRACK SEALING**

If the respective bid item is included in the bid schedule, upon completing the required cold mill depth, the Contractor shall inspect, sweep, and seal all cracks that are equal to or greater than ¼” wide and 1” deep as follows:

Clean entire crack to a depth of up to 1” using sandblasting, brushing, and air blowing techniques as required to provide a crack free from all debris, dust, loose material and moisture. Gouging or plowing may be required to remove incompressible debris deep in the crack. The cleaned crack shall be filled with granulated tire rubber, plasticizer and filler, as manufactured by Crafcro as Road Saver 203, or approved equal. All crack filler material shall be in conformance with the manufacturer’s specifications. The crack sealant placed shall be slightly below the cold milled pavement surface to avoid over-application and wicking through the new AC surface during compaction of the AC Base and Surface Course lifts. Deep cracks greater than 1” should be filled with sand and covered with a thin layer of sealant.

The sealant product shall conform to the following specifications:



ASTM D6690, D3405, AASHTO M173 and Federal SS-S-164 and SS-S 1041C.

All holes greater than 4" in diameter that exceed the cold mill depth specified shall be cleaned of loose materials, filled with Dense Graded Asphalt Concrete (DGAC) Type B PG-70-10-RAP (Max. 10% RAP), and compacted (95% Relative Compaction) to a smooth even surface with the adjacent existing milled pavement prior to placement of the AC Base or Leveling Course.

#### **404-1.2 EXISTING FACILITIES**

##### Survey Monuments

Surveyor's street and property line monuments, not scheduled for removal shall be protected in accordance with the Standard Specifications and these Special Provisions.

##### Utilities

The CITY has made every reasonable effort to locate and mark on the Plans all known metal roadway improvements such as sewer manhole covers, water valve covers, catch basin covers, which, if struck, could damage the cold milling cutting drum and/or carbide tipped cutting teeth and makes no guarantee that it has successfully done so, therefore, Contractor must thoroughly inspect the work site in advance of the cold milling operation to minimize the risk of striking any unseen under surface object(s) and shall include in the price bid for cold milling the removal work, additional amount sufficient to cover the cost of damage related down time and the cost of repair of damage to said cold milling cutting drum and/or carbide tipped cutting teeth.

##### Curb and Gutter

Care shall be exercised not to damage adjacent concrete gutters or curbs. Gutters or curbs damaged shall be replaced at the Contractor's expense.

#### **404-8 DISPOSAL OF MILLINGS** *Add the following:*

Residue from grinding shall not be permitted to flow or travel into gutters, onto adjacent street surfaces or parkways. All residues shall be completely removed by sweeping and properly disposed. No washing of residues into drainage structures will be allowed.

#### **404-10 PAVEMENT TRANSITIONS** *Add the following:*

Where required, temporary asphalt concrete ramps shall be installed to meet all current ADA accessibility requirements. Additionally, temporary asphalt concrete shall be placed at all cross-street transition sections, and driveways, as required for grade change conformance tapers.

## **PART 6**

### **TEMPORARY TRAFFIC CONTROL**

#### **SECTION 600 – ACCESS**

#### **Bid Item No. 17: Temporary Traffic Control - Pedestrian Control, Construction Phasing and Staging & Public Convenience & Safety**

#### **SECTION 600 – ACCESS**

##### **600-1 GENERAL** *Add the following:*

Prior to restricting normal access from public street to adjacent properties, the Contractor shall notify each property owner or owner's agent, informing them of the nature of the access restriction and the approximate duration of the restriction. The Contractor shall make every effort possible to minimize such restrictions.

##### **600-2 VEHICULAR ACCESS** *Add the following:*

Trenches left open overnight shall be bridged in a safe and acceptable manner at all driveways and walkways to provide safe access.

The Contractor shall provide access as required to accommodate special circumstance at any residence including access for disabled, impaired, special medical needs, etc.

The Contractor shall use temporary asphalt surfacing at his own expense as required to maintain traffic in a safe and nondisruptive manner. The Contractor shall construct temporary AC ramps to provide safe and drive-able access to residents and businesses. Transitional and temporary asphalt concrete shall be removed prior to placement of new AC pavement.

##### **600-3 PEDESTRIAN AND EMERGENCY ACCESS** *Add the following:*

A minimum of one four (4) foot wide pedestrian walkway shall be maintained and safely delineated along each public street at all times during construction.

Contractor shall provide emergency access for the fire trucks and other emergency vehicles at all times.

Two (2) working days prior to the start of construction operations, the Contractor shall notify the Police and Fire Departments of the AGENCY, giving the approximate starting date, completion date, and the name and telephone number of responsible persons who may be contacted at any hour in the event of a critical condition requiring immediate correction.

The Contractor shall provide access as required to accommodate special circumstance at any residence including access for disabled, impaired, special medical needs, etc.

## **SECTION 601 TEMPORARY TRAFFIC CONTROL FOR CONSTRUCTION AND MAINTENANCE WORK ZONES**

### **601-1 GENERAL** *Add the following:*

Traffic control shall conform with the provisions set forth in the California Manual on Uniform Traffic Control Devices (CA MUTCD), and the latest edition of Work Area Traffic Control Handbook (WATCH) published by Building News, Inc, within the City Right-of-Way and pursuant to the Caltrans Standard Plans and Specifications within the Caltrans Right-of Way, and the Plans and Specifications.

The Contractor shall perform all work for this Project Monday through Friday, and including Saturday and Sunday if directed by the Engineer, and shall be allowed to work from 8:30 a.m. to 3:30 p.m. on residential streets, and from 8:30 a.m. to 3:30 p.m. on arterial and collector streets (see City's Master Plan of Highways for reference), or unless directed otherwise by the ENGINEER. The Contractor may be allowed to work additional hours on Saturdays and Sundays pursuant to and at the discretion of the ENGINEER.

### **Special Conditions to Traffic Control and Limitations to Working Hours**

Lane closures shall be allowed per the traffic control and working hours shown in the City approved Temporary Traffic Control Plan (TTCP). Minor deviations from the requirements concerning hours of work, which do not change the cost of the work, may be permitted by the ENGINEER upon the written request of the Contractor, provided that traffic will be better served and the work expedited. The Contractor shall obtain prior written approvals from the Engineer before adopting such deviations.

### **601-2 TEMPORARY TRAFFIC CONTROL PLAN (TTCP)** *Add the following:*

The Contractor shall submit to the City a complete Temporary Traffic Control Plan (TTCP) for approval on all construction phases and stages in accordance with the Plans, the Standard Specifications, the Caltrans' Manual of Traffic Controls in Construction and Maintenance Zones (latest edition) within Caltrans Right-of-Way, these Special Provisions and the standards contained in the California Manual on Uniform Traffic Control Devices (CA MUTCD) in the Work Area Traffic Control Handbook (WATCH) published by Building News, Inc. (latest edition) within City Right-of-Way.

The Contractor shall submit a legible, detailed Traffic Control Plan (TCP) on one or more 24" x 36" reproducible plan sheets which shall clearly show and/or describe all proposed lights, warning signs, barricades, delineators, temporary lane markings, temporary traffic signals or signs, and any and all other facilities proposed to be installed. Said TCP shall be prepared and stamped/sealed, signed, and dated by a State of California Registered Traffic Engineer and shall show all lane closures, restrictions, tapers, and other disruptions of normal traffic flow, 111 including pedestrian and vehicular detours. A schedule and/or sequencing diagram shall be included. Said TCP may be drawn on a sepia or other transparent copy of the project's Plans.

Within one (1) week of receiving Award of Contract, contractor shall meet with the City to discuss the proposed traffic control plan and construction staging and phasing.

TCP shall be submitted to the Engineer for approval within fifteen (15) calendar days after Award of the Contract. Contractor may submit traffic control plan for each Phase separately. Incomplete traffic control plan will be rejected without reviewing. The City will not be responsible for any delay of the project due the incomplete submittal of the traffic control plan. The contractor shall ensure that any cold-milled street is paved within 48 hours of milling.

NOTE: Contractor to be aware of the following restrictions to any and all work being performed within the City of Costa Mesa when developing the TTCP, unless otherwise directed by the ENGINEER:

- a. Any work within a two (2) block radius of any school will be performed during a school break or on weekends. Contractor shall coordinate work schedule with ENGINEER, prior to commencing of proposed improvements.
- b. Contractor is not allowed to perform any work adjacent to the Orange County Fair Grounds from Friday prior to the start of the Orange County Fair to the Monday after the Fair ends. During this time, Contractor shall coordinate with the Engineer locations of the streets, as specified in the City's Orange County Fair Moratorium Map, prior to commencing of proposed improvements.
- c. The Contractor shall not be allowed to perform any work from the Monday before Thanksgiving to the Monday after New Year's Day on Arterial streets, and during the week of any Holiday (Sunday through Saturday) on Residential streets. During this period, all work shall be completed, all travel and/or traffic lanes shall be restored to a safe condition, be fully operational, and shall be opened to vehicular traffic.
- d. During elections, no work will be allowed within six hundred feet (600') from polling place including no parking of construction equipment or employee vehicles within said distance of 600 feet.
- e. Prior to commencement of any work within City limits, the contractor shall coordinate with the ENGINEER so that the work performed will not interfere with any special events occurring in the City throughout the year.
- f. Any night or weekend work shall be approved by the City a minimum of five (5) working days prior to the scheduled construction of the streets affected.

### **601-3 TEMPORARY TRAFFIC CONTROL (TTC) ZONE DEVICES**

#### **601-3.4 OPERATIONS AND MAINTENANCE** *Add the following:*

The Contractor shall keep the areas adjacent to the Project site clear of any objects that may be hazardous to pedestrians and motorists. Provisions to reroute pedestrians, including the disabled, around the work area must be clearly delineated. The Contractor shall be responsible for the project safety on a 24-hour basis each calendar day for the entire duration of the project.

The City will only provide inspection during the designated construction hours Monday through Friday and as approved by the ENGINEER for Saturday and Sunday work in accordance with the work hours defined herein. Any work done without inspection is at the Contractor's risk and subject to rejection. The replacement costs for rejected work will be borne by the Contractor.

The Contractor shall protect and preserve all the existing pavement outside construction limits in the same condition as existing. Contractor shall replace and/or repair the damaged area to the satisfaction of the ENGINEER at no cost to the CITY if damaged by the Contractor.

Prior to the start of each workday, the Contractor shall perform all necessary work incidental to and commensurate with the proper signing, detouring, barricading, etc., heretofore and hereinafter specified that is required for that particular day's schedule of operations. No construction shall be permitted until such signing and detouring operations have been completed.

### **601-3.5 SIGNS AND SIGNAGE**

#### **601-3.5.1 GENERAL** *Add the following:*

The Contractor shall use illuminated or reflective warning/construction signs at both ends of construction area, and at appropriate locations or as directed by the ENGINEER for the entire duration of the project. Solar powered flashing arrow boards will be required for all lane closures and may be required for other traffic control. In addition to other delineation, the Contractor shall be responsible for the project safety on a 24-hour basis. Where construction signing conflicts with existing signing, the Contractor shall cover existing signs in a manner approved by the ENGINEER.

In order to minimize interruption to the construction and the inconvenience to the motorists, the Contractor must post traffic control signs at all applicable approaches to forewarn traffic. All signs must be visible and readable to the traffic from a minimum distance of 75 feet.

The Contractor shall install C-18 ROAD CONSTRUCTION AHEAD, C-17 with APPROPRIATE SPEED LIMIT, and C-13 END CONSTRUCTION signage and as required pursuant to the Plans and Specifications.

The Contractor shall furnish, install, post and maintain in place "No Parking - Tow Away" signs of a minimum height of forty-two (42) inches (from ground finish surface to top of sign) on temporary traffic control devices (even if streets have posted "No Parking" signs), which shall be posted at least **72 hours** prior to commencement of roadwork, unless otherwise directed by the ENGINEER. On the sign, Contractor shall print the hours, day(s) and date of closure in two-inch-high letters and numbers. A sample of the completed sign shall be approved by the ENGINEER five (5) working days prior to posting. The signs shall be spaced at a maximum of 50 feet from the street intersection and/or from each adjacent sign and at 200 feet spacing within each alley. For any work

to be performed on Monday morning or a morning following a holiday, the Contractor must post "No Parking - Tow Away" signs with all requirements as specified at least 48 hours prior to weekend or holiday begins.

When directed by the ENGINEER, the Contractor shall provide flagmen to direct the traffic, at no additional contract cost to the CITY.

### **Coordination of Traffic Control with Residents, Utilities, and other Agencies**

The Contractor shall complete the following coordination efforts with residents, affected utilities, and other agencies as part of the Temporary Traffic Control work:

#### **a. Scheduling**

The Contractor shall submit the Construction Work Schedule to the CITY for review and acceptance pursuant to Section 6-1.1 of the General Provisions. This schedule shall provide affected residents and businesses ample "on-street" parking within an 800-foot distance from their residence and/or businesses'. Requests for changes in the schedule shall be submitted by the Contractor to the CITY for approval at least three (3) working days prior to the scheduled construction of the streets affected.

#### **b. Notification**

Two (2) weeks prior to construction, the Contractor shall be responsible for all notification to the residents and the businesses, and provide project status updates to affected residences and businesses informing them of the pending Project and Scope of Work, unless otherwise directed by the ENGINEER. The Contractor shall submit a resident notification letter to the CITY for approval at least five (5) working days prior to delivery. The Contractor shall hand deliver copies of the approved notification letter and a newsletter (copies provided by the CITY) to the affected residences and businesses prior to the scheduled construction of the streets. This notification letter shall state the date and time of restricted travel on the affected streets. Failure to meet the approved schedule requires that the Contractor immediately notify residents of the cancellation for that day's work and reschedule construction of the affected area at a later date, at no cost to the CITY. Notification of rescheduled work shall follow this same procedure.

Notify the ENGINEER five (5) working days before commencing any work as stated in "a" above.

Notify the trash pick-up company "Costa Mesa Disposal" and all other trash haulers licensed to do business within the city of Costa Mesa of the schedule of work and the limitation of access. Coordinate with trash haulers and residents to ensure that regularly scheduled trash collection will occur. Contact Public Services Department at (714) 754-5307 for addresses of Costa Mesa Disposal and other trash haulers; also notify U.S. Postal Service and all other affected utilities (Edison, sewer, water, gas, telephone, etc.).

Coordinate with Orange County Transportation Authority to plan and to accommodate bus routes at least five (5) working days prior to commencement of any work, which will affect any of their facilities.

**601-3.6.4 BARRICADES** *Add the following:*

Type I, II, and III barricades shall be used at all approaches, per standards and as directed by the Engineer. The Contractor shall employ sufficient traffic barriers to prevent traffic from entering the construction areas.

**601-4 TEMPORARY TRAFFIC STRIPING AND PAVEMENT MARKINGS**

The Contractor shall provide temporary delineation as depicted in the TTCP and as directed and approved by the ENGINEER. Temporary delineation shall include wet nozzle sandblasting of conflicting markings, installation and removal of temporary centerlines or lane lines, detour signing, barricading, replacement of traffic lines, and markings in their proper locations upon termination of the detour phase.

Provide temporary travel lane delineation, as required, at all times. Temporary flexible reflective stick-on markers (slurry markers) may be applied.

Any locations yielding a situation that is not considered drive-able by the ENGINEER shall be resolved by the Contractor at the direction of the ENGINEER. The Contractor shall not be paid for such corrective action and shall be charged for any costs incurred by the City for corrective action.

Provide temporary traffic restriping at the conclusion of any working day for any centerline or lane line, which is obliterated by construction for a distance longer than 65 feet.

**601-4.3 REMOVAL** *Replace with the following:*

Removal shall conform with Section 314-2 of these Special Provisions.

The Contractor shall provide the first coat of permanent traffic restriping in accordance with Section 314 of these Special Provisions.

**601-4.4 MEASUREMENT**

**601-4.5 PAYMENT** *Replace both with the following:*

**601-4 4 MEASUREMENT AND PAYMENT**

Measurement and Payment for Temporary Traffic Striping and Pavement Markers shall be included in the **contract LUMP SUM (LS) price bid** for Signing and Striping bid item as described in Part 1 of these Special Provisions. No additional compensation will be allowed therefore.

**601-5 TRAFFIC LANE WIDTHS AND CLEARANCES**

**601-5.2 LANES WIDTHS** *Add the following:*

The minimum lane width shall be 10 feet. There shall be a minimum of 5-foot clearance from open excavations deeper than 4-inches, and 24-inches clearance from other obstructions and any excavations less than 4-inches unless authorized by the Engineer. The clearance requirements from open excavations may be reduced if K-railing (if the contractor so chooses) with crash cushions are utilized; the specification and layout of the K-rails with crash cushions shall conform to Caltrans' standards and shall be approved by the ENGINEER; all costs for K-rails and crash cushions shall be borne by the Contractor.

*[Add the following Subsection:].*

## **602 MEASUREMENT AND PAYMENT**

Full compensation for the requirements of Traffic & Pedestrian Control, Construction Phasing & Public Convenience & Safety will be paid for at the **contract LUMP SUM (LS) price bid** as described in Part 1 of these Special Provisions. No additional compensation will be allowed therefore.



## **PART 7**

# **STREET LIGHTING AND TRAFFIC SIGNAL SYSTEMS**

**BID ITEM NO. 24: FURNISH AND INSTALL TRAFFIC LOOPS**

**BID ITEM NO. 16: FURNISH AND INSTALL PULL BOXES**

**BID ITEM NO. 25: FURNISH AND INSTALL PEDESTRIAN HYBRID BEACON  
(HAWK SIGNAL)**

**BID ITEM NO. 26: TRAFFIC SIGNAL MODIFICATION (FAIRVIEW/WILSON)**

[Replace Entire Section with the following.]

### **General**

The work embraced herein shall be done in accordance with the latest Edition of the Standard Specifications and the Standard Plans, of the California Department of Transportation (CALTRANS) insofar as the same may apply and these special provisions.

The following additions are made to the "Standard Specifications." If there is a conflict between the "Standard Specifications" and these additions, these additions shall have precedence. Provisions of Sections 12, 56, 84, 86 and 87 of the Standard Specifications and Standard Plans, and any applicable errata (or Revised Standard Plans) of the State of California, Department of Transportation shall apply to all construction materials, methods, and payment for traffic signal and lighting work, except as stated herein.

### **Bid Item No. 24: Furnish And Install Traffic Loops**

Furnish and Install (Type F) or (Type E Circular) Traffic Signal Loop Detector

### **86-5 Detectors**

In addition to 86-5.01A (5) Installation Details, the following shall be added:

With reference to Curb Termination Detail Type A, ES-5E California Standard Plan, page 255, the excavation in the pavement adjacent to the curb and gutter section shall be backfilled with a combination of four inches (4") minimum thickness fine hot mix bituminous material with 5.6 percent by dry weight asphalt binder mixed with minimal aggregate over two inches (2") minimum thickness, 95 percent compacted sand tack coated on all contact surfaces. Entering saw-slot shall be deepened to allow both conduit and slack loop leads to be entire within the compacted sand. Neither asphalt nor epoxy is to be allowed to encase the loop leads. Provide and install new conduit for detector loop lead-ins as required.

If required, the Contractor shall test the detectors with a motor-driven cycle, as defined in the California Vehicle Code, that is licensed for street use by the Department of Motor Vehicles of the State of California. The unladen weight of the vehicle shall not exceed 220 pounds and the engine displacement shall not exceed 100 cubic centimeters. Special features, components or vehicles designed to activate the detector will not be permitted. The Contractor shall provide an operator who shall drive the motor-driven cycle through

their response or detection area of the detector at not less than three (3) miles per hour nor more than seven (7) miles per hour. The detector shall provide an indication in response to this test.

The contractor shall install Type F loops for First Row Presence Detection. The contractor shall install Type D modified loops for all loops in a bicycle lane. All other loops including advance loops shall be Type E. For presence detection contractor shall install following number of Type E or F loops per lane:

- Left-turn lane – 4 loops at 10 O.C. (1 Type F, 3 Type E)
- Thru lane – 2 Loops at 10 O.C. (1 Type F, 1 Type E)
- Right turn lane (if applicable) – Total number of loops shown on plans (1 Type F, all additional loops shall be Type E per lane)

All Front Row Presence loops shall be installed starting at 1 foot behind the limit line.

For Advanced detection, the contractor shall install 1 Type E loop per Thru lane.

The Contractor shall test loops, associated wiring and splicing from the controller cabinet to assure continuity and shall establish that the signal and loops are fully actuated and operating as designed. The Contractor shall completely assess existing conditions and shall immediately notify the Engineer of any existing deviation from normal actuated signal operation in writing prior to start of work.

**Loop wire shall be Type 1. Loop detector lead-in cable shall be Type B**

All traffic loop detector installations shall have a minimum one (1) inch cover conforming to Caltrans Standard Plan ES-5A and ES-5B.

**Loops shall be installed 2 days following final AC work at intersections.**

Loop conductors and epoxy shall be installed on the same day the loop slots are cut. The Contractor shall seal all loop slots with asphalt emulsion sealant or approved equal.

Slots in asphalt concrete pavement shall be filled with asphaltic concrete sealant as follows:

Temperature of sealant material during installation shall be above 70° F. Air temperature during installation shall be above 50° F. Sealant placed in the slots shall be compacted by use of an 8-inch diameter by 1/8-inch-thick steel hand roller or other tool approved by the Engineer. Compacted sealant shall be flush with the pavement surface. Minimum conductor coverage shall be one inch. Excess sealant remaining after rolling shall not be reused. On completion of rolling, traffic will be permitted to travel over the sealant.

The Contractor shall determine if the existing loop lead-in conduit is adequate to accommodate the proposed loop wiring. Any increases in conduit size required to complete the work shall be included in the bid, and no additional compensation shall be allowed.

The Contractor shall contact the Engineer two (2) working days in advance for marking the locations of all existing loop detectors and adjusting signal timing prior to damaging or covering existing loops. The Engineer shall approve loop locations prior to installation; loops shall consist of 4 wraps.

Loop detectors shall be disconnected in adjacent pull box prior to pavement removal or pavement milling operations.

Measurement and Payment for “**Bid Item No. 24: Furnish and Install Traffic Loops**” shall be per the unit price bid per **Each (EA)** inductive loop detector installed, and shall be considered full compensation for providing all labor, materials, sawcut, epoxy and AC fill, new 2” stub outs (curb termination conduit) as required, home-run connections, tools, equipment, other work, testing detection connectivity, and incidentals to accomplish the work for full signal loop operation in accordance with the Plans, Specifications, pursuant to Caltrans Standard Plans and Specifications, and no additional compensation shall be allowed.

**BID ITEM NO. 16: FURNISH AND INSTALL PULL BOXES**

**BID ITEM NO. 25: FURNISH AND INSTALL PEDESTRIAN HYBRID BEACON  
(HAWK SIGNAL)**

**BID ITEM NO. 26: TRAFFIC SIGNAL MODIFICATION (FAIRVIEW/WILSON)**

## **6 CONTROL OF MATERIALS**

### **6-2 QUALITY ASSURANCE**

#### **6-2.03 DEPARTMENT ACCEPTANCE**

##### **6-2.03B JOB SITE INSPECTION AND TESTING**

[Add the following:].

It shall be the Contractor’s responsibility to arrange the furnishing, testing, pick-up, and delivery of all items to the project site. Any costs involved to test, deliver and install equipment shall be borne by the Contractor and be considered as included in the lump sum price and no additional compensation shall be allowed.

Following notification, the Contractor must complete a satisfactory “turn-on” within a reasonable time of the day and hour specified in the notification. When a turn-on is not completed, as specified above, it shall be canceled and rescheduled with the City Representative. The turn-on shall not be made on Friday or the day preceding a legal holiday. The City Representative shall be notified at least 48 hours prior to the intended turn-on and shall authorize the “turn-on” day and hour.

The installation resistance shall not be less than 100 megohms on all circuits when the megger tests are performed. Testing shall not be conducted until all control and/or sensor units and probes have been disconnected from the circuit.

The signal monitoring unit shall be tested in the field before “turn-on”. Five days of continuous satisfactory operation as called for in Section 87-1.01D, “Quality Assurance,” of the Standard Specifications shall be provided.

## **8 PROSECUTION AND PROGRESS**

### **8-1.02 SCHEDULE**

#### **8-1.02A GENERAL**

[Add the following:].

The Contractor shall initiate procurement of traffic signal equipment immediately upon contract authorization and begin assessment of utility locations. The City Representative shall approve the scheduling and sequence of all construction work prior to performing the construction activity. The Contractor shall contact each utility company to coordinate and schedule work and provide written correspondence to the City Representative.

The Contractor shall verify all existing facilities and notify the Engineer of any conflicts found during pre-construction inspection prior to commencement of any work. During the course of construction, no additional compensation will be provided for the correction of the differences between the plans and in the field.

The Contractor shall attend a pre-construction meeting within one (1) week following contract award. No actual project working days shall be charged for these activities. The Contractor shall notify the City in writing of the start date of actual field construction.

Excavation, conduit installation, pull boxes and foundations should be coordinated in a most expedient manner to minimize the disruption and inconvenience of an extended construction schedule. Construction once started shall be pursued daily through project completion.

The Contractor is responsible for securing an adequate storage site for equipment and materials. The Contractor shall provide supervisory personnel to keep the construction site in a safe, neat and orderly condition at all times. No Materials or equipment shall be stored at the job sites unless approval is issued by the City Representative.

The Contractor shall have on the work site at all times as his agent, a competent English-speaking superintendent capable of reading and thoroughly understanding the drawings, specifications, and other related documents.

## **56 OVERHEAD SIGN STRUCTURES, STANDARDS, AND POLES**

### **56-3 STANDARDS, POLES, PEDESTALS, AND POSTS**

#### **56-3.01C (2) FOUNDATIONS**

##### **56-3.01C(2)(A) GENERAL**

[Add the following:].

Portland Cement Concrete (PCC) shall conform to Section 90-2, "Minor Concrete" of the Standard Specifications and shall contain not less than 564 pounds of cement per cubic yard. Foundation concrete shall be vibrated to eliminate air pockets. Anchor bolts and cages shall be furnished and installed by the Contractor conforming to Caltrans standards. The contractor shall verify the bolt pattern of each pole prior to foundation installation.

After all utility locations are exactly established, the Contractor shall contact City Representative for authorization of specific pole foundation location.

## **56-3.02 STEEL STANDARDS, POLES, PEDESTALS, AND POSTS**

### **56-3.02A GENERAL**

[Add the following:].

Contractor shall furnish and install poles, nuts, bolts, washers, cages, and other hardware as required conforming to Caltrans standards, at no additional contract expense. Poles and hardware shall be tested and certified per Caltrans testing procedures. Copies of the inspection request form and certifications given to the City Representative. Sign mounting hardware shall be Detail "U" of the Standard Plans ES-7N.

The Contractor shall coordinate the delivery and erection of poles to occur on the same day. No materials or equipment shall be stored at the job site unless authorized by the City Representative. The job site shall be maintained in a neat and orderly condition and safe pedestrian pathways provided at all times along all sidewalks, without exception. The installation of signal poles shall meet CAL/OSHA Electrical Safety Order and the Public Utilities Commission General Order No. 95, Rules for Overhead Electric Line Construction.

## **86 GENERAL (DIVISION X ELECTRICAL WORK)**

### **86-1.02 MATERIALS**

#### **86-1.02B CONDUIT AND ACCESSORIES**

##### **86-1.02B (1) GENERAL**

[Add the following:].

Conduit shall be High Density Polyethylene (HDPE) Type (grey color) – HDPE, IPS SDR911 GPE, or Schedule 80 40 PVC, unless otherwise approved by the City Representative. HDPE shall be used for underground boring of conduit or for underground fiber optic cables and shall comply with ASTM F2160. The contractor shall have the proper HDPE spooling equipment to install conduit without crimping or damage. HDPE conduit shall not be spliced. A bonding wire shall be furnished with all HDPE conduits. All conduit sweeps shall meet Caltrans standards for future fiber optic cable

installations.

Pull tape shall be furnished and installed in each new conduit run. Pull tape must be a flat, woven, lubricated, soft-fiber, polyester tape with a minimum tensile strength of 1,800 lb. The tape must have sequential measurement markings every 3 feet.

Tracer wire shall be furnished and installed in each conduit run and shall be a minimum No. 12 solid copper conductor with orange insulation Type TW, THW, RHW, or USE.

## **86-1.02C PULL BOXES**

### **86-1.02C (1) GENERAL**

[Remove section from lines 6 to 23].

[Add the following:].

Pull boxes shall conform to the provisions in the State Standard Specifications and these special provisions and comply with UL and NEMA standards. New pull boxes shall be Christy N-series composite and lids shall be lightweight fiber material, "Fiberlyte".

All pull boxes shall be factory-made standard size No.6 pull boxes unless otherwise noted on the plans or directed by the City Representative. Home run pull boxes or pull boxes containing fiber splice enclosures shall be size No. 6 with extension (#6E) unless otherwise noted on the plans or directed by the City Representative. The cover marking for each pull box shall read "TRAFFIC SIGNAL" for traffic signal pull boxes, "TRAFFIC FIBER" for traffic signal fiber optic communication pull boxes, and "LIGHTING" for lighting pull boxes., Pull boxes containing fiber optic cables shall be provided with locking mechanisms as specified in the State Standard Plans and shall be gray in color. Contractor shall submit to the City equipment necessary to unlock and access pull boxes.

A pull box cover must have a marking on the top that is:

1. Clearly defined
2. Uniform in depth
3. Parallel to the longer side
4. From 1 to 3 inches in height

Pull boxes adjacent to Traffic Signal poles shall have 10-foot ground rod with ground clamp and shall be fastened to bare grounding conductor from Traffic Signal pole. No new pull box shall be located within five feet of a water meter or fire hydrant. Replace sidewalk in-kind to match existing material, color, and pattern, from score mark to score mark after pull boxes have been installed.

## **86-1.02F CONDUCTORS AND CABLES**

### **86-1.02F (1) GENERAL**

[Add the following:].

Only the splicing of loop detector cable shall be permitted. All other conductors including interconnect cable shall be continuous without splicing between terminal points, without exception. Conductors No. 8 AWG or larger shall be spliced by the use of "C" shaped compression connectors. Splices shall be insulated by "Method B."

Individual conductors shall not be used for new traffic signal installations or modifications of existing traffic signals unless specifically directed by the ENGINEER and shown on the plans.

Each traffic signal pole shall be served by a single 12 CSC cable per each two vehicle phases. Each pedestrian push button or bicycle push button assembly shall be served by a single 3 CSC.

Conductors and cables must be clearly and permanently marked the entire length of their outer surface with:

1. Manufacturer's name or trademark
2. Insulation-type letter designation
3. Conductor size
4. Voltage
5. Number of conductors for a cable

The minimum insulation thickness and color code requirements must comply with NEC.

#### **86-1.02F(1)(C)(II) BONDING JUMPERS AND EQUIPMENT GROUNDING CONDUCTORS**

[Add the following:].

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. The grounding jumper shall be visible after the PCC cap has been poured on foundation.

#### **86-1.02K LUMINAIRES**

##### **86-1.02K (1) GENERAL**

[Add the following:].

Luminaire heads shall be LED-type. All luminaire heads shall be equipped with utility wattage labels. The luminaire heads shall be 250W HPS equivalent or greater and shall be submitted to the City for approval.

#### **86-1.02M PHOTOELECTRIC CONTROLS**

[Add the following:].

Contractor to furnish and install Type V photoelectric control on the side of all new service equipment enclosures.

#### **86-1.02P ENCLOSURES**

## **86-1.02P (2) SERVICE EQUIPMENT ENCLOSURES**

[Add the following:].

The contractor shall be responsible for carrying out the work in any Edison prepared design drawings to establish service connection to the intersection.

The contractor shall furnish and install a Type III-B service cabinet with a Type V photoelectric control on the side of the service equipment enclosure. The Contractor shall furnish all work and materials required to provide the intended service and coordinate work with the Edison Company well in advance of this work.

A new 3" schedule 80 PVC conduit shall be furnished and installed from the existing SCE pull box to the base of signal cabinet foundation. At the base of the signal cabinet foundation a 3" to 2.5" schedule 80 reducer fitting shall be installed and 2.5" schedule 80 conduit installed into the service cabinet. The new service cabinet shall provide a 100-amp main breaker, 50-amp signal breaker, 30 amp safety lighting breaker, 15 amp IISNS breaker, and spare 15 amp breaker. It shall be the Contractor's responsibility to establish all electrical service connections for the traffic signal and lighting system and for any work seen or unforeseen during this process.

Service cabinets shall be aluminum (0.125-inch minimum thickness) with seams continuously welded meeting Caltrans Standards, unpainted aluminum, and anti-graffiti coated per the Engineer's direction.

All work and materials required to provide the intended service shall be furnished and performed, including coordinating with Edison. The lump sum bid price shall include installation and/or removal of pull boxes/hand holes, service risers, breakers, conduit and conductors, labor, materials, tools and equipment to provide the intended service operation, including all necessary connection fees, and no further compensation shall be allowed.

## **86-1.02Q CABINETS**

### **86-1.02Q (2) CONTROLLER CABINETS**

[Replace the entire section with the following:].

#### **1. Controller/Cabinet Assembly**

Contractor shall furnish and install Econolite or Western Systems (or approved equal) NEMA TS2-Type 1 P-44 full Cabinet Assembly on new foundation.

Solid-state traffic actuated controller unit, cabinet and auxiliary equipment shall conform to the provisions in Section 86-1.02Q (3), "Controller Cabinets", these Special Provisions, and NEMA TS-2 standards.

Contractor shall furnish and install Econolite Cobalt ATC Controller unit and appurtenances in new signal cabinet as indicated on the plans.



Contractor shall furnish and install all miscellaneous items as necessary to produce a fully- operational system in accordance with the plans, these technical provisions, Caltrans Standard Plans and Standard Specifications. Power distribution panel, inside auxiliary control panel, and police panel shall be hard wired. Plug-N-Go shall not be used.

For the traffic signal modification at Fairview Road and Wilson Street, the existing cabinet will be removed and a temporary cabinet installed. The existing cabinet will be modified to wire all available load switch bays which are required to accommodate all the necessary phases for the operation of the new bicycle signal and phasing per the signal modification plans.

## 2. Cabinet Assembly

The Contractor shall furnish and install Type "P-44" aluminum cabinet assembly as indicated that including but not limited to the following items:

- a) One (1) - Fully wired eight (8) phase NEMA TS2 Type 1 "P-44" unpainted aluminum cabinet.
- b) One (1) - Econolite Cobalt ATC Controller unit with data key, Ethernet port, and FSK Telemetry, with 32 channels of detection. Controller shall be equipped with Econolite EOS software.
- c) One (1) 16 Channel Malfunction Management Unit with LCD display (programmed for the intersection).
- d) One (8) position TS2 detector rack with (8) two-channel detection as indicated on plan and one (1) Bus Interface Unit, per rack.
- e) Sixteen (16) position vertical load bay with associated BIU's installed. The load bay shall accommodate a small equipment shelf left of the vertical load bay. The load bay shall be shifted to the right side of the cabinet to accommodate a mini shelf on the left side.
- f) 16 (8 Vehicle, 4 Pedestrian, 4 overlap) load switches.
- g) One (1) - Controller cabinet power supply.
- h) One (1) – Slide Drawer Shelf (for laptop usage with storage) installed underneath the bottom equipment shelf. The shelf shall be mounted so that controller cables will not interfere with the operation of the shelf when equipment is installed.
- i) One (1) SDLC expansion hub with twelve (12) position 15 pin sockets/connections or Two (2) 8-port hubs with jumper for a total of sixteen (16) ports. All SDLC cables shall attach with screw type retainers. This panel shall be mounted on the left wall of the cabinet between the shelves.

Work shall be performed by a qualified traffic signal technician, certified to perform the cabinet hardware installations as required. The contractor shall furnish and install all necessary material, equipment and appurtenances required for intended operation as shown in the plans and as outlined in these specifications.

## 3. Cabinet Construction

Cabinet shall meet, as a minimum, all applicable sections of the NEMA Standard Publication. Where differences occur, this specification shall govern. The cabinet shall

meet the following criteria:

- a) Material shall be aluminum sheet, 5052-H32, with a minimum thickness of 0.125-inch.
- b) The cabinet exterior shall be unpainted aluminum finish as indicated and with a white interior.
- c) The door hinge shall be of the continuous type with a stainless-steel hinge pin.
- d) The door handle shall be cast aluminum.
- e) All seams shall be sealed with RTV sealant or equivalent material on the interior of the cabinet.
- f) Cabinet lock shall be of the Corbin No. 2 type.
- g) The cabinet shall have four (4) sets of cabinet wiring diagrams.
- h) The cabinet shall have one (1) set of equipment manuals (Controller, MMU, etc.).
- i) Cabinets will be installed to replace existing cabinets. Existing communications, CCTV, and BBS equipment shall be moved to the new cabinet and verified operational on day of "Turn On".

#### Shelves

Two (2) aluminum shelves extending completely across the back of the cabinet in the top cabinet area.

- 1. The first aluminum shelf extending completely across the back of the cabinet shall be provided to support the detector rack(s) and power supply.
- 2. The second aluminum shelf extending completely across the back of the cabinet shall be provided to support the controller (for future requirement provision) and the MMU.

A mini shelf shall be provided on the left side of the load bay for future equipment.

#### Equipment Accessibility

All mounted panels and equipment shall have a minimum tool access clearance of 6".

Ventilating Fan SP14: The cabinet shall be provided with two (2) thermostatically controlled ventilation fans, adjustable between 80 degrees to 150 degrees Fahrenheit and shall be installed in the top of the cabinet plenum.

#### Air Filter Assembly

The cabinet Air Filter shall be a one-piece removable, medium efficiency, synthetic, pleated (Econolite Part No. 57389P11) air filter (or approved equal) and shall be firmly secured to the air entrance of the cabinet.

#### Cabinet Light Assembly

The cabinet shall be equipped with an LED lighting fixture mounted on the inside of the cabinet near the front edge. The LED light shall be activated by an On/Off switch that is turned on when the cabinet door is opened and turned off when the door is closed.

The cabinet shall have a gooseneck type lighting fixture that shall be mounted on the inside of the door near the hinge. The gooseneck light shall be activated by an On/Off switch that is turned on when the cabinet door is opened and turned off when the door is closed.

### Lightning Suppression

The cabinet shall be equipped with an EDCO Model SHP-300-10 surge arrester, or City approved equivalent.

### Power Panel

The Power Panel shall house the following equipment:

- a. One (1) 40 Amp main breaker to supply power to the main panel, controller, MMU, and cabinet power supply.
- b. One (1) 15 Amp auxiliary breaker to supply power to the fan, light, and GFCI outlet.
- c. One (1) 50 Amp, 125 VAC radio interference line filter.
- d. One (1) normally open, 60 Amp, Crydom Model #HA8475 solid state relay, or City approved equivalent.

### Convenience Outlet

Three (3) duplex outlets shall be supplied, as per the following:

1. The first is for short-term equipment use, 120-volt AC, 15 Amp NEMA 5-15 GFCI duplex outlet, and shall be mounted in the lower right corner of the cabinet facing the inside of the cabinet door and within 6" of the front edge of the opening of the door.
2. The second and third are for long-term equipment use, 120-volt AC, 15 Amp NEMA duplex outlet, and shall be mounted in the upper right corner of the cabinet facing the inside of the cabinet. Power shall be supplied from un-switched filtered power.

The cabinet shall be wired with (2) convenience power strip outlets without ground fault interrupters. One power strip per each side wall of the cabinet.

### Inside Auxiliary Control Panel Switches

The inside door panel shall contain three (3) switches: Auto/Flash, Auto/Off/On Stop-Time, and Power On/Off. Auxiliary door panel switches shall be hard wired; printed circuit boards shall not be used.

1. Auto/Flash Switch (2-Position): In the Auto position, the intersection shall operate normally. In the Flash position, power shall be maintained to the controller and the intersection shall be placed in flash. The controller shall not be stop timed when in flash. A guard shall be installed to prevent the switch from being shut off accidentally.
2. Auto/Off/On Stop-Time Switch (3-Position): In the Auto position, the controller shall be stop timed when the police door Auto/Flash Switch is in the Flash position or MMU flash. In the Off position, the switch shall release all stop time from controller. In the On position, the switch shall maintain a continuous stop time to the controller.
3. Controller Power On/Off Switch (2-Position): This switch shall control the controllers AC power. A guard shall be installed to prevent the switch from being

shut off accidentally.

#### Police Panel

The Police Panel shall contain two (2) switches: Signals On/Off and Auto/Flash. All police panel switches shall be hard wired; printed circuit boards shall not be used. The Police Panel shall have 2 conductor plugs for a mono plug (2 contacts, #59098P1 black handle) traffic light control cord "pickle switch". The Cabinet shall be furnished with all necessary "pickle switch" cabling for intended operation.

1. Signals On/Off Switch (2-Position) In the On position, the field displays shall show either normal operation or flash. In the Off position, power shall be removed from signal heads in the intersection. The controller shall continue to operate. In the Off position, the MMU shall not conflict or require reset.
2. Auto/Flash Switch (2-Position) In the Auto position, the intersection shall operate normally based on all other switches. In the Flash position, power shall not be removed from the controller and stop time shall be applied based on the Stop-Time switch.

#### Cabinet Wiring

All Controller and MMU cables shall have sufficient length to access any shelf position. All cables shall be encased in a protective sleeve along their entire free length.

All cabinet wiring shall be color coded as follows:

Purple = Flash Color programming  
Brown = Green Signal wiring  
Yellow = Yellow Signal wiring  
Red = Red Signal wiring  
Blue = Controller wiring  
Gray = DC ground return, logic ground  
Black = AC positive  
White = AC negative  
Green = Chassis  
Main-Panel and Wire Terminations

All wires terminated behind the main-panel and other panels shall be soldered. No pressure or solder-less connectors shall be used. Printed circuit boards shall not be used on main panels.

#### Flashing Operation

Cabinet shall be wired for NEMA flash. All cabinets shall be wired to flash Red for all phases. Flashing display shall alternate between phases 1, 4, 5 and 8, and phases 2, 3, 6 and 7.

#### Detector Rack and Interface

A minimum of one (1) TS-2 Vehicle Loop detector rack with field termination panel, TS-2 power supply, and SDLC cable shall be provided for each new signal cabinet. Each individual rack shall support up to sixteen (16) channels of loop/video detection and one

(1) BIU.

#### Main Panel Configuration

The main panel shall be fully wired in the following configuration:

1. Sixteen (16) vertical load sockets with BIUs.
2. Six (6) flash transfer relay sockets.
3. One (1) flasher socket.
4. Wiring for both Type 1 and Type 2 Controllers.
5. Wiring for one Type 16 MMU.

#### Field Terminal Locations

Field terminals shall be located at the bottom of the main panel and angled forward for easy viewing and wiring. The order shall be from left to right beginning with phase one and following the order of the load switches. Field terminals shall be of the barrier type.

#### 4. Cabinet Equipment

##### Detectors

New cabinets shall be equipped with the proper number of detector slots and cards, as required for intended operation.

##### Controller Unit

New cabinets shall be equipped with one (1) Econolite Cobalt ATC controller. Controller shall be system ready for communication on the Centrac Traffic Signal Management/Monitoring software. Controller shall allow logging of Alarm inputs. Controller software shall be the new Econolite EOS software.

##### Malfunction Management Unit (MMU)

New cabinets shall be equipped with a NEMA TS2 Type 16 MMU with the latest current released software. MMU jumper cards shall be programmed to specific intersection's requirements.

##### Bus Interface Unit (BIU)

BIU's shall meet all TS2-1992, Section 8 requirements. In addition, all BIU's shall provide three (3) separate front panel indicators: Power, Valid Data, and Transmit.

##### Cabinet Power Supply

The cabinet power supply shall meet the NEMA TS2 specification. All power supplies shall also provide a separate front panel indicator LED for each of the four (4) power outputs. Front panel banana jack test points for 24 VDC and logic ground shall also be provided.

##### Flasher Unit

All flasher units shall meet NEMA TS-2, Section 6 requirements and shall be EDI Model 810, or City approved equivalent.

##### Intersection Diagram

For the new cabinets, an intersection diagram prepared in AutoCAD shall be provided on

an 8.5" x 11" sheet of paper and enclosed in a protective plastic cover. The diagram and protective cover shall be located on the inside of the cabinet door above the Auxiliary Panel. The diagram shall depict the general intersection layout, phases, overlaps, detector assignments, and north arrow. The top of the diagram will be north and the diagram shall be pre-approved by the City Engineer.

#### Cabinet Wiring Diagram

New cabinet wiring diagrams shall be arranged on three (3) separate sheets in a simplistic way to facilitate the reading of it. The first sheet shall represent everything on the left side of the cabinet, the second sheet everything in the middle of the cabinet including the main panel, and the third sheet everything on the right side of the cabinet. The final cabinet wiring diagram layout shall be approved by the City Engineer.

#### Turn on Support

Contractor/Installer shall arrange to have a signal technician (IMSA Certified), qualified to work on the controller assembly and employed by the controller manufacturer or his representative, present at the time the equipment is turned on.

#### Cabinet Testing

The complete cabinet assembly with electronics shall undergo complete input/output function testing by the manufacturer before being released to the City of Costa Mesa.

#### 86-1.02R Signal Heads

[Add the following:]

Vehicle head mountings shall be configured as directed by the City Representative prior to drilling of standards and head installations. Adjustments required to the signal head mounting configuration and placement on standards shall be provided as directed by the Engineer at no additional contract cost. PV heads, if used, shall be programmed at the direction of the Engineer. The color of all signal heads shall be black.

#### **86-1.02R (4) SIGNAL FACES**

[Add the following:].

All new circular signal indications shall be 12" GE VLA Model LED Signal Modules with an incandescent look & arrow indications shall be 12" GE GTX City VLA Model with an incandescent look. All indications shall be clear and not tinted. A five-year warranty shall be provided on all LED lenses furnished by the manufacturer. A Certificate of Compliance from the manufacturer shall be submitted to the City Representative, and a copy of the LED purchase order, product specification, certificate of compliance and warrantee. If programmed visibility (PV) signal heads are used, they shall be LED.

#### **86-1.02T ACCESSIBLE PEDESTRIAN SIGNALS**

[Add the following:].

The Contractor shall furnish and install a Polara iNS iNavigator 2-wire push button APS system or approved equal. The APS system shall include Polara Push Button Stations,

Central Control Unit (iCCU-S2) and Interconnect Board (iN2-ICB) and all necessary equipment, mounts, cabling, connectors, and any other items necessary to provide the intended operation as shown on the plans and these specifications. The APS shall have vibrotactile feedback and arrow style push button per latest requirements outlined in the final rule of the Public Rights of Way Accessibility Guidelines (PROWAG).

All Accessible Pedestrian Signals shall have a 10' minimum physical separation between them per California MUTCD requirements.

The contractor shall coordinate with the manufacturer and submit to the City specification sheets for the programming of the audible feedback messaging for each pedestrian crossing for City approval.

For APS push buttons, the push button sign shall be an R10-3e (9"x15") sign with back plate attachment. The push button shall be yellow and installed 42" high from the center of the button to the finished pedestrian landing surface. Face-plate screws shall be stainless steel tamper resistant. The contractor shall submit the PPB manufacture's specifications and warranty to the City Representative.

## **86-1.02U PUSH BUTTON ASSEMBLIES**

[Add the following:].

[Add Replace entire section with the following:].

Per the Public Rights of Way Accessibility Guidelines (PROWAG), all push button assemblies for traffic signals and HAWK signals shall be APS systems. Please refer to Section 86-1.02T.

## **87 ELECTRICAL SYSTEMS**

### **87-1 GENERAL**

#### **87-1.03 CONSTRUCTION**

##### **87-1.03B CONDUIT INSTALLATION**

##### **87-1.03B (1) GENERAL**

[Add the following:].

Existing reused conduit shall be cleaned with a mandrel or cylindrical wire brush and blown out with compressed air. All existing rigid metal conduit to be reused shall be equipped with new elbows and rigid metal fittings manufactured of mild steel. Rigid galvanized steel conduit couplings shall be threaded or compression type. Threadless connections or threaded coupler with two bolts as a clamp shall not be allowed. Rigid metal type shall be manufactured of mild steel and conform to UL Publication UL 6 for Rigid Metallic Conduit. Conduit threads shall be brush painted with either zinc-rich paint or zinc-rich primer, spray-on applications shall not be permitted.

Rock wheeling shall be allowed only if authorized in writing by the City Representative.

The City Representative prior to work shall approve the method of rock wheeling. Conduit installation under pavement, curb/gutter areas shall be by boring method approved by the City Representative.

No open cutting shall be permitted for streets in City moratorium areas, unless City Standard roadway repair moratorium compliance measures are implemented. Any work in designated moratorium areas will include AC pavement mill and overlay work extending 50' beyond the damaged area, within each affected travel lane.

Excessive use of water, such that pavement might be undermined, or subgrade softened shall not be permitted. Conduits to be drilled or jacking rod shall be fitted with suitable drill bits for the required hole size. Jacking or boring method must not weaken or damage any embankment, structure or pavement. Any mud from jacking or boring shall be flushed from the conduit and removed from the jacking pit to eliminate inadequate backfilling.

Parkway trenching shall conform to City of Costa Mesa Standard Drawing No. 813, 411, 413 and 414 for sidewalk replacement. All existing plant and irrigation materials including but not limited to sod, trees and bushes damaged by trenching or boring work shall be replaced in kind, at no additional compensation.

Within pull boxes, conduit shall be placed to meet minimum clearances between the pull box base, the conduit end and lid of pull box, conforming to Caltrans Standard Plans and Specifications. The contractor shall adjust existing pull boxes where clearance is inadequate to accommodate existing and proposed cable and/or conductors. Work shall conform to Caltrans Standard Specifications 86-1.02B and 87-1.03B. The ends of conduit termination in pull boxes and controller cabinets shall be sealed with an approved type of sealing compound.

Conduit shall be placed in a manner to allow the cable/wire to be pulled in a straight line and clear the side of the pull box by at least 2 inches. Use minimum bending radius as permitted by Appendix H of ICEA S-19/NEMA WC 3 and SMFO cable manufacturer's recommendations.

After conductors/cables have been installed, the exposed end of conduits terminating in pull boxes, service equipment enclosure and controller cabinets shall be sealed with an approved type of sealing compound immediately after installation of conductors. Conduit for future use in pull boxes shall be threaded and capped, with a pull rope intact between successive pull boxes.

All excavations for the installation of conduits and pull boxes, and removal of old systems, shall be backfilled, compacted and restored to match adjacent areas and excess material shall be immediately removed from the job site. All trenching activity, commenced each day, shall be fully backfilled to the finished surface grade at the end of each day; final resurfacing shall be completed within five (5) working days on all streets and all trenches maintained in a safe condition.

Work shall include furnishing and installing trenching, jacking and boring, and all associated labor, materials, tools, equipment and incidentals involved in furnishing and installing conduit, complete in place. This shall include installation of conduit under



sidewalk, soil and roadway pavement areas, removing surface materials, furnishing fittings, bends, bushings, pull wires, modification of conduit entrances, replacement and repair in kind of AC, PCC, sod, irrigation within all areas affected by conduit installation, and all associated work, materials and equipment required to provide the intended operation. All jacking pits shall be adequately compacted immediately upon installing fill material and made safe for pedestrian access and inspected by the City Representative prior to concrete or asphalt placement.

All conduit existing within excavation areas shall be lowered, modified and/or adjusted as required to accommodate the intended improvements at no additional compensation. The Contractor shall determine the exact location of all underground facilities within improvement area, by hand digging, if necessary, prior to commencing excavation work to assure avoidance of conflicts. All costs for preliminary exploratory work of existing conditions and subsequent utility modification shall be included in the lump sum bid item and no additional compensation shall be allowed.

The Contractor shall be responsible for identifying the location and for the protection of all electrical facilities including signal conduit and interconnect. Where damage is caused by the Contractor's operation, the Contractor shall replace damaged facility at no extra cost to the City of Costa Mesa.

### **87-1.03B (3) CONDUIT INSTALLATION UNDERGROUND**

#### **87-1.03B(3)(A) GENERAL**

[Remove the section from lines 1 to 5].

[Add the following:].

Conduit depth shall be per the latest approved City of Costa Mesa standard plans and drawings.

### **87-1.03C INSTALLATION OF PULL BOXES**

#### **87-1.03C (1) GENERAL**

[Add the following:].

All pull boxes shall be located as shown on the plans and as directed by the Engineer. No pull box shall be located within the driveway apron, or within any wheelchair ramp landing. Pull boxes within unimproved areas shall have a Class 1 flexible Post Delineator, per Caltrans Standard Plan A73-C installed adjacent to the pull box.

Within the pull box, the conduit shall be placed in a manner that the lowest portion of the opening shall be a minimum of 2 inches above the bottom of the pull box, the top portion of the opening shall be not less than 8 inches from the top of the pull box. The conduit shall be placed in a manner to allow the cable/wire to be pulled in a straight line and clear the side of the pull box by at least 2 inches.

Pull box Installation Details - The bottom of pull boxes installed in the ground or in

sidewalk areas shall be bedded in at least 6 inches of crushed rock and shall be grouted prior to the installation of conductors. The grout shall be between 1 and 2 inches in depth and shall be sloped towards the drain hole. A layer of roofing paper shall be placed between the grout and the crushed rock sump. A 1-inch drain hole shall be provided in the center of the pull boxes or splice vault through the grout and the roofing paper.

Excavating and backfilling shall be as per section 87-1.03E, "Excavating and Backfilling for Electrical Systems" of the State Standard Specifications except that the backfill material shall not contain rocks graded larger than 1 inch.

Where the sump of an existing pull box is damaged by the Contractor's operations, the sump shall be reconstructed and if the sump was grouted, the old grout shall be removed, and new grout placed at the cost of the Contractor and not the City. Any existing improvements damaged by the Contractor shall be in accordance with the State Standard Specifications at the cost of the Contractor and not the City.

Pull box Adjustments - The contractor shall adjust existing pull boxes where inadequate clearance is provided to accommodate the proposed cable and conductors, or where settling has occurred whereby the pull box grade is lower than that of the adjacent surface area grade at no additional cost to the City. Work shall conform to Caltrans Standard Specifications 87-1.03C. Pull box adjustment shall include the installation of new bushings, conduit end sealant, crushed rock and grout prior to the installation of conductors, and necessary concrete repair work. Old grout shall be removed, and new grout installed as required. Repair of adjacent PCC sidewalk shall be included, conforming with these specifications.

## **87-1.03F CONDUCTORS AND CABLES INSTALLATIONS**

### **87-1.03F (2) CABLES**

#### **87-1.03F(2)(A) GENERAL**

[Add the following:]

The 12 CSC and 3 CSC cables shall be run continuous between terminal block terminals and traffic signal controller cabinet load switch bay terminals. Splices will not be allowed, and no daisy-chaining of traffic signal cables shall be permitted.

Mast-arm mounted traffic signal indications shall be connected to the side mount vehicle indication terminal box using a 5 CSC. Three section and four section vehicle indications shall use a single 5 CSC. Five section vehicle indications shall use 2-5 CSC. 5 CSC shall be run continuous between the signal indication and the side mount vehicle indication terminal box, and no splicing will be allowed. Multiple indications for the same vehicle phase shall not use the same 5 CSC. Each CSC shall be labeled in a permanent, color-coded manner at the side mount vehicle indication terminal box, such that the vehicle phase and placement are noted on the cable. For example, Ø2 Inboard would indicate the cable serving the indication closest to the traffic signal mast arm pole.

The contractor shall provide cable slack to comply with the requirements shown in

Caltrans RSP Section 87-1.03F (1). Contractor shall install a tracer wire in all electrical conduits.

## **87-1.03R SIGNAL HEADS**

### **87-1.03R (1) GENERAL**

[Add the following:].

Vehicle head mountings shall be configured as directed by the Engineer prior to drilling of standards and head installations. Adjustments required to the signal head mounting configuration and placement on standards shall be provided as directed by the Engineer at no additional contract cost. PV heads, if used, shall be programmed at the direction of the Engineer. The color of all signal heads, backplates, and mountings shall be black.

Signal backplates are required for all new signal heads and shall be Swarco McCain or approved equal with retroreflective borders manufactured and pre-equipped around the entire 2" outer border of the backplates. The Contractor shall not perform a retrofit of standard backplates using 2" retroreflective tape or sheeting. Retroreflective sheeting shall be 3M 4081 Series (Diamond Grade DG3) and fluorescent yellow. Contractor to turn in submittal sheets to Engineer for various signal configurations for approval prior to ordering.

### **Payment**

Measurement and Payment for "Bid Item No. 16: Furnish and Install Pull Boxes" shall be per the unit price bid per Each (EA), and shall be considered full compensation for providing all labor, materials, tools, equipment, other work and incidentals to accomplish the work in accordance with the Plans, Specifications, pursuant to Caltrans Standard Plans and Specifications, and no additional compensation shall be allowed.

Measurement and Payment to Furnish and Install "Bid Item No. 25: Furnish and Install Pedestrian Hybrid Beacon (HAWK Signal)" and "Bid Item No. 26: Traffic Signal Modification (Fairview/Wilson)" shall be per the Lump Sum (LS) price and additional compensation shall not be allowed. The Lump Sum price shall include full compensation for furnishing all labor, material, appurtenances, tools, equipment and incidentals, potholing of all new traffic signal pole foundations, and for doing all work involved as specified on the Plans and these Specifications.

## **PART 8**

### **LANDSCAPING AND IRRIGATION**

#### **SECTION 801 – INSTALLATION**

**BID ITEM NO. 18: MEDIAN CLEARING AND GRUBBING**

**BID ITEM NO. 19: MEDIAN LANDSCAPING**

**BID ITEM NO. 19A: LANDSCAPE MAINTENANCE (90 DAYS)**

**BID ITEM NO. 20: MEDIAN IRRIGATION**

All installations for public works projects must comply with the "Standard Specifications for Public Works Construction" (Green Book).

Additionally, all landscape and irrigation work shall adhere to the City of Costa Mesa Streetscape and Median Development Standards and Irrigation Standards. Irrigation Standards are attached to these specifications.

[Add and/or replace the following:].

#### **801-4 PLANTING**

##### **801-4.5.1 ROOT PRUNING AND ROOT BARRIER**

Where shown on attached spreadsheets, tree roots shall be cut and removed to a minimum depth of six inch (6") below the subgrade of proposed new construction. Root barriers shall be installed adjacent to the proposed new construction to existing trees of trunk diameters of more than six inches (6"). Installation of root barriers shall be per manufacturer's recommendations and guidelines under the following.

Root removals and barrier installation shall be completed on only one side of the tree where reconstruction is proposed.

Notify the Engineer if an abundant amount of roots has been removed or if roots are two (2) inches or more in diameter that are to be removed.

#### **Root Pruning**

Roots shall be pruned adjacent to the edge of the sidewalk, curb and gutter or other improvements as indicated by the Engineer. Root pruning cuts adjacent to the sidewalk shall be four inches (4") wide, twelve inches (12") deep, and minimum of eight feet (8') in each direction from the centerline of the tree as measured from the top of the sidewalk or other improvements. Root pruning cuts adjacent to the curb shall be four inches wide, eighteen inches (18") deep, and a minimum of eight feet (8') in each direction from the centerline of the tree as measured from the top of the curb or other improvements.

Root pruning equipment shall be specifically designed for this purpose with cutting teeth sharpened adequately to sever roots in a clean manner and equipped with padded tracks or rubber tires to prevent scarping or marking the sidewalk.

After the pruning cut has been completed, the Contractor shall install the appropriate amount of root pruning barrier by Deep Root Corporation, or an approved equal. All cuts shall be backfilled immediately upon completion of root pruning and barrier installation at each location. Backfill material shall consist of soil and/or mulch from root pruning and shall be free of rocks and other debris. All debris generated by these operations shall be immediately removed from the site and properly disposed of by the Contractor.

The Contractor shall repair or replace all utility service connections or sprinkler systems within the right-of-way that are damaged or removed as a result of the root pruning operation. Repairs shall be implemented immediately and completed by the end of the same working day. Repairs and replacements shall be at least equal quality and configuration to existing improvements and shall match them in finish and dimension.

The Contractor shall be responsible for contacting Underground Service Alert (USA) or Dig Alert by dialing "811" for locating underground utilities prior to the beginning of the root pruning operation.

Root pruning shall not take place if the tree has a lean. Notify the Engineer if a tree is leaning.

### **Root Barriers**

The contractor shall furnish and install root control barrier. The root control barrier shall have a minimum depth of eighteen inch (18") with a minimum thickness of 0.06". Root control barriers shall be sixteen feet (16') long in one continuous piece (preferred). Combinations of pieces shall be one eight foot (8') panel and two – four foot (4') panels; eight foot (8') panel shall be on center of each tree and as directed by the Engineer. Root barriers shall be securely fastened with adhesive at joint points. All materials must be maintained in good condition from delivery to completion of installation. If any defects are found, the defected panes must be removed and replaced at no additional cost to the City. All other details for installation are detailed in the Standard Plan No. 523-2 of the current Standard Plans for Public Works Construction. No root control barriers are needed around existing palm trees.

The Contractor shall be responsible for protecting and supporting all existing utilities. When damage to existing utilities is caused by the Constrictor's operations, the Contractor shall, at his expense, repair or replace damaged facilities promptly, in accordance with Section 5 and 306 of the Standard Specifications and the standards of each affected utility. Should the Contractor fail to perform the required repairs or replacements, the cost of performing such repairs or replacement by others shall be deducted from any monies due or to become due to the Contractor.

Root barriers shall not be installed on the non-lean side of a tree.

### **Bid Item No. 18: Median Clearing and Grubbing**

#### **300-1 CLEARING AND GRUBBING**

##### **300-1.1. GENERAL**

Clearing shall consist of the trimming and removal of trees, and the removal of brush, weeds, stumps, trash, and other debris. Grubbing shall consist of the removal of sod, grass, stumps, roots, and other vegetation on or below the ground surface. Clearing and grubbing shall be performed within the Work area and other such areas as shown on the Plans prior to the start of earthwork operations.

Grubbing shall extend to the outside excavation and fill slope lines, except where slopes are to be rounded, the areas shall extend to the outside limits of slope rounding. Within the limits of clearing, all stumps, roots 1-1/2 inches (37.5 mm) in diameter or larger, buried logs, and all other objectionable material shall be removed 3 feet (1 m) below the existing ground surface or to subgrade, whichever is deeper.

Trees and vegetation not to be removed shall be protected in place.

### **300-1.2 ROOT PRUNING AND TREE TRIMMING**

Tree trimming and root pruning shall be performed as specified in the Special Provisions.

300-1.3 Measurement, 1.4 Payment.

Measurement and payment for the preceding shall be at the lump sum (LS) price for Median Clear & Grub and Unit price shall include labor, equipment, and materials as required to complete the work. No additional compensation will be allowed.

## **Bid Item No. 19: Median Landscaping**

### **800-1 LANDSCAPING & IRRIGATION**

### **800-2 LANDSCAPE MATERIALS**

#### **800-1.01 SUMMARY**

A. Section includes landscape planting but not limited to:

1. Fine grading
2. Soil preparation on grade
3. Tree, shrub, and ground cover planting
4. Tree staking and guying
5. Mulching
6. Clean up.

#### **800-1.02 REQUIREMENTS OF REGULATORY AGENCIES**

A. All State, and local laws and regulations governing this work are hereby incorporated into and made part of this Section. When this Section calls for certain materials, workmanship or a level of construction that exceeds the level of State, or local requirements, the provisions of this Section shall take precedence.

#### **800-1.03 REFERENCE STANDARDS**

A. All plant material shall be true to botanical and common name as indicated

in "An Annotated Checklist of Woody Ornamental Plants of California, Oregon and Washington", (Number 4091)" published by the University of California School of Agriculture - 1979.

- B. "American Standard for Nursery Stock" edition 1985 by ANSI for plant materials.
- C. "Hortus Third", 1976; Cornell University for plant nomenclature.
- D. All plant material shall conform to the California Department of Food and Agriculture's regulation for nursery inspections, rules and ratings.

#### **800-1.04 QUALITY CONTROL**

- A. Manufacturer's Directions - manufacturer's directions and drawings shall be followed in all cases where the manufacturers of articles used in this Specification furnish directions covering points not shown in the Drawings and Specifications.
- B. Permits, Fees, Bonds and Inspections - the Contractor shall pay for any and all permits, fees, bonds and inspections necessary to perform and complete his portion of the Work.
- C. Plant Source Quality - submit written documentation to the Resident Engineer within 25 days of Contract award that the plant material listed on the Drawings is available. Any substitutions required due to unavailability must be requested in writing prior to confirmation of ordering.
- D. Upon execution of the order, the Owner and or Resident Engineer has the option of either inspecting the plant material at the source of growth, requesting representative color photos, or inspecting the material as it is being delivered to the site for conformity to the Drawings and Specifications. Such approvals shall not impair the right of additional inspections during further progress of the Work.
- E. Any tagging of plant material by the Owner and or Resident Engineer does not constitute his approval of the plant materials' health and vigor. The health and vigor of the plant material is the sole responsibility of the Contractor.
- F. Plant Inspection Request
  - 1. Submit a written request to the Resident Engineer for inspection of the specified plant material, either at the place of growth or by color photographs. Requests for inspection shall state the place of growth and the quantity and variety of plant material.
  - 2. The Resident Engineer reserves the right to refuse inspection if in his judgment a sufficient quantity of plant material at that time is not available for inspection.
- G. Topsoil Inspection

1. Within 25 days of contract award, furnish source of topsoil to Resident Engineer for purpose of soil inspection.

#### H. Horticultural Soils Report

1. Contractor to take one (1) representative soil sample from the site at the end of rough grading. Submit locations for Resident Engineer for approval prior to obtaining.
2. Soil samples shall be tested for pH, alkalinity, total soluble salts, porosity, sodium content and organic matter. Pre-plant soil preparation amendment recommendations shall be for the plant material specified and shall be provided within the horticultural soils testing laboratory report. Submit final horticultural soils report to Resident Engineer for approval.

### 800-1.05 QUALIFICATIONS

- A. Landscape Contractor shall be licensed by the State of California and have no less than 5 years of experience and shall submit letters of recommendation related to five (5) projects of similar size completed for a public agency within the last five (5) years.
- B. The applicator of all weed control materials shall be licensed by the State of California as a Pest Control Operator and a Pest Control Advisor in addition to any subcontractor licenses that are required.

### 800-1.06 SUBMITTALS

- A. Submit in accordance with Section 2-5.3, Submittal Procedures.
- B. The Contractor shall submit no later than 30 days after the award of Contract six (6) bound booklets containing the following landscape information:
  1. List of all proposed landscape materials indicated by description, manufacturer and model number. Include catalog cuts of all items.
  2. List of all shrubs, vines and ground covers indicated by botanical name, common name, size, nursery and location and specific remarks, i.e. "unable to locate", "photo submitted", etc.
  3. Soil amendment receipts containing analytical data and physical samples of all specified amendments.
  4. Receipts from the soil supplier of all soil mixes specified in this section.
- C. The Contractor shall submit no later than 30 days after the award of Contract the following physical samples sent to the Resident Engineer in plastic bags:
  1. Shredded bark mulch, rock mulch or decomposed granite mulch.
  2. Certificates
  3. Compliance with State of California quarantine restrictions.



D. Weed Control

1. Prior to the installation of any weed control materials, the Pest Control Advisor shall submit to the Resident Engineer, a list of the weed control materials and quantities per acre intended for use in controlling the weed types prevalent and expected on the site.
2. The Pest Control Advisor shall furnish data to demonstrate the compatibility of the weed control materials and methods with the intended planting and seed varieties.

**800-1.07 SAMPLES, TESTS AND MOCK-UPS**

- A. The Owner and or Resident Engineer reserves the right to take and analyze selected samples of plant material for conformity to this Specification at any time. Rejected plant material shall be removed from the site and be replaced by the Contractor at no cost to the Owner.

**800-1.08 PROJECT CONDITIONS**

- A. Perform planting operations only when weather and soil conditions are suitable in accordance with locally accepted practice.

**800-1.09 PRODUCT DELIVERY, STORAGE AND HANDLING**

A. Delivery

1. Deliver all plant material with legible and durable identification labels.
2. Deliver fertilizer to the site in original, unopened containers bearing the manufacturer's name, guaranteed chemical analysis, and its conformance to California State Law.
3. Notify the Resident Engineer within seven (7) days of the delivery of plant material to the site. Indicate the quantity and type of plant material in each delivery.

B. Storage

1. Store plant materials in the shade and protect from the weather.
2. Maintain and protect plant material not planted within four (4) hours of delivery.
3. It is the Contractor's responsibility to secure a local staging area for plant material.

C. Protection

1. Protect plant material during delivery to the site and after, in order to prevent damage to the root ball or desiccation of leaves.

D. Handling

1. Take extreme care in the loading and unloading of plant material. Do not pick up container plants by the stems or trunks.
2. Any plant material that has been damaged shall be removed and replaced with new material.

### **800-1.10 REJECTION OF PLANT MATERIAL**

- A. All plant material not conforming to the requirements herein shall be considered defective. Such plants, whether in place or not, shall be marked as rejected and immediately removed from the site and replaced with new material at the full expense of the Contractor. Replacement plant material shall be of the same size, specie and condition as that indicated on the Drawings.

### **800-1.11 PROTECTION OF THE SITE**

- A. Protect previously installed work and materials which may be affected by work of this Section. Provide safeguards and exercise caution against injury or defacement of existing site improvements.
- B. The Contractor shall be responsible for any damage resulting from his landscape planting operations. Repair damage and return the area to the previous condition at no additional cost to the Owner.

### **800-1.12 COORDINATION**

- A. The Contractor shall notify the General Contractor, and all other trades related to the installation of his work, so as to allow sufficient time for those contractors to perform their portion of the work.
- B. Determine the locations of underground utilities and perform work in a manner which will avoid damage to the utilities.

### **800-1.13 WARRANTY**

- A. The manufacturer's warranty shall not relieve the Contractor of his own liability under the warranty.
- B. All plant material installed under this Contract shall be covered under a warranty against poor, inadequate and inferior quality and installation for a period of 1 year from the date of Final Acceptance. Any plant material not meeting the satisfaction of the Owner shall immediately be removed and replaced at no cost to the Owner. Replaced plant material will also be warranty for a period of 1 year (palm trees for 2 years) upon installation.
- C. Replace without cost to the Owner and as soon as weather permits, all dead plants and all plants not found in a vigorous, thriving condition, as determined by the Owner and or Resident Engineer during and at the end of the plant warranty period. Replacement of plants shall closely match adjacent specimens of the same species and shall be subject to all requirements of this section.
- D. Repair damage to adjacent plant material caused by the Contractor's work at no cost to the Owner. All repairs shall be made with materials, varieties, sizes

"in kind" with adjacent existing materials.

E. Guarantee for Planting

We hereby guarantee that the planting we have furnished and installed is free from defects in materials and workmanship and the work has been completed in accordance with the drawings and specifications, ordinary wear and tear and unusual abuse or neglect excepted. We agree to replace without cost to the Owner and as soon as weather permits, all dead plants and all plants not found in a vigorous, thriving condition, as determined by the Owner and or Resident Engineer during and at the end of the plant warranty period. Replacement of plants shall closely match adjacent specimens of the same species and shall be subject to all requirements of this section. The warranty period is one (1) year after Final Acceptance of the work for plant material and 2-year warranty for palm trees. We agree to make such repairs and replacements within thirty (30) days after receipt of written notice. In the event of our failure to make such repairs and replacements within thirty (30) days of written notice, we authorize the Owner to proceed to have such repairs and replacements made at our expense and will pay all costs and charges upon demand:

Owner:

Owner's Address:

Date of Final Acceptance:

Signed:

Company Name:

Address:

### **800-3 - LANDSCAPE PRODUCTS**

#### **800-2.01 PRE-EMERGENT WEED CONTROL**

- A. Pre-emergent weed control to be Ronstar-G, Treflan, Eptam, Vegitex, or approved equal.

#### **800-2.02 PLANTING SOIL**

- A. Reuse of Stockpiled On-Site Soil
1. Stockpiled on-site soil may be available from the Resident Engineer's stockpile for use. Soils for planter beds are classified as 1-1/2-inch minus.
- B. Soil Characteristics for Stockpiled Native Soil
1. Composition for 1-1/2-inch minus topsoil - fertile, friable, well-drained soil of uniform quality, free of materials larger than 3/8 inch

- in diameter such as sticks, rocks, concrete, oils, chemicals and other deleterious materials.
2. Soil Analysis - If soil has not been tested within 30 days of the date of delivery to the project, obtain a horticultural agricultural suitability and chemical analysis of the proposed soil from a company approved by the Resident Engineer. Cost of the testing will be paid for by the Contractor. The soil report is to include the following information:
  3. Elemental Analysis: Nitrates, Nitrogen, Phosphorus, Potassium, Calcium, Magnesium, Sulfur, Sodium Zinc, Iron, Copper, Manganese, Boron and free Lime
  4. Other: pH factor, % base saturation, electrical conductivity, mechanical analysis, % of organic content, cation exchange capacity (CEC).
  5. Recommendations: Type and quantity of additives required to establish satisfactory pH factor and supply of nutrients to bring topsoil to a satisfactory level for planting.
  6. All stockpiled native soil to be used from 1-1/2-inch minus topsoil is to be amended at the levels listed in this Section as part of the base bid. Additional amendments, if requested by the Owner, are not a part of the base contract and the Contractor will be compensated for this work on a Time and Materials basis. Rates for labor and equipment will be charged according to the Construction Contract.

C. Imported Topsoil

1. In order to ensure conformance with this Specification, soil samples shall be taken by the Contractor and submitted to a qualified soil testing laboratory for analysis prior to planting i.e., Wallace Laboratories (310) 615-0116.
2. Use natural friable soil from the local region, free from lumps, toxic substances sticks, debris, vegetation or stones over 1-inch in diameter.
3. Silt plus clay content shall not exceed 20% by weight with a minimum 95% passing the 800-2.0-millimeter sieve.
4. Sodium absorption ratio (SAR) shall not exceed 6.
5. Electrical conductivity (ECe) of the saturated extract of this soil shall not exceed 801-1.0 millimhos per centimeter at 25 centigrade.
6. Boron content shall not exceed (1) part per billion as measured on the saturation extract.
7. Thoroughly blend the planter mix and amendments through a soil blender before placing the soil.

**800-2.03 SOIL AMENDMENTS**

- A. Peat Moss - natural product of sphagnum moss, reed, or sedge peat, taken from a freshwater site, free from lumps, woody material, stones and other foreign matter.

- B. Soil Sulfur - agricultural grade sulfur containing a minimum of 99% sulfur (expressed as elemental).
- C. Iron Oxide - 45% iron (expressed as metallic iron), derived from iron oxide with micronutrients.
- D. Calcium Carbonate - 95% lime as derived from oyster shells.
- E. Gypsum - agricultural grade product containing 98% minimum calcium sulfate.
- F. Iron Sulfate - 20% iron (expressed as metallic iron), derived from ferric and ferrous sulfate, 100% sulfur (expressed as elemental).
- G. Ground Limestone - agricultural limestone containing not less than 85% of total carbonates, ground to such fineness that 50% will pass a No. 1000 sieve and 90% will pass a No. 20 sieve.
- H. Dolomite Lime - agricultural grade mineral soil conditioner containing 35% minimum magnesium carbonate and 49% minimum carbonate, 100% passing the No. 65 sieve.
- I. Sulfate of Potash - agricultural grade product containing 50% to 53% of water-soluble potash.
- J. Single Superphosphate - commercial grade product containing 20% to 25% available phosphoric acid.
- K. Ammonium Sulfate - commercial grade product containing approximately 21% ammonia.
- L. Ammonium Nitrate - commercial grade product containing approximately 34% ammonia nitrogen.
- M. Urea Formaldehyde - granular commercial product containing 38% nitrogen.
- N. IBDU (Iso Butldiene Diurea) - commercial grade product containing 31% nitrogen.
- O. Iron: Gro-Power Premium Green Iron - 45% Fe, non-staining.

#### **800-2.04 FERTILIZERS**

- A. General Purpose Soil Conditioner Fertilizer (5-3-1)
  - 1. Consisting of the following minimum percentages by weight:

5%	Nitrogen
3%	Phosphoric Acid
1%	Potash

- 50% Humus
- 15% Humic Acids
- 1% Soluble Metallic  
Iron

2. Soil Conditioner Fertilizer shall be "Gro-Power", as manufactured by Gro-Power (909)393-3744 or Resident Engineer approved equal.

B. General Purpose Soil Conditioner Fertilizer with Soil Penetrant (5-3-1)

1. Soil conditioning fertilizer for use in areas of clay, adobe soils or soils high in salt, sodium boron or pH consisting of the following minimum percents by weight:

- 5% Nitrogen
- 3% Phosphoric Acid
- 1% Potash
- 50% Humus
- 15% Humic Acids
- 4% Sulfur
- 1% Soluble Metallic  
Iron

2. Soil Conditioner Fertilizer with Soil Penetrant shall be "Gro-Power Plus" as manufactured by Gro-Power (909) 393-3744, or Resident Engineer approved equal.

C. Pre-Plant Fertilizer (16-20-0)

1. Ammonium phosphate consisting of the following minimum percentages by weight:

- 16% Nitrogen
- 20% Phosphoric  
Acid
- 0% Potash

1. Pre-Plant Fertilizer shall be Best "16-20-0", as manufactured by J.R. Simplot Company (800)992-6066, or Resident Engineer approved equal.

D. General Purpose Planting Fertilizer (12-12-12)

1. Pelleted or granular form shall consist of the following minimum percents by weight:

- 12% Nitrogen
- 12% Phosphoric  
Acid
- 12% Potash

2. General Purpose Planting Fertilizer shall be Best "Triple Twelve", as manufactured by

J.R. Simplot Company (800)992-6066, or Resident Engineer approved equal.

E. Controlled Release Fertilizer (12-8-8)

1. Consisting of the following minimum percents by weight:

12%	Nitrogen
8%	Phosphoric Acid
8%	Potash
25%	Humus
5%	Humic Acids

2. Acceptable product - "Gro-Power Controlled Release", as manufactured by Gro- Power (909)393-3744, or Resident Engineer approved equal.

F. Planting Tablets (20-10-5)

1. Shall be 7-gram, 24-month release, non-burning tablets containing the following percentages of nutrients by weight:

20%	Nitrogen
10%	Phosphoric Acid
5%	Potassium
800-2.5%	Humic acids

2. Acceptable product - "Gro-Power Planting Tablets", as manufactured by Gro-Power (909) 393-3744, or Resident Engineer approved equal.

## **800-2.05 PLANT MATERIAL**

A. General Plant Condition

1. All plant material delivered to the site shall have a normal habit of growth, well-formed and shaped, healthy, vigorous, and free of any insects, diseases, sunscalds, windburn, abrasions of the bark, or other objectionable disfigurements.
2. The size of the plant material shall correspond with that normally expected for species and variety of commercially nursery stock or as specified on the Drawings.
3. Plant material shall be grown under climatic conditions similar to those in the locality of the project unless approved otherwise by the Resident Engineer.
4. The use of plant material larger than that specified on the Drawings may be used, pending approval from the Resident Engineer, however, there will be no change in the Contract amount if larger plant material is approved and installed.

B. Trees and Shrubs

1. Tree and shrub trunks shall be sturdy and well hardened with vigorous and fibrous root systems which are not root-bound.
2. In the event of a disagreement as to the condition of the root system, the root conditions of the plants furnished by the Contractor will be determined by the removal of soil around the roots of not less than 10 plants or more than 2% of the total number of plants of each species.
3. When container grown plants are supplied from several sources, the roots of not less than 10 plants of each species from each source will be inspected. In case the plants sampled are found to be defective, the Owner and or Resident Engineer has the right to reject the entire lot represented by the defective sample. Any plant material rendered unsuitable for use because of this inspection will be considered as samples and will be provided at the full expense of the Contractor.

C. Nursery Grown and Collected Stock

1. Nursery grown and collected stock shall be grown under climatic conditions similar to that found in the locality of the site.

D. Container Grown Stock

1. Container grown stock shall be in a vigorous and healthy condition, not root bound or with the root system hardened off.

E. Ground Cover Stock

1. Ground cover stock shall be well established in removable containers or having formed homogenous soil sections.

## **800-2.06 AUXILIARY ACCESSORIES**

A. Mulches

1. Shredded Bark Mulch
  - a. Shredded bark mulch shall be Type 1 produced from ground wood products and composted tree trimmings and plant material. It shall be 2- inch minus or Resident Engineer approved equal.
2. Rock
  - a. As produced by Decorative Stone Solutions and as indicated on Contract Drawings. All rock shall be washed twice by contractor and shall be clean prior to installation.
3. Decomposed Granite / Rock Mulch
  - a. Rock mulch shall be free of lumps or balls of clay and shall not contain calcareous coatings, caliche, organic matter or foreign substances. All material shall be from a single production source and shall present a uniform appearance. The requirements shall be as follows:
  - b. Size and Color as specified on the Drawings.
  - c. The surfaces upon which the decomposed granite / rock mulch is to be placed shall be graded and compacted to a density of not less than 85 percent of the maximum density in accordance with the requirements of the Materials Testing



Methods.

- d. Only locations shown on the planting plan to receive decomposed granite / rock mulch shall receive decomposed granite / rock mulch, unless otherwise directed by the Resident Engineer. If other areas to receive rock mulch, use this material and methodology.
- e. The areas to receive decomposed granite / rock mulch shall receive an application of pre-emergent herbicide in the manner recommended by the manufacture. The Contractor shall stake out the area and put an application of a weed inhibitor prior to placement of the decomposed granite / rock mulch. Contractor shall kill all weeds by manual or chemical control and remove after dead. Any pesticides use must be applied in strict accordance with Owner requirements.
- f. The Contractor shall keep a record of all applications. The Contractor shall record the type of herbicides used, such as pre- or post-emergent; the rate and method of applications; and the date and location of such applications. A copy of this report shall be furnished to the resident engineer every month.
- g. The decomposed granite / rock mulch shall be evenly distributed over the designated areas to meet thickness per drawings. The finish grade of the decomposed granite / rock mulch shall at paving areas shall be per the Drawings.
- h. Care shall be taken in the placement of the decomposed granite / rock mulch not to disturb or damage any plant material.
- i. After placing the decomposed granite / rock mulch, the Contractor shall lightly water the decomposed granite / rock mulch to remove fine material from the surface to the extent satisfactory to the Resident Engineer. The Contractor shall again apply the approved pre-emergent weed control agent according to the manufacturer's recommendations. Water in the pre-emergent thoroughly.
- j. All erosion within the decomposed granite / rock mulch areas shall be corrected by the Contractor to maintain the final grade of the decomposed granite / rock mulch as placed under this item. If soil settling occurs during the Warranty period, the contractor shall provide and install additional material at no additional expense to the Owner.
- k. Provide samples for approval to the Resident Engineer prior to purchase.

## **800-4 IRRIGATION SYSTEM MATERIALS – RECYCLED WATER**

### **800-3.01 SUMMARY**

- A. Section includes landscape irrigation for recycled water system including but not limited to:

- 1. Layout

2. Trenching
3. Backfilling
4. Assemblage
5. Wiring
6. System Flushing
7. Sprinkler Head Installation
8. Valve Installation
9. System Testing and Adjustment
10. Maintenance

### **800-3.02 REQUIREMENTS OF REGULATORY AGENCIES**

- A. All local, municipal and state laws, and rules and regulations governing or relating to any portion of this work are hereby incorporated into and made a part of this Specification, and its provisions shall be carried out by the Contractor. Anything contained in this Specification shall not be construed to conflict with any of the above rules and regulations or requirements of the same. However, when the Drawings and Specifications call for or describe materials, workmanship, or construction of a better quality, higher standard, or larger size than is required by the above rules and regulations, the provisions of the Drawings and Specifications shall take precedence.

### **800-3.03 QUALITY CONTROL**

- A. Manufacturer's Directions
1. The Manufacturer's directions and drawings shall be followed in all cases where the manufacturers of articles used in this Specification furnish directions covering points not shown in the Contract Drawings and Specifications.
- B. Permits, Fees, Bonds and Inspections
2. The Contractor shall pay for all permits, fees, bonds and inspections necessary to perform and complete his portion of the Work.
- C. Explanation of the Drawings
1. Due to the scale of the Drawings, it is not possible to indicate all offsets, fittings, sleeves, etc. which may be required. The Contractor shall carefully investigate the structural and finished conditions affecting all of his work and plan his work, accordingly, furnishing such fittings, etc. as may be required to meet such conditions. The Drawings are diagrammatic only and are indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation systems, planting, and architectural features.
  2. All work called for on the Drawings by notes or details shall be furnished and installed whether or not specifically mentioned in this Specification.
  3. The Contractor shall not willfully install the irrigation system as shown

on the Drawings when it is obvious in the field that obstructions, grade differences or discrepancies in area dimensions exist that might not have been considered in engineering. Such obstructions or differences should be brought to the attention of the Resident Engineer. In the event this notification is not performed, the Contractor shall assume full responsibility for any revisions necessary.

#### **800-3.04 SUBMITTALS**

A. Submit in accordance with Section 2-5.3, Submittal Procedures.

B. Materials List

1. The Contractor shall furnish the articles, equipment, materials, or processes specified by name in the Drawings and Specifications. No substitution will be allowed without prior written approval by the Resident Engineer.
2. Complete materials list shall be submitted prior to performing any work. Materials list shall include the manufacturer, model number and description of all materials and equipment to be used. Although manufacturer and other information may be different, the following is a guide to proper submittal format:

Item No.	Description	Manufacture	Model No.
1.	Control Valve	Rain Bird	PESB
2.	Gate Valve	Nibco	T-113-K
3.	Etc.	Etc.	Etc.

The irrigation submittal list must be specific and complete. All items must be listed and should include solvent/primer, wire, wire connectors, valve boxes, etc. No copies of manufacturer's literature (catalog cuts) are required as submittal information.

3. Equipment or materials installed or furnished without prior approval of the Resident Engineer may be rejected and the Contractor required to remove such materials from the site at no cost to the Owner.
4. Approval of any item, alternate or substitute indicates only that the product or products apparently meet the requirements of the Drawings and Specifications on the basis of the information or samples submitted.
5. Manufacturer's warranties shall not relieve the Contractor of his liability under the Warranty.

C. Record Drawings or "As-Built" Drawings

1. The Contractor shall provide and keep up to date at all times, a complete record set "As-Built" drawings of blackline bond prints which shall be corrected daily and show every change from the original Drawings and Specifications and the exact installed locations, sizes, and kinds of equipment. Prints for these purposes

- may be obtained from the Resident Engineer at the Contractor's cost. "As-Built" drawings shall be kept on the site and shall be used only as a record set.
2. "As-Built" drawings shall also serve as work progress sheets and shall be the basis for measurement and payment for work completed. "As-Built" drawings shall be available at all times for observation and shall be kept in a location easily accessible to the Resident Engineer.
  3. The Contractor shall make neat and legible notations on the "As-Built" progress sheets daily as the work proceeds, showing the work as actually installed. For example, should a piece of equipment be installed in a location that does not match the Drawings, the Contractor must indicate that equipment has been relocated in a graphic manner so as to match the original symbols as indicated in the irrigation legend. The relocated equipment and dimensions will then be transferred to the original "As-Built" drawings at the proper time.
  4. Before the date of the Final Walkthrough, the Contractor shall transfer all information from the "As-Built" prints to sepia Mylar plans procured from the Resident Engineer at the Contractor's cost. All drafting shall be done with waterproof technical pen ink and applied to the Mylar by technical drafting pens made expressly for use on Mylar surfaces. Dimensions shall be made on the Mylar so as to be easily readable even on the final irrigation controller chart. The original Mylar "As-Built" drawings shall be submitted to the Resident Engineer for approval prior to the making of the irrigation controller charts.
  5. The Contractor shall dimension from two (2) permanent points of reference, building corners, sidewalk, or road intersections, etc., the location of the following items:
    - a. Connection to existing water lines.
    - b. Connection to existing electrical power.
    - c. Gate and ball valves.
    - d. Routing of sprinkler pressure lines.
    - e. Irrigation control valves and master valves.
    - f. Routing of control wiring and signal cable.
    - g. Quick coupling valves.
    - h. Master Valve, basket strainer and flow sensor.
    - i. Check valves
    - j. Other related equipment.
  6. On or before the date of the Final Walkthrough, the Contractor shall deliver the corrected and completed Mylar "As-Built" drawings to the Resident Engineer. Delivery of the "As-Built" drawings will not relieve the Contractor of the responsibility of furnishing required information that may be omitted from the "As-Built" drawings.

#### D. Irrigation Controller Charts

1. "As-Built" drawings shall be approved by the Resident Engineer before irrigation controller charts are prepared.
2. Provide one irrigation controller chart for each irrigation controller

- supplied.
3. Each irrigation controller chart shall show the area controlled by that irrigation controller and shall be the maximum size of which the irrigation controller door will allow.
  4. The irrigation controller chart is to be a reduced drawing of the actual installed irrigation system. In the event that the irrigation controller chart is not legible when the chart is reduced, it may be enlarged to a size that will be readable when reduced.
  5. The irrigation controller chart shall be an 11 x 17-inch bond reduction with each valve station represented by a distinct color.
  6. When completed, hermetically seal the irrigation controller chart between two pieces of 5 mil plastic with a 1/8-inch edge overlap.
  7. Irrigation controller charts shall be completed and approved by the Resident Engineer prior to the Final Walk-through.

**E. Operation and Maintenance Manuals**

1. Prepare and deliver to the Resident Engineer within 10 calendar days prior to completion of irrigation installation, three 3 ring hard cover binders each containing the following information:
  - a. Index sheets stating the Contractor's address and telephone number and a list of equipment with the name and addresses of local manufacturer's representatives.
  - b. Approved Irrigation Submittal List.
  - c. Catalog and part sheets on every material and equipment installed under this Contract.
  - d. Warranty statement.
  - e. Complete operating and maintenance instructions on all major equipment.

**F. Equipment to be Furnished.**

1. Supply as a part of this Contract the following tools:
  - a. Two (2) sets of special tools required for removing, disassembling and adjusting each type of sprinkler and valve supplied on the Project.
  - b. One (1) 5-foot valve keys for operation of gate valves.
2. The above-mentioned equipment shall be turned over to the Resident Engineer at the conclusion of the Project.

**800-3.05 PRODUCT DELIVERY, STORAGE AND HANDLING**

**A. Handling of PVC Pipe and Fittings**

1. The Contractor is cautioned to exercise care in handling, loading, unloading, and storing of PVC pipe and fittings. All PVC pipe shall be transported in a vehicle which allows the length of pipe to lie flat so as not to subject it to undue bending or concentrated external load at any point. Any section of pipe that has been dented or damaged will be discarded and, if installed, shall be replaced with new piping at no cost to the Resident Engineer.

### **800-3.06 PRIOR TO START OF THE LANDSCAPE MAINTENANCE PERIOD**

- A. The Contractor shall submit proof of warranty to the Resident Engineer prior to the start of the landscape maintenance period. All computerized irrigation control system materials shall have a five-year warranty. It is the Contractor's responsibility to obtain the necessary warranty inspections from the equipment supplier. No installations will be accepted without proof of warranty.

### **800-3.07 WARRANTY**

- A. The warranty for the irrigation system shall be made in accordance with the attached form.
- B. A copy of the warranty form shall be included in the Operations and Maintenance Manual.
- C. The warranty form shall be re-typed onto the Contractor's letterhead and contain the following information:

### **800-3.08 WARRANTIES FOR SPRINKLER IRRIGATION SYSTEM**

- A. We hereby warrant that the sprinkler irrigation system we have furnished and installed is free from defects in materials and workmanship, and the work has been completed in accordance with the Drawings and Specifications, ordinary wear and tear and unusual abuse, or neglect the exception. We agree to repair or replace any defects in material or workmanship which may develop during the period of one year from date of final acceptance and also to repair or replace any damage resulting from the repairing or replacing of such defects at no additional cost to the Owner. We shall make such repairs or replacements within a reasonable time, as determined by the Owner and/or Resident Engineer, after receipt of written notice. In the event of our failure to make such repairs or replacements within a reasonable time after receipt of written notice from the Owner and/or Resident Engineer, we authorize the Owner and/or Resident Engineer to proceed to have said repairs or replacements made at our expense and we will pay the costs and charges therefore upon demand.

PROJECT:

LOCATION:

SIGNED:

ADDRESS:

PHONE:

DATE OF ACCEPTANCE:

### **800-3.09 RULES AND REGULATIONS**

- A. Work and materials shall be in accordance with the latest edition of the California Electrical Code and applicable laws and regulations of governing authorities.

### **800-3.10 PROTECTION OF WORK AND MATERIALS**

- A. The Contractor shall protect his work and work of others for the duration of the Contract. He shall protect pipes and fittings from direct sunlight and avoid undue bending and any concentrated external loading. Pipe or fittings that have been damaged shall not be used.
- B. The Contractor shall exercise extreme care in excavating and working near existing utilities. Damage to utilities which are caused by contractor's operation shall be the Contractor's responsibility.
- C. The Contractor shall take necessary precautions to protect site conditions and plant material that is to remain. Should damage be incurred, Contractor shall repair damage to its original condition or shall furnish and install equal replacements.
- D. All existing irrigation systems shall be kept in operation at all times. If the existing system is damaged by Contractor, he shall be responsible for immediate repair of such damage. After each repair, all heads of the repaired system shall be removed so that the lines can be cleared of all dirt and foreign matter.

### **800-3.11 CORRECTION OF WORK**

- A. Any and all discrepancies of unsatisfactory work shall be corrected by the Contractor at no additional expense to the Owner. The correction of work shall be finished with a reasonable period mutually agreed upon between the Owner and/or Resident Engineer and Contractor.

## **800-5 - IRRIGATION PRODUCTS**

### **800-4.01 GENERAL**

- A. Use only new materials of brands and types noted on the Drawings or Specifications or an equal approved by Resident Engineer. irrigation work shall adhere to the City of Costa Mesa Irrigation Standards,

### **800-4.02 PVC PRESSURE MAIN LINE PIPE AND FITTINGS**

- A. Pressure main line piping for sizes 2.5 inches and larger shall be purple color-coded Class 315 PVC.
- B. Class 315 piping shall be made from an NSF approved Type I, Grade I, PVC resin conforming to ASTM D1784. Piping must meet requirements as

set forth in ASTM D2241 (solvent-weld class pipe), with an appropriate standard dimension (SDR).

- C. Pressure main line piping for sizes 2 inches and smaller shall be purple color-coded Schedule 40 PVC with solvent welded joints.
- D. Schedule 40 PVC piping shall be made from NSF approved Type I, Grade I PVC resin conforming to ASTM D1784. Piping must meet requirements as set forth in ASTM D1785 (solvent-weld schedule pipe).
- E. PVC solvent-weld fittings shall be Schedule 40, 1-2, II-I NSF approved conforming to ASTM D2466.
- F. Solvent cement and primer for PVC solvent-weld pipe and fittings shall be of type and installation methods prescribed by the manufacturer.
- G. PVC pipe must bear the following markings:
  - 2. Manufacturer's name.
  - 3. Nominal pipe size.
  - 4. Schedule or class.
  - 5. Pressure rating in PSI.
  - 6. NSF approval.
  - 7. Date of extrusion.
  - 8. Recycled water warning.
- H. PVC fittings shall bear the manufacturer's name or trademark, material designation, size, applicable IPS schedule and NSF seal of approval.

#### **800-4.03 PVC NON-PRESSURE LATERAL LINE PIPING**

- A. Non-pressure buried lateral line piping shall be purple color-coded Schedule 40 PVC with solvent-welded joints.
- B. Non-pressure lateral line piping installed under pavement areas shall be installed in a purple color-coded Schedule 40 PVC sleeve.
- C. Pipe shall be made from NSF approved, Type I, Grade II PVC resin conforming to ASTM D1784. Piping must meet requirements set forth in ASTM D2241 (solvent-weld class pipe) with an appropriate standard dimension ratio.
- D. Non-rigid lateral line piping (PVC flexible hose) shall be uniformly black in color, homogeneous throughout, and smooth inside and outside, free from foreign materials, cracks, holes, dents, wrinkles and blisters. The hose shall have the following dimensions.

Size	Inside	Wall Thickness	Outside
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(In.)	Dia. (In.)	Dia. (In.)	Dia. (In.)
3/8 (IPS)	0.50	0.090	0.680
1/2 (IPS)	0.50	0.140	0.840

- E. Non-rigid lateral line piping shall be solvent-welded to PVC fittings with I.P.S. model #795 (clear) glue or approved equal. Contact I.P.S. at phone number (310) 366-3300.
- F. All requirements for non-pressure lateral line pipe and fittings shall be the same as for solvent-weld pressure main line pipe and fittings as set forth in this Specification.

#### **800-4.04 BRASS PIPE AND FITTINGS**

- A. Where indicated on the Drawings, use red brass screwed pipe conforming to Federal Specification #WW-P-351.
- B. Fittings shall be red brass conforming to Federal Specification #WW-P-460.

#### **800-4.05 GALVANIZED PIPE FITTINGS**

- A. Where indicated on the Drawings, use galvanized steel pipe ASA Schedule 40 mild steel screwed pipe.
- B. Fittings shall be medium galvanized screwed beaded malleable iron, or Class 150 flanged steel with Corten bolts where required. Galvanized couplings may be merchant coupling.
- C. Galvanized pipe and fittings installed below grade shall be painted with two (2) coats of Koppers #50 bitumastic. Or cover pipe with 2 layers of plastic, self-adhesive, pipe wrap, 2 mils thick, as manufactured by 3M Company or equal.
- D. Use non-hardening, nontoxic pipe joint sealant formulated for use on water-carrying pipes on all metal threaded connections.

#### **800-4.06 GATE VALVES AND BALL VALVES**

- A. Gate valves 3 inch and smaller shall be 125 lb. SWP bronze ball gate valve with blow-out proof and full port.
- B. Gate valves 3 inch and smaller shall have threaded ends and shall be equipped with a bronze handle.
- C. Gate valves 3 inch and smaller shall be similar to those manufactured by Hammond or approved equal.
- D. Ball valves 3-inches and smaller shall be Schedule 80 PVC full bore units, and

those include Teflon ball seats, Buna-N- O-ring seals, and pressure rated at a minimum of 235 PSI at 73 degrees F.

- E. Ball valves 3-inches and smaller shall be equipped with a Slow-Close full turn stem with gears molded of durable acetyl plastic material and polypropylene handle.
- F. Ball valves 3-inches and smaller shall be as manufactured by Colonial Valve, as distributed by Lasco Fittings or approved Equal.
- G. All gate and ball valves shall be installed per irrigation installation details.

#### **800-4.07 CONTROL WIRE**

- A. Connections between the irrigation controllers and the electric control valves shall be made with Armor clad (aluminum shield coated) direct burial copper wire AWG-U.F. 600 volt. Supplied through John Deere Landscapes, Imperial Irrigation, or equal. Pilot wires shall be a distinct color wire for each irrigation controller. Common wires shall be 12 gauge and the color white with a distinct color stripe for each irrigation controller. Install wires in accordance with valve manufacturer's specifications and wire charts. In no case shall wire size be less than 14-gauge. Wire color shall be continuous over its entire length.
- B. Wiring shall occupy the same trench and shall be installed along the same route as pressure supply or lateral lines wherever possible.
- C. Where more than one (1) wire is placed in a trench, the wiring shall be taped together at intervals of 10 feet.
- D. An expansion curl shall be provided within three (3) feet of each wire connection. Expansion curl shall be of sufficient length at each splice connection at each electric control, so that in case of repair, the valve bonnet may be brought to the surface without disconnecting the control wires. Control wires shall be laid loosely in the trench without stress or stretching of the control wire conductors.
- E. Wire splices shall be made with either Scotch-Lok #3576 Connector Sealing Packs or Rain Bird Snap-Tite wire connector or approved equal. Use one splice per connector sealing pack.
- F. Field wire splices between the irrigation controller and the electrical control valves shall not be allowed without prior approval of the Resident Engineer.
- G. When control wiring is trenched separately from main line trenches a continuous warning tape shall be installed with the wiring. Warning tape: Inert plastic film highly resistant to alkalis, acids, or other destructive chemical components likely to be encountered in soils. Three inches wide, colored yellow, and imprinted with "CAUTION: BURIED ELECTRIC LINE BELOW."
- H. Provide a 36-inch excess length of wire in an 8-inch diameter loop at each 90-

degree change of direction, at both ends of sleeves, and at 100-foot intervals along continuous runs of wiring. Do not tie wiring loop.

- I. Install common ground wire and one control wire for each electric control valve. Multiple valves on a single control wire are not permitted. Install one common wire for each controller. Multiple controllers with one common wire will not be permitted.

#### **800-4.08 SPRINKLER HEADS**

- A. All sprinkler heads shall be of the same size, type, and deliver the same rate of precipitation with the diameter (or radius) of throw, pressure, and discharge as shown on the Drawings and in this Specification.
- B. Spray heads shall have a screw adjustment.
- C. Riser units shall be fabricated in accordance with the Drawings.
- D. Riser nipples for all sprinkler heads shall be the same size as the riser opening in the sprinkler body.
- E. All sprinkler heads of the same type shall be from the same manufacturer.

#### **800-4.09 LANDSCAPE DRIPLINE**

- A. Landscape dripline shall be a continuous self-cleaning, recycled content, pressure compensating dripline with built-in check valve and be Cupron® copper oxide infused for root intrusion deterrent. It shall have a purple stripe identifying it for use with recycled or alternative source water. The low volume dripline shall have integral and evenly spaced pressure compensating check valve emitters welded to the inside of the tubing that contains 20% recycled content. The dripline shall be available with emitters in four discharge rates (0.33, 0.53, 0.77, and 1.16 gallons per hour [GPH]) evenly spaced at 12", 18", or 24" centers.
- B. Each emitter shall have the ability to independently regulate discharge rates, with an inlet pressure range of 21.8 - 58 pounds per square inch (psi), at a constant flow and with a manufacturer's coefficient of variability of 0.03 or less. Recommended operating pressure shall be between 21.8 - 50 psi. The emitter discharge rate shall be 0.33, 0.53, 0.77, or 1.16 gallons per hour (GPH) utilizing a combination of turbulent flow and reduced pressure compensation by molded silicone diaphragm. The emitters shall be capable of continuously cleaning themselves while in operation and have an anti-siphon feature which prevents debris from entering outlet at system shutdown. The dripline shall be available with 12", 18", and 24" spacing between emitters unless otherwise specified.
- C. For subsurface installation, the dripline depth shall be 4" to 6". Maximum system pressure shall be 50 psi for maximum fitting integrity. Filtration shall be 120 mesh or finer. Bending radius shall not be smaller than 7".

- D. For on-surface or under mulch installations, 6" metal wire staples shall be installed 3' on center, and two staples shall be installed over every change-of-direction fitting.
- E. Automatic flush valve units shall be in accordance with the Drawings.
- F. Landscape dripline filter units shall be in accordance with the Drawings.
- G. Pressure regulating inline units shall be in accordance with the Drawings.
- H. Miscellaneous landscape dripline system components, including but not limited to; hold- down stakes, adapter fittings and location markers, shall be in accordance with the drawings.

#### **800-4.10 IDENTIFICATION TAGS**

- B. Identification tags for electrical control valves shall be manufactured from Polyurethane Behr Desopan, or equal. Use Christy's standard tag hot stamped with black letters on yellow background. Tags shall be numbered to match programming shown on the irrigation drawing. Provide one tag of each electric control valve.
  - 1. Tags shall be numbered to match programming shown on the Drawings. Provide one tag for each electric control valve, flow sensor and master valve.
  - 2. Order tags with the controller assignment on the front side of tag and the station sequence indicated on the back side of the tag. The tag is limited to three digits each side.
  - 3. Provide one tag for each electric control valve, master valve and flow sensor. Identification for master valves and flow sensors shall be as indicated on the Drawings.
- C. Special order tags from T. Christy Enterprises, (714) 771-4142 or Resident Engineer approved equal.

#### **800-4.11 SLEEVING**

- A. Install separate sleeves beneath paved areas to route each run of irrigation pipe or wiring bundle.
- B. Sleeving material beneath pedestrian pavements - PVC Schedule 40 pipe with solvent welded joints.
- C. Sleeving beneath streets and drives - PVC Schedule 40 pipe with solvent welded joints.
- D. Sleeving diameter - equal to twice that of the pipe or wiring bundle. Minimum sleeving diameter shall be 2 inches.

- E. Temporarily terminate capped ends of sleeving at locations 2 feet past pavement edges, 4" above finished grade. Paint pipe red.
- F. Chisel 2" letter "I" at face of curb or edge of pavement to mark the location of the sleeve termination point.
- G. At no time shall any irrigation pipe change direction under pavement.

#### **800-4.12 OTHER COMPONENTS**

- A. Tools and Spare Parts
  - 1. Provide operating keys, servicing tools, test equipment, other items, and spare parts as indicated in other areas of this Specification.
- B. Other Materials
  - 1. Provide other materials or equipment not indicated on the Drawings or referenced in this Specification, as necessary, to complete the installation of the irrigation system.

#### **801-1 LANDSCAPE INSTALLATION**

##### **801-1.01 RENOVATION AND PREPARATION OF EXISTING SOIL**

- A. Contractor shall submit soil samples to Horticultural/Agricultural Soils Testing Laboratory for horticultural analysis and soil amendment recommendations.
- B. Contractor shall take one (1) representative soil samples from each station.
- C. Contractor to provide a plan indicating (1) soil sample locations and depth sample was taken.
- D. Contractor shall be responsible for paying for horticultural soils testing and report.
- E. Contractor shall perform soil amendment procedures to the soil as required by soils report.

##### **801-1.02 CULTIVATION OF EXISTING SOIL**

- A. In areas where topsoil will not be applied, rip or cultivate the existing soil that will be receiving planting to a depth of at least 9-inches immediately prior to applying soil amendments.
- B. In areas where topsoil will be applied the following procedures are to be followed:
- C. Verify that sub grades for installation of topsoil have been established under rough grading, sub grade depth plus specified depth of topsoil should equal finished grade. Do not spread topsoil prior to the Resident Engineer acceptance of all sub grade work.

- D. Rip or cultivate sub-grade in all planting areas to a minimum depth of 9-inches immediately prior to spreading topsoil.
- E. Remove all rocks, stones, sticks and debris larger than 1-inch in diameter from the surface of the sub-grade prior to applying topsoil.

#### **801-1.03 SOIL SCARIFICATION**

- A. Planting areas which become compacted in excess of 85% relative compaction due to construction activities shall be thoroughly cross ripped to a minimum depth of 9 inches to alleviate the condition, taking care to avoid existing subsurface utility lines, if present.

#### **801-1.04 VERIFICATION OF EXISTING CONDITIONS**

- A. Prior to the work in this Section, examine previously installed work from other trades and verify that such work is complete and as required, to the point where this installation may commence properly.

#### **801-1.05 ROUGH GRADING CERTIFICATION**

- A. Obtain the Resident Engineer's written certification that indicates that final rough grade has been set by previous contractors to plus or minus 0.10 feet prior to commencing fine grading operations.

#### **801-1.06 FINE GRADING OPERATIONS**

- A. Ensure that the top 2-inches of soil is free of stones, roots, stumps, wire, or other deleterious matter 1-inch in diameter and larger. Dispose of debris offsite.
- B. All planting areas to be fine graded to within 2-1/2 inches of paved areas, irrigation valve boxes, concrete mow curbs.
- C. Upon acceptance of rough grade by the Resident Engineer and prior to beginning planting operations, finish grade all planting areas, fill as needed and remove surplus soil and float areas to a smooth, uniform grade to elevations as indicated on the Drawings. Obtain the Resident Engineer approval of the fine grading prior to commencing planting operations.

#### **801-1.07 SURFACE DRAINAGE OF PLANTING AREAS**

- A. The Contractor shall bear final responsibility for properly draining all planting areas. Any discrepancy in the Drawings or Specifications, obstructions on the site, or prior work done by another contractor, which the Contractor feels precludes establishing proper drainage, shall be brought to the immediate attention of the Resident Engineer for correction or relief of said responsibility. The Contractor is to ensure proper drainage of all planting areas at a minimum

of 2% unless otherwise noted on grading plans.

- B. Contractor shall walk the project with the Owner and or Resident Engineer, and others deemed necessary by the Owner to approve finish grades prior to planting.

#### **801-1.08 SOIL PREPARATION**

- A. After finish grades for all landscaped areas have been established and approved by the Resident Engineer perform the following operations.
1. Cross-rip all area to a depth of 9 inches.
  2. Spread organic amendments uniformly on the surface of the soil and cultivate thoroughly into the top 4-6 inches in a minimum of two directions with a mechanical rototiller.
  3. The following soil amendments and fertilizers are to be used for bid purposes only. Specific amendment recommendations will be made after horticultural soil samples are taken and paid for by the Contractor. Application rates per 1,000 square feet shall be as follows:
    - Nitrolized fir bark - 6 cu. yds.
    - Planting fertilizer - 200 lbs. of Gro-Power Plus.
    - Agricultural gypsum - 100 lbs.
    - Soil sulfur - 20 lbs.
  4. After applying soil amendments and prior to planting, irrigate with overhead irrigation so that a minimum of 1-3 inches of good quality water passes through the soil profile.

#### **801-1.09 BACKFILL MIX FOR SHRUBS AND TREES**

- A. The following backfill mix is for bid price basis only. Final backfill recommendations will be made only after rough and fine grading operations are completed and horticultural soil testing has been performed and approved by the Resident Engineer. Adjustments to the backfill amendments may be required based on horticultural soil test results and is assumed covered by the Contractor, outside of extraordinary conditions.
- 7 parts by volume on-site soil.
  - 3 parts by volume nitrolized organic soil amendment 2 lbs. iron sulfate per cubic yard of mix.
  - 18 lbs. of Gro-Power Plus per cubic yard of mix. Planting tablets - quantity based on size of plant.
- B. Thoroughly blend the backfill mix prior to placement.
- C. Do not apply iron sulfate over paved materials since severe staining is likely to occur.
- D. Substitute plant pits are the responsibility of the Contractor under the Base Bid. Drainage sumps are not part of the Base Bid and compensation will be

awarded to the Contractor based on the Construction Agreement.

- E. Submit written results of each plant pit percolation test with locations, date and time of test to the Resident Engineer.

## **801-1.10 PLANTING OPERATIONS**

### **A. Planting Layout**

1. It is the Contractor's responsibility to verify with local governing agencies the location and depth of all underground utilities. If any underground construction or utility lines are encountered in the excavation of planting holes, alternative planting locations may be selected by the Resident Engineer.
2. Locations for all shrubs and trees shall be marked on the ground either by flagged stakes indicating plant type and size or the actual plants themselves for the Resident Engineer's review and approval prior to planting.

### **B. General Planting Guidelines**

1. Plant only as many plants that can be planted and watered on that same day in a given planting area.
2. Protect the planting area from excessive vehicle compaction.
3. Face plant material with fullest growth into the prevailing wind and/or the primary direction of view.
4. Center plant material in the planting hole.
5. Set plant material plumb and hold rigidly in place until soil has been tamped firmly around the root ball.
6. Planting pits shall have vertical sides and roughened surfaces. The size of the plant pit shall be per planting detail on drawings.

### **C. Container Removal**

1. Plant containers shall be opened and removed in such a manner that the soil surrounding the root ball shall not be broken.
2. Do not injure the root ball while removing the container. After removing plant, superficially cut edge roots with a knife on three (3) sides.

### **D. Shrub and Tree Installation**

1. Apply backfill mix to the plant pit up to 1/2 the height of the root ball. Add water to the top of the remaining plant pit and let soak in before completing the remainder of backfilling.

### **E. Placement of Plant Tablets**

1. Prior to planting, place the required amount of planting tablets per plant size on top of each root ball while the plants are still in their containers so that the Resident Engineer can easily verify their existence and quantity.
2. After obtaining approval by the Resident Engineer on plant tablet



quantity and after water has completely drained from the plant pit, add plant tablets to the planting pits in the following quantities:

- 1 gallon - 3 tablets
  - 5 gallon - 8 tablets
  - 15 gallon - 14 tablets
  - 24-inch box - 15 tablets
  - 36-inch box - 19 tablets
  - 48-inch box - 24 tablets
  - 60-inch box - 35 tablets
3. Dig planting pit to the recommended depth.
  4. Backfill the plant pit to attain the proper level for the plant.
  5. Place the specified amount of plant tablets between the bottom of the root ball but not higher than 1/3 of the way up the root ball. Space the plant tablets equally around the perimeter of the root ball approximately 2 inches from the football.
  6. Finish backfilling of the planting pit by tamping the soil firmly around the root ball and watering thoroughly.

#### F. Final Backfilling

1. Once the water has soaked in thoroughly, place the remaining backfill and tamp firmly.
2. After final backfilling, construct an earthen basin around the base of each plant with backfill mix sufficient to hold water for the following plant sizes:
  - Shrubs and vines - 2-inches of water.
  - Trees - 4-inches of water.
3. Remove basins in all turf areas but not before the irrigation system is operational.

#### G. Plant Settling

1. Any plant material that has settled deeper than the surrounding grade shall be raised to the correct level.

#### H. Ground Cover Planting

1. Ground cover flats shall contain sufficient moisture to reduce soil separation when lifting out the plants.
2. Plant ground covers in straight rows, evenly, triangular spaced, and at an on-center spacing as indicated on the Drawings.
3. Each rooted ground cover plant shall be planted with its proportional amount of soil.
4. Apply a 3-inch layer of wood mulch at the completion of planting.

#### I. Container Pot Planting

1. Refer to the Drawings for specific container pot planting layout, waterproofing and sump/drainage details.

### 801-1.11 WATERING

- A. All planting shall be watered immediately after planting. After the first watering, water shall be applied to all plants as conditions may require

keeping the plants in a healthy and vigorous growing condition until the completion of the Contract.

#### **801-1.12 WOOD MULCH INSTALLATION**

- A. Spread a 3-inch-deep layer of shredded bark mulch in all landscaped areas other than in turf and or hydroseed areas.

#### **801-1.13 CLEAN UP**

- B. Contractor shall remove all trash caused from his Work on a weekly basis throughout the duration of the Project.
- C. Upon completion of his Work under this Section, the Contractor shall remove all rubbish, waste and debris resulting from his operations offsite or as directed by the Owner and or Resident Engineer.
- D. All scars, ruts or other marks in the ground caused by the Contractors work shall be repaired.
- E. Remove all equipment and implements of service, and leave the entire work area in a neat, clean, and Resident Engineer accepted condition. All sidewalks and other paving areas shall receive a broom-clean treatment.

#### **801-1.14 SITE VISIT SCHEDULE**

- B. The Contractor shall be responsible for notifying the Owner and or Resident Engineer in advance to schedule the following site visits:
  - 1. Pre-construction "Kick-Off" meeting - 7 days.
  - 2. At completion of fine grading - 2 days.
  - 3. At completion of soil preparation - 2 days.
  - 4. At start of tree planting, plant layout prior to plant pit excavation - 2 days.
  - 5. After layout of shrubs and prior to pit excavation – 2 days.
  - 6. Final walkthrough prior to going on contracted maintenance period - 7 days.
  - 7. Final walkthrough for project acceptance - 7 days.
- C. When site visits are made by other than the Owner and or Resident Engineer, the Contractor shall show evidence in writing of when and by whom the site visit was made.
- D. No site visit will commence without all previous punch list items being completed, unless compliance has been waived by the Owner and or Resident Engineer. Failure to accomplish the timely execution of previous field report punch list items and not preparing adequately for the next site visit shall make the Contractor potentially liable for reimbursing the Resident Engineer for his labor and reimbursable expenses.

#### **801-2 - LANDSCAPING MEASUREMENT AND PAYMENT**

## **801-2.01 MEASUREMENT**

- A. Work of this section shall be completed in accordance with the Contract Documents and will be measured by the contract unit or fraction thereof listed in the Schedule of Quantities and Prices. The quantities contained on the Schedule of Quantities and Prices as derived from the drawings and will be used as the basis for this measurement. Lump Sum measurement of partial payment will be in accordance with the Schedule of Values addendum submitted by the Contractor.

## **801-2.02 PAYMENT**

- A. Work of this section completed in accordance with the Contract Documents will be paid for at Lump Sum (LS) unit price as listed in the Schedule of Quantities and Prices. This price shall be full compensation for furnishing all labor, materials, tools, equipment, supplies, supervision, and incidentals necessary to complete the work of this section as described by the Contract Documents. Lump Sum, partial payment will be in accordance with the Schedule of Values submitted by the Contractor.

### **Bid Item No. 20: Median Irrigation**

## **801-3 IRRIGATION INSTALLATION**

### **801-3.01 GENERAL**

- A. All scaled dimensions are approximate. The Contractor shall check and verify all size dimensions and receive the Resident Engineer's approval prior to proceeding with any work under this Specification. Contractor shall locate with 2 x 2-inch wood stakes with identifying markings for all proposed locations of electrical control valve boxes, gate valve boxes and quick coupler boxes for approval by the Resident Engineer. After locating all these items contact the Resident Engineer for review and approval. Minor adjustments to the stake locations may be requested of the Contractor by the Resident Engineer.
- B. Exercise extreme care in excavating and working near existing utilities. The Contractor shall be responsible for damages to these utilities which are caused by his operations. Check existing utility drawings for existing utility locations.
- C. Coordinate installation of sprinkler irrigation materials including pipe, so that there shall be no interference with utilities, construction elements, or the planting of trees, shrubs, and ground covers.
- D. The Contractor shall carefully check all finish grades to his satisfaction in order to safely proceed before starting work on the irrigation system.
- E. Report irregularities to the Resident Engineer prior to beginning work. Beginning of work implies acceptance of existing conditions.

### **801-3.02 SITE PREPARATION**

#### **A. Physical Layout**

1. Prior to installation, the Contractor shall stake out all pressure and non-pressure supply lines and the location of all sprinkler heads.
2. Sprinkler, equipment and piping layout shall be approved by the Resident Engineer prior to installation.

#### **B. Water Supply Point-of-Connections**

1. Water supply Points-of-Connection are as indicated on the Drawings. The Contractor shall be responsible for minor changes caused by actual site conditions.
2. The sprinkler irrigation system shall be connected to water supply Points-of- Connection as indicated on the Drawings.

#### **C. Electrical Supply Point-of-Connections**

1. Electrical supply Points-of-Connection for the irrigation controllers are as indicated on the Drawings. The Contractor shall be responsible for minor changes caused by actual site conditions.
2. Connections shall be made at approximate locations as indicated on the Drawings. The Contractor shall be responsible for minor changes caused by actual site conditions.

### **801-3.03 INSTALLATION**

#### **A. Trenching**

1. Dig trenches straight and support pipe continuously on bottom of trench. Lay pipe to an even grade. Trenching excavation shall follow the layout as indicated on the Drawings.
2. Provide a minimum soil cover of 24 inches for all recycled water pressure supply lines.
3. Provide a minimum soil cover of 12 inches for all non- pressure lines.
4. Provide a minimum soil cover of 24 inches for all control wire.
5. Provide a minimum soil cover of 2 inches and a maximum of 3 inches for dripline tubing.
6. Where piping is indicated under paved areas, but running parallel and adjacent to planting areas, install the piping in the planted areas. Irrigation head spacing as indicated on the Drawings shall not be exceeded.

#### **B. Backfilling**

1. The trenches shall not be backfilled until all required tests are performed. Trenches shall be carefully backfilled with the excavated materials approved for backfilling, consisting of earth, loam, sandy clay, sand, or other approved materials, free from large clods of earth or stones. Backfill shall be mechanically compacted landscaped areas to a dry density equal to adjacent undisturbed soil

- in planting areas. Backfill shall conform to adjacent grades without dips, sunken areas, humps or other surface irregularities.
2. A fine granular material backfill shall be initially placed over all lines. No foreign matter larger than 1/2 inch in size will be permitted in the initial backfill.
3. The flooding of trenches will be permitted only with the approval of the Resident Engineer.
4. If settlement occurs and subsequent adjustments in pipe, valves, sprinkler heads, planting, or other construction elements are necessary, the Contractor shall make all required adjustments without cost to the Owner.

#### C. Trenching and Backfilling Under Pavement

1. Trenches located under areas where asphalt concrete or concrete pavement occurs, shall be backfilled with sand (a layer six (6) inches below the pipe and three (3) inches above the pipe) and compacted in layers to 95% compaction, using manual or mechanical tamping devices. Trenches for piping shall be compacted to equal the compaction of the existing adjacent undisturbed soil and shall be left in a firm unyielding condition. All trenches shall be left flush with adjoining finish grade. The Contractor shall set piping in place, cap, and pressure test all piping under paving prior to the paving work.
2. Generally piping under existing pavement is done by jacking, boring or hydraulic driving, but where any cutting or breaking of concrete pavement is necessary, it shall be done and replaced by the Contractor at no cost to the Resident Engineer. Permission to cut or break concrete pavement shall be obtained from the Resident Engineer. No hydraulic driving will be permitted under concrete pavement.
3. Provide a minimum soil cover of 24 inches between the top of the pipe and the bottom of the aggregate base for all pressure and non-pressure piping installed under asphaltic concrete pavement.

#### D. Assemblies

1. The routing of irrigation lines as indicated on the Drawings is diagrammatic only. Install lines and various assemblies in such a manner as to conform with the Drawings.
2. Install no multiple assemblies in plastic lines. Provide each assembly with its own outlet.
3. Install all assemblies specified herein in accordance with their respective details. In absence of Drawings or Specifications pertaining to specific items required to complete this work, perform such work in accordance with best standard practice with prior approval of the Resident Engineer.
4. PVC pipe and fittings shall be thoroughly cleaned of dirt, dust and moisture before installation. Installation and solvent welding methods shall be as recommended by the pipe and fitting manufacturer.
5. On PVC to metal connections work the metal connections first. Teflon tape or approved equal, shall be used on all threaded PVC

to PVC and threaded PVC to metal joints. Apply a light wrench pressure only. Where threaded PVC connections are required, use threaded PVC adapters into which the pipe may be solvent welded.

E. Assembling Pipe and Fittings:

1. Inspect all pipe and fittings before installation.
2. Keep pipe free from dirt and pipe scale. Cut pipe ends square and debur. Clean pipe ends of loose pipe shavings.
3. Keep ends of assembled pipe capped. Remove caps only when necessary to continue assembly.
4. Install pipe with all markings up for visual inspection and verification.
5. All lines shall have a minimum clearance of six (6) inches from each other and from lines of other trades. Parallel lines shall not be installed directly over one another.
6. Maintain 10-foot minimum horizontal separation from all potable water piping. Where reclaimed and potable water pressure main line piping cross, the reclaimed water piping shall be installed below the potable water piping on a PVC Class 200 pipe sleeve which extends a minimum of five (5) feet on either side of the potable water piping. Provide a minimum vertical clearance of six (6) inches.
7. Use only strap-type friction wrenches for threaded plastic pipe.
8. Snake pipe from side to side within the trench.

F. Line Clearance

1. All lines shall have a minimum clearance of six (6) inches from each other and from lines of other trades. Parallel lines shall not be installed directly over one another.

G. Electric Control Valve Installation

1. Install electric control valves as indicated on the Drawings. When grouped together, allow at least twelve inches between electric control valves. Install each electric control valve in a separate valve box. Each electric control valve number shall be heat-branded on valve box top with 2-inch-tall letters.
2. The Resident Engineer shall approve electric control valve and quick coupling valve box locations prior to final installation.

H. Valve Box Installation

1. Install valve boxes as indicated on the Drawings. When grouped together, allow at least twelve inches between valve boxes.
2. Heat brand valve box identification as indicated on Drawings.

I. System Flushing

1. After pipelines and risers are in place and connected and all necessary diversion work has been completed, and prior to installation of sprinkler heads, the control valves shall be opened, and a full head of water used to flush out the system. Sprinkler heads shall be installed only after flushing of the system has been performed.

J. Sprinkler Head Installation

1. Install the sprinkler heads as indicated on the Drawings.
2. Spacing of sprinkler heads shall not exceed the maximum spacing as indicated on the Drawings. In no case shall the spacing exceed the maximum recommended by the manufacturer.
3. Install check valves on sprinkler heads that drain water after the control valve is turned off. "Low head" drainage will not be allowed on sprinkler heads.

K. Landscape Drip Installation

1. Install the dripline and drip emitter components as indicated on the Drawings.
2. Spacing of dripline shall not exceed the maximum spacing as indicated on the Drawings.

L. Sleeving

1. Extend sleeve ends a minimum of 24 inches beyond the edge of the paved surface. Cover pipe ends and mark with stakes. Route wire through and tie at each end to stakes.

**801-3.04 TEMPORARY REPAIRS**

- A. The Owner and/or Resident Engineer reserves the right to make temporary repairs as necessary to keep the irrigation system in operating condition.

**801-3.05 INSTALLATION OF OTHER COMPONENTS**

A. Tools and Spare Parts

1. Prior to the Pre-Maintenance Walkthrough, supply the Resident Engineer operating keys, servicing tools, test equipment, and any other items as indicated on the Drawings.

B. Other Materials

1. Install other materials or equipment to be part of the irrigation system, as indicated on the Drawings, even though such items may not have been referenced in this Specification.

**801-3.06 FIELD QUALITY CONTROL**

A. Adjustment of the Irrigation System

1. Flush and adjust all sprinkler heads and drip systems for optimum performance and to reduce overspray onto walks, roadways, and buildings as much as possible.
2. If it is determined that adjustments to the sprinkler heads will provide proper and more adequate coverage, the Contractor shall make such adjustments prior to any planting. Adjustments may also include changes in nozzle sizes and degrees of arc as required.
3. Lowering raised sprinkler heads by the Contractor shall be accomplished within 10 days after notification by the Resident

Engineer.

4. All sprinkler heads shall be set perpendicular to finish grades unless otherwise indicated on the Drawings.

**B. Irrigation System Testing**

1. The Contractor shall request the presence of the Resident Engineer at least 48 hours in advance of irrigation system testing.
2. Testing of pressure mainline shall occur prior to installation of any electric control valves.
3. The Contractor shall test all pressure lines under hydrostatic pressure of 150 PSI for a period of one (1) hour. Leaks that develop in the tested portion of the system shall be located and repaired after each test period when a drop of more than 5 pounds per square inch (35 kPa) is indicated by the pressure gauge.
4. After the leaks have been repaired, the one (1) hour pressure test shall be repeated, and additional repairs made until the drop-in pressure is less than five pounds per square inch or less. All piping (pressure and non-pressure) under pavement shall be pressure tested under a hydrostatic pressure of 150 PSI for a period of two (2) hours.
5. If during the pressure test, a pressure drop occurs - indicating a leak, replace the faulty joints and repeat the pressure test until the entire system is proven watertight.
6. All hydrostatic tests shall be made only in the presence of the Resident Engineer. No pipe shall be backfilled until it has been observed, tested and approved in writing.
7. The Contractor is to furnish the necessary force pump and all other test equipment for the hydrostatic pressure test.
8. When the irrigation system hydrostatic pressure test and is completed, perform a sprinkler coverage test in the presence of the Resident Engineer. Determine if the water coverage is complete and adequate. Furnish all materials and perform all work necessary to correct any inadequacies of water coverage due to deviations from the Drawing.
9. Upon completion of each phase of work, the entire system shall be coverage tested and adjusted to meet specific site requirements.

**801-3.07 IRRIGATION SYSTEM MAINTENANCE**

- A. The entire irrigation system shall be under full, automatic operation for a period of seven (7) days prior to beginning any planting. The Resident Engineer reserves the right to waive or shorten this operation period.

**801-3.08 CLEAN UP**

- A. Clean up shall be made by Contractor as each portion of work progresses. Refuse and excess dirt shall be removed from the site, all walks and paving shall be broom swept or washed down, and any damage sustained to the work of other contractors shall be repaired to their original conditions at no cost to the Owner.



- B. Upon completion of the Work, the Contractor shall smooth all ground surfaces. Remove excess materials such as rubbish, debris and sweep adjacent streets, curbs, gutters, walkways, and trails. Remove construction equipment from the premises.

#### **801-3.09 FINAL WALKTHROUGH PRIOR TO ACCEPTANCE**

- A. The Contractor shall operate the irrigation system in its entirety for the Resident Engineer at the time of the Final Walkthrough. Any items deemed not acceptable by the Resident Engineer shall be reworked until accepted.
- B. The Contractor shall show evidence to the Owner that the Resident Engineer has received all accessories, charts, "As-built drawings", and equipment as required before the Final Walk through will be performed.

#### **801-3.10 SITE VISIT OBSERVATION SCHEDULE**

- A. The Contractor shall be responsible for notifying the Resident Engineer in advance of the following site visits:
  - 1. Pre-Job or "Kick-Off" meeting - 7 days.
  - 2. Pressure supply line installation and testing - 2 days.
  - 3. Irrigation controller installation - 2 days.
  - 4. Control wire installation - 2 days.
  - 5. Lateral line, sprinkler head and dripline installation - 2 days.
  - 6. System coverage test - 2 days.
  - 7. Final Walkthrough - 7 days.

The owner may request the attendance of the Landscape Architect at these meetings, or any other time as deemed necessary.

#### **801-4 IRRIGATION MEASUREMENT AND PAYMENT**

##### **801-4.01 MEASUREMENT**

- A. Work of this section completed in accordance with the Contract Documents will be measured by the contract unit or fraction thereof listed in the Schedule of Quantities and Prices. The quantities contained on the Schedule of Quantities and Prices as derived from the drawings and measured by the Resident Engineer will be used as the basis for this measurement. For Lump Sum, measurement of partial payment will be in accordance with the Schedule of Values addendum submitted by the Contractor.

##### **801-4.02 PAYMENT**

- A. Work of this section completed in accordance with the Contract Documents will be paid for at the applicable unit price as listed in the Schedule of Quantities and Prices. This price shall be full compensation for furnishing all labor, materials, tools, equipment, supplies, supervision and incidentals necessary to

complete the work of this section as described by the Contract Documents. For Lump Sum, partial payment will be in accordance with the Schedule of Values submitted by the Contractor.

## **802-1 LANDSCAPE MAINTENANCE**

### **802-1.01 CONDITIONS**

- A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements apply to the Work specified in this Section.

### **802-1.02 - SCOPE OF WORK**

- A. Furnish all labor, material, equipment, transportation and services required to maintain landscape in a healthy growing condition and in a neat and attractive appearance throughout the Maintenance Period, as shown on the Drawings and specified herein.
- B. Scope of work: The general extent of landscape maintenance may include, but is not limited to the following:
  - 1. Tree, shrub, ground cover and turf areas.
  - 2. Irrigation systems.
  - 3. General site clean-up.

### **802-1.03 REFERENCES AND REGULATORY REQUIREMENTS**

- A. State of California Department of Transportation Standard Specifications, latest edition.

### **802-1.04 QUALITY ASSURANCE**

- A. Control of work: Comply with Section 5 of the CalTrans Standard Specifications, latest edition.
- B. Control of materials: Comply with Section 6 of the CalTrans Standard Specifications, latest edition.
- C. The Contractor shall be experienced in horticulture and landscape maintenance, practices, and techniques, and shall provide sufficient number of workers with adequate equipment to perform the work during the Maintenance Period.

### **802-1.05 MAINTENANCE PERIOD**

- A. Maintenance Period shall be ninety (90) Calendar days.

- B. Maintain the entire project area during progress of work and during the specified Maintenance Period or until final acceptance of the project. Maintenance shall continue beyond the Maintenance Period, as required, until final acceptance is given by the Owner.
- C. Maintenance Period shall not start until all elements of construction, planting and irrigation for the entire project are in accordance with Contract Documents. A main requirement is that all lawn and landscape areas be planted and that all lawn areas show an even, healthy stand of "sod-like" turf which shall have been mown twice. If such criteria are met to the satisfaction of the Owner's Representative, written notification shall be issued to establish the effective beginning date of the Maintenance Period.
- D. All elements listed on the Pre-maintenance Punch-list must be completed to the satisfaction of the Owner's Representative. The Maintenance Period shall, per the discretion of the Owner's Representative, be allowed to start and finish at different times in different areas as applicable, if authorization of the Owner is obtained.
- E. Any day of improper maintenance, as determined by the Owner's Representative, shall not be credited as an acceptable Maintenance Period Day. The Maintenance Period shall be extended on a daily basis if the work is not in accordance with the Plans and Specifications until proper maintenance, as determined by the Owner's Representative, is being performed.
- F. Contractor shall provide protection to the project site against trespass, vandalism, or theft during the Maintenance Period. Any damage caused by the lack of adequate site protection shall be repaired or replaced at no additional cost to the Owner.

802-1 Payment for the preceding requirements for Landscape Maintenance Bid item shall be per lump sum unit (LS) price bid and shall include full compensation for furnishing and performing all work, including all labor, tools, equipment and materials and no additional compensation will be allowed therefor.

#### **802-1.06 - GUARANTEE AND REPLACEMENT**

- A. All work executed under the Contract shall be guaranteed for the duration of the Maintenance Period and for a period of one (1) year after Final Acceptance of project against any and all poor, inadequate or inferior materials and/or workmanship, acts of God, animal or insect damage or improper maintenance, as determined by the Owner. Material shall be replaced by the Contractor at Contractor's expense.
- B. Any materials found to be dead, missing, or not in a satisfactory or healthy condition during the Maintenance Period shall be replaced immediately. The Owner's Representative shall be the sole judge as to the condition of material. Material to be replaced within the Guarantee Period shall be replaced by the Contractor within five (5) days of written notification by the Owner. All

replacement materials and installations shall comply with the Plans and Specifications.

#### **802-1.07 - OBSERVATION SCHEDULE**

- A. Observations shall be requested by the Contractor from the Owner's Representative as per observations listed in specifications Sections 801-1.14 and 801-3.10.

#### **802-1.08 - FINAL ACCEPTANCE OF THE PROJECT**

- B. Upon completion of all project work, including the Maintenance Period, the Owner's Representative will, upon written request from Contractor, make an observation to determine final project acceptability. The Contractor shall notify the Owner's Representative a minimum of two (2) working days in advance of anticipated completion.
- C. Where observed work does not comply with the Contract Documents, replace rejected work and continue specified Maintenance Period until re-inspection by the Owner's Representative and project has been determined to be acceptable. The Contractor shall repair, replace or otherwise correct all non-compliant work, continue Landscape Maintenance Period, and make another written request to the Owner's Representative to verify punch-list completion. All replacement materials and installations shall be in accordance with the Plans and Specifications. Remove rejected work and materials immediately from project. Prior to date of final observation, Contractor shall provide the Owner's Representative with all Record Drawings, turnover items and written Guarantee Statement in accordance with the Contract Documents.

#### **802-1.09 – MATERIALS**

- A. All materials used shall conform to Specifications or shall otherwise be acceptable to the Owner. The Owner shall be given a monthly record of all herbicides, insecticides and disease control chemicals used.
- B. General fertility maintenance fertilizer: shall consist of the following percents by weight:

5%	nitrogen
3%	phosphoric acid
1%	potash

- C. Slow-release fertilizer: shall consist of the following percents by weight:

12%	nitrogen
8%	phosphoric acid
8%	potash

## **802-2 EXECUTION**

### **802-2.01 GENERAL**

- A. Proper maintenance, including watering, weeding, mowing, edging, fertilization, repairing and protection shall be required until entire project is finally accepted, but in any event for a period of not less than the specified Maintenance Period.
- B. Maintenance shall be according to the following standards. All areas shall be weeded and cultivated at intervals of not more than ten (10) days. Watering, trash and debris removal, mowing, rolling, edging, trimming, fertilization, spraying and pest control, as required, shall be included in the Maintenance Period. Street gutters and sidewalks shall be included. The Contractor shall be responsible for maintaining adequate protection of the area. Damaged areas shall be repaired at the Contractor's expense. Between the 15th day and the 20th day of the Maintenance Period, the Contractor shall reseed or resod all spots or areas within the turf where normal turf growth is not evident. Replenish mulch to originally specified depth on a monthly basis, or more frequently as required.

### **802-2.02 - TREE AND SHRUB AND GROUNDCOVER CARE**

- A. Watering
  - 1. Water appropriately (based on plant type) to insure vigorous and healthy growth until work is accepted. Maintain the water basins around trees and shrubs so that water can be applied to establish moisture through the major root zone. Water enough that moisture penetrates throughout root zone and only as frequently as necessary to maintain healthy growth. Refer to irrigation schedule as noted on Plans. When hand watering use a water wand to break the water force
- B. Weed Control
  - 1. Entire project site shall be kept free of weeds at all times. Control new weed growth with recommended, legally approved pre-emergent herbicides. If weeds develop, use recommended, legally approved herbicides.
  - 2. Keep basins and areas between plants free of weeds. Avoid frequent soil cultivation that destroys shallow roots. Use mulches to help prevent weed germination.
  - 3. No herbicide shall be used without the Owner's Representative's prior consent. Use only herbicides in accordance with manufacturer's recommendations. If selective herbicides are used, extreme caution shall be observed so as not to damage any other plants. Spraying shall be done only under windless conditions.
- C. Insect and Disease Control

1. Maintain a reasonable control with approved materials.
2. Disease and insect damage shall be controlled by the use of fungicides and insecticides, subject to the prior consent of the Owner's Representative. Rodent mitigation shall be accomplished using legal means other than poison baits.

#### D. Fertilization

1. Fertilize all planting areas with the following:
  - a. Commencement of Maintenance Period - 5 lbs. per 1,000 square feet with general fertility maintenance fertilizer.
  - b. At the end of the first 30-day Maintenance Period - 5 lbs. per 1,000 square feet with general fertility maintenance fertilizer.
  - c. At the end of the Maintenance Period and at 30-day intervals should Maintenance Period be extended - 10 lbs. per 1,000 square feet with slow-release fertilizer.
2. Avoid applying fertilizer to the root ball and base of main stem; rather, spread evenly under plant to drip line. Rates will vary from about a cup of nitrate fertilizer (depending on nitrogen percentage) around a newly installed small plant to about one-half (1/2) lb. of actual nitrogen per inch of trunk diameter measured four feet from the ground for mature trees.

#### E. Protection

1. The Contractor shall maintain protection of the planted areas. Damaged areas shall be repaired or replaced at the Contractor's expense. Install a temporary maintenance fence for the entire length of Maintenance Period around all turf areas, unless otherwise specified by the Owner.

#### F. Replacement of Plants

1. Replace dead, dying and missing plants with plants of a size, condition and variety to match plants acceptable to Owner at Contractor's expense under the conditions stated in the Guarantee and Replacement section of these specifications.

### **802-2.03 IRRIGATION SYSTEM**

#### A. System Observation

1. The Contractor shall check all systems for proper operation on a weekly basis and make all necessary repairs. Lateral lines shall be flushed out by removing the last sprinkler head at each end of the lateral. All equipment shall be adjusted as necessary for proper coverage and function. All heads are to be adjusted as necessary.

#### B. Repairs

1. Repair all damages to irrigation system at the Contractor's expense. Repairs shall be made within twenty-four (24) hours.

### **802-2.04 TRASH**

- A. Remove trash and debris weekly. Dispose in a legal manner.
- B. Remove trash in all project areas including adjacent pedestrian walkways and parking areas.

## **802-2.05 FIELD QUALITY CONTROL**

- A. Final Review: At or near the end of the specified Maintenance Period, the Contractor shall make a written request for a final review and the work shall be reviewed for conformance with the Construction Documents. If work is not accepted at the time of review, a punch-list of items requiring attention will be issued to the Contractor for correction. The Maintenance Period shall be extended at the Contractor's sole cost as necessary. Upon completion of the punch-list the Contractor shall again make a written request for review. If, upon re-visiting the site, it is found that the punch-list has not been completed, the review shall end, and the Contractor shall be back-charged for all additional visits.
- B. All re-inspections required due to Contractor not being prepared or non-conformance with the Construction Documents shall be back charged to the Contractor.
- C. Final Acceptance: When work is found to be in conformance with the Contract Documents, subject to the discretion of the Owner's Representative, a statement of Final Acceptance shall be issued to the Contractor.

## **802-3 MAINTENANCE MEASUREMENT AND PAYMENT**

### **802-3.01 MEASUREMENT**

- A. Work of this section completed in accordance with the Contract Documents will be measured by the contract unit or fraction thereof listed in the Schedule of Quantities and Prices. The quantities contained on the Schedule of Quantities and Prices as derived from the drawings and will be used as the basis for this measurement. Lump Sum measurement of partial payment will be in accordance with the Schedule of Values addendum submitted by the Contractor.

### **802-3.02 PAYMENT**

- A. Work of this section completed in accordance with the Contract Documents will be paid for at the Lump Sum (LS) unit price as listed in the Schedule of Quantities and Prices. This price shall be full compensation for furnishing all labor, materials, tools, equipment, supplies, supervision, and incidentals necessary to complete the work of this section as described by the Contract Documents. Lump Sum partial payment will be in accordance with the Schedule of Values submitted by the Contractor.

**Bid Item No. 19A: Landscape Maintenance (90 Days)**

The Contractor shall be responsible for the maintenance of all the planting, irrigation and hardscape for a period of 90 calendar days from the date of substantial completion of all work.

Landscape maintenance shall comply with the requirements of subsection 308-6 of the Standard Specifications, except as shown in these special provisions. The fifth paragraph of this subsection is hereby modified to require a 90-calendar day maintenance period. The maintenance period shall be after the City has notified the Contractor of preliminary acceptance of all site improvements. Acceptance shall include but not be limited to the following: All materials as set forth in the contract shall be installed and operating according to City requirements.

During the maintenance period, all plants and planted areas shall be kept well-watered and seed free at all times.

In order to expedite the plant establishment work, the Contractor shall maintain a sufficient number of men and adequate equipment to perform the work herein specified from the time any planting is done until the end of the maintenance period.

Depressions caused by vehicles, bicycles, or foot traffic are to be filled, leveled and replanted.

Gophers and moles are to be exterminated, and their damages are to be repaired.

During the maintenance period, the Contractor shall apply 25 lbs. Gro-Power 5-3-1 per 1000 square feet to all planted areas on a 30-day interval (minimum of three (3) applications) and notify the City or City's representative the day it will be done. Final application to be 10 days prior to final acceptance. All fertilizer to be delivered to the site and approved by the City or City's representative prior to installation.

All paved areas including street curbs and gutters will be maintained in a neat and clean condition at all times, as directed by the City or City's representative.

Disease and Pest Control: Throughout the maintenance period, all plants shall be maintained in a disease and pest free condition. A licensed pest control operator shall be retained by the Contractor to recommend and apply all pesticides, herbicides and fungicides.

Each of the Contractor's working crews shall have a responsible leadman who may represent Contractor to discuss work results with the designated representative of the City.

Contractor shall submit monthly maintenance records to City Maintenance Staff.

Contractor shall contact designated representative of the City at monthly intervals for the purpose of conducting walk-through inspections of all maintained facilities.



Discrepancies will be noted and responsible party shall attempt to eliminate problems immediately.

City shall hold the 10% retention amount of the total contract cost until the 90-day maintenance period is up or maintenance and plant establishment is complete whichever occurs last. Final acceptance of project improvements will only occur after maintenance and plant establishment are complete.

This work shall consist of weekly inspection of the project site, maintaining the landscaped areas clear of any debris, cleaning graffiti on the hardscape within 48 hours, pruning plants and repair and replacement of any irrigation and electrical equipment damaged by vandalism or traffic.

Maintenance of all irrigation equipment shall be performed in accordance with the manufacturer's maintenance and operations manual for each unit installed. Copies of all said manuals shall be submitted to the Engineer at the completion of installation.

Pruning of plants shall be consistent with American National Standards Institute (ANSI) A300-1995, "Tree, Shrub and Other Woody Plant Maintenance-Standard Practices," and "Tree-Pruning Guidelines," published by the International Society of Arboriculture (ISBN 1-881956-07-5).

## **Payment**

Payment for the preceding requirements shall be per lump sum unit (LS) price bid and shall include full compensation for furnishing and performing all work, including all labor, tools, equipment and materials and no additional compensation will be allowed therefor.



# CITY OF COSTA MESA

## PUBLIC WORKS

### C&D Debris Diversion Facilities in Orange County

<div>Construction &amp; Demolition Debris Diversion Facilities</div> <div>(Please call facility to verify information)</div>			Materials Accepted															
			Mixed C&D	Asphalt/Concrete	Brick/Masonry/Tile	Cardboard	Wood	Metals	Landscape Debris	Carpet	Green Waste	Dirt	Glass	Drywall	Flooring	Appliances	Rebar	Tires
Facility	City	Phone																
CR&R. Inc.	Stanton	(714) 890-6300	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
DBW Associates Inc.	Anaheim	(714) 630-8551					X											
Ewles Materials	Irvine	(949) 552-6008		X														
Ewles Materials	Stanton	(714) 894-0032		X														
Ewles Materials	SJC	(949) 728-0436		X														
Greenstone Materials, Inc.	SJC	(949) 728-0500		X	X		X	X	X		X	X				X		
Griffith Company	Irvine	(800) 616-7625		X														
Madison Materials, Inc. / Ware	Santa Ana	(714) 664-0159	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
OC Recycling	Santa Ana	(714) 732-9253				X		X							X			
Rainbow Env. Services/Transfer	HB	(714) 847-3581	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Republic Services	Anaheim	(714) 238-3301	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
R.J. Noble	Orange	(714) 637-1550	X	X	X	X	X			X	X							
Robert’s Waste & Recycling	Santa Ana	(714) 577-2533	X	X	X			X	X		X	X						
Tierra Verde EcoCentre	Irvine	(949) 551-0363	X	X	X	X	X	X	X	X	X	X	X	X		X		
Tierra Verde La Pata	SJC	(949) 728-0401					X		X		X							
Truck and Go Delivery	Anaheim	(888) 412-4790	X	X	X	X	X		X	X	X	X		X	X			
WM - Sunset Environmental TS	Irvine	(949) 654-1562	X	X	X		X	X		X			X	X	X	X		

*Disclaimer: Costa Mesa is not liable for any errors, omissions, or changes on this list, nor does it guarantee the accuracy of any information regarding materials, services or products. These are privately owned facilities and are not affiliated with the City of Costa Mesa. This list is not intended to be exhaustive but has been developed to assist customers in finding recycling facilities. Updated: 1/4/23*

# ***SECTION “G”***

## **APPENDIX “A”**

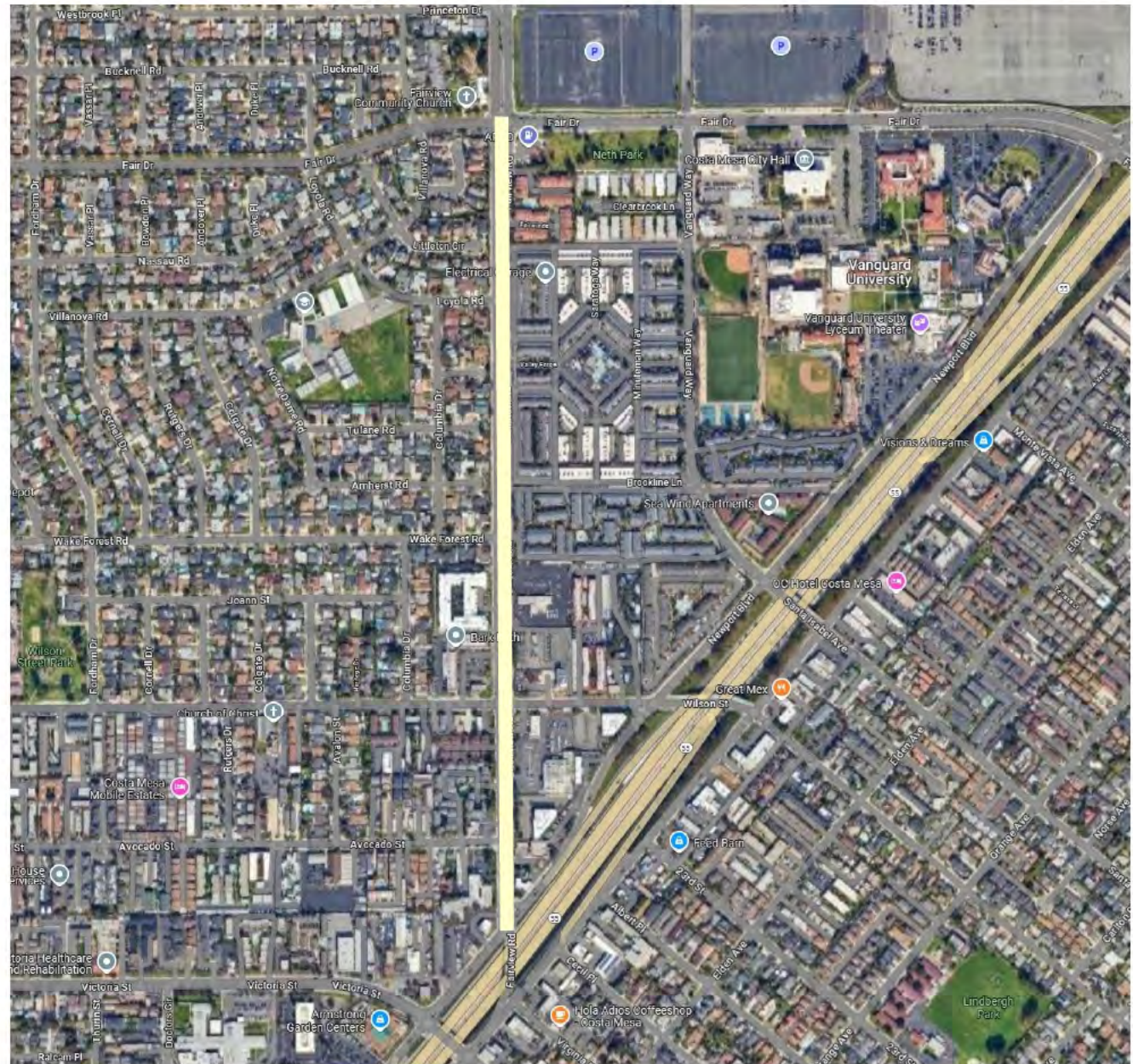
### **PROJECT LOCATION MAP**

**FAIRVIEW ROAD (FAIR DRIVE TO NEWPORT BOULEVARD)**

**PROJECT LOCATION MAP**



**Fairview Road**  
**Fair Dr. to Newport Blvd.**



***SECTION “G”***

**APPENDIX “B”**

**SELF-HAUL SOLID WASTE  
REPORTING FORM  
AND  
C&D DEBRIS DIVERSION  
FACILITIES IN ORANGE  
COUNTY**



# Self-Haul Solid Waste Reporting Form

## Construction & Demolition Per-Project Permit

<u>Permitted Self-Haul Contractor/Resident/Business Name:</u>	<u>Building Permit No.:</u>
<u>Jobsite Address:</u>	<u>Project Valuation:</u>

<b>Solid Waste Hauling Data</b> <i>(corresponding weight tickets must be attached to this form and submitted electronically)</i>				
Date	Waste Type & Receiving Facility	Total Weight	Diverted	Disposed
PROJECT TOTAL				

PERCENTAGE OF PROJECT WASTE  
DIVERTED \_\_\_\_\_ %

*Note: Weight tickets are required for all material you haul from this jobsite. Failure to disclose any and all hauling is subject to administrative penalty and revocation of your Contractor Self-Haul Permit. If additional pages are required to list all loads hauled, duplicate this form as needed.*

I hereby attest to the accuracy of this form:

_____ Contractor Representative Signature	_____ Date
_____ Contractor Representative Name	_____ City Representative Signature

For City Use Only	
1. Has Contractor provided documentation (such as weight tickets) showing proof of compliance?	Yes/No
If not, the administrative penalty calculated below shall be applied:	Administrative Penalty
Total Per-Project Fee \$ _____ x 3 = \$ _____	\$ _____ Paid on: _____ / _____ / _____
2. Has Contractor diverted 65% or the maximum amount possible of project waste?	Yes/No
If not, the administrative penalty calculated below shall be applied:	Administrative Penalty
Total Per-Project Fee \$ _____ x 2 = \$ _____	\$ _____ Paid on: _____ / _____ / _____

Public Services Final Sign-off \_\_\_\_\_

Date \_\_\_\_\_





# CITY OF COSTA MESA

## PUBLIC WORKS

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CR&R. Inc.	Stanton	(714) 890-6300	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
DBW Associates Inc.	Anaheim	(714) 630-8551					X											
Ewles Materials	Irvine	(949) 552-6008		X														
Ewles Materials	Stanton	(714) 894-0032		X														
Ewles Materials	SJC	(949) 728-0436		X														
Greenstone Materials, Inc.	SJC	(949) 728-0500		X	X		X	X	X		X	X				X		
Griffith Company	Irvine	(800) 616-7625		X														
Madison Materials, Inc. / Ware	Santa Ana	(714) 664-0159	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
OC Recycling	Santa Ana	(714) 732-9253				X		X							X			
Rainbow Env. Services/Transfer	HB	(714) 847-3581	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Republic Services	Anaheim	(714) 238-3301	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
R.J. Noble	Orange	(714) 637-1550	X	X	X	X	X			X	X							
Robert’s Waste & Recycling	Santa Ana	(714) 577-2533	X	X	X			X	X		X	X						
Tierra Verde EcoCentre	Irvine	(949) 551-0363	X	X	X	X	X	X	X	X	X	X	X	X		X		
Tierra Verde La Pata	SJC	(949) 728-0401					X		X		X							
Truck and Go Delivery	Anaheim	(888) 412-4790	X	X	X	X	X		X	X	X	X		X	X			
WM - Sunset Environmental TS	Irvine	(949) 654-1562	X	X	X		X	X		X			X	X	X	X		

*Disclaimer: Costa Mesa is not liable for any errors, omissions, or changes on this list, nor does it guarantee the accuracy of any information regarding materials, services or products. These are privately owned facilities and are not affiliated with the City of Costa Mesa. This list is not intended to be exhaustive but has been developed to assist customers in finding recycling facilities. Updated: 1/4/23*

# ***SECTION “G”***

## **APPENDIX “C”**

### **CITY AND CALTRANS STANDARD DRAWINGS**



# VERTICAL DELINEATION







# K71 Traffic Post



ONE OF A KIND



TECHNOLOGY FOR OUR TIMES



MULTI APPLICATIONS

## SELF RE-ERECTING MARKER POSTS

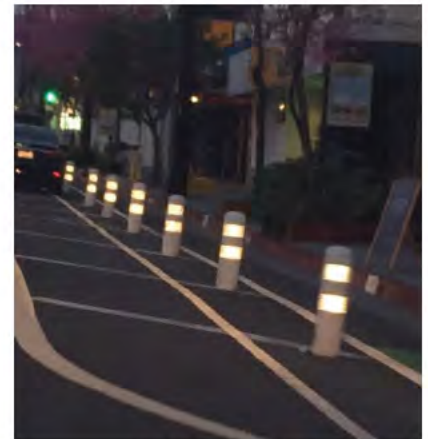
*TEMPORARY OR PERMANENT*



BICYCLE LANES



CROSSWALKS



CHANNELIZATION



BRIDGES



URBAN AREAS



WORK ZONES





## K71 Traffic Post

# Bicycle and Pedestrians

## Bold Measures take Bold Product Solutions



### Protected Bike Lanes

Over the past 20 years, US Reflector K71 bicycle lane posts have helped redefine bike lanes across north America. The K71 bollards are stronger than the flexible thinner posts commonly used and provide a much greater visual separation of traffic and bicycle lanes day & night with 2 high power reflective collars 4 inch wide each. The K71 post has become part of the Vision Zero program helping redefining safer roadways for the future. Easy to install and maintain, the K71 post 7.5 inch diameter helps motorists and bicyclists identify bike lanes from standard thin construction posts.



Bicycle impact safe, collapsible, no sharp objects, 29 inches height for safe handle bar passage, Installation: Quick and easy single point anchoring

Watch Protected Bike Lanes Video  
<https://www.youtube.com/watch?v=5e713fusSdw>

[usreflector.com](https://usreflector.com)





# K71 Traffic Post



## K71 FLEXIBLE POST

### SELF RE-ERECTING



The K71 flexible marker post is a single piece design traffic calming device that is manufactured with a unique blend of polyethylene and UV inhibitors. The combination of these materials offers exceptional softness characteristics and remarkable re-erecting memory.

Strong and durable with no springs or pivoting devices, the K71 takes just seconds for removal and re-installation. Bright vibrant colors and 4 inch reflective collars bring extra clarity to all types of safety installations. The K71 can be utilized in a wide range of safety enhancement applications temporary or permanent with the use of optional attachments.

#### Optional connection solutions

- Glue down Rubber base
- Channelizers



Rubber Base



Channelizers

### ALL-ROUND RUGGEDNESS single piece design, self-re-erecting Marker Post.

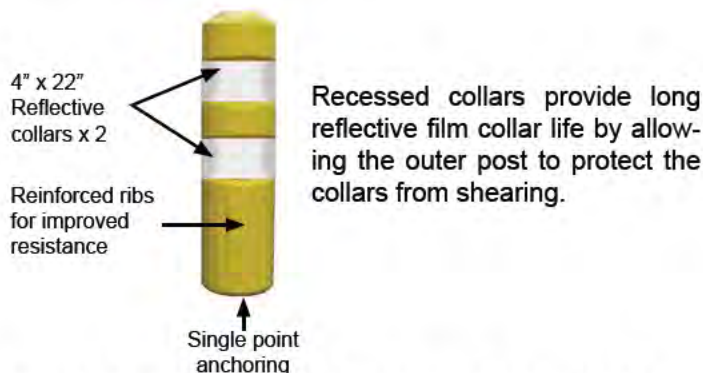
K71 Self Re-Erecting Marker Posts are built to resist impacts over 65 m.p.h... continuously without damaging the post or vehicle. Designed for superior traffic control, the K71 Marker Post "gives" under impact and re-erects into its vertical position without the use of springs or pivoting devices.

The K71 Marker Post takes just seconds for removal and re-installation, protects work site personnel and provides long-term safety for all road users.



### ALL AROUND RUGGEDNESS

Self-Re-Erecting Marker Post, both rugged and flexible, withstands pulling, shearing and folding forces. Impervious to weather and temperature differences.



### SINGLE POINT ANCHORING SYSTEM

K-71 Posts are designed with a single point anchor system that promotes quick installation and removal. K-71 post can be anchored directly to a road surface or glued to the surface using an optional disk plate. The K-71 anchor sleeve adhesive system ensures a sealed surface bond eliminating water infiltration; unlike lag bolts and lag shields

#### No anchor hardware required

The K71's anchor attachment system is built into the inside of the post eliminating the problems of lost or missing hardware. All that is needed is a T-bar for installation and removal.







# K71 Traffic Post



## INSTALLATION AND HARDWARE



**UNIVERSAL - RUGGED - COMPACT - DURABLE - FLEXIBLE - SOFT**

**One piece anchoring**  
Designed for quick and effortless intervention.

**Reflective film**  
Recessed collars for reflective film protection.

**Excellent resistance to impacts**  
K71 Flexible Posts continue to perform even when struck at speeds exceeding 65 m.p.h. with their specially designed anchored base.

**Easily Reusable**  
The Flexible Marker Post can be used multiple times by simply adding new sleeves in different locations.

**Temporary Markers**  
Promote traffic flow while enhancing safety without having to worry about fallen or stolen barrels or cones.



Drill  
1-2 min



Clean  
5 Sec



Adhesive  
15-30 seconds



Insert Sleeve  
< 1 minute

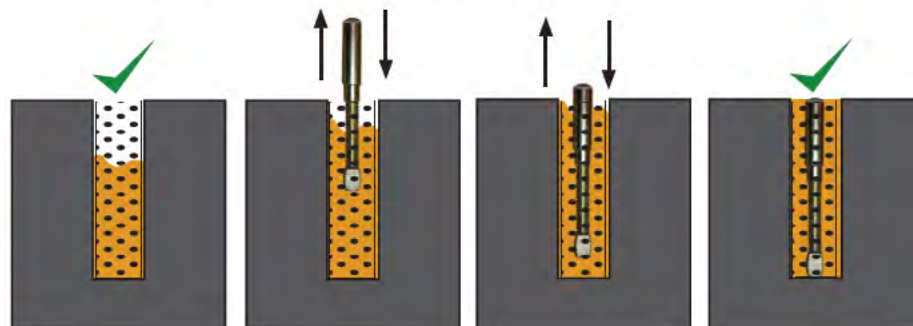


Position  
15 seconds



Install post  
15 seconds

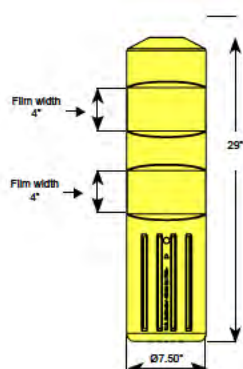
## Anchor Sleeve Installation



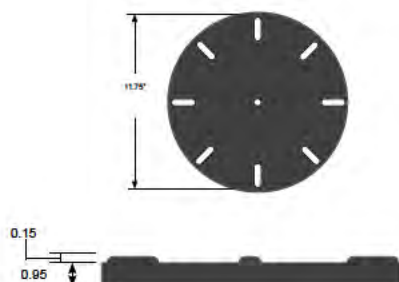
**Watch installation Video**

<https://www.youtube.com/watch?v=UQ-W3z3wltM&t=2s>

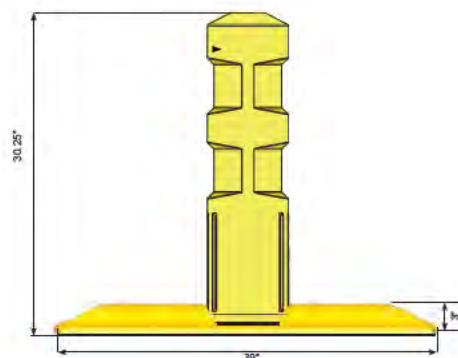
## SPECIFICATIONS



K71 Post



Rubber Base



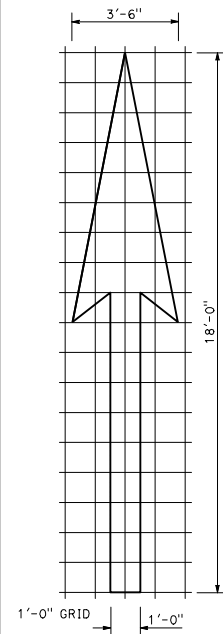
Channelizer

## INSTALLATION MATERIALS

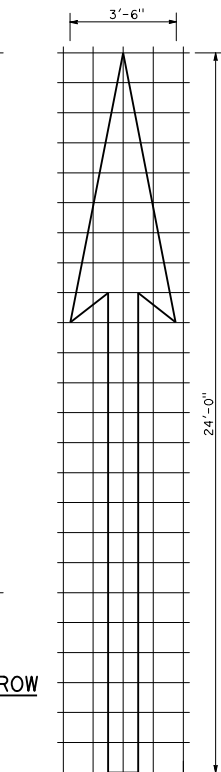


Ref	Description	Part Number
1	K71 Traffic Post	4A-0400
2	Metal anchor sleeve (For asphalt & concrete)	4A-HDW-0926
3	Nylon reinforcement screen (For asphalt only)	4A-C-HDW-0930-SCRN
4	Post cap (Optional)	4A-0400-CAPS
5	Rubber base (Use for glue down or portable weighted)	4A-0400-BASE-K71/K72
6	Anti-Debris Set Screw (Protect anchor sleeve during post removal)	4A-HDW-0935-M
7	T-Bar use for installation & removal of K71 Post	4A-HDW-0925
8	Wire brush for hole cleaning debris	4A-HDW-1inch-brush
9	Air Pump gun for cleaning hole	4A-ADH-Air-Pump-HT
10	2 Part adhesive for bonding metal anchor sleeve	4A-ADH-HY200R-112-1
11	Replacement nozzle for 2-part adhesive	4A-ADH-HY200-NOZ
12	Manual pump gun for injecting 2-part adhesive	4A-ADH-RE500-DISPENSER With Red Cartridge
13	Channelizer available in white and yellow	EVA-C-12262-W-YK71-YHI

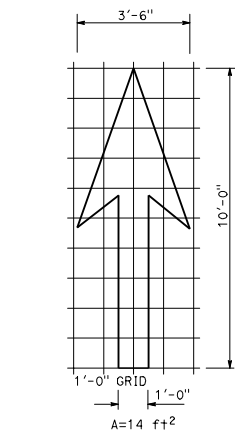




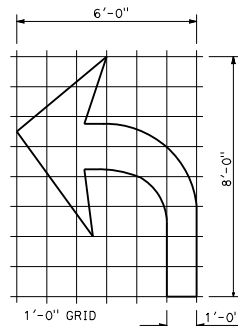
**TYPE I 18'-0" ARROW**



**TYPE I 24'-0" ARROW**



**TYPE I 10'-0" ARROW**

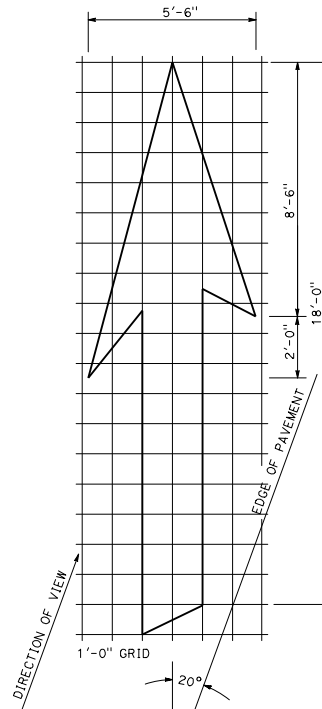


**TYPE IV (L) ARROW**

(For Type IV (R) arrow,  
use mirror image)

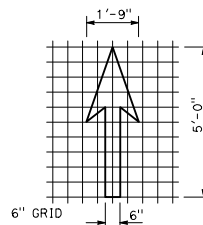
**NOTE:**

Minor variations in dimensions  
may be accepted by the Engineer.

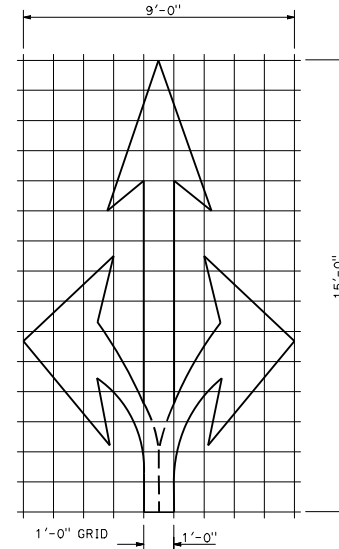


**TYPE VI ARROW**

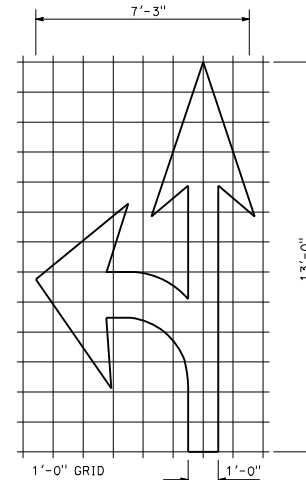
Right lane drop arrow  
(For left lane,  
use mirror image)



**BIKE LANE ARROW**



**TYPE VIII ARROW**

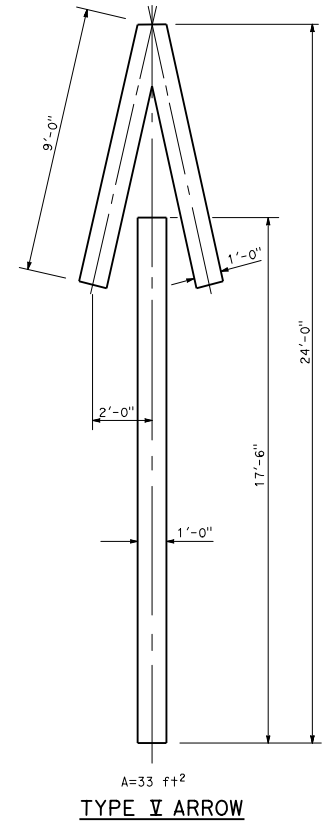


**TYPE VII (L) ARROW**

(For Type VII (R) arrow,  
use mirror image)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
<p><i>Atifa Farouq</i> REGISTERED CIVIL ENGINEER</p> <p>May 31, 2018 PLANS APPROVAL DATE</p> <p>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</p>					

REGISTERED PROFESSIONAL ENGINEER  
 No. C80402  
 Exp. 3-31-19  
 CIVIL  
 STATE OF CALIFORNIA



**TYPE V ARROW**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**PAVEMENT MARKINGS  
ARROWS**

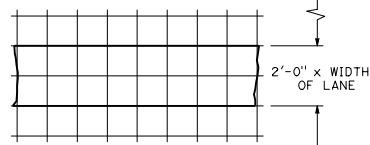
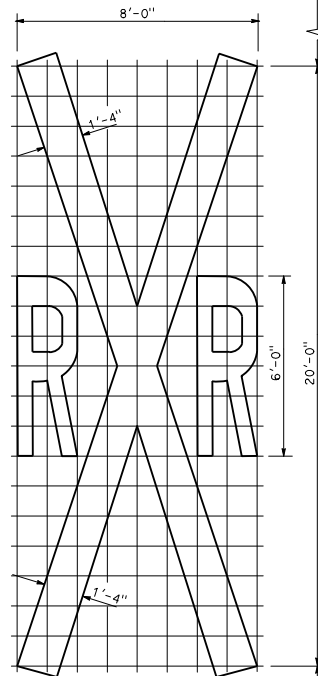
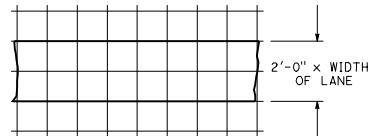
NO SCALE

**A24A**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

*Atifa Ferouz*  
 REGISTERED CIVIL ENGINEER  
 No. C80402  
 Exp. 3-31-19  
 CIVIL  
 STATE OF CALIFORNIA

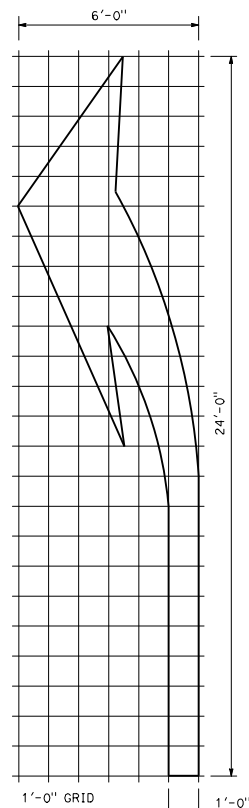
May 31, 2018  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS  
 OR AGENTS SHALL NOT BE RESPONSIBLE FOR  
 THE ACCURACY OR COMPLETENESS OF SCANNED  
 COPIES OF THIS PLAN SHEET.



1'-0" GRID  
A=70 ft<sup>2</sup> \*

### RAILROAD CROSSING SYMBOL

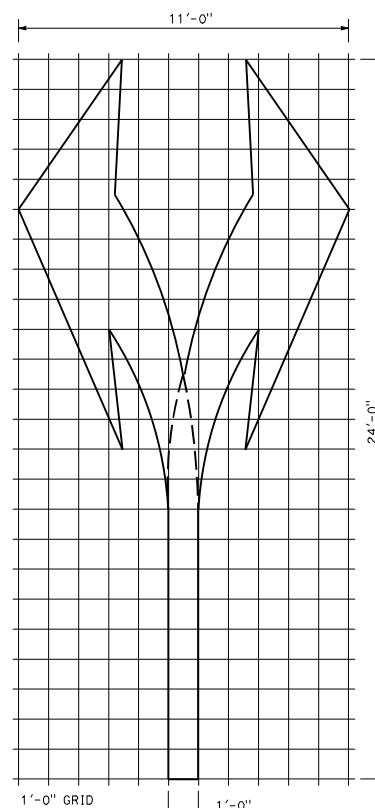
\* 70 ft<sup>2</sup> does not include the 2'-0" x variable width transverse lines.



A=42 ft<sup>2</sup>

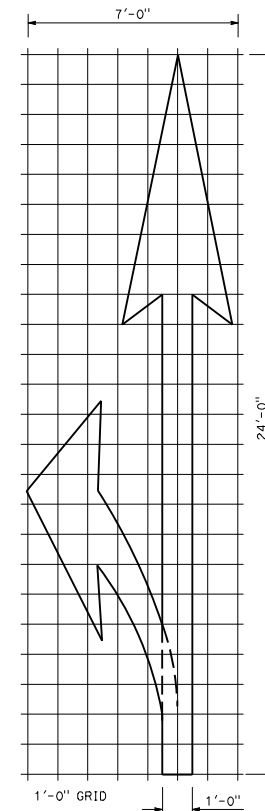
### TYPE III (L) ARROW

(For Type III (R) use mirror image)



A=73 ft<sup>2</sup>

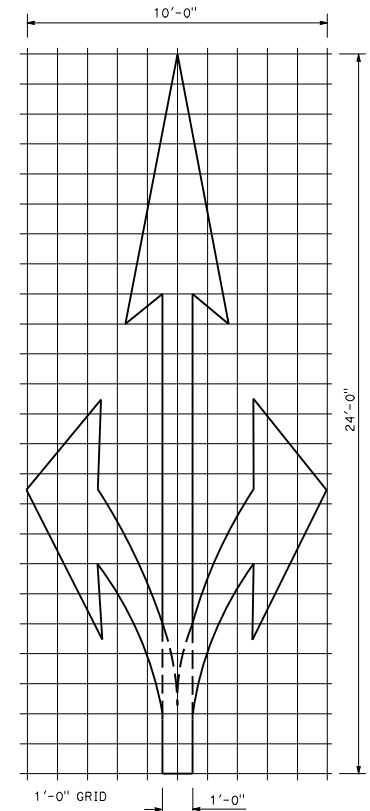
### TYPE III (B) ARROW



A=45 ft<sup>2</sup>

### TYPE II (L) ARROW

(For Type II (R) use mirror image)



A=59 ft<sup>2</sup>

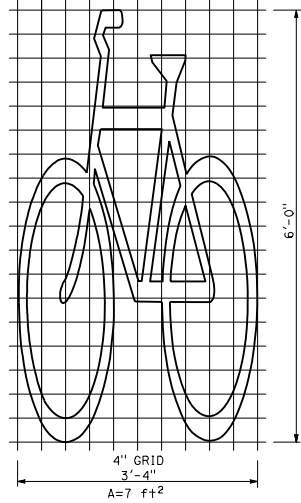
### TYPE II (B) ARROW

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

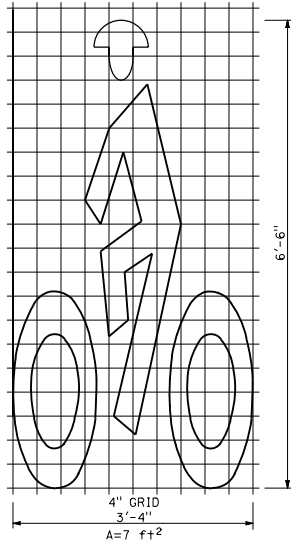
## PAVEMENT MARKINGS ARROWS AND SYMBOLS

NO SCALE

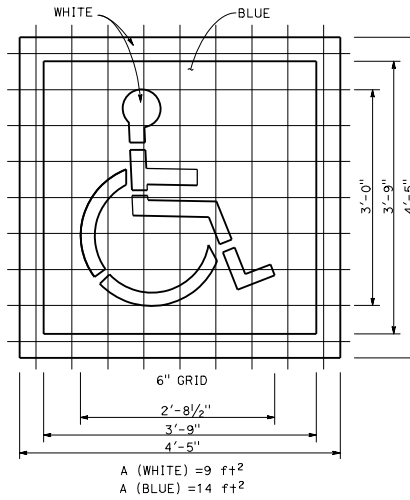
A 24B



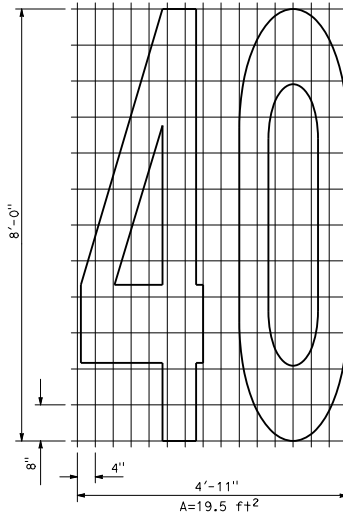
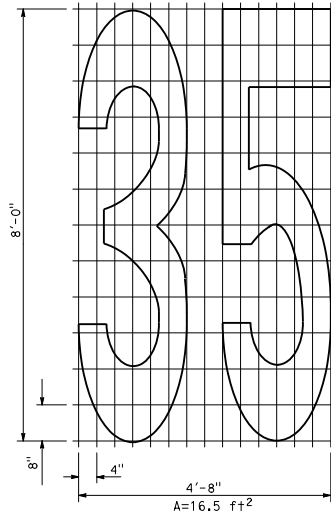
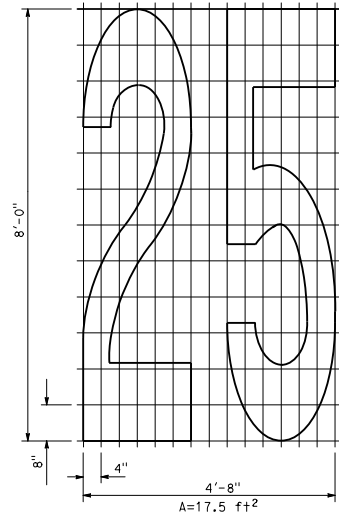
**BIKE LANE SYMBOL  
WITHOUT PERSON**



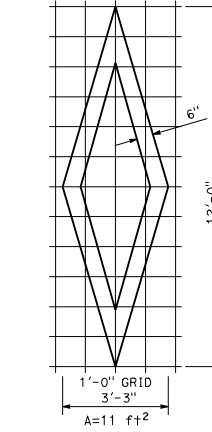
**BIKE LANE SYMBOL  
WITH PERSON**



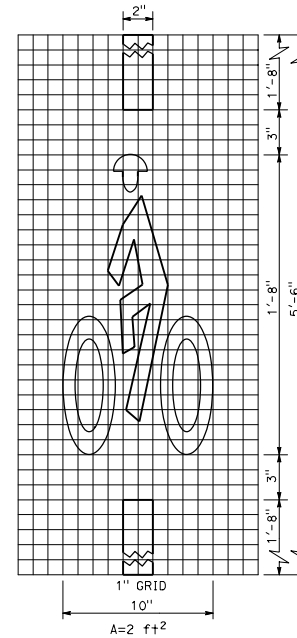
**INTERNATIONAL SYMBOL  
OF ACCESSIBILITY (ISA) MARKING**



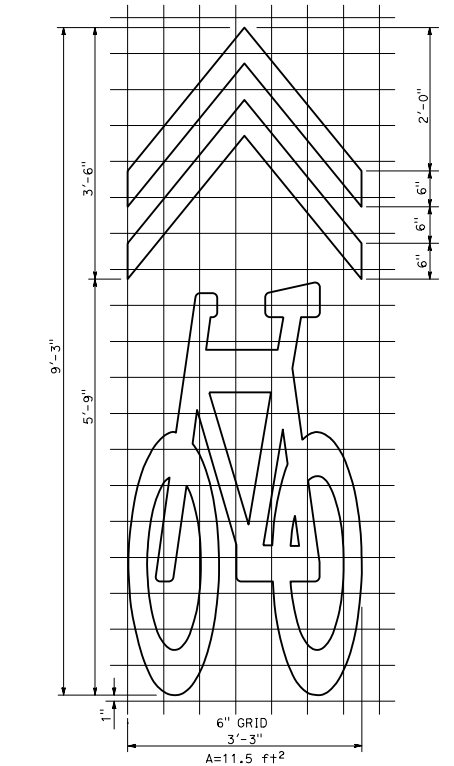
**NUMERALS**



**DIAMOND SYMBOL**



**BIKE LOOP  
DETECTOR SYMBOL**



**SHARED ROADWAY BICYCLE MARKING**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**PAVEMENT MARKINGS  
SYMBOLS AND NUMERALS**  
NO SCALE

**A24C**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Atifa Jazany  
REGISTERED CIVIL ENGINEER

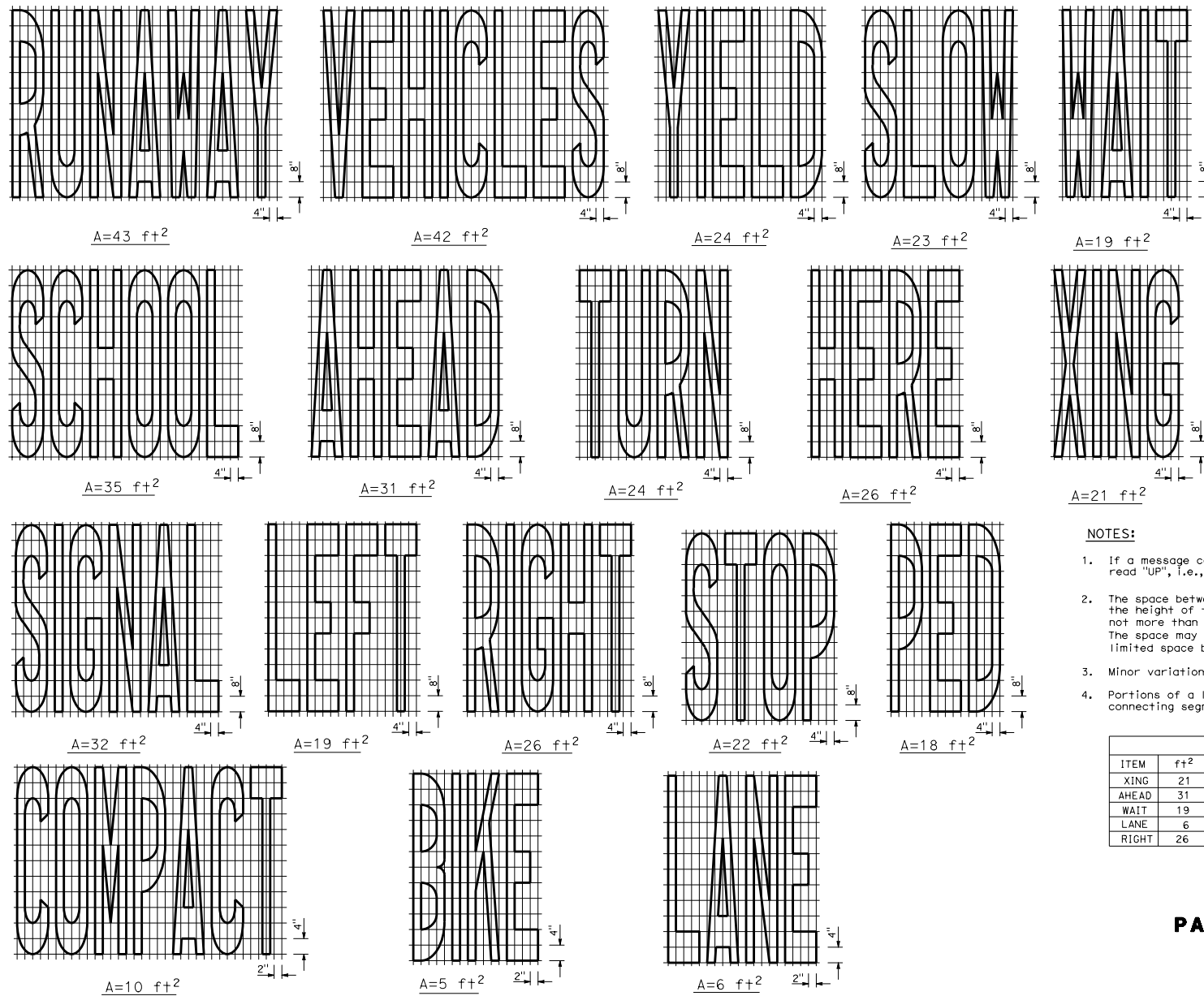
May 31, 2018  
PLANS APPROVAL DATE

Atifa Jazany  
No. C80402  
Exp. 3-31-19  
CIVIL  
STATE OF CALIFORNIA

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**NOTE:**

Minor variations in dimensions may be accepted  
by the Engineer.

**NOTES:**

1. If a message consists of more than one word, it must read "UP", i.e., the first word must be nearest the driver.
2. The space between words must be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.

**WORD MARKINGS**

ITEM	f+2	ITEM	f+2	ITEM	f+2	ITEM	f+2
XING	21	YIELD	24	BIKE	5	PED	18
AHEAD	31	SCHOOL	35	SLOW	23	COMPACT	10
WAIT	19	SIGNAL	32	STOP	22	RUNAWAY	43
LANE	6	TURN	24	LEFT	19	VEHICLES	42
RIGHT	26	HERE	26				

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**PAVEMENT MARKINGS  
WORDS**

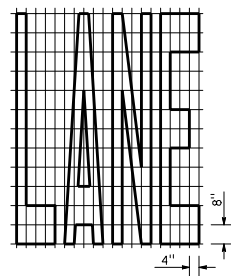
NO SCALE

**A 24D**

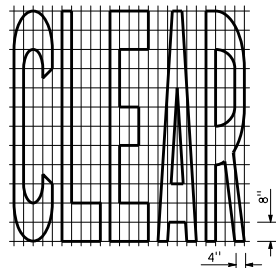
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL NO. SHEETS

*Atifa Ferouz*  
 REGISTERED CIVIL ENGINEER  
 No. C80402  
 Exp. 3-31-19  
 CIVIL  
 STATE OF CALIFORNIA

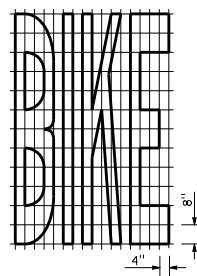
May 31, 2018  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS  
 OR AGENTS SHALL NOT BE RESPONSIBLE FOR  
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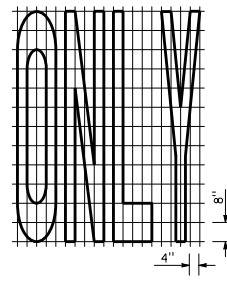
$$A=24 f+2$$



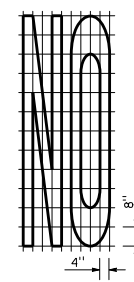
$$A=27 f+2$$



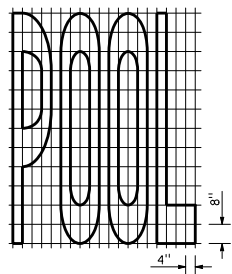
$$A=21 f+2$$



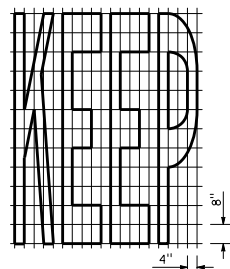
$$A=22 f+2$$



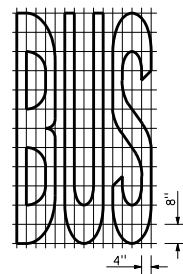
$$A=14 f+2$$



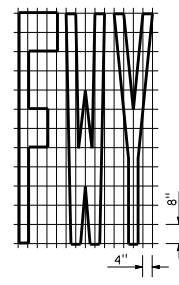
$$A=23 f+2$$



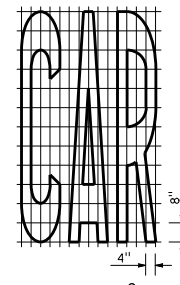
$$A=24 f+2$$



$$A=20 f+2$$



$$A=16 f+2$$

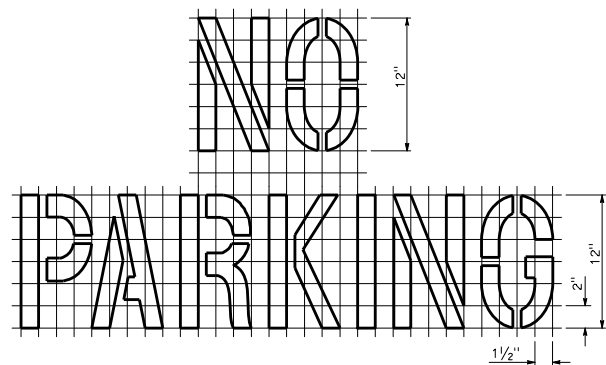


$$A=17 f+2$$

WORD MARKINGS			
ITEM	f+2	ITEM	f+2
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16

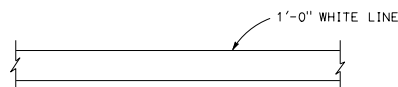
#### NOTES:

1. If a message consists of more than one word, it must read "UP", i.e., the first word must be nearest the driver.
2. The space between words must be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.
5. The words "NO PARKING" pavement marking is to be used for parking facilities. For typical locations of markings, see Standard Plans A90A and A90B.
6. The words "NO PARKING", shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials.

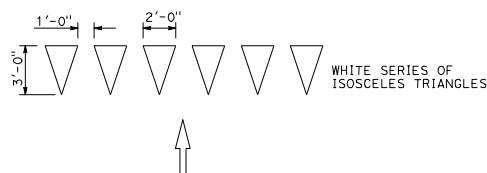


$$A=2 f+2$$

See Notes 6 and 7



LIMIT LINE (STOP LINE)



WHITE SERIES OF ISOSCELES TRIANGLES

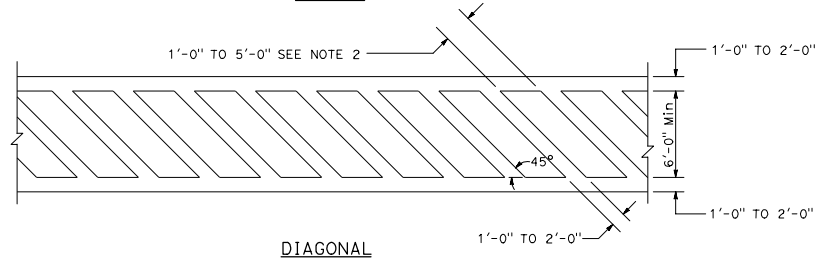
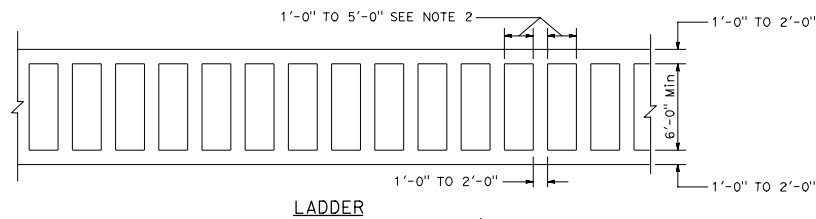
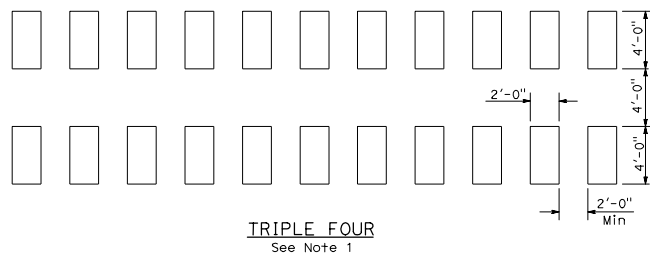
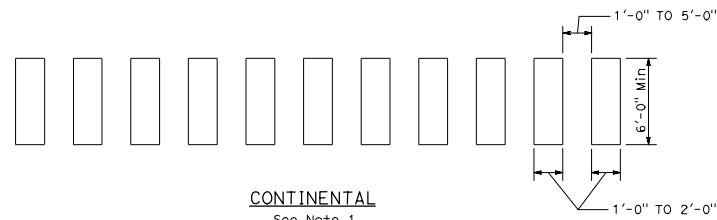
YIELD LINE

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

### PAVEMENT MARKINGS WORDS, LIMIT AND YIELD LINES

NO SCALE

**A 24E**



### HIGHER VISIBILITY CROSSWALKS

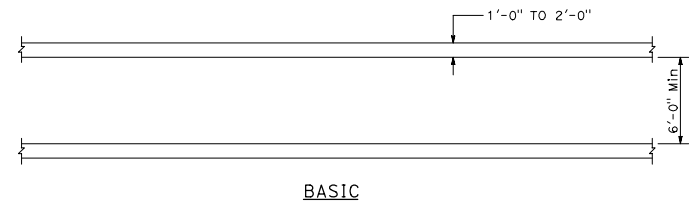
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Atif Feroz  
 REGISTERED CIVIL ENGINEER  
 May 31, 2018  
 PLANS APPROVAL DATE  
 No. C80402  
 Exp. 3-31-19  
 CIVIL  
 STATE OF CALIFORNIA

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### NOTES:

1. Spaces between markings must be placed in wheel tracks of each lane.
2. Spacings not to exceed 2.5 times width of longitudinal line.
3. All crosswalk markings must be white except those near schools must be yellow.



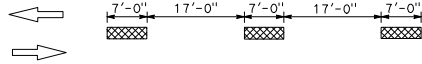
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**PAVEMENT MARKINGS  
CROSSWALKS**

NO SCALE

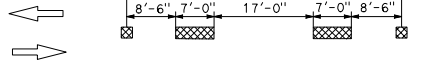
**A24F**

### CENTERLINES (2 LANE HIGHWAYS)

DETAIL 1



DETAIL 2

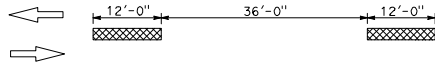
~~DETAIL 3~~

DETAIL 3 DELETED

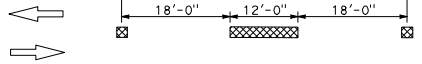
~~DETAIL 4~~

DETAIL 4 DELETED

DETAIL 5



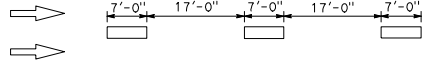
DETAIL 6

~~DETAIL 7~~

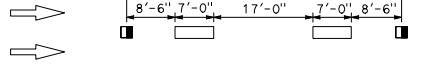
DETAIL 7 DELETED

### LANELINES (MULTILANE HIGHWAYS)

DETAIL 8

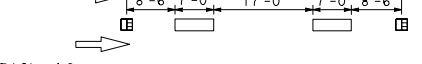


DETAIL 9



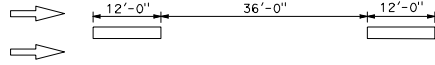
DETAIL 9A

SEE NOTE

~~DETAIL 10~~

DETAIL 10 DELETED

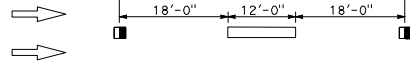
DETAIL 11



### LANELINES (Cont)

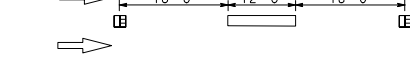
(MULTILANE HIGHWAYS)

DETAIL 12



DETAIL 12A

SEE NOTE

~~DETAIL 13~~

DETAIL 13 DELETED

~~DETAIL 14~~

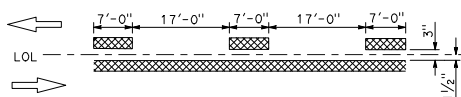
DETAIL 14 DELETED

~~DETAIL 14A~~

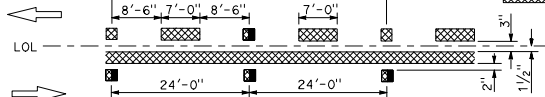
DETAIL 14A DELETED

### NO PASSING ZONES-ONE DIRECTION

DETAIL 15

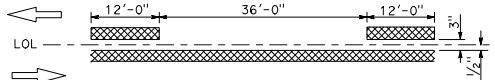


DETAIL 16

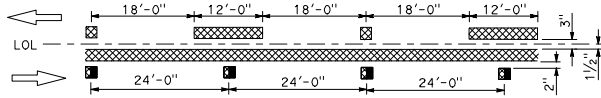
~~DETAIL 17~~

DETAIL 17 DELETED

DETAIL 18



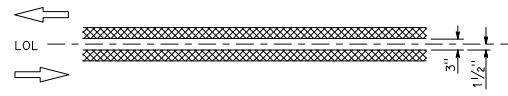
DETAIL 19

~~DETAIL 20~~

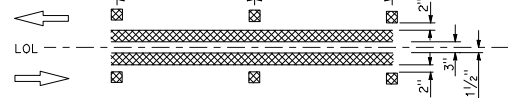
DETAIL 20 DELETED

### NO PASSING ZONES-TWO DIRECTION

DETAIL 21



DETAIL 22

~~DETAIL 23~~

DETAIL 23 DELETED

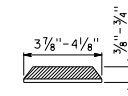
### LEGEND

#### MARKERS

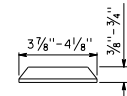
- TYPE C RED-CLEAR RETROREFLECTIVE
- TYPE D TWO-WAY YELLOW RETROREFLECTIVE
- TYPE G ONE-WAY CLEAR RETROREFLECTIVE
- TYPE H ONE-WAY YELLOW RETROREFLECTIVE

#### LINES

- 6" WHITE
- 6" YELLOW



TYPE C AND TYPE D



TYPE G AND TYPE H

RETROREFLECTIVE FACE

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

NO SCALE

**A20A**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Atifa Ferrouz  
REGISTERED CIVIL ENGINEER

May 31, 2018  
PLANS APPROVAL DATE

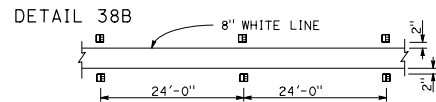
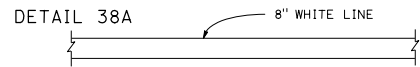
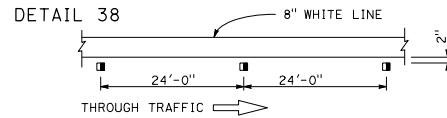
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Atifa Ferrouz  
REGISTERED PROFESSIONAL ENGINEER  
No. C80402  
Exp. 3-31-19  
CIVIL  
STATE OF CALIFORNIA

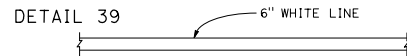
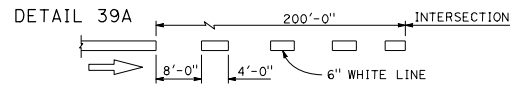
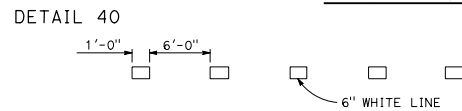






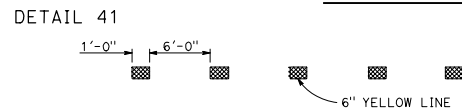
**CHANNELIZING LINE**

~~DETAIL 38C~~ DETAIL 38C DELETED

**BIKE LANE LINE****INTERSECTION LINE  
BIKE LANE****LANE LINE EXTENSIONS  
THROUGH INTERSECTIONS**

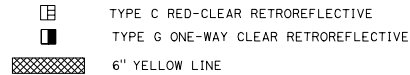
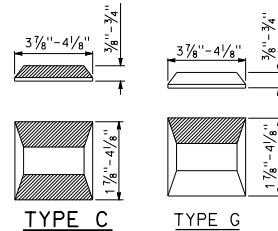
~~DETAIL 40A~~

DETAIL 40A DELETED

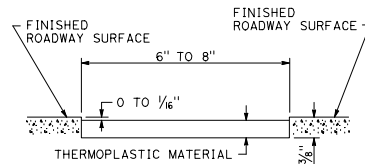
**CENTER LINE EXTENSIONS  
THROUGH INTERSECTIONS**

~~DETAIL 41A~~

DETAIL 41A DELETED

**LEGEND****MARKERS****MARKER DETAILS**

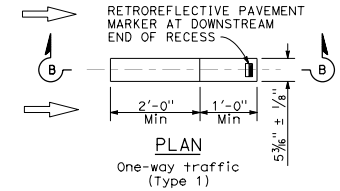
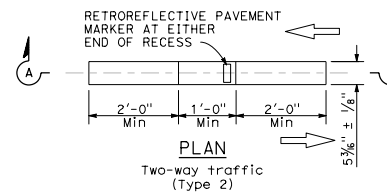
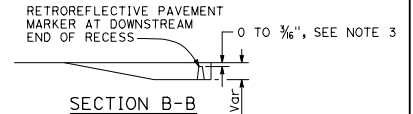
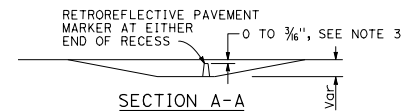
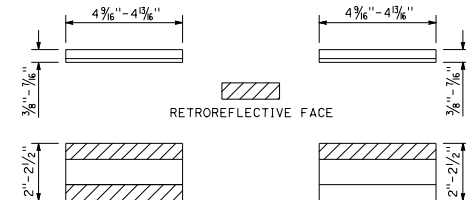
RETROREFLECTIVE FACE

**DETAIL FOR RECESSED  
THERMOPLASTIC TRAFFIC STRIPE**

See Notes A and B.

**RECESSED THERMOPLASTIC NOTES**

- A. See typical traffic line details for pavement marking patterns.
- B. The top of the thermoplastic installed in recessed pavement shall be 0 to 1/16" below the pavement surface.

**RECESS DETAIL FOR  
RETROREFLECTIVE PAVEMENT MARKER****RECESSED MARKER NOTES:**

1. See typical traffic line details for marker patterns to be used with recessed pavement markers. Detail 14A requires a Type 2 recess.
2. The retroreflective pavement markers shown for recessed installations are not to be used for non-recessed installations.
3. The top of pavement markers installed in recesses shall be 0 to 3/16" below the pavement surface.

TYPE C AND TYPE D TYPE G AND TYPE H

See Notes 1 and 2.

**RETROREFLECTIVE PAVEMENT MARKER  
FOR RECESSED INSTALLATION**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**PAVEMENT MARKERS  
AND TRAFFIC LINES  
TYPICAL DETAILS**

NO SCALE

**A20D**

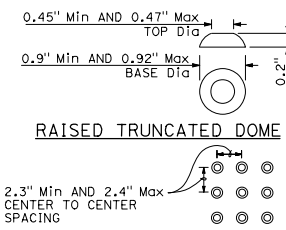
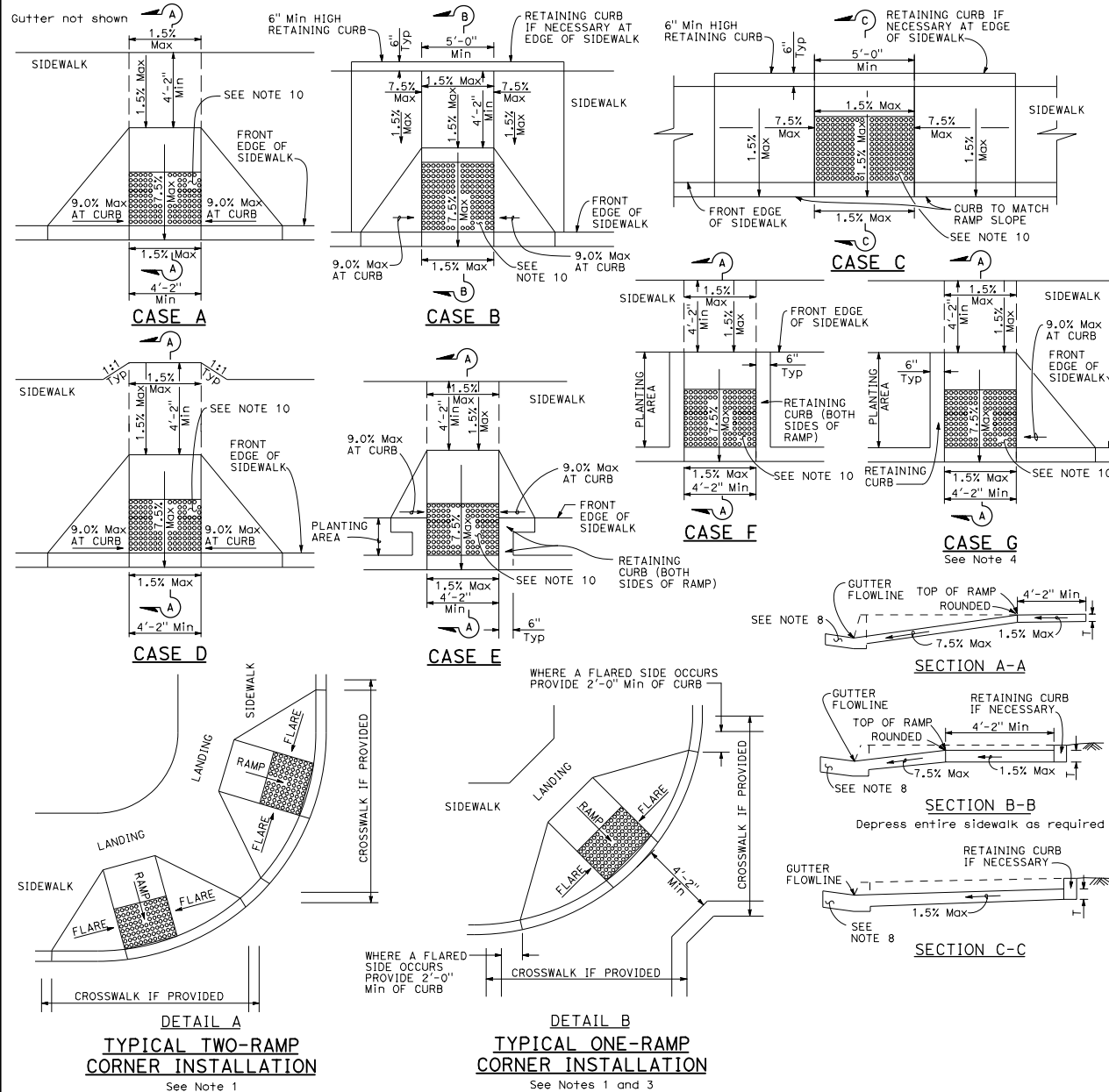
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Atifa Ferouz  
REGISTERED CIVIL ENGINEER

May 31, 2018  
PLANS APPROVAL DATE

Atifa Ferouz  
No. C80402  
Exp. 3-31-19  
CIVIL  
STATE OF CALIFORNIA

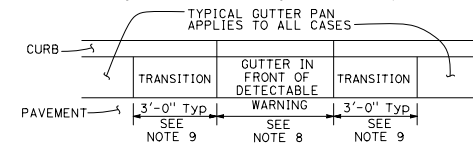
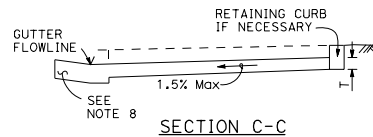
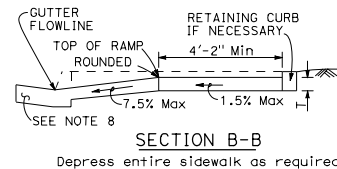
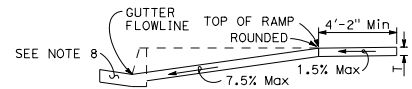
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### RAISED TRUNCATED DOME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE

NOTES: See Note 10

- As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate. For specific site condition configuration, including the conform to existing sidewalk, see Project Plans.
- If distance from curb to back of sidewalk is too short to accommodate ramp and 4'-2" platform (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B or C or may be widened as in Case D.
- When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
- As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
- The ramp portion of the curb ramp is a typical rectangle, unless modified in the Project Plans.
- Side slope of ramp flares vary uniformly from a maximum of 9.0% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
- The adjacent surfaces at curb ramps to walks, gutters, and streets shall be at the same level.
- Counter slopes of adjoining gutters and road surfaces immediately adjacent to and within 24 inches of the curb ramp shall not be steeper than 1V:20H (5.0%). Gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.
- Transition gutter pan slope from 1" of depth for each 2'-0" of width to match typical gutter pan slope per Standard Plan A87A.
- The detectable warning surface will be a rectangle as shown at back of curb, unless modified in the Project Plans. Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. Detectable warning surfaces shall extend the full width of the ramp except a maximum gap of 1 inch is allowed on each side of the ramp. Detectable warning surfaces shall conform to the requirements in the Standard Specifications.
- Sidewalk and ramp thickness, "T", shall be 3 1/2" minimum.
- Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
- Detectable warning surface may have to be cut to allow removal of utility covers while maintaining detectable warning width and depth.

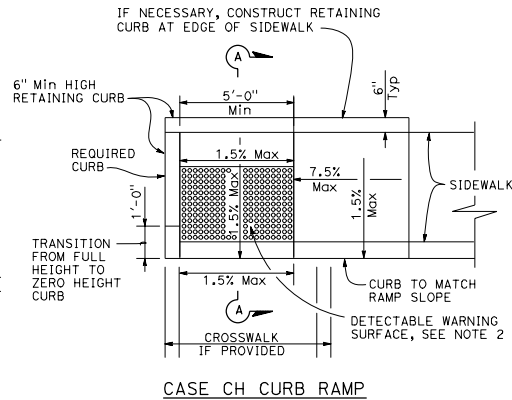
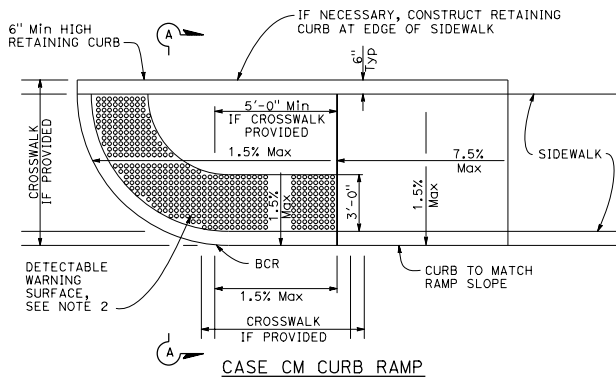


### GUTTER PAN TRANSITION

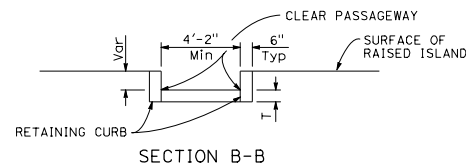
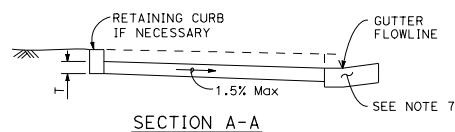
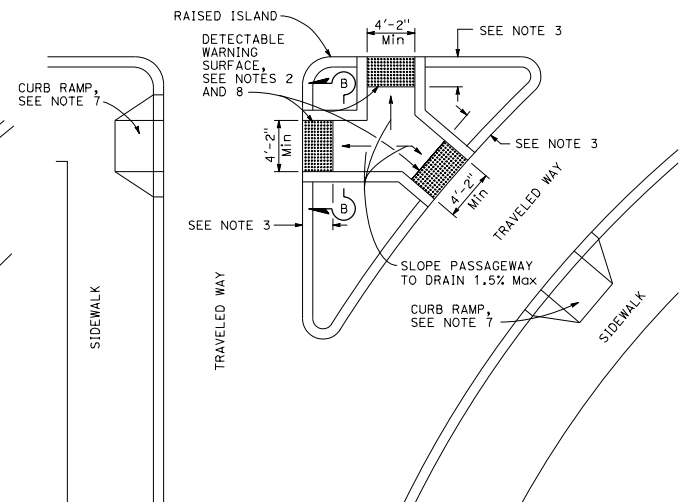
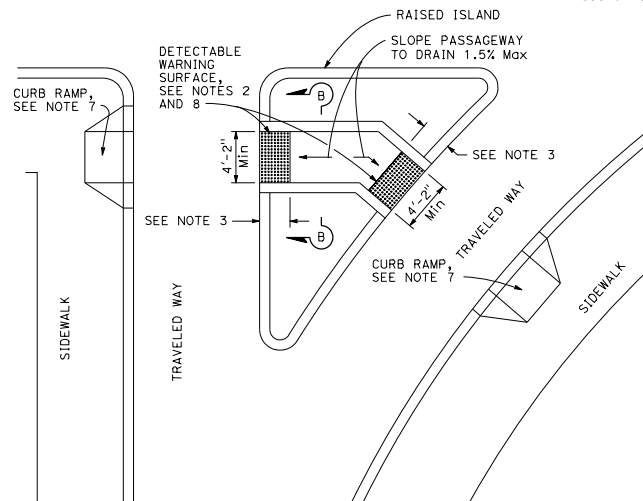
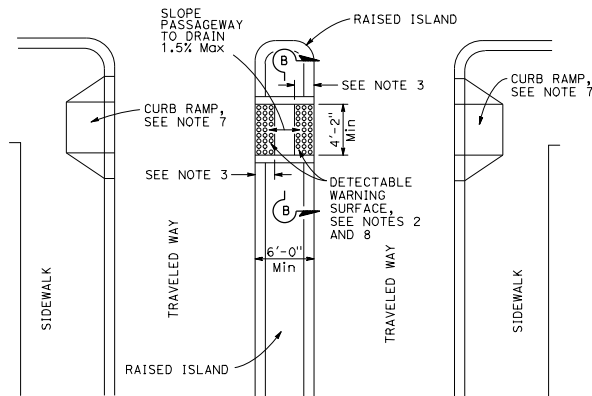
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CURB RAMP DETAILS**  
NO SCALE

**A88A**

Gutter not shown

**NOTES:**

1. Sidewalk, ramp and passageway thickness, "T", shall be 3 1/2" minimum.
2. For details of detectable warning surfaces, see Standard Plan A88A.
3. Where an island passageway length is greater than or equal to 6'-0", but less than 8'-0", each detectable warning surface shall extend the full width and 2'-0" depth of the passageway length. Where an island passageway length is greater than or equal to 8'-0", each detectable warning surface shall extend the full width and 3'-0" depth of the passageway length. Detectable warning surfaces shall extend the full width of the island passageway except a maximum gap of 1 inch is allowed on each side of the passageway.
4. The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be at the same level.
5. Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
6. Detectable warning surface may have to be cut to allow removal of utility covers while maintaining detectable warning width and depth.
7. For additional curb ramp details, see Standard Plan A88A.
8. The detectable warning surface will be a rectangle as shown at the face of curb, unless modified in the Project Plans.

**TYPE C PASSAGEWAY**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CURB RAMP AND  
ISLAND PASSAGEWAY DETAILS**

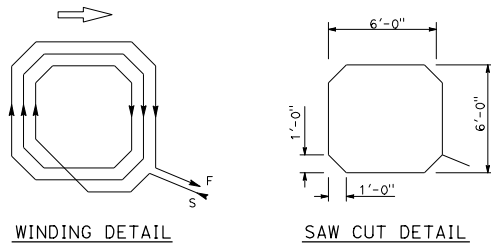
NO SCALE

**A88B**

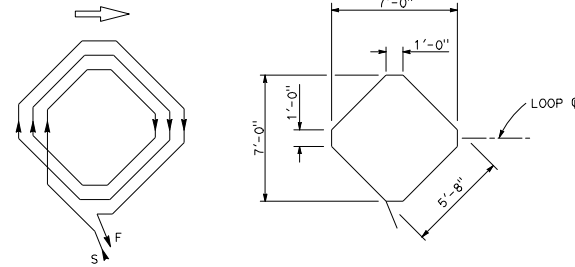
D16+	COUNTY	ROUTE	POST MILES	SHEET TOTAL
			TOTAL PROJECT	NO. SHEETS

Remedy  
REGISTERED CIVIL ENGINEER  
May 31, 2018  
PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

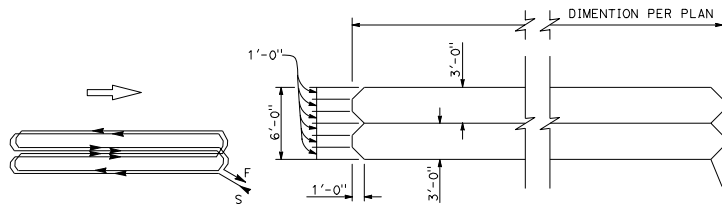
Rebecca Lynn Maury  
No. C54415  
Exp. 12-31-19  
CIVIL  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF CALIFORNIA



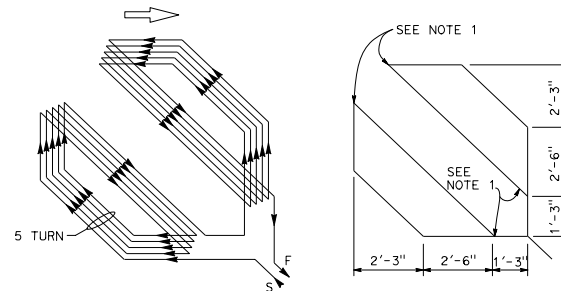
WINDING DETAIL  
SAW CUT DETAIL  
**TYPE A LOOP DETECTOR CONFIGURATION**



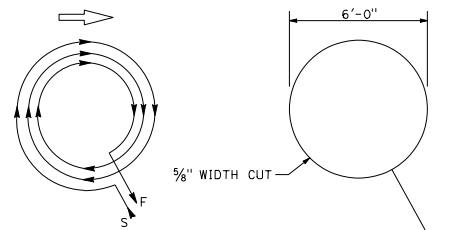
WINDING DETAIL  
SAW CUT DETAIL  
**TYPE B LOOP DETECTOR CONFIGURATION**



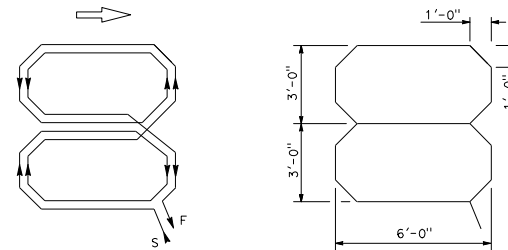
WINDING DETAIL  
SAW CUT DETAIL  
**TYPE C LOOP DETECTOR CONFIGURATION**



WINDING DETAIL  
SAW CUT DETAIL  
**TYPE D LOOP DETECTOR CONFIGURATION**



WINDING DETAIL  
SAW CUT DETAIL  
**TYPE E LOOP DETECTOR CONFIGURATION**

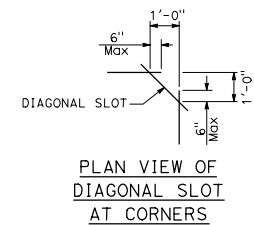


WINDING DETAIL  
SAW CUT DETAIL  
**TYPE Q LOOP DETECTOR CONFIGURATION**

#### NOTES:

1. Round corners of acute angle saw cuts to prevent damage to conductors.
2. Typical distance separating loops from edge to edge is 10' for Type A, B, D, and E installation in single lane.
3. Use Type D loops for limit line detection and bicycle lanes.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
H.R.F. REGISTERED ELECTRICAL ENGINEER May 31, 2018 PLANS APPROVAL DATE THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.			REGISTERED PROFESSIONAL ENGINEER Hamid Zolfaghari No. E15636 Exp. 12-31-19 ELECTRICAL STATE OF CALIFORNIA		



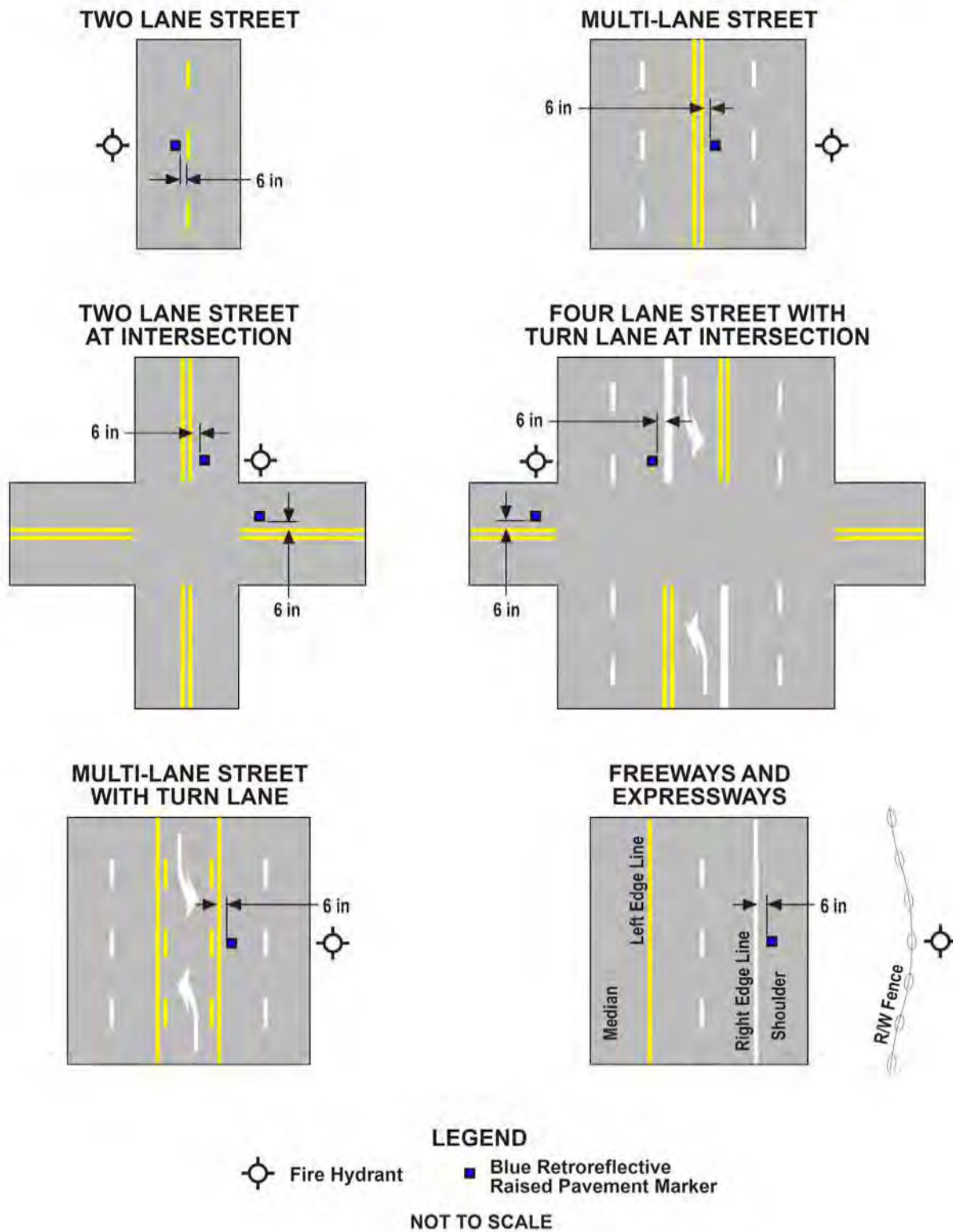
PLAN VIEW OF  
DIAGONAL SLOT  
AT CORNERS

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
(DETECTORS)**

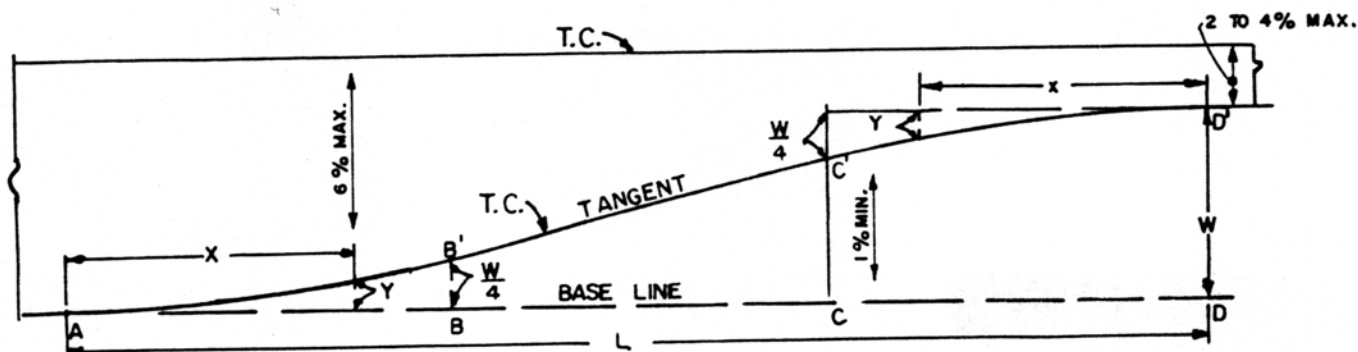
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**ES-5B**

**Figure 3B-102 (CA). Examples of Fire Hydrant Location Pavement Markers**







W = Width of left turn pocket

L = Length of taper

AB=BC=CD=  $\frac{L}{3}$

AB' and CD' are parabolic curves except on curved alignments

X = Distance from point "A" along base line

Y = Offset from base line =  $2.25W X^2 / L^2$

### SINGLE LEFT TURN POCKET

L=90' W=10'

X	0'	10'	20'	30'	40'	50'	60'	70'	80'	90'
Y	0.00'	0.28'	1.11'	2.50'	4.17'	5.83'	7.50'	8.89'	9.72'	10.00'

L=60' \* W=10'

X	0'	10'	20'	30'	40'	50'	60'
Y	0.00'	0.62'	2.50'	5.00'	7.50'	9.38'	10.00'

### DOUBLE LEFT TURN POCKET

L=150' W=20'

X	0'	10'	20'	30'	40'	50'	60'	70'	80'	90'	100'	110'	120'	130'	140'	150'
Y	0.00'	0.20'	0.80'	1.80'	3.20'	5.00'	7.00'	9.00'	11.00'	13.00'	15.00'	16.80'	18.20'	19.20'	19.80'	20.00'

### NOTE:

In the case when the base line is curved the offsets are calculated by assuming the base line to be a tangent they are then applied to the curved base line. AB' and CD' are no longer parabolic and BC is no longer a tangent.

\* Use 60' transition when insufficient distance is available for 90' transition or where approved by the Engineer.

CITY OF COSTA MESA  
CALIFORNIA  
PUBLIC SERVICES DEPARTMENT

### PARABOLIC MEDIAN CURB TRANSITION

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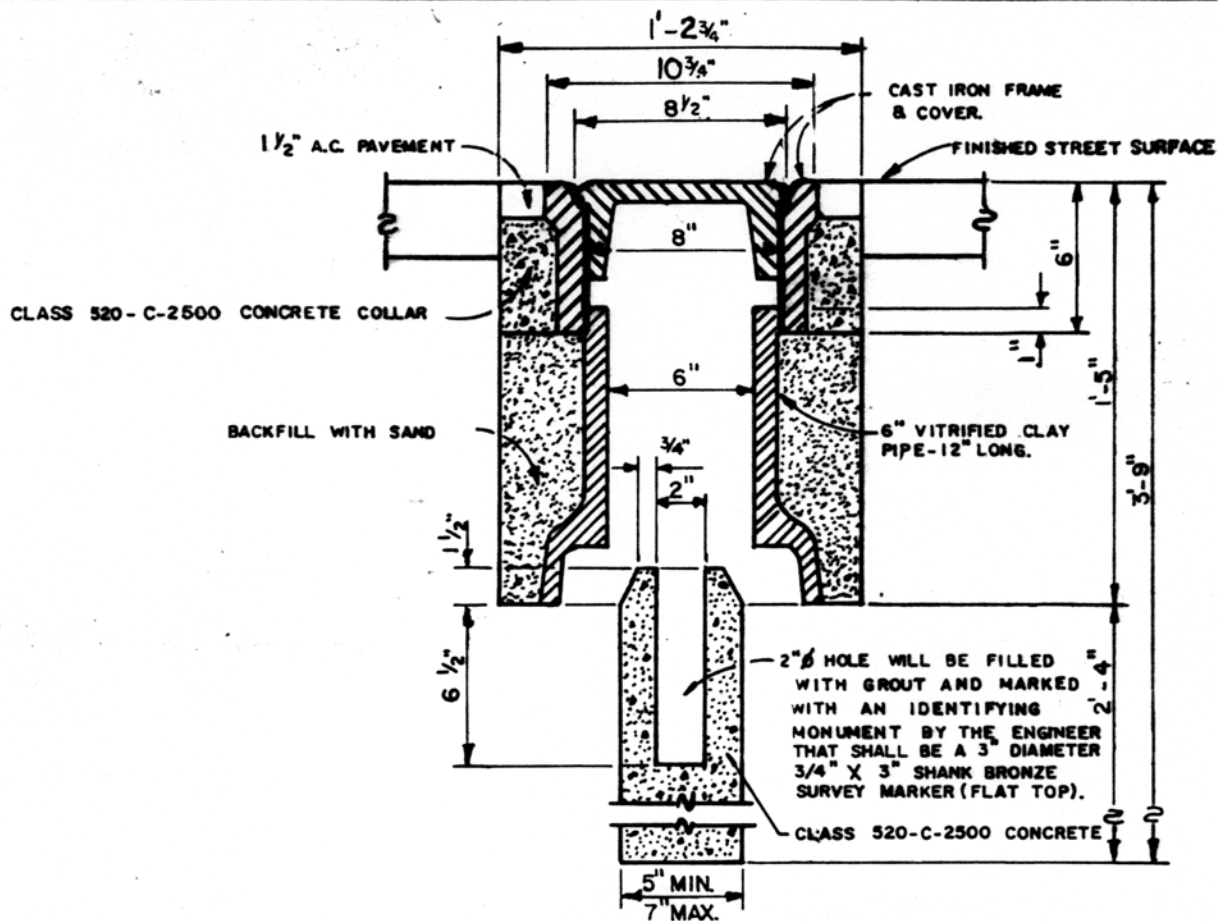
*BDMattern* DATE: 12/13/85  
BRUCE D. MATTERN R.C.E. 19388

DRAWN: C.P.R.

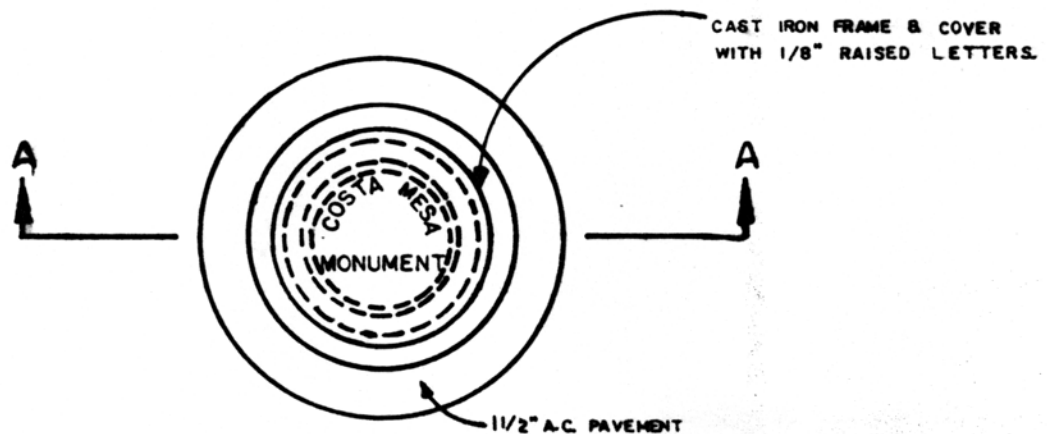
SCALE: NONE

STD. DWG. NO.

116



SECTION A-A



PLAN

CITY OF COSTA MESA  
CALIFORNIA

PUBLIC SERVICES DEPARTMENT

SURVEY MONUMENT  
TYPE "A"

APPROVED

*B. D. Mattern*  
BRUCE D. MATTERN R.C.E. 1938B

DATE

12/13/85

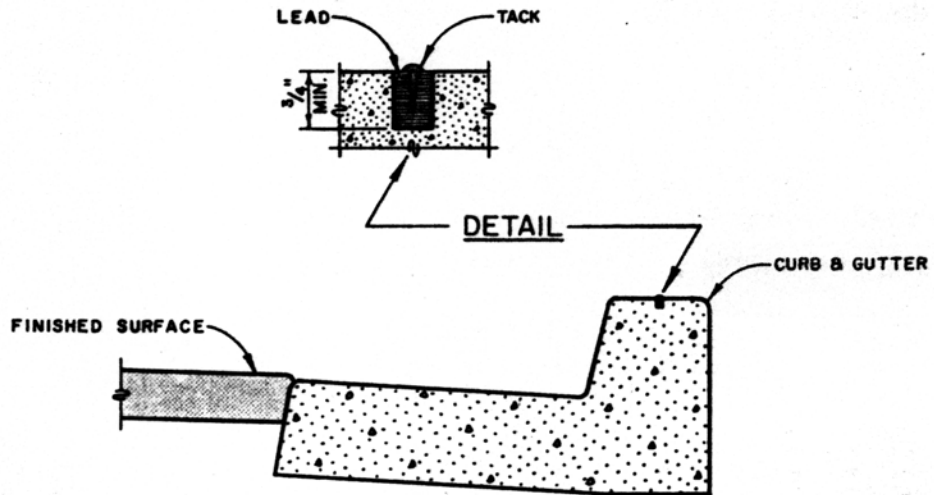
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SCALE NONE

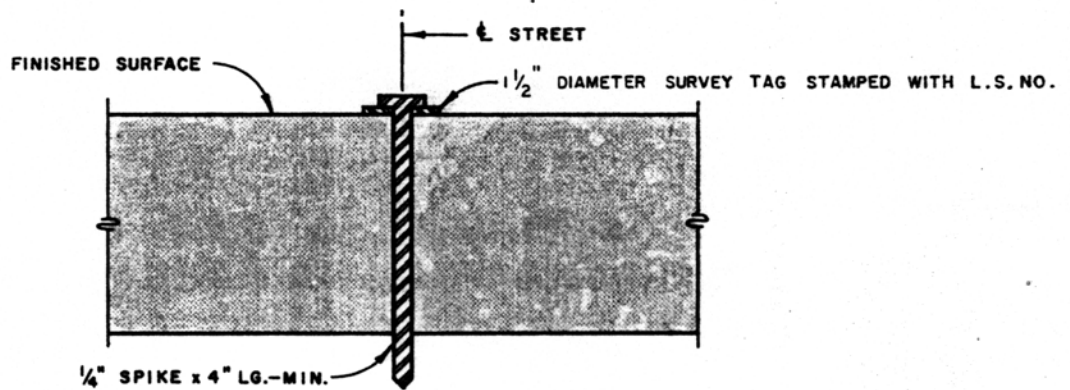
STD. DWG. NO.

613





### SECTION



### SECTION

#### NOTES:

1. ALL TIE POINTS SHALL BE LEAD & TACK. LEAD SHALL BE A MIN. OF  $\frac{3}{4}$ " DEEP AND TACKS SHALL BE MADE OF BRASS.
2. ALL INTERSECTION & CENTER LINE CONTROL POINTS SHALL BE SPIKE & WASHER.
3. ALL CONTROL POINTS SHALL HAVE A MIN. OF 4 TIES, WITH TIES PLACED SUCH THAT A PROPER ANGLE IS OBTAINED FROM THE TIE TO THE CONTROL POINT AS DETERMINED BY THE CITY ENGINEER.
4. RECORD CENTER LINE TIE DATA ON TIE SHEET AVAILABLE AT THE CITY OF COSTA MESA, ENGINEERING DIVISION.

**CITY OF COSTA MESA**  
CALIFORNIA

PUBLIC SERVICES DEPARTMENT

## **SURVEY CENTER LINE TIES**

APPROVED

BRUCE D. MATTERN R.C.E. 19399

DATE

12/13/05

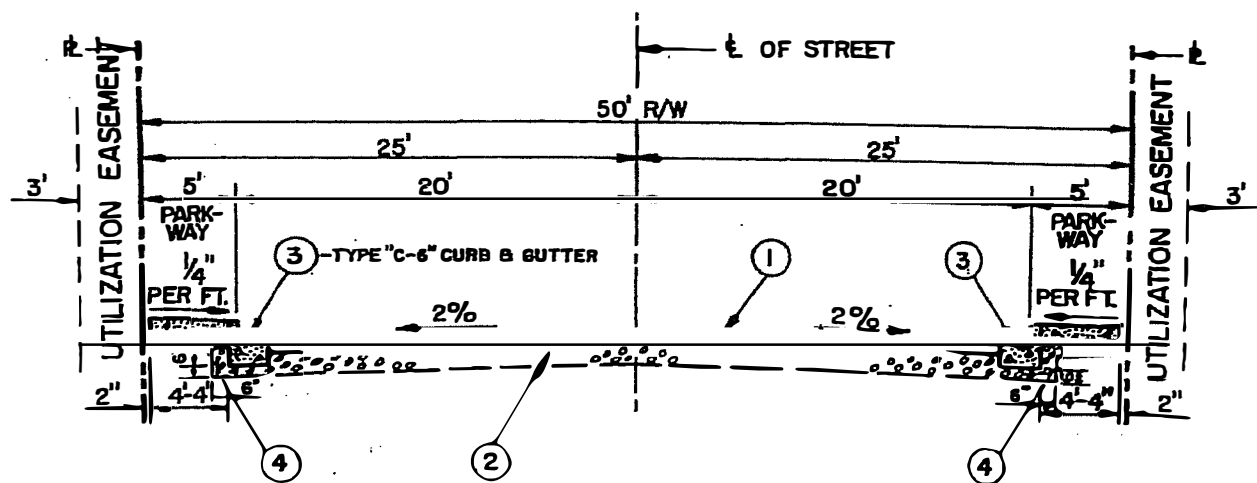
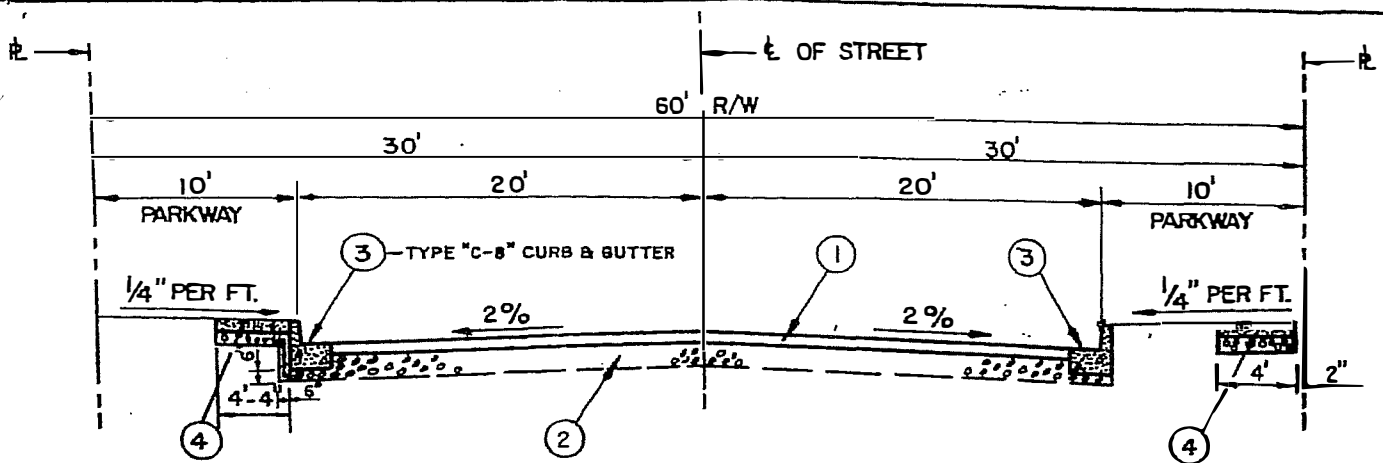
DRAWN Y.A.B.

SCALE NONE

STD. DWG. NO.

**615**

REV.



**NOTE:**

50' R/W TO BE USED WITH CITY COUNCIL APPROVAL ONLY.

**NOTES:**

- ① ASPHALTIC CONCRETE PAVEMENT (4" THICKNESS). ACTUAL THICKNESS TO BE DETERMINED AFTER ROUGH GRADING.
- ② CRUSHED AGGREGATE BASE (8" THICKNESS). ACTUAL THICKNESS TO BE DETERMINED AFTER ROUGH GRADING.
- ③ TYPE "C-5" OR "C-6" CURB AND GUTTER PER STD. DWG. NO. 312.
- ④ 4" P.C.C. SIDEWALK PER STD. DWG. NO. 411.

DRIVEWAY LOCATIONS AND SLOPES SHALL BE APPROVED BY THE CITY ENGINEER ON STREETS WITH 50' R/W.

**CITY OF COSTA MESA**  
CALIFORNIA

PUBLIC SERVICES DEPARTMENT

**TYPICAL SECTION**  
**60' & 50' RESIDENTIAL STREETS**

APPROVED

BRUCE D. MATTEO

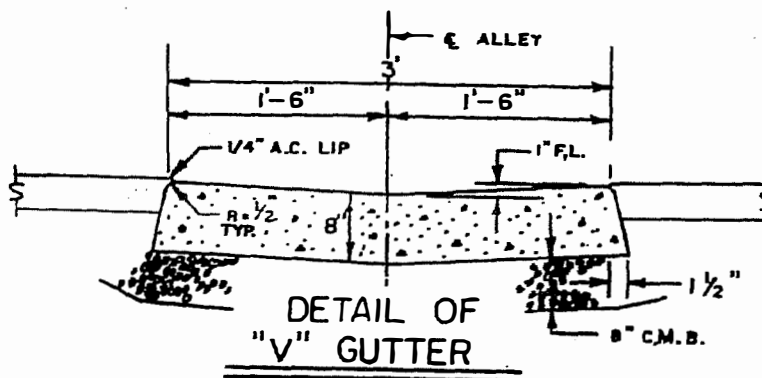
R.C.E. 19388

DRAWN J.C.B.

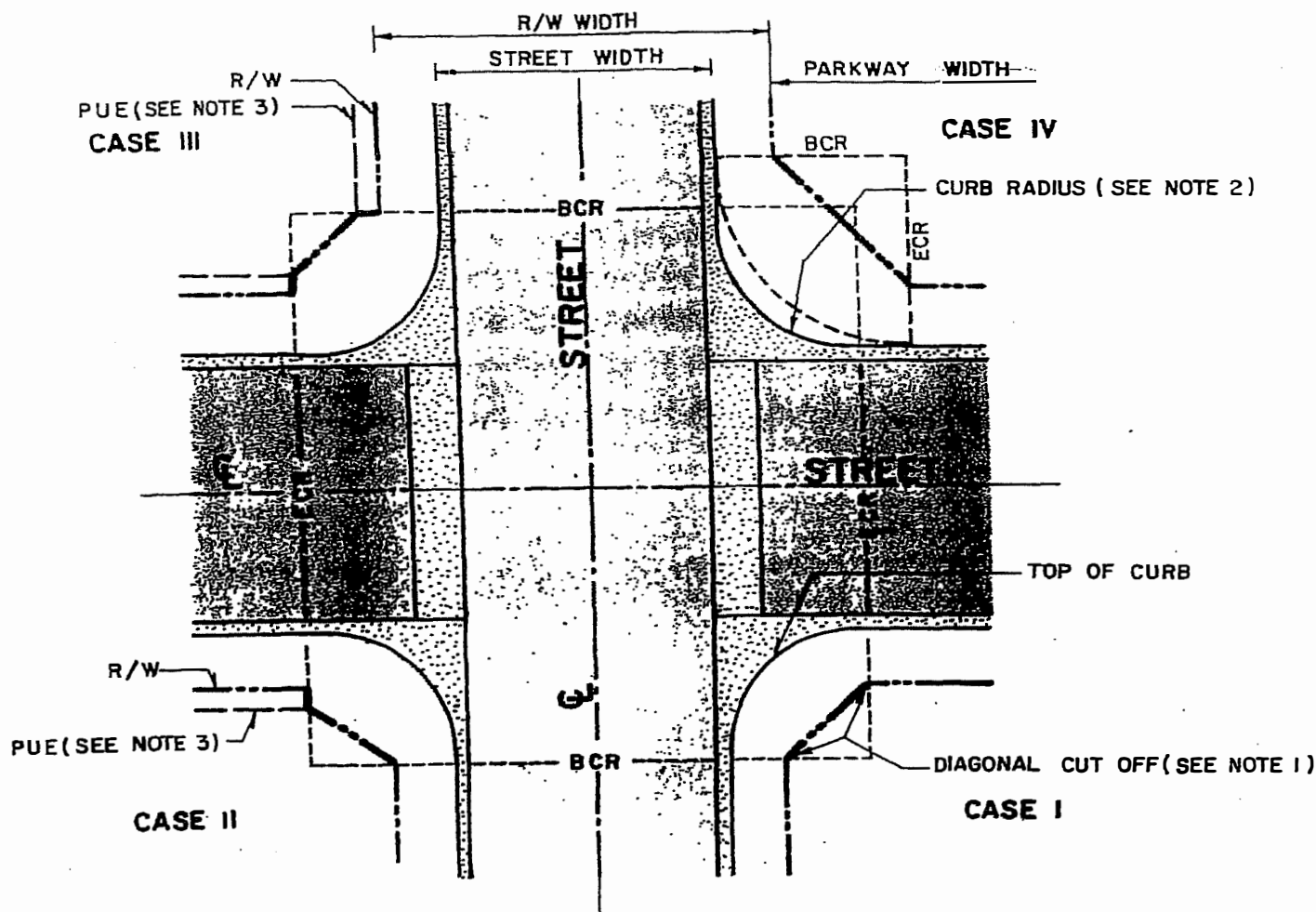
SCALE NONE

STD. DWG. NO.

114



118



**PARKWAY WIDTHS:**

5'	FOR	50'	R/W
10'	FOR	60'	R/W
7'	FOR	84'	R/W
7'	FOR	106'	R/W
8'	FOR	120'	R/W

**NOTES:**

1. THE PROPERTY LINE DIAGONAL CUT-OFF IS A STRAIGHT LINE DRAWN BETWEEN THE R/W LINES (OR PUE LINES, IF EXISTING) AT THE BCR AND ECR.
2. ALL CURB RETURN RADII SHALL BE 25' UNLESS BOTH STREETS ARE ON THE MASTER PLAN OF HIGHWAYS, AND THEN THE DIAGONAL CUT-OFF SHALL BE FOR A 35' CURB RETURN RADIUS.
3. ALL 50' STREETS REQUIRE A 3' PUBLIC UTILIZATION EASEMENT. SEE STD. DWG. NO. 114.

**CITY OF COSTA MESA**  
CALIFORNIA

PUBLIC SERVICES DEPARTMENT

**CURB RETURN RADII AND PROPERTY  
LINE DIAGONAL CUT-OFF**

APPROVED

*B. D. Mattern*  
BRUCE D. MATTERN R.C.E. 19388

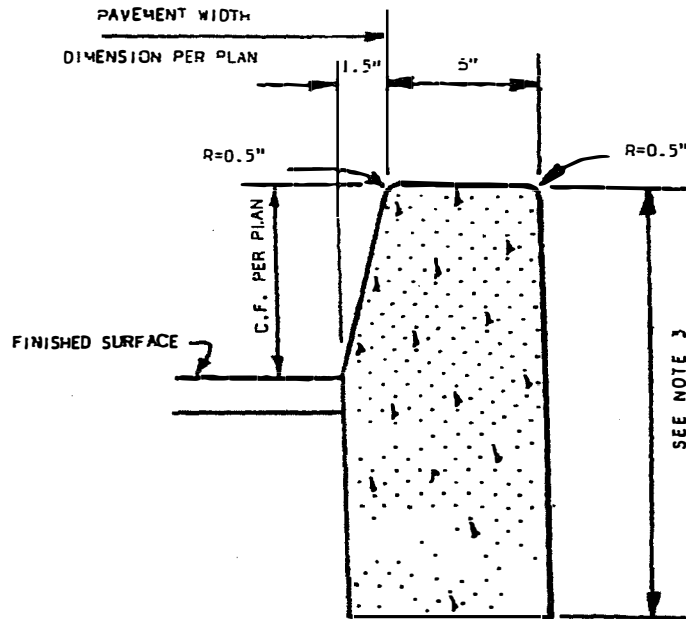
DATE 12/13/85

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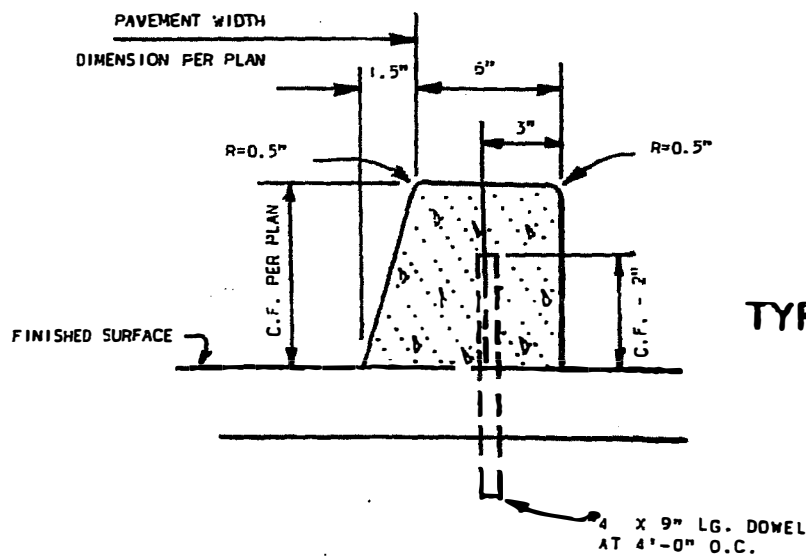
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STD. DWG. NO.

**214**



TYPE "A" CURB



TYPE "B" CURB

NOTES

1. 1/4" EXPANSION JOINTS SHALL BE PLACED AT 40' INTERVALS AND AT ALL MEDIAN NOSES. 1/8" X 2" WEAKENED PLANE OR PLASTIC CONTROL JOINTS SHALL BE PLACED AT 10' INTERVALS. FOR DETAILS SEE STD. DNG. NO. 314.
2. DOWELS FOR TYPE "B" CURB MAY BE DELETED WHEN EXTRUDED CONCRETE IS BONDED TO THE PAVEMENT WITH APPROVED ADHESIVE, EXCEPT THE ISLAND NOSES WHICH SHALL BE DOWELED.
3. WHERE MEDIANS ARE LANDSCAPED, CURB SHALL EXTEND 6" BELOW SUB-GRADE AND BE BACKED WITH A 20 MIL PLASTIC MOISTURE BARRIER THAT EXTENDS 6" BELOW CURB. C.F. AND W SHALL BE PER PLAN.
4. THESE CURBS ARE NON-WATER CARRYING. TRANSITION TO TYPE "C" CURB AND GUTTER PER PLAN.
5. CONCRETE SHALL BE 560-~~C-310~~ PER CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SEC. 201-1.1.2.

REVISED 4-16-86

CITY OF COSTA MESA  
CALIFORNIA

PUBLIC SERVICES DEPARTMENT

TYPES "A" & "B" CURBS

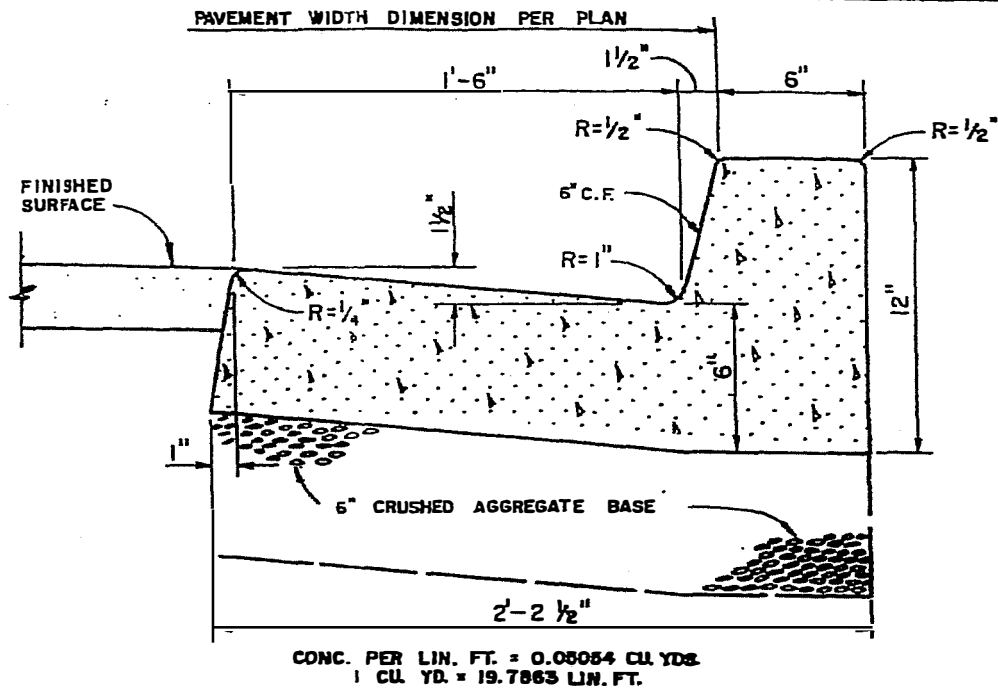
APPROVED *B. D. Matten* DATE 4/23/86  
BRUCE MATTEW B.C.E. 14188

DRAWN DWL

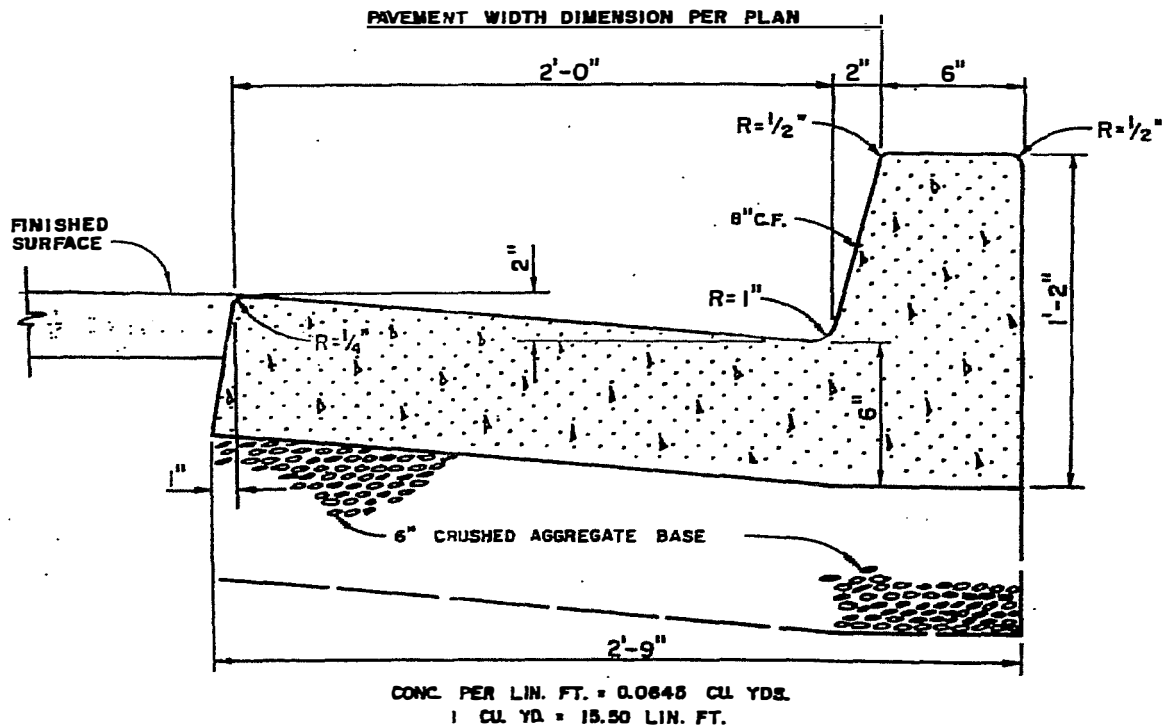
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STD. DNG. NO.

311



**TYPE "C-6" CURB & GUTTER**



**TYPE "C-8" CURB & GUTTER**

**NOTES:**

1. 1/4" EXPANSION JOINTS SHALL BE PLACED AT 40' INTERVALS AND AT ALL B.C.R.'S E.C.F.'S AND 1/8'X2" WEAKENED PLANE OR PLASTIC CONTROL JOINTS SHALL BE PLACED AT 10' INTERVALS. FOR DETAILS, SEE STD. DWG. NO. 314.
2. CONCRETE SHALL BE 560-C-325 PER CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SEC. 201-1.1.2.
3. SUBGRADE RELATIVE COMPACTION SHALL NOT BE LESS THAN 90%.

CITY OF COSTA MESA  
CALIFORNIA

PUBLIC SERVICES DEPARTMENT

TYPE "C" CURB & GUTTER

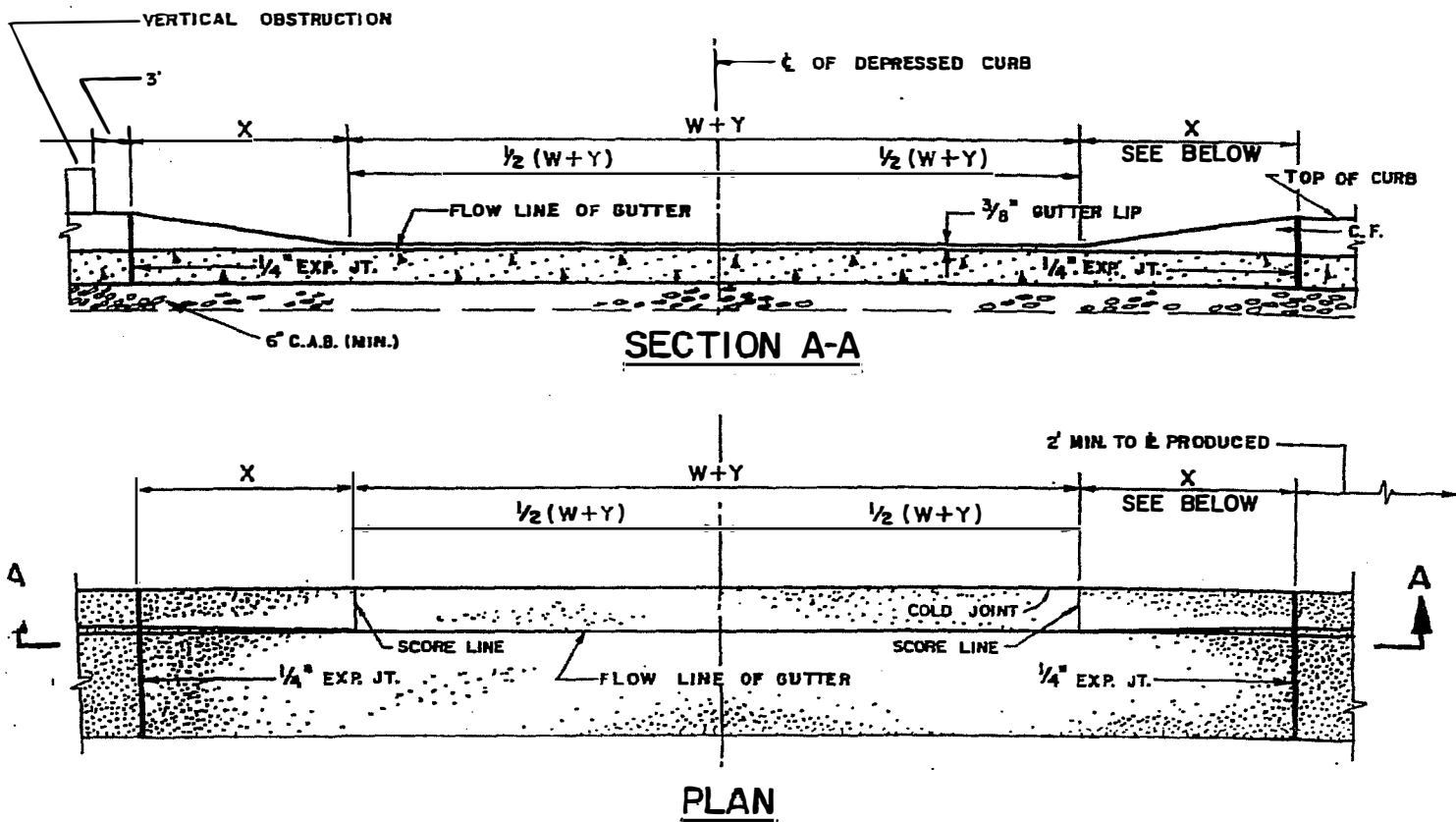
APPROVED

BRUCE D. MATTERN R.C.E. 19388

DATE 12/13/85

DRAWN M.K.S.  
SCALE NONE

STD. DWG. NO.  
312



#### NOTES:

1. FOR CURB AND GUTTER DETAILS, SEE STD. DWG. NO. 312.
2. FOR JOINT DETAILS, SEE STD. DWG. NO. 314.
3. CONCRETE TO BE 560-C-3250 PER CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SEC. 201-1.1.2
4. ALL DRIVEWAY LOCATIONS AND DIMENSIONS SHALL BE APPROVED BY TRANSPORTATION SERVICES ENGINEER.

#### DIMENSIONS:

W=10' MIN.-16' MAX. FOR RESIDENTIAL DRIVEWAYS IN R-1 ZONE. Y=0.

W=16' MIN.-26' MAX. FOR OTHER DRIVEWAYS.

X= 4' FOR 6" CURB FACE.

X= 5' FOR 8" CURB FACE.

CITY OF COSTA MESA

CALIFORNIA

PUBLIC SERVICES DEPARTMENT

DEPRESSED CURB  
FOR DRIVEWAY APPROACH

APPROVED

*BDM*  
BRUCE D. MATTERN R.C.E. 19388

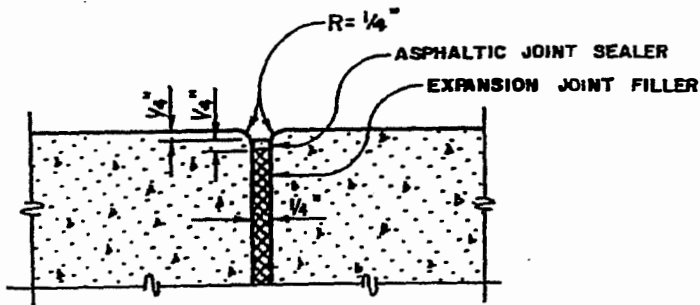
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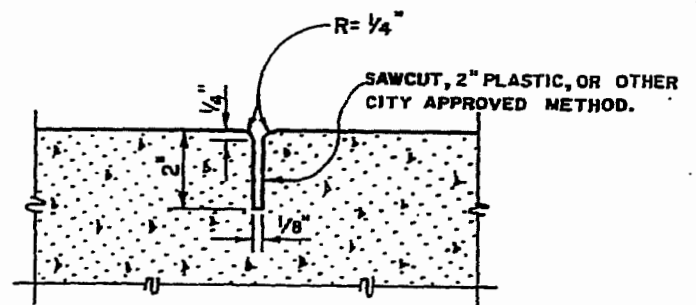
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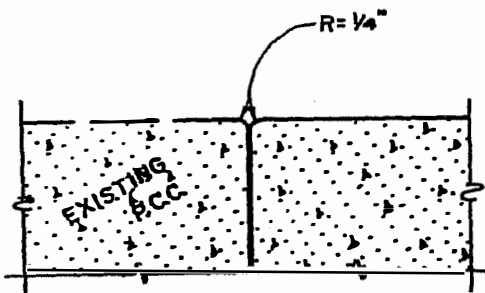
313



1/4" EXPANSION JOINT  
40' INTERVALS



1/8" x 2" WEAKENED PLANE JOINT  
10' INTERVALS



CONSTRUCTION JOINT

CITY OF COSTA MESA  
CALIFORNIA

PUBLIC SERVICES DEPARTMENT

# JOINT DETAILS

APPROVED

*B.D. Mattern*  
BRUCE D. MATTERN R.C.E. 19388

DATE

12/13/85

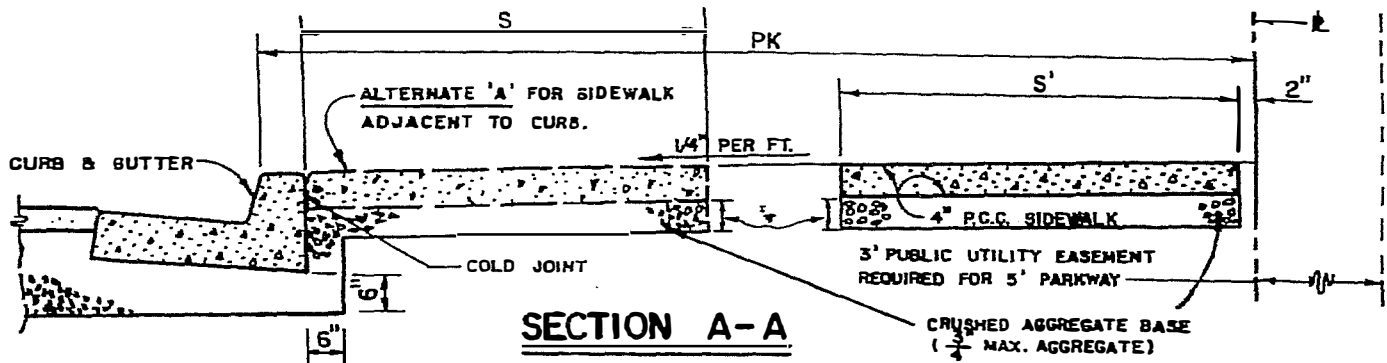
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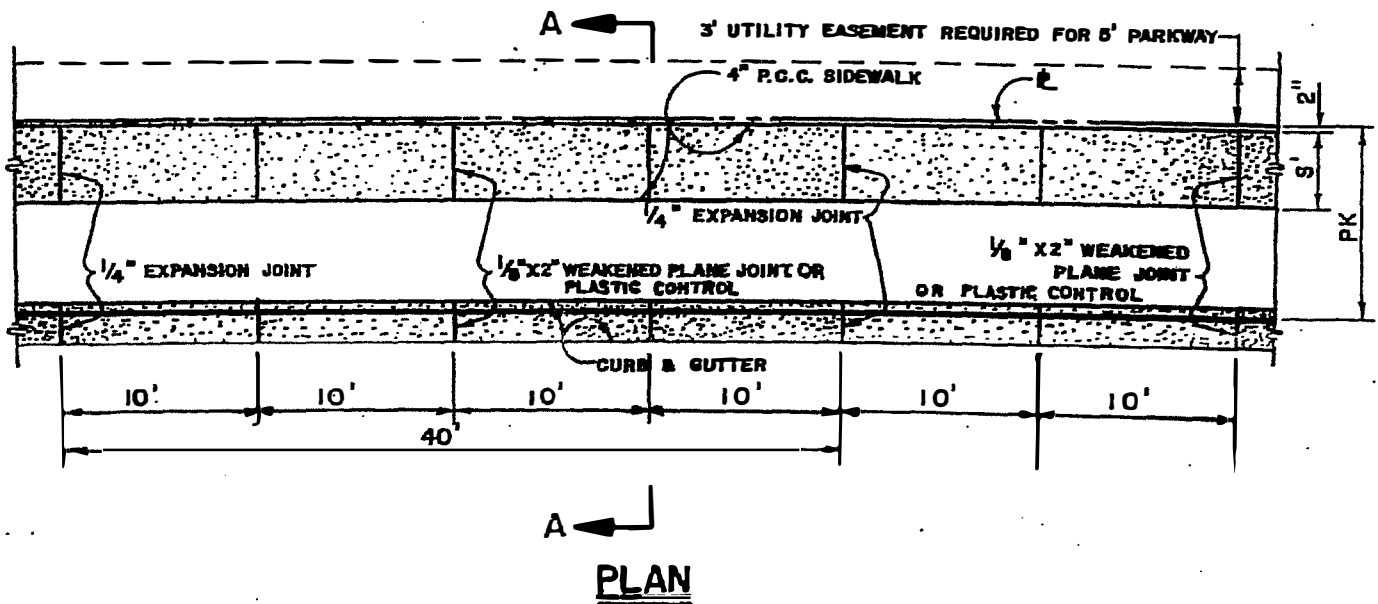
314





#### DIMENSIONS:

PK = PARKWAY WIDTH	
S = SIDEWALK WIDTH	
50' R/W -- PK = 5'	S = 4'-4"
60' R/W -- PK = 10'	S = 4'-4"
84' R/W -- PK = 7'	S = 4'-4" RESIDENTIAL, 6'-4" COMMERCIAL & INDUSTRIAL
106' R/W -- PK = 7'	S = 4'-4" RESIDENTIAL, 6'-4" COMMERCIAL & INDUSTRIAL
120' R/W -- PK = 8'	S = 4'-4" RESIDENTIAL, 7'-4" COMMERCIAL & INDUSTRIAL
S' = 4'-0"	



#### NOTES:

1. 1/4" EXPANSION JOINTS SHALL BE PLACED AT 40' INTERVALS AND AT THE END OF ALL CURB RETURNS.
2. 1/8" X 2" PLASTIC CONTROL OR WEAKENED PLANE JOINTS SHALL BE PLACED AT 10' INTERVALS.
3. EXPANSION JOINTS AND WEAKENED PLANE JOINTS FOR SIDEWALK SHALL BE PLACED TO COINCIDE WITH JOINTS OF THE CURB.
4. FOR EXPANSION JOINT AND WEAKENED PLANE JOINT DETAILS, SEE STD. DWG. NO. 314.
5. SIDEWALK THICKNESS IS 4" EXCEPT AT DRIVEWAYS WHERE IT SHALL BE 6" THICK.
6. CONCRETE SHALL BE 320-C-2500 PER CURRENT EDITION OF STANDARD SPECIFICATIONS SEC. 201-1.3.2.
7. 10' INTERVAL BETWEEN TRANSVERSE JOINTS MAY BE VARIED. IF JOINING EXISTING IMPROVEMENTS AND APPROVED BY CITY ENGINEER.
8. WIDEN SIDEWALK TO PROVIDE MIN. CLEAR DISTANCE PER STD. DWG. NO. 413.
9. ALL EXPOSED CORNERS ON SIDEWALK SHALL BE ROUNDED OFF WITH 1/2" RADIUS, EXCEPT AS OTHERWISE SHOWN ON STD. DWG. NO. 314.

CITY OF COSTA MESA  
CALIFORNIA

PUBLIC SERVICES DEPARTMENT

STANDARD SIDEWALK DETAILS

APPROVED

BRUCE D. MATTERN R.C.E. 19388

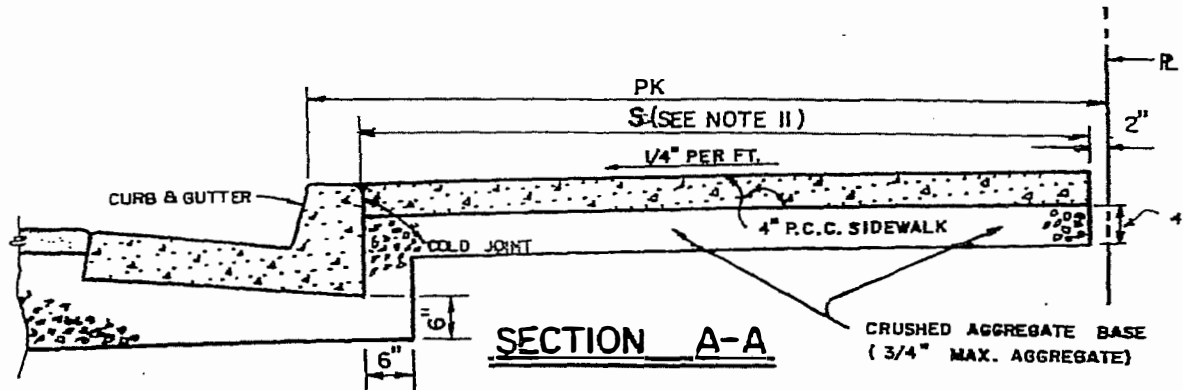
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DRAWN W.A.B.

SCALE NONE

STD. DWG. NO.

411

**DIMENSIONS:**

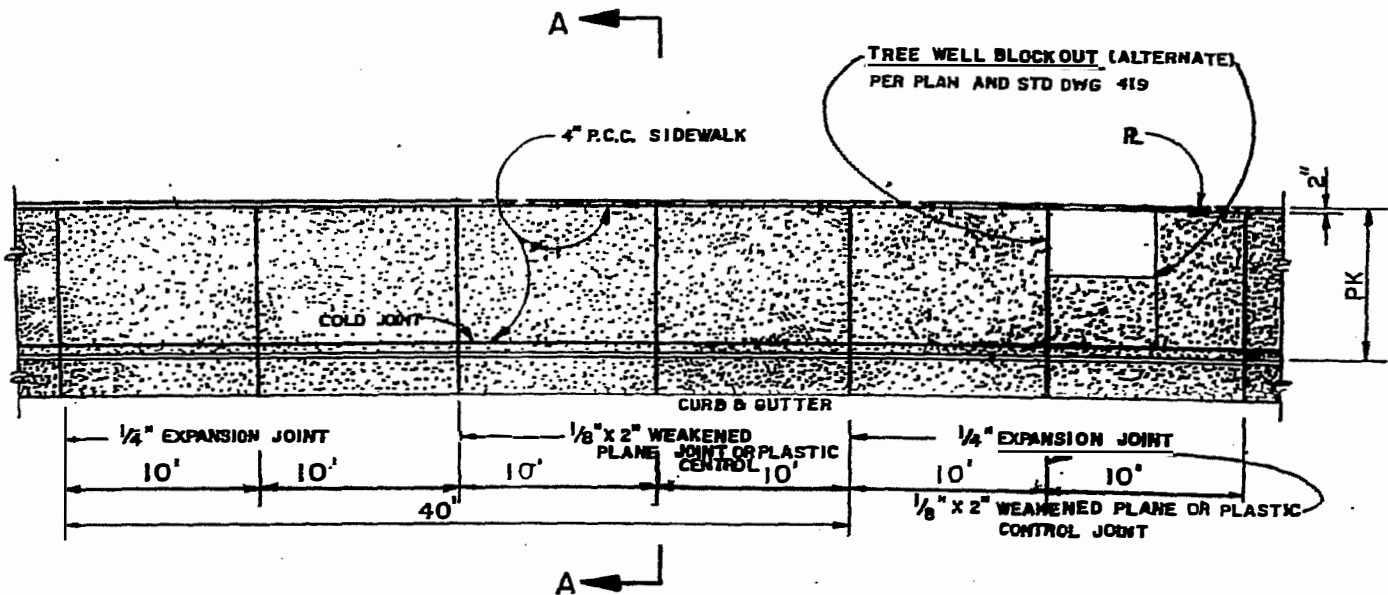
PK = PARKWAY WIDTH

60' R/W -- PK = 10'

84' R/W -- PK = 7'

106' R/W -- PK = 7'

120' R/W -- PK = 8'

**NOTES:**

1. 1/4" EXPANSION JOINTS SHALL BE PLACED AT 40' INTERVALS AND AT THE END OF ALL CURB RETURNS.
2. 1/8" X 2" WEAKENED PLANE OR PLASTIC CONTROL JOINTS SHALL BE PLACED AT 10' INTERVALS.
3. EXPANSION JOINTS AND WEAKENED PLANE JOINTS FOR SIDEWALK SHALL BE PLACED TO COINCIDE WITH JOINTS OF THE CURB.
4. FOR EXPANSION JOINT AND WEAKENED PLANE JOINT DETAILS, SEE STD. DWG. NO. 314.
5. SIDEWALK THICKNESS IS 4" EXCEPT AT DRIVEWAYS WHERE IT SHALL BE 6" THICK.
6. CONCRETE SHALL BE 520 C 2500 PER CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SEC. 201-1.1.2.
7. TREE WELL BLOCKOUTS TO BE CONSTRUCTED W/ LOCATION & SPACING PER PLAN.
8. JO INTERVAL BETWEEN TRANSVERSE JOINTS MAY BE VARIED IF JOINING EXISTING IMPROVEMENTS.
9. ALL EXPOSED CORNERS ON SIDEWALK SHALL BE ROUNDED WITH 1/2" RADIUS, EXCEPT AS OTHERWISE SHOWN ON STD. DWG. NO. 314.
10. WIDEN SIDEWALK TO PROVIDE MIN. CLEAR DISTANCE PER STD. DWG. NO. 413.
11. SIDEWALK WIDTH(S) SHALL BE PER STD. DWG. NO. 411.

REV. 6-25-80 H.R.  
REV. 2-2-79 CMO  
REV. 3-23-78  
REV. 5-12-77  
REV. 12-23-75

CITY OF COSTA MESA  
CALIFORNIA

PUBLIC SERVICE DEPARTMENT

COMMERCIAL SIDEWALK DETAILS

APPROVED

*[Signature]*  
DAUCE D. MATERN R.C.E. 1938B

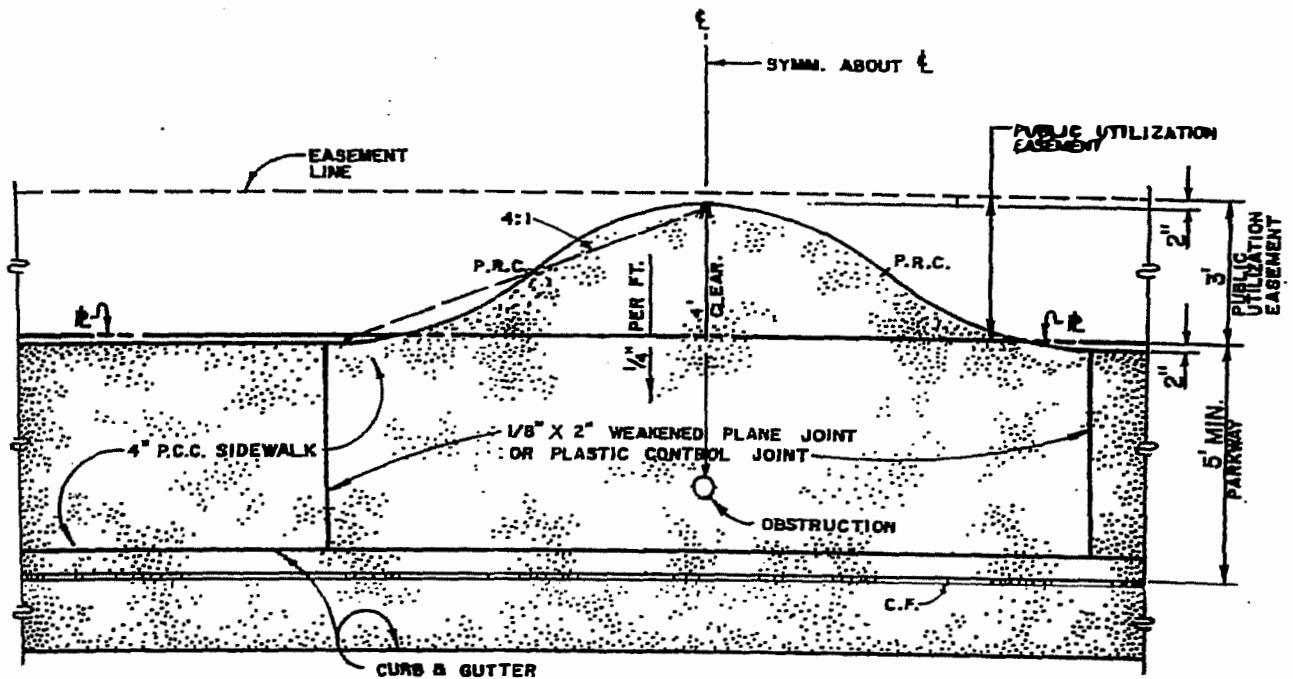
DATE

DRAWN W.A.B.

SCALE NONE

STD. DWG. NO.

412



**PLAN**

**NOTES:**

1. FOR STANDARD SIDEWALK DETAILS, SEE STD. DWG. NO. 411 AND/OR 412.
2. FIRE HYDRANTS SHALL BE 2' CLEAR OFF OF THE CURB FACE.
3. NO VERTICAL OBSTRUCTION WITHIN 3' CLEAR OF DRIVEWAY TOP OF "X".
4. MAILBOXES SHALL BE 6" CLEAR OFF THE CURB FACE, ULTIMATE LOCATION, HEIGHT, AND MATERIAL TO BE APPROVED BY LOCAL POSTMASTER.
5. POWER POLES, GUY ANCHORS, AND STREET LIGHTS SHALL BE 18" CLEAR OFF CURB FACE.

**CITY OF COSTA MESA**  
CALIFORNIA

PUBLIC SERVICES DEPARTMENT

**SIDEWALK OBSTRUCTIONS FLARE**

APPROVED

BRUCE D. MATYERN R.C.E. 19388

DATE

DRAWN W.A.B.

SCALE NONE

STD. DWG. NO.

**413**

# DIMENSIONS:

PK = PARKWAY WIDTH

8' SIDEWALK WIDTH SEE NOTE 7

50' R/W -- PK=5'

60' R/W -- PK=10'

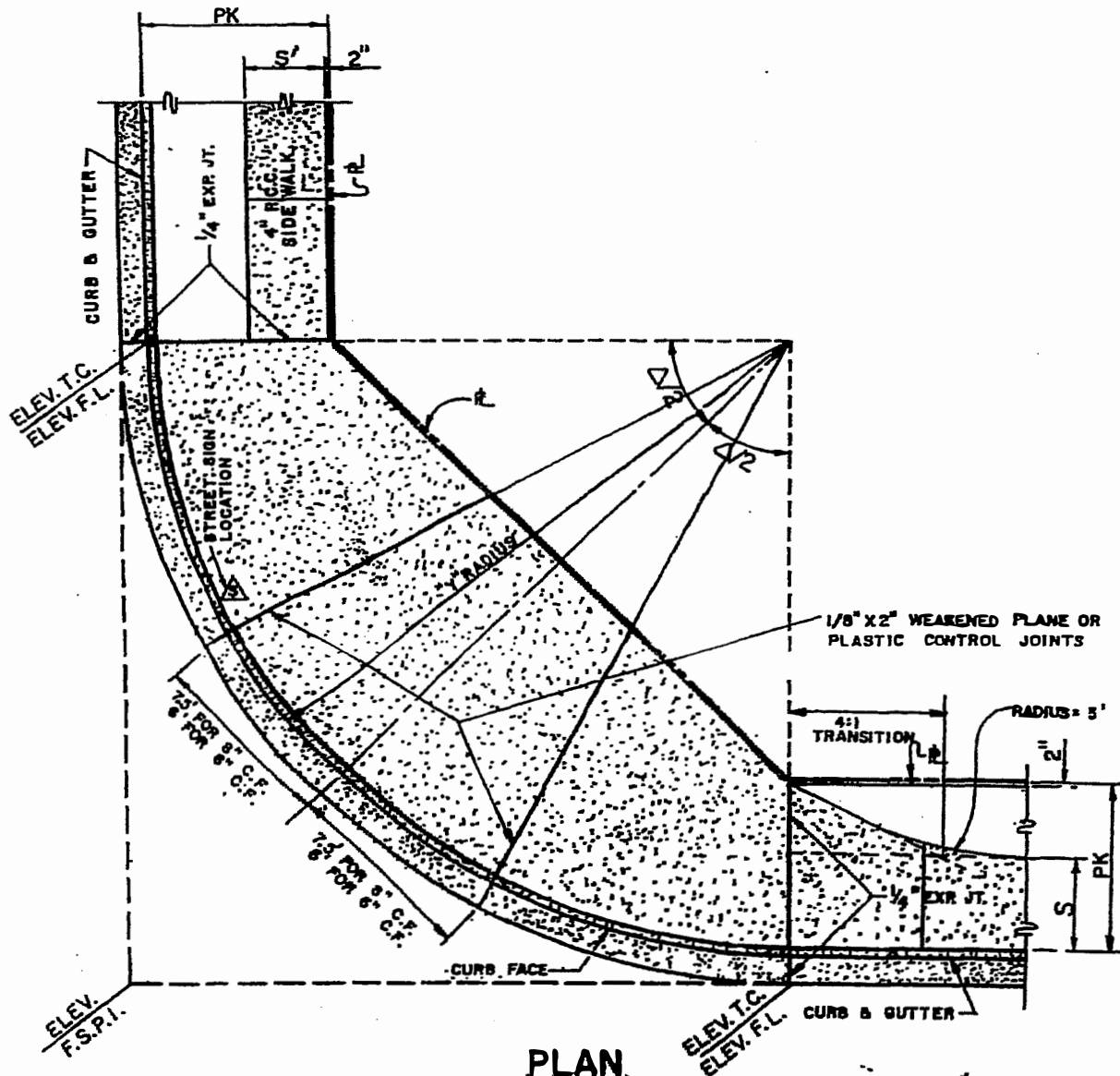
84' R/W -- PK=17'

106' R/W -- PK=27'

120' R/W -- PK=35'

"Y" -- RADIUS VARIES (25' OR 35')

5' = 4'-0"



## PLAN

### NOTES:

1. 1/4" EXPANSION JOINTS SHALL BE PLACED AT END OF CURB RETURNS.
2. 1/8" X 2" WEAKENED PLANE OR PLASTIC CONTROL JOINTS SHALL BE PLACED SO AS NOT TO EXCEED 10' O.C. AT R.
3. FOR EXPANSION JOINT AND WEAKENED PLANE JOINT DETAILS, SEE STD. DWG. NO. 314.
4. CONCRETE SHALL BE PER CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SEC. 201.11.2, CLASS 520C-2500
5. ALL ELEVATIONS PER PLAN. FOR CROSS GUTTERS F.L.P.I. PER STD. DWG. NO. 415 SHALL BE SHOWN ON PLAN.
6. FOR STREET RADIUS DATA, SEE STD. DWG. NO. 314.
7. SEE STD. DWG. NO. 411, 412 AND 413 FOR BASE AND SIDEWALK REQUIREMENTS.

CITY OF COSTA MESA  
CALIFORNIA

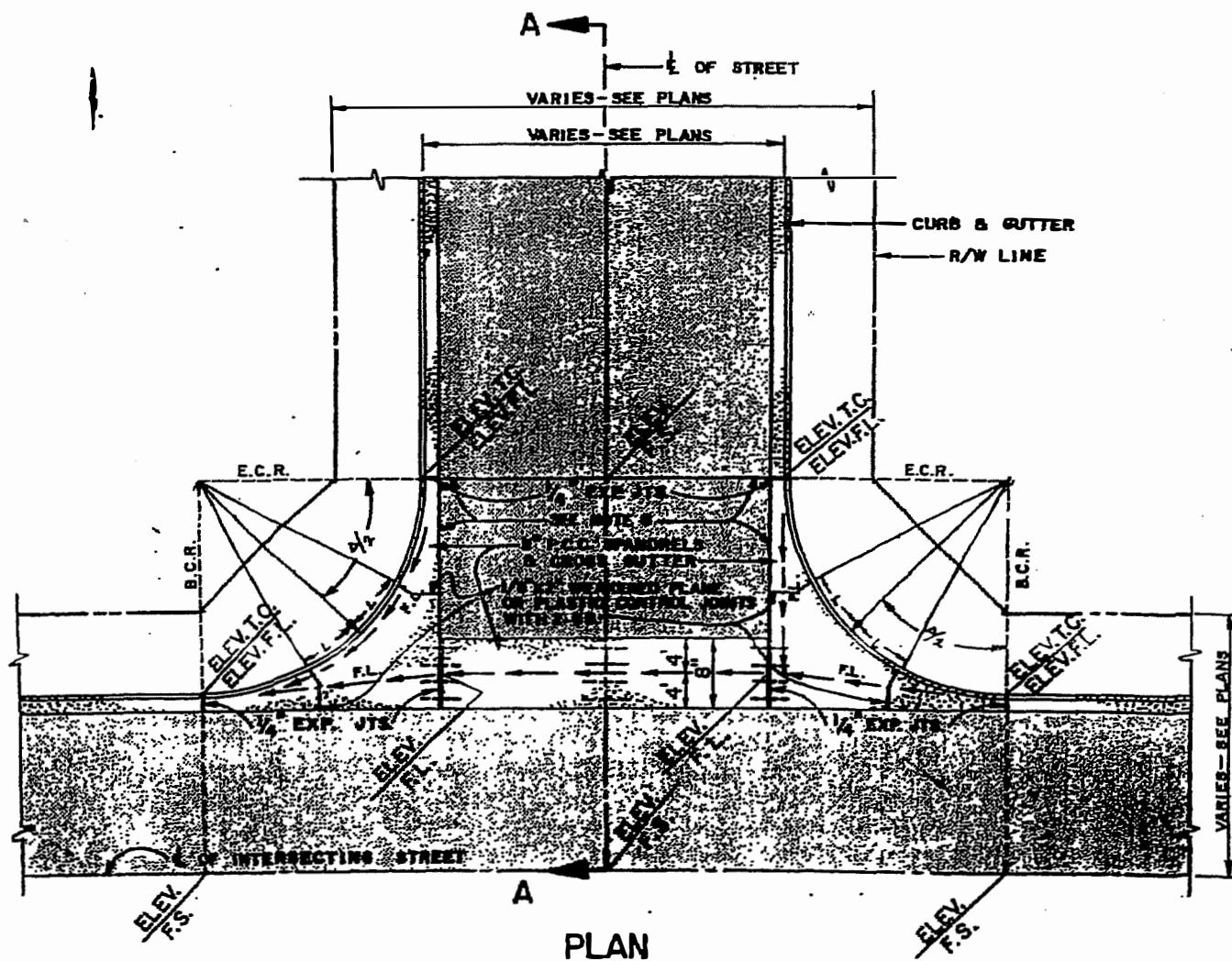
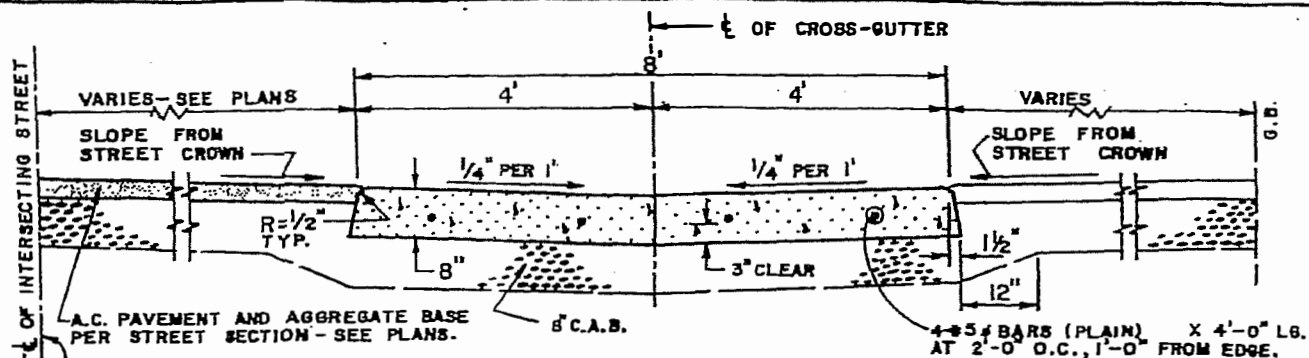
PUBLIC SERVICES DEPARTMENT

## STANDARD SIDEWALK RETURN

APPROVED

DATE

DRAWN W.A.B.  
SCALE NONE  
STD. DWG. NO.  
**414**



**NOTES:**

1. SMOOTH TROWEL 8" WIDE FLOW LINE IN CROSS-GUTTER AND SPANDRELS.
2. AGGREGATE BASE THICKNESS FOR SPANDRELS SHALL BE THE SAME AS FOR CROSS-GUTTER.
3. POUR CURB MONOLITHICALLY WITH SPANDREL.
4. FOR JOINT DETAILS, SEE STD. DWG. NO. 314 AND 414.
5. CONCRETE SHALL BE 860 C 3250 PER CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PAVED WORKS CONSTRUCTION, SEC 201-1.1.2.
6. ALL ELEVATIONS SHALL BE PER PLAN.
7. DISTANCE L FROM MIDDLE ORIGINATE OF CURB RETURN TO JOINT SHALL BE 7' FOR 8" C.F. OR 6' FOR 6" C.F..
8. ANY CROSS-GUTTER TO BE CONSTRUCTED ON LESS THAN 0.20 % SHALL HAVE DRAINAGE STRUCTURES CONSTRUCTED TO MITIGATE THE ADVERSE EFFECTS OF NUISANCE WATER AND FULL CONCRETE APRON WITH EXPANSION JOINTS ALONG Q AND ALONG EDGE OF GUTTERS.

**CITY OF COSTA MESA**  
**CALIFORNIA**

PUBLIC SERVICES DEPARTMENT

## TYPICAL CROSS-GUTTER.

**APPROVED**

**BRUCE D. MATTERN** R.C.E. 1958

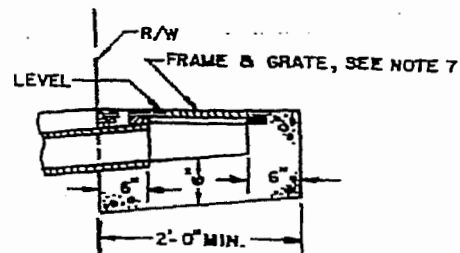
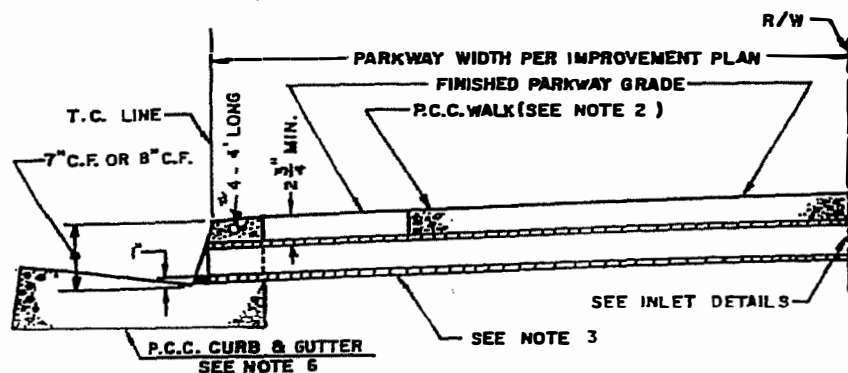
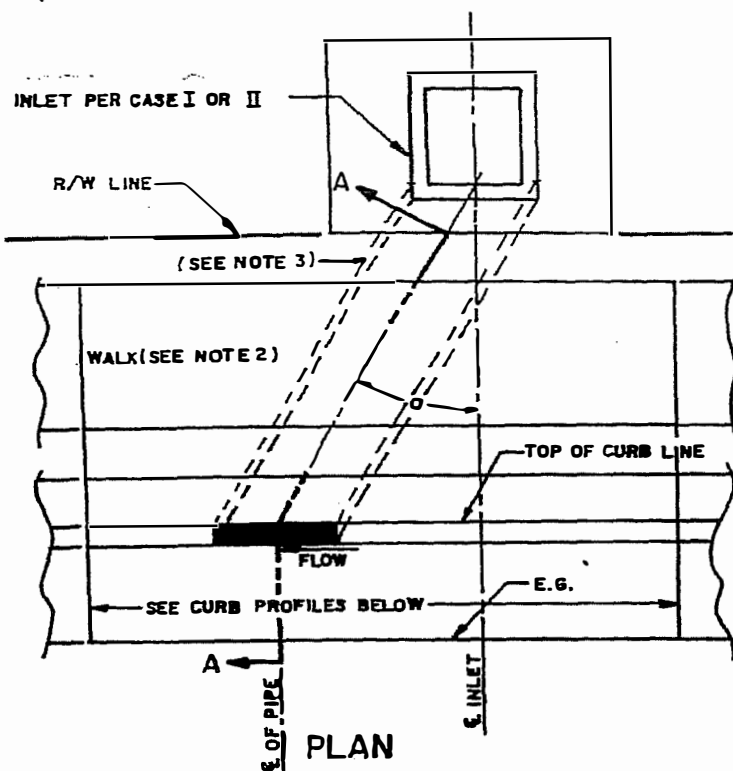
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STD. DWG. NO.	
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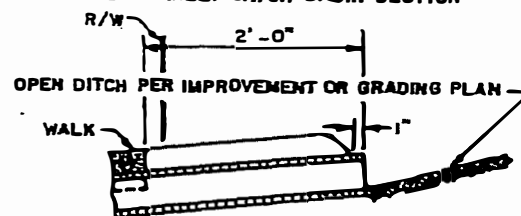
**415**





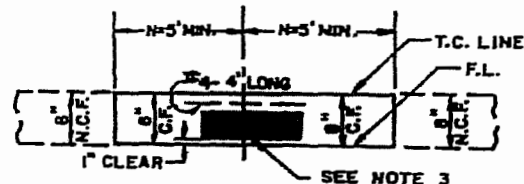
CASE I INLET

DROP INLET CATCH BASIN SECTION



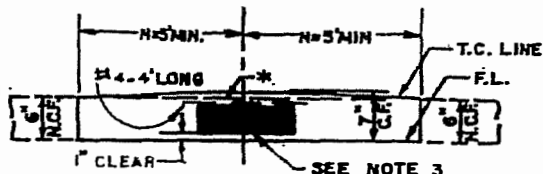
CASE II INLET

GRADED DITCH SECTION



CURB PROFILE

8\" NORMAL CURB FACE



\* NORMAL T.C. GRADE LINE AS SHOWN ON PROFILE

CURB PROFILE

6\" NORMAL CURB FACE

NOTE:

1. TOP OF INLET STRUCTURE (CASE I) TO BE FLUSH WITH ADJACENT SURFACE.
2. CONSTRUCT P.C.C. WALK AND CURB AND GUTTER AS SPECIFIED ON PLAN. MINIMUM REPLACEMENT OF WALK AND CURB AND GUTTER SHALL BE FROM JOINT OR AS DIRECTED BY THE CITY ENGINEER. SEE STD. DWG. NO. 314. THE CONTRACT PRICE PAID FOR P.C.C. WALK ITEM SHALL INCLUDE WALK CONSTRUCTED IN CONJUNCTION WITH PARKWAY CULVERT.
3. ONE CIRCULAR PIPE SHALL BE PLACED AT A LOCATION OTHERWISE THE PIPE SHALL BE ALHAMBRA FOUNDRY A470 OR EQUAL WITH THE SIZE AS SPECIFIED ON PLAN. FOR SIZES OTHER THAN 3\" x 5, 5\" x 12\" N SHALL BE 10\" AND C.F. OVER PIPE SHALL BE INCREASED 1\" FOR 1\".
4. INLET CASE TO BE SPECIFIED ON IMPROVEMENT OR GRADING PLAN.
5. ANGLE \"Q\" EQUALS 0° UNLESS OTHERWISE SPECIFIED.
6. TYPE, DIMENSIONS, AND ELEVATIONS OF P.C.C. CURB AND GUTTER PER IMPROVEMENT PLAN.
7. UNLESS OTHERWISE SPECIFIED, FRAME AND GRATE FOR INLET CASE I SHALL BE ALHAMBRA FOUNDRY 14\" x 24\" TYPE A-2422 (GALVANIZED) OR EQUAL, PLACED LEVEL.
8. CONCRETE SHALL BE CLASS 520C 2500.

CITY OF COSTA MESA  
CALIFORNIA

PUBLIC SERVICES DEPARTMENT

PARKWAY DRAIN NO.2

APPROVED

*B.D. Mattern*  
BRUCE D. MATTERN R.C.E. 19368

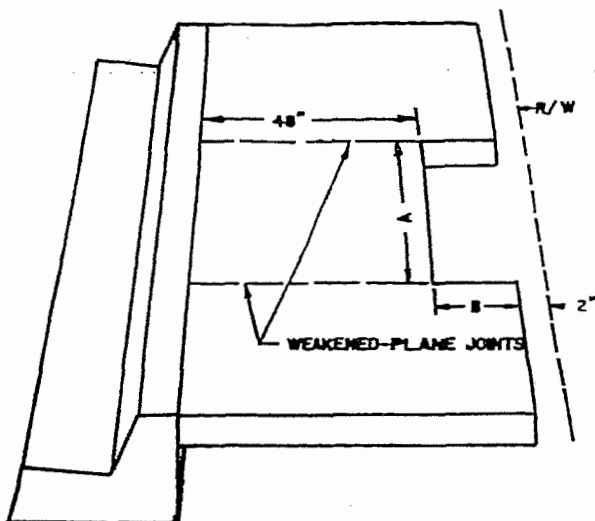
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DRAWN E.K.S.

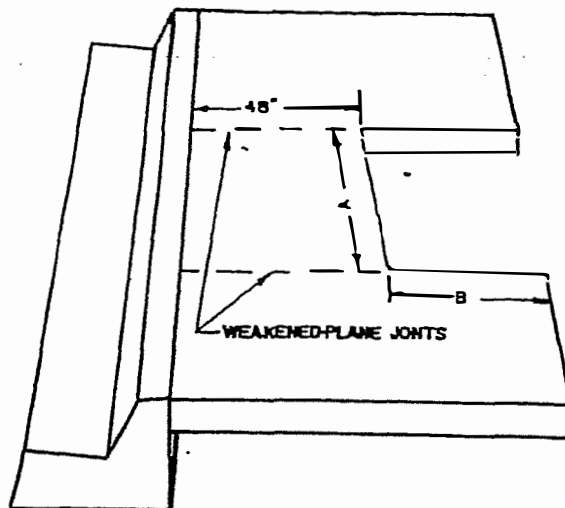
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STD. DWG. NO.

418



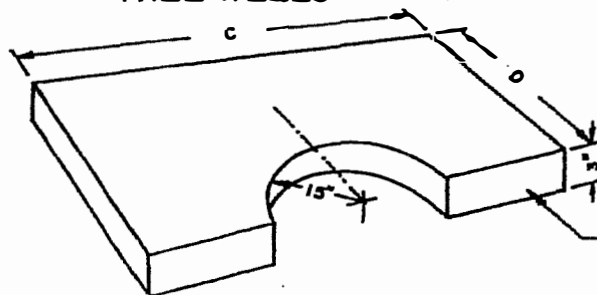
PARKWAYS LESS THAN 8'  
1 COVER REQUIRED  
CASE I: 2' X 4' TREE WELL



PARKWAYS 8' OR GREATER  
2 COVERS REQUIRED  
CASE II: 4' X 4' TREE WELL

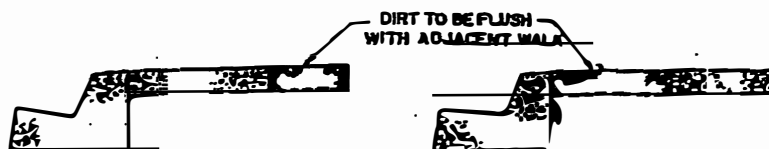
### TREE WELLS

CASE	A	B	C	D
I	4'-0"	2'-0"	3'-11"	1'-11 1/2"
II	4'-0"	4'-0"	3'-11"	1'-8 1/2"



POROUS, PERMEABLE P.C.C.  
REINFORCED WITH 2" X 2"  
16 GAUGE WIRE MESH.

POROUS TREE WELL COVER



TYPICAL SECTIONS

### NOTES:

1. TREE WELLS SHALL BE PLACED APPROXIMATELY 50' APART, BUT NOT LESS THAN ONE PER RESIDENTIAL LOT.
2. LOCATION OF TREE WELLS WILL BE SUBJECT TO THE FOLLOWING CONDITIONS:
  - A. 25' FROM CURB RETURNS.
  - B. 15' FROM LIGHT STANDARDS AND POWER POLES.
  - C. 10' FROM FIRE HYDRANTS, DRIVEWAYS, HOUSE WALKS, UTILITY METERS, PEDESTALS.
  - D. 10' FROM ALL UTILITY LATERALS AND MAINS.
3. COVERS ARE TO BE COLORED BUFF USING AN ACCEPTABLE COLORING AGENT.
4. TREE WELLS ARE TO BE BACKFILLED WITH CLEAN DIRT AND FLUSH WITH ADJACENT WALK UNTIL TREES ARE PLANTED.

CITY OF COSTA MESA  
CALIFORNIA

PUBLIC SERVICES DEPARTMENT

### SIDEWALK TREE WELL & COVER

APPROVED

*B.D. Mattern* DATE 12/13/15  
BRUCE D. MATTERN R.C.E. 10300

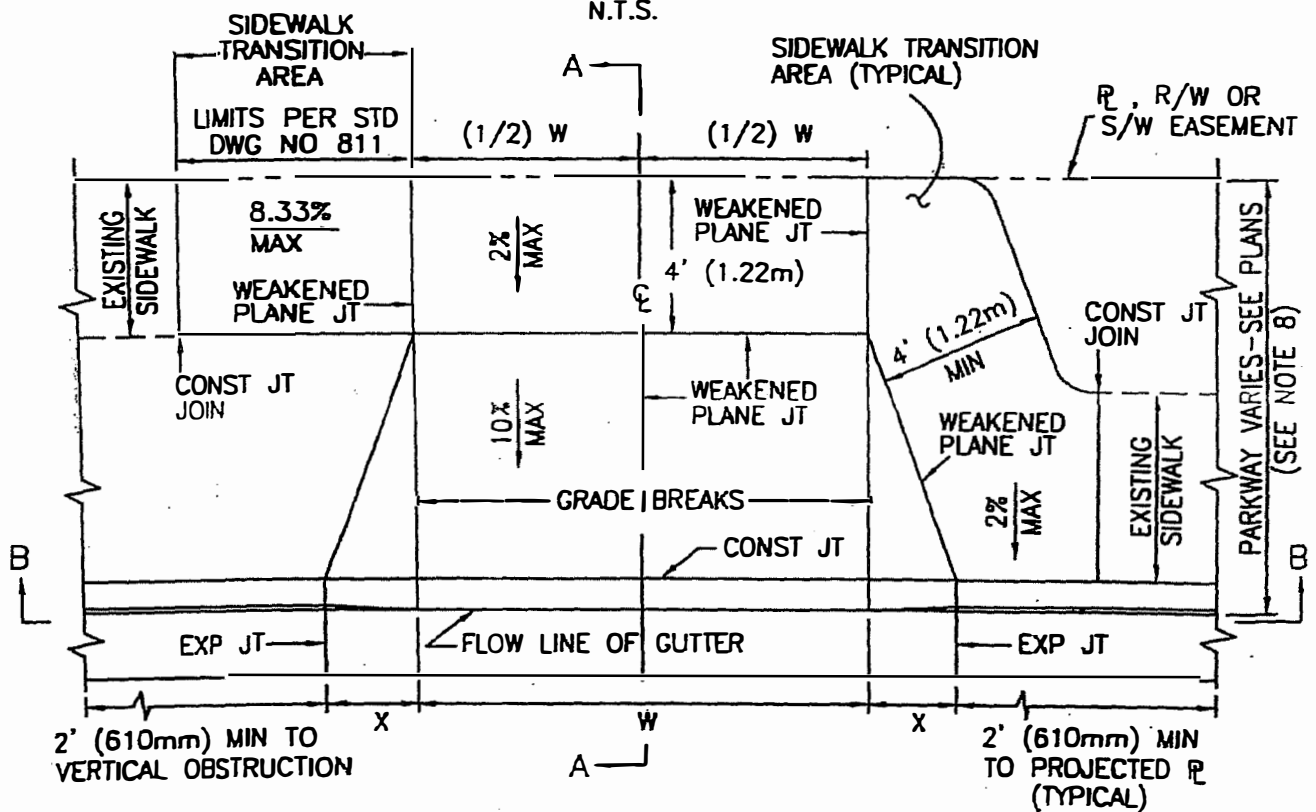
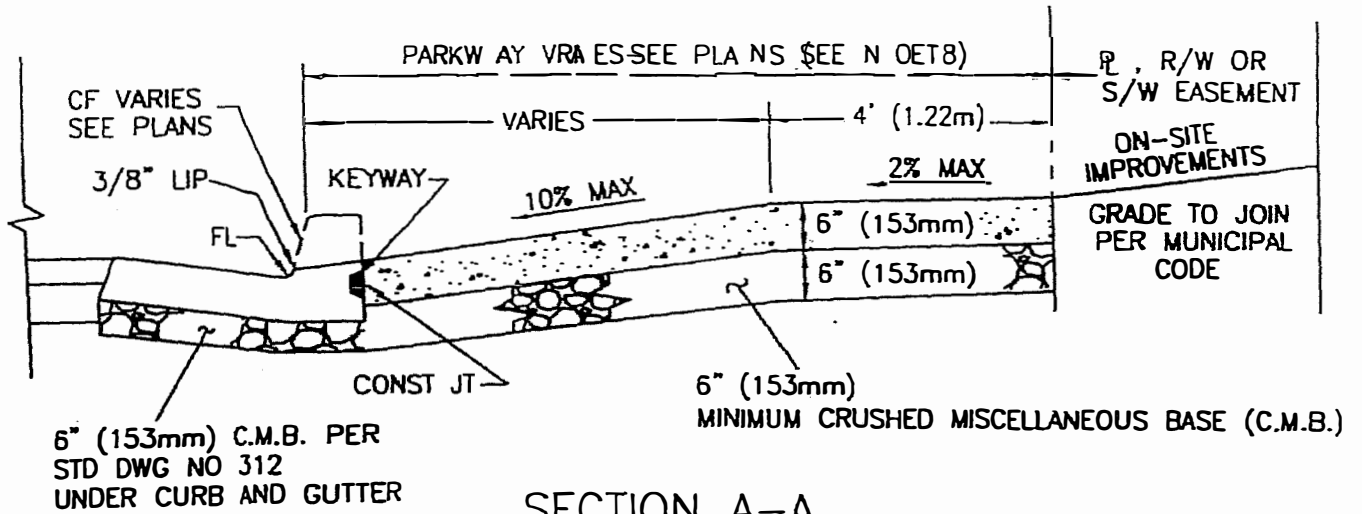
DRAWN *E.K.S.*

SCALE NONE

STD. DWG. NO.

419





CITY OF COSTA MESA  
PUBLIC SERVICES DEPARTMENT

RESIDENTIAL  
DRIVEWAY APPROACH  
TYPE I



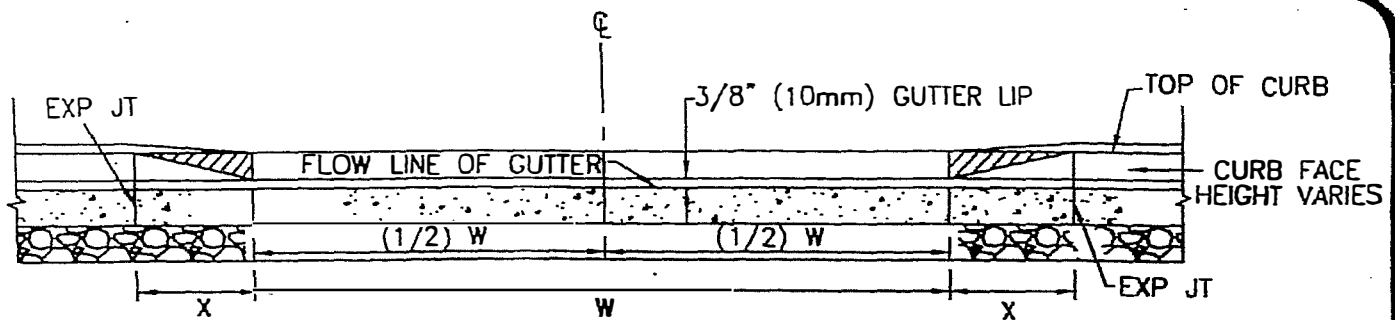
APPROVED BY:

ERNESTO MUNOZ

CITY ENGINEER

WILLIAM MORRIS 1/10/03  
DIRECTOR OF PUBLIC SERVICES

STD. DWG. NO.  
513



## SECTION B-B

N.T.S.

### DIMENSIONS

W=10' (3.05m) MIN - 16' (4.88m) MAX FOR RESIDENTIAL DRIVEWAYS.

X= 4' (1.22m) FOR 6" (153mm) CURB FACE.

X= 5' (1.52m) FOR 8" (204mm) CURB FACE.

### NOTES:

1. ALL DRIVEWAY LOCATIONS AND DIMENSIONS SHALL BE APPROVED BY THE TRANSPORTATION SERVICES DIVISION.
2. THERE SHALL BE ONE DRIVEWAY PER PROPERTY.
3. CONCRETE SHALL BE CLASS 560-C-3250 PER LATEST EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SEC. 201-1.
4. DEPRESSED CURB IS STRAIGHT GRADED WITH 3/8" (10mm) GUTTER LIP.
5. BASED UPON EXISTING SOIL CONDITIONS, THE CITY ENGINEER MAY REQUIRE A KEYWAY AT BACK OF CURB.
6. FOR JOINT DETAILS AND KEYWAY DETAIL, SEE STD DWG NO 314.
7. ALL PARTIAL DRIVEWAY RECONSTRUCTION SHALL REQUIRE TIE BARS (#4 x 24") AT 24" ON CENTER.
8. FOR A 5' (1.52m) PARKWAY, A 3' (914mm) PUBLIC SIDEWALK EASEMENT IS REQUIRED AT THE BACK OF RIGHT-OF-WAY/PROPERTY LINE.

CITY OF COSTA MESA  
PUBLIC SERVICES DEPARTMENT

RESIDENTIAL  
DRIVEWAY APPROACH  
TYPE I



APPROVED BY:

*EJP*  
ERNESTO MUÑOZ

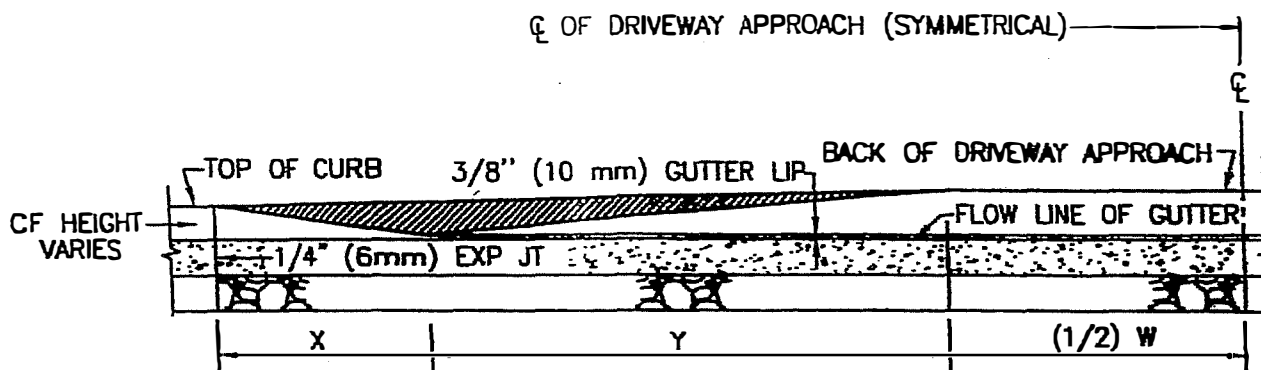
CITY ENGINEER

*William Morris* 1/10/03  
WILLIAM MORRIS  
DIRECTOR OF PUBLIC SERVICES

STD. DWG. NO.

513





**SECTION B-B**  
N.T.S.

**DIMENSIONS**

- W= 16' (4.88m) MIN – 26' (7.92m) MAX FOR ALL DRIVEWAYS.
- X= 4' (1.22m) FOR 6" (150mm) CURB FACE.
- X= 5' (1.52m) FOR 8" (200mm) CURB FACE.
- Y= 7' (2.13m) ON MASTER PLAN STREETS
- Y= 4' (1.22m) ON RESIDENTIAL, NON-MASTER PLAN STREETS.

**NOTES:**

1. ALL DRIVEWAY LOCATIONS AND DIMENSIONS SHALL BE APPROVED BY THE TRANSPORTATION SERVICES DIVISION.
2. CONCRETE SHALL BE CLASS 560-C-3250 PER LATEST EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SEC. 201-1.
3. DEPRESSED CURB IS STRAIGHT GRADED WITH 3/8" (10mm) GUTTER LIP.
4. BASED UPON EXISTING SOIL CONDITIONS, THE CITY ENGINEER MAY REQUIRE A KEYWAY AT BACK OF CURB.
5. FOR JOINT DETAILS AND KEYWAY DETAIL, SEE STD DWG NO 314.
6. ALL PARTIAL DRIVEWAY RECONSTRUCTION SHALL REQUIRE TIE BARS (#4 x 24") AT 24" ON CENTER.
7. FOR A 5' (1.52m) PARKWAY, A 3' (914mm) PUBLIC SIDEWALK EASEMENT IS REQUIRED AT THE BACK OF PROPERTY/RIGHT-OF-WAY LINE.
8. CASE I – SIDEWALK ADJACENT TO CURB AND GUTTER. NO GREENBELT.  
CASE II – EXISTING GREENBELT BETWEEN SIDEWALK AND CURB AND GUTTER.

**CITY OF COSTA MESA**  
PUBLIC SERVICES DEPARTMENT

**DRIVEWAY APPROACH-TYPE II**  
**COMMERCIAL AND MULTI-USE**



APPROVED:

ERNESTO MUNOZ

CITY ENGINEER

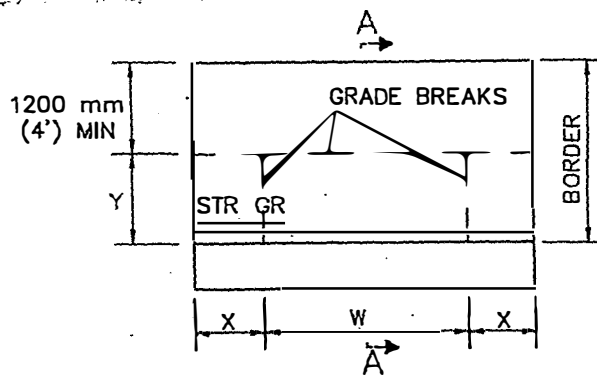
WILLIAM LORING

DIRECTOR OF PUBLIC SERVICES

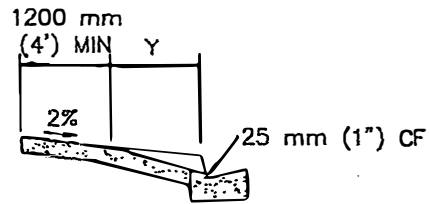
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STD. DWG. NO.

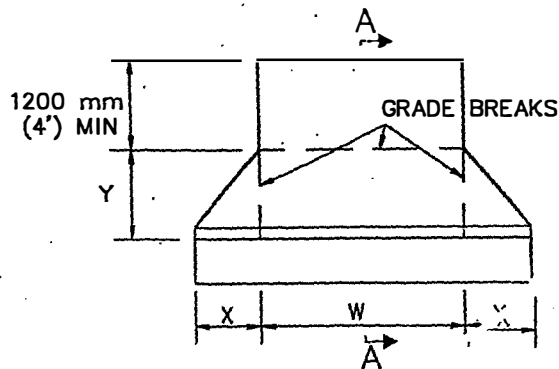
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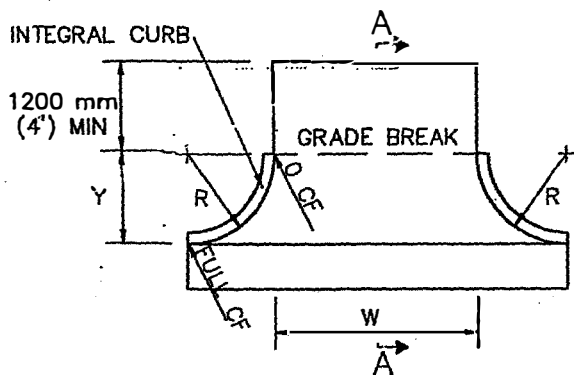
TYPE A



SECTION A-A



TYPE B



TYPE C

CURB FACE, mm	X, mm	Y, mm
150 (6") or less	900 (3'-0")	1200 (4'-0")
175 (7")	1050 (3'-6")	1425 (4'-9")
200 (8")	1200 (4'-0")	1700 (5'-8")
225 (9")	1350 (4'-6")	1950 (6'-6")
250 (10")	1500 (5'-0")	2175 (7'-3")
275 (11")	1650 (5'-6")	2400 (8'-0")
300 (12") or more	1800 (6'-0")	2625 (8'-9")

NOTES:

1. RESIDENTIAL DRIVEWAYS SHALL BE 100 mm (4") THICK PCC.
2. COMMERCIAL DRIVEWAYS SHALL BE 150 mm (6") THICK PCC.
3. WEAKENED PLANE JOINTS SHALL BE INSTALLED AT BOTH SIDE OF A DRIVEWAY AND AT APPROXIMATELY 3000 mm (10') INTERVALS.
4. CURB FOR TYPE C DRIVEWAY SHALL BE INTEGRAL AND MATCH ADJACENT CONSTRUCTION.
5. REFER TO LOCAL DEVELOPMENT REGULATIONS FOR AMERICANS WITH DISABILITIES ACCESS REQUIREMENTS AND MAXIMUM PERMITTED DRIVEWAY WIDTHS.
6. DIMENSIONS SHOWN ON THIS PLAN FOR METRIC AND ENGLISH UNITS ARE NOT EXACTLY EQUAL VALUES. IF METRIC UNITS ARE USED, ALL VALUES USED FOR CONSTRUCTION SHALL BE METRIC VALUES. IF ENGLISH UNITS ARE USED, ALL VALUES USED FOR CONSTRUCTION SHALL BE ENGLISH VALUES.

AMERICAN PUBLIC WORKS ASSOCIATION - SOUTHERN CALIFORNIA CHAPTER

PROMULGATED BY THE  
PUBLIC WORKS STANDARDS INC.  
GREENBOOK COMMITTEE  
1984  
REV. 1998

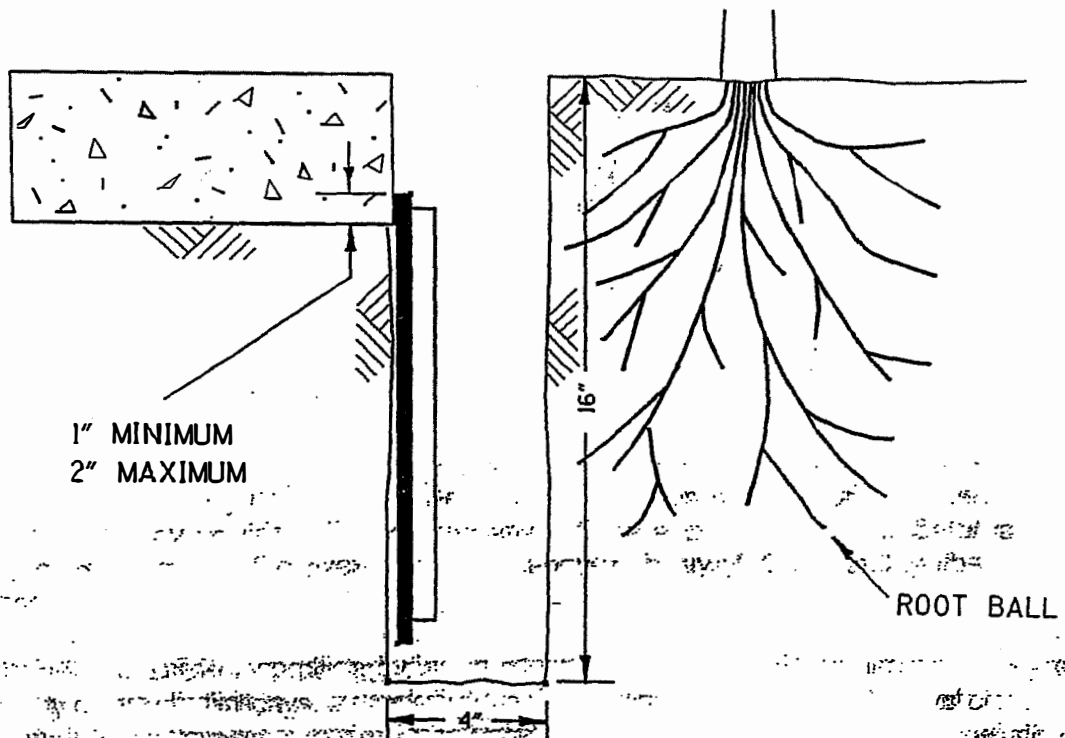
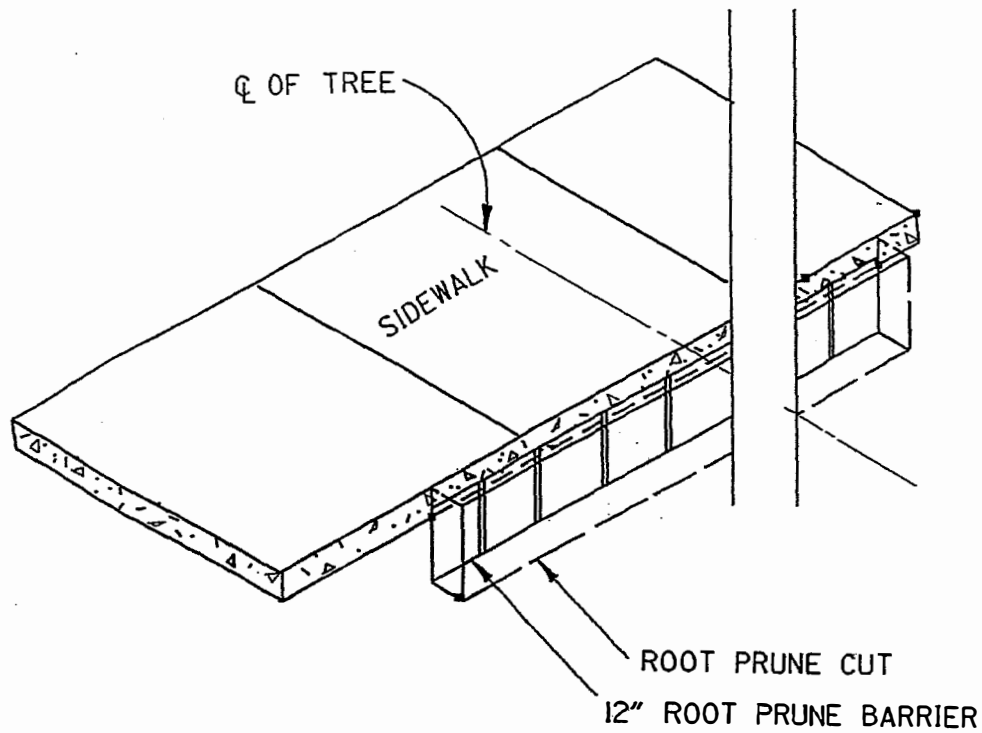
**DRIVEWAY APPROACHES**

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLAN  
METRIC

**110 - 1**

SHEET 1 OF 1



ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY

STD. PLAN

Adopted: Res. 78-791 Re Revised: Res. 86-1141, 88-1341, 96-546

Approved

W.L. Zoum, Director of Public Works

1708

TREE ROOT BARRIER

SHT. 1 OF 2

## NOTES:

### Tree Trimming :

1. Prior to root pruning, each tree shall be trimmed to reduce its overall size by one-third (1/3) and to promote improved growth.

Trimming shall also provide:

- a. Removal of all dead, damaged, diseased, or structurally deficient limbs;
- b. Thinning to reduce interior wind resistance;
- c. Vertical clearance of 14.0 feet over roadways 9.0 feet over sidewalks;
- d. Visual clearance around all traffic control devices and signs;
- e. An overall balanced appearance.

### 2. Root Pruning :

Root pruning cuts shall be made immediately adjacent to the sidewalk and shall be 4" wide, 16" deep (measured from the top of the final grade of the sidewalk) and 16' long centered 8' either side of the center of the tree. The bottom 13" of the root prune cut shall be filled with pea gravel, to promote deeper watering, with the top 3" filled with native soil free from rocks or other materials that would interfere with landscape maintenance tasks. At least 18 months shall transpire before root pruning the opposite of a tree. In general, root pruning would not be performed adjacent to the curb due to the normal depth of the curb.

### 3. Root Control Barrier :

Barrier shall be fabricated from a high density, high impact plastic, i.e. Polystyrene, Polyethylene, Polyvinyl Chloride, (PVC), or Acrylonitrile-Butadiene-Styrene (ABS). The interior surface shall have 1/2" high (minimum) raised vertical ribs spaces 6" to 8" apart the full depth of the barrier and shall be expressly designed for root deflection.

Barrier used for root pruning shall have a minimum depth of 12" with a minimum thickness of 0.06". Barriers shall be 16 feet long in one continuous piece (preferred) or in a combination of pieces securely fastened with adhesive at joint points.

ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY

Approved

*W.L. Zaur*  
W.L. Zaur, Director of Public Works

Adopted: Res. 78-791 Revised: Res. 86-1141; 88-1341; 96-546

TREE ROOT BARRIER

STD. PLAN

1708

SHT.2 OF 2

UNITED STATES POST OFFICE

OUR REF: WED13:JDIAZ:am:-9998

DATE: May 30, 1990

SUBJECT: Location of mailboxes

P.O.CL:

TO: City of Costa Mesa

Mailboxes shall be located on the right hand side of the roadway in the direction of the delivery route except on one way streets where they may be placed on the left hand side. The bottom of the box shall be set at an elevation established by the U.S. Postal Service, usually between 3'6" and 4'0" above the roadway surface.

On curbed streets, the roadside face of the mailbox shall be set back from the face of the curb a distance between 6 and 12 inches. On residential streets without curbs, that carry low traffic volumes, the roadside face of a mailbox shall be offset between 8 and 12 inches behind the edge of pavement.

156.54 D.M.M. Location

Rural boxes must be placed so that they may be safely and conveniently served by carriers without leaving their conveyances.

In all new housing tracks, we instruct the builders to install curbside delivery boxes at 2 to a post, at the property line on the curb.

155.262 Hardship cases

a) Changes in the type of delivery authorized for an area will be considered where service by existing methods would impose an extreme physical hardship on an individual customer. Any request for a change in delivery methods must be submitted in writing. Approval of these requests should be based upon humanitarian and not economic criteria. Each request for a change in delivery service should be evaluated on the basis of the customer's needs; a request should not be denied solely because of increased operational costs or because a family member or other party may be available to receive mail for the customer.



## MAILBOX IMPROVEMENT WEEK—Continued

Exhibit C

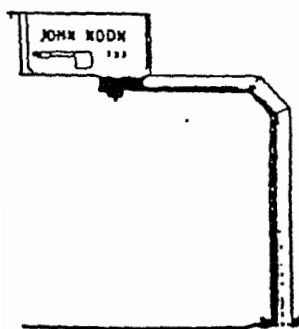
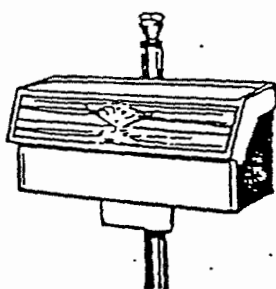


Exhibit D

**Contract Delivery Routes**

Contract delivery route customers must use an approved traditional rural-type or contemporary design box as new or replacement boxes.

**General Requirements**

The placement of mailboxes on both rural and contract routes must be safe and convenient for carriers. The boxes must be on the right-hand side of the road in the carrier's travel direction so they can deliver mail without leaving their conveyance. This rule especially applies where traffic conditions make it dangerous for the carrier to drive to the left in order to reach the boxes, or when doing so would constitute a violation of traffic laws and regulations (apartment house or other multiple dwellings can be exempted from this rule as described in DMM 156.312).

On new rural routes, all boxes must be on the right-hand side of the road in the direction of the route line of travel. Box placement must conform with state laws and highway regulations. Rural carriers are subject to the same traffic laws and regulations as other motorists. Customers must remove obstructions, including vehicles, trash cans, and snow, that impede efficient delivery. Except when a box is temporarily blocked, carriers must have access to the box without leaving the vehicle unless authorized to dismount.

**Mailbox Supports**

Supports for mailboxes should be of adequate strength and size to support the box properly. However, customers should avoid using massive mailbox supports that, when struck, could damage vehicles and cause serious injury to vehicle occupants. Heavy metal posts, concrete posts, and miscellaneous items of farm equipment, such as milk cans filled with concrete, are examples of potentially dangerous supports. The ideal support is an assembly that bends or falls away from a striking vehicle. DMM sections 156.531, 156.54, 157.32c, and 157.4 specify postal regulations regarding construction and placement of mailboxes and supports on rural and highway contract routes.

The Federal Highway Administration (FHWA) has determined that mailbox supports no larger than 4 inches by 4 inches or a 4 1/2-inch diameter wood post or a 2-inch diameter standard steel or aluminum pipe, buried no more than 24 inches, should safely break away if struck by a vehicle. The mailbox must also be securely attached to its post to prevent separation when struck. Exhibits E and F on page 12 are detailed examples of mailbox mountings and supports suggested by the FHWA. Boxes and supports should also be painted and free from rust.

**NDCBUs and All-Weather Parcel Lockers**

During Mailbox Improvement Week, postmasters/managers or their designees should also review Neighborhood Delivery and Collection Box Units (NDCBUs) and All-Weather Parcel Lockers in their delivery area to identify any hazards or irregularities. Exhibit G on page 13 is a suggested format for use in conducting the review. Results of the review should be recorded.

Employees conducting the review must complete Form 1624, *Delivery and Collection Equipment Work Request*, for any equipment that poses a safety hazard to postal customers or employees. Use Form 7380, *MDC Supply Requisition*, to request Form 1624 from the materiel distribution centers.

**Equipment Review Procedure**

Employees should use the NDCBU and parcel locker Equipment Checklist and Followup Review Procedure, Exhibit G, when examining the condition of NDCBU and parcel locker equipment. This exhibit may be reproduced locally. They should:

1. List the unit location, type, and manufacturer in the left-hand column (omit manufacturer if all items are in order).

2. Assign each checklist item one of the following ratings:

OK—Equipment does not need attention for this item.

X—Equipment needs attention for this item.

NA—Item does not apply to this particular piece of equipment.

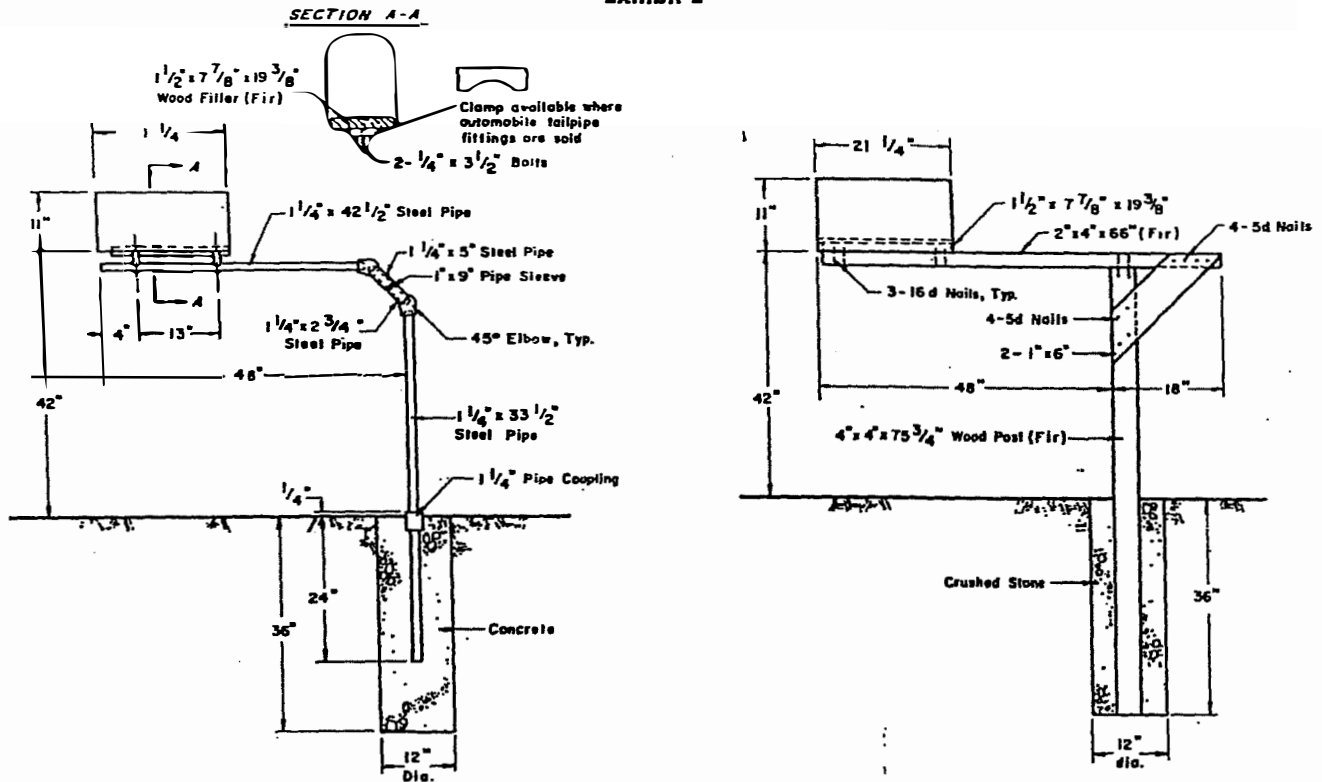
3. Examine the following items and annotate Exhibit G:

a. Equipment should be straight, vertical, and firmly mounted. Attempt to shake the unit; it should not move. If equipment is not firmly mounted, note whether it is the connection at ground level that is loose or the pedestal to customer compartments connection that needs attention.

b. Check visible welds. Make note of cracked, broken, or rusted welds.

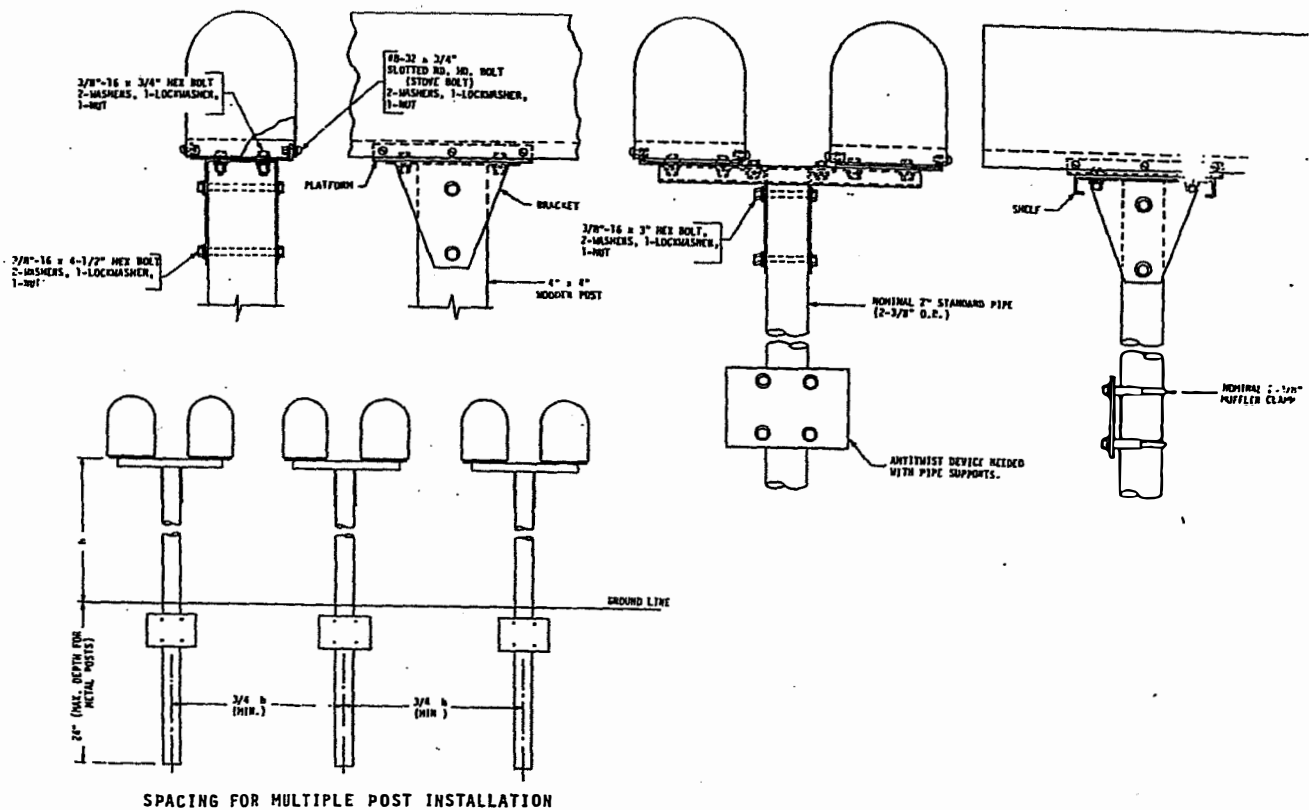
c. Observe whether the carrier access door is locked and secure. Open it and observe that it is not bowed or warped and that the door and locking bar operate smoothly. With carrier access door(s) open, notice if restraining devices prevent the door

Exhibit E

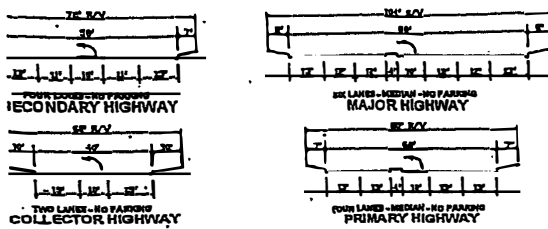


CANTILEVER MAILBOX SUPPORTS

Exhibit F



SINGLE AND DOUBLE MAILBOX INSTALLATIONS

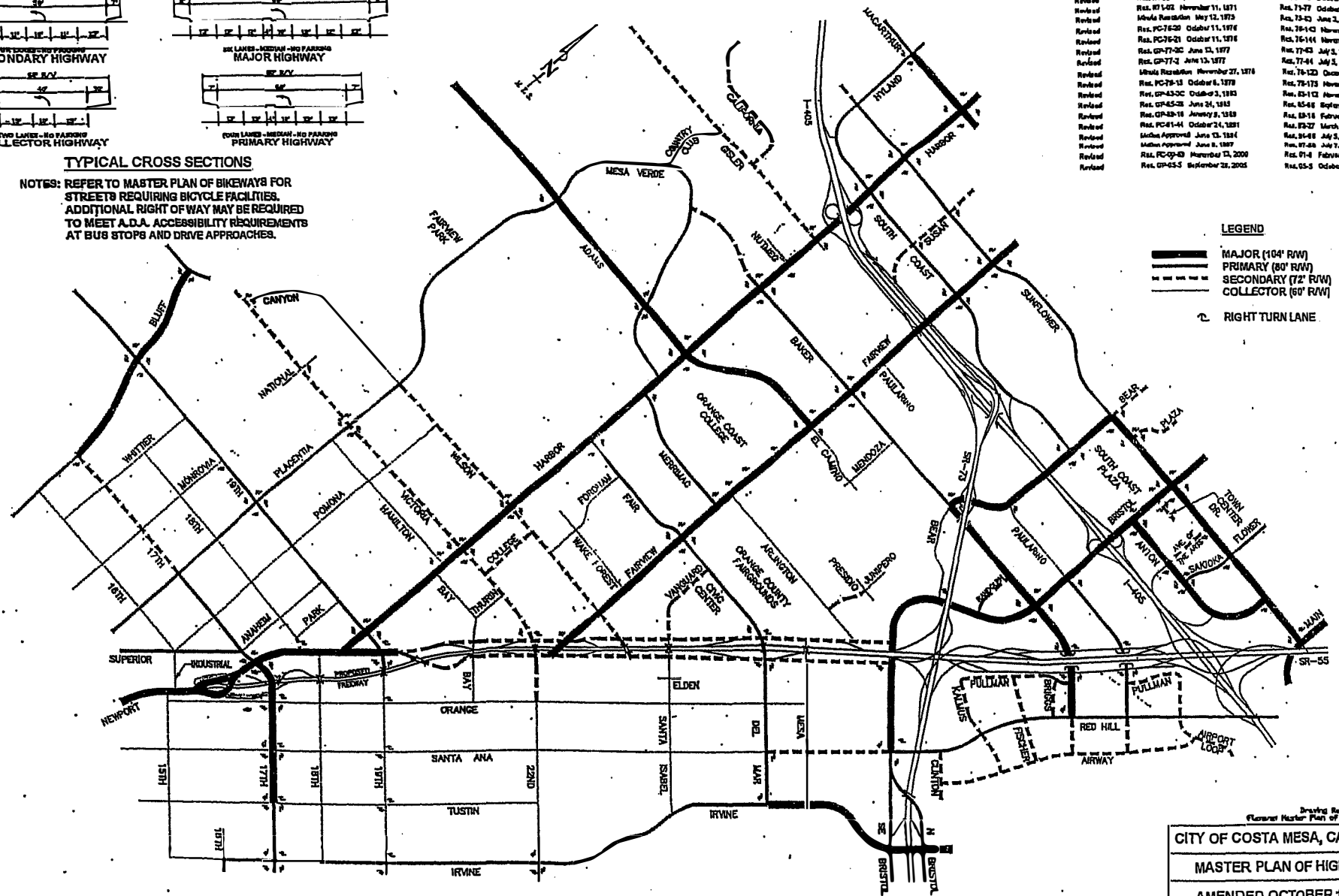


### TYPICAL CROSS SECTIONS

NOTES: REFER TO MASTER PLAN OF BIKEWAYS FOR STREETS REQUIRING BIKEWAY FACILITIES. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED TO MEET A.D.A. ACCESSIBILITY REQUIREMENTS AT BUS STOPS AND DRIVE APPROACHES.

ACTION	PLANNING COMMISSION	COUNCIL
Adopted	Res. 62-113 November 22, 1993	Res. 62-113 December 2, 1993
Revised	Res. 58 August 10, 1991	Res. 64-91 September 10, 1994
Revised	Res. 64-68 September 22, 1998	Res. 66-78 October 21, 1998
Revised	Res. 67-1-02 November 11, 1971	Res. 71-77 October 18, 1971
Revised	Whole Resolution May 12, 1973	Res. 73-42 June 3, 1973
Revised	Res. 68-50 October 11, 1976	Res. 76-143 November 15, 1976
Revised	Res. 69-26-21 October 11, 1976	Res. 76-144 November 15, 1976
Revised	Res. 69-75-02 June 13, 1977	Res. 77-43 July 5, 1977
Revised	Res. 69-77-3 April 13, 1977	Res. 77-44 July 5, 1977
Revised	Whole Resolution November 27, 1978	Res. 78-123 December 16, 1978
Revised	Res. 69-76-15 October 6, 1978	Res. 78-173 November 18, 1978
Revised	Res. 69-43-02 October 2, 1983	Res. 82-113 November 21, 1983
Revised	Res. 69-45-28 June 24, 1983	Res. 85-48 September 16, 1985
Revised	Res. 69-48-18 January 8, 1988	Res. 89-18 February 6, 1989
Revised	Res. 69-41-44 October 24, 1991	Res. 92-27 March 16, 1992
Revised	Whole Resolution June 13, 1994	Res. 96-48 July 5, 1994
Revised	Whole Resolution June 8, 1997	Res. 97-48 July 7, 1997
Revised	Res. 69-49 November 13, 2000	Res. 97-4 February 5, 2001
Revised	Res. 69-65-5 September 28, 2005	Res. 05-5 October 16, 2005

- LEGEND**
- MAJOR (104' R/W)
  - PRIMARY (80' R/W)
  - SECONDARY (72' R/W)
  - COLLECTOR (60' R/W)
  - RIGHT TURN LANE

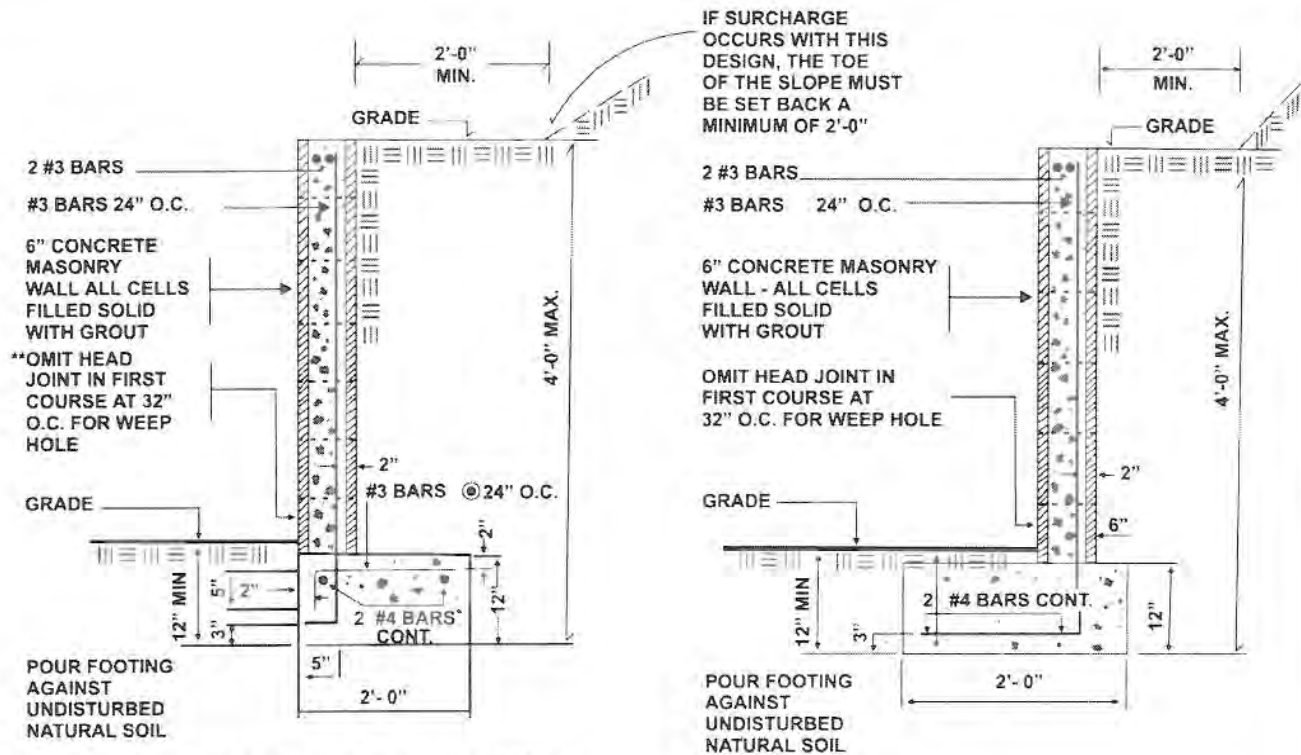


City of Costa Mesa, California  
Master Plan of Highways  
AMENDED OCTOBER 18, 2005  
GENERAL PLAN AMENDMENT 05-5



# City of Costa Mesa Building Division

## RETAINING WALLS



\*\*SUBJECT TO ADJACENT PROPERTY OWNER'S APPROVAL

### NOTES:

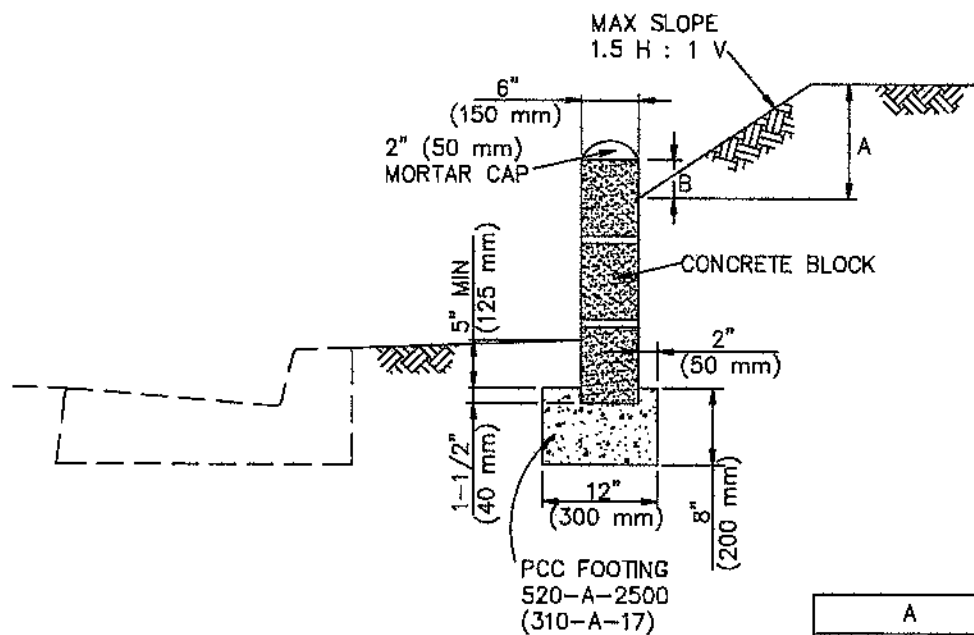
1. Retaining wall shall be grouted solid.
2. Reinforcing splices in masonry shall be lapped not less than 15", in concrete not less than 12".
3. Omit mortar at head joints of first course at 32" o.c.
4. Mortar shall be no leaner than 3 to 1.
5. Inspection required prior to grouting cells.
6. Retaining walls greater than 4'-0" in height or with surcharge loads other than shown above shall be fully engineered by a licensed engineer.
7. Retaining walls with standard concrete block walls or fences of any materials constructed above, shall be fully engineered by a licensed engineer.
8. A survey of the lot may be required by the building official to verify that the structure is located in accordance with the approved plans (2001 CBC, Section 108.1).

### SPECIFICATIONS:

CONCRETE: 2500 psi at 28 days.

BLOCK: Grade N, Type 1 A.S.T.M. C-90.

REINFORCING: Grade 40 A.S.T.M. A615.



A	B
0 TO 6" (0 TO 150 mm)	2" (50 mm)
6" TO 16" (151 TO 400 mm)	4" (100 mm)
17" TO 48" (410 TO 1200 mm)	6" (150 mm)

#### NOTES

1. MAX HEIGHT OF WALL IS 3 COURSES OF 8" (200 mm) HIGH BLOCK.
2. NO LIVE-LOAD SURCHARGE SHALL BE ALLOWED ON RETAINED SOIL.
3. POUR FOOTING AGAINST UNDISTURBED EARTH.
4. TOP OF FOOTING MAY BE PLACED AT SAME GRADE AS STREET IF STREET GRADE IS UNIFORM AND 5% MAX.
5. PLACE CONCRETE BLOCKS IMMEDIATELY AFTER POURING THE FOOTING. FILL ALL CELLS SOLID WITH GROUT AND ROD SO THAT GROUT IS MONOLITHIC WITH FOOTING.
6. IN FIRST COURSE ABOVE FINISHED GRADE, OMIT MORTAR FROM VERTICAL JOINTS EACH 32" (800 mm) TO SERVE AS WEEP HOLES.

#### STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

PROMULGATED BY THE  
PUBLIC WORKS STANDARDS INC.  
GREENBOOK COMMITTEE  
1993  
REV. 1998, 2005, 2009, 2010

### CONCRETE BLOCK SLOUGH WALL

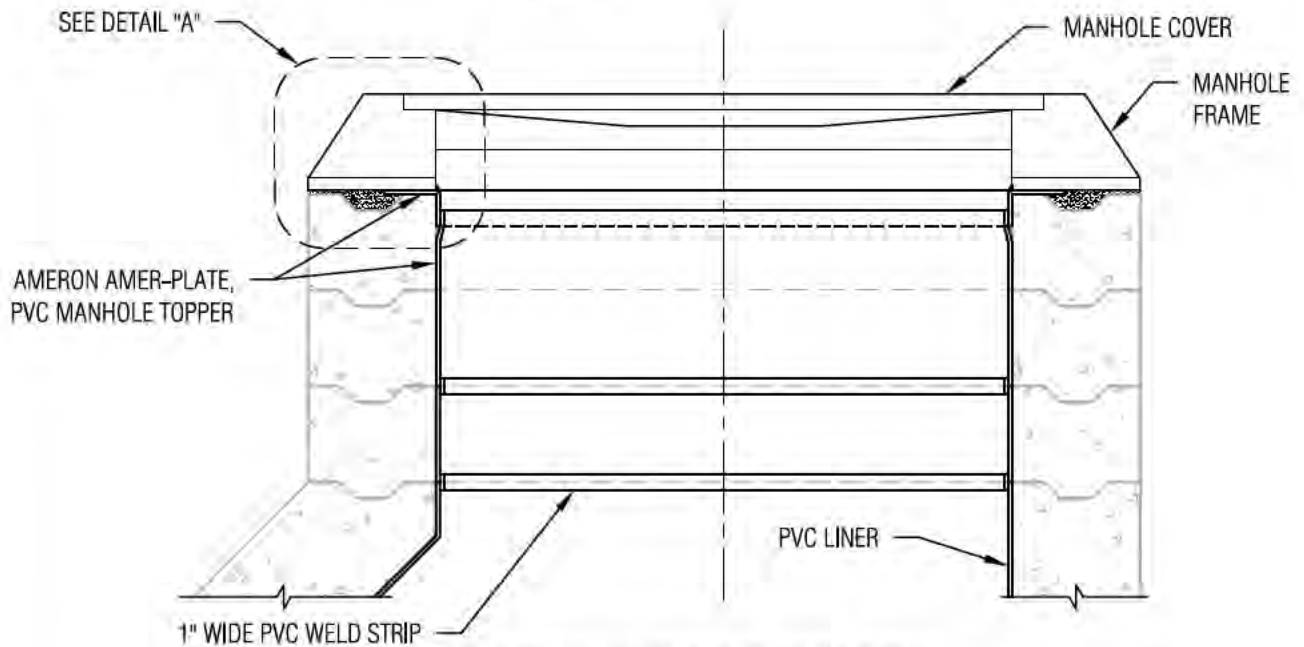
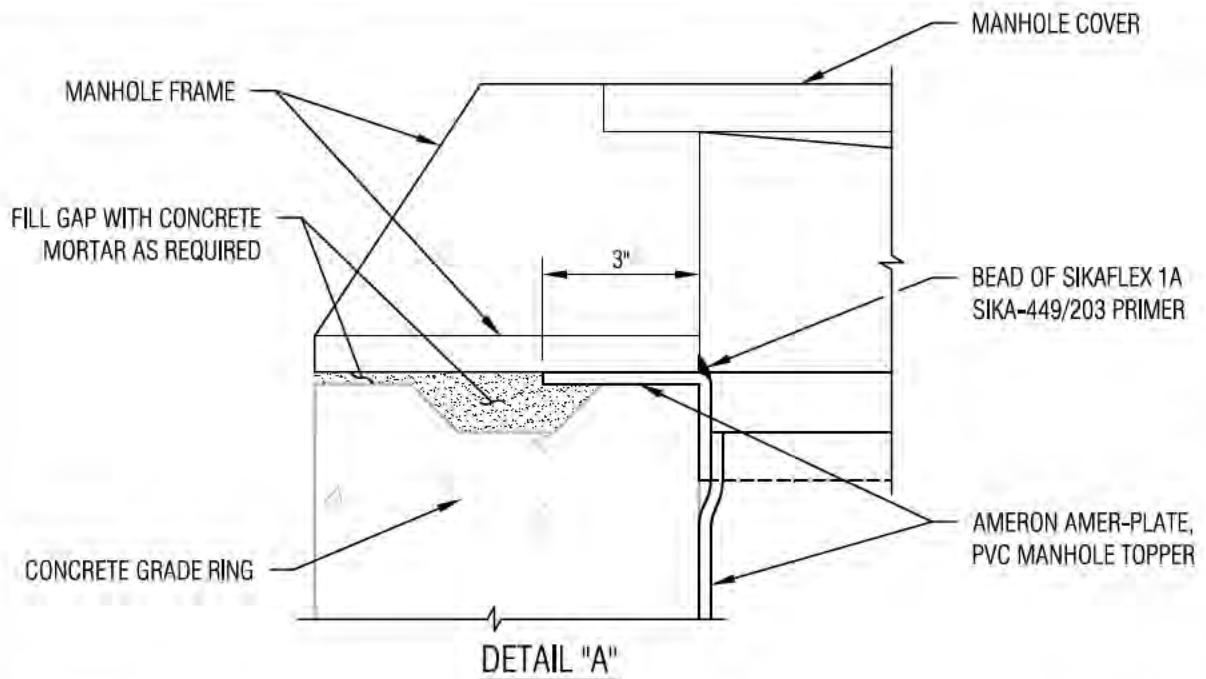
USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLAN

**622-4**

SHEET 1 OF 1







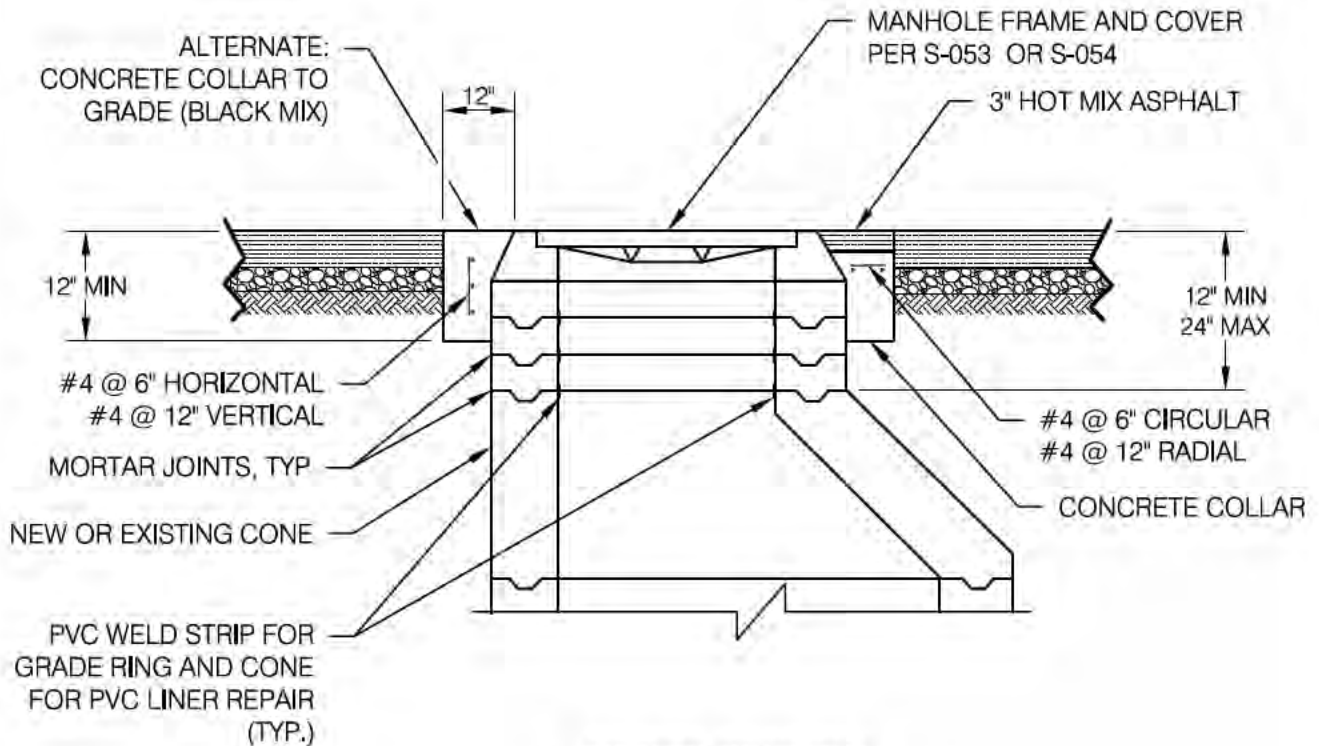
NEW MANHOLE PVC LINER DETAIL

**NOTES:**

1. MAKE FINAL ADJUSTMENTS AT THE MORTAR JOINT BETWEEN THE FIRST AND SECOND GRADE RINGS. SET FLUSH WITH PAVEMENT TO ONE-EIGHTH INCH HIGH.
2. ADD OR REMOVE GRADE RINGS, REPAIR PVC OR SPRAYED ON LINER, AND TEST LINER FOR PINHOLES AND "PROBE TEST" FOR WEAK WELDS AS APPROVED BY THE ENGINEER. ADJUST HEIGHT AT MANHOLE RISER SECTIONS IF THE TOTAL HEIGHT OF GRADE RINGS WOULD EXCEED 24 INCHES.
3. BACKFILL FLUSH WITH SURFACE OR BELOW PAVEMENT SURFACE AS REQUIRED GOVERNING AGENCY WITH 3250 PSI (CLASS B) QUICK SETTING CONCRETE FOR COLLAR. EXPOSED CONCRETE SHALL BE BLACK IN COLOR.
4. FILL AREA ABOVE BELOW-GRADE COLLAR WITH AC WEARING SURFACE TO MATCH ADJACENT AC.
5. WHERE ODOR CONDITIONS EXIST OR WHERE DESIGNATED, SEAL MANHOLE RIM AND HOLES WITH DUCT-SEAL MASTIC. RE-SEAL IF EXISTING MANHOLE COVER WAS SEALED.

DWG: J:\CAD Standards\WIP\WP\_Engineering Standard Drawings\REVISED\S-050A - PVC LINER INSTALLATION EXISTING MANHOLE ADJUST TO GRADE.dwg  
DATE: May 15, 2019 8:42am

			ORANGE COUNTY SANITATION DISTRICT ORANGE COUNTY, CALIFORNIA	PVC LINER INSTALLATION EXISTING MANHOLE ADJUST TO GRADE	NO SCALE
			APPROVED BY 		STANDARD DWG.
1	EDAC	02/22/2017	 5/20/19		S-050A
NO.	APPROVED	DATE	DIRECTOR OF ENGINEERING DATE		



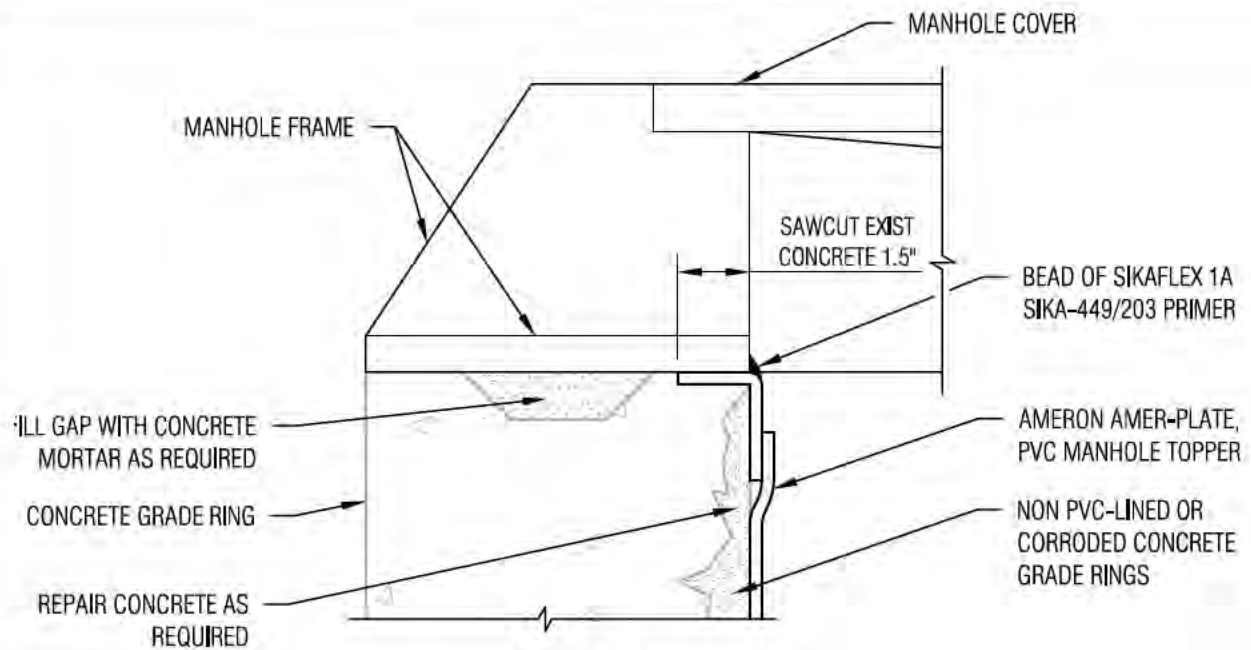
### CROSS SECTION

### NOTES:

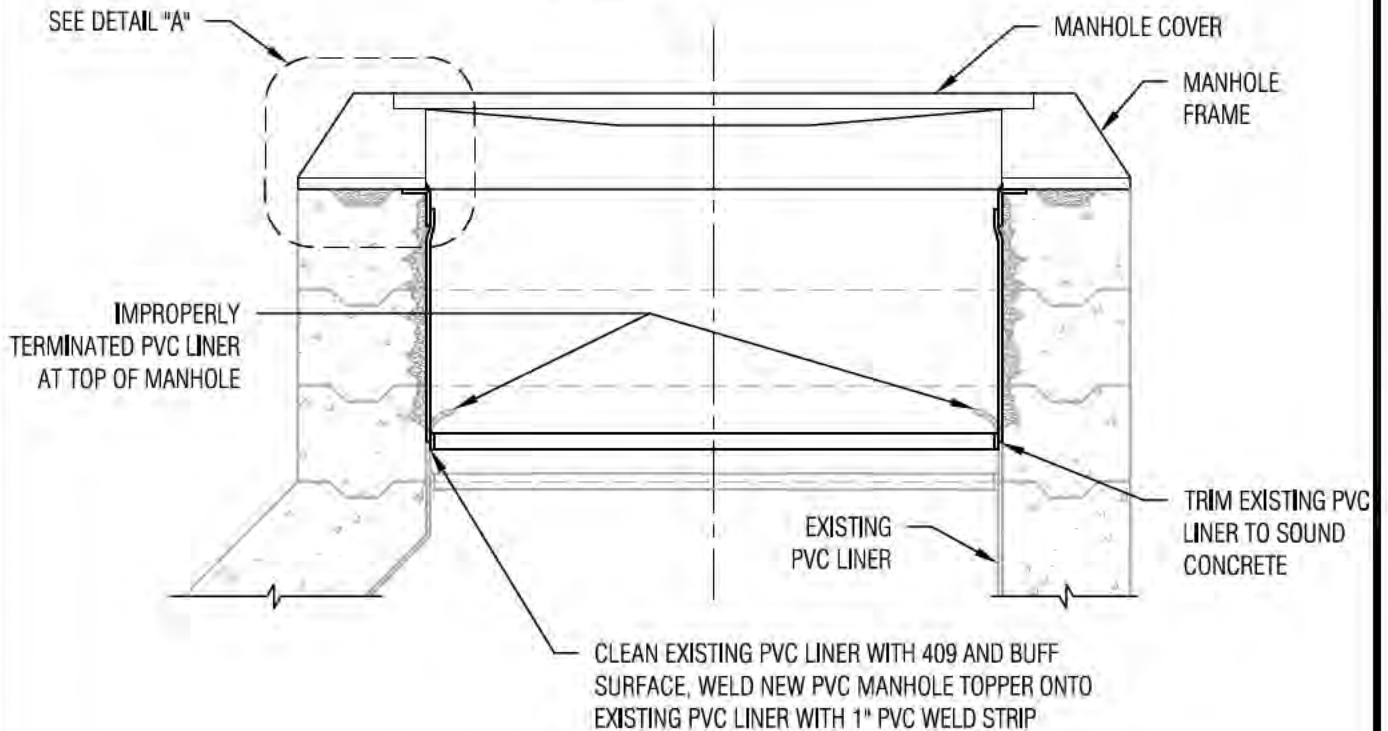
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			APPROVED BY			STANDARD DWG.
1	EDAC	02/22/2017	 5/20/18			S-055
NO.	APPROVED	DATE	DIRECTOR OF ENGINEERING DATE			





**DETAIL "A"**



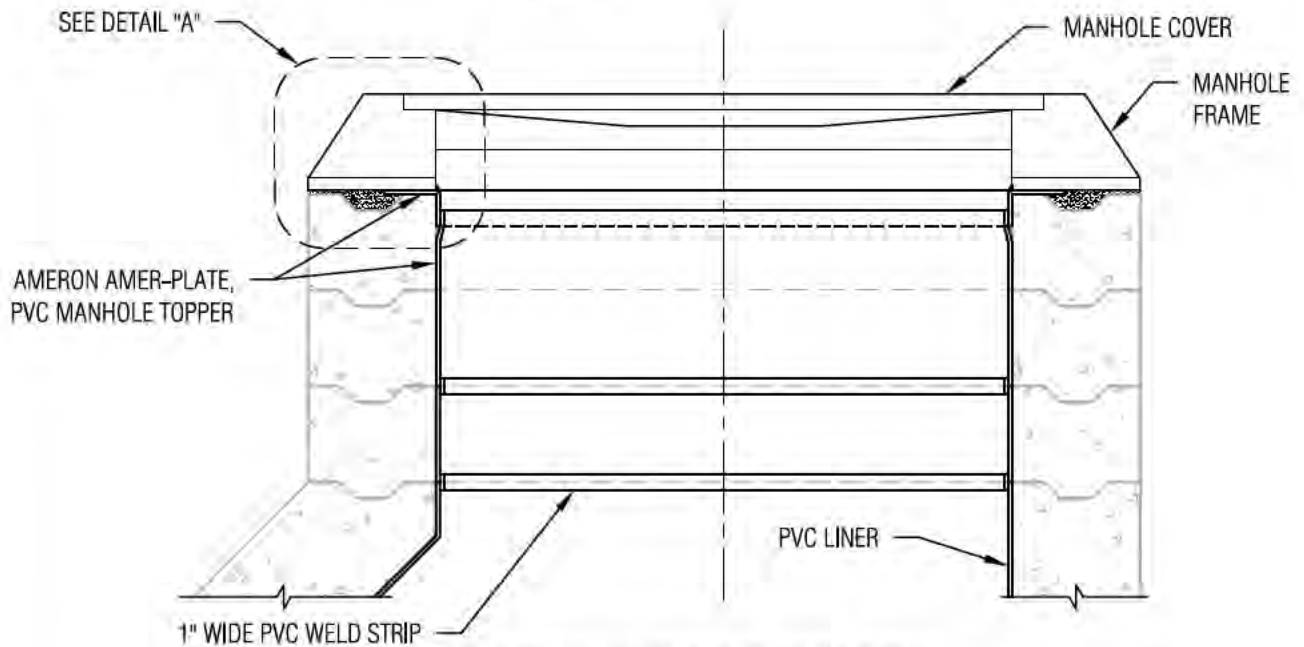
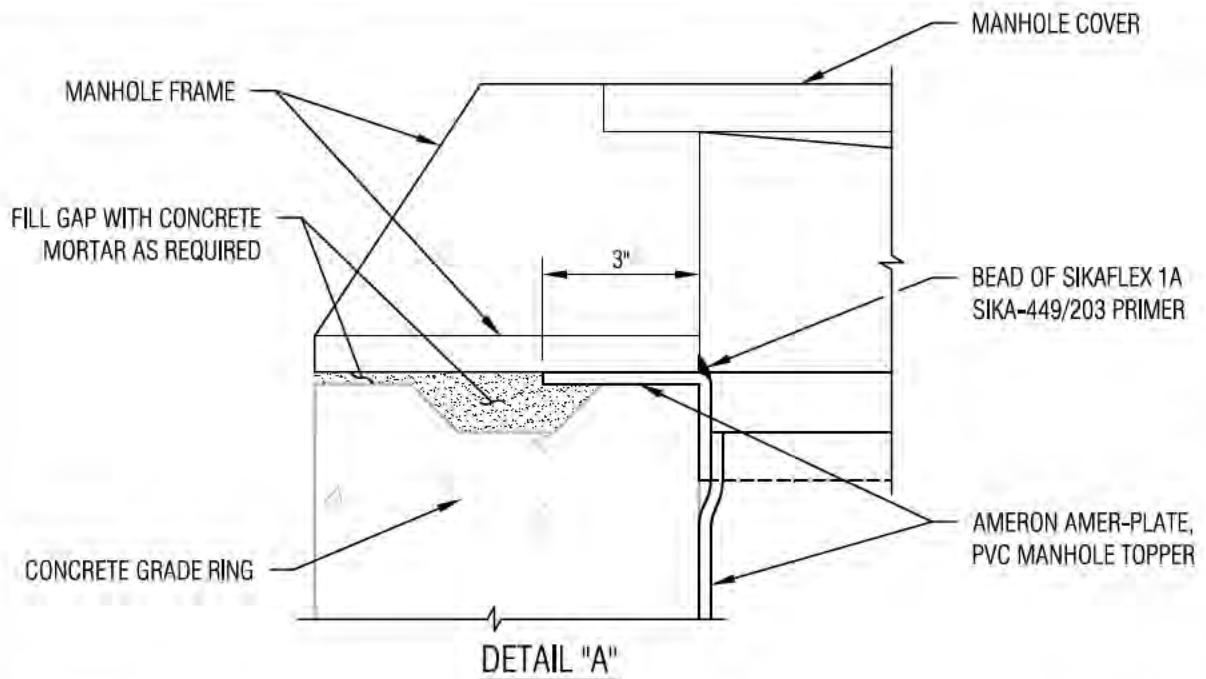
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NO.	APPROVED	DATE	DIRECTOR OF ENGINEERING		






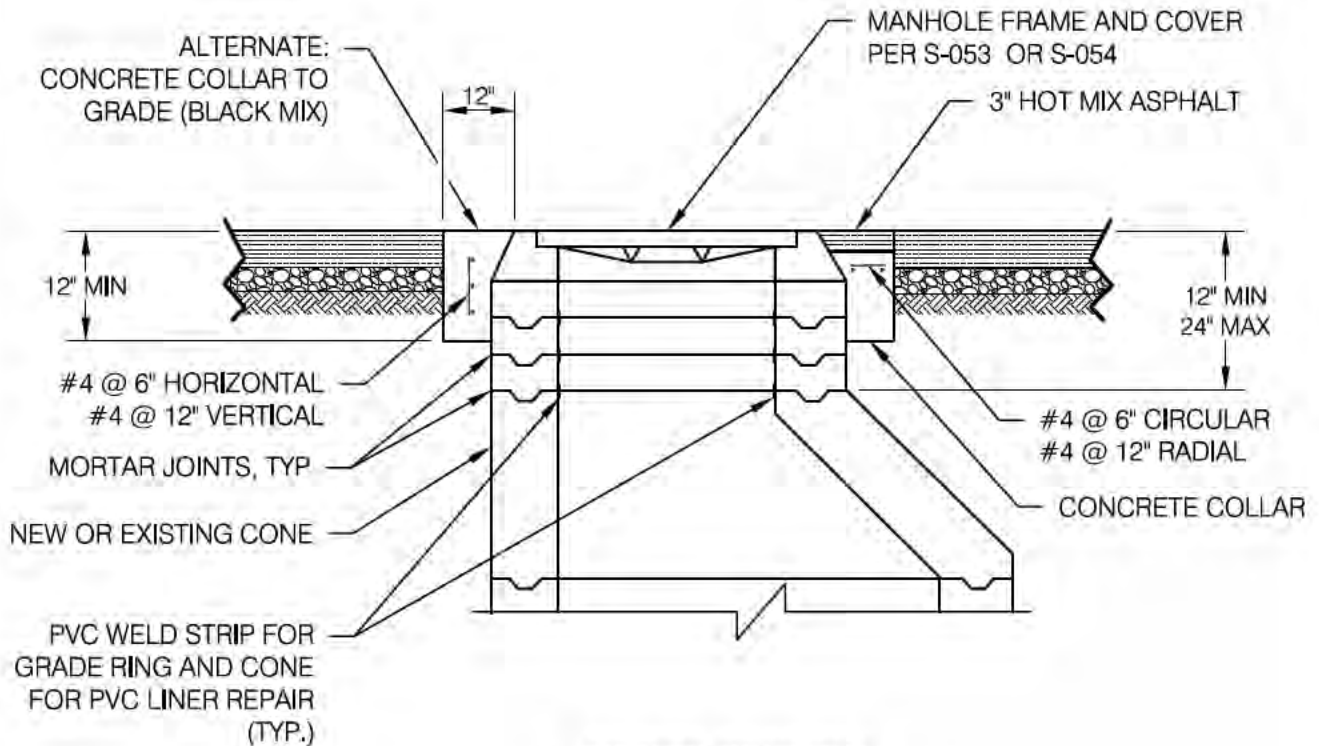
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DATE: May 15, 2019 8:42am

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					STANDARD DWG.
1	EDAC	02/22/2017			DATE
NO.	APPROVED	DATE			S-050A



### CROSS SECTION

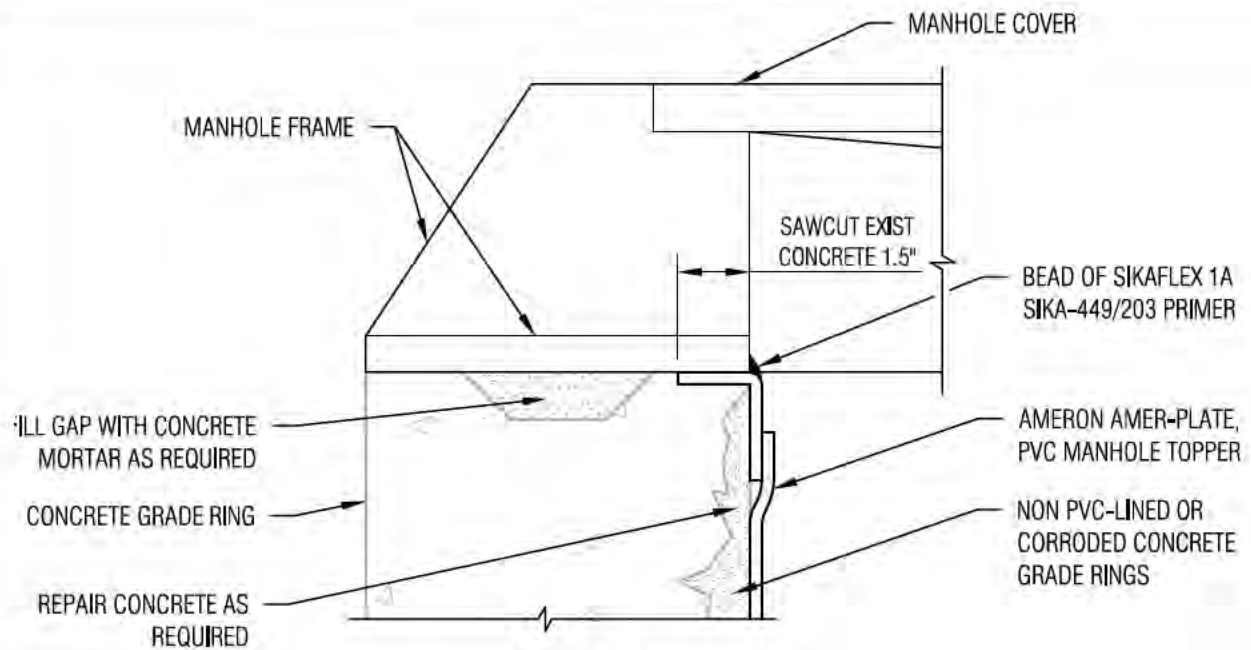
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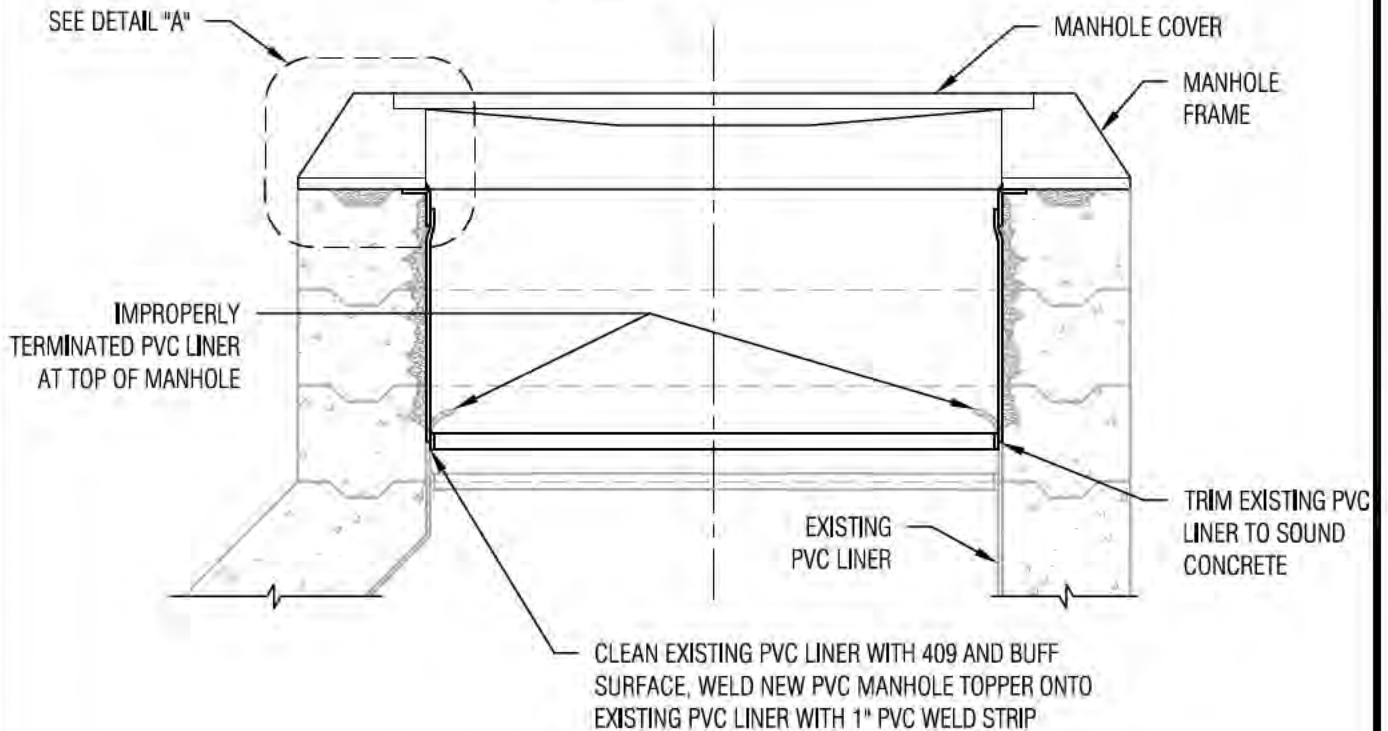
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1	EDAC	02/22/2017	DATE 5/20/18			S-055
NO.	APPROVED	DATE	DIRECTOR OF ENGINEERING			





**DETAIL "A"**



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**City of Costa Mesa  
Maintenance Services Division  
Standard Irrigation Hardware**

**Mainlines:**

Up to 2" – Schedule 40 PVC Pipe (same for non-potable sites)  
2 ½ "and Above – Class 315 PVC Pipe (same for non-potable sites)

**Lateral Lines:**

Up to 2" – Schedule 40 PVC Pipe (same for non-potable sites)  
2 ½ "and Above – Class 315 PVC Pipe (same for non-potable sites)

**Irrigation Controller Specifications:**

SiteOne (714-285-9092) – Rain Master Eagle Plus Irrigation Controllers. **Verify specifications with District Sales Manager, prior to purchasing). All enclosures to be top entry.** Inspection and certification are required after installation. Please contact John Ross – District Sales Manager. The contractor is to install two (2) additional station wires and two (2) additional common wires.

**Backflow Prevention Devices:**

Febco 825Yor 825YA (size dependent upon the needs of the project)

**Backflow Enclosure:**

All Spec – Hinged (size and type dependent upon the needs of the project)

**Ball Valves:**

Nibco – T-580 (bronze – size dependent upon site location)

**Gate Valves:**

Nibco – T113IRR– K – 200 PSI CWP (Bronze Cross – size dependent upon site location)

**Electric Remote Control Valves:**

Rain Bird EFB-CP (size dependent upon site location)

**Quick Coupler Valves:**

Rain Bird 33-DLRC & 44-LRC (size dependent upon the site location) - Potable  
Rain Bird 33-DNP & 44-NP (size dependent upon the site location) – Non Potable

**City of Costa Mesa  
Maintenance Services Division  
Standard Irrigation Hardware**

**Pop Up Spray Heads:**

Rain Bird 1800 SAM-PRS – Bottom Inlet Only (sizes dependent upon the site location) with 1800 PCS compensating screens

Spray Heads are to be specified reclaimed for non-potable projects.

**Pop Up Spray Nozzles:**

MPR nozzles, U-nozzles, VAN nozzles, HE-VAN nozzles, Rotary nozzles, and R-VAN nozzles are acceptable nozzles dependent upon the configuration of the irrigation spray heads.

**Stream Bubblers:**

Rain Bird – Body Assembly – Bottom Inlet Only. 1800 Series (sizes dependent upon the site location).

Rain Bird – PA-80 (plastic adapter) for potable or PA-8S-NP (plastic adapter) for non-potable.

Rain Bird – 1400 Series – Pressure Compensating Full-Circle Bubblers.

Rain Bird – 1800 PCS – Pressure Compensating Screens

Rain Bird – XPCN Series Nozzles (Low Volume Spray Nozzles)

**Drip Irrigation Systems:**

All drip irrigation and components to be Rain Bird Products. All drip shall be sub-surface; and include a Drip System Operation Indicator with appropriate color cap for each station.

**Rotors:**

Hunter PGP Ultra (sizes and nozzles dependent upon the site location)

Hunter I-20 Series (sizes and nozzles dependent upon the site location)

Hunter I-25 Series (sizes and nozzles dependent upon the site location)

Hunter I-40 Series (sizes and nozzles dependent upon the site location)

Hunter I-90 Series (sizes and nozzles dependent upon the site location)

Rain Bird 3500 Series (sizes and nozzles dependent upon the site location)

Rain Bird 5000 Series (sizes and nozzles dependent upon the site location)

Rain Bird 6504 Series (sizes and nozzles dependent upon the site location)

Rain Bird 8005 Series (sizes and nozzles dependent upon the site location)

Rotors are to be specified reclaimed in non-potable projects.

**City of Costa Mesa  
Maintenance Services Division  
Standard Irrigation Hardware**

**Valve Boxes:**

NDS Pro Potable – with lockable lid (sizes and variations dependent upon the site location)

NDS Pro Non-Potable – with lockable lid (sizes and variations dependent upon the site location)

**Wire Connectors:**

3M – DBR/Y-6

**Master Valves:**

**Netafim 36HM**

- Size dependent upon site location
- ER Digital Register
- Volume in US Gallons
- Flow Rate at GPM
- Output
  - Drip Irrigation Systems – 1 gallon per pulse
  - All Other Irrigation Systems – 10 gallons per pulse
- Control Option – Manual Electric



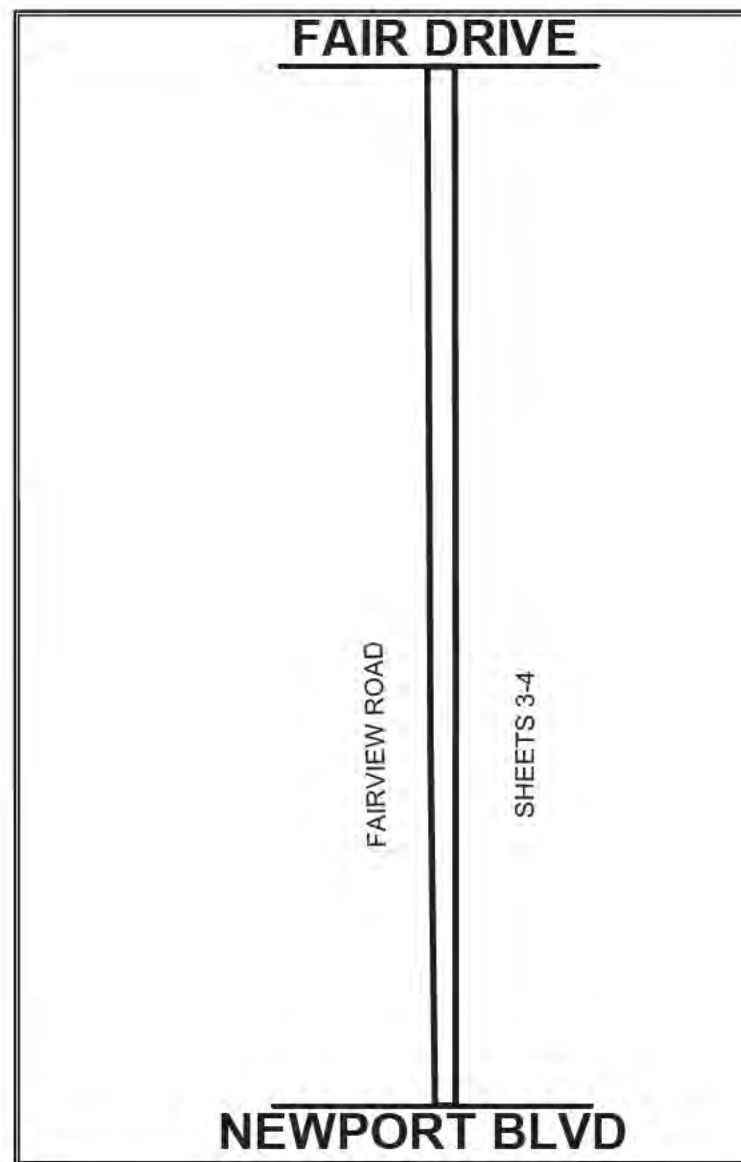
GENERAL NOTES:

- ALL WORK, LABOR AND MATERIALS SHALL BE IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, (2018 EDITION); THE STANDARD SPECIFICATIONS AND STANDARD DRAWINGS OF THE CITY OF COSTA MESA, (LATEST EDITION); THESE PLANS; THE PROJECT SPECIFICATIONS AND ALL SAFETY REGULATIONS, CODES AND REQUIREMENTS PERTINENT TO THE PROJECT CONSTRUCTION.
- ALL WORK WITHIN THE STATE'S RIGHT OF WAY SHALL CONFORM TO THE REQUIREMENTS OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND STANDARD SPECIFICATIONS (2018).
- THE CONTRACTOR SHALL MAINTAIN TRAFFIC IN CONFORMANCE WITH THE PROJECT SPECIFICATIONS AND SHALL PROVIDE 24 HOUR SERVICE TO REMOVE, INSTALL, RELOCATE, AND MAINTAIN WARNING DEVICES.
- LOCATIONS OF EXISTING SURFACES UTILITIES SHOWN ON THE PLANS ARE BASED ON INFORMATION RECEIVED FROM THE VARIOUS UTILITY COMPANIES, LOCAL AGENCIES AND FIELD INVESTIGATION. SOME OF THE DEEP STREET RECONSTRUCTION WORK MAY BE IN CLOSE PROXIMITY OF THE EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR IS ADVISED THAT LOCATIONS SHOW ARE APPROXIMATE AND EXTREME CAUTION IS REQUIRED TO PROTECT THE EXISTING FACILITIES. THE CONTRACTOR SHALL ESTABLISH THE EXACT LOCATION OF ALL UTILITIES WITH THE CONSTRUCTION AREA PRIOR TO WORK.
- THE CONTRACTOR IS ADVISED TO USE EXTREME CAUTION AND PROTECT ALL EXISTING FACILITIES IN PLACE UNLESS OTHERWISE NOTED.
- AT NO TIME IS ANY BUSINESS OR RESIDENCE TO BE WITHOUT ACCESS UNLESS OTHERWISE APPROVED.
- THE CONTRACTOR IS REQUIRED TO REMOVE ALL THERMOPLASTIC CROSSWALK AND PAVEMENT LEGENDS PRIOR TO ASPHALT CONCRETE OVERLAY.
- THE CONTRACTOR SHALL DISCONNECT ALL EXISTING TRAFFIC SIGNAL LOOP DETECTORS IN THE PULLBOX PRIOR TO PAVEMENT REMOVAL, MILLING, PLANNING OR HEATER-REMIX.
- THE EXISTING AC PAVEMENT SHALL BE SAW-CUT TO FULL DEPTH TO PROVIDE A NEAT AND STRAIGHT PAVEMENT BREAK. THEN THE JOIN BETWEEN THE EXISTING PAVEMENT AND THE NEW PAVEMENT SHALL BE SEALED. A LAYER OF TACK COAT SHALL BE APPLIED TO ALL VERTICAL-CUT FACES AND BETWEEN SUBSEQUENT HMA LIFTS.
- ALL SIGNAL LOOPS DETECTION REPLACEMENT WITHIN THE CITY OF NEWPORT RIGHT-OF-WAY SHALL CONFORM TO THE STANDARD PLANS AND SPECIFICATIONS. CONTRACTOR IS DIRECTED TO THE PROJECT SPECIFICATIONS APPENDIX C FOR THE AS-BUILT PLANS FOR THE SIGNAL LOOPS AND ELECTRICAL.

NOTE:

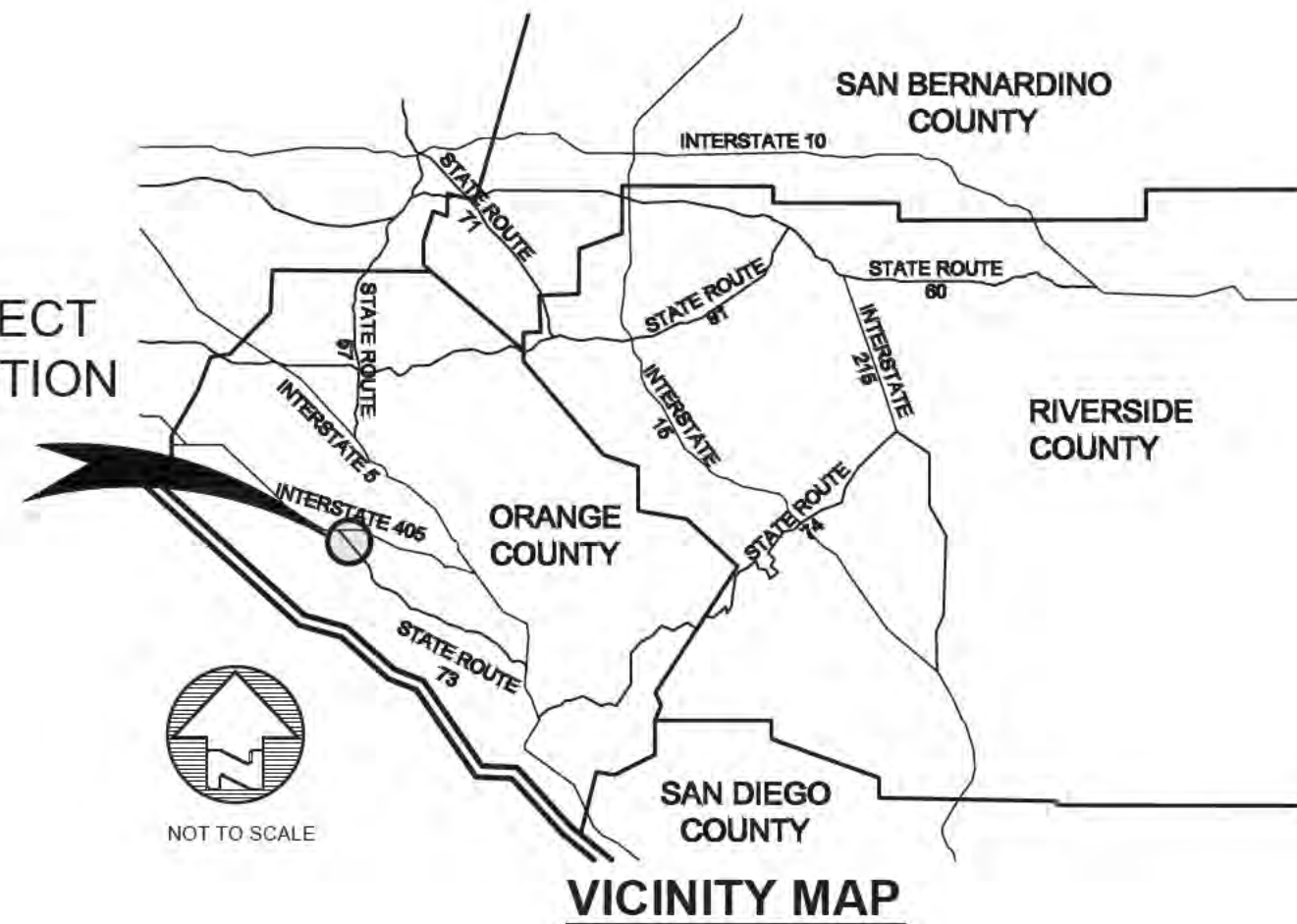
THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITY COMPANIES, THE CITY OF NEWPORT, AND CALTRANS 48 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION.

# CITY OF COSTA MESA ROAD REHABILITATION PROJECT FAIRVIEW ROAD REHABILITATION PROJECT FROM FAIR DRIVE TO NEWPORT BOULEVARD STATE FUNDED PROJECT NO. CRASL-5312(106) CITY PROJECT NO. 25-10



INDEX MAP

PROJECT  
LOCATION



VICINITY MAP

NOTICE TO CONTRACTORS

- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITY PIPES, LINES OR STRUCTURES ARE NOT NOT SHOWN ON THIS PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE EXISTING UNDERGROUND FACILITIES LOCATED AND MARKED AS NECESSARY. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT EXISTING UTILITIES AND ANY OTHER LINES OR STRUCTURES NOT SHOWN ON THESE PLANS.
- ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT ALL EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATION" OF THE U.S. DEPARTMENT OF LABOR, AND WITH THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS' "CONSTRUCTION SAFETY ORDERS."
- THE CIVIL ENGINEER AND INTERWEST CONSULTING GROUP SHALL NOT BE RESPONSIBLE IN ANY WAY FOR THE CONTRACTOR'S AND SUBCONTRACTOR'S COMPLIANCE WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS OF THE U.S. DEPARTMENT OF LABOR OR WITH THE STATE OF CALIFORNIA OF INDUSTRIAL RELATIONS "CONSTRUCTION SAFETY ORDERS."
- THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD INTERWEST CONSULTING GROUP AND THE CIVIL ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF INTERWEST CONSULTING GROUP EMPLOYEES OR CIVIL ENGINEER.

UTILITIES:

AT&T (Right-of-Way) 714-618-9132  
Charter Communications 714-591-4871  
Costa Mesa Sanitary District (CMSD) 949-631-1731  
Mesa Water District 714-549-4242  
Metro Water District of So Cal 626-844-5610 (24-hour)  
Newport-Mesa Unified School District 714-424-5080

OCTA (Detour Coordination) Dispatch 714-265-4330  
Orange County Sanitation District (OCSB) 714-593-3301 (24-hour)  
Orange County Water District (OCWD) 714-378-3240 (24-hour)  
SOE (utility notice request) 800-611-1911 (24-hour)  
So Cal Gas Co. 800-603-7060 (24 hour)  
Spectrum Time Warner Cable 714-719-9629

LEGEND:

CB CATCH BASIN  
GV EXIST. GAS VALVE  
WV EXIST. WATER VALVE  
SMH EXIST. SEWER MANHOLE  
EMH EXIST. ELECTRIC MANHOLE  
SURVEY MONUMENT  
EXIST. TRAFFIC SIGNAL LOOP DETECTORS

ABBREVIATIONS:

AB AGGREGATE BASE  
AC ASPHALT CONCRETE  
CB CATCH BASIN  
C&G CURB AND GUTTER  
CL CENTER LINE  
CONC. CONCRETE  
EP EXIST. OR (E) EXISTING  
F/C FACE OF CURB  
FH FIRE HYDRANT  
F.S. FINISHED SURFACE  
INTX. INTERSECTION  
NTS NOT TO SCALE  
R/W RIGHT OF WAY  
SDWK SIDEWALK  
SMH SEWER MANHOLE  
STA. STATION  
WV WATER VALVE

CONSTRUCTION NOTES

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INDEX OF SHEETS:

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1	TITLE SHEET
2	TYPICAL SECTIONS & DETAILS
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3	S-2.0
4	S-3.0
5	S-4.0
	MEDIAN DEMOLITION DRAWINGS
6	MD-1.0
7	MD-2.0
8	MD-3.0
9	MD-4.0
	MEDIAN IRRIGATION DRAWINGS
10	MI-1.0
11	MI-2.0
12	MI-3.0
13	MI-4.0
	MEDIAN IRRIGATION DETAILS
	MEDIAN PLANTING DRAWINGS
15	MP-1.0
16	MP-2.0
17	MP-3.0
18	MP-4.0
	TRANSPORTATION IMPROVEMENTS PLANS & DETAILS
19	G-1
20	G-2
21	CL-1
22	DC-1
23	DC-2
24	DC-3
25	DC-4
26	TS-1
27	TP-1
28	TP-2
29	TP-3
	TRAFFIC SIGNAL MODIFICATION PLAN
30	TSM-1.0
31	TSM-2.0



MARK BY	DATE	REVISIONS	APPR.	DATE

CITY OF COSTA MESA

ACCEPTED BY:  
*Seung Yang* Date: 3/25/2025  
SEUNG YANG P.E. City Engineer  
RE: Exp Date: 9/30/2026

ACCEPTANCE AS TO CONFORMANCE  
WITH APPLICABLE CITY STANDARDS AND  
PRACTICES

SEAL-ENGINEER:



Interwest Consulting Group  
(714) 899-9039  
1 JENNER SUITE 160  
IRVINE, CA 92618

REVIEWED BY: *Tyrone Chesanek*  
TYRONE CHESANEK

AERIAL IMAGERY FROM  
GOOGLE EARTH PRO ON MARCH  
2023.

RIGHT OF WAY BASED ON  
RECORD INFORMATION

SCALE:  
H: As Noted V: As Noted

CITY OF COSTA MESA  
FAIRVIEW ROAD REHABILITATION  
FAIR DR TO NEWPORT BLVD  
TITLE SHEET

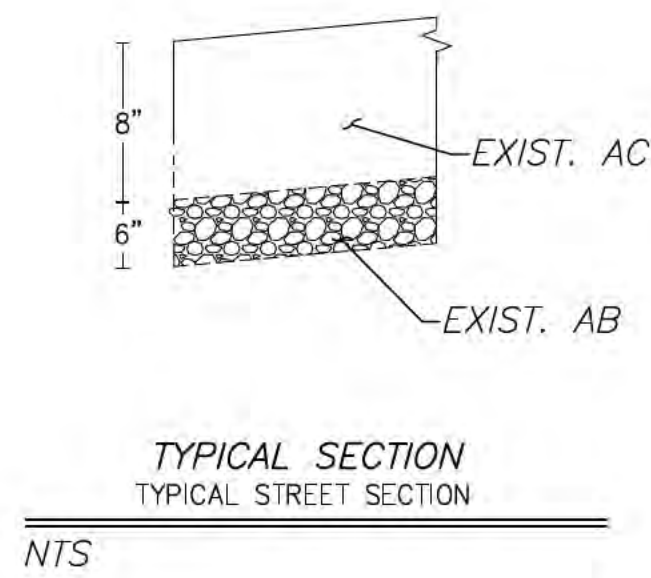
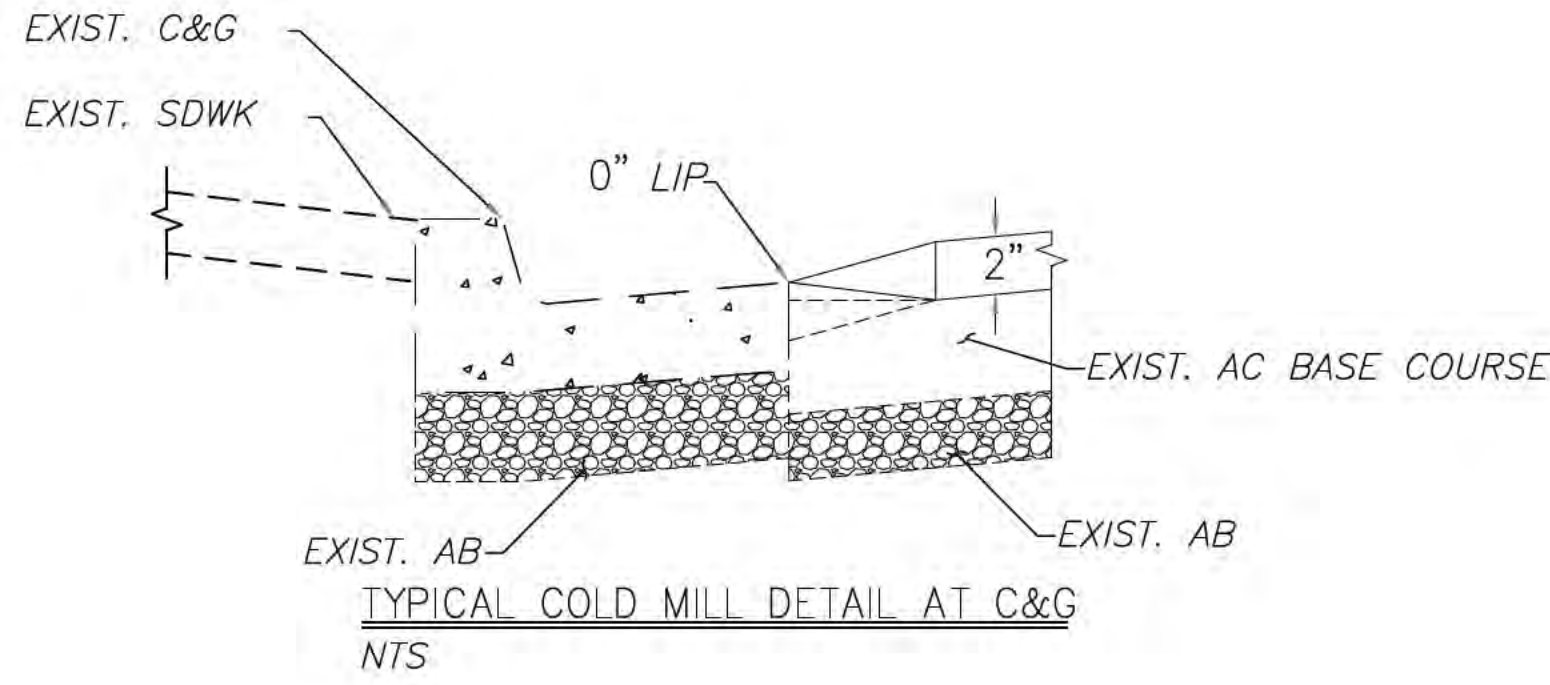
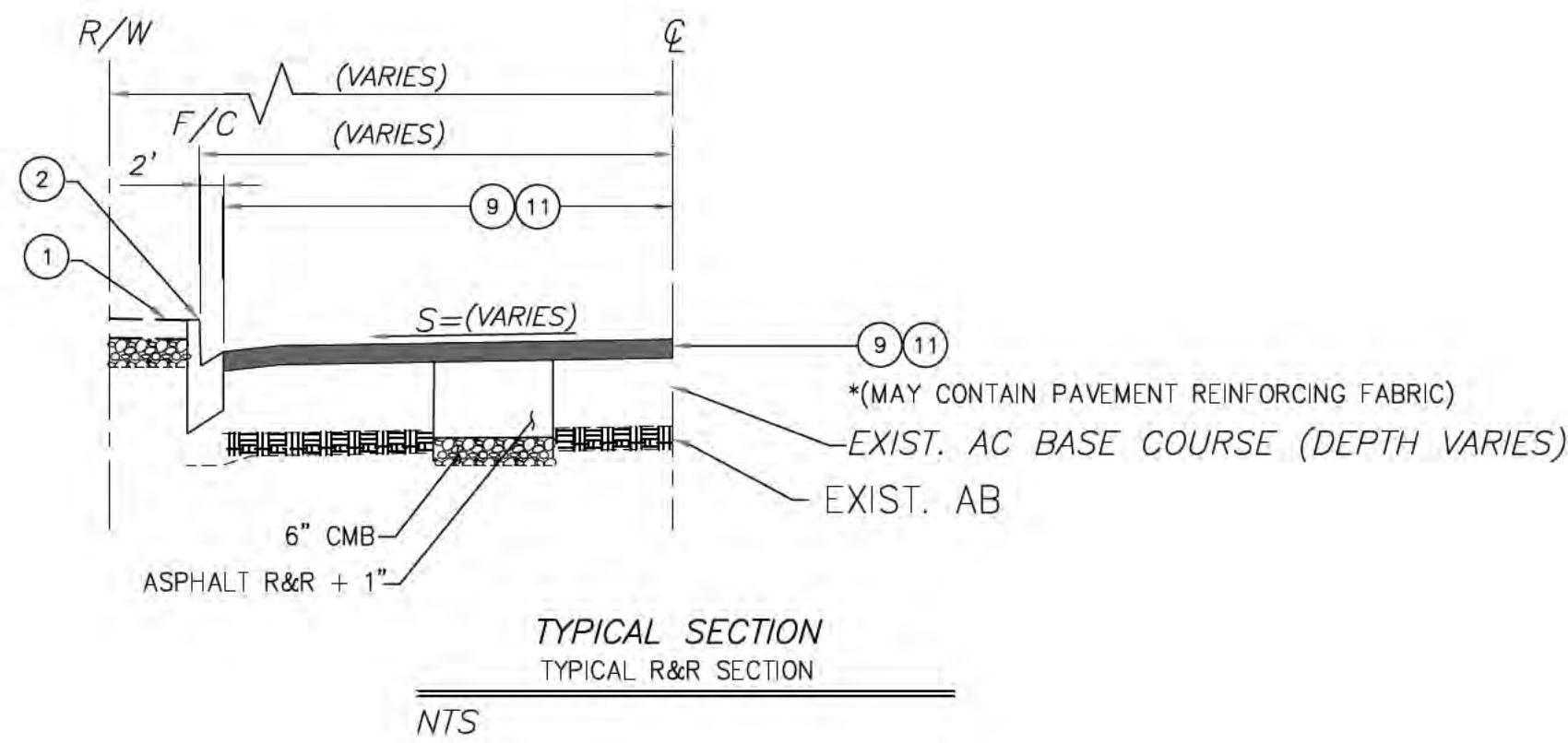
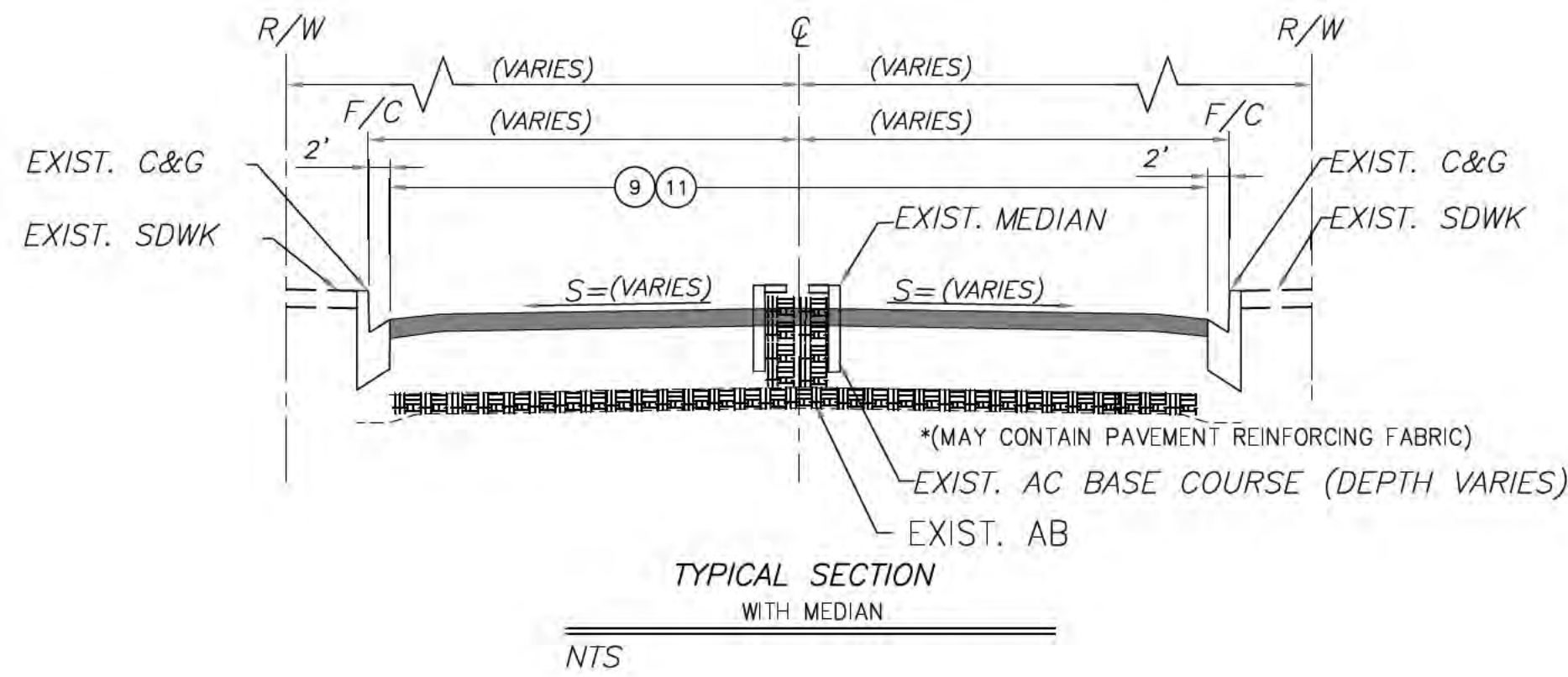
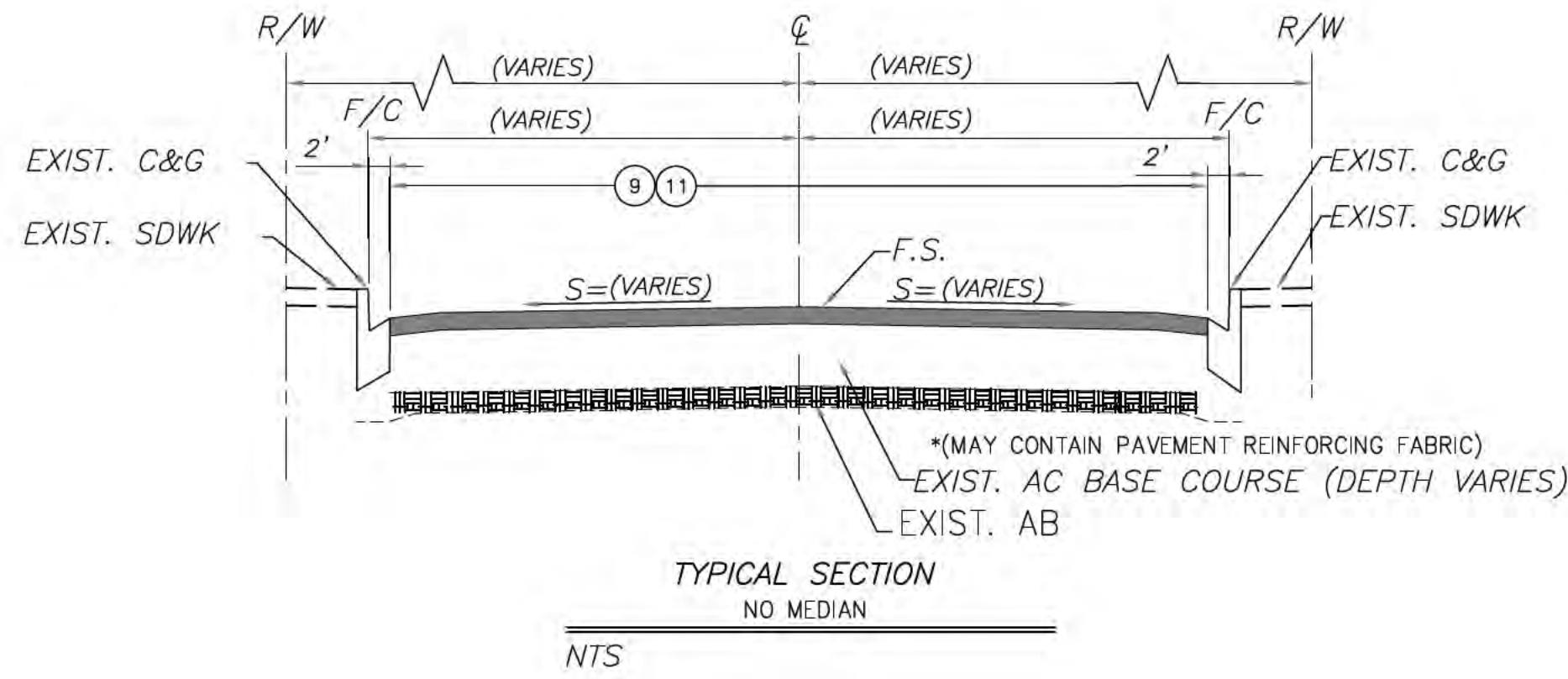
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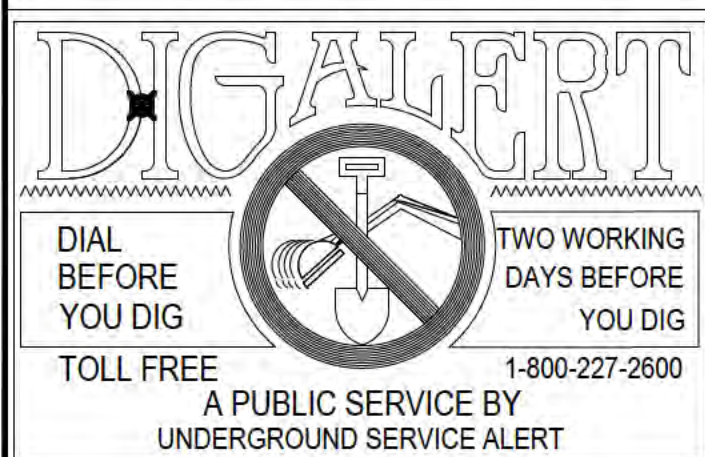
OF 31 SHTS





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MARK	BY	DATE	REVISIONS	APPR.	DATE

CITY OF COSTA MESA  
ACCEPTED BY:  
  
Date:  
SEUNG YANG P.E, City Engineer  
  
ACCEPTANCE AS TO CONFORMANCE  
WITH APPLICABLE CITY STANDARDS AND  
PRACTICES

SEAL-ENGINEER:

Interwest Consulting  
Group  
(714) 899-9039  
1 JENNER SUITE 160  
IRVINE , CA 92618

REVIEWED BY: TYRONE CHESANEK

AERIAL IMAGERY FROM  
GOOGLE EARTH PRO ON MARCH  
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SCALE:  
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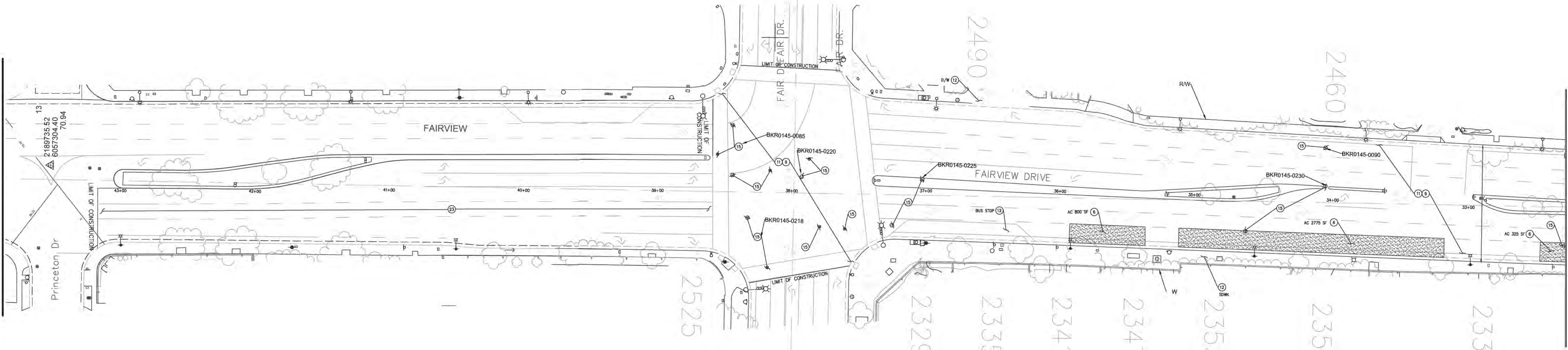
CITY OF COSTA MESA  
FAIRVIEW ROAD REHABILITATION  
FAIR DR TO NEWPORT BLVD  
TYPICAL SECTIONS & DETAILS

SHEET  
S-1.0  
SHT 2  
OF 31 SHTS

Plans Drawn By: Mohammad Alsham  
Plans Dated: 12/10/2024



BEGINNING OF PROJECT



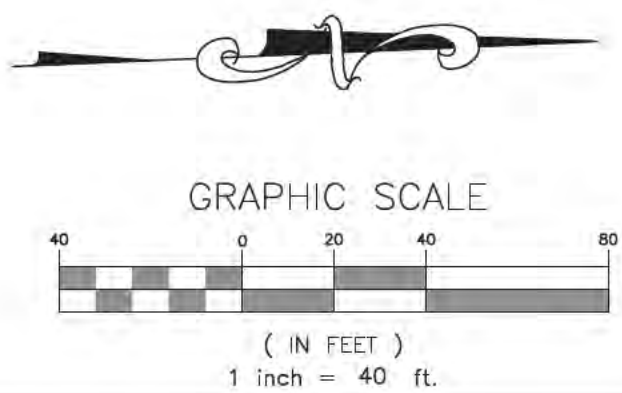
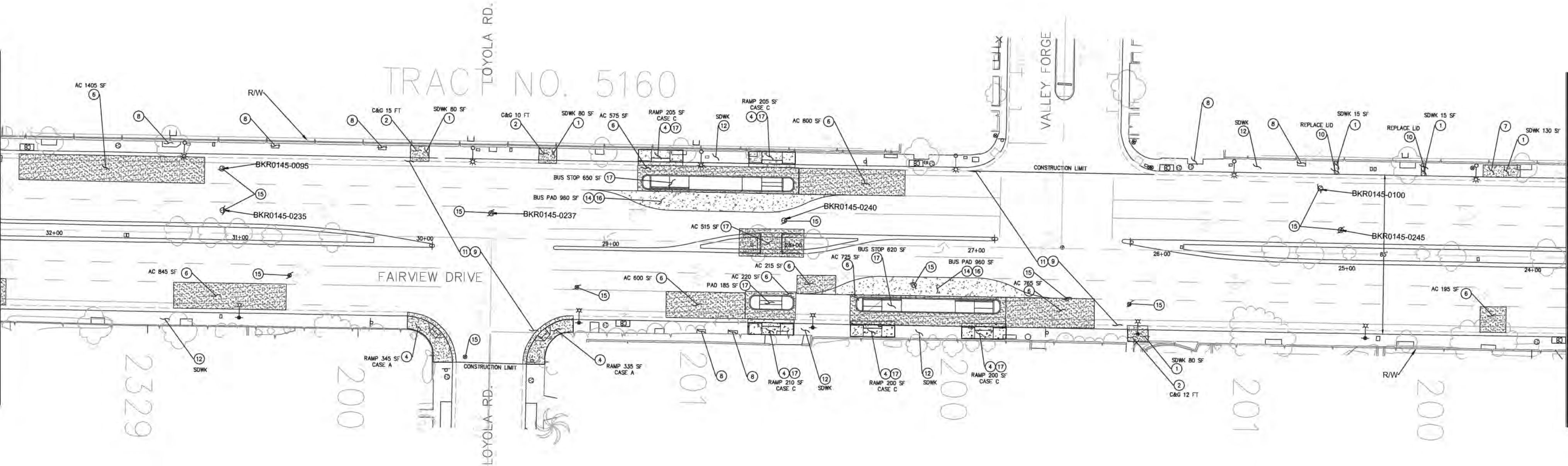
MATCH LINE  
SEE BOTTOM LEFT  
STA 32+25.49

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MATCHLINE  
SEE SHEET S-3.0 TOP LEFT  
STA 23+80.48

MATCHLINE  
SEE TOP RIGHT  
STA 32+25.49



#### LEGEND

- PCC REMOVAL & REPLACEMENT
- ASPHALT REMOVAL & REPLACEMENT

#### DEPOSITION NOTES

- 1 TO BE ADJUSTED BY OTHERS

CITY OF COSTA MESA  
ACCEPTED BY:

Date:  
SEUNG YANG P.E. City Engineer  
ACCEPTANCE AS TO CONFORMANCE  
WITH APPLICABLE CITY STANDARDS AND  
PRACTICES

SEAL-ENGINEER:

Interwest Consulting  
Group  
(714) 899-9039  
1 JENNER SUITE 160  
IRVINE, CA 92618

REVIEWED BY: TYRONE CHESANEK

AERIAL IMAGERY FROM  
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SCALE:  
H: As Noted V: As Noted

CITY OF COSTA MESA  
FAIRVIEW ROAD REHABILITATION  
FAIR DR TO NEWPORT BLVD  
STA 37+54.19 TO 23+80.48

SHEET  
S-2.0  
SHT 3  
OF 31 SHTS

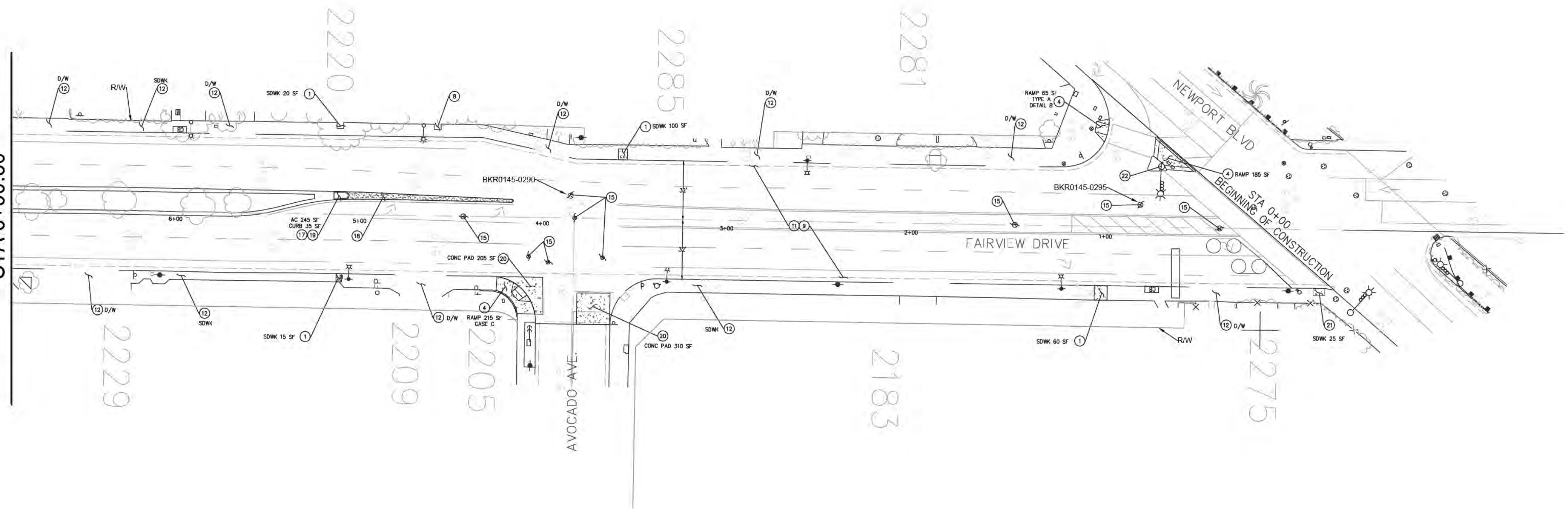
Plans Drawn By: Muhammad Alshami  
Plans Dated: 12/10/2024







MATCHLINE  
SEE SHEET S-3.0 BOTTOM RIGHT  
STA 6+90.50



#### CONSTRUCTION NOTES

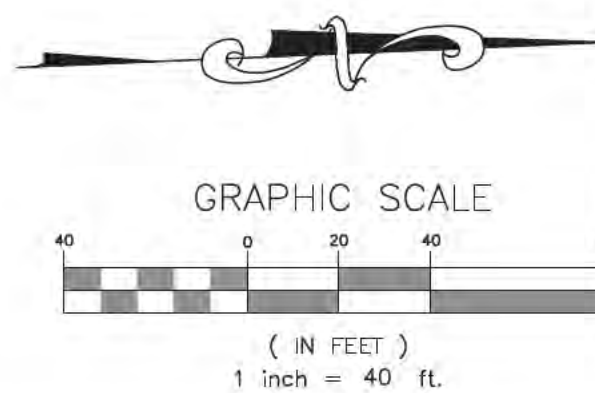
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- 11 CONSTRUCT 2" ARHM-GG-C-PG64-16AR AC SURFACE COURSE (PURSUANT TO THE SPECIFICATIONS, & AS SHOWN ON THESE PLANS, PER TYPICAL SECTIONS AND DETAILS.
- 12 PROTECT IN PLACE - EXISTING IMPROVEMENTS.
- 13 PRIOR TO CONSTRUCTION, THE CONTRACTOR'S SURVEYOR SHALL LOCATE AND TIE-OUT EXISTING CENTERLINE MONUMENTS. ONCE CONSTRUCTION IS COMPLETE THE CONTRACTOR SHALL REESTABLISH THE CENTERLINE MONUMENT TO THEIR ORIGINAL LOCATION, PER CITY OF COSTA MESA STANDARD PLAN NOS. 613, 614, & 615, PURSUANT TO THE SPECIFICATIONS, & AS SHOWN ON THESE PLANS.
- 14 REMOVE ASPHALT AND CONSTRUCT NEW 9" BUS PAD OVER 12" CMB PER CITY OF COSTA MESA STANDARD PLAN NO. 115, PURSUANT TO THE SPECIFICATIONS, & AS SHOWN ON THESE PLANS.
- 15 LOWER AND RAISE VALVE AND MANHOLE COVERS AND RINGS TO GRADE PER CITY OF COSTA MESA STD PLANS. SEE CN 25 FOR BKRXXX ADJUSTMENT.
- 16 CONSTRUCT TRAFFIC IMPROVEMENTS PER FAIRVIEW ACTIVE TRANSPORTATION IMPROVEMENTS PLANS, SHEETS 19 - 29 OF 29.
- 17 CONSTRUCT CIVIL IMPROVEMENTS AS DETAILED PER FAIRVIEW ACTIVE TRANSPORTATION IMPROVEMENTS PLANS, SHEETS 19 - 26 OF 29. PER CALTRANS STANDARD PLAN NOS. A88A & A88B PURSUANT TO THE SPECIFICATIONS, & AS SHOWN ON THESE PLANS. TRUNCATED DOME COLOR - FEDERAL YELLOW.
- 18 REMOVE MEDIAN AND RECONSTRUCT FULL DEPTH STREET SECTION PURSUANT SPECIFICATIONS, PER CITY OF COSTA MESA STANDARD PLANS, & AS SHOWN ON THESE PLANS.
- 19 CONSTRUCT 4" STAMPED MEDIAN, SAND COLOR, OVER 4" SAND OVER COMPACTED SUB-GRADE TO 95% COMPACTION. MATCH EXISTING FINISH.
- 20 REMOVE AND REPLACE EXISTING 8" SPANDREL OVER 8" CMB PER CITY OF COSTA MESA STANDARD PLAN NO. 415; INCLUDE 3" SLOT PAVE, PURSUANT TO THE SPECIFICATIONS, & AS SHOWN ON THESE PLANS.
- 21 SAW CUT EXISTING CURB RAMP, NO OVER CUTS, TO INSTALL NEW TRUNCATED DOMES PER CALTRANS STANDARD PLAN NOS. A88A, PURSUANT TO THE SPECIFICATIONS, & AS SHOWN ON THESE PLANS. TRUNCATED DOME COLOR - FEDERAL YELLOW.
- 22 ADJUST CROSSWALK PUSH BUTTON TO 42" FROM NEW FINISH GRADE, PER MUTCD REQUIREMENTS.
- 23 REMOVE EXISTING STRIPING AND RESTRIPE PER STRIPING PLAN.
- 25 ADJUST MH TO GRADE PER OCSD STD PLANS S-050A, S-055, & S-055A.

#### LEGEND

- PCC REMOVAL & REPLACEMENT
- ASPHALT REMOVAL & REPLACEMENT

#### DEPOSITION NOTES

- 1 TO BE ADJUSTED BY OTHERS



MARK	BY	DATE	REVISIONS	APPR.	DATE

CITY OF COSTA MESA  
ACCEPTED BY:

Date:  
SEUNG YANG P.E., City Engineer

ACCEPTANCE AS TO CONFORMANCE  
WITH APPLICABLE CITY STANDARDS AND  
PRACTICES

SEAL-ENGINEER:

Interwest Consulting  
Group  
(714) 899-9039  
1 JENNER SUITE 160  
IRVINE, CA 92618

REVIEWED BY: TYRONE CHESANEK

AERIAL IMAGERY FROM  
GOOGLE EARTH PRO ON MARCH  
2023.

SCALE:  
H: As Noted V: As Noted

CITY OF COSTA MESA  
FAIRVIEW ROAD REHABILITATION  
FAIR DR TO NEWPORT BLVD  
STA 6+90.50 TO 0+00

SHEET

S-4.0

SHT 5

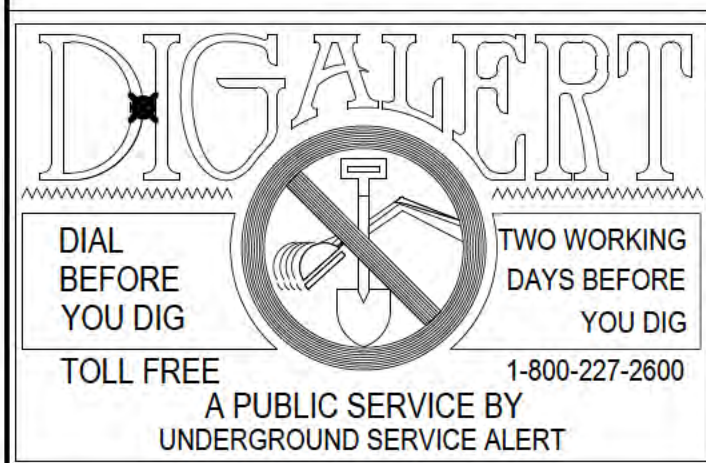
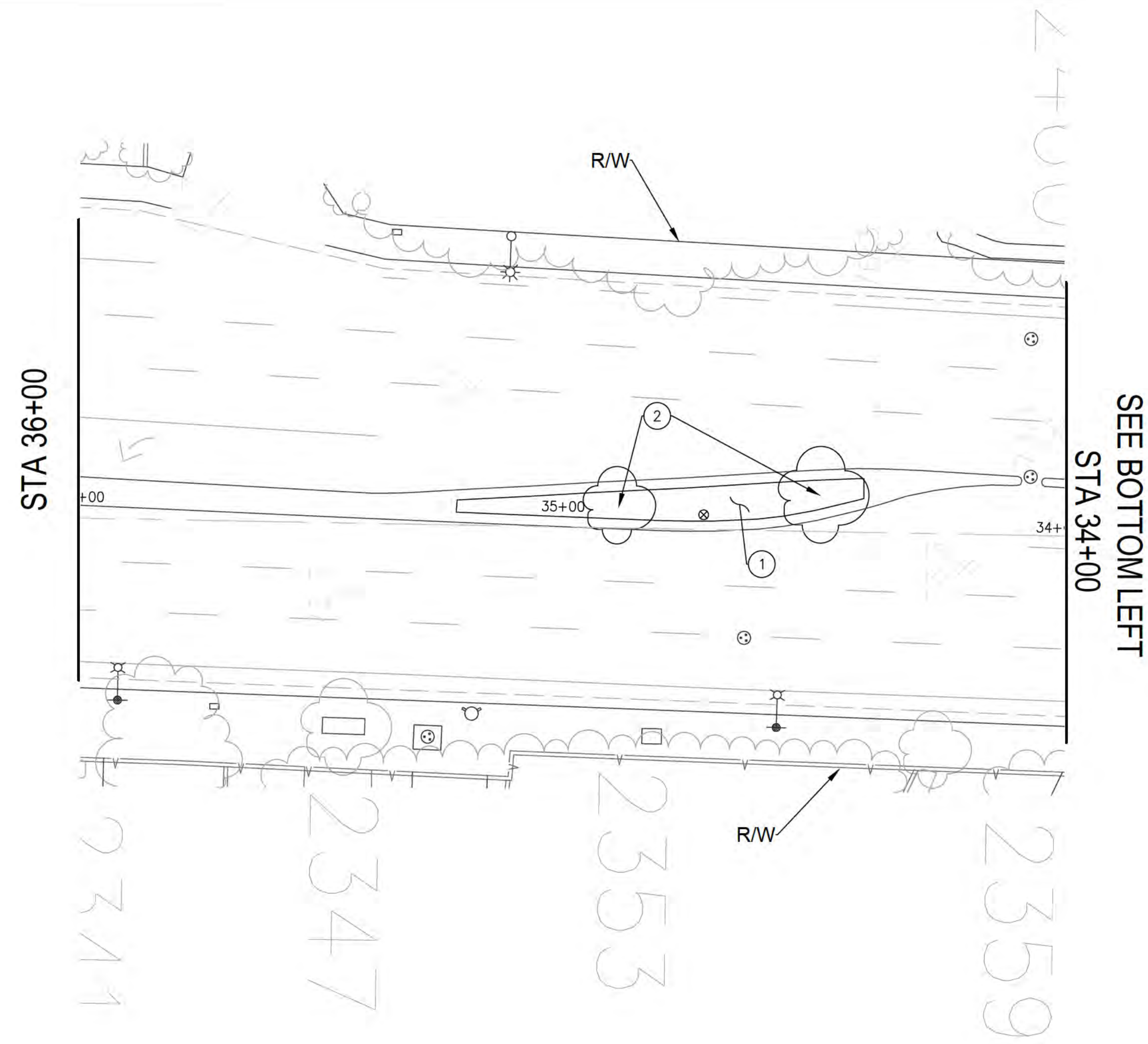
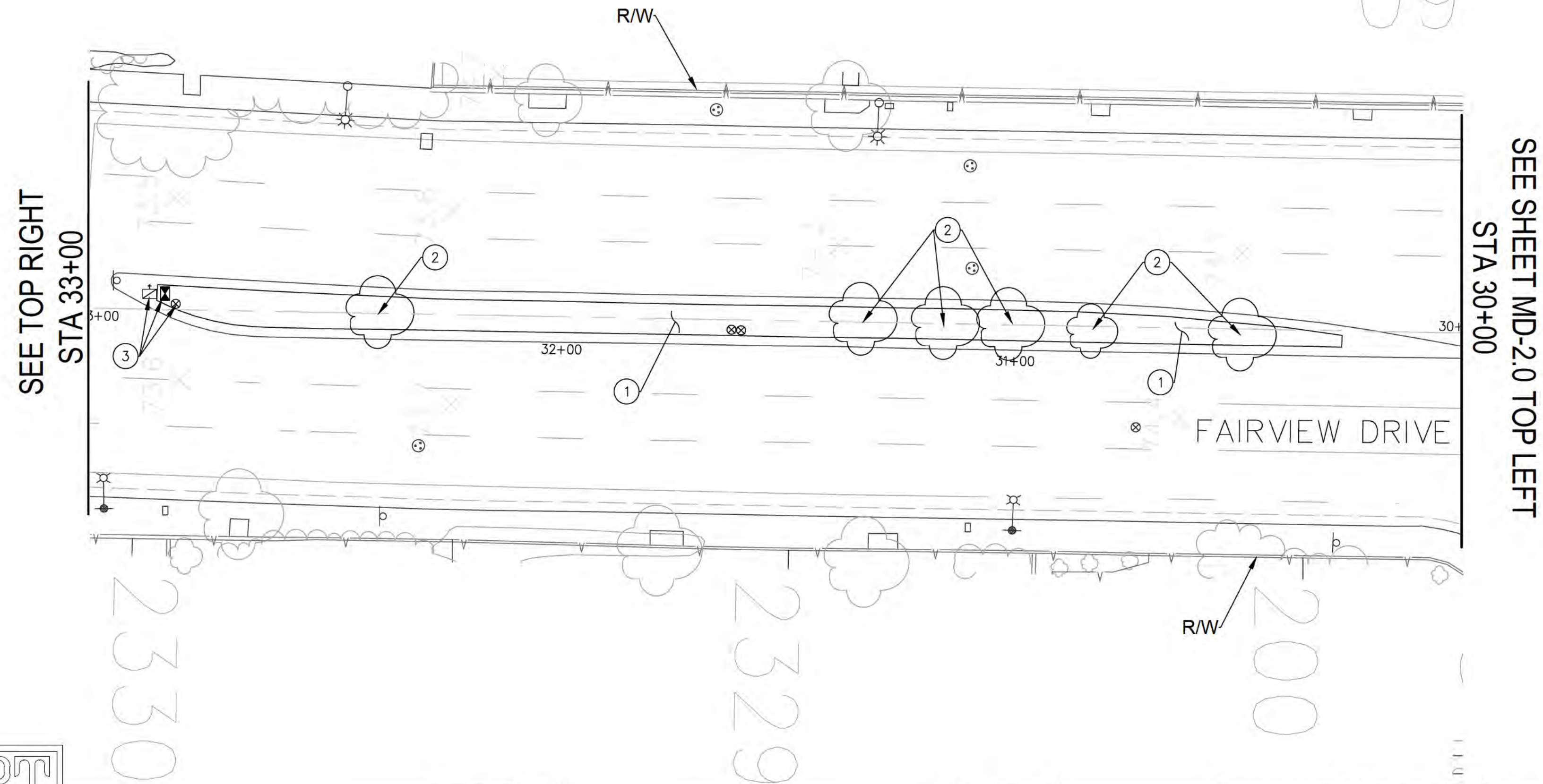
OF 31 SHTS

Plans Drawn By: Mohammad Alsham  
Plans Dated: 12/10/2024



DEMOLITION NOTES

- 1 CLEAR AND GRUB ALL VEGETATION, DEBRIS, ROCKS, CONCRETE RIBBONS, AND MISCELLANEOUS CONCRETE WITHIN THE MEDIAN CURBS.
- 2 REMOVE AND DISPOSE OF THE EXISTING TREES, STUMPS, AND ROOTS.
- 3 PROTECT IN PLACE.



MARK	BY	DATE	REVISIONS	APPR.	DATE

CITY OF COSTA MESA  
ACCEPTED BY: *Seung Yang* Date: 3/25/2025  
SEUNG YANG P.E., City Engineer  
RE No. 66786 Exp Date: 9/30/26  
ACCEPTANCE AS TO CONFORMANCE  
WITH APPLICABLE CITY STANDARDS AND  
PRACTICES

SEAL-ENGINEER:

Interwest Consulting  
Group  
(714) 899-9039  
1 JENNER SUITE 160  
IRVINE, CA 92618  
REVIEWED BY: *Tyrone Chesaneh*  
TYRONE CHESANEK

AERIAL IMAGERY FROM  
GOOGLE EARTH PRO ON MARCH  
2023.  
SCALE:  
H: As Noted V: As Noted

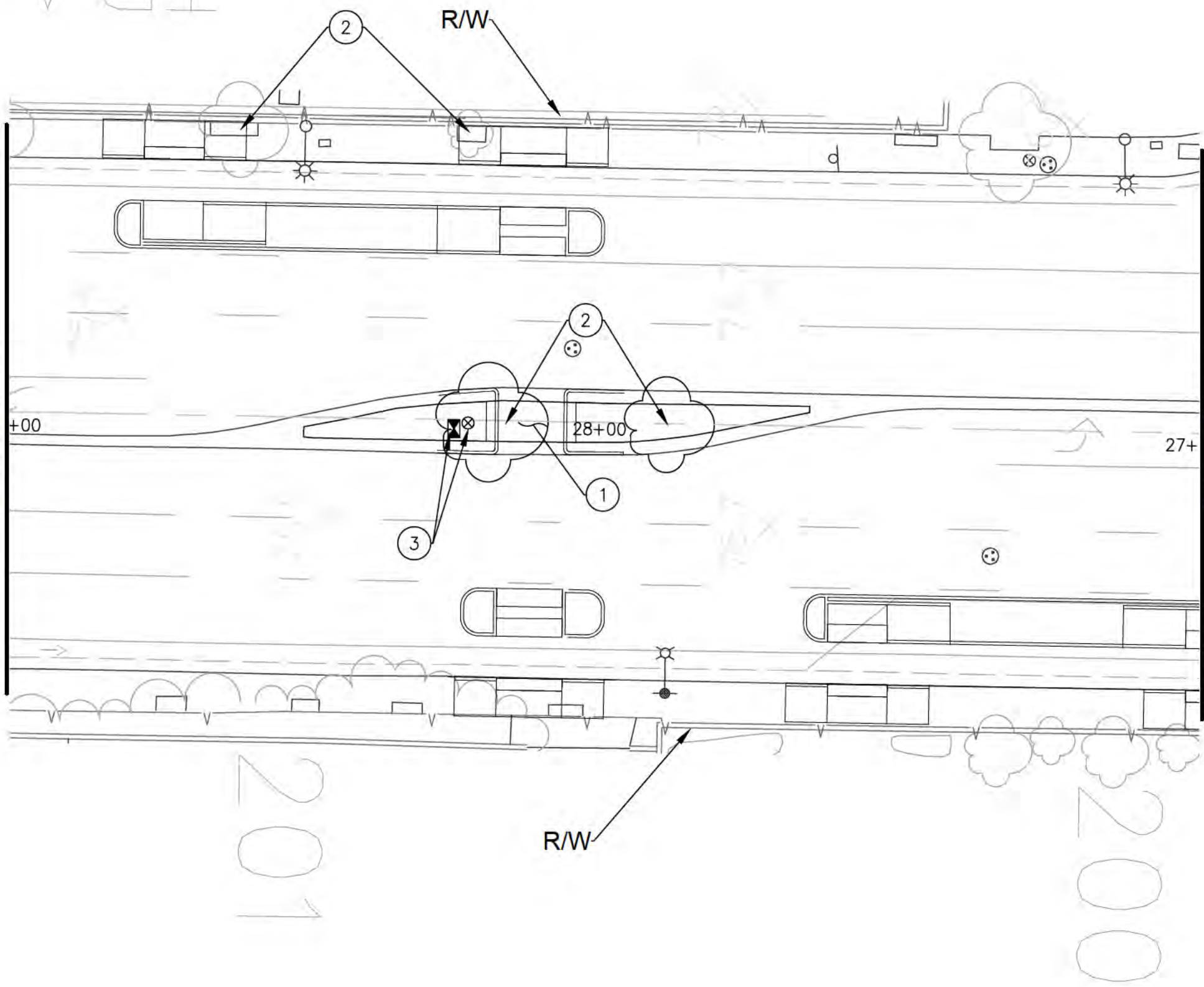
CITY OF COSTA MESA  
FAIRVIEW ROAD REHABILITATION  
LANDSCAPING DEMOLITION PLAN

SHEET  
MD-1.0  
SHT 6  
OF 31 SHTS



SEE SHEET MD-1.0 BOTTOM RIGHT

STA 29+00



SEE BOTTOM LEFT

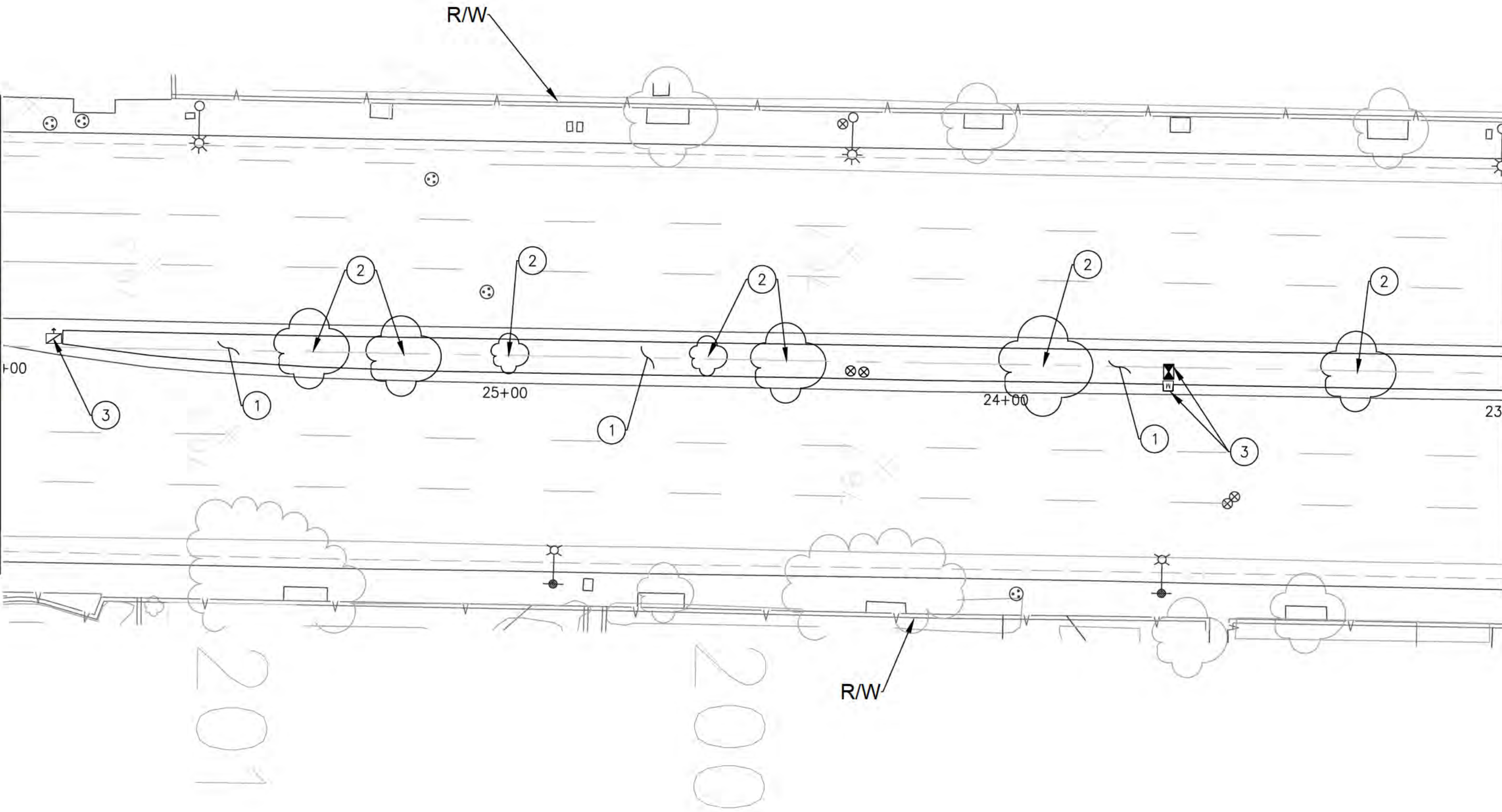
STA 27+00

DEMOLITION NOTES

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- 3 PROTECT IN PLACE.

SEE TOP RIGHT

STA 26+00

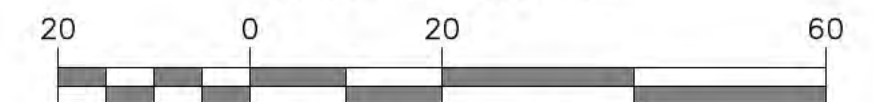


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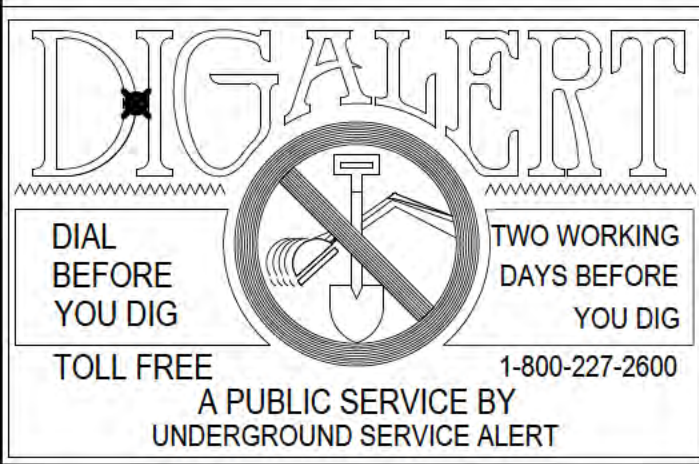
STA 23+00



GRAPHIC SCALE



SCALE: 1" = 20'



MARK	BY	DATE	REVISIONS	APPR.	DATE

CITY OF COSTA MESA  
ACCEPTED BY:  
Date:  
SEUNG YANG P.E., City Engineer  
RE No. 66786 Exp Date: 9/30/26  
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(714) 899-9039  
1 JENNER SUITE 160  
IRVINE, CA 92618

REVIEWED BY: *Tyrone Chesane*  
TYRONE CHESANEK

AERIAL IMAGERY FROM  
GOOGLE EARTH PRO ON MARCH  
2023.

SCALE:  
H: As Noted V: As Noted

CITY OF COSTA MESA  
FAIRVIEW ROAD REHABILITATION  
LANDSCAPING DEMOLITION PLAN

SHEET  
MD-2.0  
SHT 7  
OF 31 SHTS

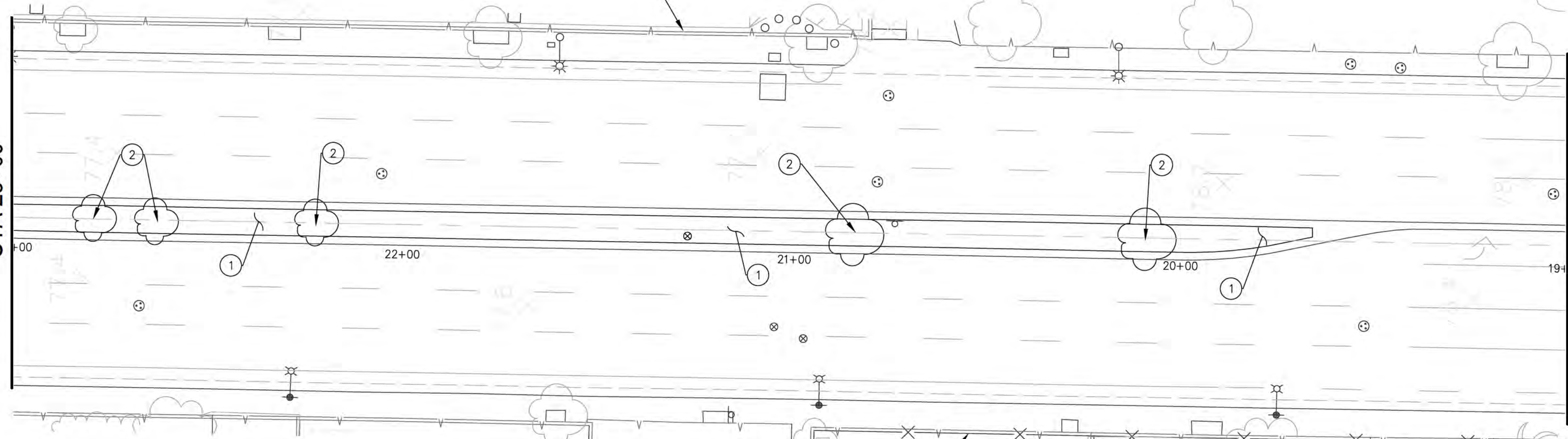
Plans Drawn By: Mohammad Alshami  
Plans Dated: 12/10/2024



TRACT NO. 5160

SEE SHEET MD-2.0 BOTTOM RIGHT

STA 23+00



SEE BOTTOM LEFT

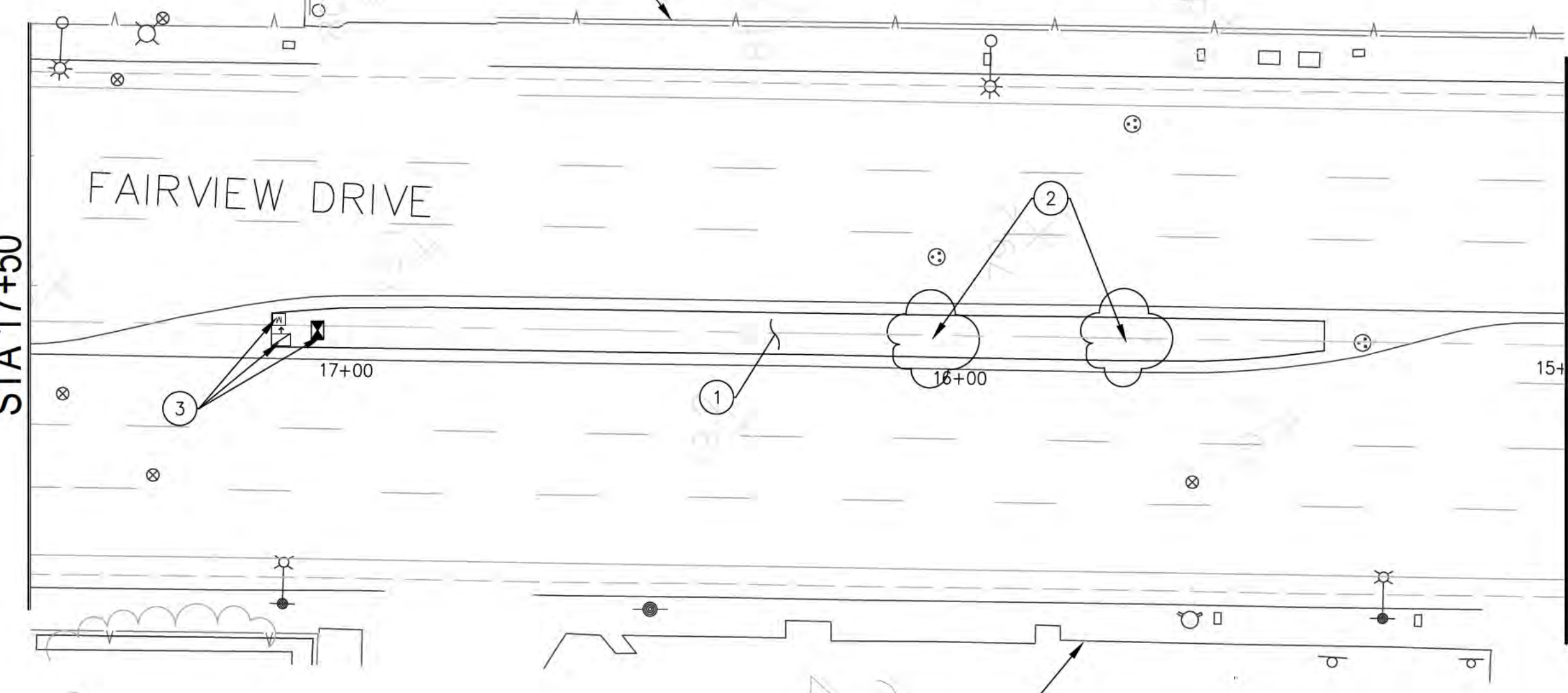
STA 19+00

DEMOLITION NOTES

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SEE TOP RIGHT

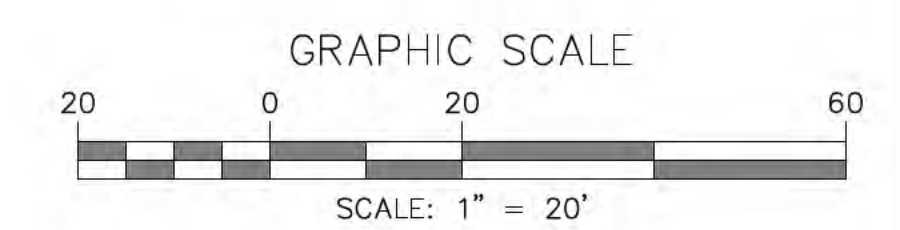
STA 17+50



SEE SHEET MD-4.0 TOP LEFT

STA 15+00

FAIRVIEW DRIVE



MARK	BY	DATE	REVISIONS	APPR.	DATE

CITY OF COSTA MESA  
ACCEPTED BY: \_\_\_\_\_  
Date: \_\_\_\_\_  
SEUNG YANG P.E., City Engineer  
RE No. 66786 Exp Date: 9/30/26  
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SEAL-ENGINEER:

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(714) 899-9039  
1 JENNER SUITE 160  
IRVINE, CA 92618  
REVIEWED BY: *Tyrone Chesaneh*  
TYRONE CHESANEK

AERIAL IMAGERY FROM  
GOOGLE EARTH PRO ON MARCH  
2023.  
SCALE:  
H: As Noted V: As Noted

CITY OF COSTA MESA  
FAIRVIEW ROAD REHABILITATION  
LANDSCAPING DEMOLITION PLAN

SHEET  
MD-3.0  
SHT 8  
OF 31 SHTS

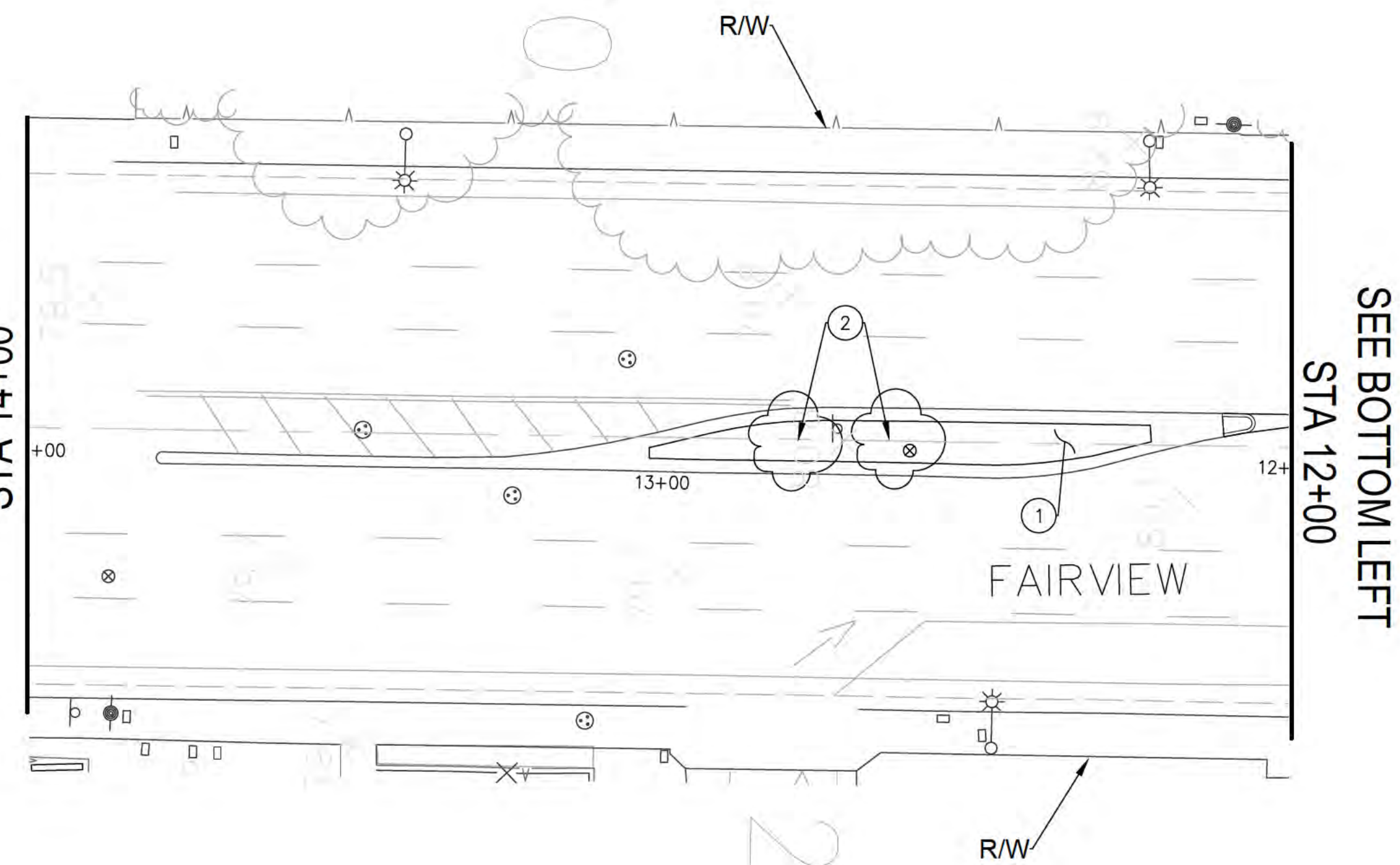
Plans Drawn By: Mohammad Alshami  
Plans Dated: 12/10/2024



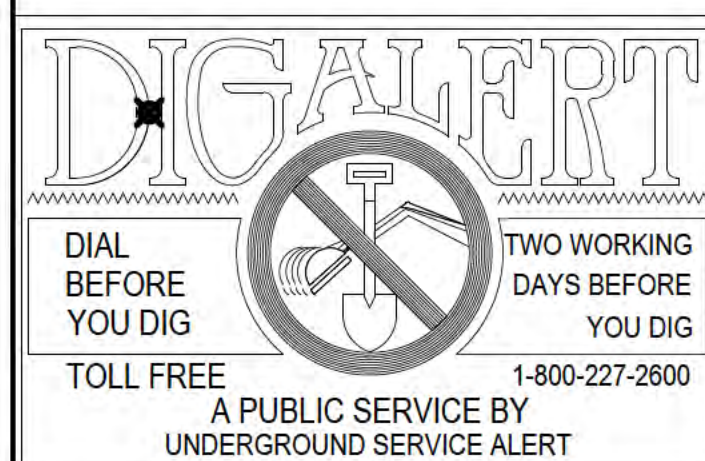
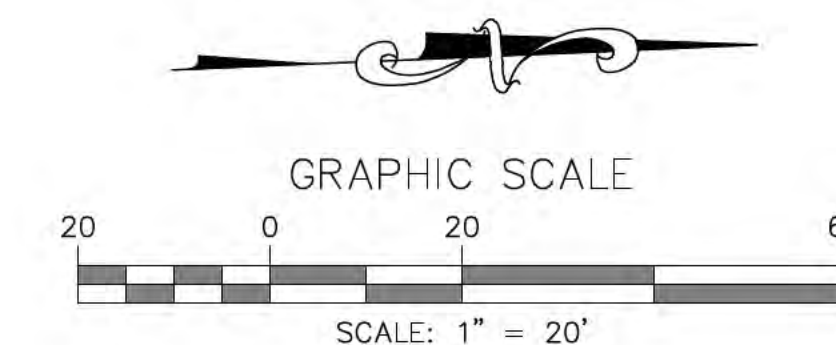
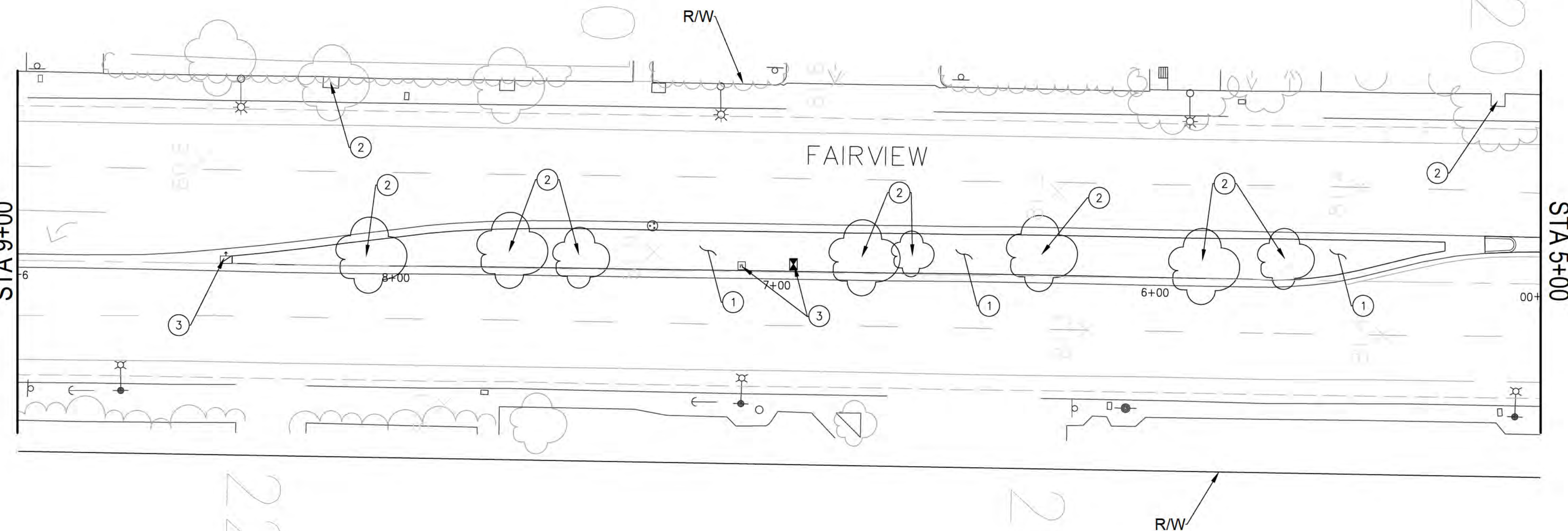
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SEE SHEET MD-3.0 BOTTOM RIGHT  
STA 14+00



SEE TOP RIGHT  
STA 9+00



MARK	BY	DATE	REVISIONS	APPR.	DATE

CITY OF COSTA MESA  
ACCEPTED BY:  
Date:  
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IRVINE, CA 92618  
REVIEWED BY: *Tyrone Chesaneck*  
TYRONE CHESANECK

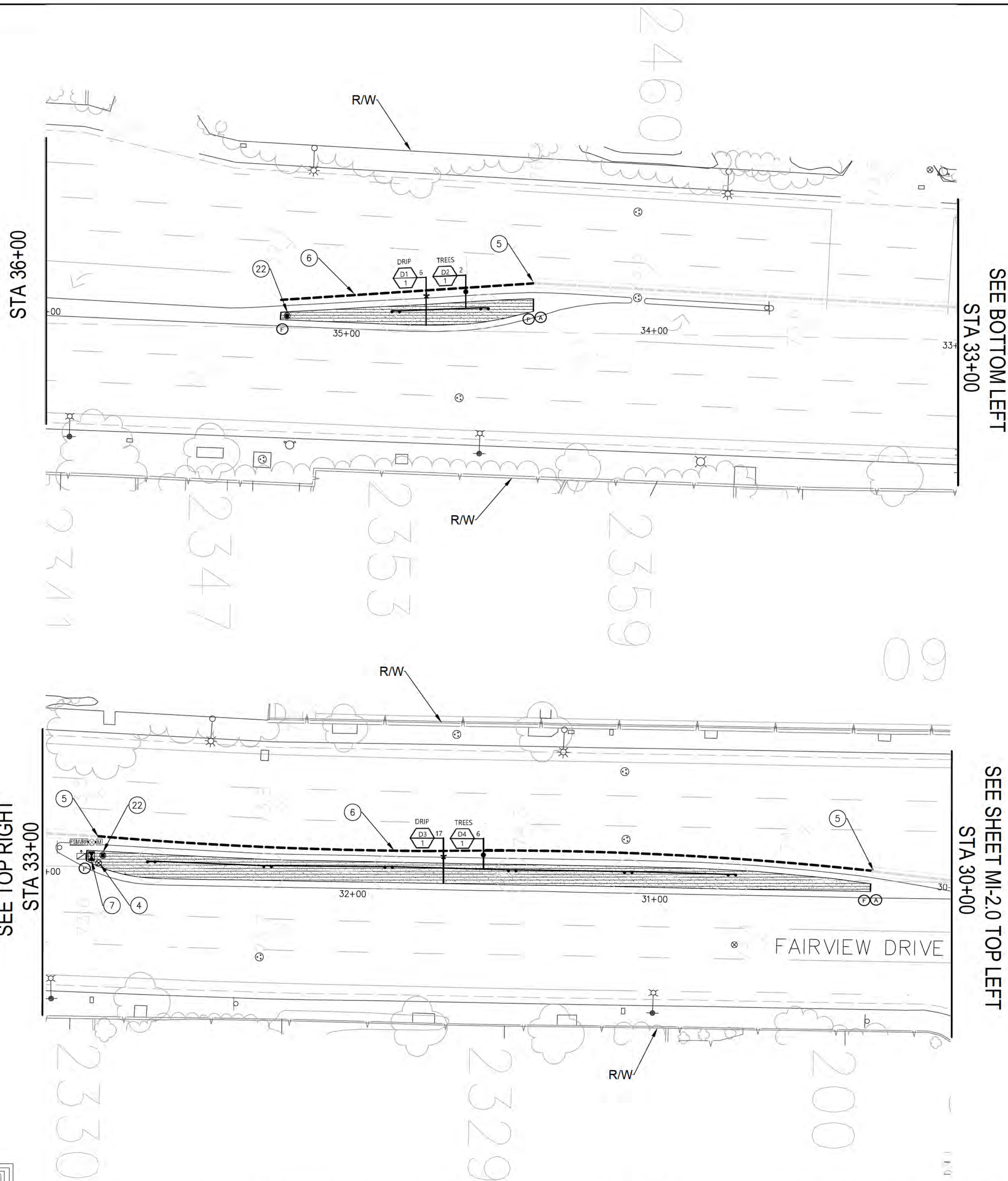
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2023.  
SCALE:  
H: As Noted V: As Noted

CITY OF COSTA MESA  
FAIRVIEW ROAD REHABILITATION  
LANDSCAPING DEMOLITION PLAN

SHEET  
MD-4.0  
SHT 9  
OF 31 SHTS

Plans Drawn By: Mohammad Alshami  
Plans Dated: 12/10/2024



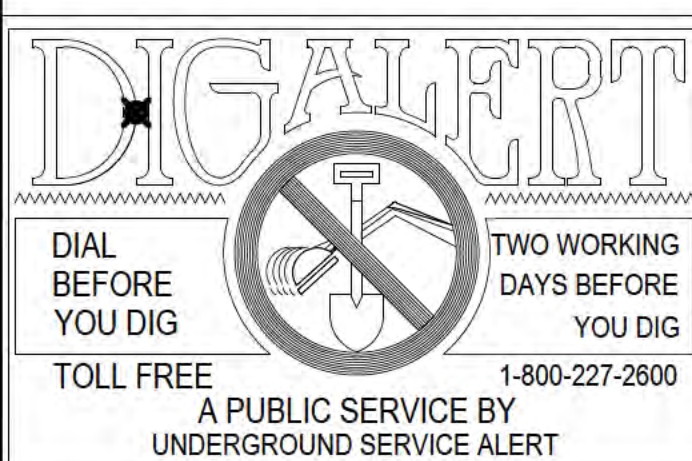
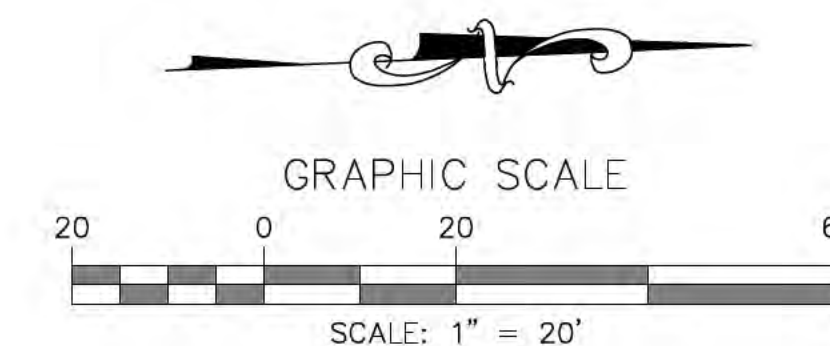


IRRIGATION NOTES

- INSTALL NEW VALVES AND VALVE BOXES PER DETAIL. SPLICE WIRES FROM EXISTING TO NEW LOCATION USING JM DBRY-6 CONNECTORS OR APPROVED EQUAL. INCLUDE 10" MIN. PIGTAIL IN THE PULL BOXES.
- CONNECT THE NEW 1-1/2" IRRIGATION MAIN TO THE EXISTING MAIN THAT GOES UNDER THE ASPHALT TO THE NEXT MEDIAN AND INSTALL NEW CONTROL WIRES.
- INSTALL NEW 1-1/2" IRRIGATION MAIN AND CONTROL WIRES.
- PROVIDE AND INSTALL BACKFLOW PREVENTER CAGE AND CONCRETE PAD, PER DETAIL.
- EXISTING UTILITIES AND CONDITIONS: PRIOR TO CUTTING INTO THE SOIL OR PAVING, LOCATE ALL CABLES, CONDUITS, AND OTHER UTILITIES THAT ARE COMMONLY FOUND UNDERGROUND, AND TAKE PROPER PRECAUTIONS NOT TO DAMAGE OR DISTURB SUCH IMPROVEMENTS. IF A CONFLICT EXISTS BETWEEN SUCH OBSTACLES AND THE PROPOSED WORK, PROMPTLY NOTIFY THE CITY ENGINEER FOR RESOLUTION.
- THE INSTALLATION OF THE IRRIGATION SYSTEM SHALL CONFORM TO ALL APPLICABLE REGULATIONS AND CODES.
- LOCATE AND CONFIRM ALL EXISTING BACKFLOW PREVENTERS, CONTROL CABINETS, AND CONTROL WIRES ARE IN GOOD WORKING ORDER.
- THE IRRIGATION SYSTEM IS SHOWN DIAGRAMMATICALLY FOR CLARITY. LOCATE ALL VALVES AND VALVE BOXES WITHIN 6" OF THE MEDIAN CURB. LOCATE PRESSURE MAINLINES WITHIN 18" OF THE MEDIAN CURB.
- THE CONTRACTOR SHALL REVIEW THE EXISTING CONTROL CABINETS WITH THE STATIONING FOR EACH OF THE EXISTING VALVES. PREPARE A SUBMITTAL TO DESIGN BUILD THE EXISTING VALVE SYSTEM TO THE NEW IRRIGATION SYSTEM. SUBMITTAL SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL.
- ALL PIPE UNDER PAVING AND ROADWAYS SHALL BE REUSED.
- SPLICES SHALL BE MADE ONLY IN PULL BOXES OR VALVE CONTROL BOXES.
- SYSTEM DESIGN IS BASED ON A DESIGN PRESSURE OF 50PSI.
- THE USE OF MANUFACTURERS NAME AND MODEL OR CATALOG NUMBER IS FOR THE PURPOSE OF ESTABLISHING A STANDARD OF QUALITY BASED ON THE CITY REQUIREMENTS. ALL SUBSTATIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL.
- EXISTING WATER METER PCO ARE SHOWN ON THE PLANS.
- BUBBLERS SHALL BE ALIGNED WITH THE TREES AT THE EDGE OF FOOTBALL AND EDGE OF PLANTING PIT, AND AS DIRECTED BY THE CITY ENGINEER.
- TREE LOCATIONS TAKE PRECEDENT OVER IRRIGATION HEAD LOCATIONS.
- ANTI-DRAIN VALVES OR CHECK VALVES ARE TO BE INSTALLED WHERE LOW POINT RUNOFF MAY OCCUR.
- NEW QUICK COUPLER VALVE AND BOX.

IRRIGATION LEGEND

SYMBOL	DESCRIPTION	PSI	GPM	RAD	MFGR/MODEL
•	BUBBLER HEAD (2 PER TREE)	30	0.5	-	RAIN BIRD RASBC 1402
---	SUB SURFACE DRIFLINE 18" SPACING 18" O.C.	30	0.01	-	RAIN BIRD XFS-09-18
Ⓐ	DRIP IRRIGATION AIR/VACUUM RELIEF VALVE				RAIN BIRD ARV-150
Ⓣ	DRIP IRRIGATION FLUSH VALVE				RAIN BIRD FLUSH CAP
Ⓢ	QUICK COUPLER VALVE				RAIN BIRD 44RVC W/ 44K KEY & SH-1 SWIVEL
ⓧ	SHUT-OFF VALVE, LINE SIZE, W/ BRONZE CROSS HANDLE				NIBCO T-580
Ⓜ	WATER METER (EXISTING)				PER WATER AUTHORITY REQUIREMENTS
Ⓜ	MASTER VALVE				NETAFIM LH-MISTG1-M
●	REMOTE CONTROL VALVE				RAIN BIRD EFB-CP SERIES BRASS VALVE, SCH 80 BALL VALVE
*	REMOTE CONTROL VALVE FOR DRIP SYSTEMS				RAIN BIRD EFB-CP SERIES BRASS VALVE, SCH 80 BALL VALVE
Ⓜ	FLOW SENSOR				RAIN BIRD PRBCKH100 PRESSURE REGULATING QUICK CHECK BASKET
Ⓜ	REDUCED PRESSURE BACKFLOW PREVENTER (VERIFY CONDITION AND SUITABILITY OF EXISTING BACKFLOW FOR POSSIBLE RE-INSTALLATION)				RAIN BIRD DRIP SYSTEM OPERATION INDICATOR KIT ON EACH DRIP STATION
Ⓜ	AUTOMATIC IRRIGATION CONTROLLER, 8 STATION, PEDESTAL MOUNT - ET BASED WITH RAIN SENSOR				RAIN BIRD FS100P
Ⓜ	EXISTING IRRIGATION CONTROLLER				FEBCO LF825Y W/ WILKINS 500Y STRAINER
---	LATERAL (NON-PRESSURE) PIPING, SIZE AS SHOWN				SA6-RM2-8/PMR CAC/10YR/GR-K-NFS
---	MAIN LINE (PRESSURE) PIPING, SIZE AS SHOWN				CENTRAL RAINMASTER EAGLE PLUS
---	SLEEVE, PER PLAN, 2x DIAM OF CARRYING PIPE, MIN.				SCH 40



MARK	BY	DATE	REVISIONS	APPR.	DATE

CITY OF COSTA MESA  
ACCEPTED BY: *S. Yang* Date: 3/25/2025  
SEUNG YANG P.E., City Engineer  
RE No. 66786 Exp Date: 9/30/26  
ACCEPTANCE AS TO CONFORMANCE  
WITH APPLICABLE CITY STANDARDS AND  
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SEAL-ENGINEER:

Interwest Consulting  
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(714) 899-9039  
1 JENNER SUITE 160  
IRVINE, CA 92618  
REVIEWED BY: *Tyrone Chesanek*  
TYRONE CHESANEK

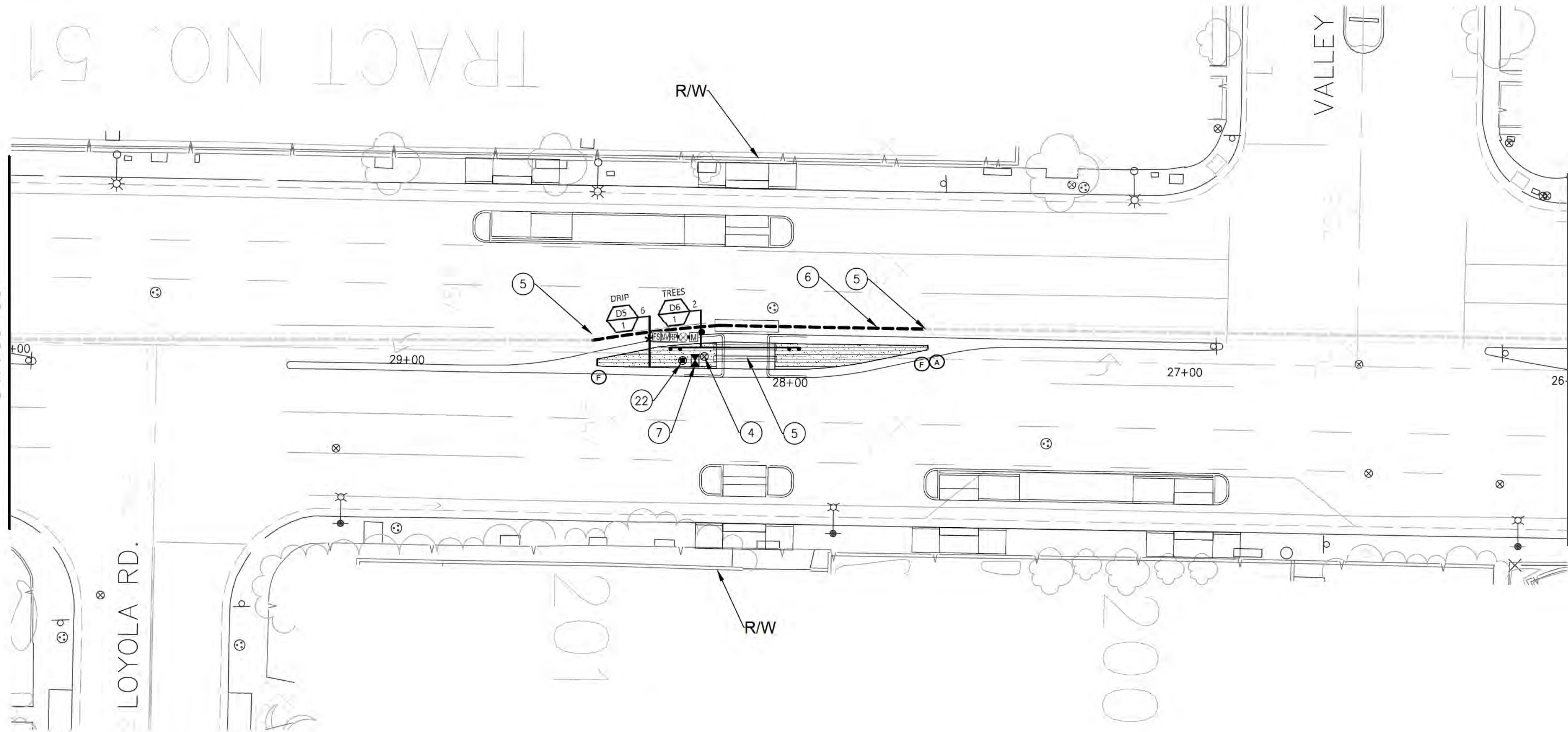
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SCALE:  
H: As Noted V: As Noted

CITY OF COSTA MESA  
FAIRVIEW ROAD REHABILITATION  
MEDIAN IRRIGATION PLAN  
SHEET  
MI-1.0  
SHT 10  
OF 31 SHTS



SEE SHEET MI-1.0 BOTTOM RIGHT

STA 30+00

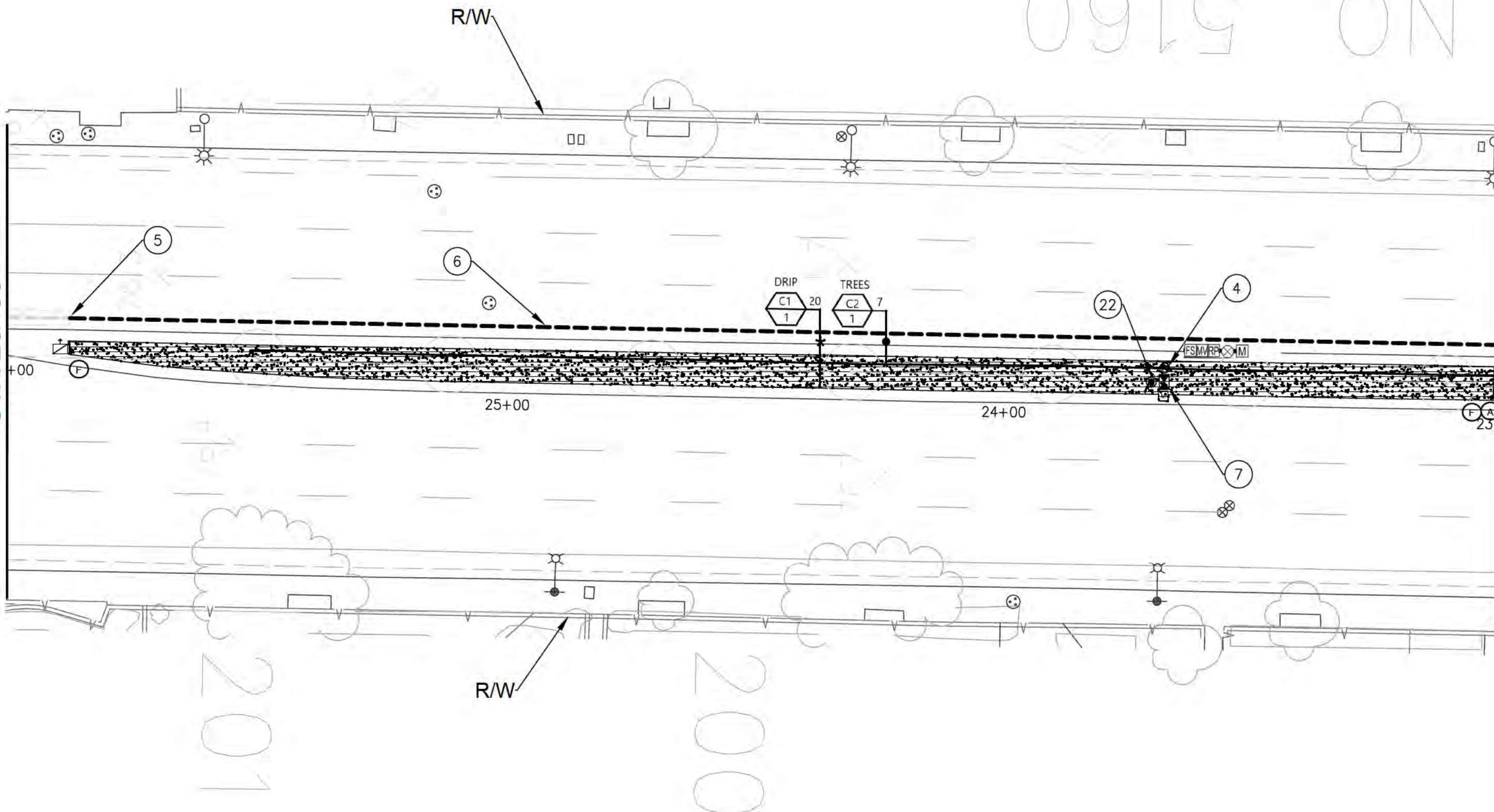


SEE BOTTOM LEFT

STA 26+00

SEE TOP RIGHT

STA 26+00



SEE SHEET MI-3.0 TOP LEFT

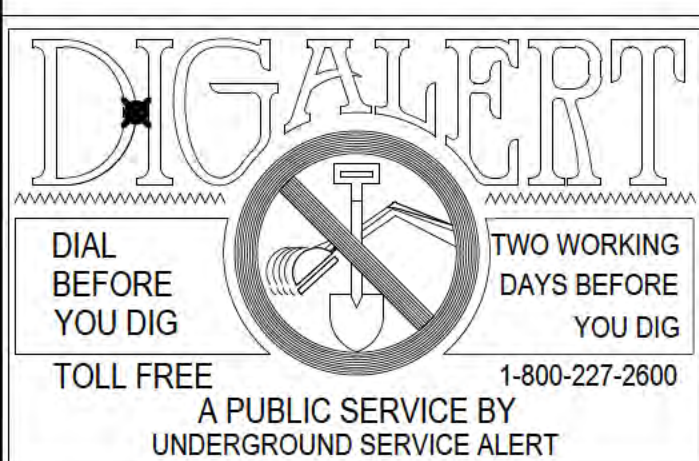
STA 23+00

#### IRRIGATION NOTES

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GRAPHIC SCALE  
20 0 20 60  
SCALE: 1" = 20'



MARK	BY	DATE	REVISIONS	APPR.	DATE

CITY OF COSTA MESA  
ACCEPTED BY:  
Date:  
SEUNG YANG P.E., City Engineer  
RE No. 66786 Exp Date: 9/30/26  
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1 JENNER SUITE 160  
IRVINE, CA 92618

REVIEWED BY: *Tyrone Chesane*  
TYRONE CHESANEK

AERIAL IMAGERY FROM  
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2023.

SCALE:  
H: As Noted V: As Noted

CITY OF COSTA MESA  
FAIRVIEW ROAD REHABILITATION  
MEDIAN IRRIGATION PLAN

SHEET  
MI-2.0  
SHT 11  
OF 31 SHTS

Plans Drawn By: Mohammad Alshami  
Plans Dated: 12/10/2024



SEE SHEET MI-2.0 BOTTOM RIGHT  
STA 23+00

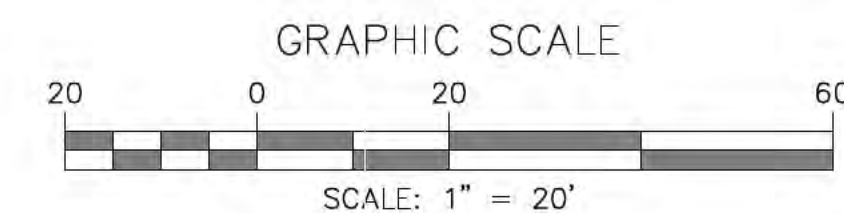
SEE BOTTOM LEFT  
STA 19+00

SEE TOP RIGHT  
STA 17+50

SEE SHEET MI-4.0 TOP LEFT  
STA 12+00

#### IRRIGATION NOTES

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- THE CONTRACTOR SHALL REVIEW THE EXISTING CONTROL CABINETS WITH THE STATIONING FOR EACH OF THE EXISTING VALVES. PREPARE A SUBMITTAL TO DESIGN BUILD THE EXISTING VALVE SYSTEM TO THE NEW IRRIGATION SYSTEM. SUBMITTAL SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL.
- ALL PIPE UNDER PAVING AND ROADWAYS SHALL BE REUSED.
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- TREE LOCATIONS TAKE PRECEDENT OVER IRRIGATION HEAD LOCATIONS.
- ANTI-DRAIN VALVES OR CHECK VALVES ARE TO BE INSTALLED WHERE LOW POINT RUNOFF MAY OCCUR.
- NEW QUICK COUPLER VALVE AND BOX.



CITY OF COSTA MESA  
FAIRVIEW ROAD REHABILITATION  
MEDIAN IRRIGATION PLAN

SHEET  
MI-3.0  
SHT 12  
OF 31 SHTS

Plans Drawn By: Mohammad Alshami  
Plans Dated: 12/10/2024

MARK	BY	DATE	REVISIONS	APPR.	DATE

CITY OF COSTA MESA  
ACCEPTED BY:  
Date:  
SEUNG YANG P.E., City Engineer  
RE No. 66786 Exp Date: 9/30/26  
ACCEPTANCE AS TO CONFORMANCE  
WITH APPLICABLE CITY STANDARDS AND  
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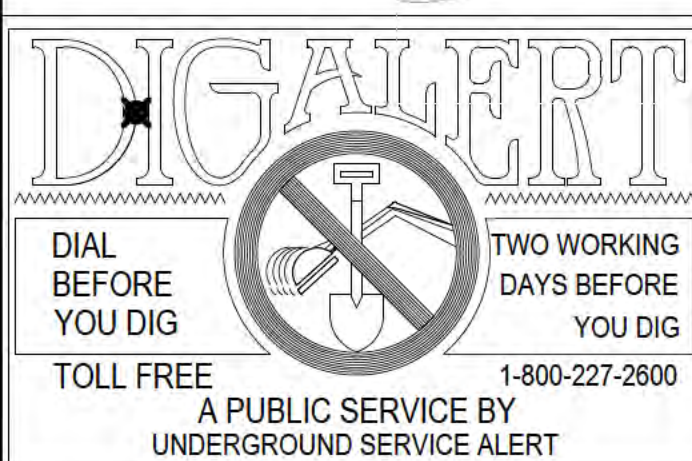
SEAL-ENGINEER:

Interwest Consulting  
Group  
(714) 899-9039  
1 JENNER SUITE 160  
IRVINE, CA 92618

REVIEWED BY: *Tyrone Chesaneh*  
TYRONE CHESANEH

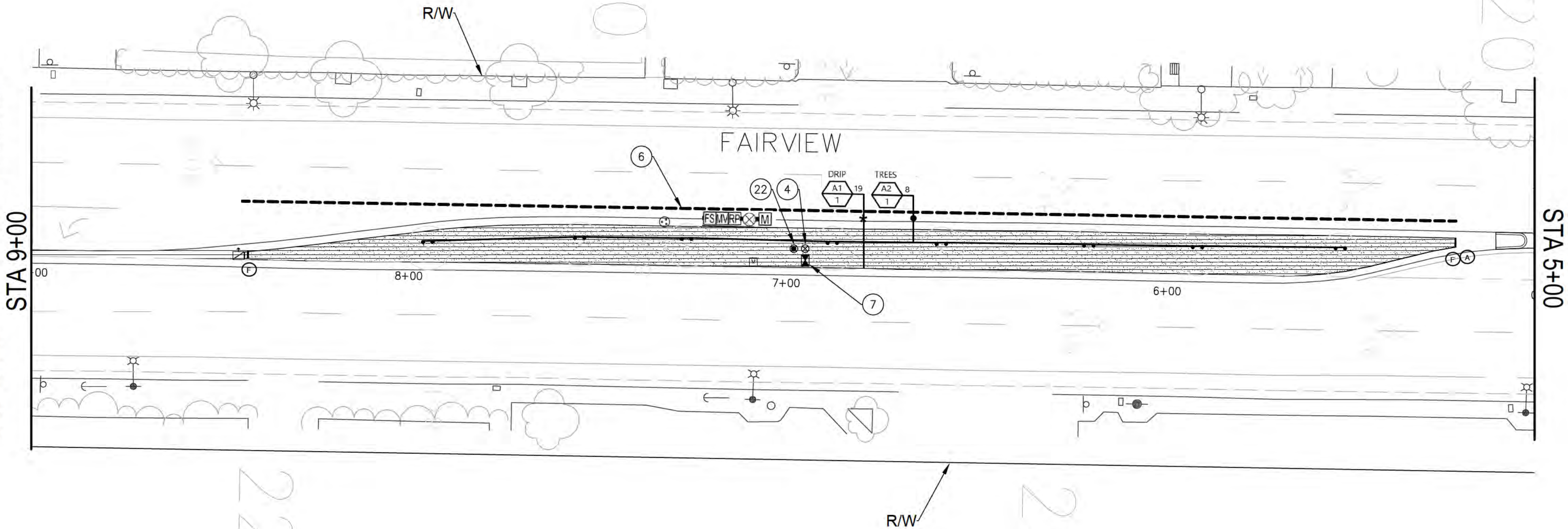
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2023.

SCALE:  
H: As Noted V: As Noted





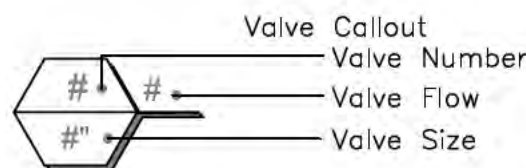
SEE SHEET MI-3.0 BOTTOM RIGHT



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	REUSE EXISTING BACKFLOW PREVENTER	6
	REUSE EXISTING WATER METER	3
	REUSE EXISTING IRRIGATION CONTROLLER	3
	NEW VALVE	9

AREA TO RECEIVE DRIPLINE  
LANDSCAPE DRIPLINE  
NETAFIM TLHCVR-053-18 TECHLINE HCVR PRESSURE  
COMPENSATING WITH CHECK VALVE AND ANTI-SIPHON  
FEATURE. FOR RECLAIMED WATER ONLY. 0.53 GPH  
EMITTERS AT 18" O.C. DRIPLINE LATERALS SPACED AT  
12" APART, WITH EMITTERS OFFSET FOR TRIANGULAR  
PATTERN. 17MM.  
LOCATE 2" BELOW FINISHED GRADE.



SYMBOL	DESCRIPTION
	EXISTING PVC IRRIGATION MAIN AND SLEEVE
	NEW PVC IRRIGATION MAIN
	NEW PVC IRRIGATION MAIN AND SLEEVE

ESTIMATED TOTAL WATER USE

<b>ETWU = (ETo) x (0.62) x [(PF x HA)/IE + SLA]</b>			
Irrigation Efficiency Value =			
Bubblers	0.81	MAWA = 150,615.36 Maximum Allowable Water Use	
Dripline (Drip)	0.81	ETWU = 123,963 Estimated total water use per year	
Rotary / Rotor	0.75	ETo = 48.20 Reference Evapotranspiration (inches per year)	
Spray	0.75	PF = See Table at Left Plant Factor from WUCOLS* or equivalent	
		HA = See Table Below Hydrozone Area (square feet)	

Plant Water Use Type	Plant Factor		
Low	0.10	0.20	0.30
Moderate	0.40	0.50	0.60
High	0.70	0.80	0.90
SLA	1.00		

HYDROZONE TABLE

Hydrozone	Plant Water Use Type(s) (low, moderate, high)	Plant Factor (PF)	Irrigation Type	Hydrozone Area (HA) (sq ft)	PF x HA (sq ft)	ETWU	
						100 CF/Year	Gallons / Year
1	Low	0.30	Dripline	11,200	3360	165.71	123,963
	SLA	1			0		
Sum				11,200	3360	165.71	123,963

RESULTS				ETWU = (ETo) x (0.62) x [(PF x HA)/IE + SLA]		100 CF/Year	Gal./year
MAWA =		150,615		ETWU =		166	123,963
ETWU must be less than or equal to MAWA ETWU complies with MAWA							

PROJECT: 5312(106) - Fairview Rd

MAXIMUM APPLIED WATER ALLOWANCE

PROJECT #: 5312(106) - Fairview Rd.

MAWA = (ETo) x (0.62) x [(0.45 x LA)+(0.55 x SLA)]

ETo**	48.20	ETo (inches/year)
Enter total project Landscaped Area	11,200	LA (square feet)
Enter Special Landscaped Area	0.00	SLA (square feet)
RESULTS:		
	150,615	MAWA (gallons/year)
	11,266.78	MAWA (100 CF/year)



GRAPHIC SCALE

SCALE: 1" = 20'

IRRIGATION NOTES

- INSTALL NEW VALVES AND VALVE BOXES PER DETAIL. SPLICE WIRES FROM EXISTING TO NEW LOCATION USING JM DBRY-6 CONNECTORS OR APPROVED EQUAL. INCLUDE 10" MIN. PIGTAIL IN THE PULL BOXES.
- CONNECT THE NEW 1-1/2" IRRIGATION MAIN TO THE EXISTING MAIN THAT GOES UNDER THE ASPHALT TO THE NEXT MEDIAN AND INSTALL NEW CONTROL WIRES.
- INSTALL NEW 1-1/2" IRRIGATION MAIN AND CONTROL WIRES.
- PROVIDE AND INSTALL BACKFLOW PREVENTER CAGE AND CONCRETE PAD, PER DETAIL.
- EXISTING UTILITIES AND CONDITIONS: PRIOR TO CUTTING INTO THE SOIL OR PAVING, LOCATE ALL CABLES, CONDUITS, AND OTHER UTILITIES THAT ARE COMMONLY FOUND UNDERGROUND, AND TAKE PROPER PRECAUTIONS NOT TO DAMAGE OR DISTURB SUCH IMPROVEMENTS. IF A CONFLICT EXISTS BETWEEN SUCH OBSTACLES AND THE PROPOSED WORK, PROMPTLY NOTIFY THE CITY ENGINEER FOR RESOLUTION.
- THE INSTALLATION OF THE IRRIGATION SYSTEM SHALL CONFORM TO ALL APPLICABLE REGULATIONS AND CODES.
- LOCATE AND CONFIRM ALL EXISTING BACKFLOW PREVENTERS, CONTROL CABINETS, AND CONTROL WIRES ARE IN GOOD WORKING ORDER.
- THE IRRIGATION SYSTEM IS SHOWN DIAGRAMMATICALLY FOR CLARITY. LOCATE ALL VALVES AND VALVE BOXES WITHIN 6" OF THE MEDIAN CURB. LOCATE PRESSURE MAINLINES WITHIN 18" OF THE MEDIAN CURB.
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CITY OF COSTA MESA  
FAIRVIEW ROAD REHABILITATION  
MEDIAN IRRIGATION PLAN

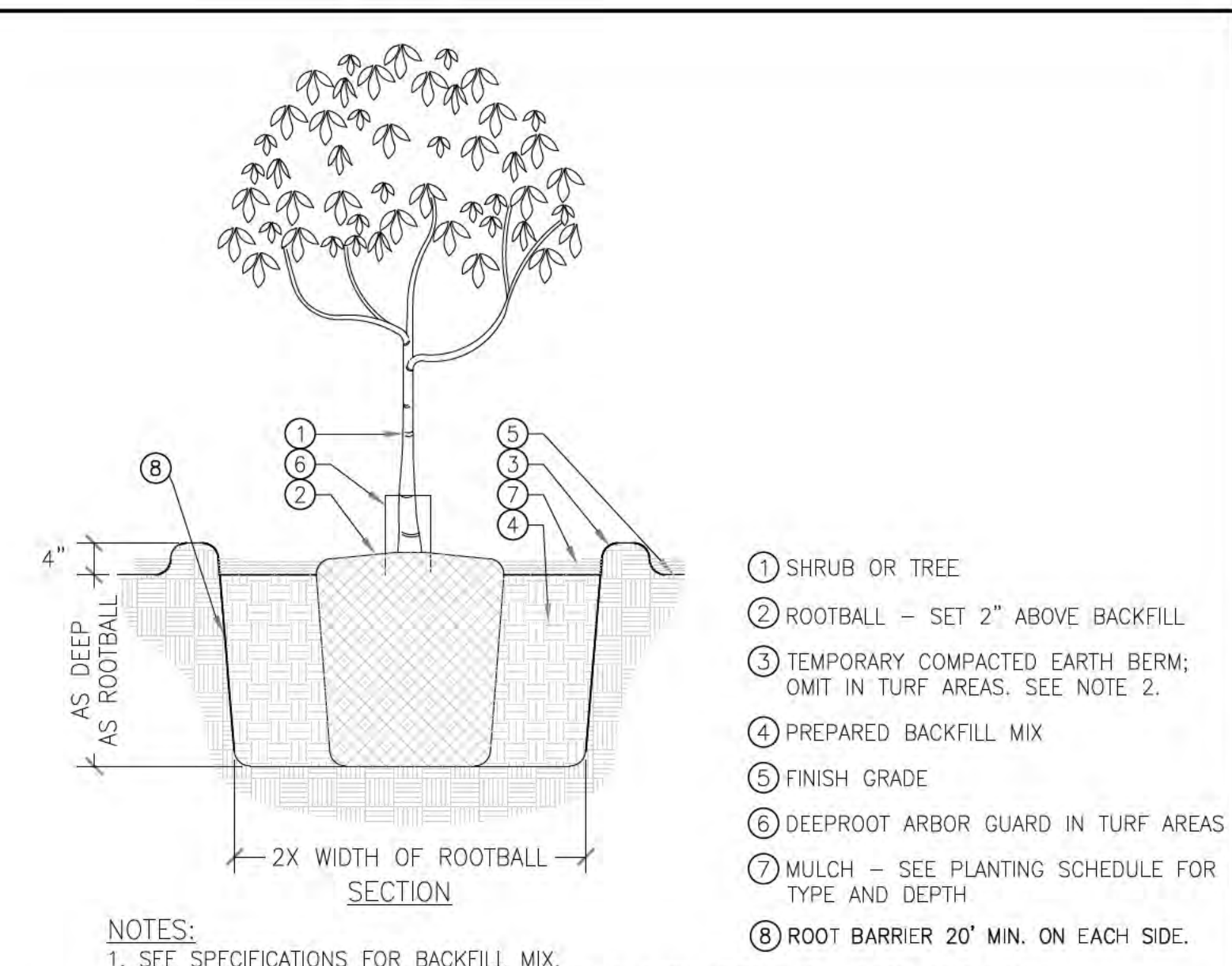
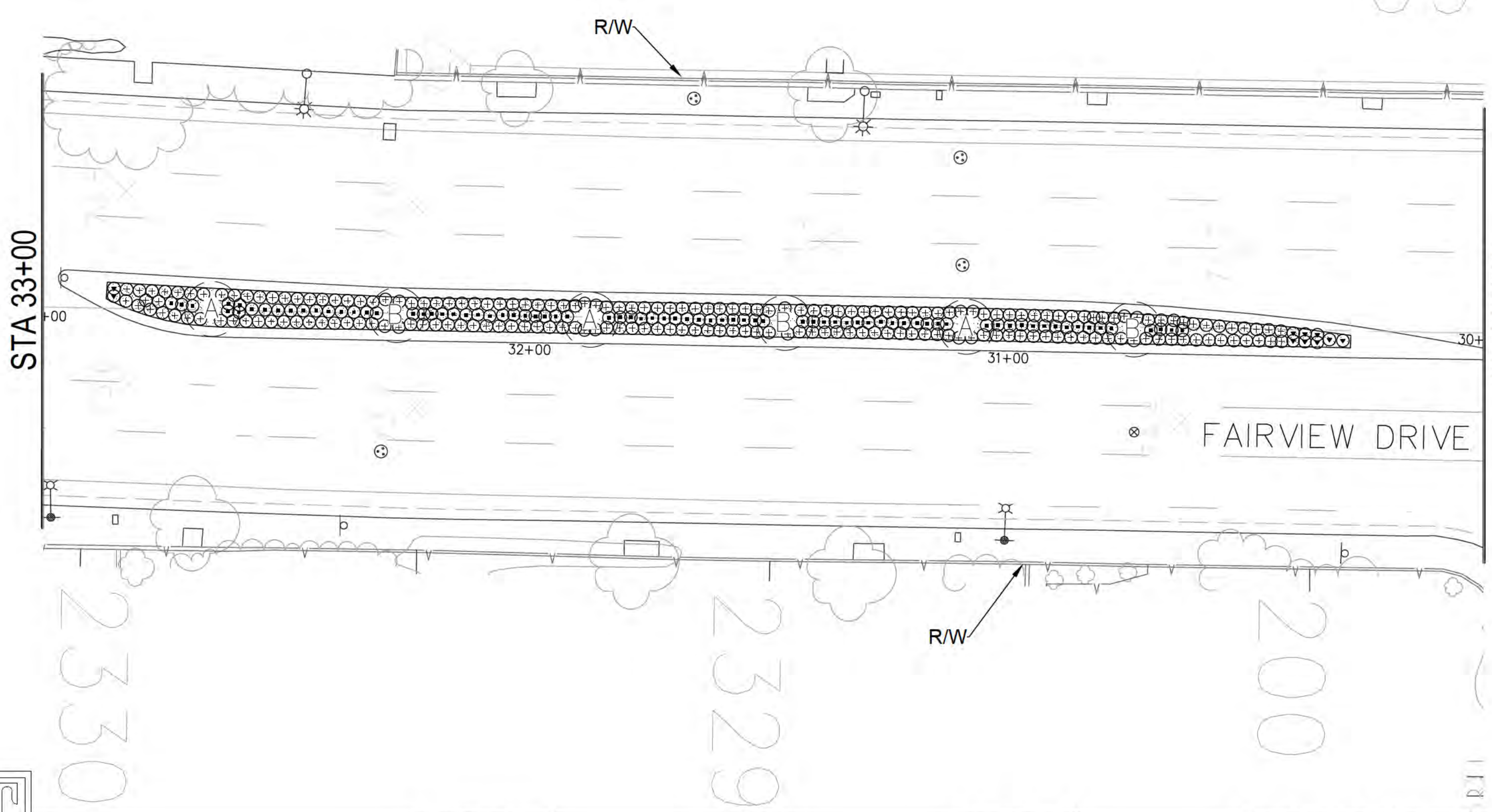
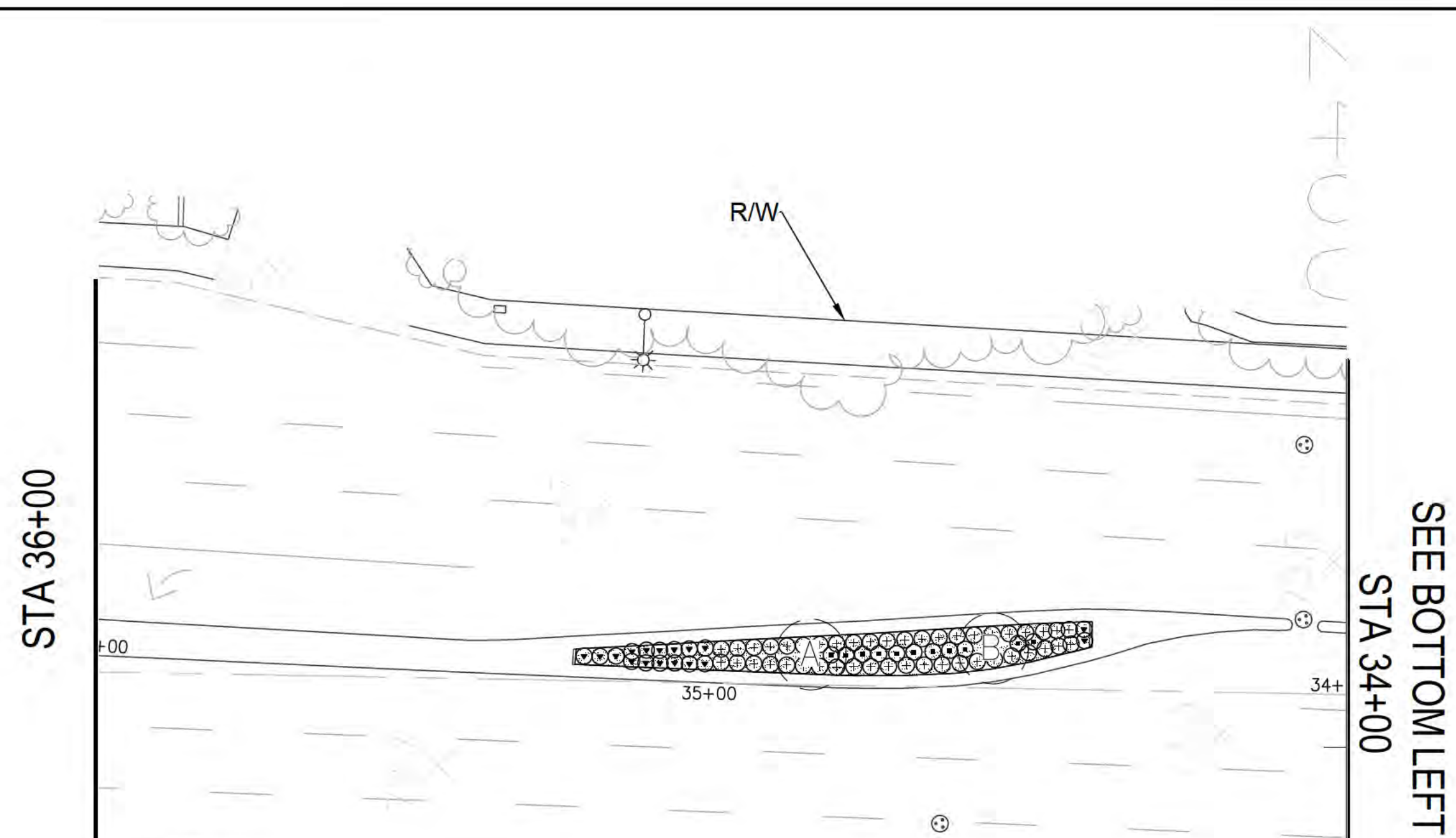
SHEET  
MI-4.0  
SHT 13  
OF 31 SHTS

Plans Drawn By: Mohammad Alshani  
Plans Dated: 12/10/2024



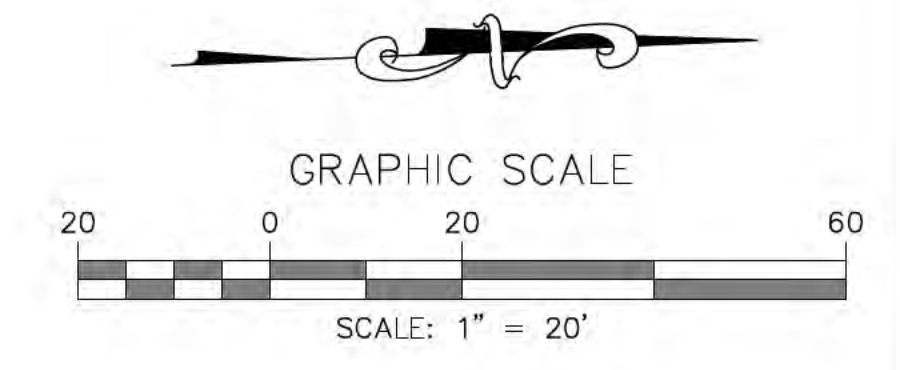






**1 TREE OR SHRUB PLANTING**  
N.T.S

PLANT SCHEDULE							
TREES	CODE	BOTANICAL NAME / COMMON NAME	CONT	SPACE	ZONE*	MAX HTXWD	QTY
(A)		LAGERSTROEMIA FAURIEI 'MUSKOGEE' / MUSKOGEE CRAPE MYRTLE TREE	36" BOX	PER PLAN			21
(B)		LAGERSTROEMIA FAURIEI 'NATCHEZ' / NATCHEZ CRAPE MYRTLE TREE	36" BOX	PER PLAN			19
SHRUBS	CODE	BOTANICAL NAME / COMMON NAME	CONT	SPACING	ZONE*	MAX HTXWD	QTY
(+)		CARISSA 'GREEN CARPET' / NATAL PLUM	5 GAL	3' O.C.	L/0.3	2.5'X2'	1100
(A)		DIANELLA REVOLUTA 'LITTLE REV' / LITTLE REV FLAX LILY	5 GAL	2.0' O.C.	L/0.2	1.5'X2'	110
(B)		LIRIOPE MUSCARI 'BIG BLUE' / LILY TURF	5 GAL	2.0' O.C.	L/0.2	2.5'X2.5'	2200



MARK	BY	DATE	REVISIONS	APPR.	DATE

CITY OF COSTA MESA  
ACCEPTED BY: *Seung Yang* Date: 3/25/2025  
SEUNG YANG P.E., City Engineer  
RE No. 66786 Exp Date: 9/30/26  
ACCEPTANCE AS TO CONFORMANCE  
WITH APPLICABLE CITY STANDARDS AND  
PRACTICES



INTEREST CONSULTING GROUP  
(714) 899-9039  
1 JENNER SUITE 160  
IRVINE, CA 92618  
REVIEWED BY: *Tyrone Chesaneck*  
TYRONE CHESANECK

AERIAL IMAGERY FROM  
GOOGLE EARTH PRO ON MARCH  
2023.  
SCALE:  
H: As Noted V: As Noted

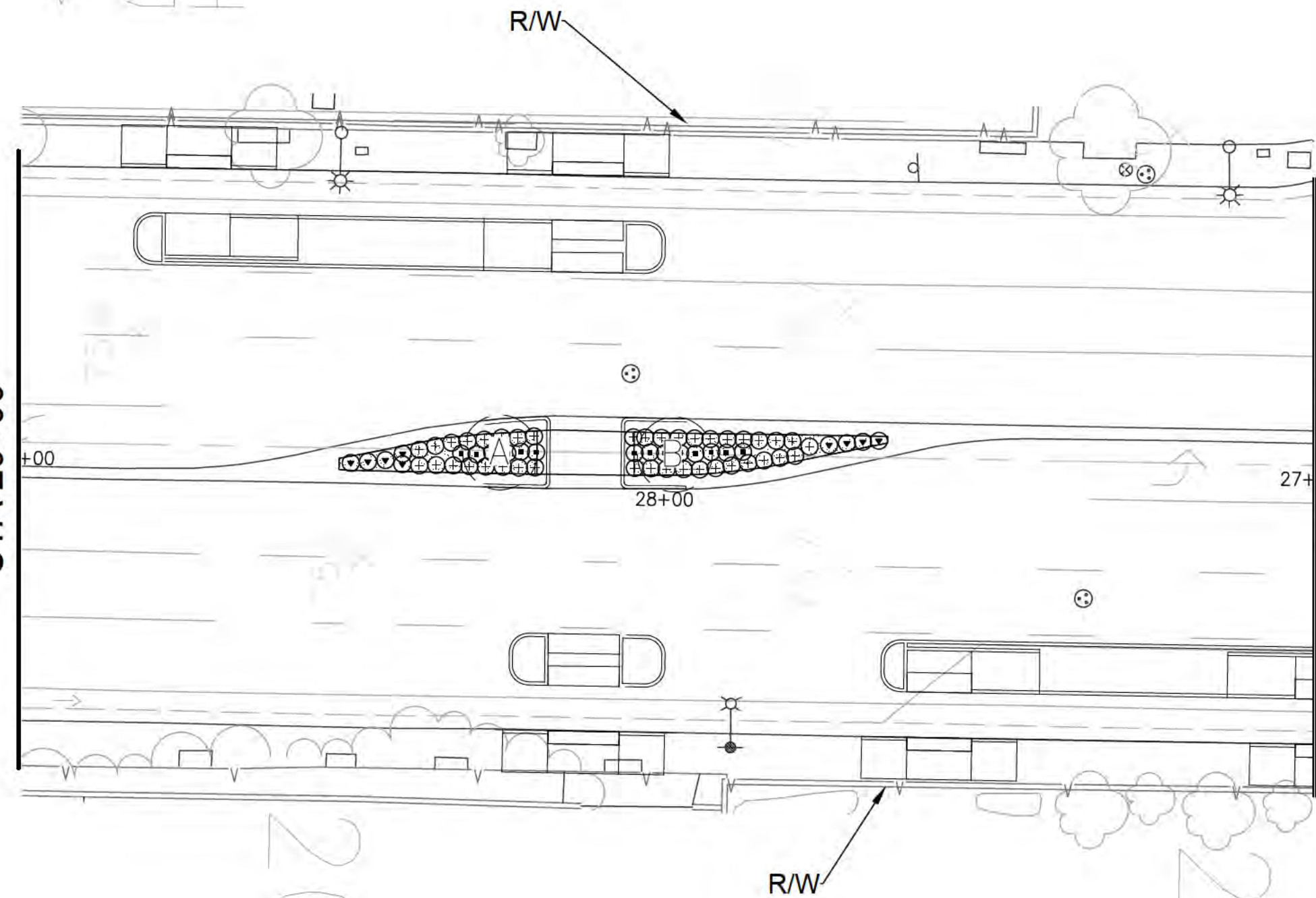
CITY OF COSTA MESA  
FAIRVIEW ROAD REHABILITATION  
MEDIAN PLANTING PLAN

SHEET  
MP-1.0  
SHT 15  
OF 31 SHTS



SEE SHEET MP-1.0 BOTTOM RIGHT

STA 29+00

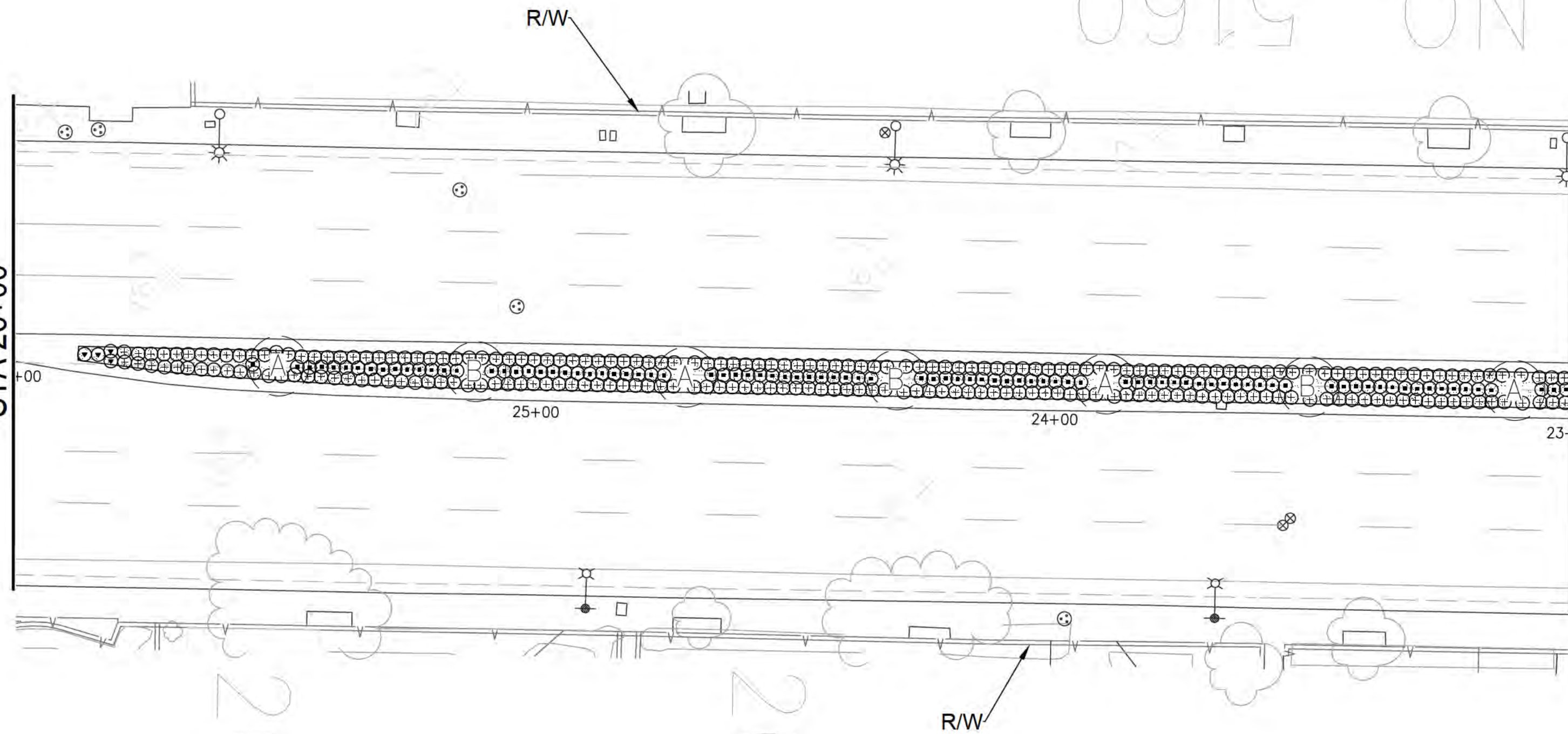


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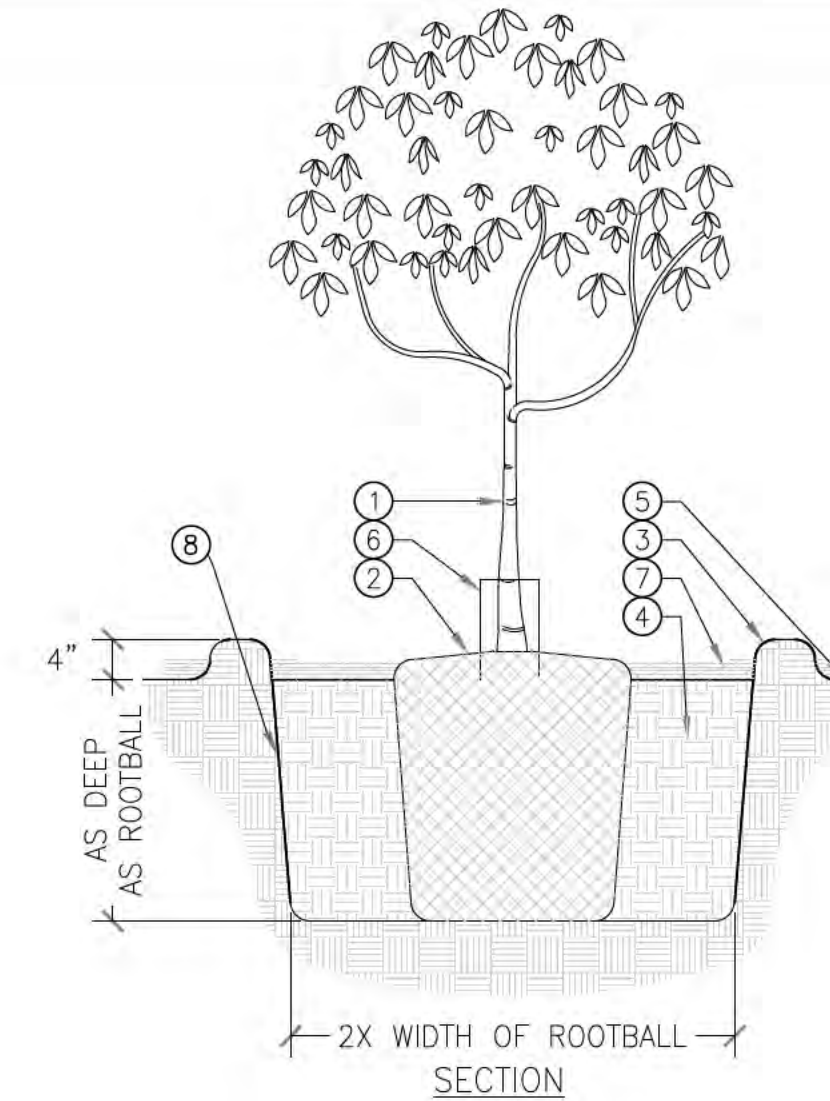
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STA 26+00



SEE SHEET MP-3.0 TOP LEFT

STA 23+00



- ① SHRUB OR TREE  
② ROOTBALL — SET 2" ABOVE BACKFILL  
③ TEMPORARY COMPACTED EARTH BERM; OMIT IN TURF AREAS. SEE NOTE 2.  
④ PREPARED BACKFILL MIX  
⑤ FINISH GRADE  
⑥ DEEPROOT ARBOR GUARD IN TURF AREAS  
⑦ MULCH — SEE PLANTING SCHEDULE FOR TYPE AND DEPTH  
⑧ ROOT BARRIER 20' MIN. ON EACH SIDE.

NOTES:  
1. SEE SPECIFICATIONS FOR BACKFILL MIX.  
2. COMPACTED EARTH BERM SHALL BE RAKED SMOOTH AFTER INITIAL DEEP IRRIGATION.

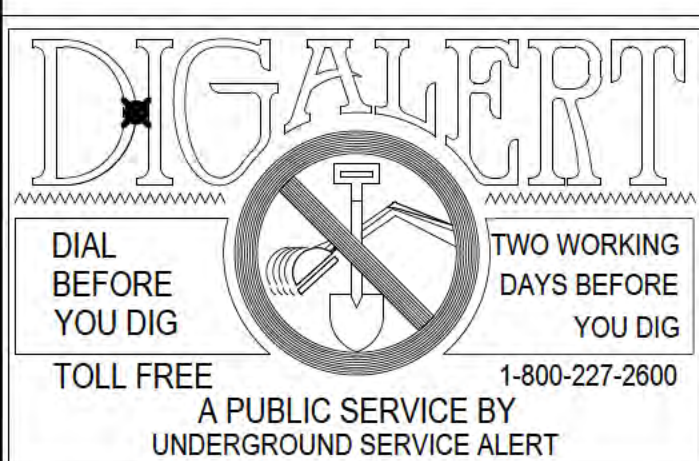
### 1 TREE OR SHRUB PLANTING

#### PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME / COMMON NAME	CONT	SPACE	ZONE*	MAX HTXWD	QTY
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GRAPHIC SCALE  
20 0 20 60  
SCALE: 1" = 20'



MARK	BY	DATE	REVISIONS	APPR.	DATE

CITY OF COSTA MESA  
ACCEPTED BY:  
Date:  
SEUNG YANG P.E., City Engineer  
RE No. 66786 Exp Date: 9/30/26  
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WITH APPLICABLE CITY STANDARDS AND  
PRACTICES

SEAL-ENGINEER:

Interwest Consulting  
Group  
(714) 899-9039  
1 JENNER SUITE 160  
IRVINE, CA 92618  
REVIEWED BY: *Tyrone Chesaneh*  
TYRONE CHESANEK

AERIAL IMAGERY FROM  
GOOGLE EARTH PRO ON MARCH  
2023.  
SCALE:  
H: As Noted V: As Noted

CITY OF COSTA MESA  
FAIRVIEW ROAD REHABILITATION  
MEDIAN PLANTING PLAN

SHEET  
MP-2.0  
SHT 16  
OF 31 SHTS

Plans Drawn By: Mohammad Alshami  
Plans Dated: 12/10/2024





SEE TOP RIGHT  
STA 17+50

FAIRVIEW DRIVE

17+00 16+00 15+00

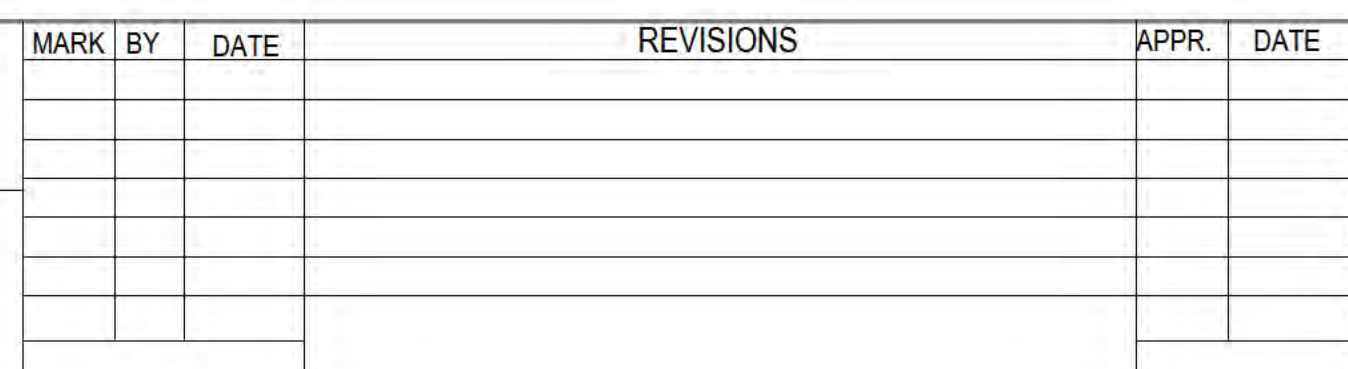
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R/W

GRAPHIC SCALE

20 0 20 60

SCALE: 1" = 20'



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2023.

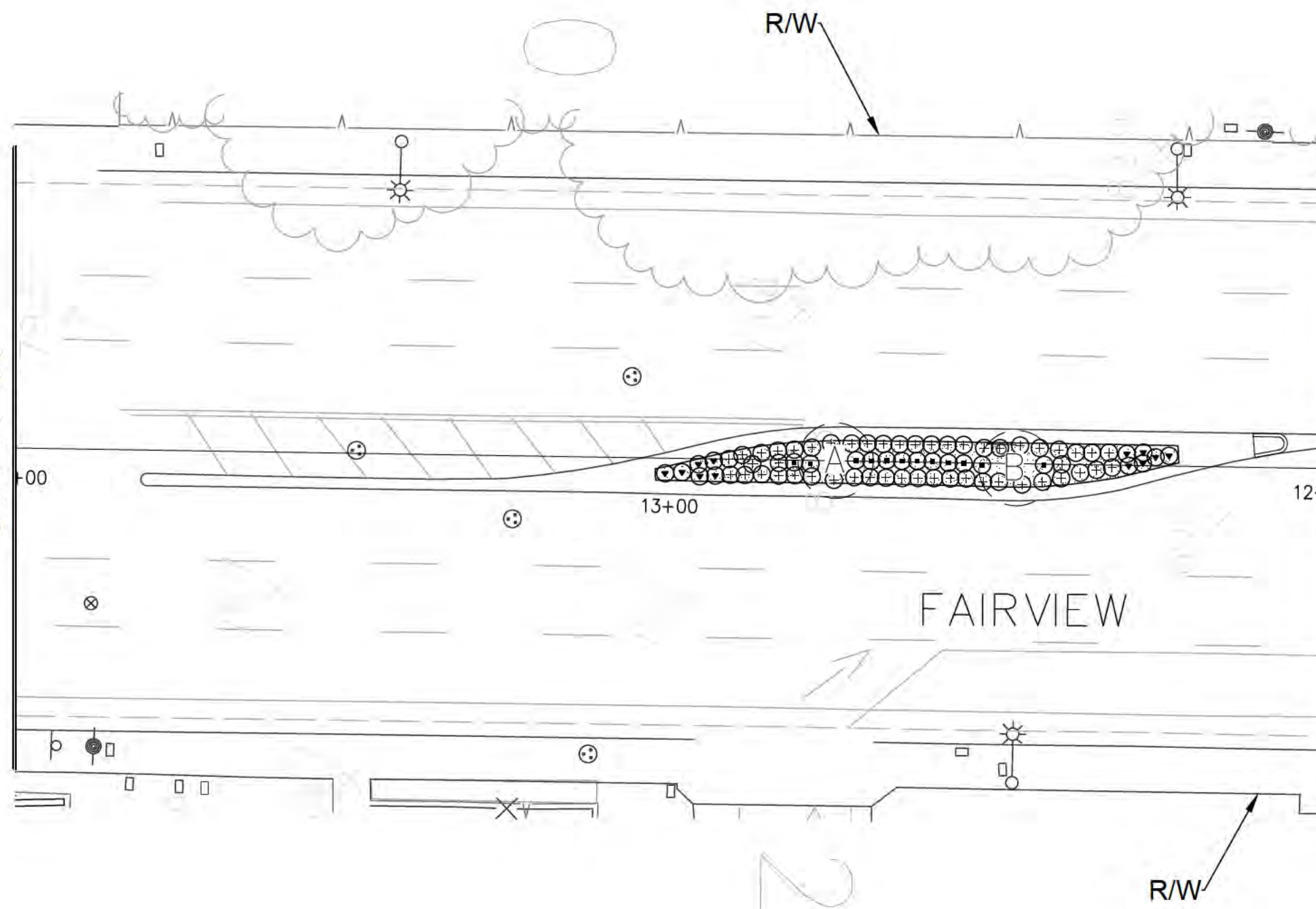
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H. As Noted V. As Noted

SHEET  
MP-3.0  
SHT 17  
OF 31 SHTS



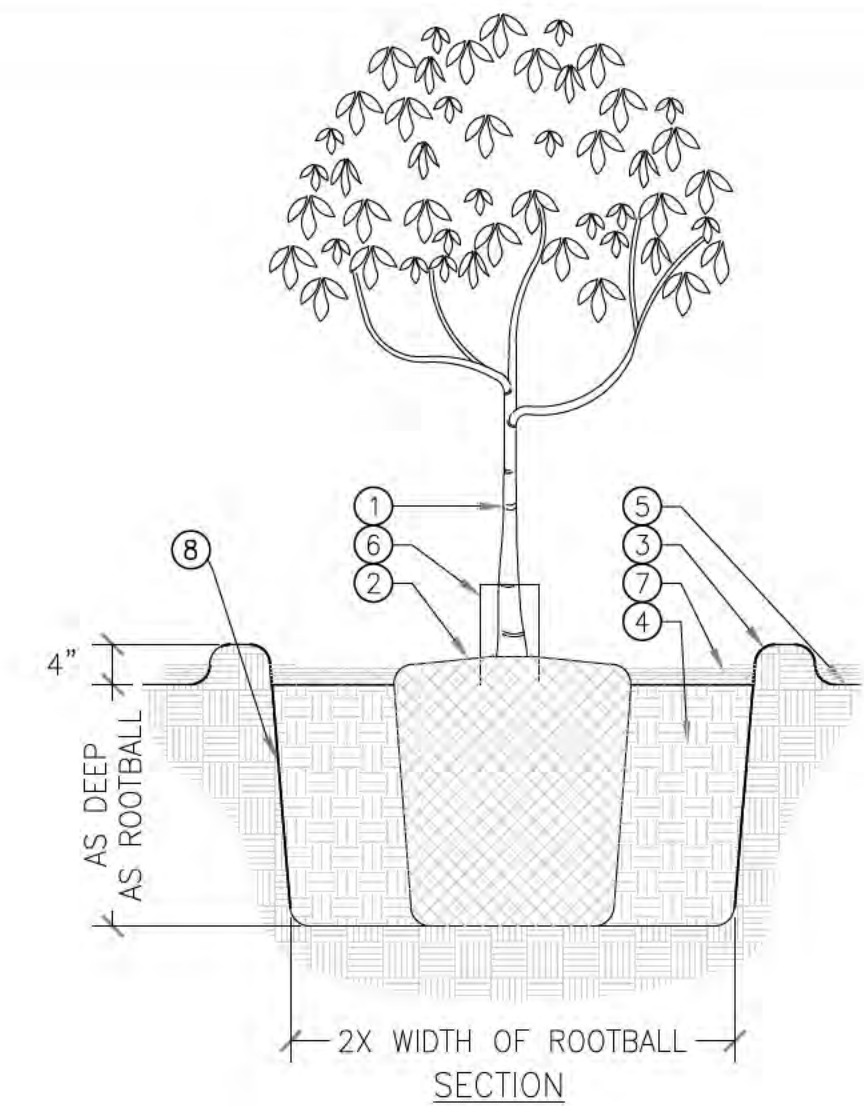
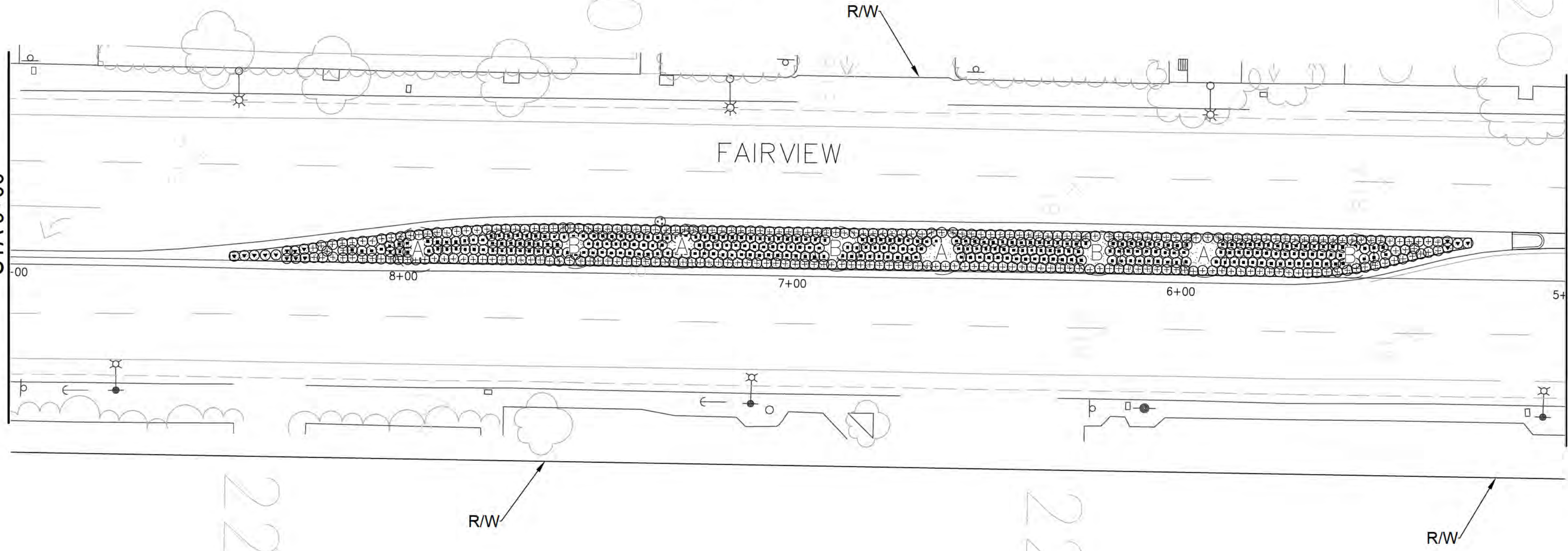
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STA 14+00

SEE TOP RIGHT  
STA 12+00



SEE BELOW LEFT  
STA 9+00

STA 5+00



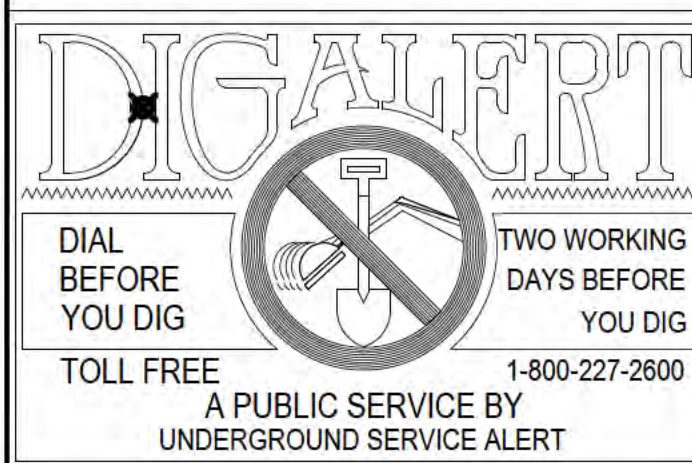
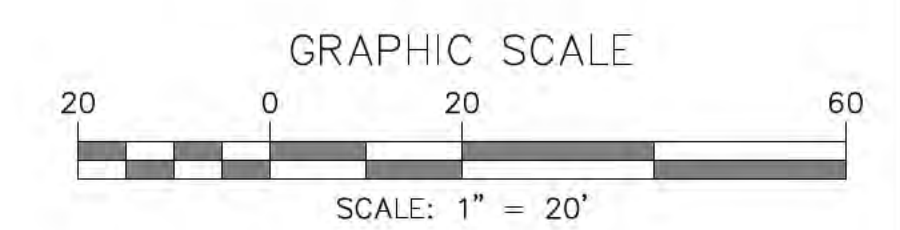
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N.T.S

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MARK	BY	DATE	REVISIONS	APPR.	DATE

CITY OF COSTA MESA  
ACCEPTED BY:  
Date:  
SEUNG YANG P.E., City Engineer  
RE No. 66786 Exp Date: 9/30/26  
ACCEPTANCE AS TO CONFORMANCE  
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SEAL-ENGINEER:

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REVIEWED BY: *Tyrone Chesane*  
TYRONE CHESANEK

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CITY OF COSTA MESA  
FAIRVIEW ROAD REHABILITATION  
MEDIAN PLANTING PLAN

SHEET  
MP-4.0  
SHT 18  
OF 31 SHTS

Plans Drawn By: Mohammad Alshami  
Plans Dated: 12/10/2024





FAIRVIEW ROAD REHABILITATION PROJECT  
FROM FAIR DRIVE TO NEWPORT BLVD.  
TRANSPORTATION IMPROVEMENTS  
STATE FUNDED PROJECT NO. CRASL-5312(106)  
CITY PROJECT NO. 25-10

PROJECT AREA



VICINITY MAP  
NOT TO SCALE

SHEET INDEX		
SHEET NO.	DRAWING NO.	SHEET NAME
19	G-1	TITLE SHEET
20	G-2	GENERAL NOTES
21	CL-1	STREET IMPROVEMENT PLAN
22	DC-1	CONSTRUCTION DETAILS - 1 OF 4
23	DC-2	CONSTRUCTION DETAILS - 2 OF 4
24	DC-3	CONSTRUCTION DETAILS - 3 OF 4
25	DC-4	CONSTRUCTION DETAILS - 4 OF 4
26	TS-1	TRAFFIC SIGNALS PLAN
27	TP-1	SIGNING AND STRIPING PLAN - 1 OF 2
28	TP-2	SIGNING AND STRIPING PLAN - 2 OF 2
29	TP-3	SIGNING SCHEDULE

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF [STATE].  
LICENSE NO. \_\_\_\_\_  
EXPIRATION DATE: \_\_\_\_\_

REUSE OF DOCUMENTS

ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.

DSGN					
DR					
CHK					
APVD	NO.	DATE	REVISION	BY	APVD

PREPARED BY : TDG Engineering, Inc., an affiliate of:

527 W 7TH STREET, SUITE 701  
LOS ANGELES, CA 90014  
PHONE: 203.257.8680  
FAX: 203.257.8680  
www.tooledesign.com  
8/30/2024  
DATE

FAIRVIEW ROAD ACTIVE  
TRANSPORTATION  
IMPROVEMENTS

COVER SHEET

CITY OF COSTA MESA

PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION

RECOMMENDED  
BY: RAJA SETHURAMAN, PUBLIC WORKS DIRECTOR, T.E. 1816  
DATE  
APPROVED  
BY: SEUNG YANG, CITY ENGINEER, R.C.E. #66786  
DATE 3/25/2025

PROJECT NO.  
02LAX.00157.00

DATE  
8/29/2024

DRAWING NO.  
G-1

SHEET NO.  
19 OF 31

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8/29/2024



H:\G00002LAX.00157.00\_P\_Fairview Road Active Transportation\PRODUCTION\CAD\PLANS\100%02LAX.00157.00\_G\_100%.dwg  
8/29/2024

GENERAL NOTES

- 1) ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 2) PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD. IF FIELD CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY ENGINEER.
- 3) ELEVATIONS AND LOCATIONS OF ALL EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO START OF ANY CONSTRUCTION AFFECTING SAID LINES. CONTACT UNDERGROUND SERVICE ALERT (U.S.A.) AT 800-227-2600 AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION.
- 4) EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATION BASED UPON RECORD INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. EXISTING UNDERGROUND SANITARY SEWER LATERALS AND GAS LATERALS MAY NOT BE ALL SHOWN ON THE DRAWINGS. THE ELEVATION OF ANY EXISTING UTILITIES, INCLUDING UNDERGROUND GAS, ELECTRIC, TELEPHONE AND WATER ARE UNKNOWN. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AT LEAST 2 WORKING DAYS IN ADVANCE OF CONSTRUCTION TO FIELD LOCATE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THOSE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF CONTRACTOR'S FAILURE TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION IN THE VICINITY SHALL BE BORNE BY THE CONTRACTOR.
- 5) THE CONTRACTOR SHALL COORDINATE ITS WORK WITH THE INSTALLATION OF FACILITIES BY SOUTHERN CALIFORNIA GAS (323-850-4908), SOUTHERN CALIFORNIA EDISON (800-611-1911), AT&T (510-645-2929), VERIZON (909-421-3339), AND TIME WARNER (818-779-2673). THE LOCATION OF EXISTING UTILITIES MAY NECESSITATE DESIGN ADJUSTMENTS. HOWEVER, ALL REVISIONS TO THIS PLAN MUST BE REVIEWED AND APPROVED BY THE CITY ENGINEER PRIOR TO CONSTRUCTION AND SHALL BE ACCURATELY SHOWN ON REVISED PLANS STAMPED AND SIGNED BY CITY ENGINEER PRIOR TO THE INSTALLATION OF THE IMPROVEMENTS. 6) THE CONTRACTOR SHALL RESTORE ALL DAMAGED, REMOVED OR OTHERWISE DISTURBED WALLS, FENCES, SERVICES, UTILITIES, IMPROVEMENTS OR FEATURES OF WHATEVER NATURE, DUE TO CONTRACTOR'S WORK.
- 7) ALL SURVEY MONUMENTS WITHIN THE CONSTRUCTION LIMITS MUST BE PERPETUATED IN ACCORDANCE WITH THE PROFESSIONAL LAND SURVEYORS ACT OF THE STATE OF CALIFORNIA.
- 8) FOR LANE CLOSURES, THE CONTRACTOR SHALL PREPARE A TRAFFIC CONTROL PLAN AND OBTAIN APPROVAL OF THE CITY ENGINEER BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE FLAGMEN AND CONES OR BARRICADES, AS NECESSARY, TO CONTROL TRAFFIC AND PREVENT HAZARDOUS CONDITIONS PER THE CALIFORNIA STANDARD PLANS, SPECIFICATIONS, AND MANUAL ON TRAFFIC CONTROL DEVICES, LATEST EDITION.
- 9) PEDESTRIAN, PUBLIC ACCESSES, AND WHEELCHAIR ACCESSES SHALL BE MAINTAINED DURING THE CONSTRUCTION TO THE SATISFACTION OF THE CITY ENGINEER.
- 10) NO TRENCHES OR HOLES SHALL BE LEFT OPEN OVERNIGHT; CONTRACTOR SHALL USE STEEL PLATING OR HOT-MIX ASPHALT AS REQUIRED TO PROTECT OPEN TRENCHES OVERNIGHT.
- 11) THE CONTRACTOR SHALL CONTROL DUST AT ALL TIMES AND SWEEP STREETS AS OFTEN AS NECESSARY DURING CONSTRUCTION AS REQUIRED BY THE CITY ENGINEER.
- 12) THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING CONSTRUCTION OF THIS PROJECT. THIS INCLUDES THE SAFETY OF ALL PERSONS AND PROPERTY, PURSUANT TO THE PROVISIONS OF OSHA AND ITS REGULATIONS FOR THE PROTECTION OF WORK, STRUCTURES, SHORING AND OTHER IMPROVEMENTS. THE REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
- 13) ALL SIGNAGE PLANS TO BE DRAFTED AND INSTALLED BY OTHERS
- 14) ALL REVISIONS TO THIS PLAN MUST BE REVIEWED AND APPROVED BY THE CITY ENGINEER PRIOR TO CONSTRUCTION AND SHALL BE ACCURATELY SHOWN ON REVISED PLANS STAMPED AND SIGNED BY THE CITY ENGINEER PRIOR TO THE INSTALLATION OF THE IMPROVEMENTS.

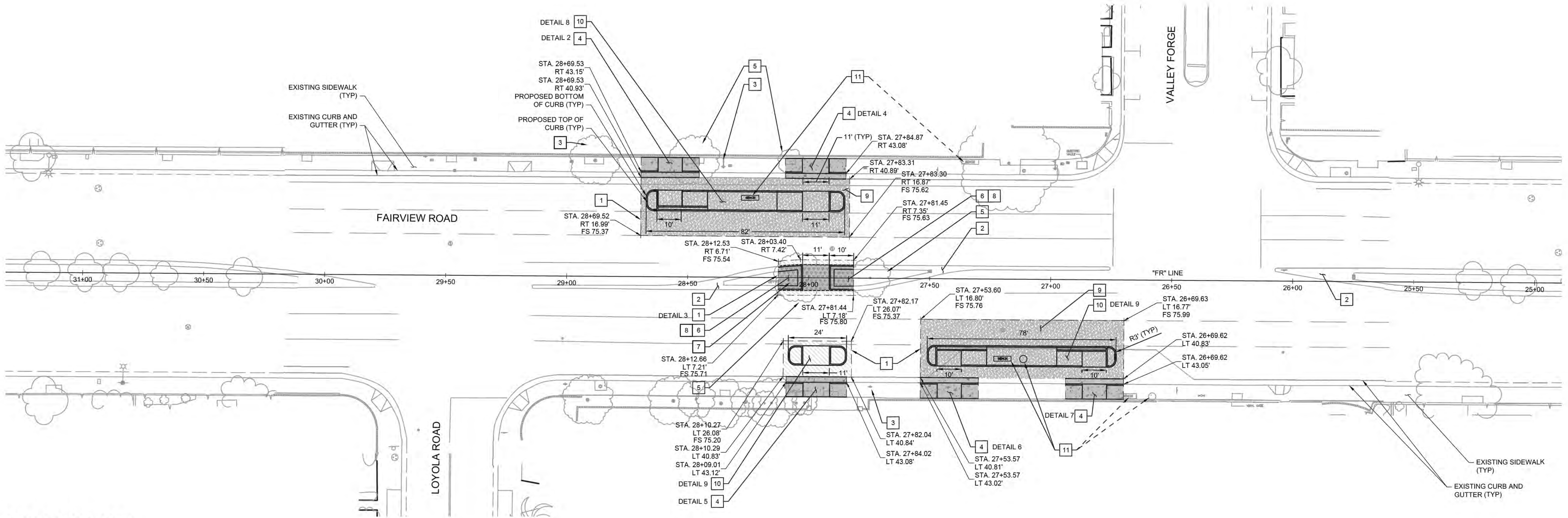
CONSTRUCTION NOTES

- 1) ALL DIMENSIONS ARE TO FACE OF CURB OR CENTERLINE OF PAVEMENT MARKING UNLESS OTHERWISE NOTED.
- 2) DIMENSIONS PROVIDED ON THESE PLANS ARE APPROXIMATE ONLY. LOCATIONS OF IMPROVEMENTS TO BE MARKED BY CONTRACTOR AND APPROVED BY CITY ENGINEER PRIOR TO INSTALLATION.
- 3) ALL CONSTRUCTION ACTIVITIES SHALL BE WITHIN THE RIGHT-OF-WAY LIMITS. CONTRACTOR TO VERIFY ALL RIGHTS-OF-WAY PRIOR TO CONSTRUCTION.
- 4) ALL EXISTING UTILITIES AND DRAINAGE FACILITIES ARE TO REMAIN UNLESS OTHERWISE NOTED.
- 5) THE CONTRACTOR SHALL REMOVE ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS UNLESS OTHERWISE NOTED.
- 6) ALL WORK SHALL CONFORM WITH THE 2014 CA MUTCD STANDARDS AND 2023 CALTRANS STANDARD PLAN AND STANDARD SPECIFICATIONS.
- 7) ALL APPLICABLE WORK AND MATERIALS SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE CITY OF BEVERLY HILLS STANDARD TECHNICAL SPECIFICATIONS AND DETAILS.
- 8) UNLESS OTHERWISE NOTED, ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED MARKINGS SHALL BE ERADICATED. ERADICATION SHALL BE PERFORMED USING WATER BLASTING OR OTHER NON-DESTRUCTIVE METHOD APPROVED BY THE CITY ENGINEER.
- 9) CONTRACTOR SHALL ARRANGE AND PAY FOR RESTRIPING IN KIND FOR ANY EXISTING STRIPING DISTURBED BY CONTRACTOR'S ACTIVITIES.

PROFESSIONAL CERTIFICATION		<div></div>		REUSE OF DOCUMENTS				PREPARED BY : TDG Engineering, Inc., an affiliate of:		CITY OF COSTA MESA		PROJECT NO.	
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF [STATE]. LICENSE NO. _____ EXPIRATION DATE: _____				ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.				<div></div> <div>527 W 7TH STREET, SUITE 701 LOS ANGELES, CA 90014 PHONE: 203.257.8680 FAX: 203.257.8680 www.tooledesign.com 8/30/2024 DATE</div>		PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION		02LAX.00157.00	
										DATE		8/29/2024	
										DRAWING NO.		G-2	
		DSGN							FAIRVIEW ROAD ACTIVE TRANSPORTATION IMPROVEMENTS		SHEET NO.		
		DR							GENERAL NOTES AND LEGEND		20 OF 31		
		CHK											
		APVD	NO.	DATE	REVISION	BY	APVD						
									RECOMMENDED BY: RAJA SETHURAMAN, PUBLIC WORKS DIRECTOR, T.E. 1816		DATE		
									APPROVED BY: SEUNG YANG, CITY ENGINEER, R.C.E. #66786		DATE		



H:\G000002\LAX.00157.00\_P\_Fairview Road Active Transportation\PRODUCTION\CAD\PLANS\100\02\LAX.00157.00\_CD\_100%.dwg  
8/29/2024

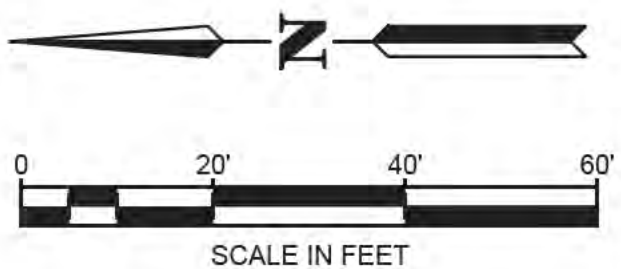


**CONSTRUCTION NOTES:**

- 1 SAW CUT BOUNDARIES
- 2 EXISTING RAISED MEDIAN TO REMAIN IN PLACE
- 3 PROTECT IN PLACE
- 4 INSTALL CURB RAMP CASE C PER CALTRANS STANDARD PLAN NO. A88A (T=4")
- 5 REMOVE TREE
- 6 REGRADE EXISTING LANDSCAPE AREA
- 7 RELOCATE EXISTING IRRIGATION CONTROL VALVE
- 8 SALVAGE AND MODIFY IMPACTED IRRIGATION TO CONFORM TO PROPOSED LANDSCAPE AREA
- 9 CONSTRUCT CONCRETE BUS PAD PER BUS BAY PAVEMENT SECTION IN CITY OF COSTA MESA STANDARD DRAWING NO. 113
- 10 CONSTRUCT PEDESTRIAN ISLAND PER CONSTRUCTION DETAIL
- 11 RELOCATE EXISTING BUS BENCH AND DEBRIS RECEPTACLE

**LEGEND**

- REMOVAL OF EXISTING MEDIAN
- CONSTRUCT CONCRETE BUS PAD PER OCTA TRANSIT SUPPORTIVE DESIGN GUIDELINES
- REMOVE AND DISPOSE OF EXISTING CURB & GUTTER AND SIDEWALK
- REMOVE AND REPLACE EXISTING AGGREGATE BASE AND ASPHALT CONCRETE SURFACING
- REMOVE AND SALVAGE
- RELOCATE AND INSTALL



**PROFESSIONAL CERTIFICATION**

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EXPIRATION DATE: \_\_\_\_\_



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DSGN	DR	CHK	APVD	NO.	DATE	REVISION	BY	APVD

PREPARED BY : TDG Engineering, Inc., an affiliate of:



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FAX: 203.257.8680  
www.tooledesign.com  
8/30/2024  
DATE

**FAIRVIEW ROAD ACTIVE  
TRANSPORTATION  
IMPROVEMENTS**  
  
STREET IMPROVEMENT PLAN

**CITY OF COSTA MESA**

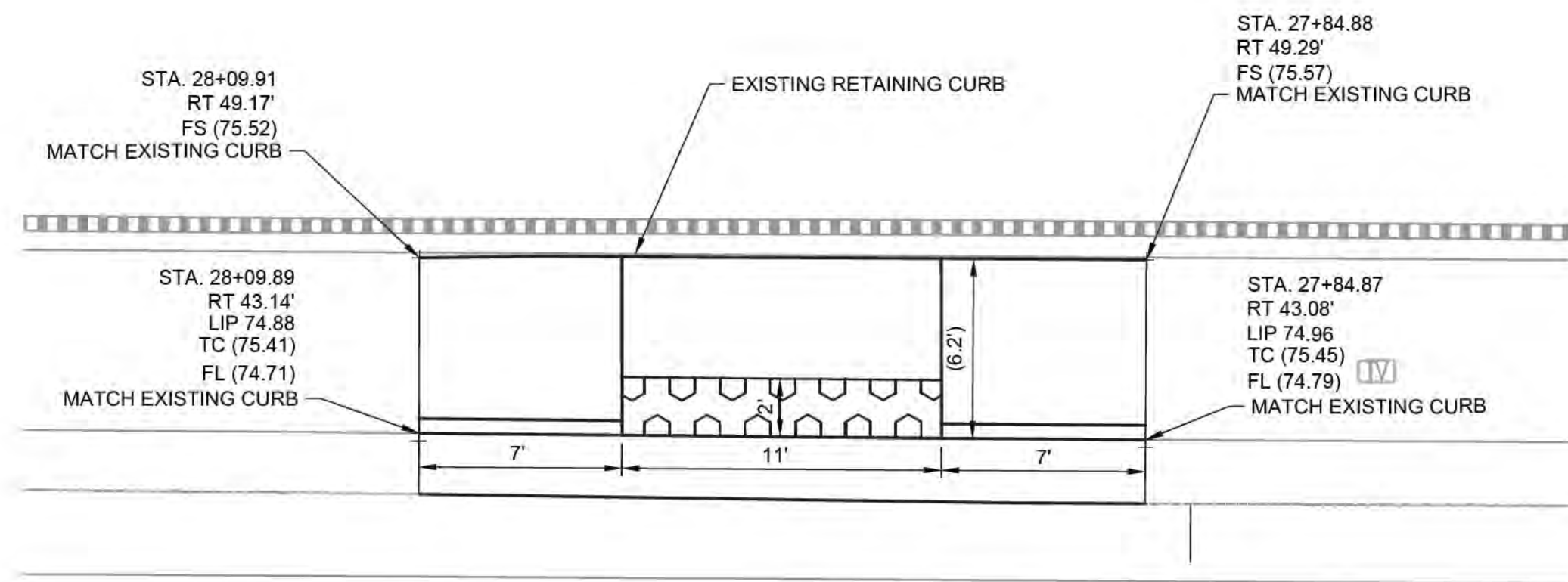
**PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION**

RECOMMENDED BY: RAJA SETHURAMAN, PUBLIC WORKS DIRECTOR, T.E. 1816	DATE	PROJECT NO. 02LAX.00157.00
APPROVED BY: SEUNG YANG, CITY ENGINEER, R.C.E. #66786	DATE	DATE 12/19/2023
		DRAWING NO. CL-1
		SHEET NO. 21 OF 31

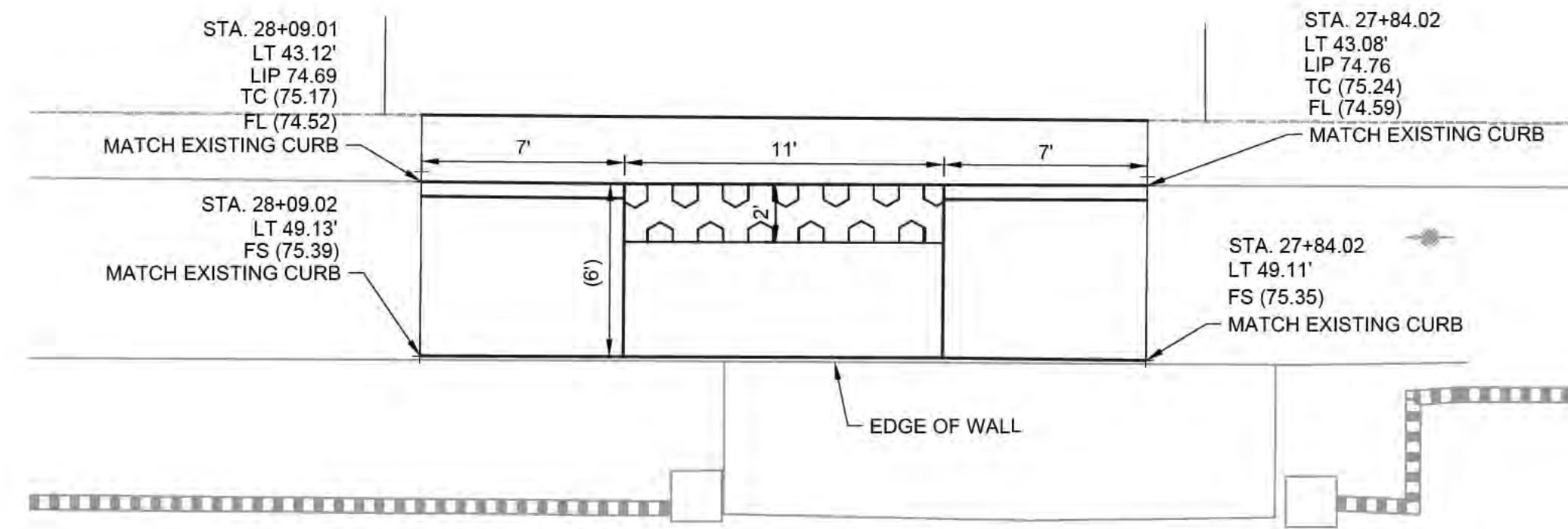




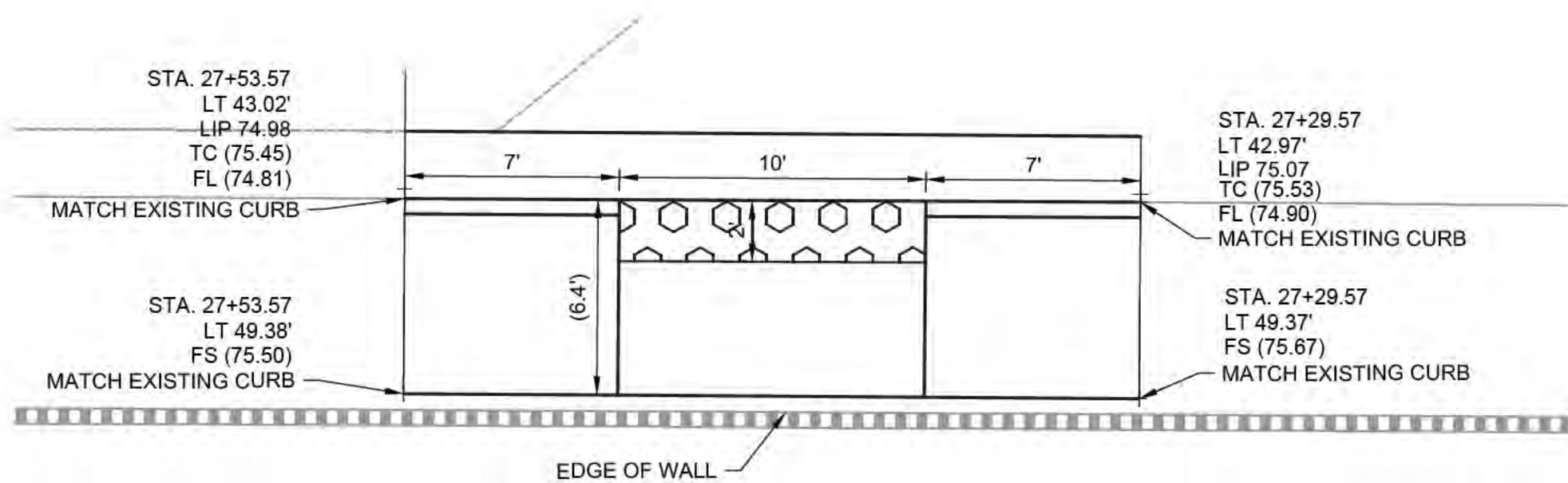




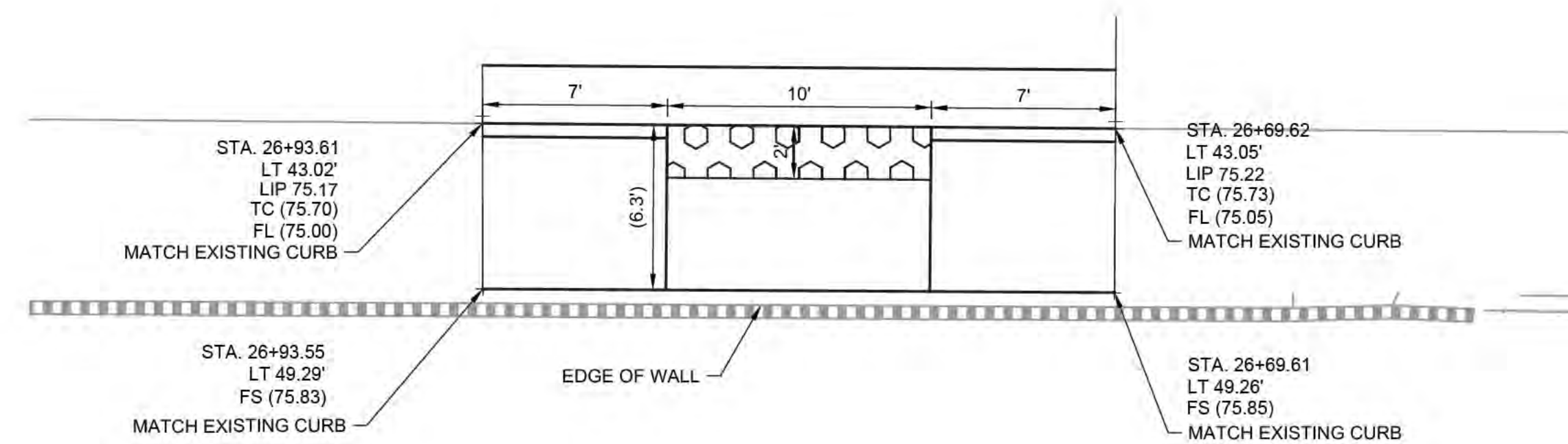
4 CURB RAMP NO.2 (CASE C)  
1"=5'



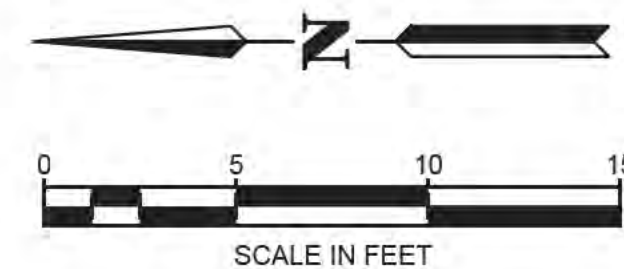
5 CURB RAMP NO.3 (CASE C)  
1"=5'



6 CURB RAMP NO.4 (CASE C)  
1"=5'



7 CURB RAMP NO.5 (CASE C)  
1"=5'



# PROFESSIONAL CERTIFICATION

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## REUSE OF DOCUMENTS

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DSGN					
DR					
CHK					
APVD					
	NO.	DATE	REVISION	BY	APVD

Revisions in red are for clarification only, these revisions do not  
change the design of the registered engineer.

PREPARED BY: TDG Engineering, Inc., an affiliate of:



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LOS ANGELES, CA 90014  
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8/30/2024  
DATE

FAIRVIEW ROAD ACTIVE  
TRANSPORTATION  
IMPROVEMENTS  
CONSTRUCTION DETAILS

CITY OF COSTA MESA

PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION

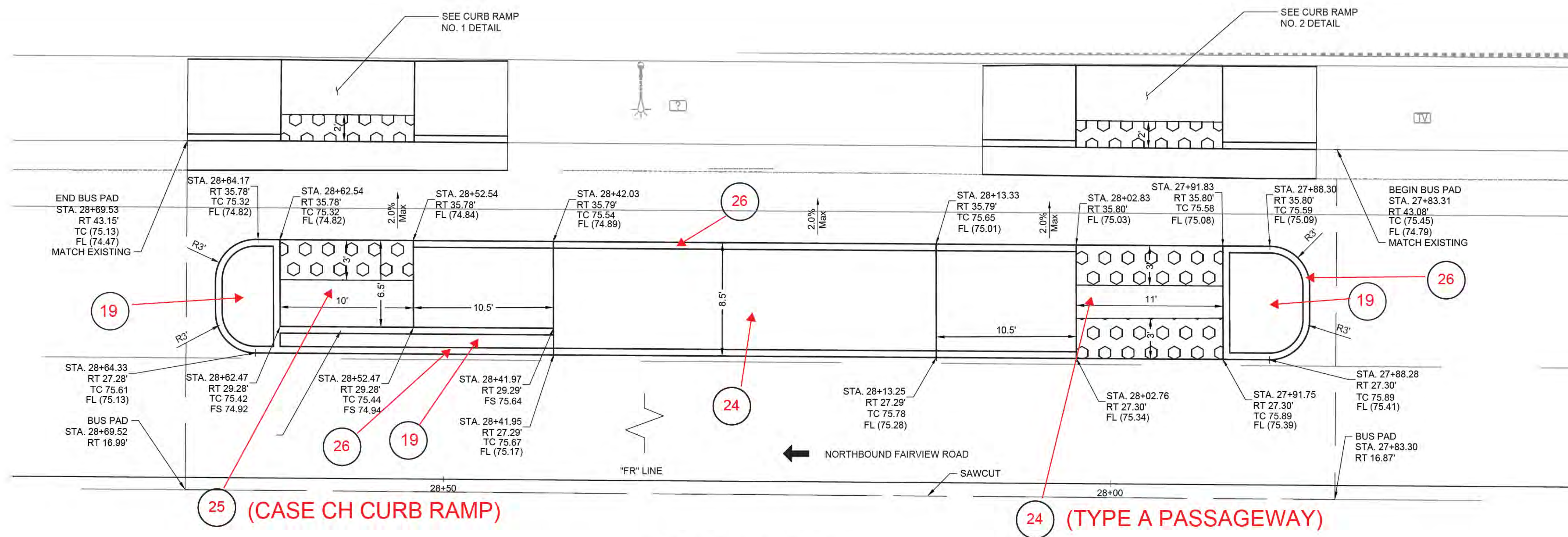
RECOMMENDED BY:	RAJA SETHURAMAN, PUBLIC WORKS DIRECTOR, T.E. 1816	DATE	
APPROVED BY:	SEUNG YANG, CITY ENGINEER, R.C.E. #66786	DATE	

PROJECT NO.	02LAX.00157.00
DATE	12/19/2023
DRAWING NO.	DC-2
SHEET NO.	23 OF 31

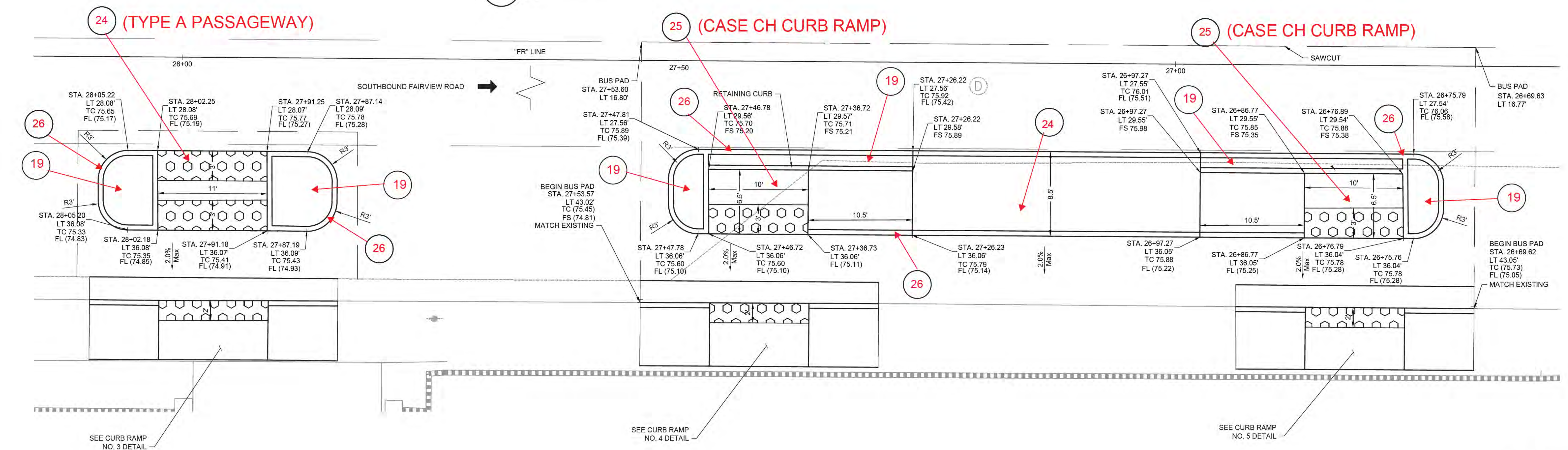


# CONSTRUCTION NOTES

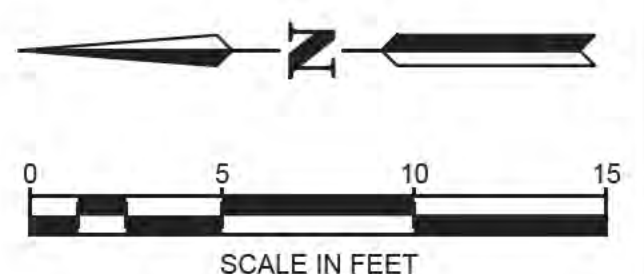
- 19 CONSTRUCT 4" STAMPED MEDIAN, SAND COLOR, OVER 4" SAND OVER COMPACTED SUB-GRADE TO 95% COMPACTION. MATCH EXISTING FINISH.
- 24 CONSTRUCT 4" CONCRETE PCC OVER 4" CMB PER CITY OF COSTA MESA STANDARD PLAN NO. 411, PURSUANT TO THE SPECIFICATIONS, & AS SHOWN ON THESE PLANS. TYPE A PASSAGEWAYS INCLUDE TRUNCATED DOMES; COLOR - FEDERAL YELLOW.
- 25 CONSTRUCT 4" CONCRETE CURB RAMPS OVER 4" CMB PER CALTRANS STANDARD PLAN NOS. A88A & A88B (CASE SHOWN ON PLANS) PURSUANT TO THE SPECIFICATIONS, & AS SHOWN ON THESE PLANS. TRUNCATED DOME COLOR - FEDERAL YELLOW. ADJUST PULL BOXES TO GRADE.
- 26 CONSTRUCT CURB TYPE A OVER 6" CMB PER OVER 6" CMB PER CITY OF COSTA MESA STANDARD PLAN NO. 311, PURSUANT TO THE SPECIFICATIONS, & AS SHOWN ON THESE PLANS.



## 8 E. BUS ISLAND 1"=5'



## 9 W. BUS ISLANDS 1"=5'



**PROFESSIONAL CERTIFICATION**

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LICENSE NO. \_\_\_\_\_

EXPIRATION DATE: \_\_\_\_\_



REUSE OF DOCUMENTS					
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DSGN		Revisions in red are for clarification only, these revisions do not change the design of the registered engineer.			
DR					
CHK					
APVD					
	NO.	DATE	REVISION	BY	APVD

PREPARED BY: TDG Engineering, Inc., an affiliate of:

**TOOLE**

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LOS ANGELES, CA 90014  
PHONE: 203.257.8680  
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8/30/2024  
DATE

**FAIRVIEW ROAD ACTIVE  
TRANSPORTATION  
IMPROVEMENTS**

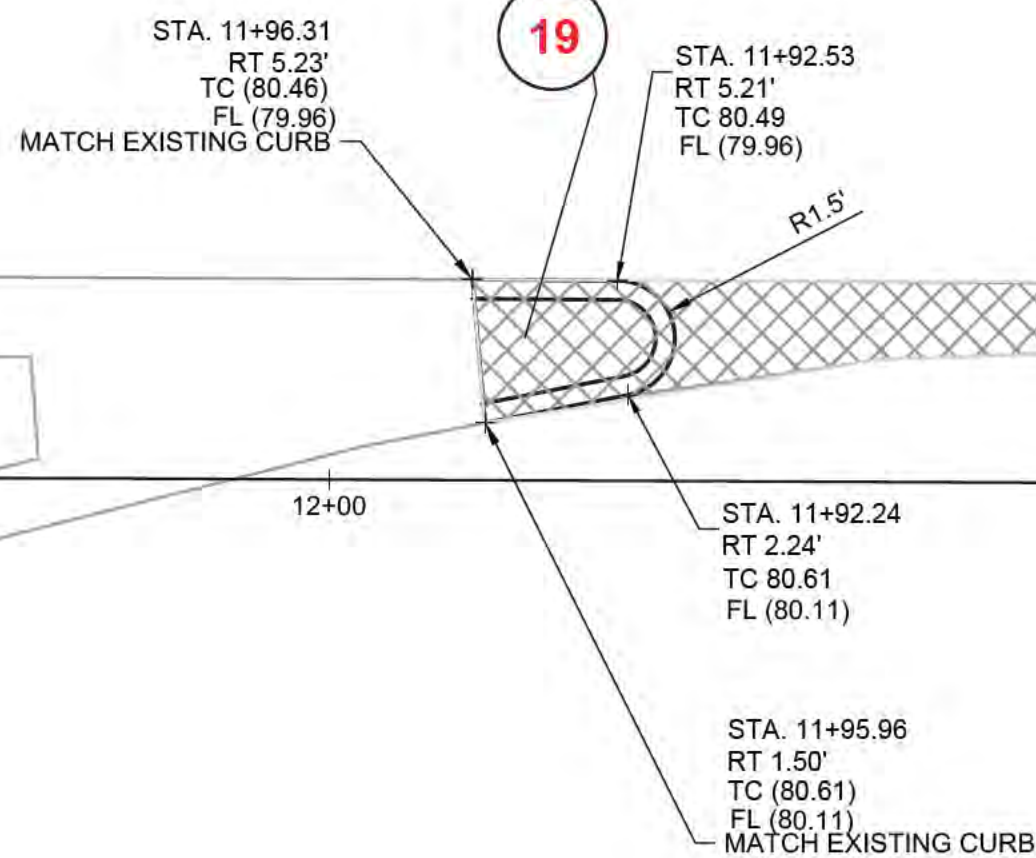
CONSTRUCTION DETAILS

CITY OF COSTA MESA		PROJECT NO.
PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION		02LAX.00157.00
RECOMMENDED BY:	RAJA SETHURAMAN, PUBLIC WORKS DIRECTOR, T.E. 1816	DATE
APPROVED BY:	SEUNG YANG, CITY ENGINEER, R.C.E. #66786	DATE
DRAWING NO.		DC-3
SHEET NO.		24 OF 31

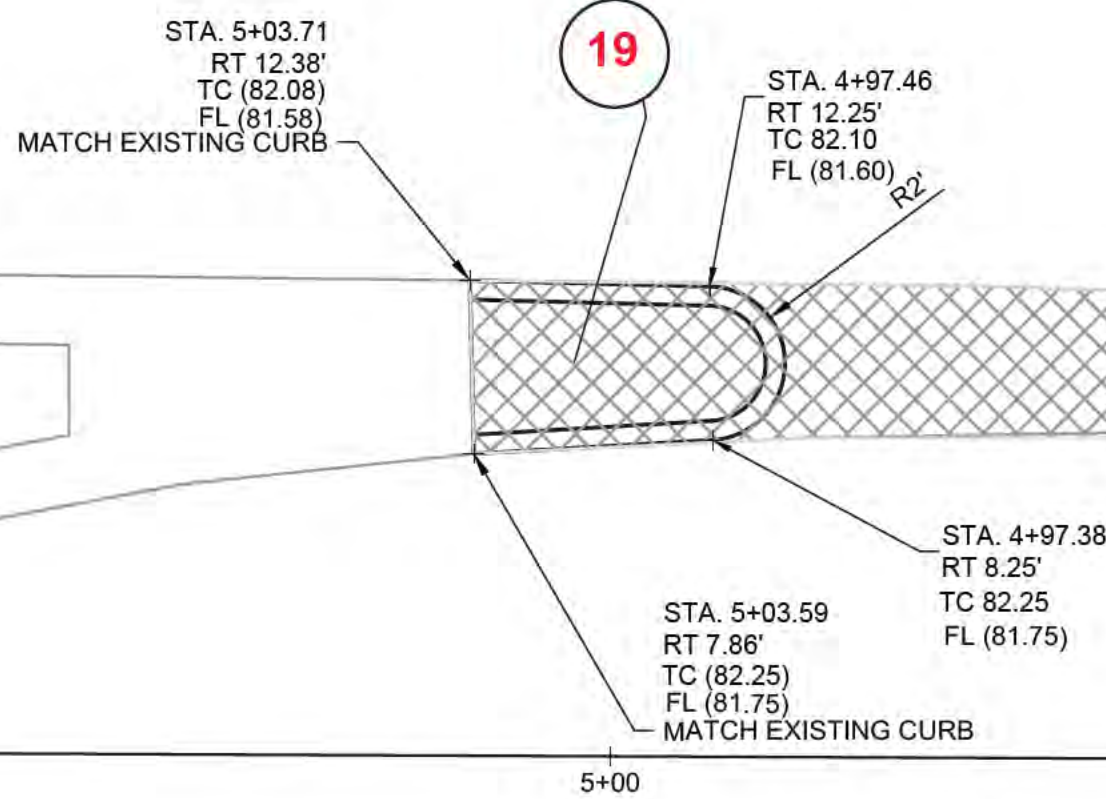


CONSTRUCTION NOTES

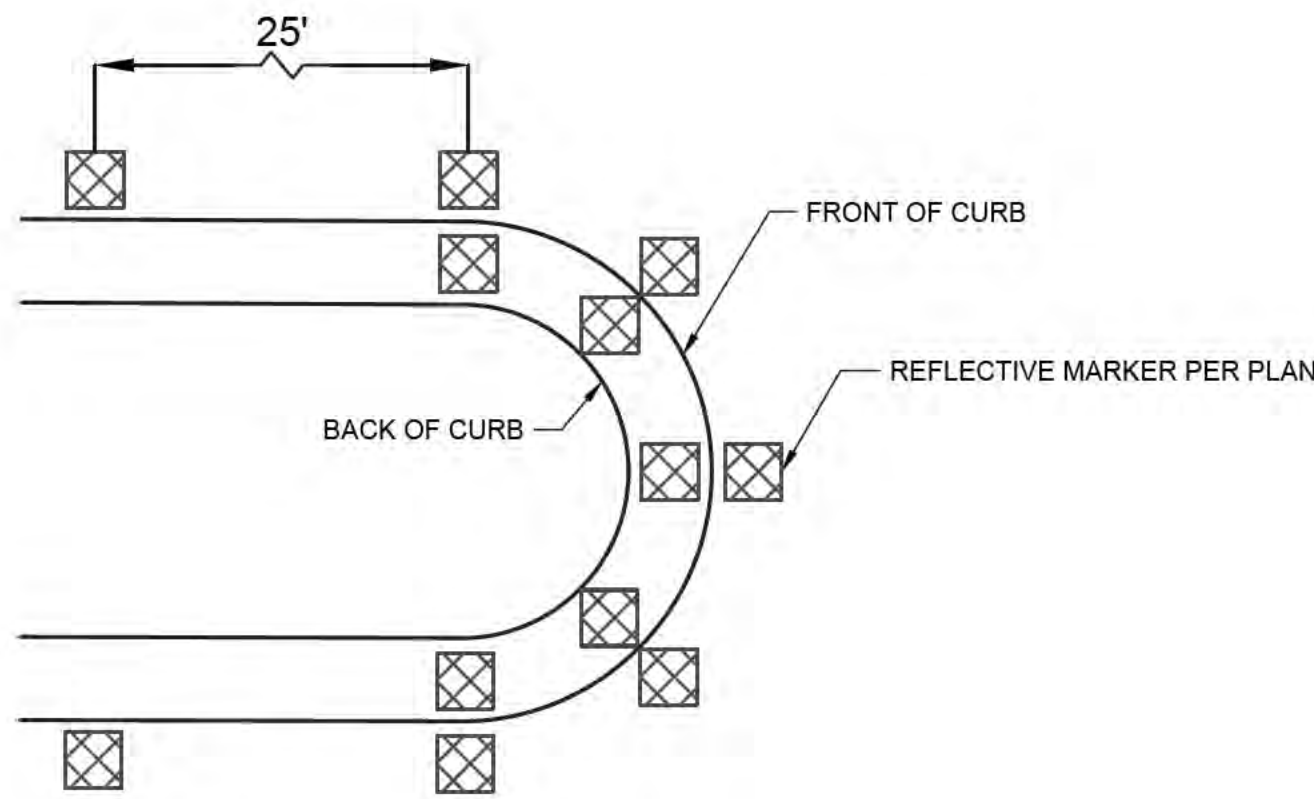
19 CONSTRUCT 4" STAMPED MEDIAN, SAND COLOR, OVER 4" SAND OVER COMPACTED SUB-GRADE TO 95% COMPACTION. MATCH EXISTING FINISH.



10 MEDIAN NOSE REMOVAL NO.1  
1"=5'

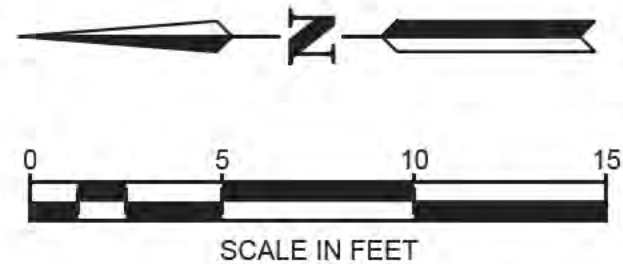


11 MEDIAN NOSE REMOVAL NO.2  
1"=5'



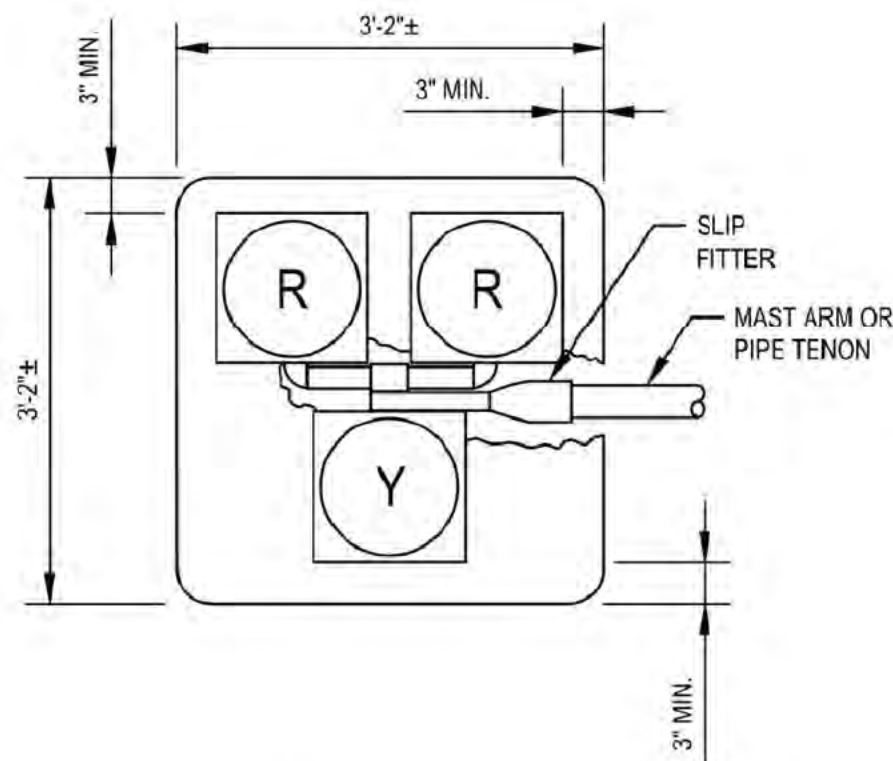
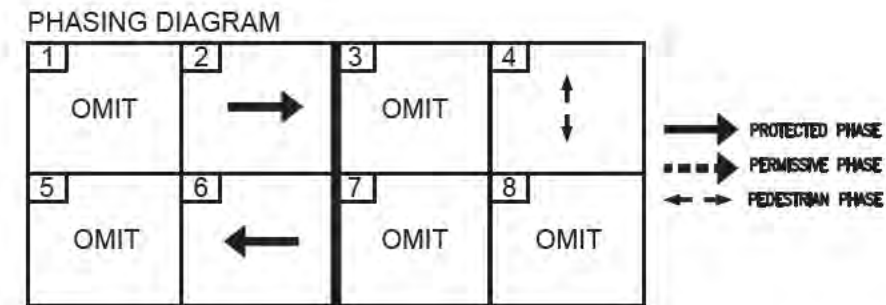
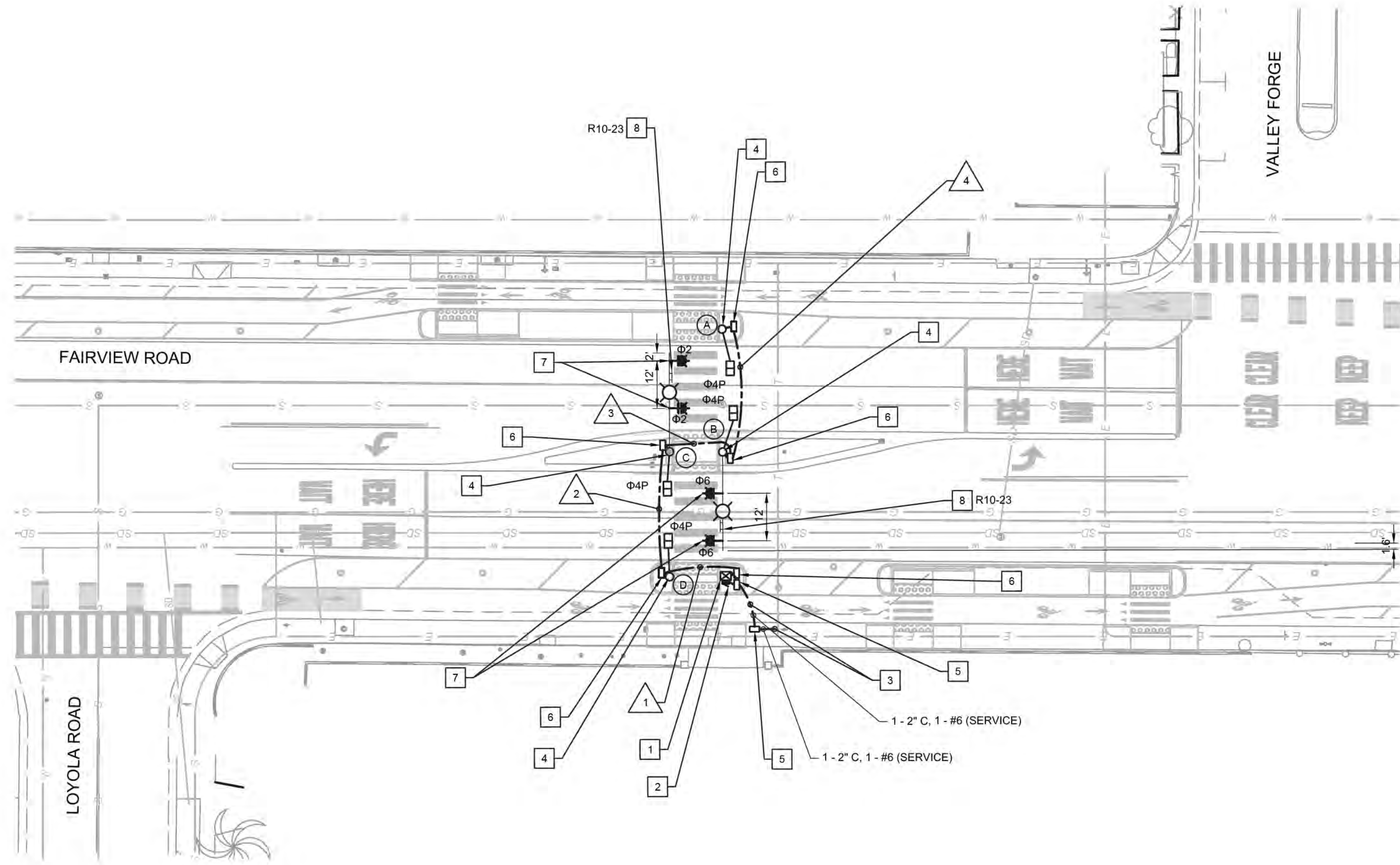
12 MEDIAN NOSE DETAIL  
NOT TO SCALE

REMOVAL OF CONCRETE MEDIAN



<b>PROFESSIONAL CERTIFICATION</b>  I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF [STATE]. LICENSE NO. _____ EXPIRATION DATE: _____		<b>REUSE OF DOCUMENTS</b> ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.  DSGN DR CHK APVD		Revisions in red are for clarification only, these revisions do not change the design of the registered engineer.		<b>TOOLE</b> [ENGINEER, P.E.]		527 W 7TH STREET, SUITE 701 LOS ANGELES, CA 90014 PHONE: 203.257.8680 FAX: 203.257.8680 www.tooledesign.com 8/30/2024 DATE		<b>FAIRVIEW ROAD ACTIVE TRANSPORTATION IMPROVEMENTS</b>  CONSTRUCTION DETAILS		<b>CITY OF COSTA MESA</b>  PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION		PROJECT NO. 02LAX.00157.00 DATE 12/19/2023 DRAWING NO. DC-4 SHEET NO. 25 OF 31	
		NO. DATE REVISION BY APVD										RECOMMENDED BY: RAJA SETHURAMAN, PUBLIC WORKS DIRECTOR, T.E. 1816 DATE APPROVED BY: SEUNG YANG, CITY ENGINEER, R.C.E. #66786 DATE			



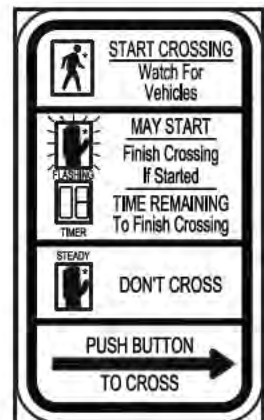


PEDESTRIAN HYBRID BEACON DETAIL  
TYPE MAS-3A  
N.T.S.

CONSTRUCTION NOTES:

- FURNISH AND INSTALL ECONOLITE COBALT CONTROLLER ASSEMBLY IN NEW TS-2 TYPE 1 "P-44" CABINET ON RAISED 18" FOUNDATION AND INSTALL SENSORS, MMU, HARNESSES AND ALL REQUIRED APPURTENANCES INSIDE CONTROLLER CABINET AS NEEDED TO PROVIDE INTENDED OPERATION ON THESE PLANS. CONSTRUCT 4" THICK PCC PAD TO ACCOMMODATE CONTROLLER FOUNDATION. FURNISH AND INSTALL POLARA INS NAVIGATOR 2-WIRE APS SYSTEM. CONTRACTOR TO SCHEDULE TURN ON SUPPORT FOR SIGNAL CONTROLLER AND CABINET.
- FURNISH AND INSTALL NEW 120/240 V TYPE III-B SIGNAL AND LIGHTING SERVICE ENCLOSURE WITH TYPE V PEC ON LEFT SIDE OF CONTROLLER ASSEMBLY COMPLETE. SERVICE SHALL INCLUDE A 100 AMP MAIN BREAKER, 50 AMP SIGNAL BREAKER, 30 AMP LIGHTING BREAKER, AND TWO 15 AMP SPARES. SIGNAL CIRCUIT IS 120V METERED AND LIGHTING IS 120V UNMETERED.
- FURNISH AND INSTALL 3" PVC CONDUIT FROM SERVICE CABINET TO PROPOSED SCE SERVICE POINT. CONTRACTOR SHALL CONTACT SOUTHERN CALIFORNIA EDISON FOR SERVICE INSTALLATION.
- FURNISH AND INSTALL POLE PER POLE SCHEDULE.
- FURNISH AND INSTALL NO 5 PULL BOX PER 2023 CALTRANS STANDARD PLANS.
- FURNISH AND INSTALL NO 6 PULL BOX PER 2023 CALTRANS STANDARD PLANS.
- FURNISH AND INSTALL TYPE MAS -3A PEDESTRIAN HYBRID BEACON 3-SECTION SIGNAL HEAD WITH RETROREFLECTIVE BACKPLATE PER CALTRANS 2023 STANDARD PLAN ES-4E.
- FURNISH AND INSTALL MAST ARM MOUNTED SIGN PER CALTRANS 2023 STANDARD PLAN ES-7N, DETAIL U.
- FURNISH AND INSTALL SIGN ON SIGNAL STANDARD PER CALTRANS STANDARD PLAN RS4.

CONDUCTOR SCHEDULE					
AWG	CONDUCTOR DESIGNATION	NUMBER OF CONDUCTORS			
		RUN NUMBER			
VEH-PED 12CSC	POLE A	1	1	1	1
	POLE B	1	1	1	1
	POLE C	1	1	1	1
	POLE D	1	1	1	1
	TOTAL	4	4	3	2
#10	LUMINAIRE	2	2	2	
	COMMON	1	1	1	
	TOTAL	3	3	3	
#8	GROUND	1	1	1	1
	EST. PERCENT FILL (%)	9%	7%	19%	9%
	CONDUIT SIZE	2-3"	2-3"	3"	3"



R10-3e (CA)



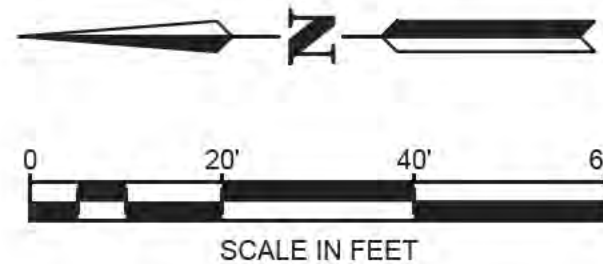
R10-23

POLE AND EQUIPMENT SCHEDULE

LOCATION	STANDARD				LED LUMINAIRE WATTAGE <sup>1</sup>	VEHICLE SIGNAL MOUNTING		PED SIGNAL MOUNTING	ACCESSIBLE PED SIGNALS (APS)		SPECIAL REQUIREMENTS
	TYPES	SIGNAL MAST ARM	LUMINAIRE MAST ARM	HEIGHT		MAST ARM	POLE		PHASE (Ø)	R10-3e ARROW	
(A)	1-A	-	-	7'	-	-	-	TP-1	4	→	
(B)	19-3-100	25'	15'	30'	105	MAS-3A, MAS-3A	-	SP-1			
(C)	19-3-100	25'	15'	30'	105	MAS-3A, MAS-3A	-	SP-1	4	↔	
(D)	1-A	-	-	7'	-	-	-	TP-1	4	→	

<sup>1</sup>Leotek GCL1-60G-MV-NW-3R-GY-530-WL-PCR7-LLPC-SC

<sup>2</sup> POLE LOCATIONS SHOWN ARE APPROXIMATE. POLE LOCATION SHALL BE APPROVED IN THE FIELD BY THE ENGINEER AND POLES SHALL BE POTHOLED TO FULL WIDTH AND DEPTH PRIOR TO ORDERING OF POLES



PROFESSIONAL CERTIFICATION

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REUSE OF DOCUMENTS

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DSGN	DR	CHK	APVD	NO.	DATE	REVISION	BY	APVD

PREPARED BY : TDG Engineering, Inc., an affiliate of:



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FAIRVIEW ROAD ACTIVE  
TRANSPORTATION  
IMPROVEMENTS  
TRAFFIC SIGNALS PLAN

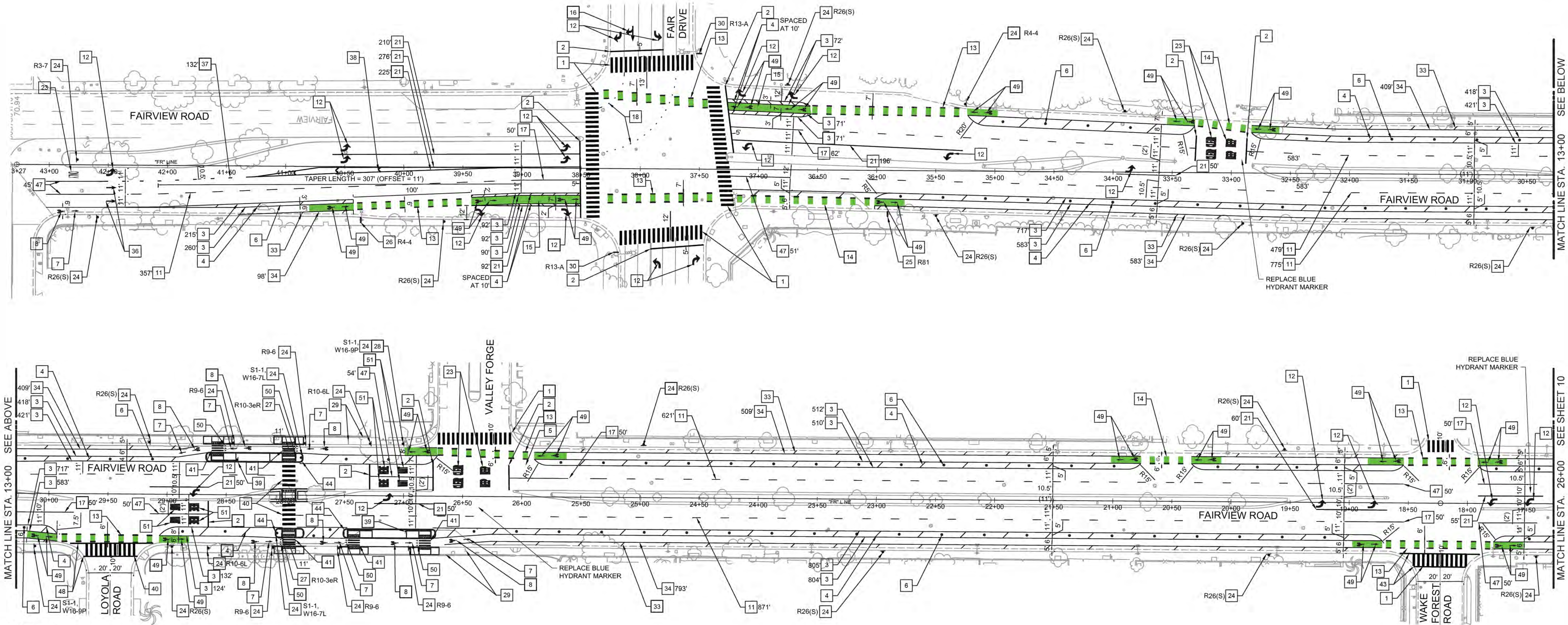
CITY OF COSTA MESA

PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION

RECOMMENDED BY: RAJA SETHURAMAN, PUBLIC WORKS DIRECTOR, T.E. 1816	DATE	PROJECT NO. 02LAX.00157.00
APPROVED BY: SEUNG YANG, CITY ENGINEER, R.C.E. #66786	DATE	DRAWING NO. TS-1
		SHEET NO. 26 OF 31

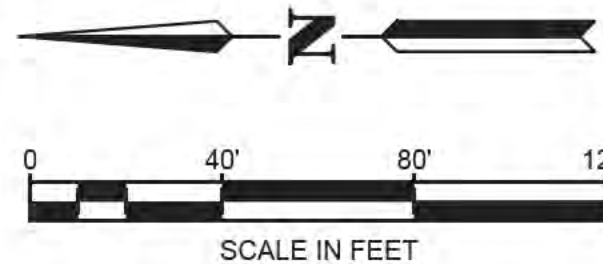


H:\G000002\LAX.00157.00\_P\_Fairview Road Active Transportation\PRODUCTION\PLANS\100%02\LAX.00157.00\_TP\_100%.dwg  
8/29/2024



#### LEGEND:

- |    |  |    |   |    |  |    |   |
|----|--|----|---|----|--|----|---|
| 1  | INSTALL THERMOPLASTIC WHITE 2' WIDE CROSSWALK PER CALTRANS STD. PLAN A24F. CROSSWALK SHALL BE 11' WIDE WITH 2' CLEAR SPACE BETWEEN BARS UNLESS OTHERWISE SHOWN | 19 | INSTALL 6" DASHED YELLOW LINE (DETAIL 41) PER CALTRANS STD. PLAN A20D   | 38 | INSTALL TYPE I 10'-0" ARROW PER CALTRANS STD. PLAN A24A  | 50 | MODIFIED BICYCLE YIELD LINE PER DETAIL C ON SHEET DC-1                      |
| 2  | INSTALL 12" THERMOPLASTIC LIMIT LINE (STOP LINE) PER CALTRANS STD. PLAN A24G   | 20 | INSTALL 6" SOLID YELLOW LINE  | 37 | INSTALL 8" WHITE LANE DROP LINE AT INTERSECTIONS (DETAIL 37B) PER CALTRANS STD. PLAN A20C  | 51 | INSTALL THERMOPLASTIC PAVEMENT MARKING AS SHOWN PER CALTRANS STD. PLAN A24D |
| 3  | INSTALL 6" BIKE LANE LINE (DETAIL 39) PER CALTRANS STD. PLAN A20D  | 21 | INSTALL 8" WHITE CHANNELIZING LINE (DETAIL 38) PER CALTRANS STD. PLAN A20D  | 38 | INSTALL 12" SOLID WHITE CHEVRON MARKINGS AT 45° AND SPACED AT 20'  |    |   |
| 4  | INSTALL 6" SOLID WHITE LINE ROTATED AT 45° AND SPACED AT 36' UNLESS OTHERWISE SHOWN  | 22 | INSTALL THERMOPLASTIC 12" SOLID YELLOW LINE ROTATED AT 45° AND SPACED AT 20'  | 39 | INSTALL RELOCATED BUS STOP FURNISHING AND SIGNS  |    |   |
| 5  | INSTALL 6" DASHED BIKE LANE LINE (DETAIL 39A) PER CALTRANS STD. PLAN A20D  | 23 | INSTALL THERMOPLASTIC PAVEMENT MARKING AS SHOWN PER CALTRANS STD. PLAN A24E   | 40 | INSTALL THERMOPLASTIC YELLOW 24" WIDE CROSSWALK PER CALTRANS STD. PLAN A24F. CROSSWALK SHALL BE 11' WIDE UNLESS OTHERWISE SHOWN  |    |   |
| 6  | INSTALL WHITE K71 FLEXIBLE SELF RE-ERECTING MARKER POST PER DETAIL 1 ON SHEET DC-1 SPACED AT 36'   | 24 | FURNISH AND INSTALL NEW SIGN AND POST PER ORANGE COUNTY PUBLIC WORKS DEPARTMENT STD. PLAN 1417  | 41 | INSTALL THERMOPLASTIC YELLOW 12" WIDE CROSSWALK PER CALTRANS STD. PLAN A24F. CROSSWALK SHALL BE 10' WIDE UNLESS OTHERWISE SHOWN  |    |   |
| 7  | INSTALL THERMOPLASTIC BIKE LANE ARROW PER CALTRANS STD. PLAN A24A  | 25 | FURNISH AND INSTALL NEW SIGN ON EXISTING SIGN POST. ADJUST SIGN AND/OR LENGTH OF POST TO MAINTAIN 7' CLEAR FROM BOTTOM-MOST SIGN TO THE GRADE OF THE SIDEWALK.                    | 42 | INSTALL CUSTOM 5' TYPE IV (R) ARROW PER CALTRANS STANDARD PLAN A24A AND BIKE LANE SYMBOL WITH PERSON PER CALTRANS STANDARD PLAN A24C. CENTERED IN BIKE LANE AND SPACED 5' APART.                                     |    |   |
| 8  | INSTALL THERMOPLASTIC BIKE LANE SYMBOL WITH PERSON PER CALTRANS STD. PLAN A24C   | 26 | FURNISH AND INSTALL NEW SIGN ON EXISTING STREET LIGHT OR UTILITY POLE. ADJUST SIGN AND/OR LENGTH OF POST TO MAINTAIN 7' CLEAR FROM BOTTOM-MOST SIGN TO THE GRADE OF THE SIDEWALK. | 43 | INSTALL 12" SOLID WHITE LINE   |    |   |
| 9  | INSTALL DOUBLE YELLOW CENTER LINE (DETAIL 22) PER CALTRANS STD. PLAN A20A  | 27 | FURNISH AND INSTALL SIGN ON PUSH BUTTON ASSEMBLY  | 44 | INSTALL TYPE G ONE-WAY CLEAR RETROREFLECTIVE PAVEMENT MARKERS PER CALTRANS STD. PLAN NO. A20A ON THE NOSE AND AROUND THE BASE AT ASPHALT LEVEL AS SHOWN ON DETAIL 12 ON SHEET DC-4, AND INSTALL OM2-1H OBJECT MARKER |    |   |
| 10 | INSTALL DOUBLE YELLOW CENTER LINE (DETAIL 28) PER CALTRANS STD. PLAN A20B  | 28 | REMOVE AND SALVAGE EXISTING SIGN  | 45 | INSTALL TYPE D TWO-WAY YELLOW RETROREFLECTIVE PAVEMENT MARKERS PER CALTRANS STD. PLAN NO. A20B ON THE NOSE AND AROUND THE BASE AT ASPHALT LEVEL AS SHOWN ON DETAIL 12 ON SHEET DC-4                                  |    |   |
| 11 | INSTALL LANE LINES (DETAIL 9) PER CALTRANS STD. PLAN A20A  | 29 | REMOVE AND SALVAGE BUS STOP FURNISHING AND SIGNS  | 46 | INSTALL DOUBLE YELLOW CENTER LINE (DETAIL 29) PER CALTRANS STD. PLAN A20A  |    |   |
| 12 | INSTALL TYPE IV (L) OR (R) ARROW PER CALTRANS STD. PLAN A24A   | 30 | FURNISH AND INSTALL NEW SIGN ABOVE SIGNAL HEAD ON EXISTING TRAFFIC POLE   | 47 | INSTALL 6" SOLID WHITE LANE LINE WITH RPMs INSTALLED AT EACH END OF THE LINE AND ON THE LINE @ 25' SPACING   |    |   |
| 13 | INSTALL BIKE LANE CONFLICT MARKINGS PER DETAIL A ON SHEET DC-1   | 31 | FURNISH AND INSTALL NEW SIGN ON EXISTING TRAFFIC POLE   | 48 | INSTALL 12" SOLID YELLOW LINE  |    |   |
| 14 | INSTALL BIKE LANE CONFLICT MARKINGS PER DETAIL B ON SHEET DC-1   | 32 | INSTALL THERMOPLASTIC YIELD LINE PER CALTRANS STD. PLAN A24G  | 49 | PREFORMED GREENBACK BICYCLE SYMBOL WITH ARROW. BICYCLE SYMBOL AND ARROW EMBEDDED INTO GREEN PREFORMED MATERIAL   |    |   |
| 15 | INSTALL GREEN PREFORMED THERMOPLASTIC PAVEMENT MARKING   | 33 | INSTALL 4" SOLID WHITE LINE ROTATED AT 45° AND SPACED AT 36'  |    |  |    |   |
| 16 | INSTALL THERMOPLASTIC TYPE VII (R) ARROW PER CALTRANS STD. PLAN A24A   | 34 | INSTALL 4" SOLID WHITE LINE   |    |  |    |   |
| 17 | INSTALL 6" SOLID WHITE LANE LINE   | 35 | FURNISH AND INSTALL NEW SIGN ON EXISTING MAST ARM   |    |  |    |   |
| 18 | INSTALL 6" DASHED WHITE LINE (DETAIL 40) PER CALTRANS STD. PLAN A20D   |    |   |    |  |    |   |



#### PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF [STATE].  
LICENSE NO. \_\_\_\_\_  
EXPIRATION DATE: \_\_\_\_\_



#### REUSE OF DOCUMENTS

ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.

DSGN					
DR					
CHK					
APVD					
NO.	DATE	REVISION	BY	APVD	

PREPARED BY : TDG Engineering, Inc., an affiliate of:



527 W 7TH STREET, SUITE 701  
LOS ANGELES, CA 90014  
PHONE: 203.257.8680  
FAX: 203.257.8680  
www.tooledesign.com  
8/30/2024  
DATE

#### FAIRVIEW ROAD ACTIVE TRANSPORTATION IMPROVEMENTS SIGNING AND MARKING PLAN

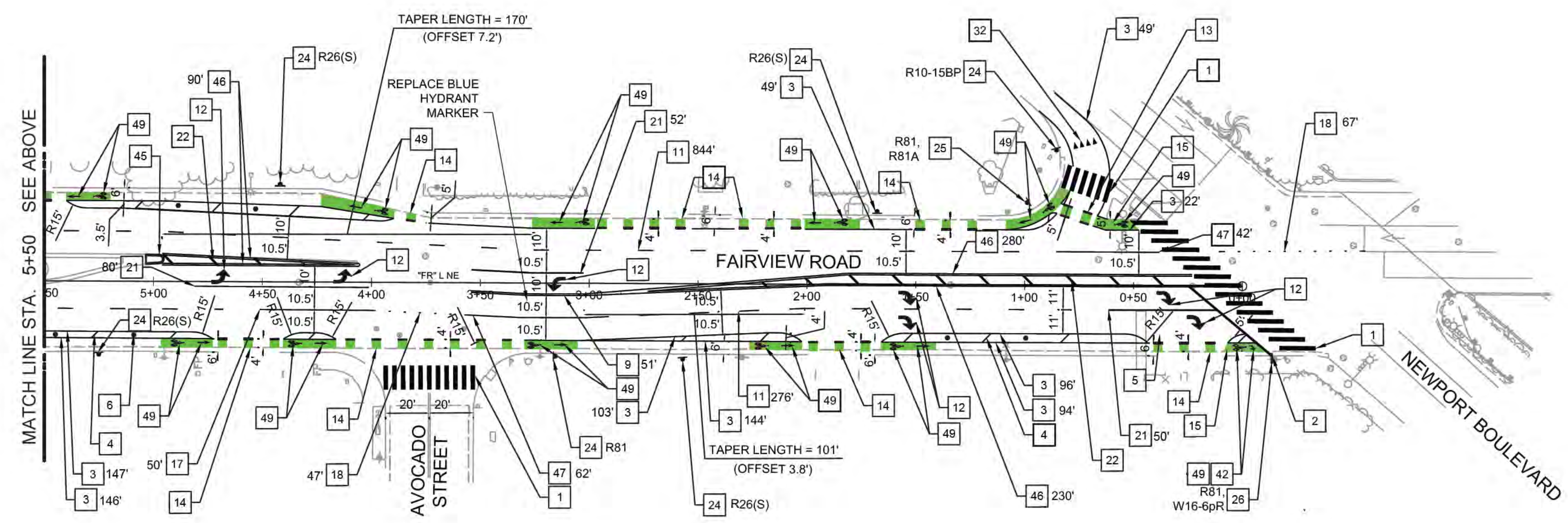
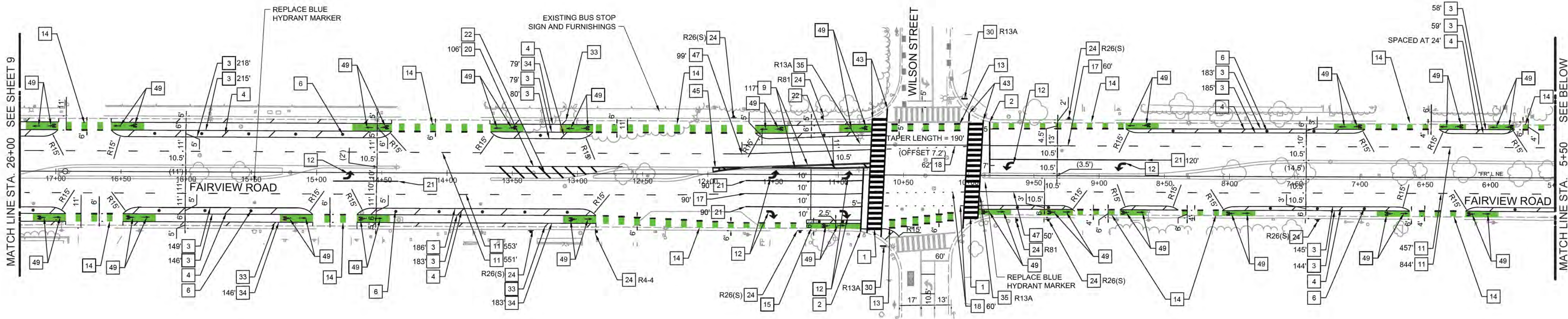
#### CITY OF COSTA MESA

PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION

RECOMMENDED BY:	RAJA SETHURAMAN, PUBLIC WORKS DIRECTOR, T.E. 1816	DATE	
APPROVED BY:	SEUNG YANG, CITY ENGINEER, R.C.E. #66786	DATE	

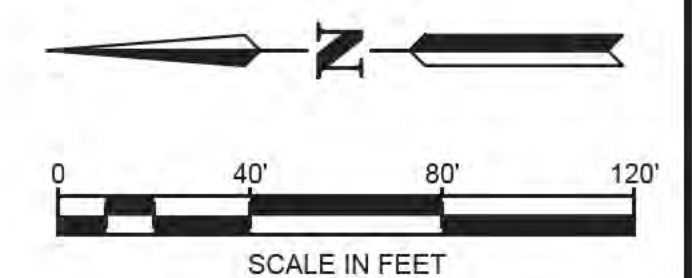
PROJECT NO.	#####
DATE	8/29/2024
DRAWING NO.	TP-1
SHEET NO.	27 OF 31





**LEGEND:**
















- |   |   |  |   |
|---|---|--|---|
| 1. INSTALL THERMOPLASTIC WHITE 2' WIDE CROSSWALK PER CALTRANS STD. PLAN A24F. CROSSWALK SHALL BE 11' WIDE WITH 2' CLEAR SPACE BETWEEN BARS UNLESS OTHERWISE SHOWN | 19. INSTALL 6" DASHED YELLOW LINE (DETAIL 41) PER CALTRANS STD. PLAN A20D   | 38. INSTALL TYPE I 10'-0" ARROW PER CALTRANS STD. PLAN A24A  | 50. MODIFIED BICYCLE YIELD LINE PER DETAIL C ON SHEET DC-1                      |
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| 18. INSTALL 6" DASHED WHITE LINE (DETAIL 40) PER CALTRANS STD. PLAN A20D  |   |  |   |





<b>PROFESSIONAL CERTIFICATION</b> I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF [STATE]. LICENSE NO. _____ EXPIRATION DATE: _____		<b>REUSE OF DOCUMENTS</b> ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.		<b>TOOLE</b> PREPARED BY: TDG Engineering, Inc., an affiliate of: 527 W 7TH STREET, SUITE 701 LOS ANGELES, CA 90014 PHONE: 203.257.8680 FAX: 203.257.8680 www.tooledesign.com 8/30/2024 DATE		<b>FAIRVIEW ROAD ACTIVE TRANSPORTATION IMPROVEMENTS</b>  SIGNING AND MARKING PLAN		<b>CITY OF COSTA MESA</b> PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION		PROJECT NO. ##### DATE 8/30/2024	
								RECOMMENDED BY: RAJA SETHURAMAN, PUBLIC WORKS DIRECTOR, T.E. 1816 DATE		DRAWING NO. TP-2	
								APPROVED BY: SEUNG YANG, CITY ENGINEER, R.C.E. #66786 DATE		SHEET NO. 28 OF 31	





H:\G0000\02LAX 00157 00\_P\_Fairview Road Active Transportation\PRODUCTION\CAD\PLANS\100%02LAX 00157 00\_TP\_100%.dwg  
8/29/2024

SIGN SCHEDULE - NOT TO SCALE					
SIGN	(CA)MUTCD CODE	SIZE (WxH)	DESCRIPTION	SIGN QUANTITY	INSTALLATION
	R13A (CA)	18" x 30"	NO RIGHT TURN ON RED	6	MOUNT ON EX POLE (4) MOUNT ON EXISTING MAST ARM (2)
	R4-4	36" x 30"	BEGIN RIGHT TURN LANE YIELD TO BIKES	3	MOUNT ON EX POLE (2) MOUNT ON NEW 10' SURFACE-MOUNTED POST (1)
	R10-15BP (R)	30" x 30"	TURNING VEHICLES YIELD TO BIKE/PED	1	MOUNT ON NEW 10' SURFACE-MOUNTED POST
	S1-1	36" x 36"	SCHOOL CROSSING WARNING	4	MOUNT ON NEW 10' SURFACE-MOUNTED POST
	W16-7L	24" x 12"	LEFT DIAGONAL ARROW PLAQUE	2	MOUNT ON NEW 10' SURFACE-MOUNTED POST
	R81 (CA)	24" x 18"	BIKE LANE (CALIFORNIA)	6	MOUNT ON NEW 10' SURFACE-MOUNTED POST (3) MOUNT ON EX POST (1) MOUNT ON EX POLE (2)
	R81A (CA)	12" x 5"	BEGIN PLAQUE (CALIFORNIA)	1	MOUNT ON EX POST
	W16-9p	24" x 12"	AHEAD PLAQUE (CALIFORNIA)	2	MOUNT ON NEW 10' SURFACE-MOUNTED POLE
	R10-23	30" x 36"	CROSSWALK, STOP ON RED	2	MOUNT ON PROPOSED MAST ARM (2), SEE TS-1
	R9-6	12" x 18"	BIKES YIELD TO PEDS	5	MOUNT ON NEW 10' SURFACE-MOUNTED POLE
	R10-6(L/R)	24" x 36"	STOP HERE ON RED	4	MOUNT ON NEW 10' SURFACE MOUNTED POST
	R10-3e	9" x 15"	PEDESTRIAN SIGN	3	MOUNT ON PROPOSED PUSH BUTTON ASSEMBLY
	W16-6pR	24" x 18"	SUPPLEMENTAL ARROW PLAQUE (RIGHT)	1	MOUNT ON EX POLE
	R26(S)	12" x 18"	NO STOPPING ANY TIME	24	MOUNT ON NEW 10' SURFACE-MOUNTED POST
	R3-7	36" x 36"	LEFT LANE MUST TURN LEFT	1	MOUNT ON NEW 10' SURFACE-MOUNTED POST

  
  
SCALE IN FEET

NOTE: SHOULD ANY DISCREPANCIES IN SIGN QUANTITIES EXIST BETWEEN THIS SIGN SCHEDULE AND THE PLANS, REFER TO PLANS FOR ACCURATE SIGN QUANTITIES AND INFORMATION.

PROFESSIONAL CERTIFICATION		REUSE OF DOCUMENTS				PREPARED BY : TDG Engineering, Inc., an affiliate of:  527 W 7TH STREET, SUITE 701 LOS ANGELES, CA 90014 PHONE: 203.257.8680 FAX: 203.257.8680 www.tooledesign.com 8/30/2024 DATE	FAIRVIEW ROAD ACTIVE TRANSPORTATION IMPROVEMENTS  SIGNING SCHEDULE	CITY OF COSTA MESA		PROJECT NO.
		ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.						PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION		#####
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF [STATE]. LICENSE NO. _____ EXPIRATION DATE: _____		DSGN						RECOMMENDED BY: RAJA SETHURAMAN, PUBLIC WORKS DIRECTOR, T.E. 1816	DATE	8/29/2024
		CHK								TP-3
		APVD	NO.	DATE	REVISION	BY	APVD	APPROVED BY: SEUNG YANG, CITY ENGINEER, R.C.E. #66786	DATE	SHEET NO. 29 OF 31

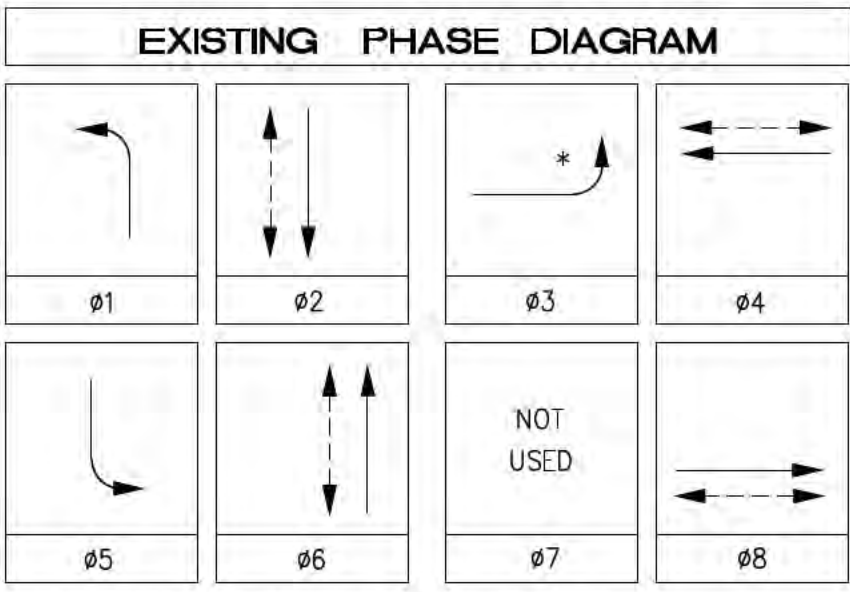




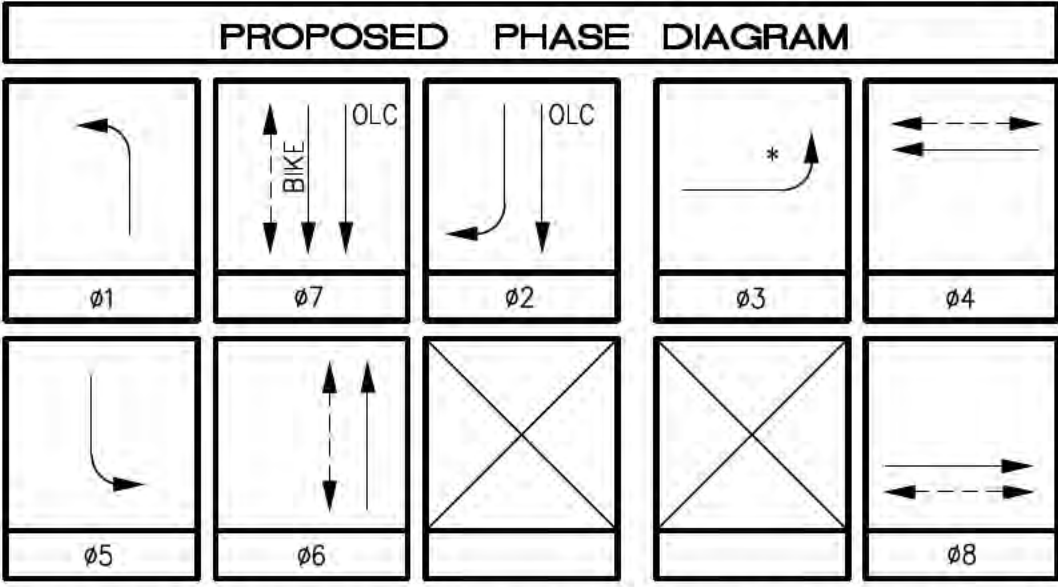


CONDUCTOR		SCHEDULE					
AWG SIZE, WIRE OR CABLE TYPE	STD	PHASES	CONDUIT SIZE AND RUN				
			1	2	3	4	5
12 WIRE CONDUCTOR CABLE 11-#14 1-#12	Ø4, Ø4P	/Ø2PPB	-	-	1/1	-	-
	Ø1, Ø2 Ø2P	/Ø4PPB	-	-	1/1	-	-
	Ø1, Ø6, Ø6P	/Ø4PPB	-	-	1/1	1/1	-
	Ø3, Ø8, Ø4P	/Ø6PPB	-	-	1/1	1/1	-
	Ø3, Ø8, Ø8P	/Ø6PPB	-	-	1/1	1/1	1/1
	Ø5, Ø6P	/Ø8PPB	-	-	1/1	1/1	1/1
	Ø2, Ø5, Ø7, OLC, Ø2P	/Ø8PPB	-	2/1	2/1	-	-
	Ø4, Ø8P	/Ø2PPB	-	1/1	1/1	-	-
TOTAL CABLES			-	3/2	9/8	4/4	2/2
#10	LUMINAIRE		-	2	2	2	2
	COMMON		1(E)	1	1	1	1
TOTAL			1	3	3	3	3
#12	IISNS		-	2	2	2	2
3#18	VIDEO & POWER CABLE		-	1	4	2	1
CAT 5E	CCTV CAMERA CABLE		-	1(E)	1(E)	-	-
OPTICOM 3100	EVP CABLE		-	-	1(E)	-	-
24SMFO	SINGLE MODE FIBER OPTIC CABLE		-	-	1(E)	1(E)	-
PERCENT FILL			1%	49%	48%	23%	35%
CONDUIT SIZES (INCHES)			2"(E)	2.5"(E)	2-3"(E)	2"(E)	2.5"(E)

CONDUCTOR SCHEDULE IS FURNISHED AS A GUIDELINE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE NECESSARY CONDUCTORS FOR THE INTENDED OPERATION. ALL CONDUITS AND CONDUCTORS ARE NEW UNLESS OTHERWISE NOTED AS (E) EXISTING. REMOVE ALL UNUSED CABLES AND CONDUCTORS.



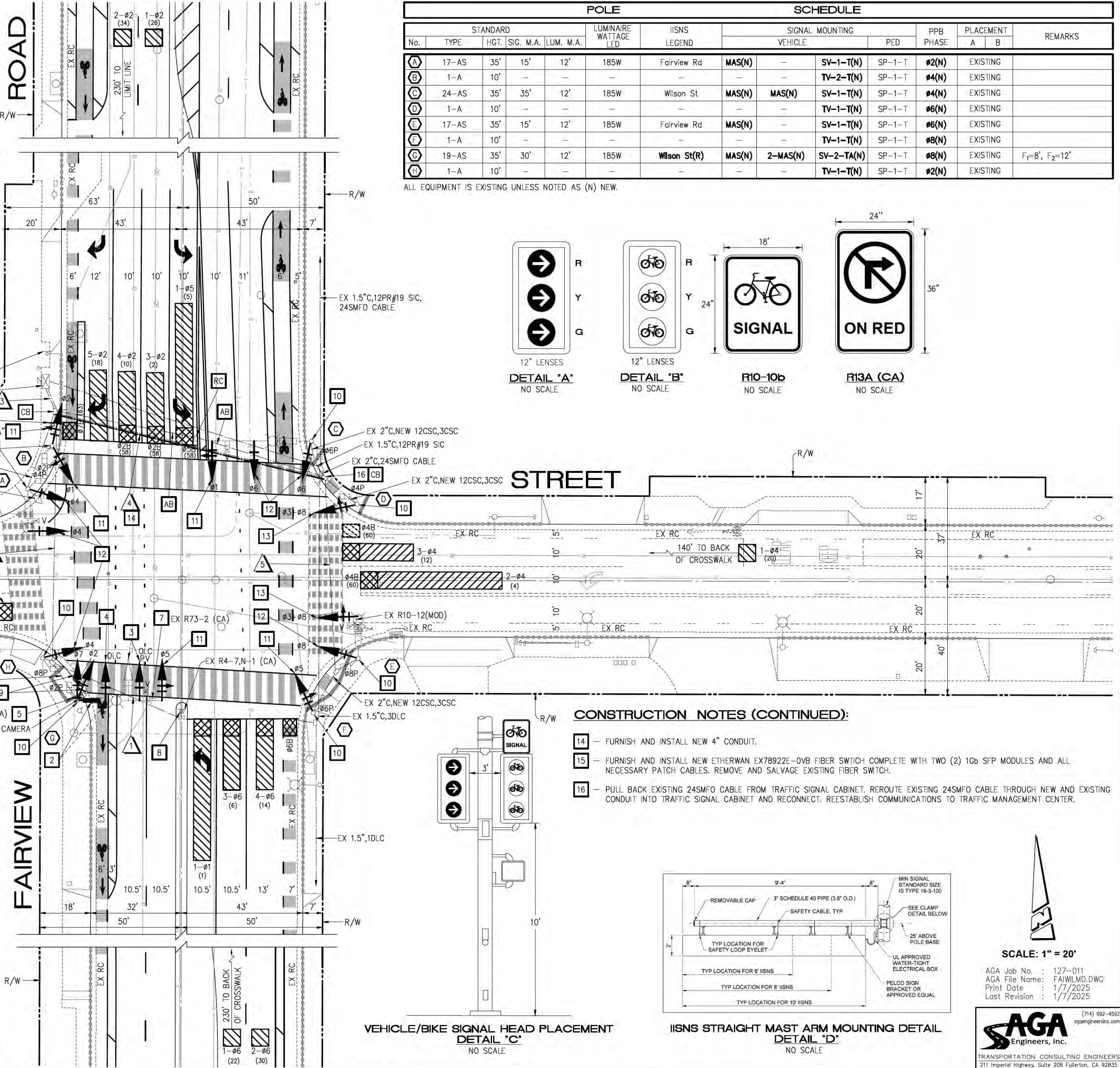
\* PROTECTED-PERMISSIVE LEFT TURN PHASING



\* PROTECTED-PERMISSIVE LEFT TURN PHASING

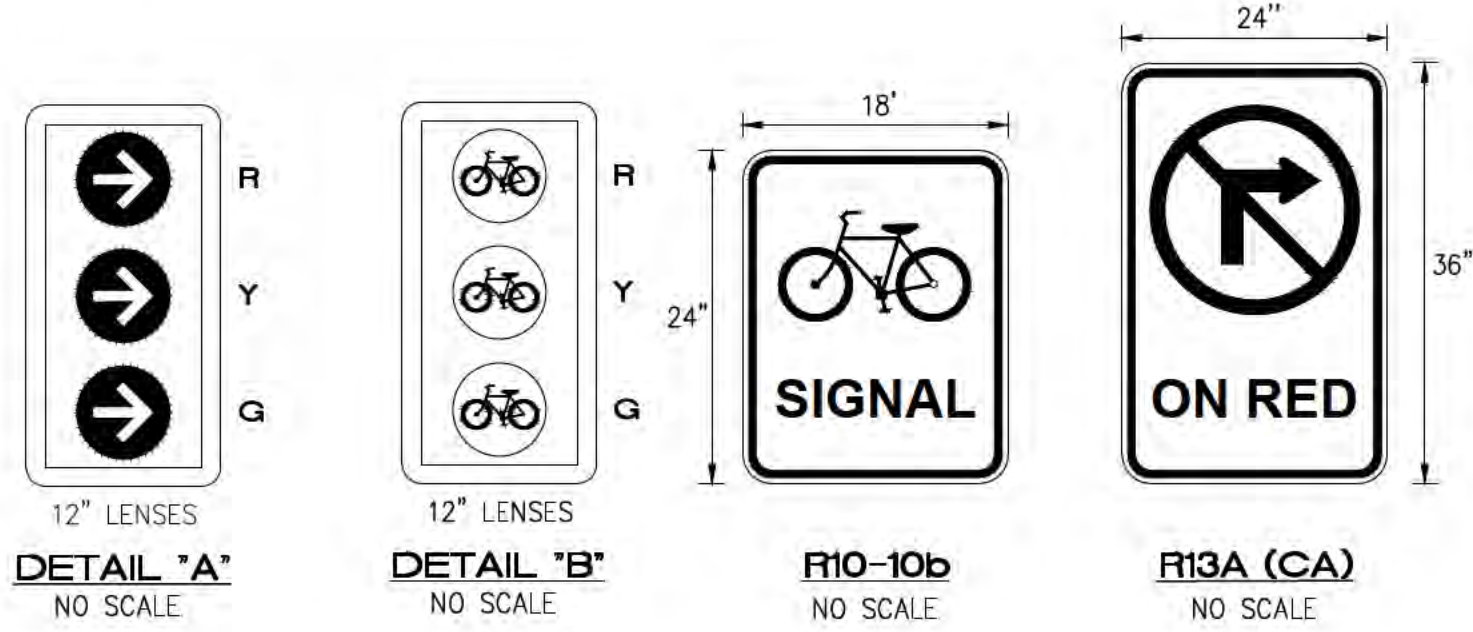
OLC = Ø2 & Ø7  
Ø2 & Ø6 ON VEHICLE RECALL  
Ø4 & Ø8 ON DOUBLE ENTRY

EX R3-7,R15-3P(MOD)  
EX TYPE P CABINET WITH TYPE II SERVICE



POLE						SCHEDULE							
STANDARD					LUMINAIRE WATTAGE LED	IISNS LEGEND	SIGNAL MOUNTING			PPB PHASE	PLACEMENT		REMARKS
No.	TYPE	HGT.	SIG. M.A.	LUM. M.A.			VEHICLE		PED		A	B	
A	17-AS	35'	15'	12'	185W	Fairview Rd	MAS(N)	—	SV-1-T(N)	SP-1-T	#2(N)	EXISTING	
B	1-A	10'	—	—	—	—	—	—	TV-2-T(N)	SP-1-T	#4(N)	EXISTING	
C	24-AS	35'	35'	12'	185W	Wilson St	MAS(N)	MAS(N)	SV-1-T(N)	SP-1-T	#4(N)	EXISTING	
D	1-A	10'	—	—	—	—	—	—	TV-1-T(N)	SP-1-T	#6(N)	EXISTING	
E	17-AS	35'	15'	12'	185W	Fairview Rd	MAS(N)	—	SV-1-T(N)	SP-1-T	#6(N)	EXISTING	
F	1-A	10'	—	—	—	—	—	—	TV-1-T(N)	SP-1-T	#8(N)	EXISTING	
G	19-AS	35'	30'	12'	185W	Wilson St(R)	MAS(N)	2-MAS(N)	SV-2-TA(N)	SP-1-T	#8(N)	EXISTING	F <sub>1</sub> =8', F <sub>2</sub> =12'
H	1-A	10'	—	—	—	—	—	—	TV-1-T(N)	SP-1-T	#2(N)	EXISTING	

ALL EQUIPMENT IS EXISTING UNLESS NOTED AS (N) NEW.

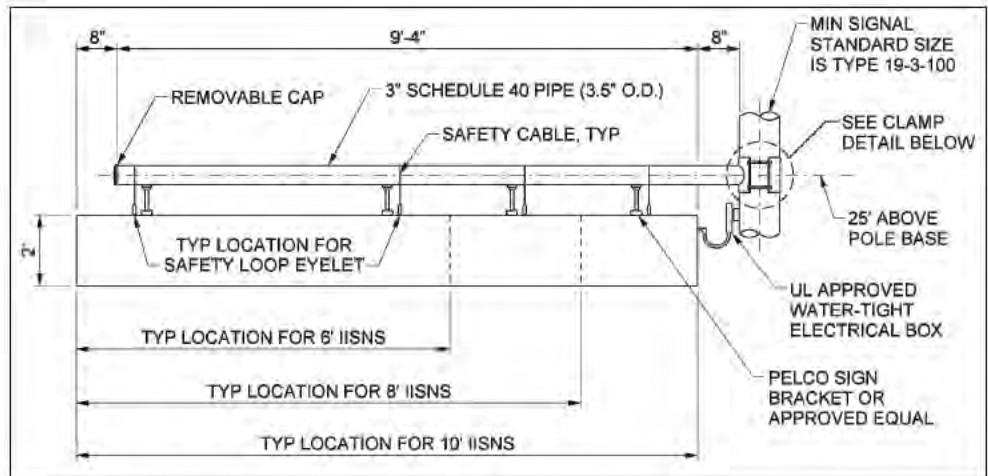


CONSTRUCTION NOTES (THIS SHEET):

- CONTRACTOR SHALL MODIFY AND WIRE EXISTING TYPE P CABINET TO PROVIDE FOUR (4) ADDITIONAL LOAD SWITCH SOCKETS. CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY TRAFFIC SIGNAL CABINET AND RECONNECT WIRING TO MAINTAIN SIGNAL IN OPERATION DURING MODIFICATION OF EXISTING CABINET. FURNISH AND INSTALL TWO (2) LOAD SWITCHES AND COMPLETE ANY NECESSARY WIRING AND CONNECTIONS TO ACHIEVE THE INTENDED OPERATION PER THE NEW PHASING DIAGRAM. FURNISH AND INSTALL NEW POLARA INS 2-WIRE ACCESSIBLE PEDESTRIAN SYSTEM (APS), COMPLETE WITH ICCU-S SHELF MOUNT CONTROL UNIT AND APPURTENANCES. ADJUST VIDEO DETECTION ZONES. PROTECT IN PLACE AND REATTACH EXISTING TYPE II SERVICE.
- RELOCATE EXISTING INTERNALLY ILLUMINATED STREET NAME SIGN (IISNS) COMPLETE ON NEW IISNS STRAIGHT ARM AS INDICATED ON PLAN. REUSE AND RECONNECT IISNS WIRES. SEE DETAIL "D".
- REMOVE AND SALVAGE EXISTING VEHICLE HEAD. FURNISH AND INSTALL NEW 3-SECTION (R,Y,G) VEHICLE HEAD ON NEW MAST-ARM MOUNT SIGNAL BRACKET AS INDICATED ON PLAN AND THE POLE SCHEDULE. NEW BACKPLATE SHALL HAVE 2" RETROREFLECTIVE YELLOW TAPE BORDER.
- FURNISH AND INSTALL NEW 3-SECTION (R,Y,G) VEHICLE HEAD ON EXISTING SIGNAL MAST-ARM ON NEW MAST-ARM MOUNT SIGNAL BRACKET AS INDICATED ON PLAN. NEW BACKPLATE SHALL HAVE 2" RETROREFLECTIVE YELLOW TAPE BORDER.
- FURNISH AND INSTALL NEW SIGN ON SIGNAL POLE STANDARD AS INDICATED ON PLAN.
- FURNISH AND INSTALL NEW SIGN ON NEW POST AS INDICATED ON PLAN.
- REMOVE SIGN FROM EXISTING SIGNAL MAST-ARM AS INDICATED ON PLAN.
- REMOVE PEDESTRIAN PUSH BUTTON COMPLETE. PLATE HOLE TO A SMOOTH FINISH.
- FURNISH AND INSTALL NEW 3-SECTION (RA,YA,GA) VEHICLE HEAD AND 3-SECTION (RED BIKE, YELLOW BIKE, GREEN BIKE) BICYCLE HEAD 3 FEET APART PER DETAILS "A", "B" AND "C". NEW BACKPLATE SHALL HAVE 2" RETROREFLECTIVE YELLOW TAPE BORDER. FURNISH AND INSTALL NEW R10-10b SIGN ADJACENT TO BICYCLE SIGNAL.
- REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON. FURNISH AND INSTALL NEW INS2 APS 2-WIRE PPB STATION WITH 5"x7" R10-3B SIGN ON STANDARD INDICATED ON PLAN AND THE POLE SCHEDULE.
- REMOVE AND SALVAGE EXISTING VEHICLE HEAD. FURNISH AND INSTALL NEW 3-SECTION (RA,YA,GA) VEHICLE HEAD ON EXISTING SIGNAL MAST-ARM OR SIGNAL STANDARD AS INDICATED ON PLAN. NEW BACKPLATE SHALL HAVE 2" RETROREFLECTIVE YELLOW TAPE BORDER.
- REMOVE AND SALVAGE EXISTING VEHICLE HEAD. FURNISH AND INSTALL NEW 3-SECTION (R,Y,G) VEHICLE HEAD ON EXISTING SIGNAL MAST-ARM OR SIGNAL STANDARD AS INDICATED ON PLAN. NEW BACKPLATE SHALL HAVE 2" RETROREFLECTIVE YELLOW TAPE BORDER.
- REMOVE AND SALVAGE EXISTING VEHICLE HEAD. FURNISH AND INSTALL NEW 5-SECTION (R,Y,G,YA,GA) VEHICLE HEAD ON EXISTING SIGNAL MAST-ARM OR SIGNAL STANDARD AS INDICATED ON PLAN. NEW BACKPLATE SHALL HAVE 2" RETROREFLECTIVE YELLOW TAPE BORDER.

CONSTRUCTION NOTES (CONTINUED):

- FURNISH AND INSTALL NEW 4" CONDUIT.
- FURNISH AND INSTALL NEW ETHERWAN EX78922E-DVB FIBER SWITCH COMPLETE WITH TWO (2) 1Gb SFP MODULES AND ALL NECESSARY PATCH CABLES. REMOVE AND SALVAGE EXISTING FIBER SWITCH.
- PULL BACK EXISTING 24SMFO CABLE FROM TRAFFIC SIGNAL CABINET. REROUTE EXISTING 24SMFO CABLE THROUGH NEW AND EXISTING CONDUIT INTO TRAFFIC SIGNAL CABINET AND RECONNECT. REESTABLISH COMMUNICATIONS TO TRAFFIC MANAGEMENT CENTER.



SCALE: 1" = 20'

AGA Job No. : 127-011  
AGA File Name: FAIWLMD.DWG  
Print Date : 1/7/2025  
Last Revision : 1/7/2025

**AGA**  
Engineers, Inc.  
TRANSPORTATION CONSULTING ENGINEERS  
211 Imperial Highway, Suite 208 Fullerton, CA 92630  
(714) 992-4532  
ogang@agaeinc.com

Underground Service Alert



Call: TOLL FREE  
**811**

TWO WORKING DAYS BEFORE YOU DIG

REVISIONS

NO.	DATE	DESCRIPTION	APP.

REFERENCES

BENCH MARK NO.	DESCRIPTION

DESIGNED BY: J. REYES/R. PERALES	DATE DEC '24	CHECKED BY:	DATE
DRAWN BY: J. REYES	DEC '24	APPROVED BY:	
RECOMMENDED BY:			



TRAFFIC SIGNAL MODIFICATION PLAN

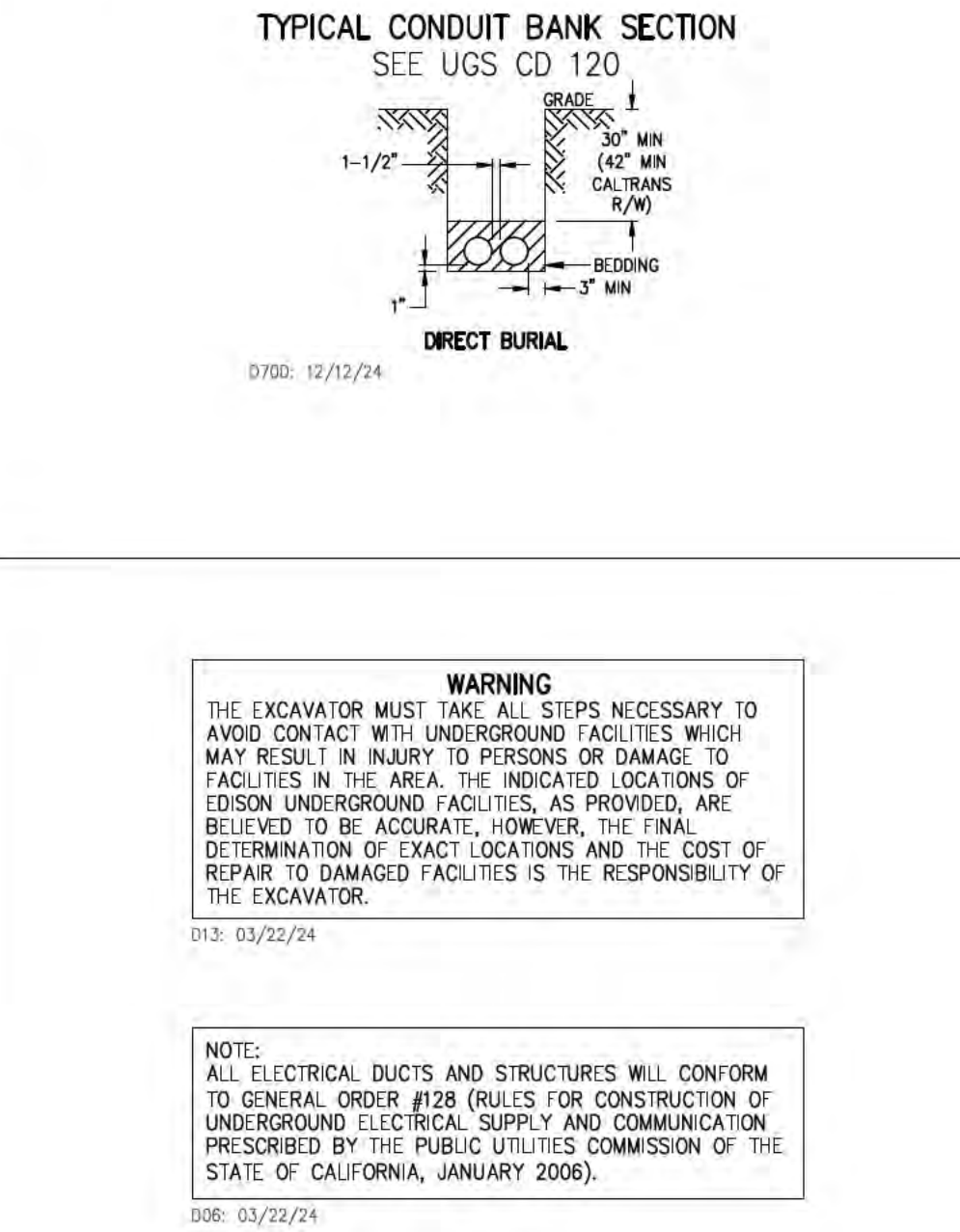
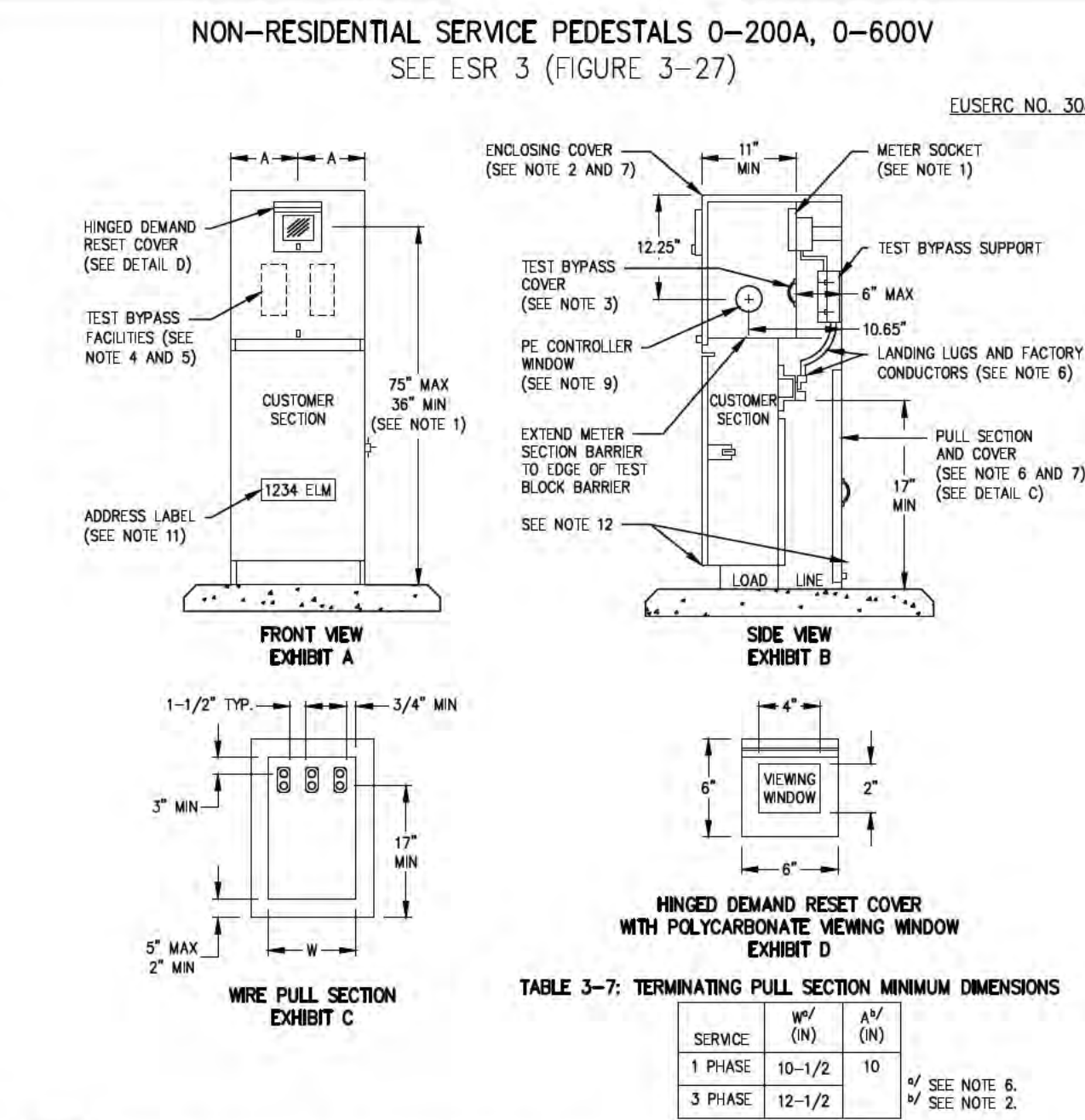
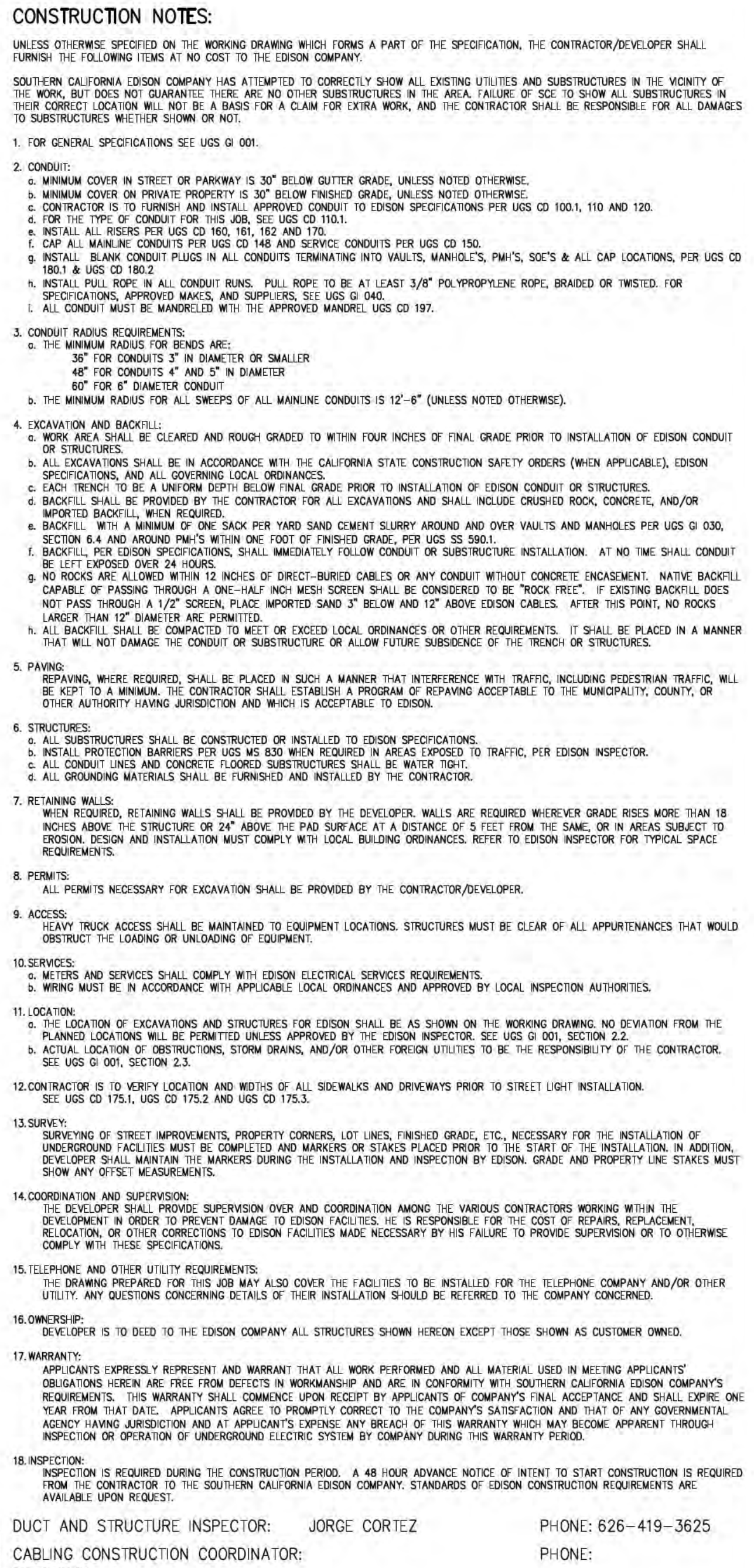
FAIRVIEW ROAD  
AND  
WILSON STREET

CITY OF COSTA MESA  
PUBLIC WORKS DEPARTMENT / TRANSPORTATION DIVISION

**TSM - 2.0**  
**SHEET 31 OF 31**

PLAN  
NUMBER





FINAL DESIGN  
APPROVED FOR CONSTRUCTION





# CITY OF COSTA MESA

P.O. BOX 12000 77 FAIR DRIVE CALIFORNIA 92628-1200

FROM THE PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION

**DATE:** MAY 1, 2025

**TO:** ALL PROSPECTIVE BIDDERS

**SUBJECT:** FAIRVIEW ROAD IMPROVEMENT PROJECT (FAIR DR. TO NEWPORT BLVD.), STATE FUNDED PROJECT NO. CRASL-5312 (106), CITY PROJECT NO. 25-10 - ADDENDUM NO. 1

Please forward this addendum to the appropriate individual as soon as possible. Please sign acknowledging receipt herein and e-mail a copy of this sheet to [janet.zuazo@costamesaca.gov](mailto:janet.zuazo@costamesaca.gov). The bidder shall individually identify and acknowledge receipt of **ALL** addenda by signing and enclosing each form in his/her bid package submittal. Failure to do so may result in a disqualification of his/her bid. **A COPY WILL NOT BE SENT BY MAIL.**

Received by: \_\_\_\_\_

Company: \_\_\_\_\_

All bidders shall register with *PlanetBids* in order to retrieve the addendum. It is the responsibility of each prospective bidder to check *PlanetBids* on a DAILY basis through the close of bids for any applicable addenda or updates.

This addendum, effective on this date, addresses the following items:

**BID OPENING DATE:** CHANGED TO WEDNESDAY, MAY 7, 2025

**BID OPENING TIME:** NO CHANGE, 4:00 P.M.

**BID OPENING PLACE:** NO CHANGE

**BID OPENING DATE:**

The bid opening date has been postponed to **Wednesday, May 7, 2025 at 4:00 p.m.**

**THE PRE-BID RFI LOG:**

Addresses RFI(s) to date. The RFI Log with both the RFI questions and responses are included in this addendum as **Attachment No. 1.**

**ORANGE COUNTY SANITATION DISTRICT MANHOLE COVER TO GRADE ADJUSTMENTS:**

Orange County Sanitation District (OCSD) manholes shall be adjusted in accordance with OCSD Standards. There are two bid items in the bid schedule for OCSD manhole adjustments: Bid Item 29A and Bid Item 29B. Prior to the start of the utility work, the Contractor shall meet with an OCSD representative to verify the locations of all OCSD manholes and confirm the required adjustment methods.

The contents of this bid addendum shall have precedence over all related provisions within the contract documents. It is the intent of the City of Costa Mesa to clarify the above-referenced items to

all bidders. Should it be necessary to request clarification on these matters, please send your request via e-mail to [janet.zuazo@costamesaca.gov](mailto:janet.zuazo@costamesaca.gov).

Sincerely,  


Irina Gurovich  
Associate Engineer

Attachment No. 1 - RFI Log with Questions and Responses

No.	Question	Response
1	Will groundwater be encountered?	Contractor should anticipate encountering groundwater approximately 6 feet below the finished surface.
2	Please confirm the measurement and payment for the Crack Repair scope.	Crack seal is not included in the scope of work.
3	Under which line item(s) will the 4" stamped median and 6" curbs for the median islands be paid?	Bid Item #22 - Measurement and payment to Construct PCC Islands & Median Cut Through over 6" CMB including 4" stamped concrete over 4" of sand, and truncated domes, shall be per the Square Foot (SF). Unit prices shall include sub-grade preparation, forms, metal hand railings, restoring form areas, temporary AC pavement, and all other work as required to complete the work. All proposed curbs are part of the PCC Islands & Median Cut Through quantity. No additional compensation will be allowed.
4	Bid Item #8 specifies 800 tons of CMB, but Bid Items #9-13 also mention base. Should base be included in those bid items or only in #8?	Bid Items 9, 10, 11, 12, 13, 21, 22, & 23 include CMB in their bid items and are not included in Bid Item #8 CMB.
5	Has a geotechnical report been completed?	No geotechnical report is available.
6	How will AC slot patching adjacent to curb ramps and curb and gutter be paid?	Slot patching is included in the respective bid items: Bid Item #12 (as specified in Section 303-5.1.1(a) ADA Access Ramp Section), Bid Item #10 (2' slot patch), Bid Item #13 (2' slot patch), and Bid Item #23 (3' slot patch). At certain locations, the Engineer may direct that slot patching not be installed. In such cases, a credit for the omitted slot patch installation will be issued to the City accordingly.
7	Will the City pay all required project permits fees?	Yes.
8	Will the City provide compaction testing services?	The City will cover initial soil compaction. Retesting due to failure will be at the Contractor's expense. Contractor must comply with City's Quality Assurance Program.
9	Is a temporary office required?	No.
10	Will a laydown or staging area be available?	If needed, the Contractor shall coordinate with the City or other applicable entities to secure a staging area. Monthly rental fees may apply.
11	Does this project require phasing?	Refer to Special Provision of Project Specifications.
12	Plans note some utility adjustments by others. Will the Contractor need to coordinate?	The Deposition Note pertains to utility companies that have elected to self-perform the adjustment of their manholes and valves. The Contractor shall coordinate directly with the responsible agencies. Full compensation for utility locating, notifications, coordination, and scheduling of utility work performed by others shall be included in the contract unit prices for the utility items of work. No additional compensation will be provided.

No.	Question	Response
13	What are the standard working hours (Monday–Friday)?	Refer to the General Provisions of Project Specifications.
14	Is night work required?	No, but if proposed, night or weekend work must be approved by the City at least five (5) working days in advance.
15	Plan Sheet S-2.0 shows construction note #23 which calls for removing existing striping and restriping per the Striping Plan. Please confirm this area is excluded from cold mill and constructing a new 2" AC surface course (notes #9 and #11).	Yes, this area is excluded from cold mill.
16	Please confirm that all sleeves under hardscape are existing.	Existing sleeves should be reused; new installations require new sleeves.
17	Are the irrigation components (controllers, POC valves, flow sensors, backflows) to be reused?	Irrigation controllers are existing and to be reused. All the other components are new.
18	Is a Caltrans encroachment permit required?	No Caltrans permit is required.
19	Fairview Road Rehabilitation Drawings S2.0 -S4.0: Please provide clarification regarding what bid item construction note # 22 Adjust Crosswalk Push Button to 42" from New Finish Grade, be allocated to.	Included in scope of Bid Item #26.
20	Fairview Road Rehabilitation Drawings S2.0 -S4.0: Please provide clarification regarding what bid item construction note # 4 Adjust Pull Boxes to Grade will be allocated to.	Included in the scope of Bid Item #12.
21	Where are the pull boxes for Bid Item #16 located?	This bid item accounts for any pull boxes that are identified as damaged or needing to be replaced during construction. They are identified on the plan sheets.
22	Edison Service Conduit Plan Sheet 2346355-Line Extension scope: Please provide confirmation which bid item will this work be allocated to?	Included in Bid Item #25 (Furnish and Install Pedestrian Hybrid Beacon).
23	Where are loop detectors for Bid Item #24 located?	Loops are to be installed on SB Fairview Rd. at the intersection of Newport Blvd. as specified in the technical special provisions.
24	Bid Item# 26 - Specs pg. SP-93 - Will the supplier be providing a quote for the Temporary Cabinet & Cobalt needed while the existing cabinet is being modified at Fairview & Wilson? Or will the contractor furnish & install the temporary cabinet & Cobalt? Will the contractor be furnishing the (4) Additional Load Switch Sockets needed for the existing cab mods? Its unclear if the Contractor is furnishing these items or the supplier.	The Contractor is responsible for furnishing and installing the temporary cabinet, cobalt, and additional load switch sockets.

No.	Question	Response
25	Bid Item# 25: Furnish and Install Pedestrian Hybrid Beacon Hawk Signal. Please provide clarification the plans call for Econolite controller cabinet and components. The bid item calls for Hawk Signal items and components. Can you please provide a list of items and what manufacture is to be quoted.	Refer to the technical special provision.
26	Is an original hard copy of the Bidder's Bond required to be submitted to the agency's office by/before the bid due date and time?	Each bidder must submit a certified check, cashier's check, or a bid bond, made payable to or in favor of the City of Costa Mesa, in an amount equal to at least ten percent (10%) of the total amount of the bid, to the Costa Mesa City Clerk prior to the bid submission deadline. No bid will be considered unless such certified check, cashier's check, or bid bond is received by the City Clerk PRIOR to the bid submission deadline.
27	Please confirm that no Mandatory Pre-Bid Meeting will be held.	There will be no mandatory pre-bid meeting for this project.
28	Is this project subject to State Prevailing Wage Rates OR Federal Davis-Bacon Wage Rates (or both)?	This project is subject to State prevailing wage requirement.
29	Please confirm whether this project is subject to a PLA (Project Labor Agreement), a PSA (Project Stabilization Agreement), a CBA (Collective Bargaining Agreement), a CWA (Community Workforce Agreement), or anything of that nature?	This project is not subject to any labor-related agreements.
30	Please advise if there is a DBE goal or good faith efforts for this project?	There is no DBE participation goal established for this project, and good faith effort documentation is not required with the submittal.
31	Must line item prices be entered through PlanetBids and also written on the bid form and uploaded?	The line items (bid items) must be entered in PlanetBids through their respective line items and must also be written on the bid form and uploaded to PlanetBids.





# CITY OF COSTA MESA

P.O. BOX 12000 77 FAIR DRIVE CALIFORNIA 92628-1200

FROM THE PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION

**DATE:** MAY 2, 2025

**TO:** ALL PROSPECTIVE BIDDERS

**SUBJECT:** FAIRVIEW ROAD IMPROVEMENT PROJECT (FAIR DR. TO NEWPORT BLVD.), STATE FUNDED PROJECT NO. CRASL-5312 (106), CITY PROJECT NO. 25-10 - ADDENDUM NO. 2

Please forward this addendum to the appropriate individual as soon as possible. Please sign acknowledging receipt herein and e-mail a copy of this sheet to [janet.zuazo@costamesaca.gov](mailto:janet.zuazo@costamesaca.gov). The bidder shall individually identify and acknowledge receipt of **ALL** addenda by signing and enclosing each form in his/her bid package submittal. Failure to do so may result in a disqualification of his/her bid. **A COPY WILL NOT BE SENT BY MAIL.**

Received by: \_\_\_\_\_

Company: \_\_\_\_\_

All bidders shall register with *PlanetBids* in order to retrieve the addendum. It is the responsibility of each prospective bidder to check *PlanetBids* on a DAILY basis through the close of bids for any applicable addenda or updates.

This addendum, effective on this date, addresses the following items:

**BID OPENING DATE:** NO CHANGE, WEDNESDAY, MAY 7, 2025

**BID OPENING TIME:** NO CHANGE, 4:00 P.M.

**BID OPENING PLACE:** NO CHANGE

**REVISIONS TO PLANS - Planting Plans MP-1.0 – MP-4.0, Plant Schedule:**

The shrub quantities in the Plant Schedule have been revised as follows:

- **Carissa 'Green Carpet' / Natal Plum:** increased from 1,100 to 1,200 each
- **Dianella revoluta 'Little Rev' / Little Rev Flax Lily:** decreased from 110 to 80 each
- **Liriope muscari 'Big Blue' / Lily Turf:** decreased from 2,200 to 650 each

The contents of this bid addendum shall have precedence over all related provisions within the contract documents. It is the intent of the City of Costa Mesa to clarify the above-referenced items to all bidders. Should it be necessary to request clarification on these matters, please send your request via e-mail to [Anna.Baca@costamesaca.gov](mailto:Anna.Baca@costamesaca.gov).

Sincerely,

Irina Gurovich  
Associate Engineer



## CITY OF COSTA MESA

P.O. BOX 12000 77 FAIR DRIVE CALIFORNIA 92628-1200

FROM THE PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION

**DATE:** MAY 2, 2025

**TO:** ALL PROSPECTIVE BIDDERS

**SUBJECT:** FAIRVIEW ROAD IMPROVEMENT PROJECT (FAIR DR. TO NEWPORT BLVD.),  
STATE FUNDED PROJECT NO. CRASL-5312 (106), CITY PROJECT NO. 25-10 -  
ADDENDUM NO. 3

Please forward this addendum to the appropriate individual as soon as possible. Please sign acknowledging receipt herein and e-mail a copy of this sheet to [janet.zuazo@costamesaca.gov](mailto:janet.zuazo@costamesaca.gov). The bidder shall individually identify and acknowledge receipt of **ALL** addenda by signing and enclosing each form in his/her bid package submittal. Failure to do so may result in a disqualification of his/her bid. **A COPY WILL NOT BE SENT BY MAIL.**

Received by: \_\_\_\_\_

Company: \_\_\_\_\_

All bidders shall register with *PlanetBids* in order to retrieve the addendum. It is the responsibility of each prospective bidder to check *PlanetBids* on a DAILY basis through the close of bids for any applicable addenda or updates.

This addendum, effective on this date, addresses the following items:

**BID OPENING DATE:** NO CHANGE, WEDNESDAY, MAY 7, 2025

**BID OPENING TIME:** NO CHANGE, 4:00 P.M.

**BID OPENING PLACE:** NO CHANGE

**REVISIONS TO PLANS** - Planting Plans MP-1.0 – MP-4.0, Plant Schedule:

The shrub quantities in the Plant Schedule have been revised as follows:

- **Carissa 'Green Carpet' / Natal Plum:** increased from 1,100 to 1,200 each
- **Dianella revoluta 'Little Rev' / Little Rev Flax Lily:** decreased from 110 to 90 each
- **Liriope muscari 'Big Blue' / Lily Turf:** decreased from 2,200 to 1,400 each

The quantities provided in this addendum, as well as those listed in the Plant Schedule, are approximate. The contractor is responsible for verifying all plant quantities with the Engineer prior to ordering. Payment will be based on the actual number of plants installed.

The contents of this bid addendum shall have precedence over all related provisions within the contract documents. It is the intent of the City of Costa Mesa to clarify the above-referenced items to all bidders. Should it be necessary to request clarification on these matters, please send your request via e-mail to [Anna.Baca@costamesaca.gov](mailto:Anna.Baca@costamesaca.gov).

Sincerely,

Irina Gurovich  
Associate Engineer

**EXHIBIT B**  
**BID PACKAGE**

CITY OF COSTA MESA  
ORANGE COUNTY, CALIFORNIA

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NOTICE TO BIDDERS, PROPOSAL, CONTRACT, AND  
SPECIAL PROVISIONS FOR

**FAIRVIEW ROAD IMPROVEMENT PROJECT**  
***(FROM FAIR DRIVE TO NEWPORT BOULEVARD)***

**CITY PROJECT NO. 25-10**  
**STATE PROJECT NO. CRASL-5312(106)**

---

Prepared Under the Direction of



*S. Yang*

**Seung Yang, P.E.**

City Engineer

Copy No. \_\_\_\_\_

Checked by \_\_\_\_\_



**SECTION C**  
**PROPOSAL**  
**FOR THE**  
**FAIRVIEW ROAD IMPROVEMENT PROJECT (FAIR DRIVE TO NEWPORT BLVD.),**  
**CITY PROJECT NO. 25-10**  
**STATE FUNDED PROJECT NO. CRASL-5312(106)**

The Honorable City Council  
City of Costa Mesa  
77 Fair Drive  
Costa Mesa, CA 92626

Dear Council Members:

In compliance with the NOTICE INVITING BIDS FOR THE **FAIRVIEW ROAD IMPROVEMENT PROJECT (FAIR DRIVE TO NEWPORT BOULEVARD), STATE FUNDED PROJECT NO. CRASL – 5312 (106), CITY PROJECT NO. 25-10**, a copy which is hereto attached, the undersigned has carefully examined the location of the proposed Work, the Plans, Specifications and other Contract Documents and is therefore satisfied as to the conditions to be encountered, as to the character, quality and quantity of work to be performed and materials to be furnished and as to the requirements of the specifications and the Contract. It is mutually agreed that the submission of a proposal shall be considered prima facie evidence that the BIDDER has made such examination.

If awarded the Contract, the undersigned agrees to commence the Work under the Contract **WITHIN TEN (10) DAYS AFTER DATE OF CONTRACT, AND COMPLETE SAID WORK WITHIN NINETY - FIVE (95) WORKING DAYS** from the first day of commencement of such work unless legal extension is granted in accordance with the terms set forth in the specifications, and to perform and complete the Work as shown on the Plans and in accordance with the Specifications and other Contract Documents, and to furnish all labor, materials, tools and equipment necessary to complete the Work in-place therefor, in the manner and time herein prescribed at the following prices, to wit:

  
\_\_\_\_\_  
Bidder's Initials



### BID SCHEDULE PROPOSAL

ITEM #	BID ITEM DESCRIPTION	APPROX. QTY.	UNIT	UNIT PRICE (in figures)	ITEMS TOTAL (in figures)
1	Mobilization (5% Maximum)	1	L.S.	\$ 100,000	\$ 100,000
2*	Additional Work Items	1	F.A.	\$150,000	\$150,000
3	Preparation And Implementation Of Erosion Control And Best Management Practice	1	L.S.	\$ 30,000	\$ 30,000
4	Unclassified Excavation (Fill)	400	C.Y.	\$ 250.00	\$ 100,000
5	Variable Cold Mill 2-inches	325,000	S.F.	\$ 0.38	\$ 123,500
6	Asphalt Concrete (AC) Pavement	400	TON	\$ 250.00	\$ 100,000
7	Asphalt Rubber Hot Mix (ARHM-G) Surface Course	4,100	TON	\$ 135.00	\$ 553,500
8	Construct Crushed Miscellaneous Base (CMB)	800	TON	\$ 25.00	\$ 20,000
9	Construct Variable Height Portland Cement Concrete (PCC) Curb 0-inches to 8-inches over 6-inch Crushed Miscellaneous Base (CMB)	100	L.F.	\$ 90.00	\$ 9,000
10	Construct 8-inch Portland Cement Concrete (PCC) Curb & Gutter over 6-inch Crushed Miscellaneous Base (CMB)	100	L.F.	\$ 125.00	\$ 12,500
11	Construct 4-inch Portland Cement Concrete (PCC) Sidewalk over 4-inch Crushed Miscellaneous Base (CMB)	1,400	S.F.	\$ 22.00	\$ 30,800
12	Construct 4-inch Portland Cement Concrete (PCC) Curb Ramp over 4-inch Crushed Miscellaneous Base (CMB) including "Federal Yellow" Truncated Domes	4,800	S.F.	\$ 30.00	\$ 144,000
13	Construct 6-inch Drive Approach over 6-inch Crushed Miscellaneous Base (CMB)	600	S.F.	\$ 32.00	\$ 19,200
14	Adjust and Reset Existing Survey Monuments and Ties per California Licensed Land Surveyor	10	EA	\$ 1,000	\$ 10,000
15	Traffic Signing, Striping, Pavement Legends & RPMs	1	L.S.	\$ 80,000	\$ 80,000
16	Furnish and Install Pull Boxes	10	EA	\$ 1,200	\$ 12,000
17	Temporary Traffic Control - Pedestrian Control, Construction Phasing/Staging, Public Convenience & Safety	1	L.S.	\$ 249,300	\$ 249,300
18	Median Clearing and Grubbing	1	L.S.	\$ 40,000	\$ 40,000
19**	Median Landscaping	1	L.S.	\$ 125,000	\$ 125,000
19A	Landscape Maintenance (90 days)	1	L.S.	\$ 5,000	\$ 5,000
20**	Median Irrigation	1	L.S.	\$ 135,000	\$ 135,000

Bidder's Initials



BID SCHEDULE PROPOSAL (Continued)					
ITEM #	BID ITEM DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE (in figures)	ITEMS TOTAL (in figures)
21	Construct 9-inch Portland Cement Concrete (PCC) Bus Pad over 12-inch Crushed Miscellaneous Base (CMB)	2,000	S.F.	\$ 40.00	\$ 80,000
22	Construct Portland Cement Concrete (PCC) Bus Boarding Islands and Portland Cement Concrete (PCC) Median Cut-Through	3,000	S.F.	\$ 30.00	\$ 90,000
23	Construct 8-inch Portland Cement Concrete (PCC) Spandrel over 8-inch Crushed Miscellaneous Base (CMB)	600	S.F.	\$ 40.00	\$ 24,000
24	Furnish and Install Traffic Loops	5	EA	\$ 800.00	\$ 4,000
25**	Furnish and Install Pedestrian Hybrid Beacon (HAWK Signal) as Shown on Plans.	1	L.S.	\$ 200,000	\$ 200,000
26**	Perform Traffic Signal Modification (at Fairview Rd. & Wilson St.)	1	L.S.	\$ 100,000	\$ 100,000
27	Furnish and Install White Flexible K-71 Posts	200	EA	\$ 305.00	\$ 61,000
28	Furnish and Install Green Preformed Thermoplastic Markings	11,500	S.F.	\$ 9.00	\$ 103,500
29A	Adjust Orange County Sanitation District (OCSD) PVC Lined Manhole Covers to Grade	9	EA	\$ 4,500	\$ 40,500
29B	Adjust Orange County Sanitation District (OCSD) Unlined Manhole Covers to Grade	16	EA	\$ 2,500	\$ 40,000
30	Adjust Costa Mesa Sanitation District (CMSD) Manhole Covers to Grade	6	EA	\$ 2,500	\$ 15,000
31	Adjust Storm Drain Manhole Frame & Cover to Grade	12	EA	\$ 1,400	\$ 16,800
32	Adjust Utility and Water Valves to Grade	26	EA	\$ 1,400	\$ 36,400
TOTAL BID PROPOSAL FIGURES:				\$ 2,860,000.00	

TOTAL BID PROPOSAL (Words):

Two million, eight hundred sixty thousand dollars.

  
Bidder's Initials



**PROPOSAL BID SCHEDULE  
(CONTINUED)**

**NOTES:**

1. The accuracy of estimate quantities as shown is not guaranteed; the Bidder shall make his/her own estimate from the drawings and field review for verification. If the unit price and the total amount are different, the unit price will control the bid. Payment shall be based on actual work done and/or actual quantities used.
2. The City reserves the right to delete one or more bid items and/or to increase or decrease bid items' quantities, at no additional cost to the City.
3. (\*) Allowance is for unforeseen work not included in the contract documents and to be included in the total bid amount as identified as follows. Use of the allowance will be at the sole discretion of the City and must be authorized in writing at the discretion of the City. This Bid item will cover unforeseen work that is not included in the contract documents. Any money used from the project allowance will be authorized via an Allowance Disbursement Form at the City's sole discretion. Any amount of money remaining in the Allowance line item upon completion of the Project will be deducted from the Contract by Deductive Change Order for the full amount(s) remaining therein. The Contractor has no beneficial interest in, and/or claim to, the Allowances and hereby disclaims any and all such interests.
4. (\*\*) Schedule of Values shall be submitted before 4:00 PM of the 5th business day following the bid opening. Price includes the indirect cost and markup.
5. FA designates force account. Payment shall be made on a time and materials basis, only if directed by the Engineer.
6. (F) Designates Final Pay Item. When an item of work is designated as "FINAL PAY ITEM" in the Specifications, the estimated quantity for that item of work shall be the final pay quantity, unless the dimensions of any portion of that item are revised by the Engineer, or the item or any portion of the item is eliminated. If the dimensions of any portion of the item are revised, and the revisions result in an increase or decrease in the estimated quantity of that item of work, the final pay quantity for the item will be revised in the amount represented by the changes in the dimensions. If a final pay item is eliminated, the estimated quantity for the item will be eliminated. If a portion of a final pay item is eliminated, the final pay quantity will be revised in the amount represented by the eliminated portion of the item of work.  
The estimated quantity for each item of work designated as "FINAL PAY ITEM" in the Specifications, shall be considered as approximate only, and no guarantee is made that the quantity which can be determined by computations, based on the details and dimensions shown on the plans, will equal the estimated quantity. No allowance will be made in the event that the quantity based on computations does not equal the estimated quantity. In case of discrepancy between the quantity shown in the Engineer's Estimate for a final pay item and the quantity or summation of quantities for the same item shown on the plans, payment will be based on the quantity shown in the Engineer's Estimate.
7. Bidder declares that it has read and understands Items 14 & 15 of Information for Bidders (Page B-2 and B-3).

  
Bidder's Initials





**PROPOSAL SCHEDULE  
(CONTINUED)**

The Contractor agrees that the City will not be held responsible if any of the approximate quantities shown in the foregoing proposal shall be found incorrect, and he shall not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done. If any error, omission or misstatements shall be discovered in the estimated quantities, it shall not invalidate this contract or release the Contractor from the execution and completion of the whole or part of the work herein specified, in accordance with the specifications and the plans herein mentioned and the prices herein agreed upon and fixed therefore, or excuse him from any of the obligations or liabilities hereunder, or entitle him to any damages or compensation otherwise than as provided for in this contract.

The Contractor agrees that the City shall have the right to increase or decrease the quantity of any bid item or portion of the work or to omit portions of the work as may be deemed necessary or expedient, and that the payment for incidental items or work, not separately provided in the proposal shall be considered included in the price bid for other various items or work.


Accompanying this proposal is "Cash," "Certified Check," or "Bidder's Bond" (circle one) in the amount of 10% of total amount bid (\$ 10%) equal to at least ten (10%) percent of the total bid price, payable to the City of Costa Mesa, to guarantee that within fourteen (14) days after written notice is deposited in the mail, or the bidder has received notice by telephone, the bidder will furnish proper Certificates of Insurance, and required bonds satisfactory to the City and execute a contract in accordance with the proposal and in the manner and form required by the contract documents.

The undersigned deposits the above-named security as a proposal guarantee and agrees that it shall be forfeited to the City of Costa Mesa as Liquidated Damages if the above requirements are not complied with.

  
Bidder's Initials

Respectfully Submitted,

Hardy & Harper, Inc.  
Contractor's Business Name  
32 Rancho Circle  
Business Address: Street  
Lake Forest, CA 92630  
City State Zip  
714-444-1851  
Business Phone Number  
Michael Amundson, Vice President  
Name Title  
Lake Forest, CA 92630  
City State Zip

Michael Amundson, Vice President  
Title  
  
Signed By  
215952 A, C-8 & C12 12/31/2025  
Contractor's License No. and Classification Exp. Date  
April 2, 2025  
Date  
32 Rancho Circle  
Residence: Street  
714-444-1851  
Residence phone Number

If the bid is by a corporation, state the names of the officers who can sign an agreement on behalf of the corporation and whether more than one officer must sign.

☒ Corporation

Taxpayer I.D. Number: 95-2251022

Name Dan T. Maas, President  
Name Michael Amundson, Vice President  
Name Kristen Paulino, Corporate Secretary

Can Sign

☒  
☒  
☒

Must Sign

☐  
☐  
☐

If the bid is by a partnership or a joint venture, state the names and addresses of all general partners and joint ventures.

☐ Partnership or Joint Ventures

Taxpayer I.D. Number: N/A


Name N/A  
Address N/A  
Name N/A  
Address N/A

If the bidder is a sole proprietorship or another entity that does business under a fictitious name, the bid shall be in the real name of the bidder with a designation following showing "DBA (the fictitious name)"; provided, however, no fictitious name shall be used unless there is a current registration with the Orange County Recorder.

The full names and residences of all persons and parties interested in the foregoing proposal, as principals, are as follows:

NOTE: Give first and last names in full; in case of corporation, give names of President, Secretary, Treasurer and Manager, and affix corporate seal; in case of partnerships and joint ventures, give names of all the individual members.

<u>Dan T. Maas</u>	<u>President</u>
<u>Michael Amundson</u>	<u>Vice President</u>
<u>Tanner Hambright</u>	<u>Vice President</u>
<u>Kristen Paulino</u>	<u>Corporate Secretary</u>

  
Bidder's Initials





## Hardy & Harper, Inc. Current Construction Projects

OWNER/AGENCY	PROJECT NAME	CONTRACT AMOUNT	APPROXIMATE COMPLETION DATE
City of Moreno Valley 14177 Frederick Street Moreno Valley, CA 92552	Pavement Rehabilitation for Various Local Streets (CDBG FY 23-24)	\$2,738,000.00	May 2025
City of Montebello 1600 W Beverly Blvd. Montebello, CA 90640	SB1 and Annual Year 1 Street Improvement Project	\$2,926,000.00	April 2025
City of Cathedral City 68700 Avenida Lalo Guerrero Cathedral City, CA 92234	2024-2025 City Street Pavement Reconstruction Projects	\$1,432,000.00	March 2025
City of Bell Gardens 7100 Garfield Avenue Bell Gardens, CA 90201	Eastern Avenue Improvements Project	\$1,278,900.00	February 2025
City of Highland 27215 Base Line Highland, CA 92346	Greenspot Road Median and Street Improvements	\$951,000.00	February 2025
City of Indian Wells 44950 Eldorado Dr. Indian Wells, CA 92210	Local Roads Improvement - Phases 2,3,4	\$1,460,000.00	February 2025
City of Eastvale 12636 Limonite Avenue Eastvale, CA 91752	2024 Median Improvement Project	\$1,650,000.00	February 2025
City of Burbank 301 East Olive Avenue Burbank, CA 91502	2022-2023 Annual Arterial Pavement Rehabilitation Project	\$1,930,000.00	May 2025
City of Laguna Hills 24035 El Toro Road Laguna Hills, CA 92653	Arterial Pavement Rehabilitation Project & Curb Ramp Replacement Project	\$5,565,584.00	March 2025
County of Riverside 3525 14th Street Riverside, CA 92501	Indiana Ave Resurfacing & Grant Street and Harlow Ave Resurfacing Project	\$3,185,000.00	February 2025
City of Jurupa Valley 8930 Limonite Avenue Jurupa Valley, CA 92509	2023-2024 CDBG Glen Avon Area Pavement Rehab & 2024-2025 CDBG Rubidoux Area Pavement Rehab	\$1,197,920.00	January 2025
City of Hawaiian Gardens 21815 Pioneer Blvd Hawaiian Gardens, CA 90716	Carson Street Beautification (Phase II), Project 108	\$4,480,000.00	February 2025

## Hardy & Harper, Inc. Past Project References

OWNER/AGENCY	CONTACT	PROJECT NAME, AMOUNT, & COMPLETION DATE
City of Grand Terrace 22795 Barton Road Grand Terrace, CA 92313	Kamran Dadbeh (909) 824-6621 kdadbeh@grandterrace-ca.gov	Pavement Rehabilitation on Mount Vernon Avenue Contract Amount: \$693,000.00 Completion Date: December 2024
City of Fullerton 303 West Commonwealth Avenue Fullerton, CA 92832	Melissa Rendon (714) 738-6886 melissa.rendon@cityoffullerton.org	Las Palmas Area Street Rehabilitation Contract Amount: \$2,585,000.00 Completion Date: October 2024
County of Riverside 3525 14th Street Riverside, CA 92501	Joel Jimenez (951) 955-1537 jrjimenez@rivco.org	Dillon Road Resurfacing and Bubbling Wells Resurfacing Contract Amount: \$3,200,000.00 Completion Date: September 2024
City of Orange 300 E. Chapman Avenue Orange, CA 92866	Salvador Munoz (714) 744-5547 smunoz@cityoforange.org	Annual Pavement Maintenance at Various Locations FY 23-24 Contract Amount: \$3,850,000.00 Completion Date: August 2024
City of Cathedral City 68-700 Avenida Lalo Guerrero Cathedral City, CA 92234	Armando Baldizzone (760) 770-0340 abaldizzone@cathedralcity.gov	Panorama Neighborhood Pavement Reconstruction Contract Amount: \$636,000.00 Completion Date: July 2024
City of Ontario 303 East "B" Street Ontario, CA 91764	Yesenia Lopez (909) 395-2103 ylopez@ontarioca.gov	2024 Spring Pavement Rehabilitation Project Contract Amount: \$2,041,000.00 Completion Date: June 2024
City of Los Alamitos 3191 Katella Avenue Los Alamitos, CA 90720	Chris Kelley (562) 431-3538 ckelley@cityoflosalamitos.org	Bloomfield Street Improvement Project Contract Amount: \$207,000.00 Completion Date: April 2024
City of Rancho Santa Margarita 22112 El Paseo Rancho Santa Margarita, CA 92688	Tri Nguyen (949) 635-1813 tnguyen@cityofrsm.org	Fy 23-24 Annual Residential Overlay Contract Amount: \$829,425.00 Completion Date: March 2024
City of Vernon 4305 Santa Fe Avenue Vernon, CA 90058	Lisette Melendez (323) 583-8811 lmelendez@cityofvernon.org	Gifford Ave, 48th, 49th & 50th Street Improvements Contract Amount: \$792,000.00 Completion Date: March 2024
City of Signal Hill 2175 Cherry Avenue Signal Hill, CA 90755	Davina Buenavista (310) 766-6985 dbuenavista@koacorp.com	Palm Drive Pavement Rehabilitation Project Contract Amount: \$774,000.00 Completion Date: October 2023
City of Manhattan Beach 14000 Highland Avenue Manhattan Beach, CA 90266	Gilbert Ramos (310) 802-5353 gramos@manhattanbeach.gov	Cycle 2 Street Resurfacing Project Contract Amount: \$3,110,000.00 Completion Date: September 2023
San Bernardino County 825 East 3rd Street San Bernardino, CA 92415	Larry White (909) 663-7599 lwhite@dpw.sbcounty.gov	Rain Shadow Road and Other Roads Contract Amount: \$830,000.00 Completion Date: September 2023
City of El Segundo 350 Main Street El Segundo, CA 90245	Floriza Rivera (310) 524-2361 frivera@elsegundo.org	FY 23/24 Pavement Rehabilitation Project Contract Amount: \$1,635,000.00 Completion Date: July 2023
City of La Cañada Flintridge 1 Civic Center Drive La Cañada Flintridge, CA 91011	Nasser Shoushtarian (818) 790-8882 nshoushtarian@lcf.ca.gov	2023 Citywide Street Resurfacing Program Contract Amount: \$1,060,000.00 Completion Date: June 2023
City of Palos Verdes Estates 340 Palos Verdes Drive West Palos Verdes Estates, CA 90274	Monica Pango (951) 475-3625 mpango@hrgreen.com	FY 21-22 Street Improvements Contract Amount: \$1,138,000.00 Completion Date: May 2023
City of Norwalk 12700 Norwalk Blvd Norwalk, CA 90650	Delfino Consunji (714) 686-8911 dconsunji@oe-eng.com	Local Streets Rehabilitation CDBG FY 22-23 Contract Amount: \$956,000.00 Completion Date: April 2023
City of San Gabriel 425 S. Mission Drive San Gabriel, CA 91776	Alam Mai (626) 308-2825 amai@sgch.org	CDBG Street Improvements Project FY 22/23 Contract Amount: \$490,000.00 Completion Date: March 2023
City of Fullerton 303 West Commonwealth Avenue Fullerton, CA 92832	Rafael Chavez (714) 932-7506 rafael.chavez@cityoffullerton.com	Residential Street Rehabilitation Contract Amount: \$1,204,780.00 Completion Date: February 2023
City of Moreno Valley 14177 Frederick Street Moreno Valley, CA 92552	Quang Nguyen (951) 413-3159 quangn@moval.org	Pavement Rehab. for Various Local Streets CDBG FY 21/22 Contract Amount: \$2,444,260.00 Completion Date: December 2022

## Hardy & Harper, Inc. Past Project References

OWNER/AGENCY	CONTACT	PROJECT NAME, AMOUNT, & COMPLETION DATE
City of Grand Terrace 22795 Barton Road Grand Terrace, CA 92313	Kamran Dadbeh (909) 824-6621 kdadbeh@grandterrace-ca.gov	Pavement Rehab. On Barton Rd, Van Buren St & Vivienda Ave Contract Amount: \$570,000.00 Completion Date: September 2022
City of Downey 11111 Brookshire Avenue Downey, CA 90241	Desi Gutierrez (562) 904-7110 dgutierr@downeyca.org	Residential Street Pavement Rehabilitation Project, Area 1 Contract Amount: \$2,875,000.00 Completion Date: June 2022
City of Orange 300 E. Chapman Avenue Orange, CA 92866	Youichi Nakagawa (714) 744-5572 ynakagawa@cityoforange.org	Prospect & Spring Right Turn Lane Modification Project Contract Amount: \$920,000.00 Completion Date: June 2022
City of San Fernando 117 Macneil Street San Fernando, CA 91340	Manuel Fabian (818) 898-1243 mfabian@sfcity.org	Pico Street Improvement Project Contract Amount: \$465,000.00 Completion Date: May 2022
City of Downey 11111 Brookshire Avenue Downey, CA 90241	Desi Gutierrez (562) 904-7110 dgutierr@downeyca.org	Residential Street Pavement Rehabilitation Project, Area 10 Contract Amount: \$2,355,000.00 Completion Date: April 2022
City of Jurupa Valley 8930 Limonite Avenue Jurupa Valley, CA 92509	Desiree Flores (951) 332-6464 dflores@jurupavalley.org	2021-22 CDBG Old Mira Loma Pavement Rehabilitation Project Contract Amount: \$810,000.00 Completion Date: April 2022
City of Anaheim 200 S. Anaheim Blvd Anaheim, CA 92805	Lorenzo Rea (714) 765-6893 lrea@anaheim.net	Residential Street Improvement Project - Lotus & Torry, Group 13 Contract Amount: \$5,806,000.00 Completion Date: March 2022
County of Riverside 3525 14th Street Riverside, CA 92501	Hector Davila (951) 955-6885 hedavila@rivco.org	Fisher Street Resurfacing Project Contract Amount: \$785,560.00 Completion Date: February 2022
City of Chino Hills 14000 City Center Drive Chino Hills, CA 91709	Carl Hassel (909) 364-2817 chassel@chinohills.org	Village Center Drive Pavement Rehabilitation Project Contract Amount: \$408,000.00 Completion Date: December 2021
Los Angeles County 900 S. Fremont Avenue Alhambra, CA 91803	Peter Sanque (661) 947-7173 psanque@pw.lacounty.gov	Pavement Reconstruction (Sustainable) North LA County Contract Amount: \$1,873,929.57 Completion Date: November 2021
City of Loma Linda 25541 Barton Road Loma Linda, CA 92354	Jarb Thaipejr (909) 799-2800 jthaipejr@lomalinda-ca.gov	Pavement Rehab. on Barton Rd, Bryn Mawr & Orange Grove Contract Amount: \$462,590.00 Completion Date: November 2021
City of Norco 2870 Clark Avenue Norco, CA 92860	Sam Nelson (951) 270-5607 snelson@ci.norco.ca.us	Sixth Street Widening Contract Amount: \$785,000.00 Completion Date: September 2021
City of Irwindale 5050 N. Irwindale Avenue Irwindale, CA 91706	Luis Pimentel (626) 430-2259 lpimentel@irwindaleca.gov	2020-2021 Resurfacing Project Contract Amount: \$544,311.93 Completion Date: May 2021
City of Brea 1 Civic Center Circle Brea, CA 92821	Steve Kooyman (530) 318-1066 skooyman@interwestgrp.com	Imperial Highway / Berry St. Intersection Improvements Contract Amount: \$579,648.80 Completion Date: May 2021
City of Colton 650 N. La Cadena Drive Colton, CA 92324	Jess Sotto (909) 370-5551 jsotto@coltonca.gov	FY 20-21 Asphalt Paving Project Contract Amount: \$2,695,493.64 Completion Date: May 2021
City of Burbank 301 E. Olive Avenue Burbank, CA 91502	Adam Salehi (818) 238-3946 asalehi@burbankca.gov	2020 Street Improvement Project Contract Amount: \$1,253,099.98 Completion Date: April 2021
City of Oxnard 300 West Third Street Oxnard, CA 93030	Renee Hatcher (805) 385-8280 renee.hatcher@oxnarca.org	Thin Maintenance Overlay Project Phase II (Rebid 2) Contract Amount: \$6,550,000.00 Completion Date: November 2020
City of Moreno Valley 14177 Frederick Street Moreno Valley, CA 92552	Michael Wolfe (951) 413-3100 purchasingdivision@moval.org	Citywide Pavement Rehabilitation Program FY 19-20 Contract Amount: \$4,080,364.90 Completion Date: November 2020
City of Cypress 5275 Orange Avenue Cypress, CA 90630	Alex Bangean (714) 229-6740 abangean@cypressca.org	Arterial Rehabilitation Project 230 Contract Amount: \$1,042,000.00 Completion Date: August 2020
City of Banning 99 East Ramsey Street Banning, CA 92220	Art Vela (951) 922-3130 avela@banningca.gov	Street Rehabilitation at Various Locations Contract Amount: \$1,451,000.00 Completion Date: March 2020



### DESIGNATION OF SUBCONTRACTORS

In compliance with the "Subletting and Subcontracting Fair Practices Act" being Sections 4100-4113 of the Public Contract Code of the State of California, and any amendments thereto, each bidder shall set forth below the name and location of the place of business of each subcontractor who will perform work or labor or render service to the prime contractor in or about the construction of the work or improvement in an amount in excess of one-half (½) of one percent (1%) of the prime contractor's total bid or in the case of bids for the construction of streets or highways, including bridges, in excess of one-half (½) of one percent (1%) of the prime contractor's total bid or ten thousand (\$10,000) dollars, whichever is greater. Bidder shall further set forth the portion of the work, which will be done by each such subcontractor with its Department of Industrial Relations (DIR) registration number. Only one subcontractor for each such portion shall be listed.

If the contractor fails to specify a subcontractor for any portion of the work to be performed under the contract, he/she/it shall be deemed to have agreed to perform the balance of all work, which is not covered, and he/she/it shall not be permitted to subcontract that portion of the work except under the conditions hereinafter set forth.

Subletting or subcontracting of any portion of the work to which no subcontractor was designated in the original bid, shall only be permitted in cases of public emergency or necessity, and then only after a finding reduced to writing as a public record of the Legislative Body of the Owner.

*All information must be filled out and typed. Please use additional pages in this format if needed.*

Bid Item (s) Number	% Portion of Work	Name, Address and E-mail of Subcontractor	State License Number	Class	DIR Registration Number
5	4%	All American Asphalt Corona, CA	267073	A, C12	1000001051
15, 27, 28	8%	BC Traffic Specialist Garden Grove, CA	877686	A, B, C31, C32, C41, C42, D39	042,064 10000407561
14	1%	Case Land Surveying, Inc. Orange, CA	LS411	LS	1000001533
25, 26	9%	Electro Belco Electric, Inc. Chino, CA	738518	A	1000004804
19, 20	9%	Marina Landscape Inc. Orange, CA	492862	A, B, C27, C28, C36, C41, D44	D39 1000000079
18	1%	V+E True Service Orange, CA	654506	C27	1000001936

By submission of this proposal, the Bidder certifies:

- That (I)(we)(it) is able to and will perform the balance of all work which is not covered in the above subcontractors listing.
- That the AGENCY will be furnished copies of all subcontracts entered into by subcontractor for this project.

  
Bidder's Initials

### CITY OF COSTA MESA BIDDERS LIST

All bidders/proposers are required to provide the following information for all DBE and non-DBE subcontractors and suppliers, who provided a proposal, bid, quote, or were contacted by the proposed prime. This information is also required from the proposed prime contractor, and must be submitted with their bid/proposal. City of Costa Mesa will use this information to maintain and update a "Bidders List" to assist in evaluating the level of DBE participation on all Public Works projects. To the extent permitted by law, all information submitted will be held in confidence.

If Bidders List information is not submitted with the bid, it shall be submitted to the City of Costa Mesa, Construction Management Division, 77 Fair Drive, Costa Mesa, CA 92626, no later than 4:00 p.m. on the fourth day, not including Saturdays, Sundays and legal holidays, following the bid opening. Bidders List information sent by U.S. Postal Service certified mail with return receipt and certificate of mailing and mailed on or before the third day, not including Saturdays, Sundays and legal holidays, following bid opening will be accepted even if it is received after the fourth day following bid opening. Failure to submit the required Bidders List information by the time specified will be grounds for finding the bid or proposal non-responsive.

Firm Name: Hardy & Harper, Inc. Phone: 714-444-1851

Address: 32 Rancho Circle Fax: 714-444-2801

Lake Forest, CA 92630

Contact Person: Michael Amundson, Vice President No. of years in business: 79

Is the firm currently certified as a DBE under 49 CFR Part 26? ☐ YES ☒ NO

Type of work/services/materials provided by firm? Asphalt Paving and Minor Concrete

What was your firm's Gross Annual receipts for last year?

- ☐ Less than \$1 Million
- ☐ Less than \$5 Million
- ☐ Less than \$10 Million
- ☐ Less than \$15 Million
- ☒ More than \$15 Million

This form can be duplicated if necessary to report all bidders (DBE subcontractors, non-DBE subcontractors and/or suppliers' information).

  
Bidder's Initials



### CITY OF COSTA MESA BIDDERS LIST

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Firm Name: All American Asphalt Phone: 951-736-7600  
Address: 400 East Sixth Street Corona, CA 92879 Fax: 951-736-7646

Contact Person: Maurice Ramirez, Project Manager No. of years in business: 55

Is the firm currently certified as a DBE under 49 CFR Part 26? ☐ YES ☒ NO

Type of work/services/materials provided by firm? Paving, Grading, Concrete, Grinding, Utility Adjustment, Slurry Seal Paving Fabric

What was your firm's Gross Annual receipts for last year?

- ☐ Less than \$1 Million
- ☐ Less than \$5 Million
- ☐ Less than \$10 Million
- ☐ Less than \$15 Million
- ☒ More than \$15 Million

This form can be duplicated if necessary to report all bidders (DBE subcontractors, non-DBE subcontractors and/or suppliers' information).

  
Bidder's Initials



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Firm Name: BC Traffic Specialist Phone: 714-493-5906

Address: 13261 Garden Grove Blvd. Fax: —

Garden Grove CA

Contact Person: Jason Lopez No. of years in business: 25

Is the firm currently certified as a DBE under 49 CFR Part 26? ☐ YES ☒ NO

Type of work/services/materials provided by firm? Signing / Striping

What was your firm's Gross Annual receipts for last year?

- ☐ Less than \$1 Million
- ☐ Less than \$5 Million
- ☐ Less than \$10 Million
- ☐ Less than \$15 Million
- ☒ More than \$15 Million

This form can be duplicated if necessary to report all bidders (DBE subcontractors, non-DBE subcontractors and/or suppliers' information).

  
Bidder's Initials

### CITY OF COSTA MESA BIDDERS LIST

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Firm Name: Case Land Surveying, Inc. Phone: 714-628-8948

Address: 614 N. Eckhoff Street Fax: 714-628-8905

Orange, CA 92868

Contact Person: Larry V. Case No. of years in business: 39

Is the firm currently certified as a DBE under 49 CFR Part 26? ☐ YES ☒ NO

Type of work/services/materials provided by firm? Construction Staking, Monument Preservation

What was your firm's Gross Annual receipts for last year?

- ☐ Less than \$1 Million
- ☐ Less than \$5 Million
- ☒ Less than \$10 Million
- ☐ Less than \$15 Million
- ☐ More than \$15 Million

This form can be duplicated if necessary to report all bidders (DBE subcontractors, non-DBE subcontractors and/or suppliers' information).

\_\_\_\_\_  
Bidder's Initials

### CITY OF COSTA MESA BIDDERS LIST

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Firm Name: ELEC NOR BELCO ELECTRIC, INC. Phone: 909-993-5470

Address: 14320 ALBERS WAY Fax: 909-993-5476  
CHINO, CA 91710

Contact Person: JOHN WONG No. of years in business: 28

Is the firm currently certified as a DBE under 49 CFR Part 26? ☐ YES ☒ NO

Type of work/services/materials provided by firm? ELECTRICAL

What was your firm's Gross Annual receipts for last year?

- ☐ Less than \$1 Million
- ☐ Less than \$5 Million
- ☐ Less than \$10 Million
- ☐ Less than \$15 Million
- ☒ More than \$15 Million

This form can be duplicated if necessary to report all bidders (DBE subcontractors, non-DBE subcontractors and/or suppliers' information).

\_\_\_\_\_  
Bidder's Initials



### CITY OF COSTA MESA BIDDERS LIST

All bidders/proposers are required to provide the following information for all DBE and non-DBE subcontractors and suppliers, who provided a proposal, bid, quote, or were contacted by the proposed prime. This information is also required from the proposed prime contractor, and must be submitted with their bid/proposal. City of Costa Mesa will use this information to maintain and update a "Bidders List" to assist in evaluating the level of DBE participation on all Public Works projects. To the extent permitted by law, all information submitted will be held in confidence.

If Bidders List information is not submitted with the bid, it shall be submitted to the City of Costa Mesa, Construction Management Division, 77 Fair Drive, Costa Mesa, CA 92626, no later than 4:00 p.m. on the fourth day, not including Saturdays, Sundays and legal holidays, following the bid opening. Bidders List information sent by U.S. Postal Service certified mail with return receipt and certificate of mailing and mailed on or before the third day, not including Saturdays, Sundays and legal holidays, following bid opening will be accepted even if it is received after the fourth day following bid opening. Failure to submit the required Bidders List information by the time specified will be grounds for finding the bid or proposal non-responsive.

Firm Name: Marina Landscape, Inc Phone: 714-939-6600

Address: 3707 W. Garden Grove Blvd, Orange, CA 92868 Fax: 714-935-1199

Contact Person: Hue Ta - Vice President of Estimating No. of years in business: 52

Is the firm currently certified as a DBE under 49 CFR Part 26? ☐ YES ☒ NO

Type of work/services/materials provided by firm? LANDSCAPE CONSTRUCTION, EROSION CONTROL, IRRIGATION, & MAINTENANCE

What was your firm's Gross Annual receipts for last year?

- ☐ Less than \$1 Million
- ☐ Less than \$5 Million
- ☐ Less than \$10 Million
- ☐ Less than \$15 Million
- ☒ More than \$15 Million

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Firm Name: V & E Tree Service, Inc Phone: 714-997-0903

Address: 2425 N. Batavia St Fax: 714-637-4070  
Orange, Ca 92865

Contact Person: John Kipton No. of years in business: 52

Is the firm currently certified as a DBE under 49 CFR Part 26? ☐ YES ☒ NO

Type of work/services/materials provided by firm? Tree Service - Removals & Trimming

What was your firm's Gross Annual receipts for last year?

- ☐ Less than \$1 Million
- ☐ Less than \$5 Million
- ☒ Less than \$10 Million
- ☐ Less than \$15 Million
- ☐ More than \$15 Million

This form can be duplicated if necessary to report all bidders (DBE subcontractors, non-DBE subcontractors and/or suppliers' information).

  
Bidder's Initials