

**CITY OF COSTA MESA  
PROFESSIONAL SERVICES AGREEMENT  
WITH  
ONWARD ENGINEERING**

THIS AGREEMENT is made and entered into this 7th day of June, 2016 ("Effective Date"), by and between the CITY OF COSTA MESA, a municipal corporation ("City"), and ONWARD ENGINEERING, a California corporation (C2640309) ("Consultant").

**WITNESSETH:**

A. WHEREAS, City proposes to utilize the services of Consultant as an independent contractor to provide engineering services for widening improvements on West 17th Street, as more fully described herein; and

B. WHEREAS, Consultant represents that it has that degree of specialized expertise contemplated within California Government Code Section 37103, and holds all necessary licenses to practice and perform the services herein contemplated; and

C. WHEREAS, City and Consultant desire to contract for the specific services described in Exhibit "A" (the "Project") and desire to set forth their rights, duties and liabilities in connection with the services to be performed; and

D. WHEREAS, no official or employee of City has a financial interest, within the provisions of Sections 1090-1092 of the California Government Code, in the subject matter of this Agreement.

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

**1.0. SERVICES PROVIDED BY CONSULTANT**

1.1. Scope of Services. Consultant shall provide the professional services described in the City's Request for Proposals ("RFP"), attached hereto as Exhibit A, and Consultant's Response to City's RFP ("Consultant's Proposal"), attached hereto as Exhibit "B," both incorporated herein by this reference.

1.2. Professional Practices. All professional services to be provided by Consultant pursuant to this Agreement shall be provided by personnel experienced in their respective fields and in a manner consistent with the standards of care, diligence and skill ordinarily exercised by professional consultants in similar fields and circumstances in accordance with sound professional practices. Consultant also warrants that it is familiar with all laws that may affect its performance of this Agreement and shall advise City of any changes in any laws that may affect Consultant's performance of this Agreement.

1.3. Performance to Satisfaction of City. Consultant agrees to perform all the work to the complete satisfaction of the City and within the hereinafter specified. Evaluations of the work will be done by the City's Chief Executive Officer ("City CEO") or his or her designee. If the quality of work is not satisfactory, City in its discretion has the right to:

- (a) Meet with Consultant to review the quality of the work and resolve the matters of concern;
- (b) Require Consultant to repeat the work at no additional fee until it is satisfactory; and/or
- (c) Terminate the Agreement as hereinafter set forth.

1.4. Warranty. Consultant warrants that it shall perform the services required by this Agreement in compliance with all applicable Federal and California employment laws, including, but not limited to, those laws related to minimum hours and wages; occupational health and safety; fair employment and employment practices; workers' compensation insurance and safety in employment; and all other Federal, State and local laws and ordinances applicable to the services required under this Agreement. Consultant shall indemnify and hold harmless City from and against all claims, demands, payments, suits, actions, proceedings, and judgments of every nature and description including attorneys' fees and costs, presented, brought, or recovered against City for, or on account of any liability under any of the above-mentioned laws, which may be incurred by reason of Consultant's performance under this Agreement.

1.5. Non-discrimination. In performing this Agreement, Consultant shall not engage in, nor permit its agents to engage in, discrimination in employment of persons because of their race, religion, color, national origin, ancestry, age, physical handicap, medical condition, marital status, sexual gender or sexual orientation, except as permitted pursuant to Section 12940 of the Government Code.

1.6. Non-Exclusive Agreement. Consultant acknowledges that City may enter into agreements with other consultants for services similar to the services that are subject to this Agreement or may have its own employees perform services similar to those services contemplated by this Agreement.

1.7. Delegation and Assignment. This is a personal service contract, and the duties set forth herein shall not be delegated or assigned to any person or entity without the prior written consent of City. Consultant may engage a subcontractor(s) as permitted by law and may employ other personnel to perform services contemplated by this Agreement at Consultant's sole cost and expense.

1.8. Confidentiality. Employees of Consultant in the course of their duties may have access to financial, accounting, statistical, and personnel data of private individuals and employees of City. Consultant covenants that all data, documents, discussion, or other information developed or received by Consultant or provided for performance of this Agreement are deemed confidential and shall not be disclosed by Consultant without written authorization by City. City shall grant such authorization if disclosure is required by law. All City data shall be returned to City upon the termination of this Agreement. Consultant's covenant under this Section shall survive the termination of this Agreement.

## **2.0. COMPENSATION AND BILLING**

2.1. Compensation. Consultant shall be paid in accordance with the fee schedule set forth in Exhibit "C," attached hereto and made a part of this Agreement by this reference (the "Fee Schedule"). Consultant's total compensation shall not exceed Two Hundred Ninety-Five Thousand Four Hundred Sixteen Dollars and Zero Cents (\$295,416.00).

2.2. Additional Services. Consultant shall not receive compensation for any services provided outside the scope of services specified in the Consultant's Proposal unless the City or the Project Manager for this Project, prior to Consultant performing the additional services, approves such additional services in writing. It is specifically understood that oral requests and/or approvals of such additional services or additional compensation shall be barred and are unenforceable.

2.3. Method of Billing. Consultant may submit invoices to the City for approval on a progress basis, but no more often than two times a month. Said invoice shall be based on the total of all Consultant's services which have been completed to City's sole satisfaction. City shall pay Consultant's invoice within forty-five (45) days from the date City receives said invoice. Each invoice shall describe in detail, the services performed, the date of performance, and the associated time for completion. Any additional services approved and performed pursuant to this Agreement shall be designated as "Additional Services" and shall identify the number of the authorized change order, where applicable, on all invoices.

2.4. Records and Audits. Records of Consultant's services relating to this Agreement shall be maintained in accordance with generally recognized accounting principles and shall be made available to City or its Project Manager for inspection and/or audit at mutually convenient times from the Effective Date until three (3) years after termination of this Agreement.

### **3.0. TIME OF PERFORMANCE**

3.1. Commencement and Completion of Work. The professional services to be performed pursuant to this Agreement shall commence within five (5) days from the Effective Date of this Agreement. Said services shall be performed in strict compliance with the project schedule approved by City as set forth in Exhibit B. The project schedule may be amended by mutual agreement of the parties. Failure to commence work in a timely manner and/or diligently pursue work to completion may be grounds for termination of this Agreement.

3.2. Excusable Delays. Neither party shall be responsible for delays or lack of performance resulting from acts beyond the reasonable control of the party or parties. Such acts shall include, but not be limited to, acts of God, fire, strikes, material shortages, compliance with laws or regulations, riots, acts of war, or any other conditions beyond the reasonable control of a party.

### **4.0. TERM AND TERMINATION**

4.1. Term. This Agreement shall commence on the Effective Date and continue for a period of five (5) years, ending on June 6, 2021, unless previously terminated as provided herein or as otherwise agreed to in writing by the parties.

4.2. Notice of Termination. The City reserves and has the right and privilege of canceling, suspending or abandoning the execution of all or any part of the work contemplated by this Agreement, with or without cause, at any time, by providing written notice to Consultant. The termination of this Agreement shall be deemed effective upon receipt of the notice of termination. In the event of such termination, Consultant shall immediately stop rendering services under this Agreement unless directed otherwise by the City.

4.3. Compensation. In the event of termination, City shall pay Consultant for

reasonable costs incurred and professional services satisfactorily performed up to and including the date of City's written notice of termination. Compensation for work in progress shall be prorated based on the percentage of work completed as of the effective date of termination in accordance with the fees set forth herein. In ascertaining the professional services actually rendered hereunder up to the effective date of termination of this Agreement, consideration shall be given to both completed work and work in progress, to complete and incomplete drawings, and to other documents pertaining to the services contemplated herein whether delivered to the City or in the possession of the Consultant.

4.4. Documents. In the event of termination of this Agreement, all documents prepared by Consultant in its performance of this Agreement including, but not limited to, finished or unfinished design, development and construction documents, data studies, drawings, maps and reports, shall be delivered to the City within ten (10) days of delivery of termination notice to Consultant, at no cost to City. Any use of uncompleted documents without specific written authorization from Consultant shall be at City's sole risk and without liability or legal expense to Consultant.

## 5.0. INSURANCE

5.1. Minimum Scope and Limits of Insurance. Consultant 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:

- (a) 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), combined single limits, 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.
- (b) 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 limits, per occurrence for bodily injury and property damage.
- (c) Workers' compensation insurance as required by the State of California. Consultant agrees to waive, and to obtain endorsements from its workers' compensation insurer waiving subrogation rights under its workers' compensation insurance policy against the City, its officers, agents, employees, and volunteers arising from work performed by Consultant for the City and to require each of its subcontractors, if any, to do likewise under their workers' compensation insurance policies.
- (d) Professional errors and omissions ("E&O") liability insurance with policy limits of not less than One Million Dollars (\$1,000,000.00), combined single limits, per occurrence and aggregate. Architects' and engineers' coverage shall be endorsed to include contractual liability. If the policy is written as a "claims made" policy, the retro date shall be prior to the start of the contract

work. Consultant shall obtain and maintain, said E&O liability insurance during the life of this Agreement and for three years after completion of the work hereunder.

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

- (a) Additional insureds: "The City of Costa Mesa and its 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 Consultant pursuant to its contract with the City; products and completed operations of the Consultant; premises owned, occupied or used by the Consultant; automobiles owned, leased, hired, or borrowed by the Consultant."
- (b) Notice: "Said policy shall not terminate, be suspended, or voided, nor shall it be cancelled, nor the coverage or limits reduced, until thirty (30) days after written notice is given to City."
- (c) Other insurance: "The Consultant'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."
- (d) Any failure 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.
- (e) The Consultant'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.

5.3. 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.

5.4. Certificates of Insurance. Consultant shall provide to City certificates of insurance showing the insurance coverages and required endorsements described above, in a form and content approved by City, prior to performing any services under this Agreement. The certificates of insurance shall be attached hereto as Exhibit "D" and incorporated herein by this reference.

5.5. Non-limiting. Nothing in this Section 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.

## 6.0. GENERAL PROVISIONS

6.1. Entire Agreement. This Agreement constitutes the entire agreement between the

parties with respect to any matter referenced herein and supersedes any and all other prior writings and oral negotiations. This Agreement may be modified only in writing, and signed by the parties in interest at the time of such modification. The terms of this Agreement shall prevail over any inconsistent provision in any other contract document appurtenant hereto, including exhibits to this Agreement.

6.2. Representatives. The City CEO or his or her designee shall be the representative of City for purposes of this Agreement and may issue all consents, approvals, directives and agreements on behalf of the City, called for by this Agreement, except as otherwise expressly provided in this Agreement.

Consultant shall designate a representative for purposes of this Agreement who shall be authorized to issue all consents, approvals, directives and agreements on behalf of Consultant called for by this Agreement, except as otherwise expressly provided in this Agreement.

6.3. Project Managers. City shall designate a Project Manager to work directly with Consultant in the performance of this Agreement.

Consultant shall designate a Project Manager who shall represent it and be its agent in all consultations with City during the term of this Agreement. Consultant or its Project Manager shall attend and assist in all coordination meetings called by City.

6.4. Notices. Any notices, documents, correspondence or other communications concerning this Agreement or the work hereunder may be provided by personal delivery, facsimile or mail and shall be addressed as set forth below. Such communication shall be deemed served or delivered: a) at the time of delivery if such communication is sent by personal delivery; b) at the time of transmission if such communication is sent by facsimile; and c) 48 hours after deposit in the U.S. Mail as reflected by the official U.S. postmark if such communication is sent through regular United States mail.

IF TO CONSULTANT:

Onward Engineering  
300 S. Harbor Blvd., Suite 814  
Anaheim, CA 92805  
Tel: (714) 533-3050  
Fax: (714) 948-8978  
Attn: Majdi Ataya

IF TO CITY:

City of Costa Mesa  
77 Fair Drive  
Costa Mesa, CA 92626  
Tel: (714) 754-5017  
Fax: (714) 754-5028  
Attn: David Cho

6.5. Drug-free Workplace Policy. Consultant shall provide a drug-free workplace by complying with all provisions set forth in City's Council Policy 100-5, attached hereto as Exhibit "E" and incorporated herein by reference. Consultant's failure to conform to the requirements set forth in Council Policy 100-5 shall constitute a material breach of this Agreement and shall be cause for immediate termination of this Agreement by City.

6.6. Attorneys' Fees. In the event that litigation is brought by any party in connection with this Agreement, the prevailing party shall be entitled to recover from the opposing party all costs and expenses, including reasonable attorneys' fees, incurred by the prevailing party in the exercise of any of its rights or remedies hereunder or the enforcement of any of the terms, conditions, or provisions hereof.

6.7. Governing Law. This Agreement shall be governed by and construed under the laws of the State of California without giving effect to that body of laws pertaining to conflict of laws. In the event of any legal action to enforce or interpret this Agreement, the parties hereto agree that the sole and exclusive venue shall be a court of competent jurisdiction located in Orange County, California.

6.8. Assignment. Consultant shall not voluntarily or by operation of law assign, transfer, sublet or encumber all or any part of Consultant's interest in this Agreement without City's prior written consent. Any attempted assignment, transfer, subletting or encumbrance shall be void and shall constitute a breach of this Agreement and cause for termination of this Agreement. Regardless of City's consent, no subletting or assignment shall release Consultant of Consultant's obligation to perform all other obligations to be performed by Consultant hereunder for the term of this Agreement.

6.9. Indemnification and Hold Harmless. Consultant agrees to defend, indemnify, hold free and harmless the City, its elected officials, officers, agents and employees, at Consultant's sole expense, from and against any and all claims, actions, suits or other legal proceedings brought against the City, its elected officials, officers, agents and employees arising out of the performance of the Consultant, its employees, and/or authorized subcontractors, of the work undertaken pursuant to this Agreement. The defense obligation provided for hereunder shall apply without any advance showing of negligence or wrongdoing by the Consultant, 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 Consultant, its employees, and/or authorized subcontractors, and/or whenever any claim, action, complaint or suit asserts liability against the City, its elected officials, officers, agents and employees based upon the work performed by the Consultant, its employees, and/or authorized subcontractors under this Agreement, whether or not the Consultant, its employees, and/or authorized subcontractors are specifically named or otherwise asserted to be liable. Notwithstanding the foregoing, the Consultant shall not be liable for the defense or indemnification of the City for claims, actions, complaints or suits arising out of the sole active negligence or willful misconduct of the City. This provision shall supersede and replace all other indemnity provisions contained either in the City's specifications or Consultant's Proposal, which shall be of no force and effect.

6.10. Independent Contractor. Consultant is and shall be acting at all times as an independent contractor and not as an employee of City. Consultant shall have no power to incur any debt, obligation, or liability on behalf of City or otherwise act on behalf of City as an agent. Neither City nor any of its agents shall have control over the conduct of Consultant or any of Consultant's employees, except as set forth in this Agreement. Consultant shall not, at any time, or in any manner, represent that it or any of its agents or employees are in any manner agents or employees of City. Consultant shall secure, at its sole expense, and be responsible for any and all payment of Income Tax, Social Security, State Disability Insurance Compensation, Unemployment Compensation, and other payroll deductions for Consultant and its officers, agents, and employees, and all business licenses, if any are required, in connection with the services to be performed hereunder. Consultant shall indemnify and hold City harmless from any and all taxes, assessments, penalties, and interest asserted against City by reason of the independent contractor relationship created by this Agreement. Consultant further agrees to indemnify and hold City harmless from any failure of Consultant to comply with the applicable worker's compensation laws. City shall have the right to offset against the amount of any fees due to Consultant under this Agreement any amount due to City from Consultant as a result of

Consultant's failure to promptly pay to City any reimbursement or indemnification arising under this paragraph.

6.11. PERS Eligibility Indemnification. In the event that Consultant or any employee, agent, or subcontractor of Consultant 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, Consultant shall indemnify, defend, and hold harmless City for the payment of any employee and/or employer contributions for PERS benefits on behalf of Consultant 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, Consultant 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.

6.12. Cooperation. In the event any claim or action is brought against City relating to Consultant's performance or services rendered under this Agreement, Consultant shall render any reasonable assistance and cooperation which City might require.

6.13. Ownership of Documents. All findings, reports, documents, information and data including, but not limited to, computer tapes or discs, files and tapes furnished or prepared by Consultant or any of its subcontractors in the course of performance of this Agreement, shall be and remain the sole property of City. Consultant agrees that any such documents or information shall not be made available to any individual or organization without the prior consent of City. Any use of such documents for other projects not contemplated by this Agreement, and any use of incomplete documents, shall be at the sole risk of City and without liability or legal exposure to Consultant. City shall indemnify and hold harmless Consultant from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from City's use of such documents for other projects not contemplated by this Agreement or use of incomplete documents furnished by Consultant. Consultant shall deliver to City any findings, reports, documents, information, data, in any form, including but not limited to, computer tapes, discs, files audio tapes or any other Project related items as requested by City or its authorized representative, at no additional cost to the City.

6.14. Public Records Act Disclosure. Consultant has been advised and is aware that this Agreement and all reports, documents, information and data, including, but not limited to, computer tapes, discs or files furnished or prepared by Consultant, or any of its subcontractors, pursuant to this Agreement and provided to City may be subject to public disclosure as required by the California Public Records Act (California Government Code Section 6250 *et seq.*). Exceptions to public disclosure may be those documents or information that qualify as trade secrets, as that term is defined in the California Government Code Section 6254.7, and of which Consultant informs City of such trade secret. The City will endeavor to maintain as confidential all information obtained by it that is designated as a trade secret. The City shall not, in any way, be liable or responsible for the disclosure of any trade secret including, without limitation, those records so marked if disclosure is deemed to be required by law or by order of the Court.

6.15. Conflict of Interest. Consultant and its officers, employees, associates and subconsultants, if any, will comply with all conflict of interest statutes of the State of California applicable to Consultant's services under this agreement, including, but not limited to, the Political Reform Act (Government Code Sections 81000, *et seq.*) and Government Code Section 1090. During the term of this Agreement, Consultant and its officers, employees, associates and subconsultants shall not, without the prior written approval of the City Representative, perform work for another person or entity for whom Consultant is not currently performing work that would require Consultant or one of its officers, employees, associates or subconsultants to abstain from a decision under this Agreement pursuant to a conflict of interest statute.

6.16. Responsibility for Errors. Consultant shall be responsible for its work and results under this Agreement. Consultant, when requested, shall furnish clarification and/or explanation as may be required by the City's representative, regarding any services rendered under this Agreement at no additional cost to City. In the event that an error or omission attributable to Consultant occurs, then Consultant shall, at no cost to City, provide all necessary design drawings, estimates and other Consultant professional services necessary to rectify and correct the matter to the sole satisfaction of City and to participate in any meeting required with regard to the correction.

6.17. Prohibited Employment. Consultant will not employ any regular employee of City while this Agreement is in effect.

6.18. Order of Precedence. In the event of an inconsistency in this Agreement and any of the attached Exhibits, the terms set forth in this Agreement shall prevail. If, and to the extent this Agreement incorporates by reference any provision of any document, such provision shall be deemed a part of this Agreement. Nevertheless, if there is any conflict among the terms and conditions of this Agreement and those of any such provision or provisions so incorporated by reference, this Agreement shall govern over the document referenced.

6.19. Costs. Each party shall bear its own costs and fees incurred in the preparation and negotiation of this Agreement and in the performance of its obligations hereunder except as expressly provided herein.

6.20. No Third Party Beneficiary Rights. This Agreement is entered into for the sole benefit of City and Consultant 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.

6.21. Headings. Paragraphs and subparagraph headings contained in this Agreement are included solely for convenience and are not intended to modify, explain or to be a full or accurate description of the content thereof and shall not in any way affect the meaning or interpretation of this Agreement.

6.22. Construction. The parties have participated jointly in the negotiation and drafting of this Agreement. 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.

6.23. Amendments. Only a writing executed by the parties hereto or their respective successors and assigns may amend this Agreement.

6.24. Waiver. The delay or failure of either party at any time to require performance or compliance by the other of any of its obligations or agreements shall in no way be deemed a waiver of those rights to require such performance or compliance. 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. 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.

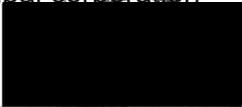
6.25. Severability. If any provision of this Agreement is determined by a court of competent jurisdiction to be unenforceable in any circumstance, such determination shall not affect the validity or enforceability of the remaining terms and provisions hereof or of the offending provision in any other circumstance. Notwithstanding the foregoing, if the value of this Agreement, based upon the substantial benefit of the bargain for any party, is materially impaired, which determination made by the presiding court or arbitrator of competent jurisdiction shall be binding, then both parties agree to substitute such provision(s) through good faith negotiations.

6.26. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original. All counterparts shall be construed together and shall constitute one agreement.

6.27. 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.

**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



\_\_\_\_\_  
Mayor

Date: 6/14/16

CONSULTANT



\_\_\_\_\_  
Signature

Date: MAY 18, 2016

MAJDI AJAYA, PRESIDENT  
Name and Title

\_\_\_\_\_  
Social Security or Taxpayer ID Number

ATTEST:



[Redacted Signature]  
City Clerk

Date: 6-16-16

APPROVED AS TO FORM:

[Redacted Signature]  
City Attorney

Date: 05/19/16

APPROVED AS TO INSURANCE:

[Redacted Signature]  
Risk Management

Date: 5/20/16

DEPARTMENTAL APPROVAL

[Redacted Signature]  
Public Services Director

Date: 5-24-16

APPROVED AS TO PURCHASING:

[Redacted Signature]  
Interim Finance Director

Date: 5.25.16

**EXHIBIT A**

**REQUEST FOR PROPOSALS**



# CITY OF COSTA MESA

CALIFORNIA 92628-1200

P.O. BOX 1200

---

FROM THE OFFICE OF THE DIRECTOR, DEPARTMENT OF PUBLIC SERVICES

March 4, 2016

**SUBJECT: REQUEST FOR PROPOSALS - ENGINEERING SERVICES FOR WEST 17<sup>TH</sup> STREET WIDENING IMPROVEMENTS**

Dear Consultant:

The City of Costa Mesa is requesting proposals for professional engineering services for improvements to widen West 17<sup>th</sup> Street from Placentia Avenue to Superior Avenue. The scope of services generally consists of the following:

- Phase 1: Detailed topographic survey
- Phase 2: Preliminary Design Plan
- Phase 3: Right-of-way engineering and legal descriptions
- Phase 3: Final civil design plans, specifications, and estimates (PS&E)

Final PS&E shall be developed as a turnkey project for advertisement and construction.

## **BACKGROUND**

The intent of the proposed project is to plan infrastructure improvements to meet current and future traffic demands and, ultimately widen West 17<sup>th</sup> Street to Master Plan of Arterial Highways (MPAH) standards. According to the Orange County Transportation Authority's (OCTA) MPAH, West 17<sup>th</sup> Street is classified as a four-lane Primary Arterial between Newport Boulevard and Placentia Avenue. Currently, West 17<sup>th</sup> Street has four lanes between Newport Boulevard and Pomona Avenue. West of Pomona Avenue, 17<sup>th</sup> Street narrows to one lane in each direction with a two-way left-turn lane and on-street parking. The project will be designed to meet the intent of the recommended roadway widths/geometrics as specified in the OCTA MPAH. The project will include developing and analyzing alternative widening alignments, preparing construction documents for the selected widening alignment and identifying right-of-way needs for the implementation of this widening project.

As widening W. 17<sup>th</sup> Street requires significant additional right-of-way, it is important to design the project and identify the needs, so that the project may be implemented in a cost effective and a phased manner. The design will consider various alignment alternatives for widening W. 17<sup>th</sup> Street so as to minimize right-of-way impacts. An alternative may involve designing W. 17<sup>th</sup> Street to Secondary Arterial standards, which may provide the required four lanes capacity without a median. Another alternative could be designing W. 17<sup>th</sup> Street to a Divided Collector standards, which would provide one lane in each direction with divided median and bicycle lanes.

## **SCOPE OF SERVICES**

The subject scope of services is intended as a "Turnkey" project to maintain a responsible and comprehensive base for all project development. Tasks shall be coordinated to effectively develop interrelated project elements; the project shall not be advanced until preliminary requirements are addressed and clear direction is established. The consultant shall have total responsibility for the accuracy and completeness of all work and services.

The following description of work defines the general project requirements. Associated tasks and provisions not specifically defined herein are requested to be addressed in the proposal and undertaken within the proposed "Not to Exceed" contract fee.

### **PHASE I - Topographic Survey, Utility Research & Project Data Collection**

The project area is defined as West 17<sup>th</sup> Street, from Placentia Avenue to Superior Avenue. This phase consists of defining physical conditions and utilities within the project area including the following:

1. Meet with City staff to define and clarify the work plan and project elements.
2. Review existing plans and materials, obtain a City permit, and secure right-of-entry for survey and geotechnical fieldwork.
3. Perform a topographic survey extending through the project area to establish horizontal and vertical controls at 10' intervals. The survey shall extend 50' outside of the City right-of-way within adjacent private parcels and 100' into cross streets. Establish existing and proposed controls including centerline, street geometrics, and right-of-way throughout project limits. Reference elevations to the closest and latest Orange County Benchmark (OCBM).
4. Establish City and private right-of-way boundaries with the same general care as would be applied to establish the exterior boundary on a final subdivision map. The consultant shall:
  - a. Recover or reestablish monumentation of points controlling in the deed description which created the City right-of-way boundary.
  - b. Recover all existing City right-of-way boundary line monumentation documented in County and City records.
  - c. By field survey, tie controlling monuments and boundary line monuments to each other and to the Orange County Horizontal Control Network.
  - d. Establish the existing City right-of-way boundary and document all work in a "Before Condition" Record of Survey.
  - e. Obtain a litigation guarantee/title report and define the exact limits of each private parcel, estimated for three (3) parcels.
5. Research and establish the precise location of all utilities and utility easements. Coordinate with all utility companies to determine underground, surface, and overhead facilities. Comply with the City adopted "Utility Coordination Procedures." Determine where interfaces with existing facilities will occur as a result of the future construction of this project. Consult with

affected utility companies and resolve any conflicts, keeping City staff informed in writing. Maintain a Utility File on all utility documentation.

7. Plot the detailed survey notes and electronic mapping files at 40 scale via CAD on 24" X 36" sheets identifying all existing conditions. Physical features shall include BCR, ECR, flow-lines, centerlines, angle points, top of curb, driveways (width, X & Y), spandrels, pavement striping, utilities, structures, walls, trees and landscape, underground and surface utilities, poles, hydrants, catch basins, signs, valves, and manholes, etc. Within all adjacent, private properties, define driveways, walkways, curbs, stairs, parking lots and parking stall layouts, buildings, planters, patios, signs, and all other physical features.

## **PHASE II – Preliminary Design Plan**

This phase consists of analysis of various widening schemes, selection of a preferred preliminary alignment, preliminary design of the improvements, analysis of environmental impacts of the roadway widening, and preparation of an environmental document to assess alternative alignment scenarios for improvements on West 17th Street.

The Consultant shall review the City proposed widening concept and the collected data and prepare up to 3 alternative preliminary widening alignments to determine the most cost effective widening alignment which meets the intent of the OCTA MPAH. Preliminary Design Plan engineering services shall include:

1. Prepare preliminary alignment concepts for the proposed improvements, identify associated impacts and costs. The concepts should include existing and proposed right-of-way, curbs, sidewalks, driveways, striping, bus stops, medians, centerlines, etc. The concept plans will be used to determine the preferred alignment plan. The preferred alignment should reduce construction and right-of-way costs and minimize unavoidable impacts to private improvements. A detailed cost estimate itemizing all construction and right-of-way elements should be prepared.
2. The Consultant shall perform the necessary environmental analysis to assess the alternative alignment scenarios and prepare environmental analysis documents suitable for a federally funded construction project.

## **PHASE III – Right-of-Way Engineering**

The Consultant shall review the selected preliminary alignment plan to determine right-of-way requirements, impacts, and costs. Right-of-way engineering services shall include:

1. Obtain and review all existing right-of-way documentation of the project area, assessor maps, building site plans, and parcel maps for each affected property.
2. Facilitate the execution of all right-of-entry agreements as required for survey and geotechnical work.
3. Procure and review current litigation guarantees/title reports, development tract maps, building plans, and associated property documentation for each affected property. Costs incurred to procure this documentation shall be included in the contract fee.

4. Determine all easement locations including utilities, existing easement facilities, and disposition of affected facilities and easements with alternative alignments.
5. Identify square footage to be acquired and itemize project impacts resulting from each affected property.
6. Interview owners and tenants, present the proposed project, and assess the extent of concerns conveyed at the meeting.
7. Prepare itemized cost estimates for acquisitions per parcel and per alignment plan, and estimate severance and/or cost-to-cure damages (excludes formal appraisal services).

Upon approval of the final alignment of the proposed improvements, perform calculations to establish precise right-of-way acquisition areas for each parcel to be acquired. Review and verify traverse closures and area calculations for each parcel. Prepare legal descriptions and acquisition maps for each parcel. The Consultant shall plot on 8-1/2" x 11" vellum acquisition maps per City standard layout. Maps shall be drawn in ink, by AutoCAD, or by another approved method. Process for City review and provide five (5) copies for each parcel of the final legal description, deed, exhibits, and right-of-way map for City execution.

#### **PHASE IV – Plans, Specifications & Estimates**

The preparation of final civil design plans, specifications and estimates, and utility coordination shall conform to MUTCD, Caltrans, and City standards. Plan and profile will be required for the existing and proposed elevations. Plans shall be 1" = 20' scale horizontally and 1"=2' vertically on standard 24" x 36" sheets. AutoCAD latest version shall be utilized, completed on 4 mil. erasable mylar per the City standards. Plans are to be fully detailed to advertise and construct the project, including:

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| < Surveying                        | < Hydrology                       |
| < Geotechnical analysis            | < Plan and profile drawings       |
| < Traffic signal modification plan | < Curb, gutter, & sidewalk        |
| < Signing and striping plan        | < Contract documents              |
| < Special provisions               | < ADA improvement details         |
| < Processing and approvals         | < Utility adjustments/relocations |
- < Private on-site reconfiguration including landscaping and irrigation adjustments; and lighting and sign relocations

1. Plot all physical features including BCR, ECR, flow-lines, centerlines, angle points, top of curb, handicap ramps, pavement striping, structures, trees, underground and surface utilities, poles, fire hydrants, catch basins, signs, water valves, manholes, etc. Within all adjacent private properties, define driveways, walkways, curbs, walls, AC and parking stall layouts, buildings, planters and irrigation, signs, lighting, utilities, and all other physical features. Based on the topographic survey, establish exact centerline controls, street geometrics, and right-of-way limits of project.

2. Prepare final intersection grid grades at 10' intervals for the subject segment of W. 17<sup>th</sup> Street and provide elevations at TC, FL, EG, EP, BCR, ECT, ¼ and ½ curb return, at 1"=10' scale. Prepare final cross sections at 25' intervals, indicating vertical and horizontal cross falls, elevations, analysis of super elevations/highway design speed calculations, and join elevations and details to private property, etc., conforming to City standards. Cross sections shall be submitted with the first plan check.
3. Utilities - Perform all necessary research to establish precise location of all utilities and utility easements. Coordinate with all utility companies to determine the nature and location of all possible relocations and associated costs. Comply with the City adopted "Utility Coordination Procedures" attached. Determine where interfaces with existing facilities will occur as a result of the construction of this project. Consult with affected utility companies requiring relocations, and resolve any conflicts, keeping City staff informed in writing, including the possibility of undergrounding utilities presently on poles along the project area. Compile information in "Utility File" and submit to City.
4. The consultant shall include \$10,000 as a separate item in the fee schedule for the City's use for potholing for utilities as requested by the consultant and approved in writing by the City's Project Manager. The Consultant will not be compensated for any other work from this item. Identifying all underground conflicting utilities is critical and it is the consultant's responsibility to ensure all utilities are properly identified and located on the plans.
5. Geotechnical/Materials report - Obtain, analyze, and document geologic and engineering data averaging five feet in depth for the project area (estimated three locations), and develop R-value and pavement design recommendations. The Geotechnical report shall include:
  - Review of readily available background materials, including published geologic maps and literature, in-house information, and stereoscopic aerial photographs. Consultant shall also review preliminary project plans, as-built project plans and specifications, log of test boring sheets, and existing structure foundation reports, if available.
  - Performance of a geotechnical site reconnaissance to observe the geotechnical conditions along the proposed alignment.
  - Provide borings at three (3) locations determined by the Consultant and approved by the City. Borings shall be a minimum of 6" wide and average 5' deep, with cores backfilled and compacted at 95% with AC material immediately following work. Provide boring log and maps showing dimensions of cores and horizontal distances from identifiable roadway points.
  - Establishing existing structural section, R-value, moisture content, expansiveness, caving potential, water level, traffic indices, and sand equivalency. Determine estimated range and degree of soil contamination if encountered. The City will provide the average daily traffic volume data.
  - Preparation of a Geotechnical Report presenting the results of the data review and findings, conclusions, and recommendations relative to the geotechnical aspects of the project's design and construction. Identify recommendations for treatment and tabulate soil information in table format for existing and proposed conditions.

6. Prepare new traffic signal plans for the intersection of West 17<sup>th</sup> Street at Pomona Avenue and traffic signal modification plans for the intersection of West 17<sup>th</sup> Street at Placentia Avenue. The consultant shall coordinate with Edison on service requirements and any necessary street light and power pole relocations.
7. Hydrologic/hydraulic Report – Analyze hydrologic/hydraulic conditions, develop details for standard longitudinal and cross fall drainage, and document findings and design calculations. Define removals and replacement of drainage pipe and design catch basin relocations, modifications, and repairs as needed.
8. Define and document Water Pollution Control requirements.
9. Define new monuments or re-setting of existing monuments and provide detailed drawings fully dimensioned for each.
10. Traffic control plans are not required. However, the specifications shall concisely define the lane and detour closure approach to minimize traffic and pedestrian impacts, and accommodate staged work requirements.
11. Complete project contract documents and special provisions in a format consistent with current City projects and guidelines. A sample of the construction proposal form and contract agreement will be furnished to the Consultant by the City.
12. The Consultant will be requested to review and approve addenda and provide clarification to plans and specifications. Consultant shall attend the pre-construction meeting, and shall be available for consultation and assistance during construction of the project to clarify or explain items relating to the design. A sub-line item fee for “Construction Technical Support” may be included under this phase, to be included within the scope of work at the discretion of the City, contingent on fee and services.
13. For construction budgeting purposes, submit to the City preliminary construction estimates with PS&E submittals at 70% and 90% completion, and any significant updates of the estimates as design work progresses. Prepare the final detailed construction quantity and cost estimate. Plans and specifications shall be signed and stamped by the Consultant before submitting.
14. Conduct a field walk-through with the City during the first and second PS&E submittal.
15. Prepare and submit a Resident Engineer’s file containing, at a minimum, final construction quantities and cost estimates with background calculation work sheets; soil and hydrology reports; survey data; Utility File; Right-of-Way File, and all relative project information.
16. The selected Consultant shall include items not specified as necessary to achieve completion and approval of the final design plans, specifications and estimates.

**Quality Assurance/Quality Control** - Quality Control shall be consistently and thoroughly applied throughout project development. Assigned QA/QC staff shall be technically well qualified to conduct the appropriate level of oversight, and demonstrate a concerted and sustained commitment to provide a high quality product. Concise written records shall be

maintained by the Consultant on all activities. Firms considering proposal submittals are requested to have an in-house technical level of expertise to professionally address all aspects of the project.

Project Design meetings shall be held once a month. The consultant shall be responsible for preparing meeting agendas, minutes, and presentation materials. A Critical Path Method (CPM) network, based on activities to support all project milestones and subtasks shall be prepared. The information will be in the form of a bar chart and show a deliverables schedule and other relevant data needed for the control of work, for City review of the work status and accomplishments occurring each month. A copy of the CPM software program and monthly updates shall be furnished to the City Project Manager.

### **Content of Proposal**

It is requested that the following be submitted with your proposal:

1. Project Understanding - provide a brief review of the project and any suggestions you might have to expedite the project or special concerns of which the City should be advised.
2. Work Plan – define the project approach, team assignments, and products.
3. Schedule – provide a detailed schedule indicating stages of work and time frames.
4. An organization chart and staffing plan identifying personnel on this project, with a brief resume on each individual (two pages max per person) and recent projects on which they have worked of a similar type. Identify the project manager with a detailed resume, and the individual authorized to negotiate the contract on behalf of the consulting firm.
5. A listing of similar street improvement projects that your firm has completed within the last five years. Information should include a description of work, year completed, cost, and agency/client name along with the agency's contact person.
6. Comply with Professional Services Agreement requirements (see attached PSA).
7. Submittal of **four (4)** duplicate proposals.

### **Fee Schedule**

The professional services contract will not be awarded based upon competitive bidding, and it is desired that fees be submitted separately. The fee schedule should show the hourly cost of personnel per task under each phase, with a total not-to-exceed amount for the project. The consultant's cost proposal for the prime and subcontractors should contain a breakdown of all cost components including labor base rate, other direct costs, overhead, and fees. It is requested that the fee, including all meetings, reproduction, materials, mailings, and associated project expenses, be itemized under the following phases:

|  |          |
|--|----------|
| Phase I: Detailed topographic survey and Preliminary Design Plan | \$ _____ |
| Phase II: Right-of-way engineering and legal descriptions        | \$ _____ |
| Phase III: Final PS&E  | \$ _____ |

**NOTE:** All originals of plans, field notes, data and calculations, correspondence, reports, electronic files, etc., will be turned over to the City upon completion of design. Ten percent (10%) of the total contract fee will be withheld until the final PS&E, Resident Engineers File, and all project documents are submitted in acceptable form to the City.

**Contract Changes**

Any change in the scope of work resulting in a contract increase or decrease in fee shall be approved by the City **in writing prior** to commencement of actual change in work. No fee adjustment will be allowed unless said **prior** approval is authorized exclusively **in writing** by the City, without exception.

**Right to Reject all Proposals**

The City of Costa Mesa reserves the right to reject any or all proposals submitted, and no representation is made hereby that any contract will be awarded pursuant to this request for proposal, or otherwise. All costs incurred in the preparation of the proposal, in the submission of additional information, and/or in any other aspect of a proposal prior to the award of a written contract will be borne by respondent. The City will provide only the staff assistance and documentation specifically referred to herein and will not be responsible for any other cost or obligation of any kind that may be incurred by a respondent. All proposals submitted to the City of Costa Mesa in response to this request for proposals shall become the property of the City.

Enclosed is the City of Costa Mesa professional services standard agreement and sample certificate of insurance for reference in preparing the proposal. The minimum insurance and endorsement requirements are stated within the enclosed documents. Should your firm be interested in submitting a proposal for this project, please forward to the City of Costa Mesa, Transportation Services Division, 4<sup>th</sup> Floor, City Hall, **on or before 5:00 p.m., April 1, 2016**. If additional information is required, please contact Pritam Deshmukh, Associate Engineer, at (714) 754-5183, or email at: [pritam.deshmukh@costamesaca.gov](mailto:pritam.deshmukh@costamesaca.gov).

Sincerely,



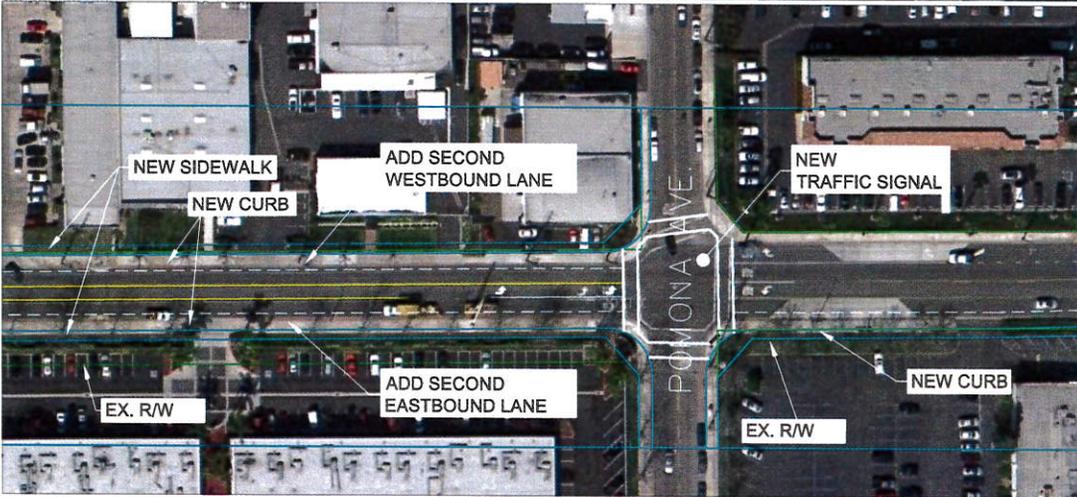
RAJA SETHURAMAN, Manager  
Transportation Services

- Attachments:   1. Aerial Map Concept Plan  
                  2. City Standard Agreement and Certificate of Insurance Forms

c       Ernesto Munoz, Public Services Director  
          Pritam Deshmukh, Associate Engineer



MATCHLINE  
SEE ABOVE RIGHT



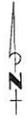
MATCHLINE  
SEE SHEET 2

MATCHLINE  
SEE BELOW LEFT



# WEST 17TH STREET IMPROVEMENTS BETWEEN PLACENTIA AVENUE AND SUPERIOR AVENUE

**SHT  
1/2**



MATCHLINE  
SEE PREVIOUS SHEET



# WEST 17TH STREET IMPROVEMENTS BETWEEN PLACENTIA AVENUE & SUPERIOR AVENUE

**SHT  
2/2**

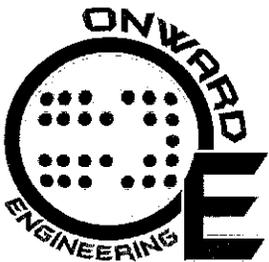
**EXHIBIT B**

**CONSULTANT'S PROPOSAL**

# ONWARD ENGINEERING

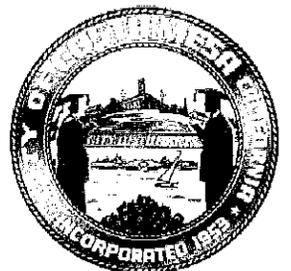
---

*Exceeding expectations, and setting the standard.  
Together we can build a better tomorrow. Today!*



Proposal to Provide Engineering  
Services for the West 17th Street  
Widening Improvement Project in the  
City of Costa Mesa

[WWW.OEENG.COM](http://WWW.OEENG.COM)



City of Costa Mesa  
Transportation Services Division, 4th Floor  
Attn: Pritam Deshmukh, Associate Engineer  
77 Fair Drive  
Costa Mesa, CA 92626

April 1, 2016

**SUBJECT: Proposal to Provide Engineering Services for the West 17<sup>th</sup> Street Widening Improvements Project in the City of Costa Mesa**

Onward Engineering (OE) is pleased to submit four copies of our proposal to provide Engineering Services for the West 17th Street Widening Improvements Project in the City of Costa Mesa. Since we opened our doors over a decade ago, we have been raising the bar in providing engineering services to public agencies. Our proposal is broken up into three primary sections, our approach, our team, and our firm.

#### **A TAILORED APPROACH**

We understand the importance of having a firm on board that has a clear understanding of the project and scope. This is amplified on projects such as this one, which cover multiple city jurisdictions, include various stakeholders, and are bound by strict schedules. So our approach was to take the issuance of the RFP as a Notice-to-Proceed. *Our team has made multiple field visits, conducted preliminary research, met with our sub-consultants, and worked on preliminary design options and exhibits.* In doing this we are able to provide you with a tailored and personalized proposal. OE is ready to hit the ground running on this high-profile project. We are in a unique position, having already started the preliminary design phase. With OE, the Costa Mesa will be our number one priority, as we aim to exceed your expectations.

#### **A HANDPICKED TEAM**

A firm is only as good as its' staff; which is why OE truly aims to bring on the very best to join our talented team. For this project, the team was of great importance. We believe that every task and every client is uniquely important, so making sure that the team proposed is able to handle the needs of the City is my chief concern. As the proposed Project Manager, Justin Smeets be *committed to this project.* Meaning that City will never have to worry about any bait and switch. Additionally, the City can be confident in his abilities. Justin has worked on multiple projects of similar size and complexity. Additionally, Justin is a *Civil3D expert* who has taken multiple classes and can truly utilize the software to ensure an accurate design. He has the experience necessary to oversee the design and to identify areas of concern. Our team also includes Dayton Lowe and Steven Macbride as Project Engineers. Our design/CAD team is ready to hit the ground running on this project.

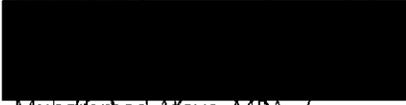
A FIRM THAT PUTS YOU FIRST

We are confident in the quality of our work, and we stand behind our past experience as proof of our ability to these *intersection widening projects on time, within budget, and at the highest level of quality*. OE utilizes highly trained staff and promises to provide ingenuity in its engineering solutions. We believe that providing the highest achievable quality of life begins with properly designed and safely constructed infrastructure. Our submittal lists relevant projects which gives the City the comfort of working with a firm who has *"been there before."*

WE SHARE YOUR VISION, AND ARE COMMITTED TO IT!

Majdi will act as the Principal-In-Charge for this contract and the individual responsible for entering OE into agreement with the City of Costa Mesa. We have reviewed the City's PSA and we have no exceptions or deviations from it. Our team is committed to premier quality in everything we do. All work performed by our skilled design team is completed at the highest level. If you have any questions, please feel free to contact us at any time at (714) 457-2994 or by email at [mataya@oe-eng.com](mailto:mataya@oe-eng.com). We look forward to working with the City on this Project.

Thank you,



Muhammad Ataya, MPA  
Vice President

## SECTION 1

# PROJECT UNDERSTANDING

## Firm Profile

Type of Corporation: "C"

Year Founded: 2004

Number of Employees: 30

Office Location: 300 S. Harbor Blvd., Suite 814, Anaheim, CA 92805 (3,000 square feet)

Contact: Phone – (714) 533-3050; Fax – (714) 948-8978; Email – [mataya@oe-eng.com](mailto:mataya@oe-eng.com)

### SERVICES OFFERED:

Design/Civil Engineering

Project Management

Construction Management

Construction Inspection

Staff Augmentation

## Executive Summary

The City of Costa Mesa is seeking a firm that can provide full engineering services for the West 17<sup>th</sup> Street Widening Improvements Project. Onward Engineering (OE) has provided successful design services on multiple *widening projects* in the past, including the Harbor Boulevard and Gisler Avenue Widening Project in the City of Costa Mesa. Additionally, we have provided Construction Management on widening projects. This means that we understand how to prepare a PS&E Package that is *constructible in addition to being consistent, clear, correct, and complete.*

Every project and client require a tailored approach. These types of improvements require a firm that can step in and hit the ground running. In an effort to best understand this project, OE treated the *City's RFP as a Notice to Proceed.* OE has visited the project limits to conduct a preliminary field investigation, carefully reviewed the City's RFP, conducted some records research, begun preparing design exhibits, and hand-picked our team. This allows us to present a *carefully constructed approach and scope, realistic schedule, and an inclusive and fine-tuned fee.*

The design of this project presents some unique issues and obstacles when it comes to stakeholder coordination due to R/W requirements. Ineffective communication will breed negative perceptions for this project, headaches for the City, and unhappy constituents. Additionally, a project of this magnitude requires *a forum for stakeholders to go to with any questions and/or concerns.* Absence of a forum leads to an inaccurate understanding of the project. Therefore, all improvements that are in the public right-of-way need to be coordinated. OE understands the importance of good communication with the affected community. Our team has put in place a couple of mediums for stakeholders to utilize during the course of this project. These mediums allow stakeholders to understand the project and to ensure that this project has a positive public perception and include *project hotlines, document controls, and project maps.*

## Project Description

The City of Costa Mesa is seeking a team which can provide full design engineering services for the West 17th Street Widening from Placentia Ave. to Superior Ave. 17th Street is a primary arterial per the City of Costa Mesa Master Plan of Highways. The standard roadway width for a primary arterial is a 106' right of way. The existing configuration is a 2 lane divided highway with center two-way left turn lane. The existing land uses are mostly commercial properties with the new mixed use development at the southeast corner of 17th Street and Pomona Avenue.

The existing roadway is 40' wide from curb face to curb face with a variable to 10' sidewalk on the north and south sides. The existing roadway is in great condition with only minor surface cracking at various locations. This stretch of roadway is littered with many different types of utilities such as; Southern California Edison (SCE), water, storm drain, and overhead power and telecommunication. Many of these facilities fall within the parkway width which means that when widening they will require relocation.

We understand that there are 16 properties along West 17th Street within the limits of this widening. The properties along West 17th Street have varying R/W frontages. This means that widening will affect each property differently. The image below represents the existing roadway configuration.



Our project understanding demonstrates a familiarity of the project area and City goals. This allows us to hit the ground running upon selection. The level of detail we put into the technical portion of our proposal is a sampling of the quality the City of Costa Mesa will get from our design team upon selection. Our deliverables will undergo a rigorous QA/QC process which ensures that the PS&E satisfies the 5 C's (consistent, clear, correct, constructible, and complete).

## Project Approach

The OE team has walked the project site and our team has developed a preliminary design to fit the perceived intent of the City. The design intent for this widening is to meet the classification of four-lane Primary Arterial as described in the OCTA Master Plan of Arterial Highways (MPAH). This includes 2-lanes in each direction with a median. The existing land use is commercial with many driveways off of 17th Street. The existing configuration has a necessary two-way left for easy access to and from each property. Since the speed limit through here is only 35 mph, and there are many driveways to be accessed, it would be ideal to keep the ability for vehicles to utilize the two-way lefts. When widening a roadway, there are many different approaches. Our goal is to provide the most efficient approach that fits the City's needs. We have come up with 3 different design alternates for the City, depending on the City's needs.

### 1) No Right-of-Way Alternate

#### a) Advantages

- i) Widen 2' on south side
- ii) 4 lanes with only a double yellow divider
- iii) No utility pole relocations
- iv) No right-of-way acquisitions
- v) Lower Cost

#### b) Disadvantages

- i) No two-way left
- ii) Less than the ultimate design
- iii) Poor alignment through intersections
- iv) Will require a re-designation on the MPAH

### 2) R/W on only the south side alternate

#### a) Advantages

- i) Only R/W required from Tom's Place
- ii) Most south properties have a 23'-25' City Easement
- iii) Achieves Primary Arterial Design
- iv) No relocation of large 3-wire SCE poles
- v) No R/W from north side

#### b) Disadvantages

- i) Tom's Place would require a full Acquisition
- ii) Misaligned from East of Pomona to West of Pomona
- iii) May require reconstruction of large retaining wall at the southwest corner property at 17th St. and Pomona Ave.
- iv) Utility poles on south side will need to be relocated and/or undergrounded

3) R/W only on north side alternate (see exhibit)

a) Advantages

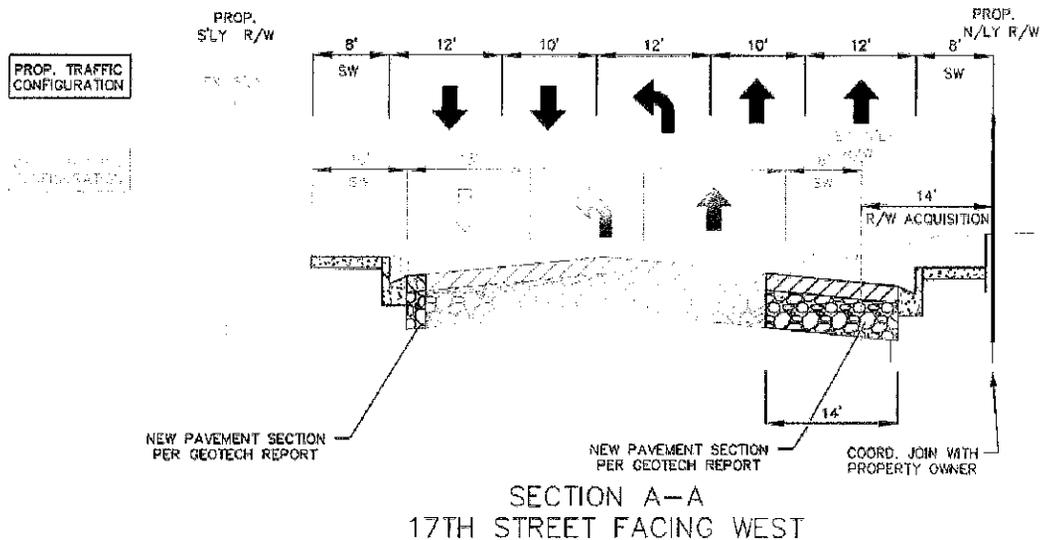
- i) Only R/W required from the north side
- ii) Ideal alignment through the intersections
- iii) Achieves Primary Arterial Design
- iv) No relocation of utility poles on south side
- v) No R/W required from the south side
- vi) Only partial acquisitions required

b) Disadvantages

- i) R/W required from 7 parcels
- ii) Retaining wall reconstruction on north side required at some locations
- iii) Large 3-wire SCE poles will need to be relocated
- iv) Widening may be required on both sides to achieve ultimate width.

The exhibit on the following page clearly shows the layout for the 3rd alternate. The big advantage for this alternate is that it creates a continuous road as you cross Pomona Ave. 17th Street just east of Pomona Avenue is sufficiently wide enough to allow for minor striping. We do understand that part of the conditions of approval for the Vesting Tentative Tract Map 17800 includes a tapered (5' - 0') right of way dedication to the City of Costa Mesa. Which will further improve the parkway width along 17th Street.

Our proposed plan will create a continuous traffic flow on 17th Street from Superior Avenue to Placentia Avenue. The plan shows a widening of the north curb by 14'. The south curb will then be widened by 2'. This will create a total curb to curb width of 56' and 8' sidewalks. This will allow for 2 lanes in each direction with a center two-way left turn lane. The south properties (APN 424-091-11 & 424-091-12) have a 23' wide street and highway easement to the City of Costa Mesa. This means that no right-of-way acquisitions will be required. This will allow us to construct the full 14' wide bus turn out as shown on the exhibit. On the east side of Pomona Avenue on 17th Street it can be seen that no additional right of way is required and only re-striping is needed to accommodate the additional lanes.





MATCHLINE SEE ABOVE RIGHT

MATCHLINE SEE BELOW LEFT



**LEGEND**

-  PROPOSED ROADWAY
-  PROPOSED PCC CURB, GUTTER, SIDEWALK & BUS PAD
-  PROPOSED RIGHT-OF-WAY
-  EXISTING RIGHT-OF-WAY

## Project Elements

---

This project will involve the following important elements; Stakeholder Coordination, Right-of-Way Engineering, Utility Coordination, Drainage Consideration, and Landscaping and Irrigation. A widening on 17th Street from Placentia Avenue to Pomona Avenue will see many challenges *which we have seen before*. This means that we will understand *how to proactively manage and overcome* them.

### Stakeholder Coordination

The design of this project presents some *unique issues and obstacles* when it comes to stakeholder coordination due to R/W requirements. Ineffective communication will breed negative perceptions for this project, headaches for the City, and unhappy constituents. Additionally, a project of this magnitude requires *a forum for stakeholders to go to with any questions and/or concerns*, Absence of a forum leads to an inaccurate understanding of the project. A review of the project site indicates that 16 Properties may be impacted by the project's ROW requirements and temporary construction easements. Therefore, all improvements that are in the public right-of-way need to be coordinated. OE understands the importance of *good communication with the affected community*. Our team has put in place a couple of mediums for stakeholders to utilize during the course of this project. These mediums allow stakeholders to understand the project and to ensure that this project has a *positive public perception*.

1. Project Hotlines: OE establishes *project hotlines to provide businesses, residents, and City staff 24/7 access to project personnel*. This number can be used for general distribution. Callers will be greeted by a short, pre-recorded introduction requesting they dial an extension to gain insightful project information (prior to routing them to a specific project staff member. All calls are addressed by an actual person. This system is completely customizable and can change throughout the course of a project (contact person, disseminated information, etc. can be altered even through construction). This means that residents, businesses, visitors, and the like all stay informed over the course of any project. It is our belief that an *informed public is a happy public*.
2. Box Enterprise for Document Control: OE has a *document filing system* that will be used on all documents and folders to ensure proper documentation. We map all of the City's standards, folder structure, and document formats to our cloud-based Box Enterprise account for implementation. This cloud-based account allows for secure, remote access and review of our entire filing system by City staff, to ensure that documentation and filing is done in compliance with the project requirements. Each City staff member attached to this assignment will be able to select a password which will allow access to view, upload, or download any of the project files *without having to change the City's existing IT framework*. Additionally, this flexibility allows the City staff *access to the project files anywhere*.
3. Project Maps: OE has the tools to build *complex and dynamic maps* for online access to stakeholders affected by a project. These maps can include project information important to affected stakeholders. We can *update this map in real-time* to keep the public informed. An example of how this works can be found at [www.oe-eng.com/academy](http://www.oe-eng.com/academy). *The maps we have*

*created for this project in the City of Anaheim have been viewed over 600 times* by affected stakeholders. Phasing, detours, temporary parking, street closures, and basic project limit information can be shown on this map. By providing information through this medium, we are truly giving the City options and alternatives for the dissemination of information.

### Right-of-Way Engineering

Right-of-Way acquisition is most effective when communication is clear and concise between both parties and our team will be effective and efficient in this process. This project will also require utility coordination and relocation from multiple parties. The main task will be coordinating the pole relocations with SCE.

*Obtaining R/W to increase roadway capacity is not generally an issue; the issues arise if the property owner perceives that negotiations are unfavorable.* For cities, the chief issue is usually acceptance of the appraisal data, spending the resident's money, and trying to stay out of court or eminent domain. One way to minimize these concerns is to make sure that all R/W negotiations identify on benefits to the property owner and the general public. This is solved through efficient, direct, and honest communication along with clearly defined impacts. *OE will prepare clear and concise site plans, plats, and legal descriptions to fully detail the property impacts from the ROW acquisition.* OE will coordinate private property improvements with the affected property owners and detail the necessary on-site improvements. This will be coordinated with sufficient sidewalk widths to ensure ADA compliance. If necessary, OE will work with the Planning and Building Departments to obtain approvals prior to final plan submittal.

The table below is an estimate of the parcels which require right-of-way and also those that require Temporary Construction Easements (TCE)'s. As you can see, only partial acquisitions are required.

| Address             | APN        | Description                | Full Take | Partial Take | TCE | R/W (SF) | TCE (SF) |
|---------------------|------------|----------------------------|-----------|--------------|-----|----------|----------|
| 1700 Placentia Ave  | 424-081-11 | Tiki Bar                   |           |              |     |          |          |
| 786 W 17th St       | 424-081-12 | Golden Paint and Body      |           | X            | X   | 840      | 120      |
| 776 W 17th St       | 424-081-13 | Moonlite Marin             |           |              |     |          |          |
| 770 W. 17th St      | 424-081-15 | JJ Paint & Body            |           | X            | X   | 1302     | 110      |
| 760 W. 17th St      | 424-081-16 | Theo's Micro Car Motors    |           | X            | X   | 840      | 120      |
| 750 W. 17th St      | 424-081-17 | Apax Technology            |           | X            | X   | 2104     | 255      |
| 742-746 W. 17th St  | 424-081-18 | Various Commercial         |           | X            | X   | 3360     | 490      |
| 720-730 W. 17th St. | 424-081-19 | Vestal / Caliber Collision |           | X            | X   | 3696     | 590      |
| 1701 Pomona Ave     | 424-081-20 | Heritage Garage            |           | X            | X   | 1764     | 176      |
| 735 W. 17th St      | 424-091-01 | Various Commercial         |           |              | X   |          | 180      |
| 1690 Placentia Ave. | 424-091-12 | Various Commercial         |           |              | X   |          | 560      |
| 799 W. 17th St.     | 424-091-11 | Tom's Place                |           |              | X   |          | 125      |

### Project Manager's Plan of Action for Right-Of-Way Acquisition:

*The success of this proposed widening project will depend on the friendly acquisition of 7 part-takes of private property land along 17<sup>th</sup> Street.*

### METHODOLOGY:

1. Obtain and review the Preliminary Title Reports:
  - o Request additional record docs that may have impact on ownership or easements;
  - o Identify issues with prior utility rights, permanent easements, or a cloud on title;

- Identify the underlying Owners and true signatories of Trusts or Corporations.
2. Evaluate the size/shape of the partial takes proposed and verify sufficiency, or note problems:
  - Walk the project and note any potential field conflicts;
  - Verify proposed R/W take is reasonable based on existing buildings/structures;
  - See if proposed TCE widths will allow for construction equipment maneuvering;
  - Recommend adjusted boundaries for the Temporary Construction Easements.
  - Obtain and review the appraisal logic, data and monetary conclusions.
3. Provide status reports on the R/W progress:
  - Conduct a Town Hall meeting for the property owners or their representatives;
  - Explain the project needs, the appraisal and purchase processes, and the timing;
  - Collect owner comments and present to Staff for consideration or response;
  - Prepare a project brief and present to the Commission and/or City Council.
4. Prepare the Temporary Construction Easements and draft Purchase Agreements documents:
  - Review the surveyor's Legal Descriptions and Exhibits for intent and accuracy;
  - Route to the City Attorney and answer any questions from staff or the City Attorney;
  - Route the final documents to the Owners for signature, then route through City for acceptance;
  - Prepare the Resolution for City Council along with related Attachments.
5. Prepare forms and exhibits needed for Environmental approval:
  - Stay on top of the environmental review and revision process;
  - Incorporate the accepted partial takes & TCEs into the design plans.

### Utility Coordination

Utility Coordination is another critical step in the widening process. *It will be critical that coordination be initiated early on with the utility companies in order to ensure a successful design.* OE will keep constant contact with the necessary agencies, and make an initial push up front to get them informed of the aggressive schedule for this project. We will ensure that all necessary relocation are done well before the contractor begins work if possible, to eliminate the need for any delays or change orders regarding utility relocations. We understand that some utility relocations and adjustments will need to be done concurrently with the construction, and we will include this in our specifications so that the Contractor is made aware prior to construction.

Our approach is to minimize construction change orders by creating a master plan of utilities within the project area. The master plan will be developed with the full cooperation of the affected utilities to ensure all parties understand the project scope of work, required relocations, and scheduling.

The utility locations will use the coordinates (northings, eastings) for the project survey including elevations. Elevations are required to ensure proper "cover". The master plan of utilities will be used to develop individual utility and pipeline relocation plans as required. *OE has completed a field review of the site and visually confirms the following utilities impact the project:*

| Above Ground   | Below Ground   |
|--|--|
| Edison Power Poles                                       | Water  |
| 3-wire Transmission lines                                | Sewer  |
| Distribution on Same Poles                               | Storm Drain  |
| Phone/Fiber  | Phone Fiber  |
| CTV/Broadband  | Street Lights  |
| Traffic Signal Cabinets/Controllers                      | Traffic Signal Conduits  |
| FD Backflow Devices/Fire Department                      | Natural Gas Mains  |
| Connections  | Mesa Water Valves  |
| Irrigation Backflow Devices                              |  |
| Fire Hydrants  |  |
| <b>Adjust utilities to behind the new curb alignment</b> | <b>Adjust utilities, provide minimum cover in the roadway cross-section.</b> |

The critical path for the above ground utility coordination will be the relocations of the Edison 3-wire transmission lines and distribution lines; and phone/fiber and CTV/broadband lines on the existing poles.

*OE will prepare a detailed utility pothole plan which will be coordinated with the proposed roadway and traffic signal improvements.* Potholing will allow the avoidance of lines for the new traffic signal foundations, catch basins, and other pertinent items. Based on the locations of underground utilities provided by record drawings, surveys, and responses from the first utility notices, the locations, along the proposed roadway alignment, vertically and horizontally, will be identified on a Pothole Exhibit for City review prior to proceeding. A report of their findings is prepared and a survey crew collects finished surface elevations to complete the findings.

### Edison Coordination

OE has been involved in Edison relocations through general ROW improvements and Rule 20A projects. This project will follow the general ROW improvement utility relocation policies and procedures as expressed in the franchise agreements. OE understands, that since this project is a ROW improvement, the cost to relocate is covered by the utility company. The Edison relocation is the critical path item on the schedule.

On the north side of W 17<sup>th</sup> Street the process for installing the new power poles behind the new curb, installing the new facilities and removing the existing facilities and poles is a lengthy process through Edison. Sufficient notice and active monitoring will be required to maintain a mutually agreed upon project schedule. As we know, once the new pole is installed, the process involves:

1. Moving Edison Transmission Line – 3-High Wire Transmission Lines
2. Move Edison Distribution Line – Cut old pole after Edison has moved off old poles
3. Move Phone/Fiber and CTV
4. Remove Existing Poles

The process requires vigilance to maintain the schedule. The Edison timeline is at least one year, if not more, to remove the existing poles. OE has the experience to perform this task.

The specific Edison; Phone/Fiber and CTV Tasks will be organized and implemented in the following manner after award of the design contract:

- A. Utility Kick Off Meeting - Immediately Schedule the Utility Kick Off Meeting with Edison, Phone/Fiber and CTV to discuss the project scope and schedule
- B. ROW Survey – Immediately initiate ROW and topographic survey. *The sooner Edison receives final ROW widening and street improvements, the sooner Edison planning/construction documents can be initiated.*
- C. Preliminary Widening and Street Improvement Design to finalize the widening and street improvements – Curb, Gutter and back of walk improvements.
- D. Conduct Monthly Progress Meetings with Edison, Phone/Fiber and CTV. With the roadway design set, Edison relocation is set.
- E. Track progress of Edison construction documents including, design, approvals and construction schedule. Coordinate with Project Improvement schedule.
- F. Construction Edison Relocation Improvements through removal of existing poles.

#### Underground Utility Coordination

The key to this Project is identifying all underground utilities. In order to fully evaluate the impacts to underground utilities, a full investigation through potholing and survey elevations is recommended to be completed as part of the design process. The following applies to all utilities located in the project area. OE recommends the following underground utility tasks for implementation after award of the design contract:

- A. Underground Utility Kick Off Meeting – Immediately schedule the kick off meeting to discuss the project scope and schedule.
- B. Complete Utility Investigation – Obtain all record documents, coordinate with Dig-Alert to confirm utility locations.
- C. Prepare Composite Utility Plans for all underground facilities including locations of potholes. Utilize the Preliminary Widening and Street Improvement Design Plans as the base map for the composite utility plan
- D. Obtain Permits – Obtain necessary roadway pothole permits and schedule the pothole company, and project surveyor to obtain the pipe elevation and existing roadway surface elevation at each pothole.
- E. Prepare Composite Utility Plan Cross-Sections – Evaluate utilities with minimum cover with proposed new profile. Identify which utilities will be lowered to obtain minimum cover.
- F. Underground Utility Impact Meetings – The meetings provide each utility with the verified field information, cross-section and relocation requirements to obtain minimum cover.
- G. Conduct Monthly Progress Meetings with affected utilities

- H. Track progress with utility construction documents including design, approvals and construction schedule. Coordinate with Project Design Improvement Schedule
- I. Construct utility relocation improvements through completion.

### Drainage Considerations

*Drainage improvements are a very important feature when widening 17<sup>th</sup> Street.* There are currently 4 catch basins along 17<sup>th</sup> Street between Placentia Avenue and Pomona Avenue, with two additional around the curb returns on Pomona Avenue. OE will discuss any drainage concerns with the City of Costa Mesa in the kick-off meeting to see if there are any areas where the maintenance staff has concerns. We understand that 17<sup>th</sup> Street has two sump locations. One is at the sag curve at approximately 735 and 742 W 17<sup>th</sup> Street. The other sump location is on the northwest corner of 17<sup>th</sup> Street and Pomona Avenue. We will review the drainage master plan to see if there were any deficiencies or catch basins that may be running beyond capacity. We will then utilities the City's Master plan of drainage to develop a hydrologic analysis of the drainage. This will help us to properly size the new catch basins.

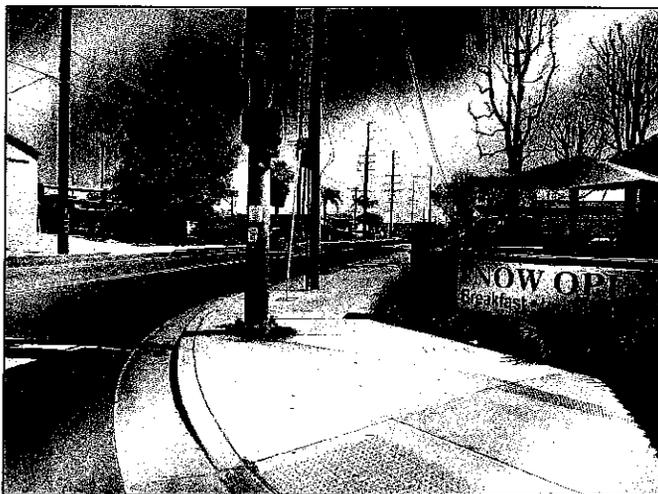
### Landscaping & Irrigation

Based on input received from the City during the Kick -Off Meeting and information gathered during the site reconnaissance and data review, NUVIS will develop a conceptual landscape plan for the project site. During our planning we will look for opportunities to:

- Maximize low water shrub areas along fence lines, passive areas, and walkways.
- Strategically place trees to reduce heat-island effects, cool parking lots, provide shading for transit areas, and promote health and wellness.
- Utilize current research tools like UC Davis' Water Use Classifications of Landscape Species (WUCOLS IV) to select plants which require low water amounts of water for the particular project site and the California Native Plant Link Exchange (CNPLX) to select appropriate native species for the bio-region.
- Specify California native plants to create water-efficient wildlife habitat where appropriate.
- *Adhere to the latest State, Local, and District water use guidelines like AB1881 and State reduction mandates like the Governor's Executive Order in effect as of June 1, 2015.*
- Group plants into water use zones to respond to specific microclimates and maximize efficient use of irrigation water.
- Develop detailed water use calculations including evapotranspiration rates, irrigation efficiencies, plant types, density of plantings, and irrigation application methods.
- Specify weather-based irrigation controllers and irrigation systems which can respond to daily changes in the site's microclimate and adjust run times accordingly.
- Mulch (wood/bark or rock/gravel) to reduce evapotranspiration & improve soil conditions.
- Incorporation, when possible, over bio-swales, bio-retention areas, rain gardens, water re-use systems, cisterns, and other water saving innovative best management practices.
- Consider throughout the design process of long-term maintenance requirements for the project site; adjustments made based upon client communication and available maintenance resources.

## Field Observations

---



The picture to the left is at the southeast corner of Placentia Avenue and 17<sup>th</sup> Street. The existing patio for Tom's Place comes out about 15' from the building towards the street. The proposed widening will only be narrowing the sidewalk by 2' and therefore there will be no impact to Tom's Place Restaurant. The existing signal pole will need to be relocated to accommodate the widening.



The picture to the left shows the existing eastbound bus stop just east of Placentia Avenue on 17th Street. As shown on the design exhibit, we propose placing a dedicated bus turnout to improve traffic movement through this busy road.



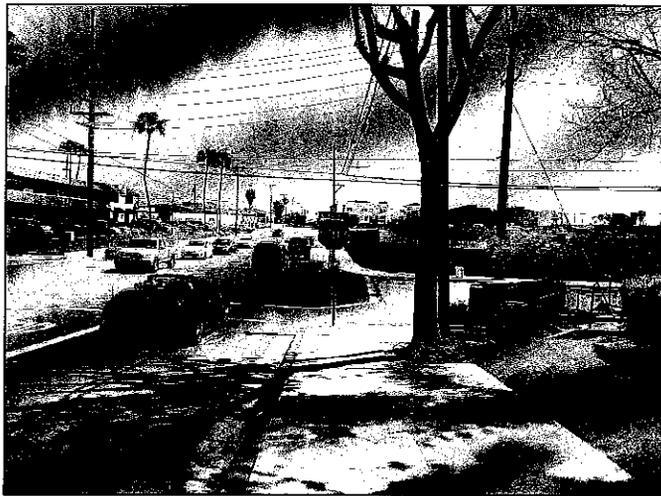
The picture to the left is on 17th Street looking east. At approximately every 220' along the south side of 17<sup>th</sup> Street there are light poles. These poles will need to be relocated 2' back to behind the new curb alignment. On the north side of the street there are utility poles which will need to be relocated. There are also both transmission and distribution lines. We know what it takes to relocate and/or underground these large poles. We will coordinate with SCE early and often to make sure that this relocation is done prior to construction.



The picture to the left is looking east on 17th Street on the south side. The existing catch basin will need to be relocated to the new curb alignment location. The existing trees in the sidewalk can be saved if we utilize grates at grade to allow ADA path around the trees.



The picture to the left is looking east on 17th Street towards Pomona Avenue. The parkway on the south side of the street has a retaining wall located 10' off the back of sidewalk. The City of Costa Mesa currently has an existing easement along this property as shown in Official Records 3925-491. If we design the sidewalk at 8' wide then we can limit the on-site improvement cost.



The picture to the left is of the southwest corner of Pomona and 17th. As you can see both roads slope down to the intersection. Here we will analyze the hydrology to determine the appropriate size for the catch basins.



The picture to the left is looking at the southeast corner of 17th Street and Pomona Avenue. The existing ramp will need to be reconstructed to meet current ADA guidelines. The existing sidewalk does not require any additional widening to meet the ultimate widening. This corner is where the 5' to 0' tapered right-of-way dedication begins.



The picture to the left is looking east on 17th St. Here is where the sidewalk will join existing. The City should see if they can condition this portion of the sidewalk and parkway improvements as part of the development if it already has not been done.



The picture to the left is looking east on 17th Street. The picture shows that the existing road is at the ultimate width as it approaches Superior Avenue



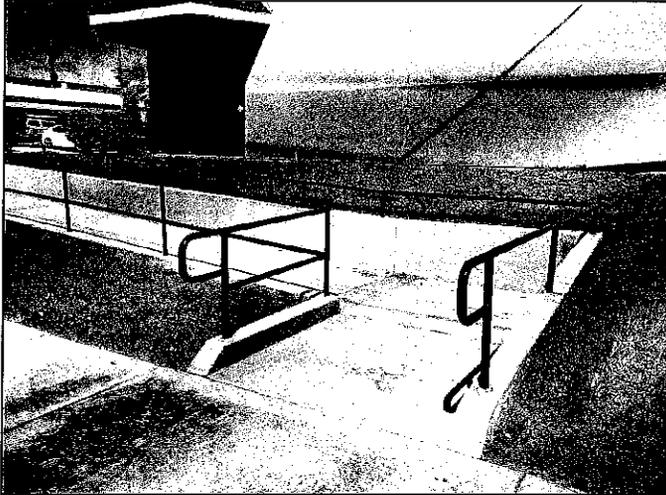
The picture to the left is looking west on 17th Street at the Pomona Avenue intersection. This is where the widening begins westbound. The photo shows the approximate 10' offset as we cross Pomona Avenue.



The picture to the left is looking at the northeast corner of 17th Street and Pomona Avenue. The existing ramp is missing the truncated dome detectable warning system. We will measure all slopes to ensure the grades match the ADA requirements of all ramps which are not being removed, and add the detectable warning device if needed.



The picture to the left is looking at the northwest corner of 17th Street and Pomona Avenue. The existing concrete retaining wall shown will need to be removed in order to accommodate the widening.



The picture to the left shows the pedestrian ramp that comes down from 738 17th Street. This ramp will need to be reconstructed because the new sidewalk will be placed at least 8' beyond the existing back of sidewalk.



The picture to the left is looking west on 17th Street. The existing property has a variable height retaining wall that will need to be removed and reconstructed to accommodate the widening.

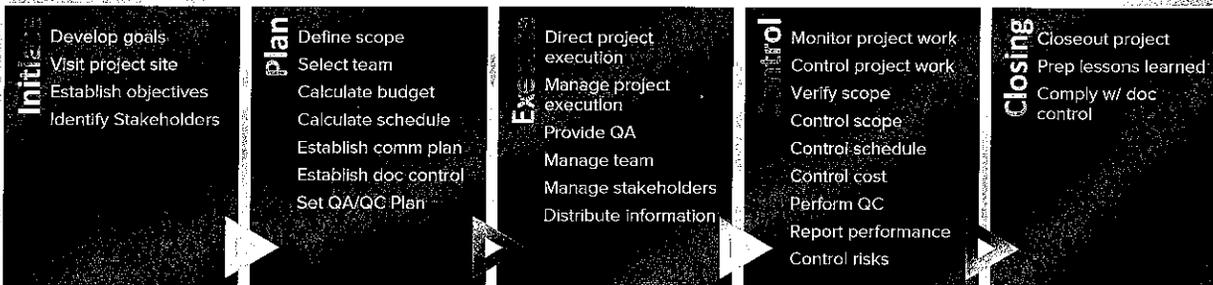


The picture to the left is of the northeast corner of Placentia Avenue and 17th Street. The existing signal system will be upgraded. We will ensure that all ADA ramps are in compliance and that the push buttons are located per ADA guidelines.

## SECTION 2: WORK PLAN

### Scope of Work

OE uses a 5-step approach for public works projects which correlates to the Project Management Institute (PMI) standards for project management. By implementing this approach, we feel that we are proactively ensuring quality and the successful design of this project.



Our Quality Policy states that OE is committed to understanding and meeting the City's needs and complying with statutory and regulatory obligations at all times. Therefore, all projects will be executed in a manner that emphasizes safety, quality, schedule and maximum cost effectiveness. Our team prides itself on the quality of the engineering services it provides. As a matter of fact, members of our project teams make great efforts to assure that each project is of the highest possible quality, meeting or exceeding the needs and expectations of our valued Clients.

Our corporate culture thrives on innovation, and we are dedicated to keeping up with industry standards and new technologies. OE provides ingenuity in its engineering solutions. We consider every project an opportunity to make peoples' lives more comfortable. As a company, we feel it's important to base our goals and objectives on a solid foundation of good corporate ethics. The following is our proposed work plan for this project.

#### Phase I -- Topographic Survey & Preliminary Design Plans

##### Kick-Off Meeting

OE will set up a design kick-off meeting with City staff to discuss the scope of work, objectives, design criteria, technical requirements, and project schedule. It is important that the scope of work and schedule be reviewed and finalized by the City at this meeting to ensure a smooth and successful project.

##### Deliverables:

- Meeting minutes and agenda

### **Research & Review Available Data**

The OE team will compile and review all records and documents from the City. Existing documentation research that will be reviewed includes State, County, City, utility, and other pertinent records and documents, existing street, signal, storm drain, gas, sewer, and water main improvement plans, topographic data maps, record drawings, utility plans, geotechnical reports, survey centerline and private property monument data, and other important information. All records will be compiled and returned to the City upon project completion. OE will conduct existing records research and coordination with utilities in the area and all design work will be coordinated with the affected utilities.

### **Deliverables:**

- Existing records matrix & copies of existing records (roadway, right-of-way, utility)

### **Utility Research & Notification**

We believe that utility notifications are a low cost/high value component of every design project. First, we focus on confirming the contacts for all existing utility facilities. OE will conduct an online design investigation which allows our staff to research and confirm the most recent contacts for all affected utilities. Each company will be contacted & informed of the upcoming project. OE then conducts a three-pronged utility coordination/investigation protocol which involves a detailed local utility research, a three-step utility notification protocol (inform, advise, relocate/adjust). In addition to the minimum of two coordination meetings, we will meet as many times as necessary with the affected agencies at no additional cost to the City. We will notify all affected utility companies to alert them of the upcoming project and request verification of the sizes, depths, and locations of their underground lines, facilities, and substructures within the project vicinity. After receipt of information from the utilities, OE will cross check the plotted locations with field review information to ensure the existing utility lines are shown in their proper locations. OE will ensure that final design is compatible with all utilities to be installed, relocated, adjusted, or otherwise modified within the project area.

### **Deliverables**

- Utility contact matrix
- 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> utility notices & utility notification log & correspondence to each utility

### **Site Evaluation**

OE will schedule a site inspection and evaluation. OE will verify records drawings and data, identify proposed improvements, inventory roadway signage and traffic signal equipment and existing pavement markings, and take note of the existing grades at the curb ramps for ADA Compliance. OE will prepare a photo log of key project areas. Additionally, we will mark and identify the join limits for the proposed curb and gutter, sidewalk and other parkway items that will require specific survey shots.

### **Deliverables:**

- Site evaluation notes, photos, & video (parkway, roadway, & other repair locations)
- Pavement marking and roadway signage inventory
- Survey notes, topographic survey basemap, CAD survey files

### Topographic Survey

OE will coordinate with the City to ensure that all desired improvements are noted prior to the initiation of the design survey to ensure that all necessary data is obtained and considered in the design. The OE survey team will conduct all necessary topographic survey work items.

Task 1 - Site Control: Establish a site-wide network of horizontal/vertical control to serve as the basis for any subsequent boundary, topographic, or construction staking surveys that may be required throughout the course of the project. CL Surveying and Mapping will reference an assumed horizontally, and available local agency vertical datum, unless specifically requested otherwise.

Task 2 - Centerline/Right-of-Way Establishment/Mapping: Conduct the field measurements necessary to re-trace the centerlines and rights-of-ways within the project limits. This effort does not constitute a full and complete boundary survey of the adjacent land parcels. Survey monuments located and indicated on the survey shall be limited to existing, centerline monuments found to be present along the streets and all associated ties as indicated.

Task 3 – Record of Survey: Prepare a Record of Survey in conjunction with the Centerline/Right-of-Way Mapping effort. The Record of Survey will be filed with the County of Orange in accordance with the State of California Land Surveyor's Act. CL Surveying and Mapping shall prepare, file and process said survey through the County to recordation. It is estimated that three Title Reports will be needed.

Task 4 – Legal Description and Exhibits: This line item establishes a budget for three legal description and exhibit preparation. The documents will be prepared and stamped by a Professional Land Surveyor and provided to the Client for attachment to grant documentation provided by others.

Task 5–Topography and Street Cross Sections: Perform a field topographic survey of the proposed project sites to document existing site topography and planimetrics. Substantial visible improvements will be located within the street right of way, including utilities, manholes, valve covers, utility vaults and covers, sign posts, signs, trees, utility poles, traffic signal poles, cross gutters, local depressions, catch basins, driveway openings, sidewalks, corner access ramps, fire hydrants, parkway drains, etc. Visible indications of surface utilities lying within the project limits will be located, as will accurate lid/rim elevations for drainage structures present. Street cross sections will be taken at 25 foot intervals. The standard cross sectional data will consist of a back of walk elevation, Top of Curb, Flow Line, Gutter Lip, and crown for both sides of the street. Additional cross sections will be take beyond right-of-way at the location of the proposed right turnout pocket.

### Deliverables:

- Survey notes, topographic survey basemap, CAD survey files

### Base Sheets

The base map will be prepared with compilation of the research records, topographic survey data and underground utility line records obtained from as-built plans from utility companies. All plans will be

developed using the latest AutoCAD software. Base maps will be prepared at 1"=20' scale using conventional line style. OE will store text annotation as a separate layer.

**Deliverables:**

- Street, right-of-way, and utility base maps (CAD & PDF file)

**Prepare Preliminary Design**

Once the site evaluation, topographic survey and base maps for the project area have been completed, OE will immediately begin the preparation of the preliminary alignment layout to make submissions. Our design team will begin to populate the plan set with the necessary plan horizontal geometrics in order to determine the right-of-way requirements. Based on the information gathered and input received during the startup meeting, NUVIS (our Landscape Engineer) will develop a three alternative preliminary plans for the planting and irrigation based on the proposed civil engineering alignments. Alternatives will include preliminary level statements of probable construction costs. Due to recent water restriction legislation (MWEL/ AB 1881), NUVIS' design alternatives will focus on removal/reduction of turf, replacement/modification of irrigation system with high efficiency system as well as the opportunity to protect/preserve the existing street trees. A meeting will be held with the City to determine the preferred alignment and landscape concept, and a Final Preferred Concept Plan will be produced. The final exhibit will be rendered in full color and at a size appropriate viewing from a distance. Photo imagery and plant palette will be included to further convey the proposed design intent. A preliminary level statement of probable construction cost will be prepared for the Final Preferred Concept to monitor the effect of the proposed design solution on the budget. Once that is submitted, OE will coordinate a **Plan Check Meetings** with the City.

**Deliverables:**

- Preliminary Design in hard copy & soft copy

**Phase II -- Right-of-Way Engineering**

**Right-of-Way Engineering**

OE has teamed with Paragon to provide the right-of-way engineering for this project. The work will include the following subtasks:

Preliminary Title Reports: Paragon will coordinate with a title company at the time of Notice to Proceed. Title Services will include obtaining and reviewing title reports to verify ownership and identify any easements or encumbrances. One report will be obtained for contiguous parcels with the same owner. Updated preliminary title reports will be obtained as needed.

Cost Estimating: Paragon will prepare cost estimates for each impacted parcel that include:

- Perform a review of the proposed right of way requirements
- Costs for acquisition (land and improvements, severance damage, good will loss)

- Appraisal fees (includes appraisals, reviews, owner's appraisals, goodwill and FF&E appraisals)
- Environmental testing (Phase I and II tests)
- Relocation assistance costs
- Escrow and title costs
- Right of way consultant fees
- Condemnation support fees
- Demolition/clearance/hazardous testing and abatement

Rights of Entry: Paragon will obtain from private landowners right of entry permits as needed for entering properties to perform surveys for ecological and geotechnical purposes. The right of entry agreement will inform the property owner of the purpose and impact of such entry, along with the approximate time range of the entry, and provide them with a contact person should they have any concerns that arise from the entry.

Utilities: Six utilities are shown by Dig-Alert to be located in the project area and therefore potentially impacted:

1. AT&T Distribution
2. Orange County Sanitation District
3. Mesa Water Distract
4. SCE - Distribution
5. So Cal Gas Co
6. Time Warner Cable

Possible impacts dependent upon final design: 3 fire hydrants, 11 large poles on the north side of 17th St. On those poles there are 13 SCE conductors and 2 Time Warner cables and 12 smaller poles on the south side of 17th St. On those poles there are 2 AT&T telephone cables. Several manhole/handhole covers may require adjustment. This is based on preliminary research. After the research is completed, Paragon's utility manager will prepare cost estimates and utility information sheets for utilities for one alternative and incorporate this information into a Right of Way Data Sheet.

Right of Way Data Sheets: Once cost estimates for acquisitions and utility relocation have been prepared Paragon will complete the Right of Way Data Sheet. Our primary research indicates 3 facilities will be impacted. After further research is completed during the cost estimating phase, Paragon's utility manager will prepare cost estimates and utility information sheets for utilities for one alternative and incorporate this information into a Right of Way Data Sheet.

**Deliverables:**

- Right of Way Data Sheets

## Phase III – Final Design

### Geotechnical Investigation

OE has teamed with AESCO Inc. for this project. AESCO will provide geotechnical recommendations for the pavement design for the proposed street improvement project. As part of the investigation, AESCO will perform a geologic review of existing materials, including stereoscopic aerial photographs, if available. Three 8-inch diameter borings will be performed to a depth of 5 feet below the existing ground surface. Cores of the existing pavement will be obtained and the existing thickness of the pavement and base material will be measured.

Borings will be backfilled with cuttings and will be patched with hot asphalt patch compacted to 95% relative compaction. Laboratory testing will be conducted, followed by design recommendations and report preparation. Dependent upon access, the borings will be performed with hand auger and manually driven undisturbed samples. Prior to performing the soil borings we will coordinate with Underground Service Alert to identify underground utilities.

#### Deliverables:

- Pavement investigation/evaluation, geotechnical, and materials reports (original & PDF)

### Utility Coordination

OE will prepare utility plans to be delivered to the appropriate utility agencies. We will coordinate any necessary relocations as early as possible so as to not delay construction. The most effective approach to utility coordination is early and effective communication on projects like these. We will ensure that all items are relocated or undergrounded prior to construction.

#### Deliverables:

- Utility Log
- Relocation Plans
- Utility Agency Correspondence

### Utility Potholing

OE will prepare a detailed utility pothole plan which will be coordinated with the proposed roadway and traffic signal improvements. Potholing will allow the avoidance of lines for the new traffic signal foundations, catch basins, and other pertinent items. Based on the locations of underground utilities provided by record drawings, surveys, and responses from the first utility notices, the locations, along the proposed storm drain alignment will be identified on a Pothole Exhibit for City Review prior to engaging the Potholing Company Safe-R-Dig. A report of their findings is prepared and a survey crew collects finished surface elevations to complete the findings. Potholing will be useful in identifying underground utilities where the signal pole equipment is considered for relocation.

#### Deliverables:

- Plan with pothole location, depth, material, and size

### Prepare 65% and 90% PS&E Submittals

Once we receive the City's comments on the 35% design submittal, OE will work expeditiously to incorporate any comments or changes, and begin preparing the next submissions of the plans. Each submittal will be preceded by submission of an electronic copy. Our plans will vary depending on the project and could include more than roadway plans and profile. The additional items may encompass:

- **Traffic Signal & Traffic Control Plans** - OE has teamed with Hartzog & Crabill to provide Traffic Signal Design. Using all right-of-way, utility, improvement and survey data provided by our design team, HCI will prepare a preliminary 90%-complete signal design for each of the intersections. The preliminary design will include relocating/upgrading the applicable traffic signal equipment at the Placentia Avenue intersection to current State and applicable City of Costa Mesa standards. The preliminary plan will take existing and proposed intersection geometry into consideration and other factors that may influence the design or operation of the signal systems, and applicable signal Edison services. HCI will include equipment removal details for the Placentia Avenue.

All signal work shown on the plan will be designed in conformance with Section 86 of the State of California (Caltrans) Specifications and Standard Plans, latest editions, and will also be compliant with the City of Costa Mesa design criteria and standards. The final traffic signal modification plan will include: General and construction notes, phase diagram, conductor, detector and pole schedules, pole placement details, and other details necessary for construction. The traffic signal modification plan will be prepared at 20-scale using AutoCAD and plotted on 'D' size (24"x36") sheet with standard City title block. All signal improvement work will conform to applicable City of Costa Mesa Standard Specifications.

HCI will provide PDF and a hard-copy of the 90% progress submittal to OE including applicable technical provisions, and construction estimate for design review and comment. Comments received during this review will be incorporated into the final 100% final submittal. HCI will include the preparation of traffic signal design technical provisions, as applicable, and a construction estimate with quantity extensions and definitions suitable for bidding in the final submittal of the traffic signal improvements. OE will prepare construction phasing and traffic control plans that meet the City's minimum requirements. These plans will be submitted at each submittal phase.

- **Striping & Signing** - OE will evaluate and prepare striping and signing plans based on the needs of each project. These will include transitional areas to join into existing lanes, and inclusion of signage consistent with City requirements and with approval from City's Traffic Section.
- **Landscape & Irrigation** - NUVIS will develop landscape and irrigation plans necessary to facilitate the proposed improvements including modification to existing irrigation systems, possible protection of existing trees, turf removal and drought tolerant planting plans required as a result of the addition of additional lanes on 17th Avenue with a focus for NUVIS between Placentia and Pomona Avenues. The total project site is approximately ½ mile in length

however our area of focus will be approximately ¼ mile both sides of the 17th Avenue between these two intersections. Due to the extent of the roadway modifications, NUVIS assumes that all coordination with private owners will be handled by the civil engineer. Using the base map and the approved preliminary plan, NUVIS will proceed to prepare planting and irrigation plans, specifications and estimates. PS&E will conform to applicable local, state and federal requirements and guidelines. Plans will be developed stacked at 1"=20' scale with submittals at 65%, 90% and final completion phases for City plan check and review. NUVIS will prepare planting and irrigation technical specifications based on the current edition of the Green Book - Standard Specifications for Public Works Construction. The final documents will be submitted with a statement of probable construction costs relative to the bid item quantities for formal plan check by the City and applicable governing agencies.

- **Off-site Improvements** - OE will evaluate offsite improvement needs and develop conceptual plans to depict all match work for off-site areas impacted by any proposed widening. This includes the relocation of existing overhead commercial signs, parking lot lights and fire line detector assemblies, construction of slough/retaining walls, re-landscaping and re-routing of irrigation systems, repaving and restriping.
- **Drainage** - OE will evaluate the need to modify drainage structures when requested. We are also able to provide hydraulic and hydrology analysis to ascertain the need to upgrade (or otherwise downgrade) drainage inlets and connector pipes to accommodate existing and future drainage needs.

The **cost estimate** development will be a continuous process which begins at project inception and ends with design completion. Our office constantly updates the unit price records from recent local projects in an effort to provide the most accurate project estimated costs. OE will provide an updated cost estimate at each submittal. With the use of our modern Civil 3D software, we are able to track the quantities and costs while preparing the plan set. This allows us to keep the cost in mind as we conduct our design. The cost estimates for the construction shall be based on the quantity take off for the project. OE will conduct value engineering study/analysis for any proposed improvements.

Clarity of bid items, site control, and payment method for each item of work are crucial in the preparation of the project **specifications**. We will ensure that each pay item is clearly referenced and described in each applicable section of work. The specifications will have all necessary contacts for utilities or residents that have special concerns, and will delineate all items needing relocation on the Contractor's part. If specific details or photographs need to be included in the specifications our staff will gladly prepare them as well. Close attention will be paid to the delineation of each bid item to ensure that the specified project scope covers the City's full intent.

**Deliverables:**

- PS&E in hard copy & soft copy
- CD of all submittal review comments/responses and red-lined plans

### **100% & Final PS&E Submittal**

Once the City has made the 3<sup>rd</sup> review of the PS&E, OE will incorporate the plan check comments into the 100% PS&E Submittal. OE will expeditiously work towards the completion and submittal of the 100% PS&E. It is not anticipated that any major changes will be required for the 100% Submittal and it will be our goal to have a quick turnaround so that the City can actively pursue getting this project out to bid. Additionally, if upon submittal of the 100% PS&E package it is noted that minor changes are needed, OE will incorporate all necessary changes. At this phase plans will be guaranteed to meet the 5 C's, consistent, clear, correct, constructible, and complete. Topographic survey plan submission will be in the latest version of AutoCAD.

### **Deliverables:**

- Complete set of plans (24" x 36" double matte 4mm mylar sheets)
- Complete unbound project specifications (single-sided prints on white letter paper)
- Project quantities and cost estimate
- Digital copy of PS&E Package

## Project Controls

---

---

### Quality Assurance

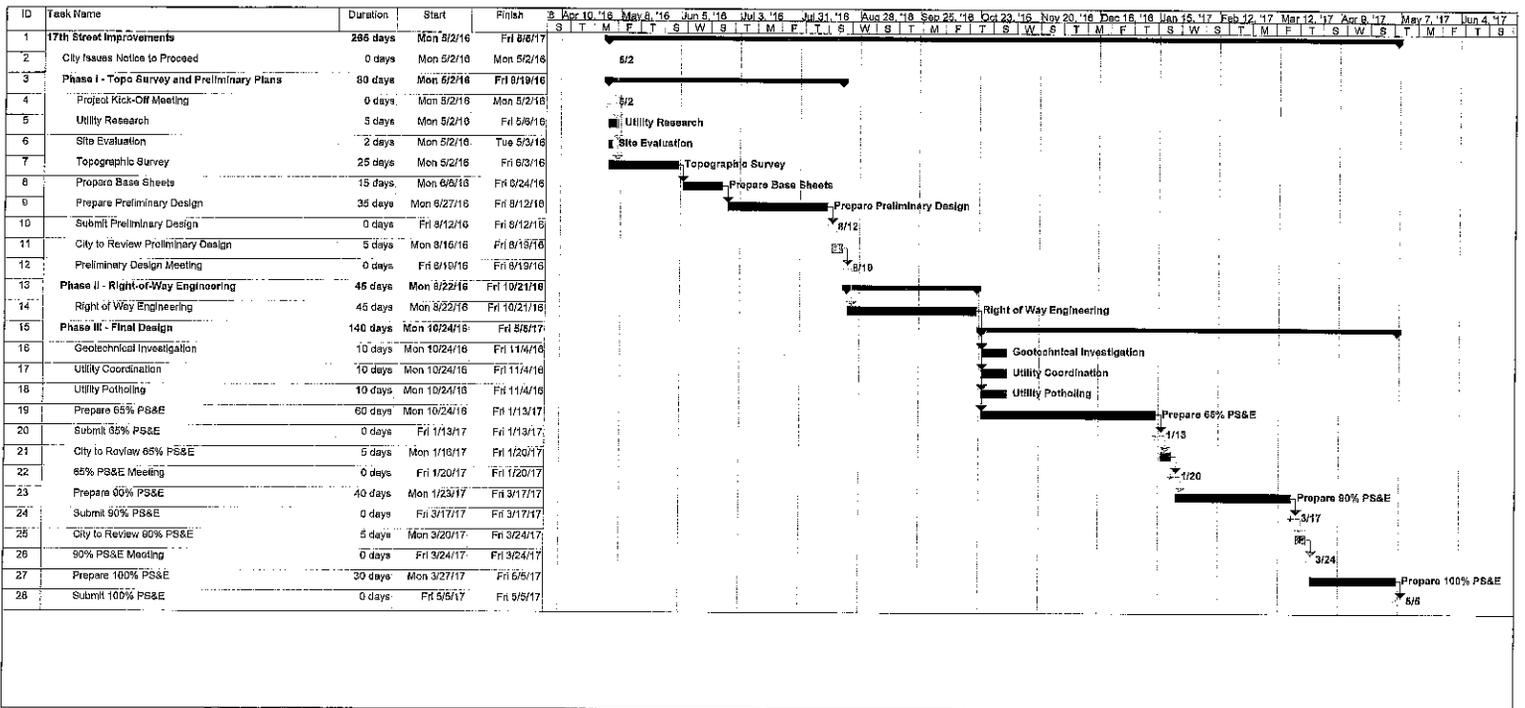
Achieving design quality is the foundation for keeping costs under control during construction. Nothing is more important than design quality. It must be stressed during all stages of project design, including concept development, preliminary design, detailed design, and bid and award. Effective Construction Management (CM) begins during design because the costs of CM, including change orders and claims, are largely determined by the design quality. Nothing provides a better return on investment than focusing resources to produce a quality design. Emphasizing design quality and design clarity is the surest way to minimize the amount of change orders and construction costs. There is no better or more effective way to control total project costs than producing well-documented, well designed plans and specifications. Quality assurance is a proactive measure taken to ensure the systems and procedures are in conformance with the City's requirements and expectations.

Plans and specifications must be of high quality, which means they must be clear and understandable, complete, accurate, consistent, and constructible. The Contractor receiving these plans should know exactly what to bid thus minimizing areas of interpretation to a minimum. The requirement for public bidding puts additional pressure on the design engineering team to achieve both quality and clarity in plans and specifications. Accuracy and consistency among the calculations, drawings, specifications, and all project documents are essential to achieving the desired project quality.

### Quality Control

Our submitted documents will go through three levels of review prior to each submittal: Initial Peer Review, Project Manager Review, and QA/QC Review. This three tiered review allows for error mitigation on three separated levels of detail: ground level (drafting, calculations, and document formatting), project management level (design and project intent compliance) and quality assurance level (completeness of document and ensure "biddable" plans). Plan checks will ensure that the plans meet the 5 C's: consistent, clear, correct, constructible, and complete.

Our project engineers and project managers recognize that quality is the result of several processes. It requires many individuals performing many appropriate activities at the right time during the plans development process. Quality Control does not solely consist of a review after a product is completed. It is an approach and a realization that quality is something that occurs throughout the design process. QC means performing all activities in conformance with valid requirements, no matter how large or small their overall contribution to the design process. Good CAD techniques, attention to detail, and ensuring the plans are correct and useful to the contractor are also essential to quality. The design team follows OE's established design policies, procedures, standards and guidelines in the preparation and review of all design products for compliance and good engineering practice as directed by the Project QC Plan.



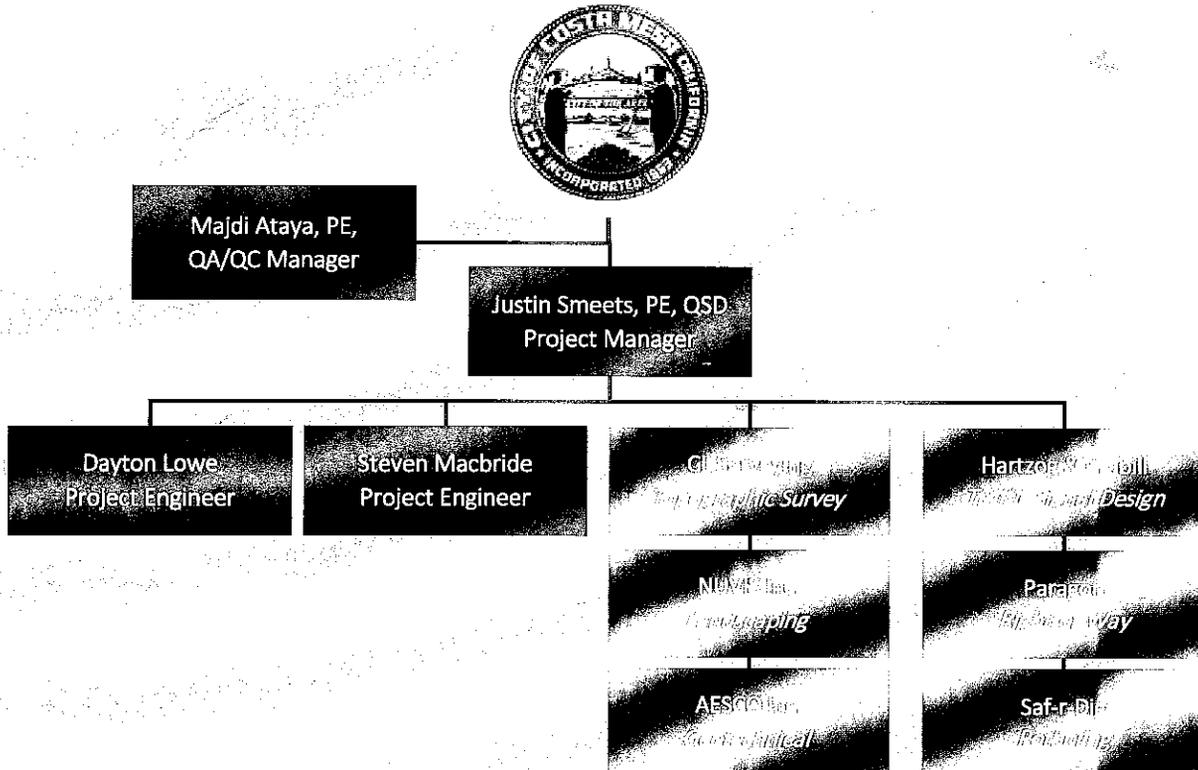
# SECTION 4

# PROJECT STAFFING

## Qualifications Chart

| Name/Roles   | Qualifications   |
|--|--|
| <b>Majdi Ataya</b><br>Principal-in-Charge<br>QA/QC Manager | -32 years of experience<br>-BS Civil Engineering, CSULB & MPA Coursework, CSULB<br>-Registered Civil Engineer<br>-Former Deputy Director of PW & City Engineer |
| <b>Justin Smeets</b><br>Project Manager                    | -11 years of experience<br>-BS Civil Engineering, CSUF<br>-Registered Civil Engineer<br>-QSD (Qualified SWPPP Developer)                                       |
| <b>Dayton Lowe</b><br>Project Engineer                     | -17 years of experience<br>-Civil Engineering Technology & CM Coursework, Broward<br>-AutoCAD Civil 3D Experience  |
| <b>Steven MacBride</b><br>Project Engineer                 | -23 years of experience<br>-AA in Drafting Technology<br>-Civil 3D Certificate of Completion (USCAD Inc.)  |

## Organizational Chart



# Majdi Ataya

## PRINCIPAL-IN-CHARGE & QA/QC MANAGER

*BS Civil Engineering, CSULB • RCE #39392 • Former Deputy Director of Public Works • Former City Engineer*

Majdi Ataya is the President and founder of Onward Engineering, and the Principal-in-Charge for Onward Engineering. Majdi Ataya PE, Former Deputy Director of Public Works/City Engineer for the City of La Habra, is a seasoned engineer with over 32 years of solid and diversified experience in the public works sector. He is extremely familiar with the process of project management and design. He is a highly effective communicator and manager with an outstanding assimilation ability. Majdi is able to adapt and relate to all levels of management, and retain high energy levels and enthusiasm for the project at hand. Majdi understands the importance of excellent communication with public agencies and will be a dependable extension of your staff.

## Work Experience

### PCH AT VISTA MONTANA/ANZA AVENUE WIDENING PROJECT, Torrance

Majdi was the QA/QC Manager for the City of Torrance on the Pacific Coast Highway (PCH) at Vista Montana/Anza Avenue Intersection Improvement Project. The proposed project limits include the high-profile intersection of PCH and Vista Montana/Anza Avenue and the immediately adjacent north/south and east/west areas (500 feet in each direction). The City of Lomita is east of the project area, Redondo Beach is north of the intersection, Palos Verdes Peninsula sits to the south, and the Pacific Ocean to the west. Multi-agency coordination was essential to ensuring success on the project. Commercial businesses and multi-family developments can be found throughout the project limits. The purpose of the project was to increase the operational capabilities of the intersection. This was accomplished by eliminating the split phase signal operation and converting to an eight-phase operating signal. With the eight-phase operation, PCH (east/west) movements will remain the same. Southbound Anza will have 5 travel lanes; dual left turn lanes, dual through lanes and a dedicated right-turn lane. Northbound Vista Montana will have 4 travel lanes; dual left turn lanes, one through lane and through/right turn lane.

### ALTON PARKWAY WIDENING PROJECT, Irvine

Majdi was the Principal-in-Charge & QA/QC Manager on the project for the City of Irvine on this project to add a left-turn lane on Alton Parkway into the south entrance of the Irvine Civic Center. The project limits were on Alton Parkway between Harvard Avenue and Murphy Avenue. The roadway previously had a median on Alton Parkway from Harvard Avenue, stopping just shy of Murphy Avenue. The median was mixed landscape and hardscape (hardscaping across the bridge), with access points for Orange County Flood Control District north and south of the San Diego Creek overpass. The project called for removing the hardscaped median on the existing bridge deck and designing a different hardscape median to accommodate a left turn lane into Irvine Civic Center. The left turn lane was 220 feet in length with a 90 foot taper. The scope of work also entailed constructing new curbs, asphalt patching, and irrigation/landscaping modifications including replacing new roadway signs, legends and striping. OE also evaluated and addressed drainage issues created by the proposed left turn lane.

**VIRGINIA AVENUE WIDENING PROJECT, Bellflower**

Majdi was the QA/QC Manager for the City of Bellflower to double the width of Virginia Avenue at 15929 Virginia. The property jettied out into the road, as a result obstructing 20 feet of the 40-foot-wide roadway. The project required assisting the City with obtaining the necessary right-of-way, and realigning the existing crown of the road to ensure proper drainage. The project included installing curb, gutter, and sidewalk where none previously existed. Furthermore, a utility coordination was performed to coordinate the relocation of utility lines for this project.

**HARBOR BLVD. & GISLER AVENUE INTERSECTION WIDENING PROJECT, Costa Mesa**

Majdi was the Principal-in-Charge on the Harbor Blvd. & Gisler Avenue Intersection Widening project in the City of Costa Mesa. Due to the close proximity of the intersection to the I-405 Harbor on-ramp, there were extremely high turn movements both eastbound on Gisler Avenue turning left onto Harbor Boulevard as well as southbound on Harbor. As a result, this created heavy congestion during peak traffic hours. In order to alleviate the congestion, phase I of the project included only eastbound improvements; converting the eastbound optional through-right lane to an optional through-left lane, and adding an eastbound right-turn lane. Phase II entailed a conceptual feasibility study and right-of-way acquisition requirements for both north and southbound improvements, including the addition of a southbound right-turn lane, and the extension of the northbound optional through-right lane. The scope of work also included installing an overhead freeway sign, which required working with SoCal Gas to relocate a gas line in conflict with footings for the overhead sign. A detailed field analysis, specifications, and plans were provided, including measurements and exhibits, in conformance with MUTCD, Caltrans, and City standards. Additionally, coordination with SAF-r-DIG and utility companies was essential to perform potholing and identify utility obstructions.

**CITYWIDE RESIDENTIAL STREET REHABILITATION PROJECT, Placentia**

Majdi was the QA/QC Manager for the City of Placentia on the 2012 Citywide Residential Street Rehabilitation Project. The project was funded by a variety of sources including Gas Tax, Proposition 1B, Measure M1, and Measure M2. The analysis included 75 miles of roadway and the actual design spanned 35 miles. The scope of work entailed rehabilitating the roadway using primarily Type II slurry seal, chip seal, and portions of full R&R. The final design included rehabilitating 41% of the City's residential roadways, including 109 new ADA compliant curb ramps, 5,445 tons of slurry, 105,050 SY of chip seal, grind and overlay with 35,000 tons of AC paving, adjusting 209 manholes and 369 water valves, and 2,363 LF of curb and gutter. In addition, the City's 2011 Pavement Management Report was reviewed, and a reconnaissance field survey was completed to better understand the existing pavement conditions. The field survey included walking each proposed roadway to make recommendations for necessary localized AC R&R patches, and to identify damaged curb & gutter and uplifted, or non-ADA compliant sidewalks. Furthermore, a location matrix was provided with photographs for each recommended repair, along with the estimated budget allocation for each location and work item. The project also required communicating extensively with residents, and spending in excess of 20 hours per week fielding calls.

# Justin Smeets

## PROJECT MANAGER

*BS Civil Engineering, CSUF • Registered Civil Engineer #78314 • Certified by OCTA for Pavement Rehabilitation  
QSD/QSP Certified #00852 • SWPPP Preparer*

Justin has 11 years of experience in Civil Engineering design, municipal engineering and facilities design, construction management, and construction administration. Utilizing AutoCAD Civil 3D Justin is responsible for managing and developing engineering plans and specifications, mapping, executing land development and grading design projects, conducting earthwork calculations, and incorporating typical designs, as well as providing engineering quantities and calculations. He is proficient in federally funded projects, and is very familiar with the Caltrans Local Assistance Procedures Manual (LAPM). Justin has successfully taken multiple projects from the initial federal funding application, to the Preliminary Environmental Study, to E-76 approval, and all the way through construction of audited federally funded construction projects. He is experienced in managing construction projects and is responsible for planning and running the kick-off meeting with the contractor, reviewing project submittals, RFI's, CCO's, and checking the contractor invoices against the field quantities as detailed on the daily work reports, as well as coordinating daily construction details with the contractor and inspector. He has completed multiple SWPPP's and erosion and sediment control plans per the latest Construction General Permit. Justin is continuously increasing his skills in modern design software, and his knowledge of industry design standards.

## Work Experience

### **PCH AT VISTA MONTANA/ANZA AVENUE WIDENING PROJECT, Torrance**

Justin was the Project Manager on this project in the City of Torrance for the Pacific Coast Highway (PCH) at Vista Montana/Anza Avenue Intersection Improvement Project. The proposed project limits include the high-profile intersection of PCH and Vista Montana/Anza Avenue and the immediately adjacent north/south and east/west areas (500 feet in each direction). The City of Lomita is east of the project area, Redondo Beach is north of the intersection, Palos Verdes Peninsula sits to the south, and the Pacific Ocean to the west. Multi-agency coordination was essential to ensuring success on the project. Commercial businesses and multi-family developments can be found throughout the project limits. The purpose of the project was to increase the operational capabilities of the intersection. This was accomplished by eliminating the split phase signal operation and converting to an eight-phase operating signal. With the eight-phase operation, PCH (east/west) movements will remain the same. Southbound Anza will have 5 travel lanes; dual left turn lanes, dual through lanes and a dedicated right-turn lane. Northbound Vista Montana will have 4 travel lanes; dual left turn lanes, one through lane and through/right turn lane.

### **TOWNE CENTRE & SANTIAGO BLVD. WIDENING PROJECT, Villa Park**

Justin served as Project Manager on the Design of this project and Construction Manager during construction phase for this widening project. The design scope included grading and pavement reconstruction; designing right- and left-turn pockets; median improvements; 2,000 LF of curb, gutter, sidewalk realignment along Santiago Blvd; parking lot grading; and drainage improvements. The plan set

included Plan and Profile sheets, Signing and Striping sheets, and the site development plan. The project was crucial to the City of Villa Park because the parking lot serves as the only business center in the City.

**SAN GABRIEL BLVD. INTERSECTION IMPROVEMENTS PROJECT, San Gabriel**

Justin was the Project Manager responsible for developing the preliminary design on this Broadway and San Gabriel Boulevard intersection widening project. The project involved widening for an additional thru-lane on San Gabriel Boulevard, and right-turn lanes on Broadway and San Gabriel, as well as new, curb, gutter, sidewalk, and storm drain improvements. Plans included Plan, Profile, and Cross Section sheets. The city also required development of an R/W exhibit, used to show the additional R/W needed to make the project successful.

**HARBOR BLVD. & GISLER AVENUE INTERSECTION WIDENING PROJECT, Costa Mesa**

Justin was the Project Manager on the Harbor Blvd. & Gisler Avenue Intersection Widening project in the City of Costa Mesa. Due to the close proximity of the intersection to the I-405 Harbor on-ramp, there were extremely high turn movements both eastbound on Gisler Avenue turning left onto Harbor Boulevard as well as southbound on Harbor. As a result, this created heavy congestion during peak traffic hours. In order to alleviate the congestion, phase I of the project included only eastbound improvements; converting the eastbound optional through-right lane to an optional through-left lane, and adding an eastbound right-turn lane. Phase II entailed a conceptual feasibility study and right-of-way acquisition requirements for both north and southbound improvements, including the addition of a southbound right-turn lane, and the extension of the northbound optional through-right lane. The scope of work also included installing an overhead freeway sign, which required working with SoCal Gas to relocate a gas line in conflict with footings for the overhead sign. A detailed field analysis, specifications, and plans were provided, including measurements and exhibits, in conformance with MUTCD, Caltrans, and City standards. Additionally, coordination with SAF-r-DIG and utility companies was essential to perform potholing and identify utility obstructions.

**RESIDENTIAL AREA 1B & ARTERIAL ZONE 7 PAVEMENT REHABILITATION, Diamond Bar**

Justin provided Project Management services to the City of Diamond Bar on the Residential Area 1B & Arterial Zone 7 Rehabilitation Project. The Area 1B and Zone 7 project consisted of 8.9 miles of residential streets, 1.3 miles of collector streets, and 2.5 miles of arterial roadways. For the annual project OE was tasked with providing a design for rehabilitating the streets in a manner that meets the City's tight budget. Each street was individually inspected to determine the most cost effective remedy. The scope of work entailed 29,000 SY of chip seal, type II slurry seal, 5,235 tons of AC overlay, 210,000 SF of cold milling the existing pavement to a variable-depth of 6' from the edge of the gutter, removal and replacement of 2,249 tons of AC pavement, adjusting 127 manhole frames and covers, and 147 water & gas valve covers, and installing 6 traffic loop detectors. Furthermore, an elementary school was within the project limits, which made construction scheduling and phasing for both the pavement and striping operations essential in order to provide safety and accessibility during the beginning and end of the school day.

# Dayton Lowe

## PROJECT ENGINEER

*Civil Engineering Technology & CM Coursework, Broward • AutoCAD Civil 3D • Construction Support Exp.*

As a Project Engineer for OE, Dayton performs and coordinates detailed designs on arterial roadways, utility coordination for major relocations on high profile projects and assistance in coordination efforts on multiple projects. He possesses an ability to produce drawings, layouts, sketches, maps, and graphic representations of engineering designs. He also has extensive knowledge of AutoCAD, Autodesk Civil 3D, Eagle Pointe Civil package and others. Dayton provides support during the overall engineering and design effort, including the preparation of design drawings and calculations. He is experienced in developing residential, commercial, and industrial conceptual site plans from the preliminary phase to final construction documents; knowledgeable in the design of gravity sanitary sewer systems; skilled in the design of sanitary sewer pump stations and force main systems; accomplished in the design of water mains for residential, commercial and industrial projects; practiced in the design of drainage systems; talented in preparing drainage calculations for effective and efficient drainage systems; and familiar in the design of grading plans for storm water drainage and ADA compliance. Dayton is also extremely proficient in preparing and submitting packages to governmental agencies to obtain required permits for construction and in the design of roadway layouts including intersections, roundabouts, turn-lanes and travel lanes.

## Work Experience

### **PCH AT VISTA MONTANA/ANZA AVENUE WIDENING PROJECT, Torrance**

Dayton provided design engineering to the City of Torrance on the Pacific Coast Highway (PCH) at Vista Montana/Anza Avenue Intersection Improvement Project. The proposed project limits include the high-profile intersection of PCH and Vista Montana/Anza Avenue and the immediately adjacent north/south and east/west areas (500 feet in each direction). The City of Lomita is east of the project area, Redondo Beach is north of the intersection, Palos Verdes Peninsula sits to the south, and the Pacific Ocean to the west. Multi-agency coordination was essential to ensuring success on the project. Commercial businesses and multi-family developments can be found throughout the project limits. The purpose of the project was to increase the operational capabilities of the intersection. This was accomplished by eliminating the split phase signal operation and converting to an eight-phase operating signal. With the eight-phase operation, PCH (east/west) movements will remain the same. Southbound Anza will have 5 travel lanes; dual left turn lanes, dual through lanes and a dedicated right-turn lane. Northbound Vista Montana will have 4 travel lanes; dual left turn lanes, one through lane and through/right turn lane.

### **WASHINGTON BOULEVARD ROADWAY WIDENING PS&E, Commerce**

Dayton was the Design Engineer on this project in the City of Commerce which involved widening the Washington Boulevard roadway approximately 3 miles from the City limits to the I-5 Freeway to the ultimate roadway width of 80 feet to provide a third travel lane in each direction. In addition, civil design services were provided for all utility coordination, relocations, modifications and adjustments. The project involved extensive utility facilities modifications, including a 12-inch water main relocation, 2- and 4-inch low pressure gas main relocations, transmission and distribution power pole relocations, telephone facility

relocations and adjustments of meters, pull boxes, and manholes. The project required coordinating with Southern California Edison, AT&T, California Water Company, Gas Company and Los Angeles County in preparation for creating the Utility Disposition Plans.

#### **FOOTHILL BOULEVARD WIDENING, San Dimas**

Dayton was the Design Engineer on this project which involved the 10 foot widening of the Foothill Boulevard Bridge at the San Dimas Wash to match the approaching roadway width. The project involved modification to the existing 12-inch water main to coincide with the Foothill Boulevard widening and modification to the San Dimas Wash culvert. The existing water main was realigned and designed to pass through the existing San Dimas Wash box culvert to connect along Foothill Boulevard from Longhorn Court to Walnut Avenue approximately 500 feet. The project duties included the design of the water main modifications complying with the Golden State Water Company design standards using AutoCAD Civil 3D.

#### **RESIDENTIAL AREA 3 & COLLECTOR STREET REHABILITATION PROJECT, Diamond Bar**

Dayton provided design engineering services to the City of Diamond on the Residential Area 3 & Collector Street Rehabilitation Project. The project limits include 25 centerline miles of collector and residential streets bound by Pathfinder Road to the north and Tonner Canyon Road to the south. The project required rehabilitating the roadway utilizing AC dig-outs in extremely damaged areas and slurry seal/ chip seal on the remaining areas. The scope of work involved removing and replacing 28 ADA compliant curb ramps, removing existing depressed curb & ramp and constructing ADA compliant curb, gutter, and sidewalk, removing and replacing 580 SF of cross gutters, grinding and replacing the existing asphalt concrete pavement to a depth of 2", and R&R 1,000 SF of existing asphalt concrete pavement to a depth of 6". Furthermore, work also included cold milling the existing pavement with a variable depth of 0" to 1.5", constructing asphalt concrete overlay, applying 50,300 SY of conventional chip seal, Type II slurry seal, adjusting 120 manhole frames and covers, and traffic striping and markings.

#### **2013-14 PAVEMENT REHABILITATION PROJECT (AREA A & B), La Mirada**

Dayton provided design engineering services to the City of La Mirada for the city's first residential rehabilitation project utilizing local Measure I funds. Measure I is a local funding measure for La Mirada's infrastructure maintenance. The project area was exclusively residential with parks, schools, pedestrian walkways and equestrian trails. The project encompassed localized street reconstructions, street resurfacing, slurry seal, storm drain lining of the existing corrugated metal storm drain, and concrete repairs of curb, gutter and sidewalks with ADA access ramps; adjustment of manholes and valve cans and new striping and traffic loop detector replacement. In addition, the existing slotted cross gutters required replacement to current roadway standards. In addition, field investigations and necessary topographic surveys were completed to provide a cost effective design solution that maximized construction dollars through the use of thin lift ac overlay, spot roadway reconstruction prior to overlay and slurry seal, and limited roadway reconstruction. All the existing corrugated metal storm drains within the project area was videotaped, and the video confirmed that the metal pipe contained debris and the flow line was rusted and needed repairing. Furthermore, the project required meeting with City staff to determine that in-situ form in-place lining is the most cost effective method to rehabilitate the storm drain pipes.

# Steven MacBride

## PROJECT ENGINEER

*Associate In Occupational Studies Degree In Drafting Technology, Alfred • Certificate In Civil 3D, USCAD Inc.*

Steven MacBride has garnered 25 years of experience in Design Engineering and as a Project Engineer for OE, he is responsible for performing and coordinating detailed designs on arterial roadways, utility coordination for major relocations on high profile projects and assisting in coordination efforts on multiple projects. In Addition, Steven has an extensive knowledge of AutoCAD, and is certified in Civil 3D.

## Work Experience

### **PCH AT VISTA MONTANA/ANZA AVENUE WIDENING PROJECT, Torrance**

Steven provided design engineering to the City of Torrance on the Pacific Coast Highway (PCH) at Vista Montana/Anza Avenue Intersection Improvement Project. The proposed project limits include the high-profile intersection of PCH and Vista Montana/Anza Avenue and the immediately adjacent north/south and east/west areas (500 feet in each direction). The City of Lomita is east of the project area, Redondo Beach is north of the intersection, Palos Verdes Peninsula sits to the south, and the Pacific Ocean to the west. Multi-agency coordination was essential to ensuring success on the project. Commercial businesses and multi-family developments can be found throughout the project limits. The purpose of the project was to increase the operational capabilities of the intersection. This was accomplished by eliminating the split phase signal operation and converting to an eight-phase operating signal. With the eight-phase operation, PCH (east/west) movements will remain the same. Southbound Anza will have 5 travel lanes; dual left turn lanes, dual through lanes and a dedicated right-turn lane. Northbound Vista Montana will have 4 travel lanes; dual left turn lanes, one through lane and through/right turn lane.

### **ALTON PARKWAY WIDENING PROJECT, Irvine**

Steve was a Project Engineer on the project for the City of Irvine on this project to add a left-turn lane on Alton Parkway into the south entrance of the Irvine Civic Center. The project limits were on Alton Parkway between Harvard Avenue and Murphy Avenue. The roadway previously had a median on Alton Parkway from Harvard Avenue, stopping just shy of Murphy Avenue. The median was mixed landscape and hardscape (hardscaping across the bridge), with access points for Orange County Flood Control District north and south of the San Diego Creek overpass. The project called for removing the hardscaped median on the existing bridge deck and designing a different hardscape median to accommodate a left turn lane into Irvine Civic Center. The left turn lane was 220 feet in length with a 90 foot taper. The scope of work also entailed constructing new curbs, asphalt patching, and irrigation/landscaping modifications including replacing new roadway signs, legends and striping. OE also evaluated and addressed drainage issues created by the proposed left turn lane.

### **HARBOR BLVD. & GISLER AVENUE INTERSECTION WIDENING PROJECT, Costa Mesa**

Steve was a Project Engineer on the Harbor Blvd. & Gisler Avenue Intersection Widening project in the City of Costa Mesa. Due to the close proximity of the intersection to the I-405 Harbor on-ramp, there were extremely high turn movements both eastbound on Gisler Avenue turning left onto Harbor Boulevard as

well as southbound on Harbor. As a result, this created heavy congestion during peak traffic hours. In order to alleviate the congestion, phase I of the project included only eastbound improvements; converting the eastbound optional through-right lane to an optional through-left lane, and adding an eastbound right-turn lane. Phase II entailed a conceptual feasibility study and right-of-way acquisition requirements for both north and southbound improvements, including the addition of a southbound right-turn lane, and the extension of the northbound optional through-right lane. The scope of work also included installing an overhead freeway sign, which required working with SoCal Gas to relocate a gas line in conflict with footings for the overhead sign. A detailed field analysis, specifications, and plans were provided, including measurements and exhibits, in conformance with MUTCD, Caltrans, and City standards.

#### **INDUSTRY HILLS REALIGNMENT OF HANDORF ROAD AND SITE GRADING**

Steven provided design engineering services on the Site Grade and Industry Hill Realignment of Handorf Road. The scope of work entailed the realigning of Handorf Road with site grading, and sewer and storm drain improvements. Steven's responsibilities included preparing grading plans, street plans, sewer plans, and storm drain plans.

#### **RESIDENTIAL STREET REHABILITATION & ANNUAL WATER MAIN REPLACEMENT, La Habra**

Steven was the design engineer on the Residential Street Rehabilitation & Annual Water Main Replacement for the City of La Habra. The project spanned an 8 centerline mile area. The scope of work included field surveying the existing roadway surfaces, curb & gutter, and gathering locations for all surface utilities to be adjusted or protected, as well as determining the pavement treatments on each stretch of roadway. The project involved reconstructing 1,440 LF of curb and gutter, 10 curb ramps, 7,645 SF of 6" pavement reconstruction, 900 tons of asphalt reconstruction, and 1,100 tons of Slurry Seal. In addition to the roadway resurfacing, the project also involved replacing 1,200 LF of water main along with valve and service replacements at various locations. OE prepared the PS&E within the City's budget and schedule.

#### **OCEAN AVENUE & MARGUERITE AVENUE RECONSTRUCTION PROJECT, Newport Beach**

Steven provided design engineering on the Ocean Avenue & Marguerite Avenue Reconstruction Project for the City of Newport Beach. The project limits consist of Marguerite Avenue from E. Pacific Coast Highway to Ocean Avenue, and on Ocean Avenue from Marguerite Avenue to Carnation Avenue, a total distance of nearly 4,000 LF. Marguerite Avenue and Ocean Avenue serve as the main route from the E. Pacific Coast Highway to Newport Beach's Corona Del Mar beach. These two residential streets are one lane in each direction with on-street parking and consisted of Portland Cement Concrete. With the process of rehabilitating/reconstructing cracked and deteriorated concrete pavement being a complicated procedure, the City of Newport Beach selected Onward Engineering to investigate the condition of the concrete pavement and arrive at a financially feasible solution that minimizes impacts to the residents and does not impact access to the beach during the warm season. The project included the design of approximately 350 feet of narrowing the existing street section and introducing a new landscaped parkway using plants and materials agreeable with the City's Architectural and Landscape Review Committee. The work also entailed coring the existing pavement to determine the existing section configuration and subgrade strength, extensive topographic survey, and resetting monuments and right-of-way.

## SECTION 5

# FIRM EXPERIENCE & REFERENCES

### **Pacific Coast Highway (PCH) at Vista Montana/Anza Ave. Intersection Improvement, Torrance**

OE provided project management and design engineering services to the City of Torrance on the Pacific Coast Highway (PCH) at Vista Montana/Anza Avenue Intersection Improvement Project (\$900,000). The proposed project limits include the high-profile intersection of PCH and Vista Montana/Anza Avenue and the immediately adjacent north/south and east/west areas (500 feet in each direction). The City of Lomita is east of the project area, Redondo Beach is north of the intersection, Palos Verdes Peninsula sits to the south, and the Pacific Ocean to the west. Multi-agency coordination was essential to ensuring success on the project. The purpose of the project was to increase the operational capabilities of the intersection. This was accomplished by eliminating the split phase signal operation and converting to an eight-phase operating signal. With the eight-phase operation, PCH (east/west) movements remained the same. Southbound Anza went from 4 travel lanes (a dedicated left turn lane, a left/through lane, a dedicated through lane, and a dedicated right turn lane) to 5 travel lanes (dual left turn lanes, dual through lanes and a dedicated right-turn lane). Northbound Vista Montana will have 4 travel lanes; dual left turn lanes, one through lane and through/right turn lane. Design was completed in March of 2016.

### **Harvard Avenue & Gisler Avenue Widening Project, Costa Mesa**

OE provided Design & Right-of-way Acquisition services to the City of Costa Mesa for this two-phase, \$400,000 project. Phase I included only eastbound improvements, converting the eastbound optional through-right lane to optional through-left lane, and addition of eastbound right-turn lane. Phase II entailed a conceptual feasibility study and right-of-way acquisition requirements for north and southbound improvements, including addition of a southbound right-turn lane, and extension of the northbound optional through-right lane. Work also included installing an overhead freeway sign. OE provided detailed field analysis, specifications, and plans including measurements and exhibits, in conformance with MUTCD, Caltrans, and City standards. Additionally, OE coordinated with SAF-r-DIG and utility companies to perform potholing and identify utility obstructions. OE worked specifically with SoCal Gas to relocate a gas line in conflict with footings for the overhead sign to be installed. Our design was completed in January of 2014.

### **Alton Parkway Widening Project, Irvine**

OE provided design services to the City of Irvine on this \$250,000 project to add a left-turn lane on Alton Parkway into the south entrance of the Irvine Civic Center. The project limits were on Alton Parkway between Harvard Avenue and Murphy Avenue. The current roadway includes a median on Alton Parkway from Harvard Avenue, stopping just shy of Murphy Avenue. The median is mixed landscape and hardscape (hardscaping in the middle), with access points for Orange County Flood Control District north and south of the San Diego Creek overpass. The work entailed removal of a hardscaped median on existing bridge deck and designing a different median to accommodate a left turn lane into Irvine Civic Center. The work also entailed replacing new roadway signs, legends and striping. Additionally, the scope required removal

of landscaping and modification of irrigation facilities in an adjacent median. OE also evaluated and addressed drainage issues that were created by the proposed left turn lane. Our design was completed in December of 2014.

#### **Jamboree & I-5 Widening Project, Irvine**

OE provided project management and design review services to the City of Irvine on this \$7.3 million dollar project. The project scope included widening Interstate 5 (I-5) northbound and southbound ramps to relieve traffic congestion, and widening Jamboree from one-tenth of a mile west of Michelle Drive to El Camino Real. Construction included additional retaining walls, landscaping, and irrigation as well. OE assisted the City in replacing the prime contractor on the project, including filing all necessary documentation for termination of contract, transferring ownership of the project to the bond company, and bringing a new prime contractor to the job. OE also assisted the City in dealing with numerous liens placed on the project due to the contractor's non-payment of wages and union dues. OE conducted a feasibility study on the plans while construction was stalled, and made recommendations for improving design inconsistencies. Our role was complete once a new prime contractor was brought on and smooth forward progress had been demonstrated by the contractor. Design was completed in August of 2012.

#### **Hammond Road Rehabilitation Project (Phase I), Brea**

OE provided design engineering services to the City of Brea to rehabilitate this aging arterial roadway that services up to 40,000 vehicles per day. With the project area encompassing nearly 300,000 SF of pavement, OE's design included pavement grinding and AC overlay of various depths, and replacing median island noses, custom designing rebar-reinforced ADA-compliant ramps, installing video detection at Traffic Signals, reconstructing PCC Driveways, installing 73 water valve sleeves and lids, coordinating with MWD to adjust manholes, and replacing portions of curb, gutter, and sidewalk. OE designed multiple construction details to clearly convey the design intent to the contractor. Our team also conducted an extensive drivability review and assessed post design roadway cross-falls relating to new ramp and driveway accessibility. OE also provided construction management services on this project. The construction cost was \$900,000 and our design was completed in May of 2012.

#### **Bastanchury Road Rehabilitation Project, Placentia**

OE provided design engineering services to the City of Placentia for the Bastanchury Road Rehabilitation Project. The project limits spanned from Kraemer Boulevard to the East City Limit, near Rose Drive. The project involved a 2" grind and overlay with an ARHM for a 1 mile stretch of roadway. Additional localized dig outs were required in order to repair any major base failures within the roadway. Along with roadway work, OE analyzed the pedestrian path of travel and incorporated any necessary improvements along the sidewalk and curb ramps in order to meet ADA guidelines. A portion of the project was funded using federal EPA funds, and OE ensured that the PS&E package reflected all required federal documents. This project has a construction cost of \$1.1 million. The design was completed in April of 2014.

**City of Torrance**

**Bill Kamimura, Project Manager**

**(310) 781-6900**

**20500 Madrona Ave.**

**Torrance, CA 90503**

**City of Diamond Bar**

**Kimberly Molina Young, Sr. Civil Engineer**

**(909) 839-7044**

**21825 Copley Drive**

**Diamond Bar, CA 91765**

**City of Irvine**

**Kal Lambaz, Project Manager**

**(949) 724-7555**

**6427 Oak Canyon, Building 1**

**Irvine, CA 92618**

**City of Bellflower**

**Jerry Stock, PE, City Engineer**

**(562) 804-1424 ext. 2218**

**16600 Civic Center Drive**

**Bellflower, CA 90706**

**City of La Mirada**

**Gary Sanui, Project Coordinator**

**(562) 902-2385**

**15515 Phoebe Avenue**

**La Mirada, CA 90638**

**City of Placentia**

**Michael McConaha, Maintenance Mgr.**

**(562) 902-2385 (now in Lake Forest)**

**401 East Chapman Avenue**

**Placentia, CA 92870**

**"The use of Onward Engineering was a superb design choice for us; and  
we would love for ANY agency."**

**-Damien Rowles, City of Norwalk**

**EXHIBIT C**  
**FEE SCHEDULE**



**ONWARD ENGINEERING FEE PROPOSAL TO PROVIDE  
DESIGN SERVICES TO THE CITY OF COSTA MESA  
FOR 17TH STREET IMPROVEMENTS FROM PLACENTIA AVE. TO SUPERIOR AVE.**

| Phase        | Task   | Project Tasks                         | QA/QC Manager   | Project Manager   | Project Engineers | Subconsultants   | Total            |
|--------------|--|---------------------------------------|-----------------|-------------------|-------------------|------------------|------------------|
|              |  |                                       | Majdi Ataya, PE | Justin Smeets, PE |                   |                  |                  |
|              |  |                                       | \$120           | \$110             | \$90              | Lump Sum         |                  |
|              |  |                                       | Hours           | Hours             | Hours             |                  |                  |
| I            | <b>PHASE I - TOPOGRAPHIC SURVEY AND PRELIMINARY DESIGN PLANS</b> |                                       |                 |                   |                   |                  |                  |
| I            | 1  | Project Kick-Off Meeting              | 2               | 4                 | 2                 | \$0              | \$860            |
| I            | 2  | Research and Review of Available Data |                 | 12                | 32                | \$0              | \$4,200          |
| I            | 3  | Utility Research                      |                 | 10                | 28                | \$0              | \$3,620          |
| I            | 4  | Site Evaluation                       | 8               | 8                 | 8                 | \$0              | \$2,560          |
| I            | 5  | Topographic Survey                    |                 | 6                 | 4                 | \$17,710         | \$18,730         |
| I            | 6  | Base Sheets                           |                 | 24                | 80                | \$0              | \$9,840          |
| I            | 7  | Prepare Preliminary Design            | 40              | 80                | 160               | \$0              | \$28,000         |
| I            | <b>PHASE I - TOPOGRAPHIC SURVEY AND PRELIMINARY DESIGN PLANS</b> |                                       | <b>50</b>       | <b>144</b>        | <b>314</b>        | <b>\$17,710</b>  | <b>\$67,810</b>  |
| II           | <b>PHASE II - RIGHT-OF-WAY ENGINEERING</b>                       |                                       |                 |                   |                   |                  |                  |
| II           | 8  | Right of Way Engineering              | 2               | 40                | 20                | \$27,313         | \$33,753         |
| II           | <b>PHASE II - RIGHT-OF-WAY ENGINEERING</b>                       |                                       | <b>2</b>        | <b>40</b>         | <b>20</b>         | <b>\$27,313</b>  | <b>\$33,753</b>  |
| III          | <b>PHASE III - FINAL DESIGN</b>                                  |                                       |                 |                   |                   |                  |                  |
| III          | 9  | Geotechnical Investigation            | 0               | 6                 | 2                 | \$16,089         | \$16,929         |
| III          | 10   | Utility Coordination                  | 0               | 80                | 60                | \$0              | \$14,200         |
| III          | 11   | Utility Potholing                     | 0               | 8                 | 4                 | \$10,000         | \$11,240         |
| III          | 12   | Prepare 65% and 90% PS&E              | 48              | 120               | 380               | \$60,385         | \$113,545        |
| III          | 13   | 100% and Final Design PS&E            | 32              | 55                | 120               | \$17,250         | \$37,940         |
| III          | 14   | Reimbursable Expenses                 |                 |                   |                   | \$1,500          |                  |
| III          | <b>PHASE III - FINAL DESIGN</b>                                  |                                       | <b>80</b>       | <b>269</b>        | <b>566</b>        | <b>\$105,224</b> | <b>\$193,854</b> |
| <b>TOTAL</b> |  |                                       | <b>\$15,840</b> | <b>\$49,830</b>   | <b>\$81,000</b>   | <b>\$150,246</b> | <b>\$295,416</b> |