

Council Meeting of
July 24, 2007

Honorable Mayor and Members
of the City Council
City Hall
Torrance, California

Members of the Council:

SUBJECT: Public Works - Amendment to Consulting Services Agreement C2005-027 with Moffatt & Nichol Engineers to Provide Additional Engineering Services for the Del Amo Boulevard Extension/Grade Separation, T-30. Expenditure: \$134,346

RECOMMENDATION

The Public Works Director recommends that the City Council approve an Amendment to Consulting Services Agreement C2005-027 with Moffatt & Nichol Engineers that extends the term until December 31, 2008 and increases the amount from \$1,475,116 to \$1,609,462 (an increase of \$134,346) to provide additional engineering services for the Del Amo Boulevard Extension/Grade Separation, T-30.

Funding

Funding is available from Project T-30 grant funds (\$93,370) secured through the Los Angeles County Metropolitan Transportation Authority and from T-30 Bond funds (\$40,976).

BACKGROUND AND ANALYSIS

The Del Amo Boulevard Extension/Grade Separation project will extend Del Amo Boulevard between Crenshaw Boulevard and Maple Avenue to provide an additional east-west arterial corridor. The project includes acquisition of right-of-way, construction of a new four lane roadway and bridge structure over the Burlington Northern Santa Fe railroad tracks, realignment of a railroad spur, construction of retaining walls, drainage improvements, relocation of utilities and relocation/reconstruction of affected off-site facilities.

On February 1, 2005 Your Honorable Body awarded a Consulting Services Agreement (C2005-027) to Moffatt & Nichol Engineers in the amount of \$1,475,116 to provide right-of-way appraisal/acquisition services and design services for the Del Amo Boulevard Extension/Grade Separation, T-30. Moffatt & Nichol Engineers successfully completed most tasks included in the Agreement, but were directed in October 2006 by staff not to complete the remaining tasks until it could be determined if additional funds could be identified to cover a shortfall of construction funding. The Agreement with Moffatt & Nichol Engineers tentatively expired earlier this year and the remaining balance is approximately \$29,500. No work has been performed since the expiration date and the City does have the option at this time to amend the Agreement.

In February 2007, the Public Works Department was informed that the City was approved for an additional \$7,000,000 to be used for construction of this project. Your Honorable Body recently approved a new Memorandum of Understanding with the Los Angeles

County Metropolitan Transportation Authority that obligates the additional \$7,000,000 of newly-granted federal funds to be used for construction of this project. However, further assistance is needed to obtain final approval from the State of California Department of Transportation's District 7 office. The City has until July 31, 2008 to obtain the approval. The total amount of grant funds for this project would then be \$20,121,000.

Moffatt & Nichol Engineers can assist the City in obtaining final approval from the State for the \$7,000,000. There assistance also is needed to complete several unanticipated tasks and to make design modifications not included in the original Agreement. There have been unexpected utility conflicts, changes required by the Burlington Northern Santa Fe railroad, and additional meetings that have resulted in a need for design modifications. Staff preferred not to proceed with any changes until additional construction funds were identified and approved.

Moffatt & Nichol Engineers proposes to complete the additional engineering services and design modifications for an amount not-to-exceed \$134,346. Additional time also is needed to perform the work. Therefore, the Amendment (Attachment A) increases the Agreement from \$1,475,116 to \$1,609,462 (an increase of \$134,346) to provide additional engineering services and will extend the term until December 31, 2008 so that adequate time is given to complete the additional engineering services. There are no other changes proposed to the Agreement.

It should be noted that there is still a concern regarding the budget versus projected construction cost for this project. The costs associated with improvements/relocations of facilities in areas of right-of-way to be acquired have increased. Staff is working to resolve this issue; however, the projected construction cost for this project may exceed the available budget by \$3.5M. The actual construction cost can not be determined until after receiving bids from qualified contractors and determining the lowest, responsible bidder.

Respectfully submitted,

ROBERT J. BESTE
Public Works Director



By Craig Bilezerian
Project Manager

CONCUR:



Robert J. Beste
Public Works Director



LeRoy J. Jackson
City Manager

Attachments: A: First Amendment (C2005-027)
B: Consulting Services Agreement (C2005-027)

FIRST AMENDMENT TO AGREEMENT (C2005-027)

This First Amendment to Agreement C2005-027 is made and entered into as of _____, 2007, by and between the CITY OF TORRANCE ("CITY"), a municipal Corporation, and Moffatt & Nichol Engineers, a California corporation ("CONSULTANT").

RECITALS:

- A. CITY and CONSULTANT entered into an Agreement as of February 1, 2005, whereby CONSULTANT agreed to provide the services listed in the Scope of Services attached as Exhibit A to the original agreement.
- B. CITY wishes to include additional design work in the Agreement so that CONSULTANT will revise plans, specifications and estimate in accordance with the Scope of Services/Fee Proposal dated May 31, 2007 attached as Exhibit C. The additional work will cost an additional \$134,346.
- C. CITY wishes to increase the Agreement sum from \$1,475,116, to \$1,609,462, an increase of \$134,346, to complete the additional work.
- D. CITY wishes to extend the Agreement term from the Effective Date through December 31, 2008 to allow adequate time to complete the additional services.

AGREEMENT:

- 1. Paragraph 2, entitled "TERM" is amended to read in its entirety as follows:
 - "2. **TERM**
Unless earlier terminated in accordance with Paragraph 4 below, this Agreement will continue in full force and effect from the Effective Date through December 31, 2008."
- 2. Paragraph 3, subparagraph A, entitled "CONSULTANT's Fee," is amended to read in its entirety as follows:
 - "3. **COMPENSATION**
 - A. **CONSULTANT'S Fee.**
For services rendered pursuant to this Agreement, CONSULTANT will be paid in accordance with the Compensation Schedule attached as Exhibit B and Scope of Services/Fee Proposal attached as Exhibit C, provided, however, that in no event will the total amount of money paid the CONSULTANT, for services contemplated by this Agreement, exceed the sum of \$1,609,462 ("Agreement Sum"), unless otherwise first approved in writing by CITY."

3. In all other respects, the Agreement entered into as of February 1, 2005 between CITY and CONSULTANT is ratified and reaffirmed and is in full force and effect.

CITY OF TORRANCE,
A Municipal Corporation

Moffatt & Nichol Engineers
a California Corporation

By _____
Frank Scotto, Mayor

By _____
Michael McCarthy, P.E.
Vice President

ATTEST:

Sue Herbers, City Clerk

APPROVED AS TO FORM:

JOHN L. FELLOWS III
City Attorney

By _____
Heather K. Whitham
Deputy City Attorney



EXHIBIT C

May 31, 2007

City of Torrance
 Engineering Division, Public Works
 20500 Madrona Ave
 Torrance, CA 90503

Attn: Craig Bilezerian

Subj: Request for Additional Fee for Engineering Services 4th Revision
 Del Amo Boulevard Extension
 M&N File: 5596 - Torrance City Contract Number: C2005-027

Dear Mr. Bilezerian:

As per telephone conversation with Beth Overstreet and your direction, we have revised our previously submitted request for additional fees for engineering services dated February 22, 2007 and May 4, 2007. The revisions consist of adding Item 6.0 *Modification to bridge chain link fencing and Item 7.0 Revisions Sewer Plans to address LA County Sanitation request for modifications* and modifications to *Item 2.8 Permit Fees*.

During the plan preparation process, there have been several items that were added to our design scope. These items required additional costs that were not anticipated and therefore not included in our budget, including design changes requested by the City for M&N to incorporate in the construction documents as described below. The costs presented in this request have been developed using the labor rates used in the City of Torrance and Moffatt & Nichol Contract Number C2005-027.

The primary items for these efforts are summarized in Table 1 and described below:

- **Item 1 – Approved cost increase to design change items.** These items have been previously discussed with the City. Back-up for cost of these items is presented in Tables 2 and 3.
 - 1.1 Changes to Roadway design to remove sidewalk and bike-path (Table 2)
 - 1.2 Del Amo Mall Dirt – Work done by AMEC and coordination with M&N for testing and stock piling material to be used as fill from the Del Amo Mall Project (Table 3)
- **Item 2 – Additional Design Scope.** These are items that address increased scope/services that are required to complete the design project. Back up for cost of these items is presented in Table 4.
 - 2.1 *Additional Meetings and Coordination (Task 310)*. This item has been deleted from our original request.
 - 2.2 *DOW Facilities Design (Task 315)*. This includes design and revisions to address DOW's facility requirements. Drainage design is addressed below as a separate issue.

- 2.3 *Waterline Design (Task 318A)*. The waterline design has required a much greater effort than originally scoped. One major factor is that the scope in the Contract provided for the design of the Cal Water (Dominguez Water) line only, and did not include the City's line. The City's system was not identified in the Project Study Report. In addition, the need for relocation outside the existing westerly alignment has required a much more substantial coordination effort than anticipated.
- 2.4 *Sewer Design (Task 318B)*. The sewer design was revised several times to accommodate the Exxon/Mobil facility design.
- 2.5 *Street Lighting (Task 318C)*. The lighting design was significantly revised from the original direction provided by the City and the changes required to the 100% design plans. Additional coordination with Edison regarding City vs. Edison facilities was required. There was also added cost incurred at this time for the design of the pedestals on the structure.
- 2.6 *Add Drainage For DOW (Task 319)*. Negotiations with DOW resulted in the addition of a new drainage system in the western-end of their property. The eastside part of the system was provided for by connections to the new City drain. This required design and preparation of additional construction plans and specifications.
- 2.7 *Railroad Design (Task 320)*. The alignment of railroad tracks on the Exxon/Mobil Property was revised several times, to accommodate changes in the planned Exxon/Mobil facilities.
- 2.8 *Permit Fees (Task 321)*. BNSF requires a permit processing fee for each utility that crosses the railroad tracks. In our case, we need permits for the City of Torrance 24" water line and Cal. Water 2-18" lines. In addition a permit will be required for the Los Angeles County Sanitation District sewer line. BNSF charges \$350 for each water and sewer line permit application. In our case we will require four permit applications. The \$1,000 fee that is required by Metro has been waived.
- 2.9 *Pile and Foundation Loadings (Task 316)*. BNSF has requested that the bridge design make provisions to allow the railroad tracks to be as close as 9'-9" from the face of the abutment to take into consideration additional tracks that may be added in the future. The proximity of the tracks will require that our design team examine vertical loading changes to the proposed piles and the foundation of the bridge. We have made the assumption that the footings will not have to be redesigned.
- 2.10 *Sewer Line Relocation (Task 316)*. The design drawings for 24" sewer line located in the Mobil property will need to be modified to incorporate changes to laterals and manholes. As per previous conversations between the City and Mobil, the sewer plans will be incorporated to the Del Amo construction documents for bidding purposes.
- 2.11 *Signal at Mariner (Task 316)*. The City has requested a traffic signal be added at Mariner to the Del Amo construction documents.

Item 3 – Other Directive Work. An allowance of \$12,000 has been allocated to provide

CONSULTING SERVICES AGREEMENT

This CONSULTING SERVICES AGREEMENT ("Agreement") is made and entered into as of February 1, 2005 (the "Effective Date"), by and between the CITY OF TORRANCE, a municipal corporation ("CITY"), and Moffatt & Nichol Engineers, a California corporation ("CONSULTANT").

RECITALS:

- A. CITY wishes to retain the services of an experienced and qualified CONSULTANT to perform design and right-of-way services to prepare and provide Plans, Specifications and Estimate for the construction of the Del Amo Blvd Extension Project, T-30.
- B. CONSULTANT represents that it is qualified to perform those services.

AGREEMENT:

1. SERVICES TO BE PERFORMED BY CONSULTANT

CONSULTANT will provide the services listed in the Scope of Services attached as Exhibit A. CONSULTANT warrants that all work and services set forth in the Scope of Services will be performed in a competent, professional and satisfactory manner.

2. TERM

Unless earlier terminated in accordance with Paragraph 4 below, this Agreement will continue in full force and effect from the Effective Date through February 1, 2007.

3. COMPENSATION

- A. CONSULTANT's Fee.

For services rendered pursuant to this Agreement, CONSULTANT will be paid in accordance with the Compensation Schedule attached as Exhibit B, provided, however, that in no event will the total amount of money paid the CONSULTANT, for services initially contemplated by this Agreement, exceed the sum of \$1,475,116 ("Agreement Sum"), unless otherwise first approved in writing by CITY.

- B. Schedule of Payment.

Provided that the CONSULTANT is not in default under the terms of this Agreement, upon presentation of an invoice, CONSULTANT will be paid monthly the fees described in Paragraph 3.A. above, according to the Compensation Schedule. Payment will be due within 30 days after the date of the monthly invoice.

4. TERMINATION OF AGREEMENT

- A. Termination by CITY for Convenience.

C2005-027

COPY

1. CITY may, at any time, terminate the Agreement for CITY's convenience and without cause.
2. Upon receipt of written notice from CITY of such termination for CITY's convenience, CONSULTANT will:
 - a. cease operations as directed by CITY in the notice;
 - b. take actions necessary, or that CITY may direct, for the protection and preservation of the work; and
 - c. except for work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.
3. In case of such termination for CITY's convenience, CONSULTANT will be entitled to receive payment for work executed; and costs incurred by reason of such termination, along with reasonable overhead and profit on the work not executed.

B. Termination for Cause.

1. If either party fails to perform any term, covenant or condition in this Agreement and that failure continues for 15 calendar days after the nondefaulting party gives the defaulting party written notice of the failure to perform, this Agreement may be terminated for cause; provided, however, that if during the notice period the defaulting party has promptly commenced and continues diligent efforts to remedy the default, the defaulting party will have such additional time as is reasonably necessary to remedy the default.
2. In the event this Agreement is terminated for cause by the default of the CONSULTANT, the CITY may, at the expense of the CONSULTANT and its surety, complete this Agreement or cause it to be completed. Any check or bond delivered to the CITY in connection with this Agreement, and the money payable thereon, will be forfeited to and remain the property of the CITY. All moneys due the CONSULTANT under the terms of this Agreement will be retained by the CITY, but the retention will not release the CONSULTANT and its surety from liability for the default. Under these circumstances, however, the CONSULTANT and its surety will be credited with the amount of money retained, toward any amount by which the cost of completion exceeds the Agreement Sum and any amount authorized for extra services.
3. Termination for cause will not affect or terminate any of the rights of the CITY as against the CONSULTANT or its surety then existing, or which may thereafter accrue because of the default; this provision is in addition to all other rights and remedies available to the CITY under law.

C. Termination for Breach of Law.

In the event the CONSULTANT or any of its officers, directors, shareholders, employees, agents, subsidiaries or affiliates is convicted (i) of a criminal offense as an incident to obtaining or attempting to obtain a public or private contract or subcontract, or in the performance of a contract or subcontract; (ii) under state or federal statutes of embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, or any other offense indicating a lack of business integrity or business honesty which currently, seriously, and directly affects responsibility as a public consultant or contractor; (iii) under state or federal antitrust statutes arising out of the submission of bids or proposals; or (iv) of violation of Paragraph 19 of this Agreement; or for any other cause the CITY determines to be so serious and compelling as to affect CONSULTANT's responsibility as a public consultant or contractor, including but not limited to, debarment by another governmental agency, then the CITY reserves the unilateral right to terminate this Agreement or to impose such other sanctions (which may include financial sanctions, temporary suspensions or any other condition deemed appropriate short of termination) as it deems proper. The CITY will not take action until CONSULTANT has been given notice and an opportunity to present evidence in mitigation.

5. **FORCE MAJEURE**

If any party fails to perform its obligations because of strikes, lockouts, labor disputes, embargoes, acts of God, inability to obtain labor or materials or reasonable substitutes for labor or materials, governmental restrictions, governmental regulations, governmental control, judicial orders, enemy or hostile governmental action, civil commotion, fire or other casualty, or other causes beyond the reasonable control of the party obligated to perform, then that party's performance shall be excused for a period equal to the period of such cause for failure to perform.

6. **RETENTION OF FUNDS**

CONSULTANT authorizes CITY to deduct from any amount payable to CONSULTANT (whether or not arising out of this Agreement) any amounts the payment of which may be in dispute or that are necessary to compensate CITY for any losses, costs, liabilities, or damages suffered by CITY, and all amounts for which CITY may be liable to third parties, by reason of CONSULTANT's negligent acts or omissions or willful misconduct in performing or failing to perform CONSULTANT's obligations under this Agreement. In the event that any claim is made by a third party, the amount or validity of which is disputed by CONSULTANT, or any indebtedness exists that appears to be the basis for a claim of lien, CITY may withhold from any payment due, without liability for interest because of the withholding, an amount sufficient to cover the claim. The failure of CITY to exercise the right to deduct or to withhold will not, however, affect the obligations of CONSULTANT to insure, indemnify, and protect CITY as elsewhere provided in this Agreement.

7. **CITY REPRESENTATIVE**

The Public Works Director is designated as the “City Representative,” authorized to act in its behalf with respect to the work and services specified in this Agreement and to make all decisions in connection with this Agreement. Whenever approval, directions, or other actions are required by CITY under this Agreement, those actions will be taken by the City Representative, unless otherwise stated. The City Manager has the right to designate another City Representative at any time, by providing notice to CONSULTANT.

8. **CONSULTANT REPRESENTATIVE(S)**

The following principal(s) of CONSULTANT are designated as being the principal(s) and representative(s) of CONSULTANT authorized to act in its behalf with respect to the work specified in this Agreement and make all decisions in connection with this Agreement:

Michael McCarthy, P.E., Vice President

9. **INDEPENDENT CONTRACTOR**

The CONSULTANT is, and at all times will remain as to CITY, a wholly independent contractor. Neither CITY nor any of its agents will have control over the conduct of the CONSULTANT or any of the CONSULTANT’s employees, except as otherwise set forth in this Agreement. The CONSULTANT may 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.

10. **BUSINESS LICENSE**

The CONSULTANT must obtain a City business license prior to the start of work under this Agreement, unless CONSULTANT is qualified for an exemption.

11. **OTHER LICENSES AND PERMITS**

CONSULTANT warrants that it has all professional, contracting and other permits and licenses required to undertake the work contemplated by this Agreement.

12. **FAMILIARITY WITH WORK**

By executing this Agreement, CONSULTANT warrants that CONSULTANT (a) has thoroughly investigated and considered the scope of services to be performed, (b) has carefully considered how the services should be performed, and (c) fully understands the facilities, difficulties and restrictions attending performance of the services under this Agreement. If the services involve work upon any site, CONSULTANT warrants that CONSULTANT has or will investigate the site and is or will be fully acquainted with the conditions there existing, prior to commencement of services set forth in this Agreement. Should CONSULTANT discover any latent or unknown conditions that will materially affect the performance of the services set forth in this Agreement, CONSULTANT must immediately inform CITY of that fact and may not proceed except at CONSULTANT’s risk until written instructions are received from CITY.

13. **CARE OF WORK**

CONSULTANT must adopt reasonable methods during the term of the Agreement to furnish continuous protection to the work, and the equipment, materials, papers, documents, plans, studies and other components to prevent losses or damages, and will be responsible for all damages, to persons or property, until acceptance of the work by CITY, except those losses or damages as may be caused by CITY's own negligence.

14. **CONSULTANT'S ACCOUNTING RECORDS; OTHER PROJECT RECORDS**

Records of the CONSULTANT's time pertaining to the project, and records of accounts between CITY and the CONSULTANT, will be kept on a generally recognized accounting basis. CONSULTANT will also maintain all other records, including without limitation specifications, drawings, progress reports and the like, relating to the project. All records will be available to CITY during normal working hours. CONSULTANT will maintain these records for three years after final payment.

15. **INDEMNIFICATION**

CONSULTANT will indemnify, pay for cost of defense, and hold harmless CITY, the City Council, each member thereof, present and future, its officers, agents and employees from and against any and all liability, expenses, including defense costs and legal fees, and claims for damages whatsoever, including, but not limited to, those arising from breach of contract, bodily injury, death, personal injury, property damage, loss of use, or property loss. The obligation to indemnify, pay for cost of defense, and hold harmless includes, but is not limited to, any liability or expense, including defense costs and legal fees, arising from the negligent acts or omissions, or willful misconduct of CONSULTANT, its officers, employees, agents, subconsultants or vendors. It is further agreed, CONSULTANT's obligations to indemnify, defend and hold harmless will apply, but only to the extent covered by Consultant's negligence, even in the event of concurrent negligence on the party of CITY, the City Council, each member thereof, present and future, or its officers, agents and employees, except for liability resulting from the negligence or willful misconduct of CITY, its officers, employees or agents. Payment by CITY is not a condition precedent to enforcement of this indemnity.

16. **NON-LIABILITY OF CITY OFFICERS AND EMPLOYEES**

No officer or employee of CITY will be personally liable to CONSULTANT, in the event of any default or breach by the CITY or for any amount that may become due to CONSULTANT.

17. **INSURANCE**

A. CONSULTANT must maintain at its sole expense the following insurance, which will be full coverage not subject to self insurance provisions:

1. Automobile Liability, including owned, non-owned and hired vehicles, with at least the following limits of liability:
 - a. Primary Bodily Injury with limits of at least \$500,000 per person, \$1,000,000 per claim; and
 - b. Primary Property Damage of at least \$250,000 per claim; or

- c. Combined single limits of \$1,000,000 per claim.
 - 2. General Liability including coverage for premises, products and completed operations, independent contractors/vendors, personal injury and contractual obligations with combined single limits of coverage of at least \$1,000,000 per claim.
 - 3. Professional liability insurance with limits of at least \$1,000,000 per claim.
 - 4. Workers' Compensation with limits as required by the State of California and Employers Liability with limits of at least \$1,000,000.
- B. The insurance provided by CONSULTANT will be primary and non-contributory
 - C. CITY, the City Council and each member thereof, members of boards and commissions, every officer, agent, official, employee and volunteer must be named as additional insured under the automobile and general liability policies.
 - D. CONSULTANT must provide certificates of insurance and/or endorsements to the City Clerk of the City of Torrance before the commencement of work.
 - E. Each insurance policy required by this Paragraph must contain a provision that no termination, cancellation or change of coverage can be made without thirty days notice to CITY.

18. SUFFICIENCY OF INSURERS AND SURETIES

Insurance or bonds required by this Agreement will be satisfactory only if issued by companies admitted to do business in California, rated "B+" or better in the most recent edition of Best's Key Rating Guide, and only if they are of a financial category Class VII or better, unless these requirements are waived by the Risk Manager of CITY ("Risk Manager") due to unique circumstances. In the event the Risk Manager determines that the work or services to be performed under this Agreement creates an increased or decreased risk of loss to CITY, the CONSULTANT agrees that the minimum limits of any insurance policies or performance bonds required by this Agreement may be changed accordingly upon receipt of written notice from the Risk Manager; provided that CONSULTANT will have the right to appeal a determination of increased coverage by the Risk Manager to the City Council of CITY within 10 days of receipt of notice from the Risk Manager.

19. CONFLICT OF INTEREST

A. No officer or employee of the CITY may have any financial interest, direct or indirect, in this Agreement, nor may any officer or employee participate in any decision relating to the Agreement that effects the officer or employee's financial interest or the financial interest of any corporation, partnership or association in which the officer or employee is, directly or indirectly interested, in violation of any law, rule or regulation.

- B. Any correctly addressed notice that is refused, unclaimed, or undeliverable because of an act or omission of the party to be notified, will be deemed effective as of the first date the notice was refused, unclaimed or deemed undeliverable by the postal authorities, messenger or overnight delivery service.
- C. Either party may change its address or fax number by giving the other party notice of the change in any manner permitted by this Agreement.

21. **PROHIBITION AGAINST ASSIGNMENT AND SUBCONTRACTING**

This Agreement and all exhibits are binding on the heirs, successors, and assigns of the parties. The Agreement may not be assigned or subcontracted by either CITY or CONSULTANT without the prior written consent of the other.

22. **INTEGRATION; AMENDMENT**

This Agreement represents the entire understanding of CITY and CONSULTANT as to those matters contained in it. No prior oral or written understanding will be of any force or effect with respect to the terms of this Agreement. The Agreement may not be modified or altered except in writing signed by both parties.

23. **INTERPRETATION**

The terms of this Agreement should be construed in accordance with the meaning of the language used and should not be construed for or against either party by reason of the authorship of this Agreement or any other rule of construction that might otherwise apply.

24. **SEVERABILITY**

If any part of this Agreement is found to be in conflict with applicable laws, that part will be inoperative, null and void insofar as it is in conflict with any applicable laws, but the remainder of the Agreement will remain in full force and effect.

25. **TIME OF ESSENCE**

Time is of the essence in the performance of this Agreement.

26. **GOVERNING LAW; JURISDICTION**

This Agreement will be administered and interpreted under the laws of the State of California. Jurisdiction of any litigation arising from the Agreement will be in Los Angeles County, California.

27. **COMPLIANCE WITH STATUTES AND REGULATIONS**

CONSULTANT will be knowledgeable of and will comply with all applicable federal, state, county and city statutes, rules, regulations, ordinances and orders.

28. **WAIVER OF BREACH**

No delay or omission in the exercise of any right or remedy by a nondefaulting party on any default will impair the right or remedy or be construed as a waiver. A party's consent or approval of any act by the other party requiring the party's consent or approval will not be deemed to waive or render unnecessary the other party's consent to or approval of any subsequent act. Any waiver by either party of any default must be in writing and will not

be a waiver of any other default concerning the same or any other provision of this Agreement.

29. **ATTORNEY'S FEES**

Except as provided for in Paragraph 15, in any dispute, litigation, arbitration, or other proceeding by which one party either seeks to enforce its rights under this Agreement (whether in contract, tort or both) or seeks a declaration of any rights or obligations under this Agreement, the prevailing party will be awarded reasonable attorney's fees, together with any costs and expenses, to resolve the dispute and to enforce any judgment.

30. **EXHIBITS**

All exhibits identified in this Agreement are incorporated into the Agreement by this reference.

31. **CONSULTANT'S AUTHORITY TO EXECUTE**

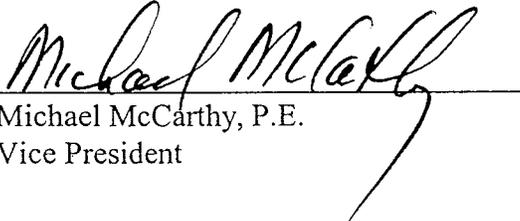
The person(s) executing this Agreement on behalf of the CONSULTANT warrant that (i) the CONSULTANT is duly organized and existing; (ii) they are duly authorized to execute this Agreement on behalf of the CONSULTANT; (iii) by so executing this Agreement, the CONSULTANT is formally bound to the provisions of this Agreement; and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which the CONSULTANT is bound.

CITY OF TORRANCE
a Municipal Corporation

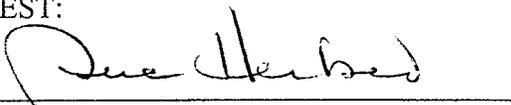


Dan Walker, Mayor

Moffatt & Nichol Engineers
a California corporation

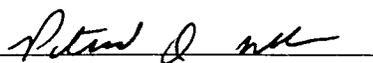
By: 
Michael McCarthy, P.E.
Vice President

ATTEST:



Sue Herbers
City Clerk

APPROVED AS TO FORM:
JOHN L. FELLOWS III
City Attorney

By: 

Attachments: Exhibit A Scope of Services
 Exhibit B Compensation Schedule

Revised: 1/30/01

SCOPE OF SERVICES**BY AND BETWEEN****THE CITY OF TORRANCE****AND****MOFFATT & NICHOL****TO****PROVIDE ENGINEERING SERVICES, PREPARE PLANS,
SPECIFICATIONS, ESTIMATES,
AND RIGHT-OF-WAY SUPPORT****FOR THE****DEL AMO BOULEVARD EXTENSION
CITY OF TORRANCE, CA**

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Table 1 – Milestone Schedule

SCOPE OF SERVICES

100 General

110 Overview

- A. The City of Torrance will utilize the services of CONSULTANT and sub-consultants to provide design engineering services for a roadway extension of Del Amo Boulevard including a new grade separation over the right-of-way of the Burlington Northern Santa Fe Railroad and Southern California Regional Rail Authority (hereafter known as "BNSF" and "SCRRA") in the City of Torrance California.
- B. The City Contract Manager for this Contract shall be: Craig Bilezerian, P.E., Project Manager.
- C. CONSULTANT shall be required to perform the professional and technical engineering services necessary to provide final design, ROW services, Agency Approvals and Permits for the project.

120 Project Location and Description

- A. Del Amo Boulevard is located in the central portion of the City of Torrance. The proposed project is located between Crenshaw Boulevard on the east and Madrona Avenue/Prairie Avenue on the west. The project site is currently a vacant right-of-way, surrounded by industrial and manufacturing uses, including the Exxon-Mobil refinery to the north and the Dow Chemical manufacturing plant to the south.
- B. The proposed project would extend Del Amo Boulevard between Crenshaw Boulevard on the east and Maple Avenue on the west, and it would also widen an existing segment of Del Amo Boulevard between Maple Avenue and Prairie Avenue. The extension/widening of Del Amo Boulevard would include the construction of a new four lane roadway, potentially with a bicycle lane on the south side, construction of a new bridge over the Burlington Northern Santa Fe mainline tracks, realignment of a portion of a BNSF branch line track, construction of retaining walls, drainage improvements, relocation of utilities and relocation/reconstruction of affected off-site facilities.

130 General Description of Required Services

- A. CONSULTANT shall prepare preliminary and final plans, specifications, and estimates (PS&E), provide ROW and appraisal services and acquisition, and obtain agency approvals and permits for construction of the Project. CONSULTANT will utilize the results of the Project Report, the preferred alternative concept plan, and the EIR as the basis for the PS&E. Any changes proposed by CONSULTANT shall be brought to the attention of City.
- B. CONSULTANT shall carry out the instructions as received from City's Contract Manager, or his designee, and shall cooperate with City, other agencies, and other consultants providing Services for the Project.

- C. It is not the intent of the foregoing paragraph to relieve CONSULTANT of professional responsibility during the performance of this Scope of Services. In those instances where CONSULTANT believes a better design, or solution to a problem is possible, CONSULTANT shall promptly notify City's Contract Manager of these concerns, together with reasons therefore.
- D. The exhibits, studies, estimates, calculations, reports and other documents furnished under this Scope of Services shall be of a quality acceptable to City. The criteria for acceptance shall be a product of neat appearance, well organized, technically and grammatically correct, checked and having the maker and checker identified. The appearance, organization and content of the drawings shall be to applicable standards.
- E. The title sheet for reports, each plan sheet, and calculations shall bear the professional seal certificate number, registration classification, expiration date of the certificate, signature of the professional engineer, registered in the State of California, responsible for their preparation.
- F. The CONSULTANT shall maintain a set of project files as required suiting this project.
- G. CONSULTANT shall develop the Resident Engineer's (RE) File related to the design specifics of the Project for use during construction.
- H. City reserves the right to approve project scope of services changes. Changes resulting from the addition, deletion, or revisions to the Scope of Services will not be made without prior written approval from City. The CONSULTANT shall not be compensated for changes in the project Scope of Services other than those approved in writing by City.
- I. CONSULTANT shall not suspend performance of this contract during the negotiations of change orders except as they may be directed by City. CONSULTANT shall perform changes in accordance with the terms and conditions of this contract.
- J. CONSULTANT shall submit final plans on CD ROM using AUTOCADD (.dwg) file format. The electronic files shall include the engineer's electronic seal. CONSULTANT shall verify the latest version of software used prior to submittal. CONSULTANT shall submit a final CD ROM. CD shall contain plot configuration files.
- K. As part of the Services involved in the preparation of the plans, specifications, and estimates, CONSULTANT shall prepare and furnish special provisions for items included in the plans which are not covered in the Standard Specifications or require more detail than is presented on the Project plans. CONSULTANT shall edit and prepare special provisions specific to the Project using the latest version of Microsoft Word.
- L. CONSULTANT shall obtain, at its expense, applicable Manuals and Standard Plans.
- M. In the event that non-standard features become apparent during the initial design, CONSULTANT shall prepare a memo documenting the Design Exceptions and need for non-standard feature.
- N. CONSULTANT shall employ quality control procedures that identify potential risks and uncertainties related to construction of the Project. Risks that may be encountered include, but are not limited to, soil conditions, constructability, factors of safety, impacts

to adjacent properties, public safety, and environmental considerations. If during the performance of this Scope of Services, CONSULTANT observes, encounters, or identifies circumstance that could pose potential risk, CONSULTANT shall notify City.

- O. CONSULTANT shall coordinate with City and other agencies involved or potentially impacted by the Project. CONSULTANT shall inform City prior to contacts, meetings, and correspondence. CONSULTANT shall also be required to coordinate activities with adjacent projects.

200 APPLICABLE STANDARDS

All plans, specifications and estimates shall be prepared in accordance with the following:

- A. The Standard Specifications for Public Works Construction (SSPWC or “Greenbook”), the City of Torrance Standard Plans and engineering design standards shall apply to the roadway design, plans and construction;
1. Roadway, water, sewer, lighting, signal, landscape, traffic striping and signage, traffic control, erosion control and drainage plans shall be prepared on City of Torrance plan format.
 2. As part of the work involved in the preparation of the plans, specifications and estimates, the Engineer shall prepare and furnish to the City special provisions for items of work included in the plans which are not covered in the City’s Standard Specifications or SSPWC.
- B. State of California Department of Transportation (Caltrans) Standard Specifications (SSP’s), Standard Special Provisions, and Standard Plans, latest editions, shall apply to the bridge design, plans and construction; Bridge plans will be prepared in general conformance to Caltrans plan format. Caltrans standards shall also apply to traffic signals and light poles.
- C. Los Angeles County Flood Control Standards and or other County standards, latest editions, shall apply to flood control/drainage facilities;
- D. Modifications to Railroad track alignments will be designed in accordance with American Railway Engineering Maintenance of Way Association (AREMA), latest edition, and the BNSF, and SCRRRA Railroad standards.
- E. All design, plans and specifications will be in Imperial/English units.

300 SERVICES PERFORMED BY CONSULTANT

- 310 Meetings and Coordination

A. Project Initiation “Kick-off” with the City to:

1. Review the scope of work
2. Discuss the methodologies and assumptions to be used.
3. Establish procedures to be followed in reviewing the project with City during various stages of the project.
4. Obtain design criteria
5. Provide to the City a request for data, including previous studies conducted in the areas surrounding each project, existing and planned configurations of roadways within the study areas and current traffic.
6. Attend a field review with the City to discuss design, existing traffic, access to the existing truck oriented businesses in the area and the existing rail service.

B. Technical Project Meetings

1. Meet with City and Exxon/Mobil jointly, at least monthly to
 - a. Discuss design and coordination issues regularly with city and Exxon/Mobil
 - b. Discuss design features of the overall Project
 - c. Discuss Projects status, and schedule.
2. Meet with Railroads for coordination of modifications to railroad track alignments. Four meetings are anticipated.

C. Public Meetings

1. Provide a public presentation to the City Council or Traffic Commission
2. Attend Community interface and Public outreach meetings. Up to four (4) meetings are anticipated.

311 Preliminary Design and Field Review

A. Research and Base Data Review

1. Review available information from City files of existing improvements that may aid in the design of the grade separation at Del Amo.
2. Research and obtain copies of existing available development plans and traffic reports from adjacent properties and coordinate with the City Wide Traffic Study.
3. Obtain existing “as-built” drawings of roadway improvements in the project vicinity.
4. Prepare a project work schedule and list of deliverables, milestone submittal schedule and submit to City for review and approval.
5. Obtain BNSF/SCRRA track alignment plans and R/W maps.
6. Conduct an independent field investigation of the project site to identify existing site conditions and physical constraints of the project area.

B. Mitigation Management and Reporting Program (MMRP) documents.

Complete the planning and traffic analysis per section 3.5.4 of the EIR including vehicle, pedestrian, bicycle circulation and management study.

C. Conceptual Facilities Layout and Design

1. Prepare Preliminary Design Plans (35%) for the grade separation design for the preferred alternative of Del Amo Blvd. Extension over the BNSF/SCRRA. Develop base plan and profile drawings from aerial topography sheets. Develop preliminary horizontal and vertical roadway alignments.
2. Develop exhibits for right of way limits, potential acquisitions and temporary construction easements required for the project.

D. Staging Plan

Develop a preliminary staging plan for vehicular traffic and rail service. Coordinate between rail, Civil and Traffic.

E. Initial Facility Cost Estimate and Schedule

Update the Project Cost Estimate with current costs for construction. A project schedule will be developed for the design and construction. The project schedule will indicate anticipated durations for general task items.

F. Summary of Deliverables:

1. Preliminary Grade Separation Design
2. Preliminary Railroad Realignment Design
3. Preliminary Relocation Plan
4. Preliminary Staging Plan
5. Preliminary Utility Plan
6. Preliminary Right of Way requirements
7. Updated Preliminary Appraisal of Acquisitions
8. Traffic Study
9. Traffic Lane Geometrics
10. Updated Preliminary Cost Estimates and Schedules
11. Mitigation and Monitoring Program

312 Surveys

A. General Requirements

1. Establish survey ground control for aerial photography.
2. CONSULTANT shall perform surveys, necessary to complete the Project. CONSULTANT shall review the available data and recommend additional design surveys required for the preliminary design of the Project.
3. Field and office surveys shall be performed in accordance with accepted professional surveying standards including requirements of current editions of the State of California Professional Engineer's Act and Professional Land Surveyor's Act.
4. Licensed personnel shall be in "responsible charge" in accordance with the Act, for survey services. License shall be a State of California Licensed Land Surveyor or Registered Civil Engineer (prior to January 1, 1982).
5. Provide design surveys as follows:
 - a. The City shall provide record centerline tie information.

- b. All surveys shall be performed in accordance with accepted professional standards.
- d. The CONSULTANT shall identify CONSULTANT-established monuments by tagging or stamping the monuments with the license or registration number of the Engineer's surveyor who is in "responsible charge" of the work.

B. Permits

CONSULTANT shall obtain applicable encroachment permits and/or right of entry prior to beginning field investigation.

C. Design Surveys to be Performed by CONSULTANT

CONSULTANT shall identify required design surveys and provide a work plan for concurrence. CONSULTANT shall perform design surveys per the work plan. CONSULTANT surveys may include, but are not limited to, the following:

1. Surveys for detailed design of roadway, retaining walls, bridge, drainage, and utilities.
2. Survey control for geotechnical investigation, if required.
3. Supplemental surveys for preparation of cross-sections.

D. Aerial Photography

1. CONSULTANT shall provide aerial photography and topographic mapping. City shall be provided a copy of the aerial photographs and digital map compilation in an electronic format compatible with the City's GIS system:

All City of Torrance GIS data currently use California State Plane Zone 7 (NAD 27) feet. Coordinates have been shifted to reduce the numeric values by -4,100,000 in the Easting (X) direction and -4,000,000 in the Northing (Y) direction.

2. The aerial image shall be orthorectified to scale and included as a layer for plotting with the plan view.
3. Final aerial mapping will consist of 40-scale plans with contours at 1-foot intervals. A single mounted oblique aerial photograph of the project area will be provided to City for display purposes.

E. Right-of-Way Base Mapping

1. CONSULTANT shall prepare Right of Way base mapping for the existing right of way conditions including APN numbers and ownership. Mapping shall be sufficient for the preparation of right-of-way plat maps.
2. ROW Base shall identify existing centerline control of Del Amo.

F. Utility Location Surveys/Potholing

1. Utility Location Surveys and potholing will be performed by Consultant and coordinated with City and utility companies for existing utilities from Utility Conflict Maps as identified in the Utility Coordination section.
2. Utility Survey will be based on the pot-holing plan as identified in the Utilities Coordination and Subsurface Utility Engineering section.

3. Utility Survey Mapping shall show identified location of utilities and potholing records. Mapping shall be sufficient for the preparation of utility conflict and design plans.

G. Construction Support

1. Replace Monuments – CONSULTANT shall restore monuments lost during design and/or construction phase of the project and file required documents with the County of Los Angeles. Copies shall also be submitted to the City.

H. Summary of Deliverables

1. Deliverables shall conform to the following:
 - a. Survey points, lines, monuments, and benchmarks shall be established, marked, identified and referenced, as required to complete the work and in accordance with the requirements herein.
 - b. Survey notes, drawings, calculations, and other survey documents/materials shall be completed as required to complete the work and in accordance with the requirements herein.
 - c. When the survey is performed with a Total Station Survey System, the original field notes shall be a legible hard copy listing of the data (observations) as originally collected and submitted by the survey party. Consultant's party chief shall sign the listing.
2. A copy, except as otherwise specified herein, of original survey documents (including original field notes, adjustment calculations, final results and appropriate intermediate documents) shall be delivered to City. Said documents shall then become the property of the City. The original survey documents (or a copy, if the original is to be provided to City) shall be retained by CONSULTANT for future reference.
3. The final results of surveys, as required, shall be delivered to City in the format specified below:
 - a. Horizontal Control. Alpha/numeric hard copy point listing with adjusted California Coordinate System northings and eastings and appropriate descriptions based on City of Torrance GIS System datum.
 - b. Vertical Control. Alpha/numeric hard copy benchmark listing with adjusted elevations on the City of Torrance GIS System and appropriate descriptions.
 - c. Topography. Alpha/numeric hard-copy listing, hard-copy drawings and electronic files. Additions or modifications to the delivered topographic mapping and its symbology shall generally conform to current version of CALTRANS' Drafting and Plans Manual.
 - d. Terrain. For each cross-section: an alpha/numeric listing, hard-copy drawing and computerized formatted file. Computerized formatted cross-sections shall be provided on magnetic tapes, cassettes, or disks

313 Geotechnical Investigation

A. General Requirements

1. CONSULTANT shall perform field exploration required to complete the PS&E.
2. All reports and plans shall bear the State of California Certified Engineering Geologist or Registered Professional Engineer's Seal with the signature, license number and registration certificate expiration date of the geologist or engineer responsible for the preparation of the

report. The geologist or engineer responsible for the preparation of the reports shall be competent in geotechnical engineering.

3. In case of future construction claims against the City, CONSULTANT may be retained by City to provide expert testimony regarding CONSULTANT services.
4. All reports shall be prepared in English units.

B. Permits

1. CONSULTANT shall provide necessary notification of activity prior to field work.
2. CONSULTANT shall identify private property requiring Rights of Entry.
3. City will review and approve the field exploration plan prior to application for encroachment permits. Encroachment permits and rights of entry shall be obtained prior to scheduling of field explorations at no cost to the CONSULTANT.
4. The Costs of encroachment permits will be the responsibility of the City.

C. Preliminary Geotechnical Services

1. Data Gathering: CONSULTANT will conduct a site visit to observe the topography and visualize the proposed improvements at this location. CONSULTANT will review available subsurface data from nearby structures or published geologic maps to determine general subsurface conditions at the project site.
2. Field Exploration Plan: CONSULTANT shall prepare a plan detailing the field exploration plan. The map shall provide the following:
 - a. Location of each proposed boring. Include depth of boring and the proposed finished surface elevation. Exploratory borings using either hollow-stem auger or rotary wash drill rig equipment will be performed for evaluation of the structural pavement section and to collect subsurface data for foundation design of the retaining walls and bridge.
 - b. The maximum boring depth will be about 100 Feet below the ground surface, if feasible based on expected ground conditions.
3. Field Exploration:
 - a. CONSULTANT shall provide experienced personnel, equipment, and facilities to perform soil sampling and testing.
 - b. Boreholes shall be backfilled in paved areas with cement grout. In unpaved areas, boreholes shall be backfilled with soil cuttings
 - c. In the event the existence of hazardous materials is discovered by CONSULTANT, CONSULTANT shall be required to immediately notify City.
4. Preliminary Geotechnical, Materials and Bridge Foundation Report: Information gathered during the site visit and review of existing subsurface data, results obtained from the alternative analysis, and the preliminary bridge and retaining wall foundation data will be presented in a report. Format and content of this report will be similar to a Preliminary Foundation Report (PFR) prepared for Caltrans Bridge Type Selection.

D. Final Geotechnical Services

1. Geotechnical Design Report (GDR) - CONSULTANT shall prepare a GDR for the Project in general conformance with the CALTRANS Guidelines for Geotechnical Design Reports. The GDR shall provide, but is not limited to, the following:

- a. Determination of ground water conditions and impacts on design and construction.
 - b. Determination of subsurface conditions and subsoil properties relating to settlement.
 - c. Determination of impacts of geologic/geotechnical conditions on construction and recommended mitigation measures.
 - d. Identification and recommendations for geologic/geotechnical constraints.
 - e. Analysis for potentially liquefiable or collapsible soils and corresponding recommendations for design or mitigation measures.
 - f. Engineering analyses and calculations required to provide design parameters for static and pseudo-static analysis for slope stability and settlement.
 - g. Site seismicity studies and peak ground acceleration evaluations to provide a basis for estimating seismic design parameters for use in embankment design.
 - h. A listing of soil samples obtained from the field exploration programs which have been tested in CALTRANS or City certified laboratories to evaluate the controlling engineering properties of the encountered subsoils. Assuming that the soil samples are free of contamination, laboratory testing may include, but is not limited to:

-Moisture and Density	-Maximum Density
-Shear Strength	-Sieve Analysis
-Expansion Index	-Plasticity Index
-Sand Equivalent	-Resistivity, Ph
-Soluble Sulfate and	-Consolidation/Collapse
-Chlorides	-R-Value
2. Foundation Report - CONSULTANT shall prepare a foundation report for the project. Report shall generally follow the Caltrans Guidelines for Foundation Reports and Investigations. As a minimum, the Foundation report shall provide the following:
- a. Evaluation of types, locations and engineering characteristics of foundation materials in the area of the proposed grade separation.
 - b. Assessment of engineering seismology of the project area including peak bedrock acceleration and liquefaction potential.
 - c. Recommended structural design parameters for the most feasible method of bridge and retaining wall foundation support, including allowable bearing capacities and resistance to lateral loads.
 - d. Evaluations of the settlement potential of approach fill embankments and recommendations for settlement periods and special foundation treatment, if required.
 - e. Requirements for structural approach slabs.
 - f. Evaluation of the corrosion potential of foundation soils.
 - g. Construction considerations, including those for pile installation.
 - h. Details pertaining to the field study and the test borings for the bridge and retaining walls will be presented on a reproducible Log of Test Borings.

E. Environmental Testing

1. Health and Safety Plan - The CONSULTANT will prepare a Health and Safety Plan for the geotechnical drilling program. The Health and Safety Plan will include the following:
 - a. Evaluation of the chemical exposure hazards
 - b. Evaluation of the physical hazards

- c. Discussion of the personal protective equipment
 - d. Description of the air monitoring instrument
 - e. Determination of the unsafe breathing zone concentrations of chemicals
 - f. Discussion of emergency response actions
2. The CONSULTANT will be onsite during the geotechnical drilling program monitoring the breathing zone in the vicinity of the boreholes and screening the soil cuttings with a photo ionization detector (PID).
 3. The CONSULTANT will place all drill cuttings in a roll-off bin with a lid and store in a location designated by the CITY.
 4. The CONSULTANT will collect one (1) composite soil sample from the roll-off bin and submit the sample to a California certified laboratory for the following analyses:
 - a. Total Petroleum Hydrocarbons (TPH) by EPA Method 8015M
 - b. Volatile Organic Compounds (VOC) by EPA Method 8260B
 - c. Semi-Volatile Organic Compounds (SVOC) by EPA Method 8270C
 - d. Heavy Metals by EPA Method 6010B/7471A
 5. Upon receipt of the analytical results, CONSULTANT will arrange for the transportation and disposal of the roll-off bin to a permitted disposal facility. The CITY is responsible for signing the shipping documents or manifests.
 6. The CONSULTANT will submit copies of the shipping documents or manifests with the analytical results to the CITY.
 7. Soil Remediation Plan
 - a. Prepare and implement a soil remediation plan for the project. This plan shall incorporate the results and recommendations provided in the Phase II Soil Investigation Report prepared for this EIR/EA. The plan shall characterize the extent of soil contamination in the project area and identify appropriate methods for on-site remediation and/or removal and disposal of contaminated soil.
 - b. Provide additional testing to determine the extent of contamination, a total of 4 additional samples may be included. Surface samples shall be analyzed using appropriate collection and sampling techniques.
 - c. During excavation, soils shall be segregated, sampled, and tested to determine the appropriate disposal and treatment options. If the soils exceed the applicable screening criteria established by the RWQCB or are classified as hazardous (according to Resource Conservation and Recovery Act {RCRA} and Cal. Code Regs. Title 22), soils shall be hauled to a Class I landfill or other appropriate soil treatment and recycling facility.
 8. Environmental Summary Report - Consultant shall prepare a report summarizing the results of the soil investigation. The report shall estimate the quantity of impacted soil believed to be encountered during the excavation, recommend disposal options, and estimate the cost of transporting and disposing the impacted soil.

F. Summary of Deliverables

1. Field Exploration Plan
2. Geotechnical Design Report and Foundation Report. Reports may be combined into a common document.
3. Log of Test Borings Sheets for the bridge site and retaining wall locations.
4. Health and Safety Plan

5. Soil Remediation Plan
6. Environmental Summary Report

314 Right-of-Way Services

A. General

1. Provide personnel who are licensed in the State of California to accomplish various kinds of right-of-way work required for the project.
2. Licensed personnel shall also be in charge of office crews analyzing and reducing field survey notes, title reports and deeds to be used in determining property line locations for use on maps and writing deeds.
3. The City may separately act as the certified Right of Way Agent for the Project during actual right of way acquisitions.

B. Right-of-Way Title Research

1. Prepare reproducible copies of available right of way record maps.
2. Prepare a block of parcel numbers for identifying ownerships and parcels.
3. Prepare title reports, including referenced title documents
4. All ROW maps and documents shall be based on established survey control data.

C. Right-of-Way Engineering

1. The CONSULTANT shall cause the following types of work to be done:
 - a. Record Maps, centerline ties, benchmarks, right of way maps, railroad maps, and other City information will be researched and reviewed in support of the work tasks described.
 - b. Plat maps for each right of way easement acquisition will be generated from survey monumentation ties, record maps and deeds.
 - c. Acquisition Documents. CONSULTANT shall prepare legal descriptions and deed forms with appropriate clauses to be used in acquiring right of way. The documents and clauses shall conform to the Procedure Handbook. Easements shall be acquired in the name of the City and each document shall show the tax assessor's number as well furnished parcel number. Documents used only to acquire rights for utility purposes shall be in the name of the utility company, when appropriate.
 - d. Resolutions of Necessity - CONSULTANT shall prepare maps and condemnation descriptions for use with Resolutions of Necessity.

D. Appraisal Coordination and Appraisal Review

1. The CONSULTANT shall provide Member Appraisal Institute (MAI) Appraisers to perform property appraisals.
2. Consultant shall review Property Appraisals to assure that the appraisals are performed to the industry standards.

E. Real Property Appraisals

1. Prepare a complete self-contained tabbed appraisal report in triplicate valuing the real property. If a report is being prepared for multiple parcels, the report shall be divided and labeled with tabs that identify the beginning of the narrative analysis and valuation for that parcel.
2. The report shall conform to the requirements promulgated by the Appraisal Foundation and known as the Uniform Standards of Professional Appraisal Practice (USPAP), which are effective at the time the report is delivered to the City.
3. The report shall be prepared in conformity with the Eminent Domain Law and interpretive cases. Consultant will complete an Appraisal Summary Statement including the attachments in order to comply with the requirements of State and Federal laws.
4. The report shall contain the following: real estate items (land, buildings, and appurtenant on-site improvements), exclusive of non-realty fixtures, equipment and business inventory; pertinent property data; a date of value; discussions and conclusions of highest and best use; a narrative explanation of approaches to value; summary and tabulation of market data; analysis of market data and conclusions of value, including severance damages where applicable.
5. The Appraiser will submit a draft report and attend a pre-submission conference with City staff, if required by staff.

F. Review Appraisals

1. CONSULTANT will prepare review appraisals for each appraisal in accordance with State and Federal laws and the City's policies and procedures. Review appraisals will meet USPAP Standards and will include a check of mathematical calculations and a determination that relevant and appropriate appraisal methodologies have been employed. Review appraisals and the original appraisals will be forwarded to the City to establish Just Compensation for the acquisition of the property needed for the Project.
2. Appraisals will be reviewed to:
 - a. Ensure that the appraiser's documentation, including valuation data and the analysis of that data, demonstrates the soundness of the appraiser's opinion of value and that the appraisal report conforms to the requirements of established appraisal practices; and
 - b. Ensure that the appraised amount is equitable and represents a proper amount for the offer and Just Compensation in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and Government Code 7260 et. seq.
3. The review appraiser process, conducted by CONSULTANT'S Senior Appraiser, is recognized as an acceptable method for determining the adequacy and appropriateness of the appraisal report being reviewed to ensure that it is based on sound appraisal theory and contains appropriate documents to support the appraiser's conclusions. The review appraiser process will also accomplish the requirement that the approved appraisal represents the fair market value for the property and represents a proper amount for the offer of Just Compensation.

G. Negotiation and Acquisition

1. CONSULTANT will prepare a cost estimate of real property acquisition-related costs, including professional services.
2. Issue Notice of Decision to Appraise to property owners, attaching the City's Property Acquisition Procedures Brochure.
3. Prepare and make one presentation to property owner's staff and elected officials, including, business and neighborhood associations, and one presentation to the City Council and one presentation to the Planning Commission.
4. Obtain and review title reports and/or litigation guarantees as may be required, including vesting deeds, supporting documents and plotted easements. Prepare Plats and legal descriptions. Coordinate clearance/elimination of clouds on title where applicable and act as liaison for on-site pre-acquisition inspections of properties as may be required.
5. Prepare offer letters, summary statements in accordance with state and federal regulations and approval of legal counsel. Forms to be provided by the City.
6. Present the written offer to acquire rights from the appropriate owners or their representatives in person, when possible, as soon as possible after receipt of signed offers from the City. In instances where the property owner declines to acknowledge receipt of the offer to acquire rights, a certification of presentation will be obtained and forwarded to the City.
7. Negotiate, in conjunction with City oversight, with the property owners (or their appointed representatives) for the purchase of the required property rights.
8. Continue personal negotiations with the property owners and tenants until every reasonable effort has been expended and it appears that the only remaining method of acquisition is through eminent domain proceedings.
9. Prepare acquisition agreements and other right of way documents necessary to complete the acquisition.
10. Promptly transmit executed documents on successfully negotiated parcels to the City for acceptance, including necessary supporting agenda items.
11. Provide needed information to City staff for preparation of City agenda items and public hearing notices, as necessary for approval of acquisition terms.
12. At such time that negotiations appear to be unsuccessful and eminent domain proceedings have commenced, provide coordination and assistance necessary to aid the condemnation legal counsel.
13. Maintain a separate diary for each individual parcel and a diary of pertinent information and contacts concerning the Project parcels.
14. Provide a written report, in a form pre-approved by City staff, summarizing of the status of the acquisition of each parcel on a monthly basis and/or upon request of City staff.
15. Coordinate the opening and closing of escrow and request funds from the City.

H. Applicable Regulations or Guidelines - CONSULTANT shall be responsible for obtaining permits where required by governmental agencies.

I. Product Correction Procedures and Requirements - All data, maps, and documents produced by CONSULTANT shall be subject to the approval acceptance by the City. In the event of non-acceptance due to errors or omissions, the Engineer shall have 7 calendar days to make corrections and return maps and documents to City.

- J. Minimum Standards - All of the data, maps, and documents produced by CONSULTANT shall be done in a workmanlike manner and shall be of a quality appropriate and consistent with the work produced by reputable Engineers performing similar duties.

K. Summary of Deliverables

1. Right-of-way plans for construction documents
2. Plat maps
3. Acquisition Documents
4. Resolutions of Necessity

315 Industry Coordination (Dow and Exxon/Mobil)

- a. Meetings – Consultant shall meet with Dow to coordinate roadway design, relocation of railroad service, maintenance of access, relocation of project utilities, and staging. A total of 4 meetings are anticipated. Exxon/Mobil Meetings will be held jointly with the City monthly meeting.
- b. Impact Maps – Prepare impact exhibits for use by Dow and Exxon/Mobil for relocation of their facilities.

316 Final PS&E Design Services

A. General

1. All plans, specifications, quantity calculations, and estimates shall conform to City requirements and shall be made available to City for review and approval at stages specified in the Milestone Schedule and upon request.

B. Right-of-Way Requirement Plan Maps

1. CONSULTANT shall prepare Right of Way Requirement Plan Maps utilizing the Project layout sheets as a basis. CONSULTANT shall identify the limits required for the ultimate roadway operation of the Project (the “fee” area), limits required for related facilities such as drainage or utilities (easement areas), and limits required in excess of the fee and easement areas for construction of the Project (temporary construction easements). CONSULTANT shall identify access control limits where applicable.
2. Requirements shall reference the centerlines (station and offsets) or, where appropriate, centerlines of local roads or property lines. At minimum, the background elements on the Maps will include:
 - a. Station lines and centerlines of roadways and drainage facilities.
 - b. Layout lines of walls.
 - c. Tops and toes of slope.
 - d. Edge of travel way, edge of shoulder, curb and gutter, sidewalks, and other roadway appurtenances.

C. Roadway/Staging Design

1. CONSULTANT shall prepare plans, specifications and estimates for the roadway design of Del Amo, including removals, grading, cross sections, staging, and median island

improvements. The design will be based on the approved PR with possible modifications to intersection geometrics based on the traffic analysis.

2. The CONSULTANT shall design the roadway structural section. The Traffic Index (TI) shall be determined by CONSULTANT for use in the design of the roadway structural section. The R-value to be used for the design of the roadway structural section shall be submitted by CONSULTANT to City for approval prior to final design of the structural section.
3. A median break similar to the ones installed on Crenshaw Boulevard and 190th Street shall be provided in the final designs of the roadway improvements.

D. Structural Design

1. Bridge Design

- a. Construction details for each design shall be prepared on City of Torrance format plan sheets.
- b. The Bridge Standard Design Detail Sheets shall be prepared in English units by CONSULTANT for the contract plans, as directed by City's Contract Manager.
- c. Caltrans standard drawings and standard plans will be incorporated into the Structure PS&E where applicable.

2. Retaining Walls

- a. CONSULTANT shall be required to prepare retaining wall plans. Said plans shall include wall location, height, typical sections, log of test borings, and material and cost estimate calculations. The extent of retaining wall construction shall be determined during the development of the PS & E.
- b. CONSULTANT shall update right of way requirements, as needed to incorporate temporary construction easements for retaining walls.
- c. Retaining walls are anticipated to be standard type walls found in Standard Plans for Public Works Construction or CALTRANS Standard Plans, and Mechanically Stabilized Earth (MSE) systems. Consultant shall notify City immediately upon determination that other retaining walls will be required for the Project.
- d. The MSE retaining walls design plans shall include wall layouts, elevations and irregularities required to accommodate approach fill. Technical Specifications will include the wall performance requirements for use in design by the wall fabricator.

E. Traffic Design

Traffic signals, signal interconnects, striping and signing as described in appropriate sections.

F. Utilities

Impact and Relocation plans for utilities as described in appropriate sections.

G. Landscaping

Landscaping and irrigation plans and details.

H. Deliverables Other than Plans

1. Special Provisions

- a. CONSULTANT shall prepare project specific Structure Special Provisions. The Structure Special Provisions shall bear the State of California Registered Professional Engineer registration seal with the signature, license number and registration certificate expiration

date of the Engineer who prepared the special provisions or the Engineer under whose direction they were prepared.

- b. A list of contract items with item descriptions, item numbers, units of pay, and item pay codes, but without quantities or estimated unit costs, shall be included in the front of the special provisions.
 - c. Special Provisions shall be submitted as follows:
 1. Unchecked Submittal (65%) – Table of Contents for Special Provisions
 2. Checked Submittal (100%) – Completed Special Provision
 3. Final Submittal (Bid Package) – Completed and signed Special Provisions with comments incorporated.
2. Construction Schedule
- a. CONSULTANT shall prepare an estimated construction schedule.
 - b. Special Provisions shall include the number of working days estimated for the construction duration.
 - c. Construction Schedules shall be submitted at the 65%, 100% and Final Submittals.
3. Quantity Calculations and Cost Estimates
- a. CONSULTANT shall prepare quantity calculations and develop costs for items that are applicable to this project.
 - b. Quantity calculations shall be neat and orderly and shall show sketches, diagrams and dimensions necessary to allow them to be independently used by field engineers.
 - c. The bridge cost estimate shall be performed utilizing the CALTRANS Quantity Summary and Estimate Forms.
 - d. Cost Estimates shall be submitted at the 35%, 65%, 100% and Final Submittals. Completed Quantities and structural check quantities will be submitted at the Final Submittal.

I. Design Plans

1. General

- a. CONSULTANT shall deliver the following plan packages to the City. Actual plan packages, as determined by City, may vary in quantity and content per submittal. The number of sets of each plan, estimate or report shall be determined prior to submittal.
- b. City and/or City's designee and other agencies will review the plans after each submittal and transmit review comments to the CONSULTANT. A comment review meeting may be scheduled between the City and CONSULTANT, where responses to the plan comments will be presented and discussed.

2. Preliminary Design (35%)

CONSULTANT shall prepare preliminary project plans in accordance with the Preliminary Design And Field Review section.

3. Unchecked Submittal (65%)

- a. Unchecked plans will include generally complete plans with un-checked details.
- b. Plans sheets are anticipated to include:
 1. Title Sheet
 2. Key Map
 3. General Notes

4. Right-of-Way and Temporary Construction Easement Requirements
5. Stage Construction Plans (if required)
6. Track Staging Plans
7. Track Plan + Profile Drawings
8. Utility Conflict Map
9. Roadway Plans and Profiles
10. Typical Cross-Sections
11. Roadway and Intersection Details
12. Drainage Plans, Profiles and Details
13. Pavement Delineation and Signs Plans & Details
14. Landscaping and Irrigation Plans
15. Bridge Structure Plans (w/borings)
16. Retaining Wall Plans and Details (w/borings)
17. Utility Design Plans
18. Electrical Lighting, Details
19. Electrical Traffic Signal, Details
4. Checked Submittal (100%)
 - a. The 100% Plans will be complete and with checked details.
 - b. Calculations for design will be submitted at the 100% submittal.
5. Final Submittal (Bid)
 - a. The Final submittal will include finalized signed plans with review comments incorporated.
 - b. This submittal will be "Issued for Bid."

317 Utility Coordination And Subsurface Utility Engineering (SUE)

A. Coordination

1. CONSULTANT shall be considered the "Utility Coordinator" for the Project. City shall assist CONSULTANT with meetings and correspondence to the utility companies affected by the Project.
2. CONSULTANT shall coordinate with utility companies and City to assist in the proper protection or relocation of affected utilities. Utility owners will prepare utility relocation plans. CONSULTANT shall provide appropriate Project plans that may assist the affected utility owner in the development of relocation plans.
3. CONSULTANT shall review relocation plans prepared by utility owners to verify compatibility with the Project, as well as other utility plans. CONSULTANT shall respond in writing either confirming conformance of the relocation plans to the Project or nonconformance to the Project and reasons therefore.

B. Project Kickoff

Utility Coordinators will attend a utility Project Kickoff Meeting(s) to ascertain project scope and to establish role of utility coordination.

C. General Utility Research

Research and obtain available as-built and reference drawings from government agencies and private utility companies. The general research includes sending and tracking receipt of Request for Information mailings to utility owners identified on the Underground Service Alert (USA) database.

D. Preliminary Field Investigation

A field investigation of the project site will be performed to identify utility locations and key site conditions. This work will be coordinated with the project design team and the field survey work. Key features including manholes, power poles, casing vents, pavement repairs, and pipeline route markers will be identified and included in the building of the utility database.

E. Preliminary Meetings

Identify and meet with key utility stakeholders and establish working relationship with their project managing staff. Establish key concerns and potential conflicts early in the design process.

F. Preliminary Utility Plan

1. Using the results of the preliminary research investigation, prepare the Preliminary Utility Plan depicting known utility lines. The drawing will be developed using ASCE 38-02 standards which establishes a level of confidence of the utility information based upon the source of data.
2. The initial Utilities Location Map will be prepared by the CONSULTANT. Any subsequent information that is provided by the respective utility company will be incorporated into the final plans accordingly. The respective utility companies will be responsible for preparing the necessary relocation plans.

G. Crossing List

1. Prepare a crossing list database which includes known utility lines, owner information, product information, importance factors, relocation cost factors etc.
2. CONSULTANT shall investigate and assist in the identification of right of way requirements impacted by the relocation of utilities. CONSULTANT shall coordinate with utility owners to determine right of way requirements for relocation of utilities.

H. Pothole Plan (including documentation and oversight of pothole operation)

1. Prepare a strategy and drawings for performing pothole verification of known utilities and confirmation of the absence of utilities in critical locations. Presumably, the location of high risk pipelines will be physically verified.
2. The Potholing Plan will include locations the proposed abutment locations to reduce the risk of the presence of undocumented utility lines.
3. The utility conflict maps will be used to establish which utility companies are affected by the Project and need to be relocated. CONSULTANT shall identify those portions of utilities which require potholing.
4. Potholing and related survey work will be performed by others as identified in "Surveys".

I. Relocation Strategy

Using acquired information, prepare a utility relocation strategy. Identify utility corridors, grading features and scheduling issues.

J. Design Team Meeting

Meet with Design team to negotiate utility relocation issues and related cost impact. Identify priority utilities that should remain in place, be protected, and possibly avoided by the bridge structure.

K. Utility Conflict Map

1. CONSULTANT shall submit utility conflict maps to City. The maps shall provide the following:
 - a. Geometric layout of the Project with the existing utility locations.
 - b. Highlight and label each utility that conflicts with the Project.
 - c. Callouts for existing utilities including the owner and the disposition of the lines.
 - d. Narrative descriptions shall accompany the utility conflict maps. These narratives shall list each utility that is in conflict with the Project.
 - e. Conflict label and drawing reference number for the utility conflict map on which the utility is highlighted and labeled
 - Description, owner, and disposition of the utility
 - Description of the potential or actual conflict that will occur due to the Project

L. Preliminary Relocation Package

Using the utility plan, CONSULTANT shall prepare drawings showing concept relocation of the interfering utility lines. This document will be used as a starting point for the individual utility companies to begin their utility relocation and protection projects.

M. Utility Coordination Kickoff Meeting

Organize and facilitate a meeting(s) to introduce the project and the relocation requirements to the utility stakeholder groups. The primary purpose of the meeting(s) is to coordinate the design and construction efforts of the individual utility companies.

N. Other

1. Participate in regularly scheduled design meetings
2. Assist in identifying and obtaining permits for utility work
3. Assist project right of way team with utility land issues

O. Excluded Work

The utility coordination work does not include detail design of the utility systems impacted by the project. Depending on the contractual right of way arrangements of the utility owners, designing the utility relocations as one construction package may be a viable cost saving.

P. Summary of Deliverables

1. Preliminary Utility Plan
2. Crossing List
3. Relocation Strategy Exhibit
4. Pothole Planning Map
5. Utility Conflict Map
6. Preliminary Relocation Map (showing reroute corridors)

Q. Relocation Design "By-Others"

CONSULTANT shall update the utility plans to show the disposition of identified utilities on the Project. Disposition shall include, but not be limited to, the utility company name, original location, proposed location, and responsible party for relocation.

1. 20-inch Chevron Oil Company line
2. 3 Exxon-Mobil lines (including an 8" line adjacent to tracks) & facilities
3. 16-inch Arco Company (BP) line
4. Overhead electrical lines
5. Railroad signal and communication lines

318 Utility Design

A. Potable Water Line

1. CONSULTANT shall provide design services for the relocation of the existing (California Water Services Co.) (Formerly Dominguez Water Company) 24 inch potable water service line. The line requires relocation as the proposed Del Amo Blvd route extension is over part of the existing water line's route. Plan and profile drawings of the 24 inch line, including required encasement, shall be developed for bid and construction. Project specifications shall be provided to address materials, installation, cathodic protection, testing and other aspects of the construction and maintainability of the line.
2. The backgrounds of the construction drawings shall incorporate available information from the record drawings and field investigations. The line's tie-in points shall be selected to minimize relocation, while facilitating constructability and access to the line during and after construction.
3. Construction specifications shall comply with City, owner and other jurisdictional requirements. The standards of the railroad companies for line installation and undercrossings, especially within the right-of-way, shall be incorporated into the design.

B. Sewer Line

1. An existing Los Angeles County 24 inch sewer line in this area requires relocation to maintain proper line cover and protection. Bid and construction plan and profile drawings shall also be

developed for this line. This sewer line, and the potable water line noted above, shall be shown on the same plan drawings, as applicable, to make use of the common background. The project specifications shall incorporate the applicable codes and standards, and shall address materials, installation, and testing, as well as other aspects for the construction and maintainability of the line.

2. The sewer line's route shall be investigated to minimize relocation, maintain sufficient slope, while maintaining required cover and minimize excessive depth. Design of thrust block sizes at bends, tees, or equipment shall follow City and applicable codes.

C. Lighting Design Plans

1. Consultant shall Design Lighting Plans in accordance with Traffic Design.
2. Consultant shall provide electrical design for lighting.

D. Fire Water

Consultant shall design fire-water facilities. Fire hydrants shall be located approximately every 300 feet along the proposed Del Amo Boulevard extension.

319 Drainage Design and Coordination

A. General Requirements

1. CONSULTANT shall be responsible for the design, including hydrologic modifications of drainage reports necessary to provide adequate drainage of the Project, including pavement drainage, runoff generated within the Project Area, inflows from watersheds beyond the Project, and interim drainage during construction. Where conflicts in methodology occur, CONSULTANT shall notify City immediately for resolution.
2. All reports shall be prepared by a qualified Civil Engineer who is registered in the State of California, and shall bear the State of California Registered Professional Engineer registration seal with his signature, license number, and registration certificate expiration date of the Engineer responsible for the preparation.
3. CONSULTANT shall update right of way requirements as needed to incorporate drainage and temporary construction easements for drainage facilities.
4. Conflicts with other utilities, including other drainage facilities, shall be identified in plan and profile.
5. Standard Urban Storm-water Mitigation Plan (SUSMP) practices will be incorporated, as directed by the City.

B. Storm Water Data Report

1. Consultant shall prepare a Storm Water Pollution Prevention Plan (SWPPP) at the 100% Submittals in accordance with State of California Regulations.

C. Hydrology Reports

1. The hydrology study and hydraulic design is limited to on-site improvements only. This will include a net effect analysis of on-site drainage and details to handle additional on-site

drainage if necessary. Hydrology for off-site watersheds and off-site storm drain hydraulics is not included in the scope of this contract.

2. On-site Hydrology Report

- a. CONSULTANT shall prepare an on-site hydrology report for the Project by supplementing existing drainage reports as required.
- b. Layout plans identifying the location of existing and, if necessary, proposed drainage facilities shall be included within the report.
- c. The report shall be submitted to City for review. Comments generated from this review will be returned to CONSULTANT for incorporation into the final plan. The number of copies of the report shall be determined prior to submittal.

D. Drainage Plans

1. CONSULTANT shall perform hydraulic analysis for the drainage facilities on the Project.
2. Drainage plans and profiles of proposed drainage facilities shall be included within the report. Modifications to existing facilities shall be identified on the plans.

E. Deliverables

1. Drainage Report
2. Drainage Design Plans
3. SWPPP

320 Railroad Design

A. Preliminary Plans

1. Develop preliminary track realignment and staging requirements
2. Develop preliminary design Plans
3. Develop right-of-way requirements plan
4. Preliminary plans shall be adequate for establishing preliminary easements for "PUC Order" and C&M Agreement.

B. Final Plans and Staging Plans

1. Develop final track realignment and staging requirements
2. Develop final design Plans

C. Check Plans

1. CONSULTANT shall provide independent checking of railroad design plans.

D. Cost Estimates

1. Prepare Railroad Cost estimates in accordance with PS&E submittals;
2. Prepare Cost Estimate for "Railroad cost"

E. Summary of Deliverables

1. Preliminary and Final Track Realignment Plans
2. Cost estimates for track related work to be performed under City contract and by Railroad forces.

321 Railroad and Agency Coordination

A. The Construction and Maintenance (C&M) Agreement and the CPUC Order to Construct processes will begin as early as possible. Tasks shall be accomplished in two phases:

1. Initial Phase
2. Final Phase

B. Initial Phase

1. Develop the background and determine the how BNSF/SCRRA will each be party to the agreement
2. Identify when to apply to CPUC for the Order to Construct.
3. Develop the construction and maintenance requirement for the BNSF/SCRRA. This would involve the granting of the easement of the overhead as part of the C & M Agreement.
4. Meet with involved agencies including the BNSF/SCRRA and Exxon/Mobil to establish their individual requirements for relocations, right of way, maintenance and general conditions of each party. A kick-off meeting with BNSF operations, Public Project personnel and the SCRRA will be held early in the preliminary design phase.
5. Initiate preliminary discussions with the BNSF/SCRRA as to the necessary work efforts on their part as a prerequisite to developing railroad costs.
6. Prepare a "rough-draft" of CPUC Order to Construct.
7. Prepare "rough-draft" outline of C & M Agreement for review by involved parties. It is assumed that SCRRA and BNSF will prefer to use their own Standard Agreement.

C. Final Phase

Based on the preliminary plans and the drafts of the CPUC order and C & M Agreements, complete the Final Drafts of these documents.

1. Establish final easement and right-of-way requirements and metes & bounds description.
2. Obtain BNSF/SCRRA approval for ROW
3. Coordinate with Railroad for changes in their communication or signal operations.
4. Transmit related project drawings to BNSF/SCRRA to develop "Railroad cost".
5. Railroad Agreement:
 - a. Prepare a draft Construction and Maintenance Agreement for approval by City, BNSF and the SCRRA.
 - b. Incorporate comments and prepare or assist the preparation of a final agreement
 - c. Prepare necessary City resolutions to authorize execution of the agreement

6. C.P.U.C. Order to Construct:
 - a. Prepare a draft of the P.U.C. Order to Construct including:
 1. General Plans
 2. Easement descriptions
 3. Temporary detours with crossing protection as required
 4. Description of the status of the Railroad Construction and Maintenance Agreement
 - b. Incorporate comments and prepare final document
 - c. Submit to P.U.C. in the name of the designated construction agency

D. Summary of Deliverables

1. C.P.U.C. Order to Construct
2. Agreements for Construction and Maintenance with the BNSF and SCRRA
3. Approved Plans for Track realignment to accommodate the Project.
4. Right-of-Way documents approved by City, BNSF, SCRRA and Exxon/Mobil.

322 Traffic Engineering

A. Project Development

1. CONSULTANT shall meet with City to review the scope of work for the traffic analyses and to discuss the methodologies and assumptions to be used. Specific topics for discussion will include: the extent of the study areas for each project and the intersections to be included in the analyses.
2. At this initial meeting, CONSULTANT will provide to the City a request for data, including previous studies conducted in the areas surrounding each project, existing and planned configurations of roadways within the study areas and current traffic volume count data.
3. Traffic meetings will be attended on an as needed basis, an assumed at total of 7 meetings, about 5 of which will be the monthly meetings, and up to 2 will be with the adjacent properties to define their needs for truck access during construction

B. Data Collection

New Counts will be provided by the City through the City-Wide Traffic Study. Consultant shall coordinate with City for the development of this information.

C. Data Analysis

1. The traffic analysis will include levels of service analysis of key study area roadway segments and approximately 28 study area intersections, as identified in the EIR. This analysis will be supplemented by a model projection of 2030 future volume changes due to this project, with the assumptions that the City of LA portion is not improved. This model projection will allow a comparison of the parallel roadway traffic volumes with and without the project.

2. The addition of mitigation measures and overall effect of the project on the roadway system shall be compared based on a "snapshot" of future conditions in the areas surrounding the project site.
3. "CONSULTANT shall provide a traffic study for the project area. This study shall include review and analysis of traffic forecasts for year 2030.

D. Report Preparation

1. The traffic study will include an evaluation of existing and future traffic conditions in the areas surrounding the project that are affected by the proposed project.
2. Mitigation Concept Designs shall be prepared for the 5 locations identified in the Project EIR. Concept design shall include analysis, concept drawings and a determination of any ROW needed.
3. It is anticipated that the City will develop the designs and/or implement any mitigations at these intersections.

E. Construction Traffic Handling Plans and Detours

CONSULTANT shall prepare plans for traffic and adjacent truck access during construction, with the assumption that most of Del Amo will be closed during construction and only the ends will need modified traffic lane requirements. This work will include final signs for the "Flare" requirement and identification of possible "gates", their location and operating strategy.

F. Signing and Pavement Delineation Plans

1. CONSULTANT shall prepare plans, specifications, and estimates for signing and pavement delineation plans including layouts showing the locations of roadside and overhead signs, special sign details, and associated lighting.
2. Signing and striping plans will be provided for the intersections (all approaches) of Crenshaw and of Prairie and the roadway segment between them.
3. Structural and foundation requirements shall be in accordance with applicable standards and design criteria.
4. Consultant shall design electrical facilities for lighting. Requirements for electrical service shall be coordinated with the local electric utility by CONSULTANT.
5. "No Loitering" signs shall be designed on the southern fence line of the Exxon-Mobil Refinery. Consultant shall coordinate with Exxon for sign posting.
6. Signage shall be placed along both ends of the Del Amo Boulevard extension suggesting that motorists focus on their driving, even while a flaring event is in progress.
7. Plans will be prepared for the Del Amo Boulevard section between Praire/Madrona and Crenshaw, and the six (6) intersections where mitigation was required based on the EIR. Preliminary Plans will be developed with proposed improvements and any need for right-of-way that would be required. Final plans will be developed for the Del Amo Extension project intersections and for the six identified which no not require right-of-way acquisition.

G. Traffic Signal Plans

1. CONSULTANT shall prepare final plans, specifications, and estimates for traffic signalization.
2. The signal plans will include modifications at both Crenshaw and at Prairie (Madrona), as well as a new signal at Maple. The work will include an operational strategy, ITS needs and work to define camera detection system requirements in conjunction with the South Bay system.
3. Traffic signalization for the proposed roadway, or equivalent safety measure, shall be incorporated in to design so that traffic, even during rush hour, is not backed up and “stalled” at the point closest to the elevated flare towers and the LPG storage area. This item will require installation of an ITS localized system, in order to achieve this goal.
4. Remotely operated physical barriers (e.g., crossing gates) shall be constructed on both ends of the Del Amo Boulevard extension. The operation of these barriers shall be integrated with the operation of the existing barrier on Crenshaw Boulevard south of 190th Street. The City and Exxon-Mobil shall prepare a joint activation protocol for the barriers.
5. Traffic signalization shall include emergency traffic light sequencing capabilities for Del Amo Boulevard.

H. Electrical Plans

1. CONSULTANT shall prepare final plan, specifications, and estimates for electrical plans including layouts showing lighting standard and conduit locations, other lighting appurtenances. Any structural or foundation requirements shall be in accordance with applicable standards and design criteria.
2. Requirements for electrical service shall be coordinated with the local electric utility by City.

I. Summary of Deliverables

1. Traffic Study
2. Concept Designs for the intersections to be mitigated
3. Construction Traffic Handling Plans
4. Signing and Pavement Delineation Plans for the Del Amo Project
5. ITS strategic plan to accomplish the three EIR requirements related to safety

323 Aesthetics/Landscape Design

A. Initial Site Visits and Meetings

Consultant shall perform an initial landscape site investigation, photograph the existing streetscape and attend specified meetings.

B. Landscape Concept Plan Development

After the initial meeting with the City is conducted, a landscape concept plan will be prepared. The landscape concept plan will be developed in a strip plan format if required. Landscape design will incorporate new planting enhancements to augment existing landscape themes and address new planting areas or opportunities created by the roadway project. Landscape plans will also address areas on adjacent private properties that will be damaged or disturbed during construction.

The initial landscape concept plan will be colored and presented to the City for review and further comment or refinement. A revised landscape concept plan will again be presented to the City and for final review and approval if required.

Concept Plan Development Summary:

- Conduct site inspection and photo existing conditions.
- Conduct initial meetings to discuss project scope and constraints.
- Present landscape concepts plans and develop photo exhibits.
- Prepare initial landscape construction cost opinion.
- Attend specified meetings to discuss and present the plans.
- Coordinate landscape utility issues.
- Prepare landscape concept plan submittal documents.

C. 65% PS&E – Preliminary Landscape Plans

- Continue administrative and project coordination responsibilities.
- Respond to concept plan review comments.
- Prepare CAD drafted landscape and irrigation plans.
- Prepare landscape and irrigation special provisions.
- Update landscape construction cost opinion.
- Conduct quality assurance/ quality control reviews.
- Submit 65% PS&E

D. 95 & 100% PS&E – Final Landscape Plans

- Continue administrative and project coordination duties.
- Respond to 65% PS&E review comments.
- Prepare 95% and 100% landscape and irrigation plans.
- Update Special Provisions.
- Update landscape construction cost opinion.
- Conduct quality assurance/ quality control reviews.
- Submit final PS&E.

324 Directed Work

Directed work shall include additional work beyond the established Scope of Services. Directed work shall be authorized by the City documenting the extent of additional scope and authorized budget to complete this work.

350 Bid Support/Construction Support

A. General

1. It is anticipated that the construction contractor will be required to perform Quality Control (QC) and testing services by an independent testing firm.
2. Construction Management (CM) and/or City will be responsible for the Quality Assurance oversight (QA) and QA inspection during construction.

B. Bid Support

1. Prepare “Pre-Bid” Presentation

2. Attend "Pre-Bid" field meeting
3. Prepare Contract Addendums if required

C. Construction Support

Construction Support is not included in this Scope of Work. These services shall be scoped separately.

400 MATERIALS FURNISHED BY CITY

- A. Concept design documents
- B. Electronic files for concept design
- C. Plans for existing facilities

500 SERVICES PERFORMED BY CITY

- A. City Oversight/Review/Approvals/Authorization
- B. City Legal Support for Right-of-Way acquisition
- C. Community Outreach
- D. Contract General Provisions (Boiler-Plate Documents)
- E. Contract Bidding and Reproduction
- F. Construction Management

600 ADMINISTRATION

610 City Project Management and Administration

- A. As part of their management activities City shall:
 1. Conduct ongoing reviews of CONSULTANT's progress in performing the work and furnish technical comments in a timely manner.
 2. Review certain types of correspondence such as, work requests to subconsultants, initial contact letters to public agencies, sensitive correspondence, and sample letters to utility companies.
 3. Coordinate the distribution of public information.
 4. Review CONSULTANT's Quality Control Plan and CONSULTANT's conformance to its Quality Control Plan.
 5. Provide a focal-point contact for questions, requests, and submittals.
 6. Review the Project Control documents (including subconsultants) submitted by CONSULTANT to ensure their understanding of the level of information required, reporting procedures, report cycle, and the intended use of each.
 7. Receive and review monthly progress reports from CONSULTANT and incorporate the data presented in their Project Control System.
 8. Review with CONSULTANT, requests for change orders and/or extensions of time when such requests are determined to be necessary.
 9. Have final review and approval over all contractual payments and changes.

620 CONSULTANT Project Management and Administration

- A. CONSULTANT management activities include, but are not limited to:
1. Establishing, furnishing, and maintaining suitable office facilities to serve as the Contact office for the duration of the Contract in the location specified in CONSULTANT's proposal.
 2. Maintaining an adequate staff of qualified support personnel to perform the work necessary to complete the Project.
 3. Establishing internal accounting methods and procedures acceptable to City for documenting and monitoring Contract costs.
 4. Providing cost-to-date, schedule, progress, staffing, and related data to City as a part of the regular monthly progress and payment process.
- B. CONSULTANT's work shall be performed and/or directed by those key personnel identified in their proposal. Any changes in the indicated key personnel shall be subject to prior review and approval by City in writing. Any change in CONSULTANT's officer-in-charge of the Services, as described in the General Terms and Conditions of this Contract, shall be subject to prior review and approval by City.
- C. CONSULTANT shall provide to City copies of written correspondence between CONSULTANT and party pertaining specifically to the Project. Copies shall be furnished within five calendar days of receipt of said correspondence from party, or five calendar days prior to mailing of correspondence to party for review.
- D. CONSULTANT is responsible for recording and distributing the minutes of meetings pertaining to the Project at which CONSULTANT is present.

630 Project Controls

- A. Consultant's Project Control System shall be able to:
1. Determine the critical path for the Services in each Contract.
 2. Forecast dates for intermediate milestones and project completion.
 3. Provide a clear format to incorporate progress data on each activity.
 4. Provide current project cost estimate information.
- B. Within 15 working days of the introductory meeting the CONSULTANT shall submit to City for their review, a Schedule showing the Critical Path and identifying project development activities and milestones. City will review these documents and return them to CONSULTANT with notes and comments as soon as possible in order to validate the planning and cost control procedures within the first calendar month of performance period.
- C. As the Contract work progresses, CONSULTANT may discover the need to change the schedule to improve productivity or accommodate new or changed conditions.

640 Monthly Progress Meetings

- A. A Progress Meeting between CONSULTANT, City shall be held, at minimum, on monthly basis to discuss the design progress, potential problems, and plans for the next period, and other progress issues. City will establish with CONSULTANT the dates and times of these meetings. Three calendar days prior to each progress meeting, CONSULTANT shall provide City with a typewritten agenda for the meeting. CONSULTANT shall prepare typewritten meeting minutes and submit them to City within seven calendar days after the meeting. The minutes shall indicate issues discussed and the resolution or action required to resolve issues.

650 Quality Assurance

- A. CONSULTANT has total responsibility for the accuracy and completeness of the plans, calculations, and related documents furnished under this Scope of Services, and shall meet that responsibility through the implementation of a Quality Assurance Plan. CONSULTANT's Quality Assurance Plan shall be in effect throughout the entire Contract and, at minimum, shall establish the process necessary to comply with the following:
1. All design is done in accordance with good engineering practice and design meets the standards set forth herein.
 2. All final plans and calculations are independently checked and back-checked, in accordance with accepted practice, by a qualified engineer, registered in the State of California. Original drawings and calculations shall be maintained for the duration of the design Contract and submitted to City at the completion of the Project.
 3. Coordination and checks are provided on those drawings that show different work in the same area (i.e., plans coordinated with specifications), to see that conflicts and misalignment do not occur between plan sheets, and between the plans and specifications.
- B. Delivery of plans and computations will be accompanied by supporting documentation that demonstrates CONSULTANT is following its Quality Assurance Plan. The documentation may include copies of appropriate lists of deliverables, tables, plan sheet punch lists, etc., which show columns for checking, revising, back-checking, and quality control reviews. Design review submittals not accompanied by sufficient verification of quality control procedures will be returned to CONSULTANT. Documentation of quality assurance procedures is considered to be a requisite element of each review submittal.
- C. Prior to the Final Design Submittal, CONSULTANT shall be required to perform an internal quality control and constructability review with engineers experienced in the appropriate discipline(s). CONSULTANT shall identify personnel responsible for this review, prior to the review. CONSULTANT shall provide review results to City. The criteria for acceptance will be well-organized, technically and grammatically correct plans, specifications, and estimates of neat appearance, checked and signed by the drafter, designer and checker, as appropriate.
- D. CONSULTANT shall submit to City within 30 calendar days after receipt of Notice to Proceed two copies of their Quality Assurance Plan. City will review the plan established by CONSULTANT to determine if quality assurance procedures are adequate and appropriate to the complexity of the project requirements. Review comments will be returned to CONSULTANT within 14 calendar days. If appropriate, the revised plan,

which incorporates the comments of City, should be resubmitted within seven calendar days of receipt of comments.

660 Design Documentation

- A. CONSULTANT shall be required to submit to City for review design notes, sketches, worksheets, and computations to document the design conclusions reached during the development of the Project.
- B. The design notes and computations shall be recorded on 8 ½" x 11" computation sheets, appropriately titled, numbered, dated, indexed, and signed by the designer and checker. Computer output forms and other oversized sheets shall be folded or legibly reduced for submittal to 8 ½" x 11" sizes.
- C. At Project completion, a final set of the design notes and computations, sealed by a Professional Engineer registered in the State of California, shall be submitted with the record set of plans and tracings.
- D. Design notes and calculations shall include, but are not limited to, the following data:
 1. Field survey notes and computations
 2. Control criteria used for the Project
 3. Hydrologic computations
 4. Structural design calculations
 5. Calculations of quantities
 6. Documentation of decisions reached resulting from meetings, telephone conversations, or site visits.

670 Reproduction Services

CONSULTANT shall provide the reproduction services required for the design phase of the project per the number of plan sets outlined in this Scope of Services.

680 Design Review Procedure

- A. Design review procedures will be as follows:
 1. CONSULTANT shall submit draft and final plans, specifications, estimates, reports, and documentation to City
 2. Comments from the reviewers will be channeled to City for consolidation. City will resolve conflicts if they occur.
 3. CONSULTANT may be requested to provide written responses to the comments prior to subsequent reviews of final document submittal.
 4. Consolidated comments will be provided to CONSULTANT and will be numbered in a manner corresponding to the plan sheet, page number, or special provision in question. A review meeting will then be scheduled with CONSULTANT to discuss responses and unresolved issues or questions.

- B. At a minimum, CONSULTANT shall obtain written approval from City for each of the deliverables outlined within this Scope of Services.
- C. Where CONSULTANT is required to prepare and submit studies, reports, plans, etc., to City as required by this Scope of Services, these shall be submitted in draft as scheduled and the opportunity provided for direct revisions, prior to final submission.

690 Submittal and Reviews

- A. City in cooperation with the City will exercise periodic review and approval functions at key points in the design process. City and CONSULTANT shall jointly develop a design review schedule. At a minimum, these reviews will be performed at the times corresponding to the target milestone project design schedule listed herein. Specific products and deliverables to be reviewed shall include but not be limited to those items listed in this section of the Scope of Services. Additionally, as part of the review process, City may request CONSULTANT to submit additional materials for review. This additional material will be determined by City as appropriate and provided by CONSULTANT in a timely manner. Submittals shall comply with this Contract and with the procedures stated herein.
- B. Reports prepared by CONSULTANT shall be submitted in draft form, and opportunity provided for City to review and comment prior to formal submittal. If so requested by City, CONSULTANT shall make other submittals in draft form to provide opportunity for review and revisions.
- C. If CONSULTANT fails to submit the required deliverable items set forth in this Scope of Services, City shall have the right to withhold payment and/or terminate this Agreement in accordance with the provisions entitled "Termination" included in this Contract.
- D. CONSULTANT may continue its design efforts while deliverables are under review by City.

TABLE 1**MILESTONE SCHEDULE**

MILESTONE Weeks after NTP by City

Milestone 0	Notice to Proceed (NTP) to CONSULTANT	0 Weeks
Milestone 1	Project Controls and Quality Assurance Plan Package	4 Weeks
Milestone 2	35% PS&E Package Submitted	12 Weeks
Milestone 3	65% PS&E Package Submitted	28 Weeks
Milestone 4	100% PS&E Package Submitted	48 Weeks
Milestone 5	Final PS&E Package Submittal	60 Weeks

EXHIBIT B
COMPENSATION SCHEDULE

See the 2 attached fee proposals. Combined they provide the required services.

