SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

ITEM
3.18
(ID # 6181)

MEETING DATE:
Tuesday, March 13, 2018

FROM : TLMA-TRANSPORTATION:

SUBJECT: TRANSPORTATION AND LAND MANAGEMENT AGENCY/ TRANSPORTATION: Approve the Engineering Services Agreement between the County of Riverside and HNTB Corporation for Grade Separation Improvements on Jurupa Road. 2nd District; [$5,357,952 – Total Cost]; State Funds (100%)

RECOMMENDED MOTION: That the Board of Supervisors:

1. Approve the Engineering Services Agreement between the County of Riverside and HNTB Corporation to provide Environmental and Engineering services necessary for the Grade Separation Improvements on Jurupa Road, and;

2. Authorize the Chairman of the Board of Supervisors to execute the same.

ACTION: Policy

Patricia Romo, Director of Transportation 2/21/2018

MINUTES OF THE BOARD OF SUPERVISORS

On motion of Supervisor Jeffries, seconded by Supervisor Perez and duly carried by unanimous vote, IT WAS ORDERED that the above matter is approved as recommended.

Ayes:	Jeffries, Tavaglione, Washington, Perez and Ashley
Nays:	None
Absent:	None
Date:	March 13, 2018
xc:	Transp.

Kecia Harper-Ihem
Clerk of the Board
By: Deputy

SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

FINANCIAL DATA	Current Fiscal Year:	Next Fiscal Year:	Total Cost:	Ongoing Cost
COST	$ 1,000,000	$ 2,500,000	$ 5,357,952	$ 0
NET COUNTY COST	$ 0	$ 0	$ 0	$ 0

SOURCE OF FUNDS: Senate Bill Number 132 (100%) There are no General Funds used on this project.	**Budget Adjustment:** No **For Fiscal Year:** 2017/18 – 2022/23

C.E.O. RECOMMENDATION: Approve

BACKGROUND:

Summary

The Riverside County Transportation Department in cooperation with the City of Jurupa Valley, and the Riverside County Transportation Commission (RCTC) desire to construct a new grade separation to replace the existing Union Pacific Railroad (UPRR) at-grade crossing located on Jurupa Road in the City of Jurupa Valley, just east of Van Buren Boulevard. Jurupa Road is a four-lane Arterial Highway that provides access to commercial, industrial and residential land uses in the City of Jurupa Valley.

This proposed project will grade separate Jurupa Road and the UPRR mainline tracks with an elevated structure where it crosses the tracks. This project will improve vehicular traffic circulation and safety and will provide uninterrupted and efficient access for motorists, residents, businesses, pedestrians and emergency vehicles in the area. Additionally, the project will enhance the operational characteristics (i.e. speed, efficiency, and reliability) of freight and passenger trains throughout Riverside County by eliminating conflicts between railroad operations and vehicular traffic.

In April 2017, the Governor and State Legislators dedicated $427 million to improve five major transportation projects in Riverside County. The Jurupa Road Grade Separation project was allocated $108.4 million for the design and construction of a new roadway and structure to grade separate Jurupa Road from the UPRR railroad tracks. Without this approved funding, the project would not have been built for many years. These funds will be distributed through RCTC.

The existing at-grade crossing and the proposed grade separation project are located within the jurisdictional boundaries of the City of Jurupa Valley. The County Transportation Department has extensive experience in the development and implementation of State and Railroad grade separation projects. Both the City and County desire to designate the County as the lead agency in the development and implementation of the project in part due to the experience and expertise of the County.

By Minute Order 3-14 of October 24, 2017, the Board of Supervisors approved an agreement with the City of Jurupa Valley and the Riverside County Transportation Commission that defines how the project is to be administered, financed, coordinated, engineered and constructed.

RCTC will be responsible for approving fund expenditures. The City will participate in the project meetings and will provide review and approval of the various design components.

This Agreement defines the terms and conditions under which HNTB Corporation will provide the engineering and environmental services for the Jurupa Road Grade Separation Project and how the County will administer and manage the consultant's performance of these services.

A total of ten firms submitted proposals in response to a request for proposal that was posted on the Transportation Department website and advertised in the Press Enterprise. HNTB Corporation was selected by a panel comprised of representatives from the City of Jurupa Valley, Caltrans and the Riverside County Transportation Department, as the most qualified consulting firm to provide the required engineering and environmental services.

The scope of services included in this contract include:

1. Preliminary Engineering and Environmental Clearance
2. Final Design (Plans, Specifications & Estimates)
3. Bidding and Award Support
4. Construction Support

A not-to-exceed budget amount of $5,357,951.86 was negotiated with HNTB Corporation to perform the desired services.

Project Number: C8-0060

Impact on Residents and Businesses

The Jurupa Road grade separation project will improve vehicular traffic circulation and safety and will provide uninterrupted and efficient access for motorists, residents, businesses, pedestrians and emergency vehicles in the area. Additionally, the project will enhance the operational characteristics (i.e. speed, efficiency, and reliability) of freight and passenger trains through Riverside County by eliminating conflicts between railroad operations and vehicular traffic.

Additional Fiscal Information

On April 6, 2017, the California Senate approved Senate Bill Number 132 (hereinafter "SB-132") which added appropriation to the budget bill to provide $427,172,000 for five major transportation projects. SB-132 includes provisions for providing funding in the amount of $108.4 million for the construction on the Jurupa Road Grade Separation project. SB-132 funds for the project will be distributed through the RCTC.

The City of Jurupa Valley will be 100% responsible for the funding of the project. No county funds will be used.

No General Funds will be used for this agreement.

Contract History and Price Reasonableness

The proposed fee for these services was compared to the cost of performing similar services for the following grade separation projects and is generally consistent with these costs.

Airport Blvd (56th Ave): Polk Street to Westerly Coachella Valley Storm Channel
Clay St: General Dr to Linares Ave
Magnolia Ave: Lincoln St to Buchanan St
Sunset Ave Undercrossing: Lincoln St to Ramsey St
66th Ave Grade Separation: SR 111 to Dale Kiler Rd

ATTACHMENTS:

HNTB Agreements
Vicinity Map

Gregory P. Priamos, Director County Counsel 3/1/2018

Jurupa Road Grade Separation Project

Exhibit A – Vicinity Map

Contract No. _____

Riverside County Transportation

ENGINEERING SERVICES AGREEMENT

for

Jurupa Road Grade Separation Project

between

County of Riverside • Transportation Department

and

HNTB Corporation, Inc.

MAR 13 2018 3.18

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ENGINEERING SERVICES AGREEMENT

COUNTY OF RIVERSIDE, hereinafter referred to as "COUNTY", and HNTB Corporation, Inc., hereinafter referred to as "ENGINEER", located at the following addressees:

County of Riverside • Transportation Department	HNTB Corporation, Inc.
4080 Lemon Street, 8th Floor	3633 Inland Empire Blvd, Suite 750
Riverside, CA 92502	Ontario, CA 91764

do hereby agree as follows:

ARTICLE I • DESIGNATED CONTACTS

Coordination of ENGINEER, and COUNTY activities shall be accomplished through an ENGINEERING PROJECT MANAGER, and a COUNTY PROJECT MANAGER.

The ENGINEERING PROJECT MANAGER for ENGINEER shall be:

Pat Somerville

The COUNTY PROJECT MANAGER for COUNTY shall be:

C. Scott Staley

ARTICLE II • PROJECT DEFINITION

ENGINEER shall furnish all technical and professional services including labor, material, equipment, transportation, supervision, and expertise to fully and adequately perform and complete the covenants set forth in Appendix A, Scope of Services, which is attached hereto and incorporated herein by reference. All services and deliverables associated with the performance and accomplishment of the covenants described in the Scope of Services is hereinafter collectively referred to as the "PROJECT".

ARTICLE III • COOPERATIVE AGENCIES

A. Lead Agency

COUNTY is designated as the lead agency for PROJECT and is working cooperatively with other agencies in the effort to complete PROJECT.

B. Cooperative Agencies

The cooperating agencies are listed below and will hereinafter be collectively referred to as the "AGENCIES".

Caltrans, Riverside County Transportation Commission, City of Jurupa Valley, Union Pacific Railroad

C. COUNTY/AGENCIES Standards

All deliverables shall be prepared in accordance with the current COUNTY and AGENCIES practices, regulations, policies, procedures, manuals and standards where applicable. All deliverables are subject to review and approval by COUNTY.

ARTICLE IV • CONDITIONS

A. Notifications

All notices hereunder and communications regarding interpretation of the terms of this contract and changes thereto shall be effected by the mailing thereof by registered or certified mail, return receipt requested, postage prepaid and addressed to the attention of the ENGINEERING PROJECT MANAGER or the COUNTY PROJECT MANAGER at the respective addresses provided on page one of this contract.

B. Assignment

Without written consent of COUNTY, this contract is not assignable by ENGINEER either in whole or in part.

C. Subcontracts

1. ENGINEER shall perform the services contemplated with resources available within its own organization. No portion of the services pertinent to this contract shall be subcontracted without written authorization by the COUNTY PROJECT MANAGER, except that which is expressly identified in this contract.
2. In the event ENGINEER subcontracts any portion of ENGINEER's duties under this contract, ENGINEER shall require its subcontractors to comply with the terms of this contract in the same manner as required of ENGINEER including, but not limited to; indemnification of the COUNTY, requiring the same insurance of Subcontractors as required of ENGINEER, and having Subcontractor's insurance name the COUNTY as Additional Insured for each type of insurance where this Agreement requires ENGINEER's insurance to name COUNTY as Additional Insured.

D. Modifications

1. This contract may be amended or modified only by mutual written agreement of the parties. No alteration or variation of the terms of this contract other than minor modifications will be valid unless made in writing and signed by the parties hereto and no oral understanding or agreement not incorporated herein, will be binding on any of the parties hereto.

2. Minor modifications are changes that do not substantially affect the Scope of Service or the contract budget. Minor modifications may be: changes in services to be provided that are consistent with the overall scope and do not require an increase in the contract budget; the shifting of work and/or funding between tasks within the same phase that impacts the budget allocated to any sub consultant, the shifting of work and/or funding from one phase to another; use of contingency pursuant to Article VI.B.1. All requests for minor modifications must be approved in writing by the Director of Transportation, or his designee. The shifting of work and/or funding between tasks within the same phase and does not modify the budget allocated to any sub consultant is also allowed and but not require approval of COUNTY.
3. There shall be no change in the ENGINEERING PROJECT MANAGER or key members of the PROJECT team without prior written approval by the COUNTY PROJECT MANAGER.
4. All modifications that do not fit within the definition of a minor modification to the contract shall be considered a major change and must be approved in writing by the ENGINEER and COUNTY Board of Supervisors prior to implementing the major change.

E. COUNTY Directives

ENGINEER shall receive contract directions and interpretations from the COUNTY PROJECT MANAGER.

F. Liability

1. ENGINEER has total responsibility for the accuracy and completeness of all data, reports, plans, specifications and estimates (PS&E) prepared for this PROJECT and shall check all such material accordingly. COUNTY will review all work product deliverables. The responsibility for accuracy and completeness of such items remains solely that of ENGINEER. Neither COUNTY'S review or approval shall give rise to any liability or responsibility on the part of COUNTY, or waive any of COUNTY'S rights, or relieve ENGINEER of its professional responsibilities or obligations under this contract.
2. The plans, designs, estimates, calculations, reports and other documents furnished in accordance with the Scope of Services shall meet the criteria for acceptance and be a product of neat appearance, well organized, technically and grammatically correct, checked and having the preparer and checker identified. The minimum standard of appearance, organization and contents shall be of similar types produced by COUNTY and AGENCIES. If any work product submitted is not complete and ready for use by COUNTY, it shall be marked "Draft" or similar designation to indicate it is not ready for use by

COUNTY. COUNTY expects that all work product not so designated is ready for and can be used on PROJECT.

5. The page identifying preparers of engineering reports, the title sheet for specifications and each sheet of plans, shall bear the professional seal, certificate number, registration classification, expiration date of the certificate, and signature of the professional engineer(s) responsible for their preparation.
6. COUNTY and ENGINEER agree that plans, drawings or other work products prepared by ENGINEER are for the exclusive use of COUNTY and will be used by COUNTY for the project for which they were specifically designed. ENGINEER shall not be responsible for use of such plans, drawings or other work products if used on a different project without the written authorization or approval by ENGINEER.
7. ENGINEER acknowledges that the plans, drawings and/or other work products may be used by COUNTY for the PROJECT regardless of any disputes that may develop between ENGINEER and COUNTY. All plans, drawings, or other work product shall be deemed the sole and exclusive property of COUNTY and ownership thereof is irrevocably vested in COUNTY whether the PROJECT is executed or not.
8. ENGINEER, and the agents and employees of ENGINEER, in the performance of this contract, shall act in an independent capacity and not as officers, employees or agents of COUNTY.

G. Indemnification and Defense

1. To the fullest extent permitted by applicable law, ENGINEER agrees to and shall indemnify, defend and hold harmless the County of Riverside, its Agencies, Districts, Departments and Special Districts, their respective directors, officers, Board of Supervisors, elected and appointed officials, employees, agents, volunteers and representatives (hereinafter individually and collectively referred to as "Indemnitees") from all liability, including, but not limited to loss, suits, claims, demands, actions, or proceedings caused by any alleged or actual negligence, recklessness, or willful misconduct of ENGINEER, its directors, officers, partners, employees, agents, subconsultants or representatives or any person or organization for whom ENGINEER is responsible, arising out of or from the performance of services under this Agreement.
2. The duty to indemnify does not include loss, suits, claims, demands, actions, or proceedings caused by actual negligence of Indemnitees; however, any actual negligence of Indemnitees will only affect the duty to indemnify for the specific act adjudged by the findings of a court of competent jurisdiction to be negligence of the Indemnitees, and will not preclude a duty to indemnify for any negligence, recklessness,

or willful misconduct of ENGINEER.

3. To the fullest extent permitted by applicable law, ENGINEER shall defend and pay, at its sole expense, all costs and fees, including but not limited to attorney fees, cost of investigation, and defense, in any loss, suits, claims, demands, actions, or proceedings based or alleged to be based on any negligence, recklessness, or willful misconduct of ENGINEER arising out of or from the performance of services under this Agreement. The duty to defend applies to any alleged or actual negligence, recklessness, or willful misconduct of ENGINEER. The duty to defend shall apply whether or not ENGINEER is a party to the lawsuit, and shall apply whether or not ENGINEER is directly liable to the plaintiffs in the lawsuit. The duty to defend applies even if Indemnitees are alleged or found to be actively negligent, unless the negligent act, error or omission at issue was caused by the sole active negligence of Indemnitees.
4. The specified insurance provisions and limits required in this Agreement shall in no way limit or circumscribe ENGINEER'S obligations to indemnify and hold harmless Indemnitees from third party claims.
5. In the event there is conflict between the indemnity and defense provisions and California Civil Code Sections 2782 and 2782.8, the indemnity and defense provisions shall be interpreted to comply with Civil Code sections 2782 and 2782.8.

H. Quality Control

ENGINEER shall implement and maintain the following quality control procedures during the preparation of the plans and documents relating to PROJECT. ENGINEER shall have a quality control plan in effect during the entire time services are being performed under this contract. The plan shall establish a process whereby calculations are independently checked, plans checked, corrected and back-checked, and all job related correspondence and memoranda routed and received by affected persons and then bound in appropriate job files. Where several drawings show different work in the same area, means shall be provided to avoid conflicts and misalignment in both new and existing improvements. Evidence that the quality control plan is functional may be requested by the COUNTY PROJECT MANAGER. All plans, calculations documents and other items submitted to the COUNTY PROJECT MANAGER for review shall be marked clearly as being fully checked and that the preparation of the material followed the quality control plan established for the work.

I. Value Engineering

1. Elements of PROJECT may be considered for Value Engineering Studies. To this end, the COUNTY PROJECT MANAGER may direct the ENGINEER to examine the various elements of a design segment and submit an informal written statement or memorandum addressing those elements where it appears significant savings and other advantages can be realized. The statement shall be sufficiently informative to enable COUNTY to determine whether to direct a detailed Value Engineering Study or possibly direct immediate design changes where the value of the change is apparent without the need of detailed study and analysis.
2. ENGINEER or its subcontractors shall not incorporate in the design materials or equipment of single or sole source origin without written approval of COUNTY. Proprietary names of material or equipment shall not be used in the plans and specifications.

J. Extra Work

1. ENGINEER shall not perform Extra Work until receiving written authorization from the COUNTY PROJECT MANAGER.
2. In the event that COUNTY directs ENGINEER to provide services constituting Extra Work, COUNTY shall provide extra compensation to the ENGINEER. Allowable compensation for approved extra work will be based on the provisions of Appendix C, Budget, which is attached hereto and incorporated herein by reference.
3. An amendment to this contract providing for such compensation for Extra Work shall be issued by COUNTY to ENGINEER. Such Amendment shall not be effective until executed by both parties.

K. Disputes

1. In the event ENGINEER considers any work demanded of him to be outside the requirements of the contract, or if he considers any order, instruction, or decision of COUNTY to be unfair, he shall promptly upon receipt of such order, instruction or decision, ask for a written confirmation of the same whereupon he shall proceed without delay to perform the work or to conform to the order, instruction, or decision; but unless ENGINEER finds such order, instruction, or decision satisfactory, he shall within 20 days after receipt of same, file a written protest with COUNTY stating clearly and in detail his objections and reasons therefore. Except for such protests or objections as are made of record in the manner specified and within the time stated herein, and except for such instances where the basis of a protest could not reasonably have been foreseen by ENGINEER within the time limit specified for protest, ENGINEER

hereby waives all grounds for protests or objections to the orders, instruction, or decisions of COUNTY and hereby agrees that, as to all matters not included in such protests, the orders, instructions and decisions of COUNTY will be limited to matters properly falling within COUNTY's authority.

2. Any controversy or claim arising out of or relating to this contract which cannot be resolved by mutual agreement may be settled by arbitration in accordance with the rules of the American Arbitration Association, provided that the parties mutually agree to submit to arbitration.

3. Neither the pendency of a dispute nor its consideration by arbitration will excuse ENGINEER from full and timely performance in accordance with the terms of the contract.

L. Termination Without Cause

1. COUNTY reserves the right to terminate this contract at COUNTY's discretion and without cause, upon thirty (30) calendar days written notice to ENGINEER.

2. In the event of termination of the Agreement, upon demand, ENGINEER shall deliver to COUNTY all field notes, surveys, studies, reports, plans, drawings, specifications, and all other materials and documents prepared by or provided to ENGINEER in the performance of this contract. All such documents and materials shall be property of COUNTY.

3. In the event that this contract is terminated, ENGINEER is entitled to full payment for all services performed up to the time written notice of contract cancellation is received by ENGINEER. Payment shall be made for services performed to date based upon the percentage ratio that the basic services performed bear to the services contracted for, less payments made to date; plus any amount for authorized, but unpaid, extra work performed and costs incurred.

M. Termination for Lack of Performance

COUNTY may terminate this contract and be relieved of the payment of any consideration to ENGINEER should ENGINEER fail to perform the covenants herein contained at the time and in the manner herein provided. In the event of such termination, COUNTY may proceed with the work in any manner deemed proper by COUNTY. In such event, ENGINEER shall be paid only for work completed and delivered to COUNTY in a timely and successful manner.

N. Insurance

Without limiting or diminishing the ENGINEER'S obligation to indemnify or hold the COUNTY harmless, ENGINEER shall procure and maintain or cause to be maintained, at its sole cost and expense, the following

insurance coverage's during the term of this Agreement. As respects to the insurance section only, the COUNTY herein refers to the County of Riverside, its Agencies, Districts, Special Districts, and Departments, their respective directors, officers, Board of Supervisors, employees, elected or appointed officials, agents or representatives as Additional Insureds.

1. Workers' Compensation:

   If the ENGINEER has employees as defined by the State of California, the ENGINEER shall maintain statutory Workers' Compensation Insurance (Coverage A) as prescribed by the laws of the State of California. Policy shall include Employers' Liability (Coverage B) including Occupational Disease with limits not less than $1,000,000 per person per accident. The policy shall be endorsed to waive subrogation in favor of The County of Riverside.

2. Commercial General Liability:

   Commercial General Liability insurance coverage, including but not limited to, premises liability, unmodified contractual liability, products and completed operations liability, personal and advertising injury, and cross liability coverage, covering claims which may arise from or out of ENGINEER'S performance of its obligations hereunder. Policy shall name the COUNTY as Additional Insured. Policy's limit of liability shall not be less than $1,000,000 per occurrence combined single limit. If such insurance contains a general aggregate limit, it shall apply separately to this agreement or be no less than two (2) times the occurrence limit.

3. Vehicle Liability:

   If vehicles or mobile equipment are used in the performance of the obligations under this Agreement, then ENGINEER shall maintain liability insurance for all owned, non-owned or hired vehicles so used in an amount not less than $1,000,000 per occurrence combined single limit. If such insurance contains a general aggregate limit, it shall apply separately to this agreement or be no less than two (2) times the occurrence limit. Policy shall name the COUNTY as Additional Insureds.

4. Professional Liability

   ENGINEER shall maintain Professional Liability Insurance providing coverage for the ENGINEER's performance of work included within this Agreement, with a limit of liability of not less then $1,000,000 per occurrence and $2,000,000 annual aggregate. If ENGINEER's Professional Liability Insurance is written on a claims made basis rather than an occurrence basis, such insurance shall continue through the term

of this Agreement and ENGINEER shall purchase at his sole expense either 1) an Extended Reporting Endorsement (also, known as Tail Coverage); or 2) Prior Dates Coverage from new insurer with a retroactive date back to the date of, or prior to, the inception of this Agreement; or 3) demonstrate through Certificates of Insurance that ENGINEER has Maintained continuous coverage with the same or original insurer. Coverage provided under items; 1), 2), or 3) will continue as long as the law allows.

5. General Insurance Provisions - All lines:

   a. Any insurance carrier providing insurance coverage hereunder shall be admitted to the State of California and have an A M BEST rating of not less than A: VIII (A:8) unless such requirements are waived, in writing, by the County Risk Manager. If the County's Risk Manager waives a requirement for a particular insurer such waiver is only valid for that specific insurer and only for one policy term.

   b. The ENGINEER must declare its insurance self-insured retention for each coverage required herein. If any such self-insured retention exceed $500,000 per occurrence each such retention shall have the prior written consent of the County Risk Manager before the commencement of operations under this Agreement. Upon notification of self-insured retention unacceptable to the COUNTY, and at the election of the Country's Risk Manager, ENGINEER'S carriers shall either; 1) reduce or eliminate such self-insured retention as respects this Agreement with the COUNTY, or 2) procure a bond which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses.

   c. ENGINEER shall cause ENGINEER'S insurance carrier(s) to furnish the County of Riverside with either 1) a properly executed original Certificate(s) of Insurance and certified original copies of Endorsements effecting coverage as required herein, and 2) if requested to do so orally or in writing by the County Risk Manager, provide original Certified copies of policies including all Endorsements and all attachments thereto, showing such insurance is in full force and effect. Further, said Certificate(s) and policies of insurance shall contain the covenant of the insurance carrier(s) that thirty (30) days written notice shall be given to the County of Riverside prior to any material modification, cancellation, expiration or reduction in coverage of such insurance. In the event of a material modification, cancellation, expiration, or reduction in coverage, this Agreement shall terminate forthwith, unless the County of Riverside receives, prior to such effective date, another properly executed original Certificate of Insurance and original copies of endorsements or certified original

policies, including all endorsements and attachments thereto evidencing coverage's set forth herein and the insurance required herein is in full force and effect. ENGINEER shall not commence operations until the COUNTY has been furnished original Certificate (s) of Insurance and certified original copies of endorsements and if requested, certified original policies of insurance including all endorsements and any and all other attachments as required in this Section. An individual authorized by the insurance carrier to do so on its behalf shall sign the original endorsements for each policy and the Certificate of Insurance.

d. It is understood and agreed to by the parties hereto that the ENGINEER'S insurance shall be construed as primary insurance, and the COUNTY'S insurance and/or deductibles and/or self-insured retention's or self-insured programs shall not be construed as contributory.

e. If, during the term of this Agreement or any extension thereof, there is a material change in the scope of services; or, there is a material change in the equipment to be used in the performance of the scope of work; or, the term of this Agreement, including any extensions thereof, exceeds five (5) years; the COUNTY reserves the right to adjust the types of insurance and the monetary limits of liability required under this Agreement, if in the County Risk Manager's reasonable judgment, the amount or type of insurance carried by the ENGINEER has become inadequate.

f. ENGINEER shall pass down the insurance obligations contained herein to all tiers of subconsultants working under this Agreement.

g. The insurance requirements contained in this Agreement may be met with a program(s) of self-insurance acceptable to the COUNTY.

h. ENGINEER agrees to notify COUNTY of any claim by a third party or any incident or event that may give rise to a claim arising from the performance of this Agreement.

O. Conflict of Interest

ENGINEER warrants, by execution of this contract, that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by ENGINEER for the purpose of securing business. For breach or violation of this warranty, COUNTY has the right to annul this contract without liability, pay only for the value of the work actually performed, or in its discretion to deduct from the contract price or

consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee. ENGINEER may be requested to complete a Conflict of Interest Statement prior to, during, or after execution of this contract. ENGINEER understands that as a condition of this contract ENGINEER agrees to complete the Conflict of Interest Statement when requested to do so by COUNTY.

P. Legal Compliance

ENGINEER shall comply with all Federal, State and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts or administrative bodies or tribunals currently in effect and in any manner affecting the performance of this contract, including, without limitation, workers' compensation laws and licensing and regulations.

Q. Nondiscrimination

1. During the performance of this contract, ENGINEER and its Subcontractors shall not act unlawfully against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, age or sex. ENGINEER and Subcontractor shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 et seq.) and applicable regulations promulgated thereunder (California Administrative Code, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12900, set forth in Chapter 5 of Division 4 of Title 2 of the California Administrative Code are incorporated into this contract by reference and made a part hereof as if set forth in full. ENGINEER and its Subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.
2. ENGINEER will provide all information and reports required by the Regulations, or orders and instructions issued pursuant thereto, and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by COUNTY or AGENCIES to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of ENGINEER is in the exclusive possession of another who fails or refuses to furnish this information, ENGINEER shall so certify to COUNTY, or the Federal Highway Administration as appropriate and shall set forth what efforts he has made to obtain the information.
3. In the event of ENGINEER's noncompliance with the nondiscrimination provisions of this contract,

COUNTY shall impose such contract sanctions as it determines to be appropriate, including, but not limited to:

- Withholding of payments to ENGINEER under the contract until ENGINEER complies;
- Cancellation, termination, or suspension of the contract in whole or in part.

4. ENGINEER shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under this contract.
5. ENGINEER shall comply with Title VI of the Civil Rights Act of 1964, as amended. Accordingly, 49 CFR 21 through Appendix H and 23 CFR 710.405(b) are applicable to this contract by reference.

R. Labor Code and Prevailing Wages

1. Certain Classifications of Labor under this contract may be subject to prevailing wage requirements.
2. Reference is made to Chapter 1, Part 7, Division 2 of the California Labor Code (commencing with Section 1720). By this reference said Chapter 1 is incorporated herein with like effect as if it were here set forth in full. The parties recognize that said Chapter 1 deals, among other things with discrimination, penalties and forfeitures, their disposition and enforcement, wages, working hours, and securing worker's compensation insurance and directly effect the method of prosecution of the work by ENGINEER and subject it under certain conditions to penalties and forfeitures. Execution of the contract by the parties constitutes their agreement to abide by said Chapter 1, their stipulation as to all matters which they are required to stipulate as to by the provisions of said Chapter 1, constitutes ENGINEER's certification that he is aware of the provisions of said Chapter 1 and will comply with them and further constitutes ENGINEER's certification as follows: "I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this contract."
3. Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates, including the per diem wages applicable to the work, and for holiday and overtime work, including employer payments for health and welfare, pension, vacation, and similar purposes, in the county in which the work is to be done have been determined by the Director of the California Department of Industrial Relations. These wages are available from the California Department of Industrial Relations' Internet website at http://www.dir.ca.gov.
4. Should a portion of the project contain Federal funding, Federal minimum wages shall be used. The

Federal minimum wage rates for this project as determined by the United States Secretary of Labor are available from the U.S Department of Labor, Employment Standards Administration, Wage and Hour Division's Internet website at http://www.access.gpo.gov/davisbacon. If there is a difference between the minimum wage rates determined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California Department of Industrial Relations for similar classifications of labor, the ENGINEER and subcontractors shall pay not less than the higher wage rate. The Department will not accept lower State wage rates determinations. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by the ENGINEER and subcontractors, the ENGINEER and subcontractors shall pay not less than the Federal minimum wage rate which most closely approximates the duties of the employees in question.

S. Review and Inspection

ENGINEER and any Subcontractors shall permit COUNTY and/or AGENCIES to review and inspect PROJECT activities including review and inspection on a daily basis.

T. Record Retention / Audits

1. ENGINEER's and subconsultants' contracts, including cost proposals and indirect cost rates (ICR), are subject to audits or reviews such as, but not limited to, a Contract Audit, an Incurred Cost Audit, an ICR Audit, or a certified public accountant (CPA) ICR Audit Workpaper Review. If selected for audit or review, the contract, cost proposal and ICR and related workpapers, if applicable, will be reviewed to verify compliance with 48 CFR, Part 31 and other related laws and regulations. In the instances of a CPA ICR Audit Workpaper Review, it is ENGINEER's responsibility to ensure federal, state, or local government officials are allowed full access to the CPA's workpapers. The contract, cost proposal, and ICR shall be adjusted by ENGINEER and approved by COUNTY contract manager to conform to the audit or review recommendations. ENGINEER agrees that individual terms of costs identified in the audit report shall be incorporated into the contract by this reference if directed by COUNTY at its sole discretion. Refusal by ENGINEER to incorporate audit or review recommendations, or to ensure that the Federal, State, or local governments have access to CPA workpapers, will be considered a breach of contract terms and cause for termination of the contract and disallowance of prior reimbursed costs.

2. ENGINEER, Subcontractors, and COUNTY shall maintain all books, documents, papers, accounting records, and other evidence pertaining to the performance of the contract, but not limited to, the costs of administering the contract. All parties shall make such materials available at their respective offices at all reasonable times during the contract period and for ten years from the date of final payment under the contract or ten years from project closeout, whichever is later.
3. COUNTY, Caltrans, the State Auditor General, FHWA or any duly authorized representative of the Federal Government shall have access to any books, records, and documents of ENGINEER that are pertinent to the contract for audits, examinations, excerpts, and transactions, and copies thereof shall be furnished if requested.

U. Rebates, Kickbacks, or Other Unlawful Consideration

1. ENGINEER warrants that this contract was not obtained or secured through rebates kickbacks or other unlawful consideration, either promised or paid to any COUNTY employee. For breach or violation of this warranty, COUNTY shall have the right in its discretion; to terminate the contract without liability; to pay only for the value of the work actually performed; or to deduct from the contract price; or otherwise recover the full amount of such rebate, kickback or other unlawful consideration.

V. Prohibition of Expending Local Agency, State, or Federal Funds for Lobbying

1. ENGINEER certifies to the best of his or her knowledge and belief that:
   a. No state, federal or local agency appropriated funds have been paid, or will be paid by-or-on behalf of ENGINEER to any person for influencing or attempting to influence an officer or employee of any state or federal agency; a Member of the State Legislature or United States Congress; an officer or employee of the Legislature or Congress; or any employee of a Member of the Legislature or Congress, in connection with the awarding of any state or federal contract; the making of any state or federal grant; the making of any state or federal loan; the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any state or federal contract, grant, loan, or cooperative agreement.
   b. If any funds other than federal appropriated funds have been paid, or will be paid to any person for influencing or attempting to influence an officer or employee of any federal agency; a Member of Congress; an officer or employee of Congress, or an employee of a Member of Congress; in connection with this federal contract, grant, loan, or cooperative agreement; ENGINEER shall

complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, US. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.
3. ENGINEER also agrees by signing this document that he or she shall require that the language of this certification be included in all lower-tier subcontracts, which exceed $100,000, and that all such sub recipients shall certify and disclose accordingly.

W. Ownership of Data

Ownership and title to all reports, documents, plans, specifications, and estimates produced as part of this contract will automatically be vested in COUNTY and no further agreement will be necessary to transfer ownership to COUNTY.

X. Confidentiality of Data

1. All financial, statistical, personal, technical or other data and information which is designated confidential by COUNTY or AGENCIES, and made available to ENGINEER in order to carry out this contract, shall be protected by ENGINEER from unauthorized use and disclosure.
2. Permission to disclose information on one occasion for a public hearing held by COUNTY or AGENCIES relating to the contract shall not authorize ENGINEER to further disclose such information or disseminate the same on any other occasion.
3. ENGINEER shall not comment publicly to the press or any other media regarding the contract, including COUNTY or Agencies actions regarding this contract. Communication shall be limited to COUNTY, Agency or ENGINEER's staff that are involved with the project, unless ENGINEER shall be requested by COUTY to attend a public hearing or respond to questions from a Legislative committee.
4. Each subcontract shall contain provisions similar to the foregoing related to the confidentiality of data and nondisclosure of the same.
5. ENGINEER shall not issue any news release or public relations item of any nature whatsoever regarding work performed or to be performed under this contract without prior review of the contents thereof by

COUNTY and receipt of COUNTY's written permission.

Y. Funding Requirements

1. All obligations of COUNTY are subject to appropriation of resources by various Federal, State and local agencies.
2. This contract is valid and enforceable only if sufficient funds are made available to COUNTY for the purpose of this PROJECT. In addition, this contract is subject to any additional restrictions, limitations, conditions or any statute enacted by Congress, State Legislature or COUNTY that may affect the provisions, terms or funding of this contract in any manner.
3. It is mutually agreed that if sufficient funds for the program are not appropriated, this contract will be amended or terminated to reflect any reduction in funds.

ARTICLE V • PERFORMANCE

A. Performance Period

1. This contract shall begin upon notification to proceed by the COUNTY PROJECT MANAGER.
2. ENGINEER is advised that any recommendation for contract award is not binding on COUNTY until the proposed contract is fully executed and approved by COUNTY.
3. ENGINEER shall perform PROJECT services in accordance with the provisions set forth in Appendix B, Schedule of Services, which is attached hereto and incorporated herein by reference.
4. Where ENGINEER is required to prepare and submit studies, reports, plans, etc., to COUNTY, these shall be submitted in draft as scheduled, and the opportunity provided for COUNTY to offer comments prior to final submission.
5. When COUNTY determines that ENGINEER has satisfactorily completed the PROJECT services, COUNTY may give ENGINEER a written Notice of Final Acceptance. ENGINEER shall not incur any further costs hereunder unless so specified in the Notice of Final Acceptance. ENGINEER may request a Notice of Final Acceptance determination when, in its opinion, it has satisfactorily completed all covenants as stipulated in this contract.
6. Time is of the essence in this contract.

B. Time Extensions

1. Any delay in providing PROJECT services required by this contract occasioned by causes beyond the control and not due to the fault or negligence of ENGINEER, shall be the reason for granting an extension

of time for the completion of the aforesaid work. When such delay occurs, ENGINEER shall promptly notify COUNTY in writing of the cause and of the extent of the delay whereupon COUNTY shall ascertain the facts and the extent of the delay and grant an extension of time for the completion of the work when, in COUNTY's judgment, their findings of fact justify such an extension of time.

2. COUNTY's findings of fact shall be final and conclusive to the parties hereto. However, this is not intended to deny ENGINEER it's civil legal remedies in the event of a dispute.

C. Reporting Progress

1. As part of the monthly invoice ENGINEER shall provide progress information on individual tasks and/or deliverables in accordance with COUNTY Consulting Services Manual.
2. To ensure understanding and performance of the contract objectives, meetings between COUNTY, AGENCIES, and ENGINEER shall be held as often as deemed necessary (typically monthly). All work objectives, ENGINEER's work schedule, the terms of the contract and any other related issues will be discussed and/or resolved. ENGINEER shall keep minutes of meetings and distribute copies of minutes as appropriate. The COUNTY Consulting Services Manual specifies a list of the documents that are expected to be prepared and distributed to the Project Team members as part of these progress meeting.

D. Evaluation of ENGINEER

ENGINEER's performance will be evaluated by COUNTY for future reference.

ARTICLE VI • COMPENSATION

A. Work Authorization

ENGINEER shall not commence performance of any work or project services until so directed by the County Project Manager. No payment will be made prior to approval of this contract.

B. Basis of Compensation

1. PROJECT services as provided under this contract and as described in the Scope of Services, shall be compensated for as defined in Appendix C, Budget, which is attached hereto and incorporated herein by reference. The total amount of the contract is not to exceed **$ 5,357,951.86** and reimbursement is to be made at actual cost plus fixed fee for the following contractors:

• **HNTB**	$ 4,272,191.46
• Advanced Civil Technologies	$ 242,232.29
• Arellano Associates	$ 61,829.40

• Leighton Consulting	$ 186,726.16
• LIN Consulting	$ 210,359.83
• Safeprobe	$ 51,743.28
• Tatsumi and Partners, Inc.	$ 124,672.92
• Towill	$ 59,649.92
• Vandermost Consulting Services	$ 148,546.60

If a contingency budget is provided, COUNTY shall hold such contingency in reserve for unforeseen Extra Work that may arise during the performance of this agreement. Contingency funds shall only be used at the discretion of the COUNTY PROJECT MANAGER. Use of Contingency funds will be authorized by issuance of an Administrative Budget Modification by COUNTY.

No additional compensation for Extra Work will be paid except upon the issuance of an Administrative Budget Modification by COUNTY or by execution of an amendment between COUNTY and ENGINEER.

2. Prior authorization in writing by the COUNTY PROJECT MANAGER will be required before ENGINEER enters into any non-budgeted purchase order or subcontract exceeding $500 for supplies, equipment or consultant services. ENGINEER shall provide an evaluation of the necessity or desirability of incurring such costs.

3. For purchase of any item, service or consulting work not covered in ENGINEER's proposal and exceeding $500, with prior authorization by the COUNTY PROJECT MANAGER, three competitive quotations shall be submitted with the request, or the absence of bidding shall be adequately justified.

4. Any equipment purchased as a result of this contract is subjected to the following: ENGINEER shall maintain an inventory of all nonexpendable property. Nonexpendable property is defined as having a useful life of at least two years and an acquisition cost of $500 or more. If the purchased equipment needs replacement and is sold or traded in, COUNTY shall receive a proper refund or credit. At the conclusion of the contract or if the contract is terminated, ENGINEER may either keep the equipment and credit COUNTY in an amount equal to its fair market value or sell such equipment at the best price obtainable at a public or private sale in accordance with established COUNTY procedures and credit COUNTY in an amount equal to the sales price. If ENGINEER elects to keep the equipment, fair market value shall be determined, at ENGINEER's expense, on the basis of a competent independent appraisal of such equipment. Appraisals shall be obtained from an appraiser mutually agreeable by COUNTY, and

ENGINEER. If it is determined to sell the equipment, the terms and conditions of such sale must be approved in advance by COUNTY and AGENCIES.

5. The consideration to be paid ENGINEER, as provided herein, shall be in compensation for all of ENGINEER's expenses incurred in the performance hereof, including travel and per diem, unless otherwise expressly so provided.
6. ENGINEER agrees that the Contract Cost Principles and Procedures, CFR 48, Federal Acquisition Regulations Systems, Chapter 1, Part 31, shall be used to determine the allowability of individual items of cost.
7. ENGINEER agrees to comply with the federal Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards of 2 CFR, Part 200.
8. ENGINEER also agrees to comply with Federal procedures in accordance the Code of Federal Regulations Section 49, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments
9. In the event of errors or omissions in the plans for PROJECT, ENGINEER shall perform the necessary engineering services required to correct such errors and omissions without additional charge to COUNTY.

C. Progress Payments

1. ENGINEER shall submit monthly invoices for PROJECT Services in accordance with Appendix C, Budget, and in accordance with COUNTY Consulting Services Invoicing Procedures.
2. ENGINEER shall submit an invoice each month for PROJECT services performed during the preceding month. Invoices shall be submitted to the COUNTY PROJECT MANAGER and shall include supporting progress documentation as defined in the COUNTY supplied Invoice Templates.
3. Progress payments will be based on PROJECT services provided and actual costs incurred. Payments made prior to the completion of each phase will not exceed the amount allowed in ENGINEER's cost proposal for the completion of that phase and prior phases, unless approved in writing by the COUNTY PROJECT MANAGER. Budgets established for individual Tasks within can be distributed between tasks within the same Phase without approval of the COUNTY PROJECT MANAGER with the exception of funds being transferred between sub consultants or between the prime and sub consultants. Budget Modifications that impact budgets specified for sub consultants require written approval by the COUNTY PROJECT MANAGER.

4. Progress payments will be made within 60 days of receipt by the COUNTY PROJECT MANAGER of itemized invoices.
5. COUNTY will withhold the last 10 percent of the budget for preparation of the final PS&E documents. The 10 percent retainage is to be held after 90% of the PS&E phase has been billed and is not to be deducted from each invoice. The amount retained will be paid to ENGINEER after COUNTY has approved ENGINEER's PS&E documents.

ARTICLE VII • GIS INFORMATION

A. "GIS Information" shall include GIS digital files (including the information or data contained therein) and any other information, data, or documentation from County GIS (regardless of medium or format) that is provided pursuant to this contract.

B. ENGINEER acknowledges that the unauthorized use, transfer, assignment, sublicensing, or disclosure of the GIS information, documentation, or copies thereof will substantially diminish their value to COUNTY. ENGINEER acknowledges and agrees that COUNTY GIS information is a valuable proprietary product, embodying substantial creative efforts, trade secrets, and confidential information and ideas. COUNTY GIS information is and shall remain the sole property of COUNTY; and there is no intention of COUNTY to transfer ownership of COUNTY GIS information.

C. COUNTY GIS information is made available to ENGINEER solely for use in the normal course of ENGINEER's business to produce reports, analysis, maps and other deliverables only for this PROJECT and as described within the Scope of Services.

D. ENGINEER agrees to indemnify and hold harmless COUNTY, its officers, employees and agents from any and all liabilities, claims, actions, losses or damages relating to or arising from ENGINEER's use of COUNTY GIS information.

E. GIS information cannot be used for all purposes; and GIS information may not be complete for all purposes. Additional investigation or research by ENGINEER into other sources will be required. GIS information is intended only as an information base and is not intended to replace any legal records. COUNTY has used and will continue to use its best efforts to correctly input into COUNTY GIS the information contained in various legal and other records; but COUNTY accepts no responsibility for any conflict with actual legal records or for information not transferred from legal records to COUNTY GIS. COUNTY has attempted to update GIS information as often as is practically feasible. However, ENGINEER should be aware that GIS

information may not be current and changes or additions to the information contained in COUNTY GIS may not yet be reflected in COUNTY GIS.

F. COUNTY accepts no responsibility for the use of GIS information; and COUNTY provides no warranty for the use of COUNTY GIS or COUNTY GIS information by ENGINEER. THE WARRANTIES SPECIFICALLY SET FORTH IN THIS AGREEMENT ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE; AND SUCH OTHER WARRANTIES ARE HEREBY EXCLUDED.

G. Final plans, drawings or PROJECT work products will be provided in an electronic format suitable for inclusion within the COUNTY GIS or CADD Systems by ENGINEER and will contain the appropriate meta data and will be geographically registered using a appropriate coordinate system such as the California State Plane Coordinate System NAD 83.

ARTICLE VIII • APPROVALS

COUNTY Approvals

RECOMMENDED FOR APPROVAL:

Dated: 2-28-2018

PATRICIA ROMO

Director of Transportation

APPROVED AS TO FORM:

GREGORY P. PRIAMOS, County Counsel

Dated: 2/28/18

By Deputy

APPROVAL BY THE BOARD OF SUPERVISORS

Dated: MAR 13 2018

CHUCK WASHINGTON

PRINTED NAME

Chairman, Riverside County Board of Supervisors

ATTEST:

Dated: MAR 13 2018

KECIA HARPER-IHEM

Clerk of the Board (SEAL)

ENGINEER Approvals

ENGINEER:

Dated: 1/11/18

Arthur J. Hadnett

PRINTED NAME

West Division President

TITLE

ENGINEER:

Dated: 1/8/18

Thomas D. Ellis

PRINTED NAME

Senior Vice President

TITLE

APPENDIX A • SCOPE OF SERVICES

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APPENDIX A • ARTICLE AI • INTRODUCTION

A. PROJECT DESCRIPTION

The Riverside County Transportation Department in cooperation with the City of Jurupa Valley, the Riverside County Transportation Commission and the State Department of Transportation (Caltrans) desire to construct a new grade separation to replace an existing Union Pacific Railroad at-grade crossing located on Jurupa Road in the City of Jurupa Valley. To the east of the crossing, Jurupa Road is lined by retail, commercial and light industrial land uses. To the west, the road is lined with single family homes, except for some commercial uses at the Jurupa Road/Van Buren Boulevard intersection. The project will encroach onto property and facilities owned by the Union Pacific Railroad (UPRR) company. The impacted UPRR tracks are part of UPRR's area, Los Angeles subdivision. The tracks also service Metrolink. The UPRR railroad tracks run parallel with Van Buren Boulevard and the railroad right-of-way abuts Van Buren Blvd. There are spur tracks that branch off from the UPRR rails, and merge to run parallel with Jurupa Road in the easterly direction. These spur tracks (DOT Crossing No. 810979D) serve industrial facilities along Jurupa Road and the Agua Mansa area north of Riverside.

B. LOCATION

C. COORDINATION

ENGINEER shall coordinate with other involved agencies for compatible design and phasing of construction with existing conditions. Coordination may include, but will not necessarily be limited to the following:

- City of Jurupa Valley
- Riverside County Transportation Commission
- State Department of Transportation (Caltrans)
- Union Pacific Railroad
- California Public Utilities Commission
- Metrolink

All meetings with other outside agencies will be scheduled by ENGINEER with approval of COUNTY.

D. PHASES

The services performed by ENGINEER will be accomplished in 4 Phases:

Phase I – Preliminary Engineering / Environmental Clearance

Phase II – Plans, Specifications and Estimates

Phase III – Construction Bidding and Award Support

Phase IV - Design Support during Construction

Phase I will proceed upon written notice to proceed. The remaining phases will not proceed until authorized in writing by County. Phase II scope of services and associated fee estimate will be reevaluated upon selection of a preferred alternative.

E. STANDARDS

The preliminary plans, environmental document, plans, specifications and estimate (PS&E) shall be prepared in accordance with AASHTO and CALTRANS standards including compliance with American Railway Engineering and Maintenance-of-Way Association (AREMA) requirements, BNSF Railway-Union Pacific Railroad Guidelines for Railroad Grade Separation Projects (1/5/2016) and/or COUNTY or City of Jurupa Valley Standards as appropriate.

Environmental

Pursuant to section 21080.13 of the California Environmental Quality Act (CEQA), the state legislature has determined that railroad grade separations shall be statutorily exempt from CEQA documentation and public disclosure requirements. Accordingly, a more formal CEQA environmental document is not required for this

project. However, in certain instances and at the discretion of the sponsoring agency, it is sometimes prudent to undertake certain limited environmental studies in order to better understand and manage the consequences of a particular proposed railroad grade separation. Such is the case for the Jurupa Rd/UPRR Grade Separation, for which the Riverside County Transportation Department (COUNTY) has determined that certain selected studies should be undertaken. This scope of work responds to that decision.

The Jurupa Valley/UPRR Grade Separation will not receive federal funds and therefore NEPA compliance is not required. Unless otherwise specified, scope of work tasks will be completed by ENGINEER's staff. Subconsultant activities will be managed by ENGINEER.

Preliminary Survey/Aerial Topographical Mapping/Design Field Surveys

All preliminary Surveys, aerial mapping, and design field surveys shall be performed by COUNTY.

Design

Roadway design shall be in accordance with the current CALTRANS Highway Design Manual and its revisions and/or COUNTY or City of Jurupa Valley Standards as appropriate. Traffic design shall be in accordance with the Manual of Uniform Traffic Control Devices (MUTCD) and the California Supplement.

Plans, Specifications and Estimates (PS&E)

As part of the work involved in the preparation of the PS&E, the ENGINEER shall prepare and furnish to COUNTY special provisions for items of work included in the plans which are not covered in the Standard Specifications or CALTRANS-approved SSPs.

Bridge plans shall be prepared in accordance with the Bridge Design Details Manual, Bridge Design Aids Manual and Bridge Memos to Designers, California Department of Transportation, Division of Structures, current editions.

Roadway plans shall be prepared electronically in conformance with the CALTRANS Plan Preparation Manual and the CALTRANS CADD Users Manual of Instructions. Roadway plans shall be prepared with MicroStation. All Roadway plans shall be on single sheet files. Graphic files shall be two-dimensional and shall conform to the CALTRANS data format as defined in Caltrans CADD Users Manual of Instructions. One set of roadway plans and one electronic version shall be provided with the final PS&E submittal.

Special Provisions shall be prepared using Microsoft Word conforming to CALTRANS format and content. ENGINEER shall coordinate with COUNTY staff regarding procedures for specification and special provision preparation prior to commencing preparation of specifications. COUNTY staff may provide the initial draft of

the specifications to be reviewed and modified by ENGINEER.

Bridge specifications shall be prepared in conformance with the Bridge Design Specifications, California Department of Transportation, Division of Structures, current edition.

Project cost estimates shall be prepared in accordance with the Riverside County Transportation Department's Engineer Estimating Guidelines.

Geotechnical Design Report

A preliminary foundation report shall be prepared in conformance with Caltrans Standards to support the Advance Planning Study (APS) and Bridge Type Selection. A geotechnical report shall be prepared providing recommendations for all design elements during PS&E.

Project Files

Project Files shall be indexed in accordance with CALTRANS Project Development Uniform File System.

F. KEY PERSONNEL

The ENGINEER has represented to the COUNTY that certain key personnel will perform the services and if one or more of such personnel should become unavailable, ENGINEER may substitute other personnel of at least equal competence only after prior written approval by the COUNTY PROJECT MANAGER has been secured. The key personnel for performance of this PROJECT are:

Patrick Somerville, Project Manager

Tanja Brix, Deputy Project Manager, Lead Civil

Nien Wang, Lead Structures

Steve Greene, Lead Traffic

Garry Cohoe, Third Party Coordination

Julie Beeman, Environmental

ARTICLE AII • PROJECT ADMINISTRATION

A. PROJECT MANAGEMENT PLAN

The ENGINEER's Project Management Plan (PMP) will include a work plan, quality control plan, risk management matrix, and a communication plan. The communication plan will consist of a roster of staff involved in the PROJECT and multiple forms of contact for each team member (address, telephone number, e-mail, etc.). The communication plan will also identify lines of communication with levels of responsibility/authority for development of the PROJECT. The PMP will be provided to the COUNTY within

two (2) weeks after Notice to Proceed (NTP) for review and approval.

B. QUALITY CONTROL PLAN

A Quality Control Plan shall be established for this PROJECT in accordance with the provisions of Article IV, Section H of the Agreement. It will be provided to the COUNTY within two (2) weeks after NTP for review and approval.

C. BUDGETING

ENGINEER shall prepare and monitor budgets for each task and milestone for the PROJECT. Such budgets will be entered in to the ENGINEER's Management Information System along with actual costs incurred and used as a basis for cost monitoring and control.

D. COST ACCOUNTING

ENGINEER will prepare monthly reports of expenditures for the PROJECT by task and milestone. Expenditures include direct labor costs, other direct costs and subconsultant costs. These reports will be included as supporting data for invoices presented to the COUNTY every month and shall be in accordance with the COUNTY invoicing requirements as described in the COUNTY Transportation Department's Consulting Services Manual.

E. SCHEDULING

Within two (2) weeks from the Notice to Proceed (NTP), the ENGINEER shall provide a detailed project schedule, which indicates milestones, major activities and deliverables, to the COUNTY for review and comments. This schedule will reflect assumed review times necessary by all of the agencies involved. Review of the schedule will occur at subsequent trend meetings. Adjustments will be made, as necessary, due to changing circumstances.

F. CONTRACT ADMINISTRATION AND MEETINGS

1. Project Management and Administration

   This task includes the day-to-day management of the PROJECT. The ENGINEERING PROJECT MANAGER shall maintain ongoing liaison with the COUNTY PROJECT MANAGER, AGENCY contacts, railroad, regulatory agencies and utility companies to promote effective coordination during the course of project development. The following management and administrative duties shall be performed:

   - Supervise project staff, subconsultants, coordinate, and monitor work for conformance with set standards and policies

- Conduct internal meetings with project staff and subconsultants
- Apply for and obtain permits necessary for the design team to be on the jobsite
- Apply for and obtain County and/or City approvals and permits, as necessary
- Prepare, circulate, and file correspondence and memoranda as appropriate
- Maintain Project files using specified filing system

2. Project Meetings

A Project Development Team (PDT) including representatives from the COUNTY, CITY, CALTRANS, UNION PACIFIC RAILROAD, RCTC and other relevant agencies shall be established within two (2) weeks after NTP.

PDT meetings shall be held monthly to resolve issues and to apprise the affected agencies of the progress of the PROJECT. A kick off meeting with the PDT (PDT Meeting No. 1) shall be held as soon as possible after NTP. Subconsultants will attend PDT meetings as appropriate. The ENGINEER shall prepare meeting notes for each meeting and have these available for review at each succeeding meeting. ENGINEER shall prepare and distribute additional progress management documents in accordance with the County Consulting Services Manual. A total of 24 PDT meetings plus an additional 24 meetings are assumed through the end of the design phase. It is assumed that meetings during the bidding and construction phases will be included in those phases of work.

G. CONTRACT DELIVERABLES

ENGINEER shall provide and maintain a contract deliverables matrix showing all deliverables along with the associated level of quality control.

H. OUTREACH

ENGINEER shall conduct public engagement efforts to provide opportunities for project updates and community input and feedback.

1. Collateral Material & Coordination

ENGINEER shall compile a comprehensive stakeholder database for the project. The database shall include public agencies, schools, businesses, residents, property owners, emergency responders, elected officials, environmental groups and interested parties in the project area. A set of easy to understand and bilingual (Spanish) collateral materials are important communication tools for this public outreach effort. These include, but are not limited to:

- Fact Sheet
- Meeting Notification Postcard
- Community Meeting Materials (sign-in sheets, comment cards, directional signage, etc.)

2. Open House Community Meetings

ENGINEER shall plan and coordinate three (3) public meetings to support the project process. The meetings will be in an open house format and will provide opportunities for stakeholders to learn about the proposed project and process, ask questions and provide valuable input that can be used to refine the project design and studies. Logistics and support activities for the meeting will include research of meeting locations and availability, coordination of meeting dates and times with the project team, organization of facility details (including equipment and insurance, if applicable), preparation of notices, meeting set-up and clean-up, meeting materials as noted in the section above, photography, Spanish translation/interpretation services, refreshments and preparation of summary memos for both meetings.

3. Stakeholder and Business Briefings

ENGINEER shall coordinate briefings with key stakeholders and businesses near the project area, including, but not limited to: the Jurupa Unified School District/Van Buren Elementary School, and businesses located immediately adjacent to the project area, including Chevron, Country Mutt Dog and Cat Grooming, El Colima Restaurant, Jack in the Box, and others. In addition, one (1) briefing will be provided to the City of Jurupa Valley to provide a progress update. A total of 12 briefings are assumed.

ARTICLE AIII • PLANNING AND PROJECT DEVELOPMENT

A. RESEARCH AND DATA GATHERING

Existing topographic mapping, photos, reports, maintenance reports, right-of-way maps, "as-built" plans, record maps and surveys, study reports, assessor maps, contract documents, utility index maps, local street improvement/development plans and other pertinent data will be obtained and reviewed.

B. PERMITS

ENGINEER shall identify locations outside the roadway right-of-way where it will be necessary to obtain specific rights-of-entry from affected property owners. The listing of the candidate locations will be furnished to the COUNTY. The COUNTY will be informed if their support is required to obtain rights-of-entry.

C. DESIGN SURVEYS

COUNTY shall perform field surveys, ground control, photogrammetric mapping, digital terrain modeling, and

design field surveys.

D. PRELIMINARY GEOTECHNICAL INVESTIGATION

1. Preliminary Foundation Report

The preliminary foundation report is intended for use in the Advance Planning Study and Bridge Type Selection. ENGINEER shall collect existing subsurface information that is available for the project area including geological maps published by the California Division of Mines and Geology, and geological maps published by the United States Geological Survey.

ENGINEER shall review available data and shall provide seismic and geologic information and groundwater data for the preliminary plans and environmental documents. ENGINEER shall identify any seismic and geologic hazards that will impact the design and construction of this project. These findings will be documented in a report.

2. Phase 1 Environmental Site Assessment

ENGINEER shall produce an Initial Site Assessment (ISA) for the full and partial Right-of-Way (ROW) acquisition parcels located in the project footprint. The ISA will identify potential Recognized Environmental Conditions (RECs) within and adjacent to the ROW acquisitions.

3. Aerially Deposited Lead (ADL) Survey

ENGINEER shall prepare a workplan and perform a Preliminary Site Assessment (PSI) and Aerially Deposited Lead (ADL) Survey which will include sampling of near surface exposed soils on the shoulders of Jurupa Road and Van Buren Boulevard extending from the length of the project area collecting samples from 0.5-, 1-, 2- and 5 feet below ground surface. A statistical evaluation of the ADL data will be performed to classify the soils for waste disposition in a soil management plan. In addition, the PSI will include an assessment of ROW acquisitions for the new gas station location south of Jurupa Road including soil characterization for pesticides and lead around the foundation of the former structure and an assessment of the existing Chevron Gas Station located on the Northwest corner of Jurupa Road and Van Buren Boulevard for releases of petroleum hydrocarbons, volatile organic compounds, and lead from the existing tank field and dispenser islands. A hazardous materials survey of the gas station structures will be performed to identify asbestos containing materials, lead-based paints and universal waste rule components to aid in the development of demolition bidding documentation. No other investigative scope is proposed unless additional environmental conditions are

identified during the ISA process. If hazardous materials are encountered during the geotechnical field services, ENGINEER shall terminate work and notify COUNTY.

E. PLANNING STUDIES

ENGINEER shall identify up to three (3) appropriate geometric alternatives for development and analysis. The three alternatives that will be evaluated include an underpass and two overpass configurations, one with an interchange-type connection and one with a connector road.

The analysis for each alternative shall include:

1. Geometrics

   ENGINEER shall develop the horizontal geometry and a centerline profile. The geometry will include roadway line and curve data, typical sections, striping, and equestrian trail layout. It is assumed that the plans will be half-scale (11x17).

2. Draft Drainage Analysis

   ENGINEER shall prepare hydrologic and hydraulic analyses of the existing project site to support any required storm drain relocation and realignment.

3. Utility Impact Identification

   ENGINEER shall identify utility companies affected by the project and delineate utilities within the project's sphere of influence on the plans. The extent of impact shall be identified and a concept relocation route shall be identified for cost estimating purposes.

4. Structure Advance Planning Studies

   The Advance Planning Studies (APS) shall be prepared following the Caltrans OSFP guideline for APS to document the scope and cost of structure work in projects. An APS consists of one plan sheet for structure showing the basic structure layout details and cost estimate.

5. Track Geometrics

   The horizontal layout for the realignment of railroad tracks shall be prepared including but not limited to horizontal clearances, curvature, etc.

6. Estimate of Probable Cost

   ENGINEER shall prepare an Estimate of Probable Cost including construction, right-of-way, and administrative costs.

7. Schedule

ENGINEER shall prepare a schedule that covers design, permitting, right-of-way and construction.

8. Constructability

Prepare construction staging concepts and potential detour routing requirements. Focus will be on impacts to motorists, pedestrians, adjacent property owners, utilities and schedule.

9. Traffic Study

ENGINEER shall prepare a traffic study for the project area and vicinity. This study shall evaluate the existing peak hour intersections volumes, traffic forecasts for the year 2045, performance of intersection level of service calculations for key arterials and intersections in the area and traffic operations analyses of up to three (3) proposed alternatives to determine geometric requirements. Intersection vehicular traffic counts, including pedestrian, bicycle, bus, and trucks will be collected. Truck counts will be broken out with trucks transporting hazardous materials. Train counts will be conducted and broken out between freight and passenger. The intent behind obtaining these counts is to provide justification for the geometry and provide potential traffic impacts. Year 2045 traffic volumes will be developed from the City of Jurupa Valley General Plan Traffic Study (LSA Associates, November 2016).

Where current data is not available, ENGINEER will coordinate with the COUNTY to obtain the needed information. A field reconnaissance will be conducted to verify existing traffic control, geometry, traffic patterns and traffic operating conditions. Traffic counts, including ADT and peak-hour intersection turning movements, will be collected. Parking counts at businesses will be noted to evaluate the permanent loss of parking due to project geometrics and temporary loss during construction.

10. Landscape & Aesthetics

Landscape and aesthetics concepts shall be prepared per COUNTY and CITY requirements. The concepts will include an initial plant palette, planting design, hardscape and softscape finishes, structural treatments and view corridors. Materials board, sections and elevations will be prepared to illustrate the treatments.

F. VISUAL AIDS

ENGINEER shall produce before-and-after visual simulations within the project influence area (sites and photo viewpoints to be determined in consultation with COUNTY staff). Post-project representations will be prepared and will attempt to portray a realistic image of the project to viewers adjacent to the project. The images shall include the following:

1. Photosimulations

Photosimulations shall be prepared for each of the three alternatives from the same three viewsheds, a combination of aerial and street-level views.

2. Videos

A simulated fly-through video will be prepared for the preferred alternative from an aerial perspective that will provide a 360-degree view of the project. The base model will be developed upon a static aerial image with 3d rendered models for existing elements and the proposed project features.

G. ENVIRONMENTAL DETERMINATION AND ENVIRONMENTAL ISSUES

1. Environmental Coordination & Assistance

The ENGINEER will prepare a thorough project description defining the limits of project-related activities, which will be used as the basis for environmental technical studies conducted for this project. Pursuant to section 21080.13 of the California Environmental Quality Act (CEQA) and CEQA Guidelines Section 15282(g), the state legislature has determined that railroad grade separations shall be statutorily exempt from CEQA documentation and public disclosure requirements. Accordingly, a more formal CEQA environmental document is not required for this project. However, in certain instances and at the discretion of the sponsoring agency, it is sometimes prudent to undertake certain limited environmental studies in order to better understand and manage the consequences of a particular proposed railroad grade separation. Such is the case for the Jurupa Rd/UPRR Grade Separation, for which the Riverside County Transportation Department (COUNTY) has determined that certain selected studies should be undertaken. This scope of work responds to that decision.

As part of the scope of services, the ENGINEER will prepare a Notice of Exemption (NOE) and provide to the COUNTY for approval and submittal to the State Clearinghouse.

In addition, once biological, cultural, noise, and community impact reports have been completed and approved by the COUNTY, the ENGINEER will prepare a letter report summarizing the findings of these reports, as well as general information related to public outreach that was conducted in support of the project.

The Jurupa Valley/UPRR Grade Separation will not receive federal funds and therefore NEPA compliance is not required and Caltrans Local Assistance involvement is not anticipated. Unless otherwise specified, scope of work tasks will be completed by ENGINEER's staff.

2. Biological Resources Technical Report

The proposed biological resources technical report will address potential biological resource issues as required for conformance with the Western Riverside County Multiple Species Habitat Conservation Plan.

ENGINEER's biological resources technical report will include a review of literature sources, a field survey of the project site, and preparation of a single biological resources technical report that will emphasize sensitive animal and plant species along with special habitats. The report will identify potential impacts, if any, to sensitive resources, and it will suggest mitigation measures for those impacts.

The elements of this biological resources technical report will include: (a) conduct a literature search, (b) conduct a field review of the project site, (c) evaluate the proposed project in the context of the MSHCP (i.e., MSHCP conservation objectives, potential project-related inconsistencies, recommended mitigation measures), (d) prepare protocol-level burrowing owl and narrow endemic plant surveys and supporting letter reports and (e) prepare a letter report documenting the above.

Literature Search and Records Check

Prior to the field survey, ENGINEER will review previous relevant studies in the project vicinity then conduct a literature review to identify sensitive species known or reported in the project area. The literature under review will include the California Natural Diversity Data Base (CNDDB), the California Native Plant Society (CNPS) Electronic Inventory, and the Western Riverside County Multiple Species Habitat Conservation Plan.

The literature search shall also include the following:

- Special status species lists from the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS);
- Database searches of current versions of the California Natural Diversity Database (CNDDB) and the On-line Inventory of the California Native Plant Society (CNPS);
- The most recent applicable Federal Register listing package and critical habitat determination for federally listed Endangered or Threatened species potentially occurring within the project site;
- The most recent CDFW Annual Report on the status of California's listed Threatened and Endangered plants and animals;

- Other available biological studies conducted in the vicinity of the project site; and
- The approved Western Riverside County Multi Species Habitat Conservation Plan (MSHCP).

Field Survey

ENGINEER's biologists familiar with sensitive resources will conduct a general on-site survey that will include the following elements:

- Delineating and mapping habitat types
- A directed search for sensitive plant species that potentially could occur within the project site
- A general inventory of wildlife species
- Evaluating suitability of habitat for sensitive resources (i.e., desert tortoise) and others that may be identified during the literature search
- Preliminary identification of areas that may be considered wetlands, waters of the U.S., or streambeds as defined by the U.S. Army Corps of Engineers and the California Department of Fish and Wildlife
- Noting other pertinent features or conditions of the site and adjacent lands

The field survey shall also include the following:

After reviewing relevant information, the project area will be evaluated, with a thorough "walkover" covering all portions relevant to potential biological resource constraints. Detailed field notes will be complied including conditions, visible disturbance factors, species, habitats, and more general biological resource issues observed or detected. The site will be evaluated regarding the presence, absence, or likelihood of occurrence for all special status species, habitats, or more general biological resource issues potentially posing a constraint to the project through applicable laws and regulations. The study area is assumed to be the proposed project footprint plus 100 feet (where access is permissible).

MSHCP

ENGINEER biological resources technical report will determine whether the project will meet the conservation objectives of the MSHCP, identify any inconsistencies, and suggest measures to achieve consistency as necessary. All projects covered by the MSHCP, whether inside or outside the MSHCP Conservation Areas, must be reviewed for consistency with the MSHCP objectives for conservation of both plant and animal species.

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3. Narrow Endemic Plant and Burrowing Owl (BUOW) Surveys

Protocol-level surveys for narrow endemic plants and BUOW will be conducted and documented in letter reports. Information from these letter reports will be incorporated into the biological resources technical report. The project site lies within the MSHCP survey area for Burrowing Owl. A qualified biologist will perform an evaluation of the potential for Burrowing Owl (Athene cunicularia) to occur. All areas to be evaluated will be examined carefully for habitat characteristics and disturbance factors. This scope of work assumes that a focused survey for burrowing owl will be required and will cover up to 30 acres. The results of the focused survey for Burrowing Owl will be directly incorporated into the Biological Resources Technical Report. No narrow endemic plants or BUOW are anticipated to be found on the project site; however, if they are additional coordination and reporting may be needed. In addition, a MSHCP Consistency Determination or DBESP may be needed which has also been included as an optional task.

Report Preparation

ENGINEER will prepare a biological resources technical report summarizing the survey methodology and results, and including a description of the project area and methods used during the survey. The report also will include findings on sensitive species, an evaluation of potential sensitive habitat, plant and animal species present, and a general habitat description. The report will include graphics showing site location, sensitive species sightings, and sensitive habitat locations, as needed.

The report will analyze potential impacts of the proposed project on the biological resources and all identified sensitive species, if any. The analysis will include a discussion of the types and amount of habitats present on-site and the importance of these habitats in a regional context. The report will also assess cumulative impacts to these resources based on development in surrounding areas.

ENGINEER will identify any areas that may qualify as wetlands or streambeds. Depending on the configuration of the proposed project, formal wetlands delineation may be necessary for permitting requirements under applicable regulations. The biological resources technical report will survey these issues in general for planning purposes; however, this scope of services includes theses regulatory permitting-related services as optional tasks if they are needed in the future, including a formal wetlands/waters delineation, determination of jurisdiction, and processing of related regulatory permits.

ENGINEER will recommend mitigation measures for the impacts identified during the study, including

those to any sensitive biological elements present.

4. Water Quality and Erosion

The objective of the water quality and erosion study is to describe the existing water resources within the area, to determine if the potential impacts of the project on the water resources would be adverse and to identify feasible mitigation measures for protection of water quality. This study will discuss how the project would increase the amount of impervious surface area and potentially increase runoff volumes and the amount of water percolating into the local groundwater basin. It will also discuss beneficial uses of the surface water and groundwater in the area and will evaluate appropriate best management practices for mitigating potential pollutants generated from the project which could adversely affect the beneficial uses of the water resources. A PA/ED level Report shall also be developed at this stage of the project. This report shall comply with Caltrans, City and County requirements for Permanent Water Pollution Control at the site. Dewatering and site access will also be addressed along with the need for construction, source control, and treatment BMPs that satisfy current NPDES permits.

5. Floodplain

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. In accordance with E.O. 11988 (May 24, 1977), and DOT Order 5650.2, CONSULTANT will prepare documentation to determine whether any of the alternatives will affect a base floodplain. Base floodplain limits shall be determined by using FEMA floodplain maps, or, if one or more are not available for a particular area, on the best available information. A floodplain technical memorandum that describes the project hydrologic and hydraulic setting and flood plain issues will be prepared during this project phase. With no Federal funding and not on the state highway system, it is assumed that Floodplain Evaluation Report and a Location Hydraulic Study will not be required.

6. Noise Study Report (NSR)

The Consultant will prepare a Noise Study Report (NSR) evaluating the noise impacts and potential noise abatement/mitigation measures. The Noise Study Report (NSR) will be prepared in accordance with procedures specified by FHWA in Title 23, Section 772 (23 CFR 772), the Riverside County General Plan Noise Element Requirements (CNEL), the Riverside County Department of Public Health

(Office of Industrial Hygiene) noise standards and the applicable standards of adjacent jurisdictions.

Operational Noise Sources

On and off-site noise impacts from vehicular traffic will be assessed using the U.S. Federal Highway Traffic Noise Prediction Model (FHWA-RD-77-108)? The 24-hour weighted Community Noise Equivalent Levels (CNEL) will be presented in a tabular format.

Site Visit

Conduct a site visit to identify noise sensitive land uses and other features of the project area relevant to the noise study. A field noise study will be performed to quantify and assess existing noise conditions at the potential noise-sensitive areas. It is estimated that short-term (10 to 15 minutes duration) sound-level data will be collected at up to five (5) representative noise-sensitive locations throughout the area. In addition, a continuous 24-hour noise monitoring will be conducted at up to one location if a secure measurement location can be identified.

The Consultant will conduct traffic noise modeling related to the proposed project. The Consultant will model worst-noise-hour noise conditions at representative modeled receiver locations under existing conditions and design-year conditions with and without the proposed project. Traffic noise impacts of the proposed project under 23CFR772 will be assessed by determining if implementation of the project is projected to result in traffic noise levels under design-year conditions that approach or exceed the FHWA noise abatement criteria or if implementation of the project is predicted to result in a substantial Increase in noise at noise-sensitive uses.

7. Cultural Resources Report

A Phase I Cultural Resources study will be completed for the Project site that consists of (1) a cultural resources records search in the California Historical Resources Information System (CHRIS) at the Eastern Information Center (EIC) located at University of California, Riverside, to determine if any previously recorded cultural resources are known to exist within or near the project site; (2) a paleontological resources records search and literature review from the Vertebrate Paleontology Section of the Los Angeles County Museum that will provide information on geological formations, paleontological localities, the project's potential to adversely affect fossil resources, and mitigation recommendations; (3) a pedestrian survey of the project site; and (4) preparation of a Cultural Resources section of the Environmental Document that will include a review of previous research

conducted and resources recorded in the vicinity, an assessment of the project's potential to adversely impact such resources, and recommendations for mitigating any adverse impacts to resources to a less than significant level and in consideration of the questions contained in the cultural resources section in the CEQA Environmental Checklist Form (i.e., Appendix G of the State CEQA Guidelines).

Because Grade Separation projects are exempt from CEQA, Native American scoping under the consultation requirements of AB 52 (July 2015) is not required.

8. Community Impact Assessment Memorandum

A brief (i.e. 4-6 page) memorandum discussing potential community impacts associated with the proposed project as well as potential avoidance and minimization strategies will be prepared by the ENGINEER and submitted to the COUNTY for review and approval.

9. Preparation and Processing of Regulatory Permits

A qualified biologist will examine all relevant portions of the site and perform a routine-level delineation of the extent of potentially jurisdictional waters under both state and federal regulations. Evaluation for federal wetlands will follow the applicable methods in the 1987 manual from the Corps of Engineers and 2006 Arid West supplement from the Corps of Engineers, and the Rapanos Guidance (2007), along with subsequent supporting materials and applicable regulations, policy, and case law. The study area for this work will include the proposed project footprint along with a 50-foot buffer. The Biological Resources Technical Report will meet the standard requirements for a delineation report in the applicable regions of the Corps of Engineers, California Department of Fish and Wildlife, and Regional Water Quality Control Board. The field determination with the Corps of Engineers and Department of Fish and Wildlife is included. Regulatory permits from regulatory agencies for impacts to jurisdictional waters (CDFW, USACE, RWQCB) and/or riparian-riverine resources (MSHCP) are not anticipated at this time; however, the results from the required technical studies may include a determination that permit(s) may be needed. Therefore, these regulatory permitting-related services have been included as optional tasks.

Additionally, permits for the material site(s) and/or disposal/borrow site(s) may be required.

This project is not within the County coastal jurisdiction nor is it within state coastal jurisdiction or within state appealable jurisdiction.

10. Preparation and Processing of MSHCP Consistency Determination and DBESP

Prepare a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis document for submittal to the County of Riverside Environmental Programs Department (EPD). To ensure consistency with the requirements set forth in the Western Riverside County MSHCP, including survey requirements for inadequately covered species, the project area will be assessed, and geographic information systems (GIS) software will be used to map the site in relation to MSHCP areas, including criteria cells, conservation areas, and wildlife movement corridors and linkages; survey areas for plant, bird, mammal, and amphibian species; and the narrow endemic plant survey area. This task includes drafting the text, preparing graphics, internal review and quality control, incorporating one round of client comments, and producing a final report.

If Burrowing Owls or narrow endemic plant species occur within the area of impact, a DBESP for impact areas, as required by the MSHCP, will be prepared. The DBESP will include a discussion of unavoidable impacts associated with the project, including direct and indirect effects; a written description of the project design features and mitigation measures; and findings that although the proposed project would not avoid impacts, with proposed design and compensation measures, the project would be biologically equivalent or superior to that which would occur under an avoidance alternative.

H. PRELIMINARY ENGINEERING REPORT

ENGINEER shall compile the items of work from the Planning Studies, the Visual Aids and the Environmental Determination into a Preliminary Engineering Report and obtain approval from the COUNTY, City of Jurupa Valley and the UPRR. This report will include analysis of up to three (3) alternatives to be considered for selection for final design. The Preliminary Engineering Report will examine the various roadway alternative based upon forecast traffic volumes and impacts to the adjacent properties. The alternatives will be examined against the new topographic mapping to identify any additional details that might affect the feasibility of the alternatives. It is anticipated that sufficient data and information will be developed such that a preferred alternative will be selected early in the project.

The first step in the project development process will be to evaluate the conceptual alternatives for the grade separation evaluated in the Preliminary Engineering Report. Those elements to be considered will include:

- Safety
- Traffic Requirements (Existing and Future)

- Design Standards
- Right-of-Way Requirements & Impacts
- Project Costs
- Other Various Impacts

After completion of this initial step, the COUNTY will review the conceptual alternatives, the impacts and costs of each alternative and will select a preferred alternative that will be advanced and examined in greater detail.

I. GEOMETRIC APPROVAL DRAWINGS

Geometric drawings shall be prepared in accordance with Caltrans District 8 Geometric Approval Drawings (GAD). It is assumed that only the preferred alternative will be refined to the level of GAD, which shall include plans, typical sections, profiles and superelevation diagrams. The GAD will include appropriate signature blocks and traffic volume data shown on large sheets to clearly present the overall geometric design rather than on 11" x 17" sheets with match lines.

Any nonstandard design elements will be documented in the appropriate Fact Sheet documents and provided to the COUNTY for approval.

J. DESIGN DRAINAGE REPORT

A Design Drainage Report shall be prepared to document hydrologic and hydraulic calculations necessary to complete drainage improvement plans related to the grade separation project. Prior to developing hydrology calculations, a thorough field reconnaissance will be conducted. Available documents pertinent to this Design Drainage Report will be obtained from the COUNTY, City of Jurupa Valley and CALTRANS for review. The ENGINEER's analysis will be closely coordinated with the affected agencies, including the Riverside County Flood Control & Water Conservation District (RCFC & WCD). The Design Drainage Report will quantify the magnitude and frequency of design flows from adjacent areas to the PROJECT area, as well as the volumes attributable to the proposed improvements. It will also include a description of the proposed on-site drainage improvements and any treatment Best Management Practices (BMPs) to be incorporated into the design in order to satisfy agency water pollution control regulations.

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K. GEOTECHNICAL DESIGN REPORT

Geotechnical Investigations

The goals of this task are to document observations of subsurface conditions and collect soil samples for laboratory testing. ENGINEER shall perform the following boring program:

Design Element	No. of Borings	Approx. Depth (ft)
Bridge	6	80
Jurupa Road	10	15 TO 35
Van Buren	2	5
Felspar	4	15 TO 35

Large bulk samples will be collected for the near-surface soil. Relatively undisturbed and disturbed samples will be collected at approximately 5-foot intervals. The California sampler will be used alternating with the Standard Penetration Test (SPT) sampler. Three disturbed samples from each of the two deep borings will also be collected for grain-size distribution; results of the grain-size distribution will be used for scour analysis.

Laboratory Testing.

The field boring logs shall be reviewed and analyzed to select bulk and undisturbed samples for laboratory testing. The following laboratory tests shall be performed:

In-place moisture and unit weight	Maximum density
Grain-size analysis	Corrosivity
Collapse potential	Sand Equivalent
Direct Shear	R-Value

Additional tests may be necessary depending on the subsurface conditions. All tests shall be conducted in general accordance with Caltrans Test Methods and/or ASTM Standards.

Engineering Analyses

Results obtained from the field and laboratory testing program shall be used to establish an idealized soil profile and strength parameters for bridge foundation design, and slope stability and settlement calculations for the approaches. ENGINEER shall provide information on remediation measures if the site soils are

corrosive to concrete or steel structures. R-value shall be used to determine composite pavement structural sections using Traffic Indices.

Report Preparation

ENGINEER shall prepare a Geotechnical Report for foundation design of the bridge, and roadway pavement and embankment.

ENGINEER's estimate for geotechnical services shall be based on the following assumptions:

- All soil borings shall be drilled using a hollow-stem auger drill rig and there is no restriction on time of drilling; traffic control will be required on some of the soil borings.
- No drumming and testing of soil cuttings. Soil cuttings shall be used for backfilling boreholes and cold patch asphalt shall be used to cover the borehole at existing traffic lanes.
- Destructive testing (AC coring) will be performed for the overlay thickness, if required.
- Boreholes will be located at least 25 feet from the nearby railroad tracks so that an encroachment permit and railroad liability insurance shall not be required from the railroad company.
- ENGINEER shall secure a no-fee encroachment permit from CITY; any other permit(s) if required shall be secured by COUNTY.
- Per AREMA, seismic design is based on 3 return periods. If used, COUNTY to provide the return periods.

L. RIGHT-OF-WAY MAPS

All right-of-way map preparation will follow COUNTY procedures. The ENGINEER shall coordinate with COUNTY Survey Division to ensure that all requirements are followed. The ENGINEER shall verify the COUNTY ground controls for the preparation of a Survey Control sheet within the right-of-way requirement map.

The ENGINEER shall submit 2 sets each of preliminary right-of-way requirement maps to the COUNTY for review and comment. It is anticipated that COUNTY will use the approved right-of-way requirement maps to prepare the Legal Descriptions, Plats and Right-of-way Maps to acquire the necessary right-of-way. The COUNTY will be responsible for completion of land acquisition activities.

M. AGREEMENTS

The ENGINEER shall provide technical support to the COUNTY as required for obtaining cooperative agreements, construction and maintenance (C&M), CPUC approval and escrow agreements.

N. UTILITY COORDINATION

The intent of the County of Riverside (COUNTY) is that the services of the ENGINEER shall be complete and "turn-key" with respects to all utility coordination matters, including complete coordination for the protection and relocation of existing facilities as described herein, as well as coordination, preparation of applications, and all other matters pertaining to the relocation and installation of water and electric services, except for those procedures that must be performed by COUNTY.

ENGINEER shall designate dedicated staff who shall be responsible for all coordination work related to utilities for Project, including but not limited to relocations of existing trunk and mainline facilities, installation of new trunk and mainline facilities, relocation of existing electric and water services, and installation of new electric and water services.

ENGINEER shall coordinate with utility owners and COUNTY utility coordination staff with respect to all utility related matters. ENGINEER shall provide copies of all correspondence with utility companies and other utility related information to the COUNTY. Correspondence, as described herein, shall be prepared by ENGINEER for either ENGINEER or COUNTY signature, as appropriate, and as directed by the County's Project Manager. County forms shall generally be utilized by ENGINEER.

ENGINEER shall coordinate with COUNTY staff to obtain record copies of utility maps from each utility owner within the project limits for existing and/or proposed utility facilities. ENGINEER shall include mapping and/or exhibits that clearly define the project limits as part of the requests for utility information.

ENGINEER shall Identify utility companies affected by the project and delineate utilities within the project's sphere of influence on the plans. ENGINEER shall prepare preliminary plans, which shall include all existing utilities (above ground and below ground) identified by location, size, type, and owner, as appropriate. ENGINEER shall check horizontal and vertical clearances for utilities and coordinate design with the various utility companies to address conflicts. In addition to information provided by the owning utility companies and through research of other record maps, field surveys shall be used to locate utility features such as manholes, valves, fire hydrants, poles, risers, etc., which shall be reflected on the plans.

If it is necessary to pothole existing utilities at critical locations, ENGINEER shall coordinate with COUNTY staff to arrange with the respective utility owner to pothole its facility (at utility owner or COUNTY cost). ENGINEER shall coordinate the use of field survey crews to locate potholed utilities by coordinates and elevations based on the project's survey controls.

Known utility conflicts shall be shown on the plans with construction notes indicating action to be taken and by whom. Inventory numbers of poles, vaults and other surface facilities shall be shown on the plans for those facilities that have such numbers attached to the facility and as provided on the owner's inventory maps.

ENGINEER shall send preliminary design plans through COUNTY staff to owning utility companies within the project limits with requests for review and comments on the plans relevant to their respective facilities, and with requests for other project specific information.

ENGINEER shall monitor responses of utility notices received and make recommendations for mitigating conflicts. ENGINEER shall provide written responses to utility companies with regard to stated concerns and conduct design coordination meetings with utility companies as needed. Unresolved issues shall be brought to the attention of the COUNTY PROJECT MANAGER and County utility coordination staff as early as practical. Utility conflict issues shall be resolved prior to the completion of the final design plans as follows:

- ENGINEER, through COUNTY staff, shall request and obtain a written acknowledgement of any conflicts from the respective utility owners.
- Reasonable efforts shall be taken to accommodate utility company requests for minor design changes to accommodate their facilities. ENGINEER understands that the utility companies are generally operating within the COUNTY right-of-way, but may have prior rights to that of the COUNTY in some cases.
- ENGINEER, through COUNTY staff, shall Issue County format mid-design letter with 65% plans which requests utility owner to initiate relocation engineering, funding, property rights checks, etc.
- ENGINEER shall monitor each utility owner that has conflicting facilities and shall obtain relocation plans and other relevant information from utility owner. ENGINEER shall review relocation plans for conformance with the requirements of the project.• ENGINEER shall coordinate inclusion of special provisions in County's bid documents for adjustments and relocations of utility facilities as alternate bid items, if requested by the owning utility. Said work may require that cooperative agreements be prepared by COUNTY between the County of Riverside and the owning utility companies. Engineer shall provide information and exhibits as required to support the preparation of cooperative agreements, if needed.
- ENGINEER shall conduct utility coordination meetings, as needed, regarding adjustments and

relocations, to resolve conflict issues, and with respect to performing work for utility companies by COUNTY contractors.

- For utility conflicts that require relocating, COUNTY staff will submit the official notice / order to the utility companies to relocate conflicting facilities.
- ENGINEER shall make recommendations for special provision language with regard to utility issues, recommendations for construction windows of time for utility relocation activities, recommendations for inclusion of utility bid items, etc.

If new water service will be needed, ENGINEER shall provide support as directed by COUNTY. Such support includes, but is not limited to, the following responsibilities:

- Obtain approved water service point from the serving water company for each water meter to be installed, and identify requirements that the serving water company has for the provision of service. Coordinate with water company with respect to design issues associated with the provision of service. Coordinate with serving water company to fulfill serving water company requirements as appropriate, including preparation of all utility company forms and submission to County for execution. Advise COUNTY of requirements that are beyond the scope of the ENGINEER (e.g.: execution of applications for service). However, ENGINEER is expected to provide turn-key service.

Deliverables:

- Irrigation design to show preferred service location.
- Application to water purveyor for water service point, including any and all water use calculation information and landscaping plans as required by Water Company.
- Obtain service address from appropriate municipality.
- Obtain approved water service plan from water purveyor.
- Staging plans for relocation of water meters.
- Application to water purveyor for water service, including coordination with account holder for signatures, payments of fees, etc.
- Service spreadsheet and exhibit as described herein.
- Plans, special provisions, and Water Company drawings, details and requirements for inclusion in bid package.

Construction support.

If new electrical service will be needed, ENGINEER shall provide support as directed by COUNTY. Such support includes, but is not limited to, the following responsibilities:

- Obtain approved electrical service point from the serving electric company for each service equipment enclosure to be installed, and identify requirements that the serving electric company has for the provision of service. Coordinate with electric company with respect to design issues associated with the provision of service. Coordinate with serving electric company to fulfill serving electric company requirements as appropriate, including preparation of all utility company forms and submission to County for execution. Advise COUNTY of requirements that are beyond the scope of the ENGINEER (e.g.: execution of applications for service). However, ENGINEER is expected to provide turn-key service.
- Serving electric company shall be notified that Electrical Safety Orders clearance requirements must be met (10' radial clearance between 12kv overhead electrical facilities and signal poles and mast arms, and greater clearance for higher voltage electrical facilities). Show such clearance conflicts on the plans with construction notes.
- Submit plans indicating proposed service connection locations to serving electric company for approval (service equipment enclosure, conduit runs, riser quadrant, pole number, and connections to vaults as appropriate).
- Provide detailed load calculations to serving electric company, with a copy to the COUNTY, which provides calculations of the normal and maximum expected loads.

For both water and electric service, ENGINEER shall prepare a spreadsheet of the tasks required to obtain service, in accordance with the sample provided by, or as approved by, the Transportation Department, which shall be utilized as an ongoing list of action items and a dynamic record of actions completed, throughout the development of the project. The spreadsheet shall be supplemented with a map exhibit of the project footprint with the locations of all services plotted and referenced to the spreadsheet. ENGINEER's Project Manager shall arrange for a second qualified person to periodically review work of the ENGINEER staff that is assigned this responsibility, and that person shall independently verify the accuracy of the information on a regular basis. The ENGINEER agrees that any costs that are incurred by the County resulting from incomplete or inadequate arrangements for water or electric service, including relocations or removals of existing services, will be the funding responsibility of the ENGINEER.

Deliverables:

- Electrical design to show preferred service location.
- Application to electric purveyor for electric service point(s), including any and all electricity use calculation information and electrical plans as required by electric company.
- Obtain service address from appropriate municipality.
- Obtain approved electric service plan from electric purveyor.
- Staging plans for relocation of electrical service meters.
- Application to electric purveyor for electric service, including coordination with account holder for signatures, payments of fees, etc.
- Service spreadsheet and exhibit as described herein.
- Plans, special provisions, and electric company drawings, details and requirements for inclusion in bid package.
- Construction support.

Potholing of both high and low risk utilities, including all utilities that could be in conflict with the improvements, shall be anticipated by the ENGINEER. The ENGINEER shall prepare potholing exhibits as needed to adequately locate underground utilities, shall enter into a contract with a licensed contractor for the potholing of utilities, and shall ensure that appropriate permits are obtained from all appropriate jurisdictions prior to the start of work.

The contract between the ENGINEER and the potholing contractor shall require that the Contractor's insurance policies name the ENGINEER, the County of Riverside, and any other affected jurisdictions as additionally insured with respect to the contractor's general liability, excess liability and automobile liability policy. The contractor shall meet the insurance requirements, as set forth elsewhere in this agreement, except that the contractor will not be required to provide professional liability coverage. Review and approval of the Contractor's insurance certificate and endorsements by the County's representative shall be obtained prior to the start of potholing work.

The ENGINEER shall evaluate the potholing data, and shall include the information on the utility plans in table format, with numbered or letter references to the location of the location of the potholes. The ENGINEER shall determine whether or not the facilities are in conflict, and the limits of the conflict, both of which shall be shown on the utility plans with construction notes.

ENGINEER shall assist with the resolution of utility related issues that may arise during the bidding process and during construction, including design modifications as needed and as approved by the COUNTY PROJECT MANAGER.

Specific issues and utility company requirements may result in deviation from the procedures outlined herein.

If and as applicable, ENGINEER shall perform all tasks required with respect to utilities to enable certification of right-of-way for the project. Certification of the utility section of the Right-of-Way certification shall be in accordance with Chapter 14 of the Caltrans Right-of-Way Manual, and shall comply with applicable Federal and State requirements. ENGINEER shall be fully knowledgeable in the requirements to certify Right-of-Way with respect to utilities, and shall schedule project activities accordingly.

ENGINEER shall communicate and coordinate with County's Project Manager and Utility Unit, and shall request and coordinate any necessary actions of the County which cannot be performed by ENGINEER, such as agreement execution and document signatures. ENGINEER shall allow enough time in the project schedule for completion of tasks by County.

Upon completion of right-of-way certification, ENGINEER shall transmit documents to Caltrans if and as requested, including Notices to Owners, Utility Agreements and relocation plans.

Upon completion of right-of-way certification, ENGINEER shall prepare utility liability package files for Caltrans, if appropriate, and Construction Manager to include: Project Engineer's Certification of Utility Facilities, Right-of-way Certification, Notices to Owners, Utility Agreements, Engineer's certifications that owner's plans comply with the needs of the project, Caltrans relocation plan approvals if appropriate, relocation plans, and no-conflict letters. Said files shall be neatly organized by utility owner.

ENGINEER shall also provide to County a complete file as described above, but which also includes the property rights documents and prior rights documentation, communication diaries, requests for utility plans, liability claim letters and responses, structures letters, and all other relevant documents. Said files shall be neatly organized by utility owner.

O. MISCELLANEOUS DESIGN SUPPORT

1. Design Exceptions

   If design exceptions are deemed necessary, these will be identified early in the PROJECT and the ENGINEER will coordinate with COUNTY and CITY to receive approval as a part of the GAD approval.

2. Traffic Management Plan

The ENGINEER shall prepare and submit a Traffic Management Plan (TMP), for the preferred alternative, for COUNTY and CITY review and approval. The TMP Report shall describe various strategies that shall be implemented for alleviating or minimizing work-related traffic delays by the effective application of traditional traffic handling practices and innovative combination of various strategies. These strategies may include, but are not limited to, public awareness campaigns, motorist information, incident management, construction methods, demand management and alternate route planning.

The TMP will evaluate the project construction impacts on the parking of nearby businesses and proposed necessary parking mitigations.

3. Track Design

The ENGINEER shall provide design for the realignment of railroad industry lead track(s) in conformance with UPRR standards and approval. It is assumed that mainline tracks will not require relocation or shoofly.

ARTICLE AIV • STRUCTURES

A. STRUCTURE TYPE SELECTION AND BRIDGE GENERAL PLANS

The culmination of Advance Planning Study will lead to the submittal and presentation for review and approval of a General Plan for the proposed structures. This process will be considered the "Structure Type Selection" process and no further design work shall be performed until written approval of the structure types is received from COUNTY. A Type Selection Review Meeting will be held with the COUNTY in which the ENGINEER shall be prepared to discuss and provide information on foundation requirements, hydrological requirements, falsework requirements, seismic and aesthetic considerations, traffic handling, construction Copies of the proposed General Plans, General Plan Estimates, Type Selection Memos and a Vicinity Map shall be submitted for review two weeks prior to the Structure Type Selection Review Meeting. The results of the meeting will be summarized in writing by the ENGINEER within two weeks following the meeting. This scope of services is based upon a five-span bridge structure with cast-in-place superstructure with exception of span over the UPRR mainline tracks being a pre-cast concrete girder. Upon selection of a preferred alternative and bridge type, this scope of services and associated level of effort will be reevaluated.

B. GEOTECHNICAL COORDINATION AND FOUNDATION REPORT

Foundation design and construction recommendations shall be included in the geotechnical report as described in Article AIII, Item "K".

C. STRUCTURAL DESIGN AND CALCULATIONS

Following the Type Selection Meeting and approval of the General Plans, structural design calculations shall be prepared in conformance with Caltrans design specifications and procedures. All plans and calculations shall conform to CALTRANS and AREMA requirements and shall be made available for review upon request.

The Bridge Design Specifications, California Department of Transportation, DOS current editions shall be used as design criteria.

Bridge Plans shall be prepared in accordance with the Bridge Design Details Manual, Bridge Design Aids Manual and Bridge Memos to Designers, California Department of Transportation, DOS current editions and AREMA Manual.

The scope of this work shall include but not be limited to:

- Construction details for each design shall be prepared on DOS format plan sheets. These standard drawings and Standard Plans shall be incorporated into the Contract Plans where applicable.
- Each plan sheet shall be signed and stamped by the responsible design engineer who is registered in the State of California. Each design shall be independently checked by a Professional Engineer registered in the State of California.

D. INDEPENDENT CHECK REVIEW AND QUALITY CONTROL

An Independent Check review shall be conducted as soon as the initial design is complete. Checking shall include the preparation of an independent set of structural design check calculations and review of the plans and details. The checker and the designer will resolve any disagreements and concur on any revisions to the contract plans.

E. STRUCTURE SPECIFICATIONS & ESTIMATES

Special Provisions shall be prepared for items not covered by the CALTRANS Standard Specifications or Standard Special Provisions (SSP's). The ENGINEER shall edit Standard Special Provisions (SSPs) and prepare Structure Special Provisions specific to this project which will be incorporated into the final PS&E. These Structure Special Provisions shall be prepared, signed and stamped by a Professional Engineer registered in the State of California.

The ENGINEER shall prepare quantity calculations for bid items and prepare the bridge cost estimate. All contract items used shall be substantiated by calculations. Quantity calculations shall be neat and orderly

and shall show all sketches, diagrams and dimensions necessary to allow them to be independently used by field inspectors. All quantity calculations shall be independently checked and substantiated with calculations. The Construction Cost Estimate shall be prepared using the latest available Caltrans cost data, COUNTY cost data and actual recent construction costs in the PROJECT area.

F. INITIAL STRUCTURE PS&E (65% UNCHECKED PLANS)

The Initial (65% Unchecked Plans) structure PS&E shall be compiled and submitted for review to the COUNTY, Caltrans DOS and Union Pacific Railroad Company. These documents will be submitted to the County in electronic "pdf" format.

G. INTERMEDIATE STRUCTURE PS&E (90% CHECKED PLANS)

The Intermediate (90% Checked Plans) structure PS&E shall be compiled and submitted for review to the COUNTY and Union Pacific Railroad Company. These documents will be submitted to the County in electronic "pdf" format.

H. DRAFT FINAL STRUCTURE PS&E (95%)

The Draft (95%) structure PS&E shall be compiled and submitted for review to the COUNTY and Union Pacific Railroad Company. This shall include for each bridge:

One set of reproducible and seven sets of "blueline" plans, two copies of design calculations and design check calculations, three sets of quantity calculations and Marginal Estimates and three sets of edited Structure Special Provisions. (One copy of each shall be returned with comments). The package shall be accompanied by a Structures PS&E checklist. These documents will be submitted to the County in electronic "pdf" format.

I. FINAL STRUCTURE PS&E

The Final structure PS&E shall incorporate review comments from the COUNTY, UPRR and other affected agencies. The ENGINEER shall provide all necessary documents in a bid-ready form. COUNTY shall advertise, award and administer the construction contract for this PROJECT.

The ENGINEER shall deliver the following documents to COUNTY:

1 set of final Structure Special Provisions

1 copy of final quantity calculations and estimate

1 copy of final design calculations

1 copy of design check calculations (upon request)

1 PDF copy of all required documentation

2 Resident Engineer's Files (structures information)

ARTICLE AV • ROADWAY

The title sheet for specifications and reports, and each sheet of plans, shall bear the professional seal, certificate number, registration classification, expiration date of the certificate and signature of the Professional Engineer responsible for their preparation. All roadway plans shall also use single sheet files.

The basis of this scope of services is a roadway overpass with a horizontal alignment on Jurupa Road that is offset to the south and includes a connector road to Van Buren Boulevard and an at-grade intersection with Felspar Street. Upon selection of a preferred alternative and bridge type, this scope of services and associated level of effort will be reevaluated. The following is a summary listing of drawing types that shall be prepared as part of the roadway PS&E:

A. BASIC ROADWAY PLANS

- Title Sheet/General Sheets
- Plan & Profile Sheets
- Horizontal Control Plans
- Removal Plans
- Typical Sections
- Construction Details
- Grading Plans
- Planting & Irrigation Plans

B. CALCULATIONS

The following calculations shall be provided:

- Geometric Traverse and right-of-way (ROW)
- Profile
- Other Quantities
- Grid Grades
- Earthwork Quantities

C. DRAINAGE PLANS

CONSULTANT shall perform hydrology and hydraulic studies to obtain and provide design solutions, which will remove surface runoff from the area of the improvements. A Drainage Report describing the hydraulics and hydrology of the proposed systems and including drainage area maps and drawings shall be developed at the 65% and 95% completion levels. It is assumed that modification to the Bly Channel or the triple box culvert crossing is not required. The NPDES report will updated at the PS&E level. For the 65% and 95% completion level, the following roadway drainage related drawings shall be developed:

- Storm Drain Plans

- BMP & Erosion Control Plans

D. TRAFFIC AND ELECTRICAL PLANS

The following list of drawing types and the number of sheets estimated shall include:

- Street Lighting Plans
- Signal Plan
- Detour Routing Plan
- Stage Construction and Traffic Handling
- Striping and Signing Plans
- Bridge Lighting Plans

E. MISCELLANEOUS PLANS

- Utility Composite Plans
- Track Plans
- Right-of-way Requirements
- Retaining Wall Plans

F. INTERMEDIATE REVIEWS

Roadway, drainage, traffic and miscellaneous plans shall be submitted for review to the COUNTY at the 65%, 95% and 100% complete stage. A pre-65% submittal shall be prepared and submitted that consists of "skeletal" layouts at approximately 30% completion to confirm appropriate direction of the designs and plan set. The ENGINEER shall submit the intermediate plans electronic "pdf" format to the County for review. Roadway cross sections, and grid grades shall be submitted only at the 100% complete submittal stage. This task includes the tracking and resolution of comments received on each of the milestone submittals.

G. SPECIFICATIONS AND ESTIMATE

Specifications and Special Provisions shall be prepared for items not covered by the Caltrans Standard Specifications or Standard Special Provisions and submitted to County in electronic "pdf" format for intermediate reviews.

The Roadway Construction Cost Estimate shall be prepared using the latest available Caltrans cost data, COUNTY cost data and actual recent construction costs in the PROJECT area. The cost estimates will be submitted to the County in electronic "pdf" format for intermediate reviews.

H. QUALITY CONTROL

The Plans, Specifications and Estimate (PS&E) shall be subject to quality control reviews before submittal. These reviews shall assure conformance to the required standards and criteria, such as Caltrans and COUNTY, as well as minimize typographical omissions. This task accounts for the quality assurance, internal team audits and external audits. Efforts related to the quality control efforts, such as discipline and interdiscipline reviews, are included within each element of work.

I. DRAFT PS&E (95% COMPLETE)

The roadway plans, revised to incorporate Quality Control review comments, shall be submitted to the COUNTY for review and comment in electronic "pdf" format. These will include:

- Plans
- Special Provisions
- Design Calculations
- Roadway Quantities and Cost Estimate

One safety/constructability review meeting shall be held at the 95% PS&E stage.

J. FINAL PS&E (100% COMPLETE)

The final PS&E will incorporate applicable comments from the draft PS&E received from the COUNTY, Caltrans and other affected agencies. The ENGINEER will provide the necessary final PS&E documents in a bid-ready form. PROJECT files and the Project Engineer's/Resident Engineer's file will also be submitted with the final PS&E. The entire PROJECT, which will be prepared in MicroStation format, will be submitted upon final approval of the PS&E.

ARTICLE AVI • CONSTRUCTION BIDDING PHASE

Bidding procedures will be the responsibility of COUNTY. While the PROJECT is being advertised for bids, all questions concerning the intent shall be referred to COUNTY for resolution. In the event that the items requiring interpretation in the drawings or specifications are discovered during the bidding period, said items shall be analyzed by the ENGINEER for decision by COUNTY as to the proper procedure required. Corrective action taken will either be in the form of an addendum prepared by the ENGINEER and issued by COUNTY or by covering change order after the award of the construction contract.

ARTICLE AVII • CONSTRUCTION SUPPORT PHASE

Upon award of the construction contract, ENGINEER will proceed with the Construction Support Phase services required by this contract.

A. ENGINEER shall attend the pre-construction meeting with the successful construction contractor upon notification by the COUNTY.

B. ENGINEER shall be available to visit to the jobsite for on-site review of construction and other visits to the jobsite as requested by the COUNTY to resolve any discrepancies in the contract documents. ENGINEER shall bring to the attention of the County Resident Engineer any defects or deficiencies in the work by the construction contractor, which the ENGINEER may observe. ENGINEER shall have no authority to issue instructions on behalf of the COUNTY or to deputize another to do so. All agreements

shall be between the COUNTY and its construction contractor. These provisions shall not be construed as making the ENGINEER responsible for failure of the construction contractor to carry out the work in accordance with the contract documents nor the construction means or methods or techniques, sequences, procedures or safety programs in connection with the work.

C. ENGINEER shall draft responses to contractor inquiries and RFIs as requested by the COUNTY within two working days of receipt.

D. ENGINEER shall review shop drawings and RFI's submitted by the construction contractor (falsework review is not included). ENGINEER shall complete shop plan reviews within two weeks of receipt.

E. During construction, the ENGINEER shall furnish all necessary additional drawings for correcting and change orders required by errors and omissions of ENGINEER. Such drawings will be requested in writing from the ENGINEER by COUNTY and shall be at no additional cost to the COUNTY. The original drawings and contract wording for change orders shall be submitted to the COUNTY for duplication and distribution. Drawings and change orders required due to actions of the COUNTY, which are beyond the scope of the ENGINEER's responsibilities, shall be considered extra services.

F. ENGINEER shall prepare and deliver to the COUNTY the "As-Built" plans within two months of completion of structure construction. COUNTY shall provide a single complete red-line set of drawings from the contractor noting changes required on the plans. Red-lines shall be complete with no references to other documents such as RFI's, change orders, or submittals.

ARTICLE AVIII • COMPUTER FACILITIES

A. CALCULATIONS

All roadway calculations will be performed using InRoads. The structural analyses and design will be performed by using STAADIII, GTSTRUDL, SEISAB, PCBRIDGE, PCYIELD, PCFOOT, PCBENT and PCABUT programs. The data files and the results will be submitted electronically on compact discs along with a hard copy.

B. COMPUTER AIDED DRAFTING AND DESIGN (CADD)

All plans will be prepared using MicroStation format in conformance with the latest Caltrans CADD Users Manual, Caltrans Drafting Manual and County CADD Standards to assure complete compatibility.

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ARTICLE AIX • VALUE ENGINEERING

A value engineering review may be undertaken as early in the Project Development process as applicable. This will assist in identifying possible cost reduction measures. The Value Analysis Study effort will involve review by senior staff of the ENGINEER as well as peer review by the COUNTY and other agency staff.

APPENDIX B • ARTICLE BI • INTRODUCTION

The Engineer shall perform the covenants set forth in Appendix A, Scope of Services in accordance with the performance requirements of Article V of this agreement and with the following Schedule of Services. All Covenants set forth in this agreement shall be completed by December 31, 2023, unless extended by supplemental agreement.

Funding for this project is being provided by SB 132 which requires that all funding be encumbered by June 30, 2023. Funding may be lost if not encumbered by this deadline and therefor time is of the essence.

A. PHASES

This contract is divided into the following 4 phases:

I. Preliminary Engineering and Environmental

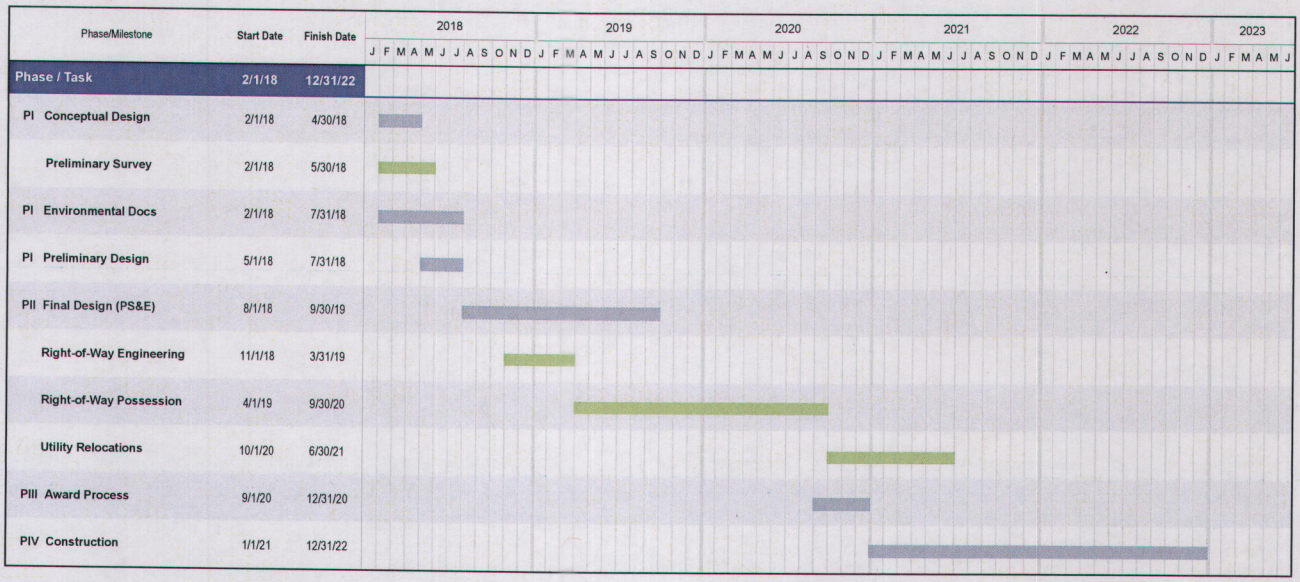
II. Plans, Specifications & Estimates

III. Bid Support

IV. Construction Support

B. GANTT CHART

The chart provided below graphically illustrates the sequencing and completion time for the project.



Satisfactory performance and completion of the Services under this Agreement shall be compensated based upon actual costs plus a fixed fee. COUNTY will reimburse ENGINEER for actual costs (including labor costs, overhead, and other direct costs) incurred by ENGINEER in performance of the work, exclusive of any fixed fee. A prorata portion of ENGINEER's fixed fee shall be included in the progress payments. Actual costs shall not exceed the estimated costs without prior written agreement between COUNTY and ENGINEER.

APPENDIX C • ARTICLE CI • ELEMENTS OF COMPENSATION

Compensation for the Services will be comprised of the following elements: DIRECT LABOR COSTS, FEES, OTHER DIRECT COSTS and OUTSIDE SERVICES.

A. DIRECT LABOR COSTS

Direct Labor costs shall be paid in an amount equal to the Direct Salary Costs plus the product of the Direct Salary Costs and the Multiplier which are defined as follows:

1. Direct Salary Costs

   Direct Salary Costs are the base salaries and wages actually paid to the ENGINEER's personnel directly engaged in performance of the Services under the Agreement. Salary rates for specific employees shall be provided on the Fee Proposal Worksheets included in ARTICLE CV • COST PROPOSAL. All Salary rates shall be in effect for three years following the effective date of the Agreement. Thereafter, ENGINEER may request adjustments to individual rates on an annual basis. ENGINEER shall notify COUNTY in writing requesting a change in the rates included herein. All adjustments to rates shall be subject to approval by the County Director of Transportation, or his designee.

2. Multiplier

   The Multiplier to be applied to the Direct Salary Costs to determine the Direct Labor Costs is the sum of the following components:

   PAYROLL ADDITIVES.....48.27 %

   The decimal ratio of Payroll Additives to Direct Salary Costs. Payroll Additives include all employee benefits, allowances for vacation, sick leave, and holidays, and company portion of employee insurance and social and retirement benefits, all federal and state payroll taxes, premiums for insurance which are measured by payroll costs, and other contributions and benefits imposed by applicable laws and regulations.

   OVERHEAD COSTS..... 97.96 %

The decimal ratio of allowable Overhead Costs to ENGINEER firm's total direct salary costs. Allowable Overhead Costs include general, administrative and overhead costs of maintaining and operating established offices, and consistent with established firm policies, and as defined in the Federal Acquisitions Regulations, Part 31.2.

TOTAL MULTIPLIER.....146.23 %

(sum of Payroll Additives and Overhead Costs)

B. FIXED FEE

1. The Total Fixed Fee payable to the ENGINEER is $385,717.96 (PRIME CONSULTANT Profit)
2. A pro-rata share of the Fixed Fee shall be applied to the total Direct Labor Costs expended for services each month, and shall be included on each monthly invoice.

C. OTHER DIRECT EXPENSES

Additional Direct Costs, directly identifiable to the performance of the services of this Agreement, shall be reimbursed at the rates below, or at actual invoiced cost.

Rates for identified Additional Direct Costs are as follows:

Item	Rate	Unit	Budget
Travel/Mileage	$0.54	Mile	
Traffic Counts		Actual Cost	$18,000
Printing, Plotting & Copies		Actual Cost	$5,000
Exhibits, Plotting & Mounting		Actual Cost	$2,514

Travel by air and travel in excess of 100 miles from ENGINEER's office nearest to COUNTY's office must have COUNTY's prior written approval to be reimbursed under this Agreement.

D. OUTSIDE SERVICES

Outside services shall be paid in accordance with the cost proposals submitted by each Subconsultant. Billings for Outside Services shall be submitted along with the Prime Consultant's monthly Progress Report/Billing submittals and shall be in conformance with the COUNTY Engineering Services Invoicing Procedures.

ARTICLE CII • DIRECT SALARY RATES

Direct Salary Rates, which are the range of hourly rates to be used in determining Direct Salary Costs, are given below and are subject to the following:

A. PREMIUM OVERTIME

Direct Salary Rates shall be applicable to both straight time and overtime work, unless payment of a premium for overtime work is required by law, regulation or craft agreement, or is otherwise specified in this Agreement. In such event, the premium portion of Direct Salary Costs will not be subject to the Multiplier.

B. SALARY RATES

All Salary rates shall be in effect for three years following the effective date of the Agreement. Thereafter, ENGINEER may request adjustments to individual rates on an annual basis. ENGINEER shall notify COUNTY in writing requesting a change in the rates included herein. All adjustments to rates shall be subject to approval by the County Director of Transportation, or his designee.

POSITION OR CLASSIFICATION	MAXIMUM HOURLY RATES	
Project Manager	$132.00	hour
DPM/Lead Civil	$91.00	hour
Quality Manager	$74.00	hour
Lead Traffic	$110.00	hour
Technical Manager	$110.00	hour
Technical Lead	$84.00	hour
Sr. Project Engineer	$74.00	hour
Project Engineer/Planner	$60.00	hour
Engineer/Planner III	$46.00	hour
Engineer II	$40.00	hour
Engineer I	$37.00	hour
CADD-Civil	$49.00	hour
Project Analyst	$49.00	hour
Administrative Assistant	$32.00	hour
Lead Structures	$110.00	hour
Structures Sr. Project Engineer	$76.00	hour
Structures Project Engineer	$65.00	hour
Structures Engineer III	$53.00	hour
Structures Engineer II	$51.00	hour

CADD-Structures	$65.00	hour

The above rates are for ENGINEER only. All rates for subconsultants to ENGINEER will be in accordance with the subconsultants cost proposal.

ARTICLE CIII • INVOICING

ENGINEER shall submit invoices in accordance with the Engineering Services Agreement ARTICLE VI • COMPENSATION and with the following requirements.

1. Charges shall be billed in accordance with the terms and rates included herein, unless otherwise agreed in writing by the County Contract Administrator.
2. Base Work and Extra Work shall be charged separately, and the charges for each Phase listed in Appendix B, Schedule of Services, shall be listed separately. The charges for each individual assigned under this Agreement shall be listed separately.
3. Charges of $500.00 or more for any one item of Additional Direct Costs shall be accompanied by substantiating documentation such as invoices, telephone logs, etc.
4. Each invoice shall indicate payments to DBE subconsultants or supplies by dollar amount and as a percentage of the total invoice and shall state the DBE goals as a percentage of Total Agreement Value.
5. Each invoice shall bear a certification signed by the Engineering Contract Manager or an officer of the firm which reads as follows:

   I hereby certify that the hours and salary rates charged in this invoice are the actual hours and rates worked and paid to the employees listed.

ARTICLE CIV • PAYMENT

Progress payments shall be made in accordance with the Engineering Services, Agreement ARTICLE VI • COMPENSATIONS.

ARTICLE CV • COST PROPOSAL

The following cost proposal reflects the negotiated targeted contract amount. The cost proposal will serve as a guideline and reference document during the execution of this contract. ENGINEER shall be compensated in accordance with the rates provided. The total amount of the contract is not to exceed $5,357,951.86. Reimbursement is to be made at actual cost plus fixed fee, however, billing shall not exceed the rates provided in Section B above or the rates provided in the attached Fee Proposal Worksheets below.

Jurupa Road Grade Separation Fee Proposal Summary

January 2, 2018

COMPANIES	PHASE I	PHASE II	PHASE III	PHASE IV	TOTAL
HNTB Prime	$ 1,720,783.77	$ 2,294,107.11	$ 32,340.30	$ 224,960.28	**$ 4,272,191.46**
Advanced Civil Technologies (ACT) Third Party Coord/Construction Staging	$ 86,889.61	$ 155,342.68			**$ 242,232.29**
Arellano Associates Public Outreach	$ 61,829.40				**$ 61,829.40**
Leighton Consulting Geotechnical & Haz Mat Phase I	$ 158,544.22	$ 28,181.94			**$ 186,726.16**
LIN Consulting Traffic Engineering	$ 84,964.78	$ 114,635.29	$ 1,035.85	$ 9,723.92	**$ 210,359.83**
Safeprobe Potholing	$ 51,743.28				**$ 51,743.28**
Tatsumi and Partners, Inc. Landscape Architecture	$ 30,074.21	$ 88,064.87		$ 6,533.84	**$ 124,672.92**
Towill Right-of-Way Requirements Map	$ 25,226.51	$ 34,423.41			**$ 59,649.92**
Vandermost Consulting Services (VCS) Environmental Services	$ 148,546.60				**$ 148,546.60**
TOTAL	**$ 2,368,602.38**	**$ 2,714,755.31**	**$ 33,376.14**	**$ 241,218.04**	**$ 5,357,951.86**

Phase I **Preliminary Engineering & Environmental**
Phase II **Plans, Specs & Estimates**
Phase III **Bid Support**
Phase IV **Construction Support**

FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	Project Summary	All Phases
PROJECT:		**DATE:**
Jurupa Road Grade Separation		January 2, 2018

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Pat Somerville	Project Manager	1,612	@	$120.00	$193,440.00
Tanja Brix	DPM/Lead Civil	3,502	@	$82.96	$290,525.92
Kelly Lumen	Quality Manager	124	@	$67.52	$8,372.48
Steve Greene	Lead Traffic	60	@	$100.00	$6,000.00
	Technical Manager	290	@	$100.00	$29,000.00
	Technical Lead	927	@	$76.31	$70,739.37
	Sr. Project Engineer	814	@	$67.15	$54,660.10
	Project Engineer/Planner	3,201	@	$54.36	$174,006.36
	Engineer/Planner III	692	@	$41.60	$28,787.20
	Engineer II	3,637	@	$36.52	$132,823.24
	Engineer I	2,458	@	$33.72	$82,883.76
	CADD-Civil	60	@	$44.48	$2,668.80
	Project Analyst	372	@	$44.46	$16,539.12
	Administrative Assistant	152	@	$29.07	$4,418.64
Nien Wang	Lead Structures	737	@	$100.00	$73,700.00
	Structures Sr. Project Engineer	1,768	@	$68.88	$121,779.84
	Structures Project Engineer	520	@	$59.44	$30,908.80
	Structures Engineer III	2,304	@	$47.87	$110,292.48
	Structures Engineer II	420	@	$46.72	$19,622.40
	CADD-Structures	1,964	@	$58.72	$115,326.08
		TOTAL HOURS:	**25,614**	TOTAL AMOUNT:	**$1,566,494.59**

MULTIPLIERS

ESCALATION @		(Rates Vary by Phase)	
OVERHEAD @	97.96%	(of Direct Labor + Escalation)	$1,534,538.10
PAYROLL ADDITIVES @	48.27%	(of Direct Labor + Escalation)	$756,146.94
PROFIT (FIXED FEE)			$385,717.96
		TOTAL MULTIPLIERS:	**$2,676,403.00**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Travel/Mileage	7000	MI	@	$0.54	$3,780.00
Traffic Counts (Amount is Budget)	1	Actual Cost	@	$18,000.00	$18,000.00
Printing, Plotting & Copies (Amount is Budget)	1	Actual Cost	@	$5,000.00	$5,000.00
Exhibits, Plotting & Mounting (Amount is Budget)	1	Actual Cost	@	$2,513.87	$2,513.87
			TOTAL ODC'S:		**$29,293.87**

SUB CONSULTANT SERVICES

COMPANY	LABOR	MULTIPLIERS	ODC's	TOTAL
Advanced Civil Technologies (ACT)	$93,697.34	$147,994.95	$540.00	$242,232.29
Arellano Associates	$21,545.92	$19,482.04	$20,801.44	$61,829.40
Leighton Consulting	$37,771.60	$80,808.56	$68,146.00	$186,726.16
LIN Consulting	$71,030.00	$136,603.03	$2,726.80	$210,359.83
Safeprobe	$18,780.00	$32,865.00	$98.28	$51,743.28
Tatsumi and Partners, Inc.	$42,444.57	$80,243.40	$1,984.95	$124,672.92
Towill	$18,957.97	$40,491.95	$200.00	$59,649.92
Vandermost Consulting Services (VCS)	$147,905.00		$641.60	$148,546.60
			TOTAL SUBCONSULTANT SERVICES:	**$1,085,760.40**

GRAND TOTAL **$5,357,951.86**

FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	Preliminary Engineering & Environmental	Phase I
PROJECT:		DATE:
Jurupa Road Grade Separation		January 2, 2018

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Pat Somerville	Project Manager	932	@	$120.00	$111,840.00
Tanja Brix	DPM/Lead Civil	1,780	@	$82.96	$147,668.80
Kelly Lumen	Quality Manager	4	@	$67.52	$270.08
Steve Greene	Lead Traffic	60	@	$100.00	$6,000.00
	Technical Manager	136	@	$100.00	$13,600.00
	Technical Lead	792	@	$76.31	$60,437.52
	Sr. Project Engineer	492	@	$67.15	$33,037.80
	Project Engineer/Planner	1,204	@	$54.36	$65,449.44
	Engineer/Planner III	692	@	$41.60	$28,787.20
	Engineer II	1,788	@	$36.52	$65,297.76
	Engineer I	72	@	$33.72	$2,427.84
	CADD-Civil			$44.48	
	Project Analyst	300	@	$44.46	$13,338.00
	Administrative Assistant	44	@	$29.07	$1,279.08
Nien Wang	Lead Structures	176	@	$100.00	$17,600.00
	Structures Sr. Project Engineer	436	@	$68.88	$30,031.68
	Structures Project Engineer			$59.44	
	Structures Engineer III	360	@	$47.87	$17,233.20
	Structures Engineer II			$46.72	
	CADD-Structures	184	@	$58.72	$10,804.48
	TOTAL HOURS:	**9,452**		TOTAL AMOUNT:	**$625,102.88**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	97.96%	(of Direct Labor + Escalation)	$612,350.78
PAYROLL ADDITIVES @	48.27%	(of Direct Labor + Escalation)	$301,737.16
PROFIT (FIXED FEE)			$153,919.08
		TOTAL MULTIPLIERS:	**$1,068,007.02**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Travel/Mileage	4000	MI	@	$0.54	$2,160.00
Traffic Counts (Amount is Budget)	1	Actual Cost	@	$18,000.00	$18,000.00
Printing, Plotting & Copies (Amount is Budget)	1	Actual Cost	@	$5,000.00	$5,000.00
Exhibits, Plotting & Mounting (Amount is Budget)	1	Actual Cost	@	$2,513.87	$2,513.87
		TOTAL ODC'S:			**$27,673.87**

SUB CONSULTANT SERVICES

COMPANY	LABOR	MULTIPLIERS	ODC's	TOTAL
Advanced Civil Technologies (ACT)	$33,580.00	$53,039.61	$270.00	$86,889.61
Arellano Associates	$21,545.92	$19,482.04	$20,801.44	$61,829.40
Leighton Consulting	$28,821.50	$61,660.72	$68,062.00	$158,544.22
LIN Consulting	$28,212.00	$54,025.98	$2,726.80	$84,964.78
Safeprobe	$18,780.00	$32,865.00	$98.28	$51,743.28
Tatsumi and Partners, Inc.	$10,248.20	$19,287.11	$538.90	$30,074.21
Towill	$8,028.53	$17,147.98	$50.00	$25,226.51
Vandermost Consulting Services (VCS)	$147,905.00		$641.60	$148,546.60
			TOTAL SUBCONSULTANT SERVICES:	**$647,818.60**

TOTAL **$2,368,602.38**

FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	**Plans, Specs & Estimates**	**Phase II**
PROJECT:		**DATE:**
Jurupa Road Grade Separation		**January 2, 2018**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Pat Somerville	Project Manager	500	@	$120.00	$60,000.00
Tanja Brix	DPM/Lead Civil	1,360	@	$82.96	$112,825.60
Kelly Lumen	Quality Manager	120	@	$67.52	$8,102.40
Steve Greene	Lead Traffic			$100.00	
	Technical Manager	144	@	$100.00	$14,400.00
	Technical Lead	135	@	$76.31	$10,301.85
	Sr. Project Engineer	290	@	$67.15	$19,473.50
	Project Engineer/Planner	1,751	@	$54.36	$95,184.36
	Engineer/Planner III			$41.60	
	Engineer II	1,849	@	$36.52	$67,525.48
	Engineer I	2,386	@	$33.72	$80,455.92
	CADD-Civil			$44.48	
	Project Analyst			$44.46	
	Administrative Assistant	108	@	$29.07	$3,139.56
Nien Wang	Lead Structures	545	@	$100.00	$54,500.00
	Structures Sr. Project Engineer	1,280	@	$68.88	$88,166.40
	Structures Project Engineer	420	@	$59.44	$24,964.80
	Structures Engineer III	1,844	@	$47.87	$88,272.28
	Structures Engineer II	420	@	$46.72	$19,622.40
	CADD-Structures	1,704	@	$58.72	$100,058.88
		TOTAL HOURS:	**14,856**	TOTAL AMOUNT:	**$846,993.43**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	97.96%	(of Direct Labor + Escalation)	$829,714.76
PAYROLL ADDITIVES @	48.27%	(of Direct Labor + Escalation)	$408,843.73
PROFIT (FIXED FEE)			$208,555.19
		TOTAL MULTIPLIERS:	**$1,447,113.68**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Travel/Mileage		MI	$0.54	
Traffic Counts (Amount is Budget)		Actual Cost	$18,000.00	
Printing, Plotting & Copies (Amount is Budget)		Actual Cost	$5,000.00	
Exhibits, Plotting & Mounting (Amount is Budget)		Actual Cost	$2,513.87	
			TOTAL ODC'S:	

SUB CONSULTANT SERVICES

COMPANY	LABOR	MULTIPLIERS	ODC's	TOTAL
Advanced Civil Technologies (ACT)	$60,117.34	$94,955.34	$270.00	$155,342.68
Arellano Associates				
Leighton Consulting	$8,950.10	$19,147.84	$84.00	$28,181.94
LIN Consulting	$39,326.00	$75,309.29		$114,635.29
Safeprobe				
Tatsumi and Partners, Inc.	$30,098.73	$56,645.81	$1,320.33	$88,064.87
Towill	$10,929.44	$23,343.97	$150.00	$34,423.41
Vandermost Consulting Services (VCS)				
			TOTAL SUBCONSULTANT SERVICES:	**$420,648.19**

TOTAL **$2,714,755.31**

FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	Bid Support	Phase III
PROJECT:		**DATE:**
Jurupa Road Grade Separation		January 2, 2018

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Pat Somerville	Project Manager	24	@	$120.00	$2,880.00
Tanja Brix	DPM/Lead Civil	48	@	$82.96	$3,982.08
Kelly Lumen	Quality Manager			$67.52	
Steve Greene	Lead Traffic			$100.00	
	Technical Manager	2	@	$100.00	$200.00
	Technical Lead			$76.31	
	Sr. Project Engineer			$67.15	
	Project Engineer/Planner	16	@	$54.36	$869.76
	Engineer/Planner III			$41.60	
	Engineer II			$36.52	
	Engineer I			$33.72	
	CADD-Civil			$44.48	
	Project Analyst	24	@	$44.46	$1,067.04
	Administrative Assistant			$29.07	
Nien Wang	Lead Structures	8	@	$100.00	$800.00
	Structures Sr. Project Engineer	16	@	$68.88	$1,102.08
	Structures Project Engineer			$59.44	
	Structures Engineer III			$47.87	
	Structures Engineer II			$46.72	
	CADD-Structures	16	@	$58.72	$939.52

TOTAL HOURS: **154** TOTAL AMOUNT: **$11,840.48**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	97.96%	(of Direct Labor + Escalation)	$11,598.93
PAYROLL ADDITIVES @	48.27%	(of Direct Labor + Escalation)	$5,715.40
PROFIT (FIXED FEE)			$2,915.48

TOTAL MULTIPLIERS: **$20,229.82**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Travel/Mileage	500	MI	@	$0.54	$270.00
Traffic Counts (Amount is Budget)		Actual Cost		$18,000.00	
Printing, Plotting & Copies (Amount is Budget)		Actual Cost		$5,000.00	
Exhibits, Plotting & Mounting (Amount is Budget)		Actual Cost		$2,513.87	

TOTAL ODC'S: **$270.00**

SUB CONSULTANT SERVICES

COMPANY	LABOR	MULTIPLIERS	ODC's	TOTAL
Advanced Civil Technologies (ACT)				
Arellano Associates				
Leighton Consulting				
LIN Consulting	$345.00	$690.85		$1,035.85
Safeprobe				
Tatsumi and Partners, Inc.				
Towill				
Vandermost Consulting Services (VCS)				

TOTAL SUBCONSULTANT SERVICES: **$1,035.85**

TOTAL **$33,376.14**

FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	Construction Support	Phase IV
PROJECT:		**DATE:**
Jurupa Road Grade Separation		January 2, 2018

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Pat Somerville	Project Manager	156	@	$120.00	$18,720.00
Tanja Brix	DPM/Lead Civil	314	@	$82.96	$26,049.44
Kelly Lumen	Quality Manager			$67.52	
Steve Greene	Lead Traffic			$100.00	
	Technical Manager	8	@	$100.00	$800.00
	Technical Lead			$76.31	
	Sr. Project Engineer	32	@	$67.15	$2,148.80
	Project Engineer/Planner	230	@	$54.36	$12,502.80
	Engineer/Planner III			$41.60	
	Engineer II			$36.52	
	Engineer I			$33.72	
	CADD-Civil	60	@	$44.48	$2,668.80
	Project Analyst	48	@	$44.46	$2,134.08
	Administrative Assistant			$29.07	
Nien Wang	Lead Structures	8	@	$100.00	$800.00
	Structures Sr. Project Engineer	36	@	$68.88	$2,479.68
	Structures Project Engineer	100	@	$59.44	$5,944.00
	Structures Engineer III	100	@	$47.87	$4,787.00
	Structures Engineer II			$46.72	
	CADD-Structures	60	@	$58.72	$3,523.20

TOTAL HOURS: **1,152** TOTAL AMOUNT: **$82,557.80**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	97.96%	(of Direct Labor + Escalation)	$80,873.62
PAYROLL ADDITIVES @	48.27%	(of Direct Labor + Escalation)	$39,850.65
PROFIT (FIXED FEE)			$20,328.21

TOTAL MULTIPLIERS: **$141,052.48**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Travel/Mileage	2500	MI	@	$0.54	$1,350.00
Traffic Counts (Amount is Budget)		Actual Cost		$18,000.00	
Printing, Plotting & Copies (Amount is Budget)		Actual Cost		$5,000.00	
Exhibits, Plotting & Mounting (Amount is Budget)		Actual Cost		$2,513.87	

TOTAL ODC'S: **$1,350.00**

SUB CONSULTANT SERVICES

COMPANY	LABOR	MULTIPLIERS	ODC's	TOTAL
Advanced Civil Technologies (ACT)				
Arellano Associates				
Leighton Consulting				
LIN Consulting	$3,147.00	$6,576.92		$9,723.92
Safeprobe				
Tatsumi and Partners, Inc.	$2,097.64	$4,310.48	$125.72	$6,533.84
Towill				
Vandermost Consulting Services (VCS)				

TOTAL SUBCONSULTANT SERVICES: **$16,257.76**

TOTAL **$241,218.04**

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	**Manhour Summary**	**All Phases**
PROJECT:		DATE:
Jurupa Road Grade Separation		**January 2, 2018**

TASK	PROJECT MANAGER	DPM/LEAD CIVIL	QUALITY MANAGER	LEAD TRAFFIC	TECHNICAL MANAGER	TECHNICAL LEAD	SR. PROJECT ENGINEER	PROJECT ENGINEER/PLANNER	ENGINEER/PLANNER III	ENGINEER II	ENGINEER I	CADD-CIVIL	PROJECT ANALYST	ADMINISTRATIVE ASSISTANT	HOURS	(Top & Bottom) HOURS
	$325.02	$224.70	$182.88	$270.85	$270.85	$206.69	$181.88	$147.24	$112.67	$98.92	$91.33	$120.48	$120.42	$78.74		
PHASE TOTALS	**1,612**	**3,502**	**124**	**60**	**290**	**927**	**814**	**3,201**	**692**	**3,637**	**2,458**	**60**	**372**	**152**	**17,901**	**25,614**
PHASE I	932	1,780	4	60	136	792	492	1,204	692	1,788	72		300	44	8,296	9,452
PHASE II	500	1,360	120		144	135	290	1,751		1,849	2,386			108	8,643	14,856
PHASE III	24	48			2			16					24		114	154
PHASE IV	156	314			8		32	230				60	48		848	1,152

TASK	LEAD STRUCTURES	STRUCTURES SR. PROJECT ENGINEER	STRUCTURES PROJECT ENGINEER	STRUCTURES ENGINEER III	STRUCTURES ENGINEER II	CADD-STRUCTURES	HOURS
	$270.85	$186.56	$161.00	$129.66	$126.54	$159.04	
PHASE TOTALS	**737**	**1,768**	**520**	**2,304**	**420**	**1,964**	**7,713**
PHASE I	176	436		360		184	1,156
PHASE II	545	1,280	420	1,844	420	1,704	6,213
PHASE III	8	16				16	40
PHASE IV	8	36	100	100		60	304

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	Preliminary Engineering & Environmental	Phase I
PROJECT:		**DATE:**
Jurupa Road Grade Separation		January 2, 2018

TASK	PROJECT MANAGER	DPM/LEAD CIVIL	QUALITY MANAGER	LEAD TRAFFIC	TECHNICAL MANAGER	TECHNICAL LEAD	SR. PROJECT ENGINEER	PROJECT ENGINEER/PLANNER	ENGINEER/PLANNER III	ENGINEER II	ENGINEER I	CADD-CIVIL	PROJECT ANALYST	ADMINISTRATIVE ASSISTANT	HOURS	COST
	$325.02	$224.70	$182.88	$270.85	$270.85	$206.69	$181.88	$147.24	$112.67	$98.92	$91.33	$120.48	$120.42	$78.74		
Total Manhours	932	1,780	4	60	136	792	492	1,204	692	1,788	72		300	44	8,296	
ARTICLE AII - PROJECT ADMINISTRATION																
A. Project Management Plan	16	40	4		4	4							20	16	104	$ 20,498
B. Quality Control Plan	10	20			40									8	78	$ 19,208
C. Budgeting (24 months)	24	48											100		172	$ 30,628
D. Cost Accounting (24 months)	24	60													84	$ 21,283
E. Scheduling (24 months)	24	60											80		164	$ 30,916
F. Contract Administration and Meetings																
F.1 Project Management/Administration (24 mos)	160	300											100		560	$ 131,456
F.2 Project Meetings (24 PDT meetings+24)	192	288		16	12	16		192		192					908	$ 185,270
G. Contract Deliverables	16	24													40	$ 10,593
H. Outreach																
H.1 Collatoral Materials & Coordination	8	16						24		40					88	$ 13,686
H.2 Open House Community Meetings (3)	12	12						12							36	$ 8,364
H.3 Stakeholder and Business Briefings (12)	48	48								24					120	$ 28,761
ARTICLE AIII - PLANNING AND PROJECT DEV																
A. Research and Data Gathering	8	16			4	8	16	28	8	24					112	$ 19,240
B. Permits		4			16			12							32	$ 6,999
C. Design Surveys	2	4								8					14	$ 2,340
D. Preliminary Geotechnical Investigations																
D.1 Preliminary Foundation Report	2	2													4	$ 1,099
D.2 Phase I Environmental Site Assessment	2	2													4	$ 1,099
D.3 Aerially Deposited Lead (ADL) Survey	2	2													4	$ 1,099
E. Planning Studies (3 Alternatives)																
E.1 Geometrics	80	120						120		180					500	$ 88,439
E.2 Draft Drainage Analysis	8	16				20	96								140	$ 27,789
E.3 Utility Impact Identification	12	32						40		60					144	$ 22,915

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	Preliminary Engineering & Environmental	Phase I
PROJECT:		**DATE:**
Jurupa Road Grade Separation		January 2, 2018

TASK	PROJECT MANAGER	DPM/LEAD CIVIL	QUALITY MANAGER	LEAD TRAFFIC	TECHNICAL MANAGER	TECHNICAL LEAD	SR. PROJECT ENGINEER	PROJECT ENGINEER/PLANNER	ENGINEER/PLANNER III	ENGINEER II	ENGINEER I	CADD CIVIL	PROJECT ANALYST	ADMINISTRATIVE ASSISTANT	HOURS	COST
E.4 Structure Advance Planning Study	4	8													12	$ 3,098
E.5 Track Geometrics	4	8			12			12							36	$ 8,115
E.6 Estimate of Probable Cost	12	40			8	40		56		60					216	$ 37,503
E.7 Schedule	12	40						12							64	$ 14,655
E.8 Constructability	24	40				80		60		60					264	$ 48,093
E.9 Traffic Study	4	16		32				200	260						512	$ 72,305
E.10 Landscape and Aesthetics	12	8						12			12				44	$ 8,561
F. Visual Aids																
F.1 Photo Simulations (9)	4	8						40	160	200					412	$ 46,798
F.2 Videos (1)	8	16						40	240	220					524	$ 60,888
G. Environmental Determination and Issues																
G.1 Environmental Coordination & Assistance	16	24													40	$ 10,593
G.2 Biological Resources Technical Report																
G.3 Narrow Endemic & Burrowing Owl Surveys																
G.4 Water Quality & Erosion						40									40	$ 8,268
G.5 Floodplain						40									40	$ 8,268
G.6 Noise Study Report																
G.7 Cultural Resources Report																
G.8 Community Impact Memorandum																
G.9 Regulatory Permitting																
G.10 MSHCP & DBESP																
H. Preliminary Engineering Report	40	100		12		16		124	24	140				20	476	$ 78,412
I. Geometric Approval Drawings	20	32						80		120					252	$ 37,340
J. Design Drainage Report & WQMP	8	24				72	180				60				344	$ 61,092
K. Geotechnical Design Report	2	4													6	$ 1,549
L. Right-of-Way Maps	4	8				40									52	$ 11,365
M. Agreements	40	60				40				60					200	$ 40,685
N. Utility Coordination																
N.1 Utility Research & Mapping	8	30				44				80					162	$ 26,349
N.2 Utility Coordination & Meetings	40	120				300	200			240					900	$ 162,087

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	Preliminary Engineering & Environmental	Phase I
PROJECT:		**DATE:**
Jurupa Road Grade Separation		January 2, 2018

TASK	PROJECT MANAGER	DPM/LEAD CIVIL	QUALITY MANAGER	LEAD TRAFFIC	TECHNICAL MANAGER	TECHNICAL LEAD	SR. PROJECT ENGINEER	PROJECT ENGINEER/PLANNER	ENGINEER/PLANNER III	ENGINEER II	ENGINEER I	CADD-CIVIL	PROJECT AMALYST	ADMINISTRATIVE ASSISTANT	HOURS	COST
N.3 Utility Potholing	2	4				8				16					30	$ 4,785
N.4 Electric and Water Service Meters	4	40				24				24					92	$ 17,623
O. Miscellaneous Design Support																
O.1 Design Exceptions	8	24						80		40					152	$ 23,728
O.2 Traffic Management Plan	4	8													12	$ 3,098
O.3 Track Design	2	4			40			60							106	$ 21,217

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	Preliminary Engineering & Environmental	Phase I
PROJECT:		DATE:
Jurupa Road Grade Separation		January 2, 2018

TASK	LEAD STRUCTURES	STRUCTURES SR. PROJECT ENGINEER	STRUCTURES PROJECT ENGINEER	STRUCTURES ENGINEER III	STRUCTURES ENGINEER II	CADD-STRUCTURES							HOURS	COST
	$270.85	$186.56	$161.00	$129.66	$126.54	$159.04								
Total Manhours	**176**	**436**		**360**		**184**							**1,156**	
ARTICLE AII - PROJECT ADMINISTRATION														
A. Project Management Plan														
B. Quality Control Plan														
C. Budgeting (24 months)														
D. Cost Accounting (24 months)														
E. Scheduling (24 months)														
F. Contract Administration and Meetings														
F.1 Project Management/Administration (24 mos)													**40**	**$ 10,834**
F.2 Project Meetings (24 PDT meetings+24)	**40**													
G. Contract Deliverables														
H. Outreach														
H.1 Collatoral Materials & Coordination														
H.2 Open House Community Meetings (3)														
H.3 Stakeholder and Business Briefings (12)														
ARTICLE AIII - PLANNING AND PROJECT DEV														
A. Research and Data Gathering	**16**	**40**											**56**	**$ 11,796**
B. Permits														
C. Design Surveys														
D. Preliminary Geotechnical Investigations														
D.1 Preliminary Foundation Report	**16**	**24**											**40**	**$ 8,811**
D.2 Phase I Environmental Site Assessment														
D.3 Aerially Deposited Lead (ADL) Survey														
E. Planning Studies (3 Alternatives)														
E.1 Geometrics														
E.2 Draft Drainage Analysis														
E.3 Utility Impact Identification														

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	Preliminary Engineering & Environmental	Phase I
PROJECT:		**DATE:**
Jurupa Road Grade Separation		January 2, 2018

TASK	LEAD STRUCTURES	STRUCTURES SR. PROJECT ENGINEER	STRUCTURES PROJECT ENGINEER	STRUCTURES ENGINEER III	STRUCTURES ENGINEER II	CADD-STRUCTURES								HOURS	COST
E.4 Structure Advance Planning Study	80	320		320		160								880	$ 148,306
E.5 Track Geometrics															
E.6 Estimate of Probable Cost															
E.7 Schedule															
E.8 Constructability															
E.9 Traffic Study															
E.10 Landscape and Aesthetics															
F. Visual Aids															
F.1 Photo Simulations (9)															
F.2 Videos (1)															
G. Environmental Determination and Issues															
G.1 Environmental Coordination & Assistance															
G.2 Biological Resources Technical Report															
G.3 Narrow Endemic & Burrowing Owl Surveys															
G.4 Water Quality & Erosion															
G.5 Floodplain															
G.6 Noise Study Report															
G.7 Cultural Resources Report															
G.8 Community Impact Memorandum															
G.9 Regulatory Permitting															
G.10 MSHCP & DBESP															
H. Preliminary Engineering Report	16	40		40		24									$ 20,800
I. Geometric Approval Drawings															
J. Design Drainage Report & WQMP															
K. Geotechnical Design Report	8	12													$ 4,406
L. Right-of-Way Maps															
M. Agreements															
N. Utility Coordination															
N.1 Utility Research & Mapping															
N.2 Utility Coordination & Meetings															

MANHOUR WORKSHEET

COMPANY: **HNTB**

SCOPE OF WORK: **Plans, Specs & Estimates**

PHASE: **Phase II**

DATE: **January 2, 2018**

PROJECT: **Jurupa Road Grade Separation**

TASK	PROJECT MANAGER	DPM/LEAD CIVIL	QUALITY MANAGER	LEAD TRAFFIC	TECHNICAL MANAGER	TECHNICAL LEAD	SR. PROJECT ENGINEER	PROJECT ENGINEER/PLANNER	ENGINEER/PLANNER III	ENGINEER II	ENGINEER I	CADD-CIVIL	PROJECT ANALYST	ADMINISTRATIVE ASSISTANT	HOURS	COST
	$325.02	$224.70	$182.88	$270.85	$270.85	$206.69	$181.88	$147.24	$112.67	$98.92	$91.33	$120.48	$120.42	$78.74		
Total Manhours	**500**	**1,360**	**120**		**144**	**135**	**290**	**1,751**		**1,849**	**2,386**			**108**	**8,643**	
ARTICLE AIV - STRUCTURES															**6**	**$ 1,549**
A. Structure Type Selection and Bridge General Plans	2	4														
B. Geotechnical Coordination and Foundation Report																
C. Structural Design and Calculations																
D. Independent Check Review and Quality Control															**6**	**$ 1,549**
E. Structure Specifications & Estimates	2	4													**6**	**$ 1,549**
F. Initial Structure PS&E (65% unchecked plans)	2	4													**6**	**$ 1,549**
G. Intermediate Structure PS&E (90% Checked Plans)	2	4													**6**	**$ 1,549**
H. Draft Final Structure PS&E (95%)	2	4													**6**	**$ 1,549**
I. Final Structure PS&E																
ARTICLE AV - ROADWAY																
A. Basic Roadway Plans								16		26	26				**77**	**$ 9,425**
A.1 Title Sheet/General Sheets	1	8													**4**	**$ 999**
A.2 Horizontal Control Plans	1	3						26		78	78				**216**	**$ 27,110**
A.3 Typical Sections	8	26						143		234	156				**663**	**$ 92,876**
A.4 Plan & Profile Sheets	52	78						78		130	156				**468**	**$ 64,568**
A.5 Construction Details	26	78						78		156	130				**468**	**$ 64,766**
A.6 Grading Plans	26	78						52		156	130				**442**	**$ 60,937**
A.7 Removal Plans	26	78						10							**38**	**$ 8,567**
A.8 Planting & Irrigation Plans	8	20														
B. Calculations								20		30					**62**	**$ 9,010**
B.1 Geometric Traverse & Right-of-Way	4	8						20		30					**62**	**$ 9,010**
B.2 Grid Grades	4	8						20		30					**62**	**$ 9,010**
B.3 Profile	4	8						40		60					**124**	**$ 18,020**
B.4 Earthwork Quantities	8	16						24		40					**70**	**$ 9,039**
B.5 Other Quantities	2	4														

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	**Plans, Specs & Estimates**	**Phase II**
PROJECT:		**DATE:**
Jurupa Road Grade Separation		**January 2, 2018**

TASK	PROJECT MANAGER	DPM/LEAD CIVIL	QUALITY MANAGER	LEAD TRAFFIC	TECHNICAL MANAGER	TECHNICAL LEAD	SR. PROJECT ENGINEER	PROJECT ENGINEER/PLANNER	ENGINEER/PLANNER III	ENGINEER II	ENGINEER I	CADD-CIVIL	PROJECT ANALYST	ADMINISTRATIVE ASSISTANT	HOURS	COST
C. Drainage Plans																
C.1 Storm Drain Plans	13	52				52	104				234				455	$ 66,944
C.2 BMP & Erosion Control Plans	3	16				13	26				52				110	$ 16,735
D. Traffic & Electrical Plans																
D.1 Street Lighting Plans	1	5													6	$ 1,449
D.2 Stage Construction & Traffic Handling	3	5													8	$ 2,099
D.3 Detour Routing Plan	2	4													6	$ 1,549
D.4 Signal Plan	1	5													6	$ 1,449
D.5 Striping & Signing Plans	4	9			10			52		91					166	$ 22,688
D.6 Bridge Lighting Plans	1	4													5	$ 1,224
E. Miscellaneous Plans																
E.1 Utility Composite Plans	20	52						156			312				540	$ 69,649
E.2 Electrical & Water Meter Plans	8	26						52			78				164	$ 23,223
E.3 Right-of-Way Requirements	5	10													15	$ 3,872
E.4 Track Plans	3	5			52			78			78				216	$ 34,791
E.5 Retaining Wall Plans	5	10								13					28	$ 5,158
F. Intermediate Reviews	24	80			8	20	40	12							184	$ 41,119
G. Specifications and Estimate (30% & 65%)	48	164			32	4	16	244		140	56			60	764	$ 124,468
H. Quality Control	8	20	120												148	$ 29,040
I. Draft PS&E (95% Complete)																
I.1 Plans	83	220			24	25	50	285		340	550				1,577	$ 222,998
I.2 Special Provisions	24	64				4	16	96						48	252	$ 43,832
I.3 Design Calculations	2	8			4			48		40					102	$ 14,555
I.4 Roadway Quantities & Cost Estimate	10	30				2	8	30		50	20				150	$ 23,049
J. Final PS&E (100% Complete)	50	134			14	15	30	171		205	330				949	$ 134,304

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	Plans, Specs & Estimates	Phase II
PROJECT:		**DATE:**
Jurupa Road Grade Separation		January 2, 2018

TASK	LEAD STRUCTURES	STRUCTURES SR. PROJECT ENGINEER	STRUCTURES PROJECT ENGINEER	STRUCTURES ENGINEER III	STRUCTURES ENGINEER II	CADD-STRUCTURES								HOURS	COST
	$270.85	$186.56	$161.00	$129.66	$126.54	$159.04									
Total Manhours	**545**	**1,280**	**420**	**1,844**	**420**	**1,704**								**6,213**	
ARTICLE AIV - STRUCTURES															
A. Structure Type Selection and Bridge General Plans	**88**	**160**		**160**		**120**								**528**	**$ 93,516**
B. Geotechnical Coordination and Foundation Report	**28**	**40**												**68**	**$ 15,046**
C. Structural Design and Calculations	**44**	**240**		**740**										**1,024**	**$ 152,639**
D. Independent Check Review and Quality Control			**420**		**420**									**840**	**$ 120,766**
E. Structure Specifications & Estimates	**88**	**80**		**80**										**248**	**$ 49,133**
F. Initial Structure PS&E (65% unchecked plans)	**88**	**240**		**120**		**500**								**948**	**$ 163,692**
G. Intermediate Structure PS&E (90% Checked Plans)	**44**	**120**		**120**		**300**								**584**	**$ 97,578**
H. Draft Final Structure PS&E (95%)	**28**	**40**		**80**		**80**								**228**	**$ 38,143**
I. Final Structure PS&E	**28**	**40**		**80**		**80**								**228**	**$ 38,143**
ARTICLE AV - ROADWAY															
A. Basic Roadway Plans															
A.1 Title Sheet/General Sheets															
A.2 Horizontal Control Plans															
A.3 Typical Sections															
A.4 Plan & Profile Sheets															
A.5 Construction Details															
A.6 Grading Plans															
A.7 Removal Plans															
A.8 Planting & Irrigation Plans															
B. Calculations															
B.1 Geometric Traverse & Right-of-Way															
B.2 Grid Grades															
B.3 Profile															
B.4 Earthwork Quantities															
B.5 Other Quantities															

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	**Plans, Specs & Estimates**	**Phase II**
PROJECT:		**DATE:**
Jurupa Road Grade Separation		**January 2, 2018**

TASK	LEAD STRUCTURES	STRUCTURES SR. PROJECT ENGINEER	STRUCTURES PROJECT ENGINEER	STRUCTURES ENGINEER III	STRUCTURES ENGINEER II	CADD-STRUCTURES								HOURS	COST
C. Drainage Plans															
C.1 Storm Drain Plans															
C.2 BMP & Erosion Control Plans															
D. Traffic & Electrical Plans															
D.1 Street Lighting Plans															
D.2 Stage Construction & Traffic Handling															
D.3 Detour Routing Plan															
D.4 Signal Plan															
D.5 Striping & Signing Plans															
D.6 Bridge Lighting Plans															
E. Miscellaneous Plans															
E.1 Utility Composite Plans															
E.2 Electrical & Water Meter Plans															
E.3 Right-of-Way Requirements															
E.4 Track Plans															
E.5 Retaining Wall Plans	**44**	**80**		**200**		**480**								**804**	**$ 129,116**
F. Intermediate Reviews	**10**	**24**		**36**		**40**								**110**	**$ 18,216**
G. Specifications and Estimate (30% & 65%)	**18**	**80**		**60**										**158**	**$ 27,580**
H. Quality Control															
I. Draft PS&E (95% Complete)															
I.1 Plans	**10**	**40**		**40**		**80**								**170**	**$ 28,081**
I.2 Special Provisions	**10**	**40**												**50**	**$ 10,171**
I.3 Design Calculations	**5**	**24**		**80**										**109**	**$ 16,204**
I.4 Roadway Quantities & Cost Estimate	**2**	**8**		**24**										**34**	**$ 5,146**
J. Final PS&E (100% Complete)	**10**	**24**		**24**		**24**								**82**	**$ 14,115**

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	Bid Support	Phase III
PROJECT:		**DATE:**
Jurupa Road Grade Separation		January 2, 2018

TASK	PROJECT MANAGER	DPM/LEAD CIVIL	QUALITY MANAGER	LEAD TRAFFIC	TECHNICAL MANAGER	TECHNICAL LEAD	SR. PROJECT ENGINEER	PROJECT ENGINEER/PLANNER	ENGINEER/PLANNER III	ENGINEER II	ENGINEER I	CADD-CIVIL	PROJECT ANALYST	ADMINISTRATIVE ASSISTANT	HOURS	COST
	$325.02	$224.70	$182.88	$270.85	$270.85	$206.69	$181.88	$147.24	$112.67	$98.92	$91.33	$120.48	$120.42	$78.74		
Total Manhours	24	48			2			16					24		114	
ARTICLE AVI - CONSTRUCTION BIDDING PHASE																
A. Project Administration (6 months)	12	24											24		60	$ 12,183
B. Construction Bidding Services	12	24			2			16							54	$ 12,191

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	Bid Support	Phase III
PROJECT:		**DATE:**
Jurupa Road Grade Separation		January 2, 2018

TASK	LEAD STRUCTURES	STRUCTURES SR. PROJECT ENGINEER	STRUCTURES PROJECT ENGINEER	STRUCTURES ENGINEER III	STRUCTURES ENGINEER II	CADD-STRUCTURES							HOURS	COST
	$270.85	$186.56	$161.00	$129.66	$126.54	$159.04								
Total Manhours	**8**	**16**				**16**							**40**	
ARTICLE AVI - CONSTRUCTION BIDDING PHASE														
A. Project Administration (6 months)														
B. Construction Bidding Services	**8**	**16**				**16**							**40**	**$ 7,697**

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	**Construction Support**	**Phase IV**
PROJECT:		DATE:
Jurupa Road Grade Separation		**January 2, 2018**

TASK	PROJECT MANAGER	DPM/LEAD CIVIL	QUALITY MANAGER	LEAD TRAFFIC	TECHNICAL MANAGER	TECHNICAL LEAD	SR. PROJECT ENGINEER	PROJECT ENGINEER/PLANNER	ENGINEER/PLANNER III	ENGINEER II	ENGINEER I	CADD-CIVIL	PROJECT ANALYST	ADMINISTRATIVE ASSISTANT	HOURS	COST
	$325.02	$224.70	$182.88	$270.85	$270.85	$206.69	$181.88	$147.24	$112.67	$98.92	$91.33	$120.48	$120.42	$78.74		
Total Manhours	**156**	**314**			**8**		**32**	**230**				**60**	**48**		**848**	
ARTICLE AVII - CONSTRUCTION SUPPORT PHASE																
A. Project Administration (24 months)	**24**	**48**											**48**		**120**	**$ 24,366**
B. Pre-Construction Meeting	**6**	**6**						**6**							**18**	**$ 4,182**
C. Meetings & Site Reviews	**90**	**96**						**40**							**226**	**$ 56,713**
D. Response to Inquiries/RFI's (75)	**16**	**80**					**16**	**80**							**192**	**$ 37,865**
E. Submittal & Shop Drawing Review (30)	**16**	**60**			**8**		**16**	**80**							**180**	**$ 35,538**
F. Change Order Support																
G. Outreach Support																
H. As-Builts	**4**	**24**						**24**				**60**			**112**	**$ 17,455**

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
HNTB	**Construction Support**	**Phase IV**
PROJECT:		DATE:
Jurupa Road Grade Separation		**January 2, 2018**

TASK	LEAD STRUCTURES	STRUCTURES SR. PROJECT ENGINEER	STRUCTURES PROJECT ENGINEER	STRUCTURES ENGINEER III	STRUCTURES ENGINEER II	CADD-STRUCTURES								HOURS	COST
	$270.85	$186.56	$161.00	$129.66	$126.54	$159.04									
Total Manhours	**8**	**36**	**100**	**100**		**60**								**304**	
ARTICLE AVII - CONSTRUCTION SUPPORT PHASE															
A. Project Administration (24 months)															
B. Pre-Construction Meeting	**4**													**4**	**$ 1,083**
C. Meetings & Site Reviews		**12**	**24**											**36**	**$ 6,103**
D. Response to Inquiries/RFI's (75)	**2**	**12**	**24**	**40**										**78**	**$ 11,831**
E. Submittal & Shop Drawing Review (30)	**2**	**12**	**36**	**60**										**110**	**$ 16,356**
F. Change Order Support															
G. Outreach Support															
H. As-Builts			**16**			**60**								**76**	**$ 12,119**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Advanced Civil Technologies (ACT)	**Third Party Coord/Construction Staging**	**All Phases**
PROJECT:		DATE:
Jurupa Road Grade Separation		**January 2, 2018**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Jamal Salman	QA/QC	40	@	$128.73	$5,149.20
Garry Cohoe	Project Manager	342	@	$115.00	$39,330.00
Isaac Alonso Rice	Transportation Manager	112	@	$83.29	$9,328.48
Karen Cohoe	Sr. Engineer E-3	126	@	$70.95	$8,939.70
Haoyuan (Tim) Liu	Sr. Design Engineer E-3	124	@	$55.76	$6,914.24
Ziyin (David) Shen	Sr. Design Engineer E-3	32	@	$55.29	$1,769.28
Dai Nguyen	Design Engineer E-3	144	@	$37.50	$5,400.00
Jeff Huang	Staff Engineer	128	@	$33.21	$4,250.88
Ali Salman	Staff Engineer	111	@	$33.21	$3,686.31
Khai Ngo	Staff Engineer	120	@	$31.35	$3,762.00
Kyle Hwang	Staff Engineer	90	@	$27.50	$2,475.00
Caleb Hackney	Staff Engineer	89	@	$30.25	$2,692.25
Jennifer Baran	Project Coordinator			$23.10	
Janelle Halog	Project Coordinator			$20.00	
	TOTAL HOURS	**1,458**		OTAL DIRECT LABOR	**$93,697.34**

MULTIPLIERS

ESCALATION @		(Rates Vary by Phase)	
OVERHEAD @	134.50%	(of Direct Labor + Escalation)	$126,022.92
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)	
PROFIT (FIXED FEE)			$21,972.03
		TOTAL MULTIPLIERS	**$147,994.95**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Travel/Milage	500	Mi	@	$0.54	$270.00
Milleage-Personal Vehicle	500	Mi	@	$0.54	$270.00
		TOTAL ODC'S			**$540.00**

TOTAL **$242,232.29**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Advanced Civil Technologies (ACT)	**Third Party Coord/Construction Staging**	**Phase I**
PROJECT:		DATE:
Jurupa Road Grade Separation		**January 2, 2018**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Jamal Salman	QA/QC			$128.73	
Garry Cohoe	Project Manager	292	@	$115.00	$33,580.00
Isaac Alonso Rice	Transportation Manager			$83.29	
Karen Cohoe	Sr. Engineer E-3			$70.95	
Haoyuan (Tim) Liu	Sr. Design Engineer E-3			$55.76	
Ziyin (David) Shen	Sr. Design Engineer E-3			$55.29	
Dai Nguyen	Design Engineer E-3			$37.50	
Jeff Huang	Staff Engineer			$33.21	
Ali Salman	Staff Engineer			$33.21	
Khai Ngo	Staff Engineer			$31.35	
Kyle Hwang	Staff Engineer			$27.50	
Caleb Hackney	Staff Engineer			$30.25	
Jennifer Baran	Project Coordinator			$23.10	
Janelle Halog	Project Coordinator			$20.00	
	TOTAL HOURS	**292**		OTAL DIRECT LABOR	**$33,580.00**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	134.50%	(of Direct Labor + Escalation)	$45,165.10
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)	
PROFIT (FIXED FEE)			$7,874.51
		TOTAL MULTIPLIERS	**$53,039.61**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Travel/Milage	250	Mi	@	$0.54	$135.00
Milleage-Personal Vehicle	250	Mi	@	$0.54	$135.00
			TOTAL ODC'S		**$270.00**

TOTAL **$86,889.61**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Advanced Civil Technologies (ACT)	**Third Party Coord/Construction Staging**	**Phase II**
PROJECT:		DATE:
Jurupa Road Grade Separation		**January 2, 2018**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Jamal Salman	QA/QC	40	@	$128.73	$5,149.20
Garry Cohoe	Project Manager	50	@	$115.00	$5,750.00
Isaac Alonso Rice	Transportation Manager	112	@	$83.29	$9,328.48
Karen Cohoe	Sr. Engineer E-3	126	@	$70.95	$8,939.70
Haoyuan (Tim) Liu	Sr. Design Engineer E-3	124	@	$55.76	$6,914.24
Ziyin (David) Shen	Sr. Design Engineer E-3	32	@	$55.29	$1,769.28
Dai Nguyen	Design Engineer E-3	144	@	$37.50	$5,400.00
Jeff Huang	Staff Engineer	128	@	$33.21	$4,250.88
Ali Salman	Staff Engineer	111	@	$33.21	$3,686.31
Khai Ngo	Staff Engineer	120	@	$31.35	$3,762.00
Kyle Hwang	Staff Engineer	90	@	$27.50	$2,475.00
Caleb Hackney	Staff Engineer	89	@	$30.25	$2,692.25
Jennifer Baran	Project Coordinator			$23.10	
Janelle Halog	Project Coordinator			$20.00	
	TOTAL HOURS	**1,166**		TAL DIRECT LABOR	**$60,117.34**

MULTIPLIERS

ESCALATION @		(of Direct Labor)		
OVERHEAD @	134.50%	(of Direct Labor + Escalation)		$80,857.82
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)		
PROFIT (FIXED FEE)				$14,097.52
			TOTAL MULTIPLIERS	**$94,955.34**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Travel/Milage	250	Mi	@	$0.54	$135.00
Milleage-Personal Vehicle	250	Mi	@	$0.54	$135.00
			TOTAL ODC'S		**$270.00**

TOTAL **$155,342.68**

SUBCONSULTANT MANHOUR WORKSHEET SUMMARY

COMPANY:	SCOPE OF WORK:	PHASE:
Advanced Civil Technologies (ACT)	**Third Party Coord/Construction Staging**	**All Phases**
PROJECT:		DATE:
Jurupa Road Grade Separation		**January 2, 2018**

TASK	QA/QC	PROJECT MANAGER	TRANSPORTATION MANAGER	SR. ENGINEER E-3	SR. DESIGN ENGINEER E-3	SR. DESIGN ENGINEER E-3	DESIGN ENGINEER E-3	STAFF ENGINEER	STAFF ENGINEER	STAFF ENGINEER	STAFF ENGINEER	STAFF ENGINEER	PROJECT COORDINATOR	PROJECT COORDINATOR	HOURS
	$332.06	$296.64	$214.85	$183.02	$143.83	$142.62	$96.73	$85.67	$85.67	$80.87	$70.94	$78.03	$59.59	$51.59	
PHASE TOTALS	**40**	**342**	**112**	**126**	**124**	**32**	**144**	**128**	**111**	**120**	**90**	**89**			**1,458**
PHASE I		292													292
PHASE II	40	50	112	126	124	32	144	128	111	120	90	89			1,166
PHASE III															
PHASE IV															

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Advanced Civil Technologies (ACT)	Third Party Coord/Construction Staging	Phase I
PROJECT:		**DATE:**
Jurupa Road Grade Separation		January 2, 2018

TASK	QA/QC	PROJECT MANAGER	TRANSPORTATION MANAGER	SR. ENGINEER E-3	SR. DESIGN ENGINEER E-3	SR. DESIGN ENGINEER E-3	DESIGN ENGINEER E-3	STAFF ENGINEER	STAFF ENGINEER	STAFF ENGINEER	STAFF ENGINEER	STAFF ENGINEER	PROJECT COORDINATOR	PROJECT COORDINATOR	HOURS	COST
	$332.06	$296.64	$214.85	$183.02	$143.83	$142.62	$96.73	$85.67	$85.67	$80.87	$70.94	$78.03	$59.59	$51.59		
Total Manhours		**292**													**292**	
ARTICLE AII - PROJECT ADMINISTRATION																
G. Contract Deliverables		**72**													**72**	**$ 21,358**
ARTICLE AIII - PLANNING AND PROJECT DEV																
M. Agreements		**220**														**$ 65,261**

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Advanced Civil Technologies (ACT)	Third Party Coord/Construction Staging	Phase II
PROJECT:		**DATE:**
Jurupa Road Grade Separation		January 2, 2018

TASK	QA/QC	PROJECT MANAGER	TRANSPORTATION MANAGER	SR. ENGINEER E-3	SR. DESIGN ENGINEER E-3	SR. DESIGN ENGINEER E-3	DESIGN ENGINEER E-3	STAFF ENGINEER	STAFF ENGINEER	STAFF ENGINEER	STAFF ENGINEER	STAFF ENGINEER	PROJECT COORDINATOR	PROJECT COORDINATOR	HOURS	COST
	$332.06	$296.64	$214.85	$183.02	$143.83	$142.62	$96.73	$85.67	$85.67	$80.87	$70.94	$78.03	$59.59	$51.59		
Total Manhours	40	50	112	126	124	32	144	128	111	120	90	89			1,166	
ARTICLE AV - ROADWAY																
D. Traffic & Electrical Plans																
D.1 Street Lighting Plans																
D.2 Stage Construction & Traffic Handling	8	8	31	37	37	16	49	31	41	41	41	31			371	$ 45,616
D.3 Detour Routing Plan		5	15	15	15		23	27		31		31			162	$ 19,072
F. Intermediate Reviews			6	8	8	8	9	8	8						55	$ 7,286
G. Specifications and Estimate	5	5	6	6	9		14	14	14						73	$ 10,578
H. Quality Control	5	8	10	18											41	$ 9,476
I. Draft PS&E (95% Complete)																
I.1 Roadway Plans		4	8	10	13	8	10	11	11	11	11	11			108	$ 13,126
I.2 Special Provisions	7	8	9	9	14		10	8	8	8	8	8				
I.3 Design Calculations		4	9	10	14		11	12	12	12	13				97	$ 11,977
I.4 Roadway Quantities & Cost Estimate	7	4	10	13	14		10	8	8	8	8	8			98	$ 14,229
J. Final PS&E (100% Complete)	8	4	8				8	9	9	9	9				64	$ 9,244

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Arellano Associates	**Public Outreach**	**Phase I**
PROJECT:		DATE:
Jurupa Road Grade Separation		**January 2, 2018**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Cheryl Donahue	Senior Outreach Manager	102	@	$90.00	$9,180.00
Kathy Ortiz-Cobian	Senior Outreach Coordinator	124	@	$47.08	$5,837.92
Ariel Alcon Tapia	Outreach Coordinator	84	@	$31.00	$2,604.00
Kyle Santiago	Graphic Designer	40	@	$31.00	$1,240.00
Hallie Somerville	Asst. Outreach Coordination	122	@	$22.00	$2,684.00
	TOTAL HOURS	**472**		TOTAL DIRECT LABOR	**$21,545.92**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	73.11%	(of Direct Labor + Escalation)	$15,752.22
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)	
PROFIT (FIXED FEE)			$3,729.81
		TOTAL MULTIPLIERS	**$19,482.04**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Travel/Milage	836	Mi	@	$0.54	$451.44
Parcel Data	1	Actual Cost	@	$250.00	$250.00
Postage	1	Actual Cost	@	$300.00	$300.00
Facility fees, if applicable	2	Actual Cost	@	$300.00	$600.00
Meeting Supplies/24x36 exhibits	2	Actual Cost	@	$1,000.00	$2,000.00
Refreshments	2	Actual Cost	@	$100.00	$200.00
Spanish Translation	1	Actual Cost	@	$1,000.00	$1,000.00
Spanish Interpretation (public hearing only)	1	Actual Cost	@	$1,200.00	$1,200.00
Newspaper Advertisements (public hearing only)	1	Actual Cost	@	$8,000.00	$8,000.00
Video Production	1	Actual Cost	@	$6,000.00	$6,000.00
Printing	1	Actual Cost	@	$800.00	$800.00
		TOTAL ODC'S			**$20,801.44**

TOTAL **$61,829.40**

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Arellano Associates	Public Outreach	Phase I
PROJECT:		**DATE:**
Jurupa Road Grade Separation		January 2, 2018

TASK	SENIOR OUTREACH MANAGER	SENIOR OUTREACH COORDINATOR	OUTREACH COORDINATOR	GRAPHIC DESIGNER	ASST. OUTREACH COORDINATION									HOURS	COST
	$171.38	$89.65	$59.03	$59.03	$41.89										
Total Manhours	**102**	**124**	**84**	**40**	**122**									**472**	
ARTICLE AII - PROJECT ADMINISTRATION															
H. Outreach															
H.1 Collatoral Materials & Coordination	**56**	**60**	**48**	**40**	**80**									**284**	**$ 23,522**
H.2 Open House Community Meetings (3)	**30**	**40**	**24**		**30**									**124**	**$ 11,401**
H.3 Stakeholder and Business Briefings (12)	**16**	**24**	**12**		**12**									**64**	**$ 6,105**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Leighton Consulting	**Geotechnical & Haz Mat Phase I**	**All Phases**
PROJECT:		DATE:
Jurupa Road Grade Separation		**January 2, 2018**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Jeffrey DeLand	Staff Geologist	132	@	$28.50	$3,762.00
Breeanna Copeland	Staff Scientist	90	@	$23.50	$2,115.00
Zach Freeman, PG	Project Scientist	144	@	$32.21	$4,638.24
Richard Orr, PG	Associate Geologist	108	@	$57.21	$6,178.68
Simon Saiid, PE, GE	Principal Engineer/PM	108	@	$70.07	$7,567.56
Kris Lutton, PG	Sr. Principal Geologist/QC- Enviro	4	@	$106.97	$427.88
Buu Tran	CAD Operator	62	@	$40.87	$2,533.94
Mary Murphy	GIS Analyst	22	@	$34.25	$753.50
Bashir Saiid/Christain Delgadillo, EIT	Staff Engineers	210	@	$28.50	$5,985.00
Debbie Meggers	Word Processor/Admin	50	@	$24.95	$1,247.50
Mary-Ann Verrilli/Viki Malu	Project Accountant	22	@	$24.69	$543.18
Robert Riha, CEG	Sr. Principal Geologist/QC	24	@	$84.13	$2,019.12
	TOTAL HOURS	**976**		OTAL DIRECT LABOR	**$37,771.60**

MULTIPLIERS

ESCALATION @		(Rates Vary by Phase)	
OVERHEAD @	58.40%	(of Direct Labor + Escalation)	$22,058.61
PAYROLL ADDITIVES @	127.00%	(of Direct Labor + Escalation)	$47,969.93
PROFIT (FIXED FEE)			$10,780.01
		TOTAL MULTIPLIERS	**$80,808.56**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Travel/Milage	1900	Mi	@	$0.54	$1,026.00
Postage	8	LS	@	$15.00	$120.00
Rotary Dill Rig	4	LS	@	$5,500.00	$22,000.00
CPT Rig	2	LS	@	$3,500.00	$7,000.00
Enviro Lab Testing/ADL	1	LS	@	$9,500.00	$9,500.00
Geotechnical Lab Tetsing	5	LS	@	$1,500.00	$7,500.00
Hollow Stem Auger Drilling	5	LS	@	$2,800.00	$14,000.00
EDR-Research Data	1	LS	@	$1,000.00	$1,000.00
Traffic Control	4	LS	@	$1,500.00	$6,000.00
			TOTAL ODC'S		**$68,146.00**

TOTAL **$186,726.16**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Leighton Consulting	**Geotechnical & Haz Mat Phase I**	**Phase I**
PROJECT:		DATE:
Jurupa Road Grade Separation		**January 2, 2018**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Jeffrey DeLand	Staff Geologist	120	@	$28.50	$3,420.00
Breeanna Copeland	Staff Scientist	90	@	$23.50	$2,115.00
Zach Freeman, PG	Project Scientist	104	@	$32.21	$3,349.84
Richard Orr, PG	Associate Geologist	108	@	$57.21	$6,178.68
Simon Saiid, PE, GE	Principal Engineer/PM	68	@	$70.07	$4,764.76
Kris Lutton, PG	Sr. Principal Geologist/QC- Enviro	4	@	$106.97	$427.88
Buu Tran	CAD Operator	22	@	$40.87	$899.14
Mary Murphy	GIS Analyst	22	@	$34.25	$753.50
Bashir Saiid/Christain Delgadillo, EIT	Staff Engineers	160	@	$28.50	$4,560.00
Debbie Meggers	Word Processor/Admin	38	@	$24.95	$948.10
Mary-Ann Verrilli/Viki Malu	Project Accountant	16	@	$24.69	$395.04
Robert Riha, CEG	Sr. Principal Geologist/QC	12	@	$84.13	$1,009.56
	TOTAL HOURS	**764**		OTAL DIRECT LABOR	**$28,821.50**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	58.40%	(of Direct Labor + Escalation)	$16,831.76
PAYROLL ADDITIVES @	127.00%	(of Direct Labor + Escalation)	$36,603.31
PROFIT (FIXED FEE)			$8,225.66
		TOTAL MULTIPLIERS	**$61,660.72**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Travel/Milage	1800	Mi	@	$0.54	$972.00
Postage	6	LS	@	$15.00	$90.00
Rotary Dill Rig	4	LS	@	$5,500.00	$22,000.00
CPT Rig	2	LS	@	$3,500.00	$7,000.00
Enviro Lab Testing/ADL	1	LS	@	$9,500.00	$9,500.00
Geotechnical Lab Tetsing	5	LS	@	$1,500.00	$7,500.00
Hollow Stem Auger Drilling	5	LS	@	$2,800.00	$14,000.00
EDR-Research Data	1	LS	@	$1,000.00	$1,000.00
Traffic Control	4	LS	@	$1,500.00	$6,000.00
		TOTAL ODC'S			**$68,062.00**

TOTAL **$158,544.22**