

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



ITEM
3.35
(ID # 5784)

MEETING DATE:

Tuesday, January 9, 2018

FROM : TLMA-TRANSPORTATION:


SUBJECT: TRANSPORTATION AND LAND MANAGEMENT AGENCY-TRANSPORTATION:

Approval of the Engineering Services Agreement between the County of Riverside and Dokken Engineering for the Portola Avenue/Interstate 10 Interchange Project; District 4; [\$4,159,004]; City of Palm Desert (25%), CVAG (75%).

RECOMMENDED MOTION: That the Board of Supervisors:

1. Approve the Engineering Services Agreement between the County of Riverside (County) and Dokken Engineering for the Portola Avenue/Interstate 10 (I-10) Interchange Project; and
2. Authorize the Chairman of the Board to execute the same.

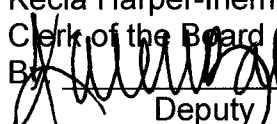
ACTION: Policy


Patricia Romo, Director of Transportation 12/7/2017

MINUTES OF THE BOARD OF SUPERVISORS

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

Ayes: Jeffries, Tavaglione, Washington and Perez
Nays: None
Absent: Ashley
Date: January 9, 2018
xc: TLMS-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	\$500,000	\$1,600,000	\$ 4,159,004	\$ 0
NET COUNTY COST	\$ 0	\$ 0	\$ 0	\$ 0
SOURCE OF FUNDS: CVAG (75%), City of Palm Desert (25%)			Budget Adjustment:	No
There are no General Funds used on this project			For Fiscal Year: 17/18-22/23	

C.E.O. RECOMMENDATION: Approve

BACKGROUND:

Summary

The City of Palm Desert (City) and the County of Riverside in cooperation with Caltrans and the Coachella Valley Association of Governments (CVAG) propose to construct a new interchange on I-10 at Portola Avenue, in the City of Palm Desert. The project includes construction of a new bridge overcrossing I-10 and the Union Pacific Railroad (UPRR), construction of new on and off ramps and realignment of Varner Road north of I-10. Auxiliary lanes will be added between the adjacent interchanges at Cook Street and Monterey Avenue.

East and West of the proposed Portola Avenue interchange, the I-10/Monterey Avenue and I-10/Cook Street interchanges currently provide the primary access from I-10 to the City of Palm Desert and the unincorporated community of Thousand Palms in Riverside County, as well as portions of the cities of Rancho Mirage and Indian Wells. As traffic demands in the region increase, level of service at these interchanges are expected to decline below acceptable levels. The project is needed to facilitate the additional demand and provide acceptable levels of service to the surrounding communities.

On April 26, 2016, agenda item #3-28, the County Board of Supervisors approved an amendment to the City of Palm Desert and CVAG Reimbursement Agreement. This agreement designates the County as lead agency and provides that CVAG and the City of Palm Desert will be 100% responsible for the funding of the project. Also, on the same date, and same agenda item, the cooperative agreement between the County and the State of California Department of Transportation (Caltrans) was approved by the board of supervisors. This agreement outlines the terms and conditions of each agency for preparation of the Project Approval and Environmental Document (PA/ED), the Plans, Specifications, and Estimate (PS&E), and Right-of-Way (R/W) acquisition. The roles and responsibilities for each agency during Construction will be defined in a future agreement.

Dokken Engineering, under contract with the City of Palm Desert, was tasked with the preparation of the PA/ED, PS&E, and right-of way acquisition for the project. Dokken has substantially completed the PA/ED phase and has started the design phase of the project. Now, as the lead agency for the project, the County desires to enter into an Engineering

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Services Agreement with Dokken Engineering to complete the PA/ED, PS&E, R/W and construction phases of the project.

Impact on Residents and Businesses

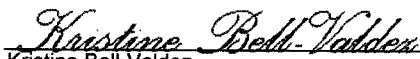
The proposed Portola Avenue Interchange will provide improved access to I-10 and will provide needed congestion relief for the Monterey Avenue and Cook Street interchanges. Construction is anticipated to begin in mid 2020. Because the Portola Avenue Interchange is a new Interchange the construction activities will have minimal impact on the traveling public. The construction work is expected to take two years to complete.

Additional Fiscal Information

CVAG has committed to funding 75% of the project costs as provided in the CVAG and City of Palm Desert agreement and is consistent with CVAG's policies for funding projects of this type. The City is responsible for funding the 25% match. No County Transportation or general funds will be used for this project.

ATTACHMENT

Vicinity Map
Agreement



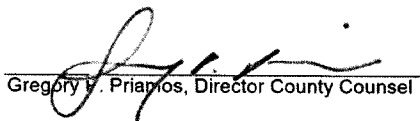
Kristine Bell-Valdez

12/13/2017



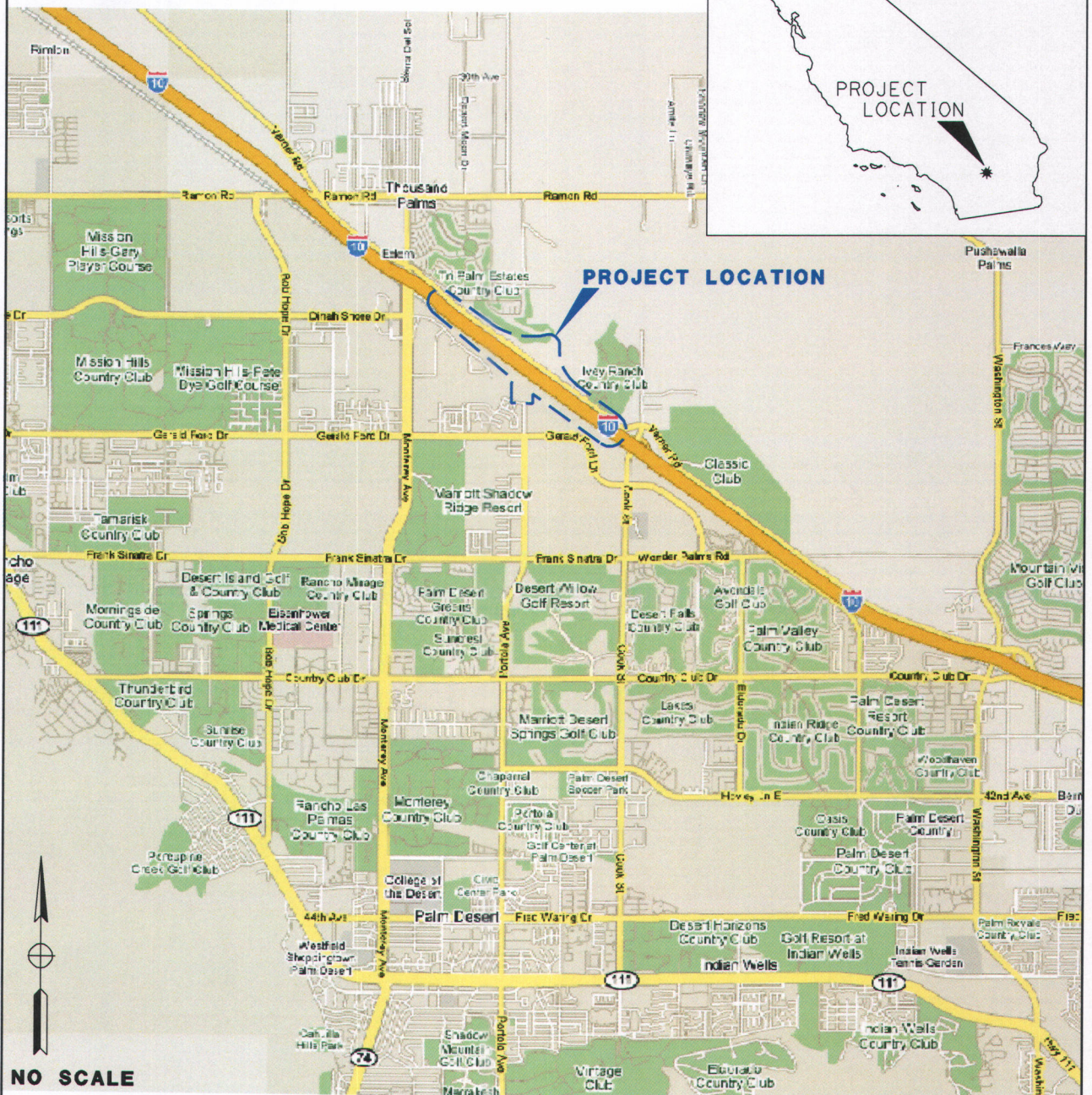
Melissa Noone, Associate Management Analyst

1/3/2018



Gregory V. Priamos, Director County Counsel

12/15/2017



**PROPOSED NEW CONNECTION TO INTERSTATE 10 AT PORTOLA AVENUE
FROM MONTEREY AVENUE TO COOK STREET IN THE CITY OF PALM DESERT**

DE DOKKEN
ENGINEERING
5675 RUFFIN ROAD
SUITE 250
SAN DIEGO, CA 92123
(858) 514-8377

ATTACHMENT A : VICINITY MAP
PROJECT:
**PROPOSED INTERCHANGE AT
INTERSTATE 10 AND PORTOLA
AVENUE**



Federal Project No.

Contract No. _____
Riverside County Transportation

ENGINEERING SERVICES AGREEMENT

for

For Portola Avenue/I-10 Interchange

between

County of Riverside • Transportation Department

and

Dokken Engineering



JAN 09 2018 3.35

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ENGINEERING SERVICES AGREEMENT

This Agreement is entered into this _____ day of _____, 2017, by and between COUNTY OF RIVERSIDE, hereinafter referred to as "COUNTY", and Dokken Engineering, hereinafter referred to as "ENGINEER", located at the following addresses:

County of Riverside • Transportation Department

Dokken Engineering

4080 Lemon Street, 8th Floor

110 Blue Ravine Road, Suite 200

Riverside, CA 92502

Folsom, CA 95630

COUNTY and Dokken Engineering 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:

Juann Ramos

The COUNTY PROJECT MANAGER for COUNTY shall be:

John Marcinek

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". The work to be performed under this Agreement is described in Appendix A1 entitled Statement of Work and the approved CONSULTANT's Cost Proposal dated 7-26-17. If there is any conflict between the approved Cost Proposal and this Agreement, this Agreement shall take precedence

ARTICLE III • COOPERATIVE AGENCIES

A. Responsible Agency and Lead Agency

COUNTY is designated as the Responsible Agency on behalf of the Cities of Norco and Eastvale for performing the preliminary engineering, conducting the environmental studies, and preparing the environmental documentation to secure the CEQA and the NEPA clearance for the PROJECT.

In accordance with the California Environmental Quality Act (CEQA), City of Norco shall be the Lead Agency to consider and approve all environmental documents required under CEQA for the PROJECT.

B. Cooperative Agencies

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

City of Palm Desert

Federal Highway Administration (FHWA)

CALTRANS

Union Pacific Railroad

Coachella Valley Water District

Utility Companies

Regulatory Agencies including:

U.S. Army Corps of Engineers (USACE)

U.S. Fish and Wildlife Service (USFWS)

California Department of Fish and Wildlife (CDFW)

Regional Water Quality Control Board (RWQCB)

Riverside County Flood Control & Water Conservation District (RCFC & WCD)

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.
3. Any substitution of subconsultant(s) must be approved in writing by COUNTY's Contract Manager prior to the start of work by the subconsultant(s).
4. ENGINEER shall pay its subconsultants within ten (10) calendar days from receipt of each payment made to ENGINEER by COUNTY.
5. Nothing contained in this contract or otherwise, shall create any contractual relation between COUNTY and any subconsultant(s), and no subcontract shall relieve ENGINEER of its responsibilities and obligations hereunder. ENGINEER agrees to be as fully responsible to COUNTY for the acts and omissions of its subconsultant(s) and of persons either directly or indirectly employed by any of them as it is for the acts and omissions of persons directly employed by ENGINEER. ENGINEER's obligation to pay its subconsultant(s) is an independent obligation from COUNTY'S obligation to make payments to the ENGINEER.

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 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. Minor modifications may be: a shift of funds between tasks within a budget category; 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, prior to implementing the change.
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 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.
3. 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.

4. 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.
5. 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.
6. 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, CONSULTANT 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 CONSULTANT, its directors, officers, partners, employees, agents, subconsultants or representatives or any person or organization for whom CONSULTANT 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 CONSULTANT.
3. To the fullest extent permitted by applicable law, CONSULTANT 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

1 loss, suits, claims, demands, actions, or proceedings based or alleged to be based on any negligence,
2 recklessness, or willful misconduct of CONSULTANT arising out of or from the performance of services
3 under this Agreement. The duty to defend applies to any alleged or actual negligence, recklessness, or
4 willful misconduct of CONSULTANT. The duty to defend shall apply whether or not CONSULTANT is a
5 party to the lawsuit, and shall apply whether or not CONSULTANT is directly liable to the plaintiffs in the
6 lawsuit. The duty to defend applies even if Indemnitees are alleged or found to be actively negligent,
7 unless the negligent act, error or omission at issue was caused by the sole active negligence of
8 Indemnitees.

- 9 4. The specified insurance provisions and limits required in this Agreement shall in no way limit or
10 circumscribe CONSULTANT'S obligations to indemnify and hold harmless Indemnitees from third party
11 claims.
- 12 5. In the event there is conflict between the indemnity and defense provisions and California Civil Code
13 Sections 2782 and 2782.8, the indemnity and defense provisions shall be interpreted to comply with Civil
14 Code sections 2782 and 2782.8.

15 **H. Quality Control**

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

27 **I. Value Engineering**

- 28 1. Elements of PROJECT may be considered for Value Engineering Studies. To this end, the COUNTY
29 PROJECT MANAGER may direct the ENGINEER to examine the various elements of a design segment

1 and submit an informal written statement or memorandum addressing those elements where it appears
2 significant savings and other advantages can be realized. The statement shall be sufficiently informative
3 to enable COUNTY to determine whether to direct a detailed Value Engineering Study or possibly direct
4 immediate design changes where the value of the change is apparent without the need of detailed study
5 and analysis.

- 6 2. ENGINEER or its subcontractors shall not incorporate in the design materials or equipment of single or
7 sole source origin without written approval of COUNTY. Proprietary names of material or equipment shall
8 not be used in the plans and specifications.

9 **J. Extra Work**

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

18 **K. Disputes**

- 19 1. In the event ENGINEER considers any work demanded of him to be outside the requirements of the
20 contract, or if he considers any order, instruction, or decision of COUNTY to be unfair, he shall promptly
21 upon receipt of such order, instruction or decision, ask for a written confirmation of the same whereupon
22 he shall proceed without delay to perform the work or to conform to the order, instruction, or decision; but
23 unless ENGINEER finds such order, instruction, or decision satisfactory, he shall within 20 days after
24 receipt of same, file a written protest with COUNTY stating clearly and in detail his objections and reasons
25 therefore. Except for such protests or objections as are made of record in the manner specified and
26 within the time stated herein, and except for such instances where the basis of a protest could not
27 reasonably have been foreseen by ENGINEER within the time limit specified for protest, ENGINEER
28 hereby waives all grounds for protests or objections to the orders, instruction, or decisions of COUNTY
29 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. In the event of termination for cause or failure to perform by CONSULTANT, COUNTY will be relieved of the payment of any consideration to CONSULTANT should CONSULTANT fail to perform the covenants herein contained at the time and in the manner herein provided.

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

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

- 9 d. It is understood and agreed to by the parties hereto that the ENGINEER'S insurance shall be
10 construed as primary insurance, and the COUNTY'S insurance and/or deductibles and/or self-insured
11 retention's or self-insured programs shall not be construed as contributory.
- 12 e. If, during the term of this Agreement or any extension thereof, there is a material change in the scope
13 of services; or, there is a material change in the equipment to be used in the performance of the
14 scope of work; or, the term of this Agreement, including any extensions thereof, exceeds five (5)
15 years; the COUNTY reserves the right to adjust the types of insurance and the monetary limits of
16 liability required under this Agreement, if in the County Risk Manager's reasonable judgment, the
17 amount or type of insurance carried by the ENGINEER has become inadequate.
- 18 f. ENGINEER shall pass down the insurance obligations contained herein to all tiers of subconsultants
19 working under this Agreement.
- 20 g. The insurance requirements contained in this Agreement may be met with a program(s) of self-
21 insurance acceptable to the COUNTY.
- 22 h. ENGINEER agrees to notify COUNTY of any claim by a third party or any incident or event that may
23 give rise to a claim arising from the performance of this Agreement.

24 **O. Conflict of Interest**

- 25 1. ENGINEER warrants, by execution of this contract, that no person or selling agency has been employed
26 or retained to solicit or secure this contract upon an agreement or understanding for a commission,
27 percentage, brokerage or contingent fee, excepting bona fide employees or bona fide established
28 commercial or selling agencies maintained by ENGINEER for the purpose of securing business. For
29 breach or violation of this warranty, COUNTY has the right to annul this contract without liability, pay only

1 for the value of the work actually performed, or in its discretion to deduct from the contract price or
2 consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or
3 contingent fee. ENGINEER may be requested to complete a Conflict of Interest Statement prior to,
4 during, or after execution of this contract. ENGINEER understands that as a condition of this contract
5 ENGINEER agrees to complete the Conflict of Interest Statement when requested to do so by COUNTY.

6 2. ENGINEER shall disclose any financial, business, or other relationship with COUNTY that may have an
7 impact upon the outcome of this contract, or any ensuing COUNTY construction project. ENGINEER shall
8 also list current clients who may have a financial interest in the outcome of this contract, or any ensuing
9 COUNTY construction project, which will follow.

10 3. ENGINEER hereby certifies that it does not now have, nor shall it acquire any financial or business
11 interest that would conflict with the performance of services under this contract.

12 4. ENGINEER hereby certifies that neither ENGINEER, nor any firm affiliated with ENGINEER will bid on
13 any construction contract, or on any contract to provide construction inspection for any construction
14 project resulting from this contract. An affiliated firm is one, which is subject to the control of the same
15 persons through joint-ownership, or otherwise.

16 5. Except for subconsultants whose services are limited to providing surveying or materials testing
17 information, no subconsultant who has provided design services in connection with this contract shall be
18 eligible to bid on any construction contract, or on any contract to provide construction inspection for any
19 construction project resulting from this contract.

20 6. All subcontracts entered into by ENGINEER as a result of this contract shall contain paragraphs 2
21 through 5 of this Section O.

22 **P. Legal Compliance**

23 ENGINEER shall comply with all Federal, State and local laws, statutes, ordinances, rules and
24 regulations, and the orders and decrees of any courts or administrative bodies or tribunals currently in
25 effect and in any manner affecting the performance of this contract, including, without limitation, workers'
26 compensation laws and licensing and regulations. Failure to comply by CONSULTANT may impact the
27 continued availability of funding for this Agreement and may be grounds for termination by the COUNTY.

28 **Q. Nondiscrimination**

29 1. ENGINEERS's signature affixed herein, and dated, shall constitute a certification under penalty of perjury

1 under the laws of the State of California that ENGINEER has, unless exempt, complied with, the
2 nondiscrimination program requirements of Government Code Section 12990 and Title 2, California
3 Administrative Code, Section 8103.

4 2. During the performance of this contract, ENGINEER and its Subcontractors shall not act unlawfully
5 against any employee or applicant for employment because of race, religion, color, national origin,
6 ancestry, physical handicap, medical condition, marital status, age or sex. ENGINEER and
7 Subcontractor shall comply with the provisions of the Fair Employment and Housing Act (Government
8 Code, Section 12900 et seq.) and applicable regulations promulgated thereunder (California
9 Administrative Code, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment
10 and Housing Commission implementing Government Code, Section 12900, set forth in Chapter 5 of
11 Division 4 of Title 2 of the California Administrative Code are incorporated into this contract by reference
12 and made a part hereof as if set forth in full. ENGINEER and its Subcontractors shall give written notice
13 of their obligations under this clause to labor organizations with which they have a collective bargaining or
14 other agreement.

15 3. ENGINEER will provide all information and reports required by the Regulations, or orders and instructions
16 issued pursuant thereto, and will permit access to its books, records, accounts, other sources of
17 information, and its facilities as may be determined by COUNTY or AGENCIES to be pertinent to
18 ascertain compliance with such Regulations, orders and instructions. Where any information required of
19 ENGINEER is in the exclusive possession of another who fails or refuses to furnish this information,
20 ENGINEER shall so certify to COUNTY, or the Federal Highway Administration as appropriate and shall
21 set forth what efforts he has made to obtain the information.

22 4. In the event of ENGINEER's noncompliance with the nondiscrimination provisions of this contract,
23 COUNTY shall impose such contract sanctions as it determines to be appropriate, including, but not
24 limited to:

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

27 5. ENGINEER shall include the nondiscrimination and compliance provisions of this clause in all
28 subcontracts to perform work under this contract.

29 6. 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. Title VI provides that the recipients of federal assistance will implement and maintain a policy of nondiscrimination in which no person in the state of California shall, on the basis of race, color, national origin, religion, sex, age, disability, be excluded from participation in, denied the benefits of or subject to discrimination under any program or activity by the recipients of federal assistance or their assignees and successors in interest.

7. The ENGINEER, with regard to the work performed by it during the Agreement shall act in accordance with Title VI. Specifically, the ENGINEER shall not discriminate on the basis of race, color, national origin, religion, sex, age, or disability in the selection and retention of Subconsultants, including procurement of materials and leases of equipment. The ENGINEER shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the U.S. DOT's Regulations, including employment practices when the Agreement covers a program whose goal is employment

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 affect 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, 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.
2. 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. Audit Review Procedures

1. Any dispute concerning a question of fact arising under an interim or post audit of this contract that is not disposed of by agreement, shall be reviewed by COUNTY'S Chief Financial Officer.
2. Not later than 30 days after issuance of the final audit report, ENGINEER may request a review by COUNTY'S Chief Financial Officer of unresolved audit issues. The request for review will be submitted in writing.
3. ENGINEER Cost Proposal is subject to a CPA ICR Audit Work Paper Review by Caltrans' Audit and Investigation (Caltrans). Caltrans, at its sole discretion, may review and/or audit and approve the CPA ICR documentation. The Cost Proposal shall be adjusted by the ENGINEER and approved by the COUNTY Contract Manager to conform to the Work Paper Review recommendations included in the management letter or audit recommendations included in the audit report. Refusal by the ENGINEER to incorporate the Work Paper Review recommendations included in the management letter or audit recommendations included in the audit report will be considered a breach of the contract terms and cause for termination of the contract and disallowance of prior reimbursed costs.
 - a. During a Caltrans' review of the ICR audit work papers created by the ENGINEER's independent CPA, Caltrans will work with the CPA and/or ENGINEER toward a resolution of issues that arise during the review. ENGINEER agrees to use its best efforts to resolve any audit disputes in a timely manner. If Caltrans identifies significant issues during the review and is unable to issue a cognizant approval letter, COUNTY will reimburse the ENGINEER at a provisional ICR until a FAR compliant ICR {e.g. 48 CFR, part 31; GAGAS (Generally Accepted Auditing Standards); CAS (Cost Accounting Standards), if applicable; in accordance with procedures and guidelines of the American Association of State Highways and Transportation Officials Audit Guide; and other applicable procedures and guidelines} is received and approved by A&I. Provisional rates will be as follows:
 - aa. If the proposed rate is less than 150% - the provisional rate reimbursed will be 90% of the proposed rate.
 - bb. If the proposed rate is between 150% and 200% - the provisional rate will be 85% of the proposed rate.
 - cc. If the proposed rate is greater than 200% - the provisional rate will be 75% of the

proposed rate.

- b. If Caltrans is unable to issue a cognizant letter per paragraph 3.a. above, Caltrans may require ENGINEER to submit a revised independent CPA-audited ICR and audit report within three (3) months of the effective date of the management letter. Caltrans will then have up to six (60 days to review the ENGINEER's and/or the independent CPA's revisions.
- c. If the ENGINEER fails to comply with the provisions of this Section 3, or if Caltrans is still unable to issue a cognizant approval letter after the revised independent CPA-audited ICR is submitted, overhead cost reimbursement will be limited to the provisional ICR that was established upon initial rejection of the ICR and set forth in paragraph 1.a. above for all rendered services. In this event, this provisional ICR will become the actual and final ICR for reimbursement purposes under this contract.
- d. ENGINEER may submit to COUNTY final invoice only when all of the following items have occurred: (1) Caltrans approves or rejects the original or revised independent CPA-audited ICR; (2) all work under this contract has been completed to the satisfaction of COUNTY; and, (3) Caltrans has issued its final ICR review letter. The ENGINEER MUST SUBMIT ITS FINAL INVOICE TO COUNTY no later than 60 days after occurrence of the last of these items.

The provisional ICR will apply to this contract and all other contracts executed between COUNTY and the ENGINEER, either as a prime or subconsultant, with the same fiscal period ICR.

V. Rebates, Kickbacks, or Other Unlawful Consideration

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.

W. Debarment and Suspension Certification

1. ENGINEER's signature affixed herein, shall constitute a certification under penalty of perjury under the laws of the State of California, that ENGINEER has complied with Title 2 CFR, Part 180, "OMB Guidelines to Agencies on Government wide Debarment and Suspension (nonprocurement)", which certifies that he/she or any person associated therewith in the capacity of owner, partner, director, officer, or manager,

is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency; has not been suspended, debarred, voluntarily excluded, or determined ineligible by any federal agency within the past three (3) years; does not have a proposed debarment pending; and has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three (3) years. Any exceptions to this certification must be disclosed to COUNTY.

2. Exceptions will not necessarily result in denial of recommendation for award, but will be considered in determining ENGINEER responsibility. Disclosures must indicate to whom exceptions apply, initiating agency, and dates of action.

3. Exceptions to the Federal Government Excluded Parties List System maintained by the General Services Administration are to be determined by the Federal highway Administration.

X. Prohibition of Expending COUNTY, 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 COUNTY 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.

Y. 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.

Z. 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 COUNTY 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.

AA. 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 its civil legal remedies in the event of a dispute.

C. Reporting Progress

1. As part of the monthly invoice ENGINEER shall submit a progress report in accordance with COUNTY Engineering Services Progress Reporting Guidelines. Progress Reports shall indicate the progress achieved during the previous month in relation to the Schedule of Services. Submission of such progress report by ENGINEER shall be a condition precedent to receipt of payment from COUNTY for each monthly invoice submitted.
2. To ensure understanding and performance of the contract objectives, meetings between COUNTY, AGENCIES, and ENGINEER shall be held as often as deemed necessary. 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.

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 \$4,159,004.07 and reimbursement is to be made at actual cost plus fixed fee for the following contractors:

Dokken Engineering	\$3,514,439.43
PACE Advance Water Engineering	\$76,343.08
Earth Mechanics, Inc.	\$387,719.93
David Evans and Associates, Inc.	\$102,446.95
Fehr & Peers	\$78,054.68

1
2 If a contingency budget is provided, COUNTY shall hold such contingency in reserve for unforeseen Extra
3 Work that may arise during the performance of this agreement. Contingency budget shall only be used at
4 the discretion of the COUNTY PROJECT MANAGER, and with prior written authorization by the COUNTY
5 PROJECT MANAGER.

6 No additional compensation for Extra Work will be paid except upon the issuance of an Extra Work Order
7 by COUNTY.

- 8 2. Prior authorization in writing by the COUNTY PROJECT MANAGER will be required before ENGINEER
9 enters into any non-budgeted purchase order or subcontract exceeding \$500 for supplies, equipment or
10 consultant services. ENGINEER shall provide an evaluation of the necessity or desirability of incurring
11 such costs.
- 12 3. For purchase of any item, service or consulting work not covered in ENGINEER's proposal and
13 exceeding \$500, with prior authorization by the COUNTY PROJECT MANAGER, three competitive
14 quotations shall be submitted with the request, or the absence of bidding shall be adequately justified.
- 15 4. Any equipment purchased as a result of this contract is subjected to the following: ENGINEER shall
16 maintain an inventory of all nonexpendable property. Nonexpendable property is defined as having a
17 useful life of at least two years and an acquisition cost of \$500 or more. If the purchased equipment
18 needs replacement and is sold or traded in, COUNTY shall receive a proper refund or credit. At the
19 conclusion of the contract or if the contract is terminated, ENGINEER may either keep the equipment and
20 credit COUNTY in an amount equal to its fair market value or sell such equipment at the best price
21 obtainable at a public or private sale in accordance with established COUNTY procedures and credit
22 COUNTY in an amount equal to the sales price. If ENGINEER elects to keep the equipment, fair market
23 value shall be determined, at ENGINEER's expense, on the basis of a competent independent appraisal
24 of such equipment. Appraisals shall be obtained from an appraiser mutually agreeable by COUNTY, and
25 ENGINEER. If it is determined to sell the equipment, the terms and conditions of such sale must be
26 approved in advance by COUNTY and AGENCIES.
- 27 5. The consideration to be paid ENGINEER, as provided herein, shall be in compensation for all of
28 ENGINEER's expenses incurred in the performance hereof, including travel and per diem, unless
29 otherwise expressly so provided.

- 1 6. ENGINEER agrees that the Contract Cost Principles and Procedures, CFR 48, Federal Acquisition
2 Regulations Systems, Chapter 1, Part 31, shall be used to determine the allowability of individual items of
3 cost.
- 4 7. ENGINEER also agrees to comply with Federal procedures in accordance the Code of Federal
5 Regulations Section 49, Part 18, Uniform Administrative Requirements for Grants and Cooperative
6 Agreements to State and Local Governments.
- 7 8. Any costs for which payment has been made to ENGINEER that are determined by subsequent audit to be
8 unallowable under 49 CFR, Part 18 and 48 CFR, Federal Acquisition Regulations System, Chapter 1,
9 Part 31.000 et seq., are subject to repayment by ENGINEER to COUNTY.
- 10 9. In the event of errors or omissions in the plans for PROJECT, ENGINEER shall perform the necessary
11 engineering services required to correct such errors and omissions without additional charge to COUNTY.

12 **C. Progress Payments**

- 13 1. ENGINEER shall submit monthly invoices for PROJECT Services in accordance with Appendix C,
14 Budget, and in accordance with COUNTY Engineering Services Invoicing Procedures.
- 15 2. ENGINEER shall submit an invoice each month for PROJECT services performed during the preceding
16 month. Invoices shall be submitted to the COUNTY PROJECT MANAGER and shall be included with a
17 Progress Report covering the same period as the submitted invoice.
- 18 3. Progress payments will be based on PROJECT services provided and actual costs incurred. Payments
19 made prior to the completion of each phase will not exceed the amount allowed in ENGINEER's cost
20 proposal for the completion of that phase and prior phases, unless approved in writing by the COUNTY
21 PROJECT MANAGER.
- 22 4. Progress payments will be made as promptly as fiscal procedures will permit upon receipt by the
23 COUNTY PROJECT MANAGER of itemized invoices.
- 24 5. Invoices shall follow the format stipulated for the approved Cost Proposal and shall reference this
25 contract number and project title. Final invoice must contain the final cost and all credits due COUNTY
26 including any equipment purchased under the provisions of Article VI Compensation of this contract. The
27 final invoice should be submitted within 60 calendar days after completion of ENGINEER's work
- 28 6. COUNTY will withhold the last 10 percent of the budget for preparation of PS&E documents. The 10
29 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 plans, specifications and estimate.

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

1 FORTH IN THIS AGREEMENT ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED,
2 INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE;
3 AND SUCH OTHER WARRANTIES ARE HEREBY EXCLUDED.

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

ARTICLE VIII • APPROVALS

COUNTY Approvals

RECOMMENDED FOR APPROVAL:

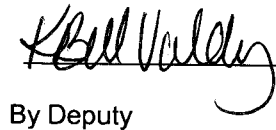
 Dated: 12-7-17

PATRICIA ROMO


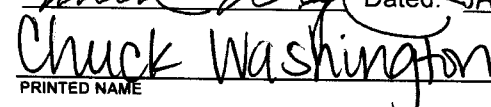
Director of Transportation

APPROVED AS TO FORM:

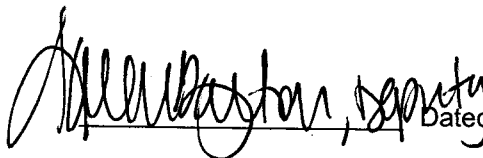
GREGORY P. PRIAMOS, COUNTY COUNSEL

 Dated: 12/13/17
By Deputy

APPROVAL BY THE BOARD OF SUPERVISORS

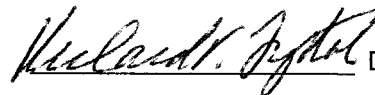
 Dated: JAN 09 2018

PRINTED NAME
Chairman, Riverside County Board of Supervisors

ATTEST:

 Dated: JAN 09 2018
KECIA HARPER-IHEM
Clerk of the Board (SEAL)

ENGINEER Approvals

ENGINEER:

 Dated: 11/22/17

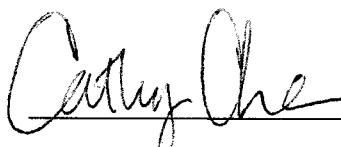
RICHARD T. LIPTAK

PRINTED NAME

PRESIDENT

TITLE

ENGINEER:

 Dated: 11/22/17

CATHY CHAN

PRINTED NAME

SECRETARY

TITLE

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APPENDIX A - SCOPE OF SERVICES

ARTICLE AI • INTRODUCTION

A. DESCRIPTION

The PROJECT proposes to construct a new interchange on Interstate 10 at Portola Avenue to accommodate future traffic demand for existing and future land use and reduce traffic congestion at the adjacent existing Monterey Avenue and Cook Street interchanges. In April 2005, Caltrans prepared a Project Study Report (PSR) that defined the scope of the PROJECT and environmental requirements. The PROJECT is consistent with the City of Palm Desert General Plan, which involves aligning the north end of Portola Avenue to cross I-10 and interconnect with Varner Road on the north. The City of Palm Desert initiated the PROJECT but in agreement with County of Riverside (COUNTY), the COUNTY will be the lead for completion of the Preliminary Engineering/Environmental Document, preparation of PS&E, and PROJECT construction. The PROJECT will include the extension of Portola Avenue from its existing terminus at Dinah Shore Drive to I-10 and the realignment of adjacent Varner frontage road within the Project area.

B. LOCATION

The new Portola Avenue Interchange is to be located at PM 44.8/46.6 in the City of Palm Desert, Riverside County approximately 1.0 mile west of the Cook Street / I-10 interchange and 1.3 miles east of the Monterey Avenue / I-10 interchange in Palm Desert. Attached is a vicinity map of the proposed PROJECT.

C. COORDINATION

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

- Federal Highway Administration (FHWA)
- CALTRANS
- Riverside County Departments
- City of Palm Desert
- Utility Companies
- Union Pacific Railroad
- Coachella Valley Water District
- The public and adjacent property owners

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Regulatory Agencies including:

- California Department of Fish and Game (CDFG)
- Regional Water Quality Control Board (RWQCB)

CALTRANS may exercise review and approval function through the COUNTY PROJECT MANAGER at key points in the development process. All contacts with CALTRANS will be directed through COUNTY. Milestone PROJECT submittal reviews will be performed for the specific products and deliverables listed herein. The COUNTY PROJECT MANAGER will conduct these reviews, in addition to the monthly project status reports and meetings. All meetings with other outside agencies will be scheduled by ENGINEER with approval of COUNTY.

D. PHASES

The services performed by ENGINEER shall include the following Phases:

- Phase I – Preliminary Engineering / Environmental Clearance / Technical Report
- Phase II – Plans, Specifications & Estimates (PS&E) for the preferred project alternative
- Phase III – Construction Bidding and Award Support
- Phase IV – Design Support Construction

Phases II, III, and IV shall proceed upon written notice to proceed by COUNTY.

E. STANDARDS

1. Environmental

The procedures to be followed and the content of the environmental surveys, environmental technical reports, and environmental documents are set forth in Caltrans "Project Development Procedures Manual", Caltrans "Environmental Handbook", Caltrans Transportation Laboratory technical manuals for environmental studies, and FHWA's "Technical Advisory T6640.8A".

Federal and state requirements for environmental analysis and impact assessment, as set forth in the National Environment Policy Act, the California Environmental Quality Act, and other applicable county and state regulations, must be satisfied.

2. Survey

Surveys shall be performed by the COUNTY in accordance with the current Department of Transportation (Caltrans) "Survey Manual" and its revisions. Work not covered by the manual shall be performed in accordance with accepted professional surveying standards as approved by Caltrans.

3. Geotechnical Design Report

The Geotechnical Design Report shall be prepared in conformance with current editions of the State Manual of Test, California Test Method 130.

4. Design

Roadway design shall be in accordance with the current CALTRANS Highway Design Manual and its revisions and/or COUNTY Road Standards and City of Palm Desert standards as appropriate. It is anticipated that design will proceed at risk in order to meet funding deadlines. Traffic design shall be in accordance with the Manual of Uniform Traffic Control Devices (MUTCD) and the California Supplement. Basic design shall be in accordance with the approved Technical Report and final Environmental Document including any supplements and/or updates. The work to be performed by the ENGINEER shall be based on, but not limited to the procedures, guidelines, standards and code contained in the Caltrans and other agency publications listed below:

- All deliverables and supporting documentation shall be prepared based on English values.
- Project Development Procedures Manual (PDPM), with current amendments
- Local Assistance Program Guidelines, with current amendments
- Local Programs Procedures (LPP), with current amendments
- Local Assistance Procedures Manual (LAPM), with current amendments
- Project Management Handbook, with current amendments
- Project Risk Management Handbook, with current amendments
- Project Communication Handbook, with current amendments
- Highway Design Manual (HDM), current edition with current amendments
- Traffic Manual, current edition
- Construction Manual, current edition
- Standard Plans, current edition
- Standard Specifications, current edition
- Standard Special Provisions, with current amendments
- Bridge Design Specifications (code)
- Storm Water Quality Handbooks, current editions

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- Encroachment Permit Manual, current edition
- Cooperative Agreement Manual, current edition
- PS&E Preparations Manual, current edition
- Caltrans CADD User's Manual, current edition
- Drafting Manual, current edition
- Standard Environmental Reference, current edition
- Manual of Test, California 130 (geotechnical design), current edition
- All manuals and publications unique to the field of bridge design and construction, with current amendments
- Urban Drainage Design Manual, US Department of Commerce, current edition
- Drainage of Highway Pavement, US Department of Transportation, current edition
- County of Riverside Roadway Improvement Standards and Specifications
- City of Palm Desert Roadway Improvement Standards and Specifications
- Union Pacific Railroad Standards
- Plans Preparation Manual Section 2-3.5 and 2-3.6 for As-builts preparation
- Chapter 5-104D of the Caltrans Construction Manual for as-builts

5. 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 shall 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:

Assignment	Key Personnel
Principal in Charge	Richard Liptak, PE
Project Manager	Juann Ramos, PE
Roadway Project Engineer	Kris Kofoed, PE
Structures Project Engineer	Charles Tornaci, PE

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Senior Environmental Planner	Namat Hosseinion
Senior Drainage Engineer	Pamela Dalcin-Walling, PE
QA/QC Engineer	Elizabeth Diamond, PE
Utility Coordinator	Ryan Neves, PE

G. COUNTY RESPONSIBILITIES

The following includes tasks to be completed by the COUNTY:

- Provide all current standards, existing plans, and manuals (at ENGINEER cost)
- Provide survey controls, topographic mapping, current digital orthophotography and supplemental surveys.
- Perform field design surveys as requested by the ENGINEER
- Perform quality assurance for all work and deliverables
- Attend project meetings
- Provide right of way base mapping and parcel mapping in Caltrans format
- Verify that COUNTY survey control points are still in place and undisturbed.
- Provide survey records research, including grant deeds and right of way documents in support of Right of Way base mapping prepared by COUNTY surveyor for the preferred alternative
- Survey position and ground surface elevations at each boring location
- COUNTY will provide Survey and Land Acquisition Services generally as described below:
 - Prepare existing right of way and parcel mapping.
 - Coordinate Permits for Right of Entry with property owners.
 - Obtain and review Title Reports, identify easements and encumbrances.
 - Preparation of Plats and Legal Exhibits.
 - Prepare appraisals for temporary and permanent right of way and perform appraisal review.
 - Perform right of way negotiations and acquisitions.
 - Certify new acquired right of way.

ARTICLE AII • PROJECT ADMINISTRATION (PHASES I, II, III, & IV)

A. PROJECT MANAGEMENT

This task includes the day-to-day management of the PROJECT. PDT meetings with the COUNTY PROJECT MANAGER, the California Department of Transportation staff and other representatives from affected agencies will be held at least once a month. The environmental team leaders and/or subconsultants will attend PDT meetings as appropriate. The ENGINEER shall prepare meeting notes for each meeting and have these available for review at least one week prior to each succeeding meeting.

The ENGINEER's Project Management Plan will include 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.

B. BUDGETING

The ENGINEER shall prepare 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.

C. COST ACCOUNTING

The ENGINEER shall prepare monthly reports of expenditures for the PROJECT by task and milestone. Expenditures will 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.

D. SCHEDULING

Within one month 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, if necessary, due to changing circumstances.

E. PROGRESS REPORTING

Progress reports and invoices shall be prepared in accordance with COUNTY guidelines. Reports providing actual physical progress will be required monthly and shall be accompanied by an invoice.

F. CONTRACT ADMINISTRATION

The ENGINEER's PROJECT MANAGER shall maintain ongoing liaison with the COUNTY PROJECT MANAGER, AGENCY contacts and utility companies to promote effective coordination during the course of project development. Progress meetings with ENGINEER's staff, subconsultants and the COUNTY PROJECT MANAGER shall be held regularly.

ARTICLE AIII • PROJECT APPROVAL (PA) & ENVIRONMENTAL DOCUMENT (ED) TASK LIST (PHASE I)

ENGINEER shall provide a Project Approval Report (PA) and Environmental Document (ED) for the PROJECT. The following task list is consistent with the project schedule.

TASK 1.0 PROJECT MANAGEMENT

Project Management shall be conducted to ensure a smooth flow of information between Project Development Team (PDT) members. A project schedule shall be developed and periodically updated. A comprehensive Quality Assurance/Quality Control (QA/QC) plan shall be implemented. Monthly PDT Meetings shall be held.

1.1 MONTHLY PROJECT TEAM MEETINGS

ENGINEER shall coordinate and attend Project Development Team (PDT) meetings with COUNTY, Caltrans staff and other representatives from resource agencies as necessary. Minutes shall be prepared by the ENGINEER at each meeting and distributed to the COUNTY'S Project Manager and other attendees at each meeting. An Action Item List and a Deliverables Status Matrix shall be updated and prepared for each PDT meeting.

1.2 MONTHLY PROGRESS REPORTS

ENGINEER shall prepare progress reports to record the progress of the project and as supporting data for invoices presented monthly to the COUNTY. The Progress Report shall include accomplished tasks for the month, anticipated progress for the next month, pending issues and schedule completion target dates. ENGINEER shall mail progress reports with the monthly invoices.

1.3 PROJECT SCHEDULE

ENGINEER shall provide a detailed project baseline schedule, indicating milestones, major activities and deliverables, to the COUNTY and Caltrans for review and comments. ENGINEER shall update the schedule as required.

1.4 QUALITY CONTROL

ENGINEER shall have a quality control plan in effect during the entire course of the project. ENGINEER shall develop a plan establishing a process to ensure design calculations are independently checked. Exhibits and plans shall also be checked, corrected and back-checked for accuracy and completeness. ENGINEER shall review environmental and engineering Sub-consultant report submittals to ensure that appropriate background information, study methodology, interpretation of data, format and content are completed in accordance with current standards.

1.5 COST ACCOUNTING

ENGINEER shall prepare monthly reports of expenditures for the PROJECT by task and milestone. Expenditures include direct labor costs, other direct costs, and sub-consultant costs. These reports shall be included as supporting data for invoices presented to the COUNTY every month.

- *Deliverable: ENGINEER shall prepare meeting notices, agendas and minutes, schedules, monthly progress reports and invoices, and public meeting materials.*

TASK 2.0 TRAFFIC STUDY UPDATE

2.1 TRAFFIC DATA COLLECTION

ENGINEER shall update the Traffic Operations Memorandum to identify changes associated with the modification of Varner Road in the study area. As part of this update, the ENGINEER shall address the changing in alignment and the reduced length for queuing. Updated Traffic data will be used in support of design exception approval. Traffic memorandum will identify pocket lengths for the modified intersection at Portola Avenue / Varner Road.

- *Deliverable: ENGINEER shall prepare an updated traffic Operations Memorandum.*

TASK 3.0 PRELIMINARY DRAINAGE/WATER QUALITY STUDIES

3.1 PRELIMINARY HYDROLOGY/DRAINAGE REPORT

ENGINEER shall update the Preliminary Hydrology / Drainage Report to obtain pertinent drainage information and plot said information on a tributary map. ENGINEER shall update the limits and characteristics of watersheds, existing and future drainage facilities, and existing and future developments affecting the project limits. The information shall be included in the updated hydrology study and considered in the design of drainage facilities. ENGINEER shall update existing drainage systems for their ability to

1 accommodate future design flows and propose drainage modifications/ improvements for the PROJECT.
2 After review by the COUNTY, Coachella Valley Water District (CVWD) and Caltrans, ENGINEER shall
3 incorporate comments into a final report.

- 4 - *Deliverable: ENGINEER shall update Preliminary Hydrology/Drainage Report*

5 **3.2 FLOODPLAIN HYDRAULICS MODELING AND FEMA CONDITIONAL LETTER OF MAP**
6 **REVISION**

7 3.2.1 Floodplain Hydraulics Modeling

8 ENGINEER shall prepare 2D floodplain hydraulic analysis of the potential changes to the existing
9 100-year floodplain for the area surrounding the project area based on the proposed channel
10 system and grading. ENGINEER shall utilize the results of a detailed two-dimensional floodplain
11 hydraulic model for the existing and proposed conditions in order to quantify the changes to the
12 100-year floodplain including depth and velocity.

- 13 - *Deliverable: ENGINEER shall prepare a Floodplain Impacts Technical Memorandum*

14 3.2.2 FEMA Conditional Letter of Map Revision

15 ENGINEER shall analyze changes to the existing FEMA floodplain based on the floodplain
16 hydraulics modeling. ENGINEER shall then prepare required floodplain mapping exhibits for
17 submittal to FEMA, included an annotated Flood Insurance Rate Map (FIRM) for the panel
18 containing the project indicating the extent of the revision on the current published flood hazard
19 map, and a comparison FEMA floodplain map to show the differences between the new and current
20 hazard mapping at the project site.

21 ENGINEER shall prepare a FEMA submittal package for a Conditional Letter of Map Revision
22 (CLOMR). The initial package will include a cover letter, description of the extent of map revision,
23 technical background information, FEMA application forms, and a written concurrence from the
24 County indicating their agreement with the proposed floodplain modification.

- 25 - *Deliverable: ENGINEER shall prepare and process through FEMA a CLOMR, including an annotated*
26 *FIRM*

3.3 STORM WATER QUALITY ASSESSMENT (SWQA)

ENGINEER shall evaluate the potential impacts on water quality that may be caused by the introduction of pollutants into surface bodies of water, the alteration of surface drainage patterns, and changes to area groundwater levels due to an increase of impermeable surfaces. A water quality assessment shall be prepared by reviewing and documenting existing available records to describe ambient conditions in nearby water channels, natural or manmade. Water quality data for both surface and groundwater shall be used from published reports. The impacts of the Project shall be evaluated and potential mitigation measures to alleviate both short-term (during construction) and long-term impacts shall be identified. After review by the COUNTY and Caltrans, ENGINEER shall incorporate all comments into a final assessment.

- *Deliverable: ENGINEER shall complete a SWQA and incorporate the assessment into the environmental document.*

3.4 STORM WATER DATA REPORT (SWDR)

ENGINEER shall update the Storm Water Data Report and identify potential storm water quality impacts and develop options to avoid, reduce or minimize the potential for storm water quality impacts. ENGINEER shall ensure that the programmed project includes sufficient right-of-way and budget for required storm water controls and identify project-specific permanent and temporary Best Management Practices (BMPs) that may be required to mitigate impacts. Drainage areas and total disturbed area shall be defined, as shall climatic conditions, existing drainage site conditions, site permeability, soil texture, existing vegetation and groundwater.

3.4.1 Evaluation Documentation Form

ENGINEER shall determine hydraulic conditions, disturbed soil areas, local pollution control requirements and total maximum daily loads (TMDLs) within the project vicinity.

3.4.2 Site Data and Storm Water Quality Design Issues

ENGINEER shall define site data and storm water quality design issues in accordance with checklists SW-1, SW-2 and SW-3 from the Caltrans Project Planning and Design Guide:

- Receiving water bodies/303(d) list/Pollutants of Concern
- Regional Water Quality Control Board (RWQCB) special requirements/concerns
- Local agency requirements/concerns

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- Project design considerations (climate, soil, topography, geology, groundwater, right of way requirements, slope stabilization)
- Right-of-way BMP costs and funding
- Measures for avoiding or reducing potential storm water impacts

3.4.3 Design Pollution Prevention BMPs

ENGINEER shall describe proposed design pollution prevention BMPs to be used on the project in accordance with checklists DPP-1, Parts 1-5:

- Downstream effects related to potentially increased flow
- Slope/Surface protection systems
- Concentrated flow conveyance systems
- Preservation of existing vegetation

3.4.4 Permanent Treatment BMPs

ENGINEER shall describe proposed permanent treatment BMPs to be used on the project in accordance with checklists T-1, Parts 1-7:

- Biofiltration Swales/Strips
- Dry weather diversion
- Infiltration basins
- Detention basins
- Gross solids removal devices
- Traction sand traps
- Media filters
- Multi-chamber treatment train
- Wet basins

3.4.5 Construction Cost Information

ENGINEER shall prepare a summary of construction costs included in the Preliminary Construction Cost Estimate Summary associated with storm water pollution prevention. After review by the COUNTY and Caltrans, ENGINEER shall incorporate all comments into a final report.

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- *Deliverable: ENGINEER shall update a SWDR and incorporate the report information into the Project Report and Environmental Document.*

TASK 4.0 ENVIRONMENTAL DOCUMENT UPDATE

The following items will need to be updated and/or revalidated to incorporate the preferred alternative alignment which shifts Portola Avenue / Varner Road intersection to the south of the initial design. After the technical studies are update and approved by Caltrans, the updated Draft Initial Study/Environmental Assessment will be submitted for review and approval.

4.1 TECHNICAL STUDIES

4.1.1 Natural Environment Study Memorandum

ENGINEER shall prepare a Natural Environment Study Revalidation Memorandum to reflect any changes to the Biological Study Area (BSA) as well as identifying any changes in impacts to biological resources due to revising the project alignment. Additional surveys will be required due to the new alignment being outside of the previously studied BSA. The NES revalidation memorandum will be sent to the COUNTY and Caltrans for review and approval.

- *Deliverable: ENGINEER shall prepare a NES Revalidation Memorandum*

4.1.2 Supplemental Historic Property Survey Report/Archaeological Survey Report

ENGINEER shall prepare A Supplemental Historic Property Survey Report (HPSR)/Archaeological Survey Report (ASR) to reflect any changes in in the Area of Potential Effects (APE) and update the discussion of cultural resources for the project. Additional surveys will be necessary to evaluate areas outside of the current APE. ENGINEER will coordinate with Caltrans cultural staff to determine what, if any, additional Native American consultation is needed, and that consultation will be completed and documented in the Supplemental HPSR. The Supplemental HPSR/ASR will be sent to Caltrans and the COUNTY for approval.

- *Deliverable: ENGINEER shall prepare a Supplemental HPSR/ASR*

4.1.3 Hazardous Waste Initial Site Assessment Revalidation Memorandum

ENGINEER shall prepare A Hazardous Waste Initial Site Assessment (ISA) Revalidation Memorandum to reflect any additional hazardous waste sites within the new project area. Additional surveys will be needed to assess areas outside of the previously studied project footprint. An

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updated record search from Environmental Data Resources will be obtained and included with the ISA Revalidation Memorandum. The memorandum will be sent to Caltrans and the COUNTY for approval.

- *Deliverable: ENGINEER shall prepare a Hazardous Waste ISA Revalidation Memorandum*

4.1.4 Air Quality Analysis Revalidation Memorandum

ENGINEER shall prepare an Air Quality Analysis Revalidation Memorandum to reflect any additional impacts to air quality within the project area due to revising the project alignment. As part of this task, ENGINEER will coordinate with the COUNTY to update the Southern California Association of Governments Regional Transportation Plan and the Federal Transportation Improvement Program listings for the I-10/Portola Avenue New Interchange Project ensure that these regional transportation planning documents accurately reflect a 2020 opening year date. The Air Quality Analysis Revalidation Memorandum will be sent to Caltrans and the COUNTY for approval.

- *Deliverable: ENGINEER shall prepare an Air Quality Analysis Revalidation Memorandum*

4.1.5 Air Quality Conformity Analysis

ENGINEER shall prepare an Air Quality Conformity Analysis report after public circulation to determine the project is in regional air quality conformity with regional transportation planning and air quality modeling. This analysis will address the conformity requirements of the Federal Clean Air Act and will provide all information needed by FHWA to make a project-level conformity determination. The report will be sent to Caltrans and the COUNTY for approval prior to sending it to FHWA for their concurrence.

- *Deliverable: ENGINEER shall prepare an Air Quality Conformity Analysis*

4.1.6 Update Noise Study Report

ENGINEER shall prepare an updated Noise Study Report to reflect changes to the project alignment and analyze how the revised project will change the existing Noise environment. This scope of work assumes that no changes to the current Traffic Operations Analysis will be needed. The Noise model will be updated and ENGINEER will coordinate with the COUNTY to determine if additional noise analysis is required to evaluate noise impacts to the new proposed residential

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development located north of the interchange. This additional evaluation is only required if the development has formally submitted development plans to the COUNTY with the locations mapped of future residences. The updated Noise Study Report will be sent to Caltrans and the COUNTY for approval.

- *Deliverable: ENGINEER shall prepare an updated Noise Study Report*

4.1.7 Visual Impact Assessment Revalidation Memorandum

ENGINEER shall prepare a Visual Impact Assessment (VIA) Revalidation Memo to document the changes in the proposed project and how those changes may affect the existing visual environment. No new impacts are expected and no changes to the minimization measures identified in the VIA are expected. The VIA Revalidation Memorandum will be sent to Caltrans and the COUNTY for approval.

- *Deliverable: ENGINEER shall prepare a VIA Revalidation Memorandum*

4.1.8 Location Hydraulic Study and Summary Floodplain Encroachment Report

ENGINEER shall update the previously approved LHS as required while incorporating additional data from the 2012 CVWD Riverine and Alluvial Fan Model. Drainage areas and total disturbed area shall be defined and delineated in relation to floodplain encroachment.

ENGINEER shall prepare a floodplain evaluation report in accordance with Executive Order 11988, FHWA Federal Aid Policy Guide (FAPG) Part 650 Subpart A, and Caltrans' Floodplain Encroachment Evaluation Guidelines, by reviewing the most recent Federal Insurance Rate Maps (FIRM maps) of the Project area and identifying the limits of the base (100-year) floodplain and regulatory floodway. ENGINEER shall identify and analyze the encroachment of the floodplain. ENGINEER shall prepare a Flood Risk Assessment to be included in the Floodplain Evaluation. ENGINEER shall coordinate with the Corps of Engineers, Riverside County Flood Control District, and the Coachella Valley Water District to identify hydrologic conditions near the Project.

- *Deliverable: ENGINEER shall prepare Location Hydraulic Study and Summary Floodplain Encroachment Report*

4.1.9 Soil Testing for Hazardous Waste Contamination (Heavy Metals, Hydrocarbons, and Pesticides)

ENGINEER shall perform soil sampling and analysis within former agricultural use properties and railroad properties that will be disturbed during construction. The soil samples will be tested for the potential presence of hazardous concentrations of residual pesticides in former agricultural use properties and the potential presence of petroleum hydrocarbons and heavy metals in the railroad property. The information obtained from the investigation will be used to evaluate soil disposal costs and identify health and safety concerns. ENGINEER shall prepare a Phase II Soil testing Report

- *Deliverable: ENGINEER shall prepare Phase II Soil Testing Report*

4.1.10 Historic Resources Evaluation and Finding of Effect Reports

ENGINEER and their subconsultant GPA Consulting shall prepare a Historic Resource Evaluation Report to evaluate the section of railroad within the project area to determine if it is a historic resource eligible for inclusion in the National Register of Historic Places. Based on prior eligibility determination on the railroad elsewhere in the region, the evaluation is expected to find the railroad within the project area as a historic resource. If the railroad is determined eligible, the ENGINEER shall prepare a Finding of Effect report documenting that the proposed project will not adversely affect the historic railroad. This task is not to be initiated without COUNTY written approval.

- *Deliverable: ENGINEER shall prepare Historic Resource Evaluation Report and Finding of Effect Report*

4.2 ENVIRONMENTAL DOCUMENTATION

4.2.1 Draft Initial Study/Environmental Assessment

ENGINEER shall update the Draft Initial Study/Environmental Assessment (IS/EA) joint CEQA/NEPA document consistent with Caltrans requirements. The project description and exhibits will be updated to include all project design changes associated with the realignment of Varner Road and changing the bridge profile to accommodate UPRR requirements. Environmental analysis sections of the document will be updated to reflect these changes as well as the contents of the updated environmental technical studies discussed in Task 4.1 above. The Draft IS/EA will be provided to the COUNTY and Caltrans for review and comment. ENGINEER anticipates 2-3

rounds of Caltrans review prior to approval of the Draft IS/EA. ENGINEER will prepare the necessary revisions to obtain final approval of the submittal.

- *Deliverable: ENGINEER shall update the Draft IS/EA*

4.2.2 Public Circulation of the IS/EA

ENGINEER shall prepare all necessary public notices, exhibits, and prepare mailings to local property owners in anticipation of the start of public circulation of the Draft IS/EA. Public notices or copies of the Draft IS/EA will be sent to interested parties, responsible agencies, and any Native American groups that have been consulted with during the PA&ED phase. ENGINEER will prepare hard copies and CDs of the environmental technical studies and Draft IS/EA for public review at Caltrans, County and City Offices as needed. ENGINEER will coordinate with the COUNTY and Caltrans to post the environmental document on a website. ENGINEER will coordinate and attend a public hearing at the City of Palm Desert City Hall and will arrange to have a court reporter present to take oral comments from the public.

- *Deliverable: ENGINEER shall prepare a Public Notice, Mailings, Exhibits and all other documentation needed for Public Circulation of the Draft IS/EA*

4.2.3 Responses to Public Comments

ENGINEER shall prepare responses to all public comments received during the 30 day public circulation period. Public comments can be received via comment card, mail, email, or from oral comments recorded at the public hearing. ENGINEER will prepare written responses to all comments and include them as an attachment to the Final IS/EA.

- *Deliverable: ENGINEER shall prepare written responses to all public comments received during the 30 day public circulation period*

4.2.4 Prepare Final Initial Study/Environmental Assessment

ENGINEER shall update the Draft IS/EA to Final, consistent with Caltrans format requirements. The Final IS/EA will include selection of a preferred alternative, as well as any changes required as a result of public or agency comments received during public circulation. The Final IS/EA will also include a summary of the Air Quality Conformity Analysis and document FHWA's concurrence that the project is in conformity with regional air quality modeling. The Final IS/EA will be submitted

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to the COUNTY and Caltrans for review and approval. ENGINEER will prepare the necessary revisions to obtain final approval of the submittal.

- *Deliverable: ENGINEER shall prepare Final IS/EA*

4.2.5 Notice of Determination and Finding of No Significant Impact

ENGINEER shall coordinate with the County and Caltrans to prepare a Notice of Determination and Finding of No Significant Impact after approval of the Final IS/EA. These documents complete the CEQA and NEPA processes respectively, by documenting the project determination that the project will not significantly impact the environment.

- *Deliverable: ENGINEER shall prepare Notice of Determination and Finding of Not Significant Impact*

TASK 5.0 PROJECT ALTERNATIVES UPDATE

5.1 PROJECT ALTERNATIVES UPDATE

ENGINEER shall update the project alternative exhibits to reflect the changes that resulted by the Varner Road realignment and UPRR grade separation modifications. ENGINEER shall refine the project alternative. The preferred alignment will be evaluated to identify approximate impact limits for the area of potential effects and project study area.

ENGINEER shall evaluate alternatives that include the shifting of mainline I-10 and realignment of interchange ramps to minimize/eliminate impacts to the UPRR right of way. ENGINEER shall coordinate with Caltrans regarding feasibility of alternatives and applicable design exceptions for nonstandard features.

- *Deliverable: ENGINEER shall update Project Alternative Exhibits and prepare I-10 Mainline & eastbound ramps realignment Exhibits*

TASK 6.0 PROJECT TYPICAL SECTIONS/LAYOUT/PROFILE SHEETS UPDATE

6.1 PROJECT TYPICAL SECTIONS/LAYOUT/PROFILE SHEETS UPDATE

ENGINEER shall update the typical sections / layout sheets / profile sheets in support of the Project Report to reflect the changes that resulted by the Varner Road realignment and UPRR grade separation modifications.

- *Deliverable: ENGINEER shall update Typical Sections / Layout Sheets / Profile Sheets*

TASK 7.0 RIGHT OF WAY

7.1 RIGHT OF WAY DATA SHEET UPDATE

ENGINEER shall update right of way impacts Report to reflect the changes that resulted by the Varner Road realignment and UPRR grade separation modifications. Data sheets shall summarize the number of parcels potentially affected, impacts to property access and shall include a preliminary estimate of right of way acquisition costs.

- *Deliverable: ENGINEER shall update Right of Way Data Sheets*

TASK 8.0 PRELIMINARY DESIGN

8.1 GEOMETRIC APPROVAL DRAWING UPDATE

ENGINEER shall update the Geometric Approval Drawing (GAD) package to obtain approval of the alignment geometrics. ENGINEER shall prepare the GAD in accordance with Caltrans GAD requirements. The purpose of the GAD is to demonstrate that the proposed design meets the requirements of the Highway Design Manual and County Standards and formally confirm that the design meets the operational needs of the facility. In addition, the GAD provides the foundation for the project base map. ENGINEER shall prepare the GAD submittal package which includes plan view exhibits, profiles with superelevation diagrams, and typical sections.

- *Deliverable: ENGINEER shall update a Geometric Approval Drawing for the preferred alternative*

8.2 DESIGN EXCEPTION FACT SHEETS UPDATE

ENGINEER shall update DIB 78 and prepare Design Exception Fact Sheets for the newly identified non-standard features and shall submit to Caltrans for review and approval. The Fact Sheets shall be prepared in accordance with Chapter 21 of the Project Development Procedures Manual, "Exceptions to Design Standards." The signed Design Exception Fact Sheets shall become an attachment to the Project Report.

- *Deliverable: ENGINEER shall update DIB 78 and prepare Design Exception Fact Sheets*

8.3 STRUCTURES ADVANCED PLANNING STUDIES UPDATE

ENGINEER shall update the Advanced Planning Studies (APS's) for all structures (bridge and retaining walls) to incorporate the preferred project alternative.

- *Deliverable: ENGINEER shall update the Advanced Planning Studies*

8.4 COST ESTIMATES UPDATE

ENGINEER shall update the cost estimates to incorporate to reflect the changes that resulted by the Varner Road realignment and UPRR grade separation modifications.

- *Deliverable: ENGINEER shall update the Cost Estimates*

TASK 9.0 PROJECT REPORT UPDATE

9.1 DRAFT PROJECT REPORT UPDATE

ENGINEER shall update the Draft Project Report for submittal to the COUNTY, City of Palm Desert, and Caltrans. The Draft Project Report (DPR) shall be updated to reflect the changes for the realigned Varner Road. Updates to the DPR will include updates to the RTP/FTIP, area planning exhibit, land use designations, local developments, and risk register. ENGINEER will prepare the necessary revisions to obtain final approval of the submittal.

- *Deliverable: ENGINEER shall update the Draft Project Report*

9.2 FINAL PROJECT REPORT

Following public circulation of the Draft Environmental Document and consideration of public comments, the Draft Project Report shall be revised to create the Final Project Report. All sections and attachments of the Draft Project Report shall be included in the Final Project Report. ENGINEER will prepare the necessary revisions to obtain final approval of the submittal.

- *Deliverable: ENGINEER shall prepare the Final Project Report*

9.3 NEW CONNECTION REPORT

ENGINEER shall prepare a New Connection Report for submittal to the COUNTY, City of Palm Desert, and Caltrans. The New Connection Report (NCR) shall rewrite the previous document from 2010 to be consistent with current Federal Highway Administration (FHWA) and Caltrans requirements, including the current Interstate System Access Informational Guide (August 2010) and current FHWA 8 Policy Points for Interstate Access Requests. Part of the updated FHWA requirements is the completion of a comprehensive safety analysis. ENGINEER will complete the analysis using the Highway Safety Manual (HSM) Enhanced Interchange Safety Analysis Tool (ISATe) methodology. The NCR shall also reflect the changes consistent with those made for the DPR and updated traffic analysis. ENGINEER will prepare the necessary revisions to obtain final approval of the submittal. This task is not to be initiated without COUNTY written approval.

- 1 - *Deliverable: ENGINEER shall prepare a New Connection Report.*

2 **9.4 NEW CONNECTION REPORT TRAFFIC ANALYSIS**

3 ENGINEER shall complete a new traffic analysis in support of the NCR to reflect updates to the RTP/FTIP,
4 land use designations, local developments, and to include the adjacent interchanges consistent with FWHA
5 requirements. This task is not to be initiated without COUNTY written approval.

6 9.4.1 Traffic Analysis Approach and Methodology

7 ENGINEER will prepare a technical memorandum summarizing the following for review and
8 approval by the Project Team including Caltrans:

- 9 • Study intersections
10 • Study mainline and ramp locations
11 • Study analysis periods
12 • Future year analysis periods (e.g. opening and design year)
13 • Traffic operations analysis tool (e.g. Synchro/SimTraffic)
14 • Traffic forecasting modeling tool

- 15 - *Deliverable: ENGINEER shall prepare a Traffic Analysis Approach and Methodology Memorandum.*

16 9.4.2 Data Collection and Existing Conditions Analysis

17 9.4.2.1 Data Collection

18 ENGINEER will collect weekday AM (7:00 – 9:00 AM) and PM (4:00 – 6:00 PM) peak
19 period turning movement counts at all study locations. Please note that traffic peaks in
20 the Coachella Valley during the winter months; so ENGINEER will need to coordinate
21 with the Project Team on the appropriate time to schedule traffic counts.

22 Study Intersections:

- 23 1. Varner Road/Monterey Avenue
24 2. I-10 Westbound Ramps/Monterey Avenue
25 3. I-10 Eastbound Ramps/Monterey Avenue
26 4. Dinah Shore Drive/Monterey Avenue
27 5. Gerald Ford Drive/Portola Road
28 6. Varner Road/Cook Street

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7. I-10 Westbound Ramps/Cook Street

8. I-10 Eastbound Ramps/Cook Street

9. Gerald Ford Drive/Cook Street

ENGINEER will also obtain one weekday AM and PM peak period count on I-10 at the Cook Street overcrossing. ENGINEER will evaluate I-10, from west of the Monterey Avenue interchange to east of the Cook Street interchange, for mainline, merge, diverge, and weave conditions using the count data collected and supplemented with Caltrans PeMS and freeway vehicle classification data.

In addition to the peak hour intersection counts and freeway count noted above, Fehr & Peers will also collect three days' worth of ADT traffic counts and vehicle classification counts at the following locations:

- Monterey Avenue Overcrossing
- Portola Road (north of Gerald Ford Drive)
- Cook Street Overcrossing
- Varner Road (west of Jack Ivey Drive)

9.4.2.2 Freeway Mainline and Ramp Junction Analysis

ENGINEER will evaluate the freeway mainline and ramp terminal junctions study locations using a spreadsheet assessment consistent with Highway Capacity Manual Methodologies during the AM and PM peak hours.

9.4.2.3 Intersection Analysis

ENGINEER will analyze the existing study intersections under AM and PM peak hour conditions using the Synchro/SimTraffic 8.0 software. The traffic simulation analysis will model the effects of vehicle queues on intersection capacity more accurately than the macroscopic equations provided by the Highway Capacity Manual (HCM). Peak hour factors will be based on the traffic counts. Peak hour delay and level of service will be calculated for each intersection consistent with 2010 HCM analysis procedures. The traffic simulation results will be based on a statistically valid set of multiple runs using different random value seeds according to Caltrans' Guidelines for Applying Traffic

Microsimulation Modeling Software. The Synchro models will be converted to micro-simulation (SimTraffic) to determine existing intersection delay, level of service and 95th percentile queues.

9.4.2.4 Collision Analysis

ENGINEER will prepare a collision summary on I-10 in the study area based on Caltrans TASAS data for the most recent available three-year period. The results will be summarized by collision type in tabular form and compared to state-wide averages for similar facilities.

9.4.2.5 Existing Conditions Analysis Memorandum

ENGINEER shall prepare a technical memorandum presenting data collected, the existing traffic operations and the collision summary and submitted to the Project Team for review and approval. ENGINEER shall then respond to comments and provide a Final Existing Conditions Analysis Memorandum.

- **Deliverable:** ENGINEER shall prepare an Existing Conditions Analysis Memorandum.

9.4.3 Future Conditions Analysis

9.4.3.1 Develop Traffic Forecasts

ENGINEER will work with the Project Team to identify the most appropriate model to forecast future traffic volumes. However, this scope of work assumes that one of the following models will be used for the interchange assessment:

- City of Palm Desert General Plan Model (developed in 2016)
- CVAG TPPS, RACE, and TUMF Model (developed in 2016 which updated RIVTAM to be consistent with the 2016 RTP/SCS)
- SCAG 2016 RTP/SCS Model
- RIVTAM

The model land uses will be reviewed to ensure that approved and pending projects in the study area are included in the forecasting efforts. Additionally, roadway network assumptions and connectivity will be reviewed to ensure that the network coding is appropriate in both the base year and future year assessment.

9.4.3.2 Traffic Forecasting Memorandum

ENGINEER will submit a technical memorandum summarizing the traffic forecasts for review by the Project Team. ENGINEER will respond to written comments and prepare a Final Traffic Forecasting Memorandum. Once approved, ENGINEER will proceed with the technical evaluation of the project.

- **Deliverable:** ENGINEER shall prepare a Traffic Forecasting Memorandum.

9.4.3.3 Opening Year and Design Year Intersection and Freeway Operations Analysis

The traffic forecasts developed in Task 3.1 will be used to update the existing traffic analysis models (AM and PM peak period for intersections and freeway analysis) for one project alternative plus No Project conditions. Similar to existing conditions, freeway density and level of service will be presented for each study mainline section.

Under Project conditions, the following two intersections will be included in the analysis in the addition to the nine existing study intersections:

- I-10 Westbound Ramps/Portola Road (Future Intersection)
- I-10 Eastbound Ramps/Portola Road (Future Intersection)

ENGINEER will compare the results of the scenarios to help the PDT evaluate the benefit and justification for the project. Results will include average delay, level of service, and estimated 95th percentile queue lengths for each study intersection. The results will also help identify the necessary traffic control and intersection geometrics at the I-10/Portola Road interchange that will be necessary to serve the anticipated growth in the area.

If ramp metering will be a design feature at the future interchange, we will evaluate the adequacy of the desired ramp metering storage using the following formula:

$$\text{Desired Ramp Metering Storage} = 0.07 * \text{Design Year Peak Hour Volume}$$

9.4.4 Traffic Operations Report

ENGINEER will prepare the Traffic Operations Report (TOR) summarizing the results and findings.

ENGINEER will submit an Administrative Draft TOR to the Project Team for review. ENGINEER will respond to written comments and prepare the Draft TOR for submittal to Caltrans. ENGINEER will submit the Final TOR in both hard copy and electronic format.

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- *Deliverable: ENGINEER shall prepare a Draft and Final Traffic Operations Report.*

9.4.5 Intersection Control Evaluation (ICE) (Optional)

ICE is required for Caltrans projects per TOPD 13-02, which was implemented by Caltrans after the project was initiated. Although the County would like to forgo ICE as part of this project, Caltrans may still enforce the requirement as part of the TOPD 13-02 requirements.

ENGINEER shall complete both a Step 1 and Step 2 ICE assessment to assist in identifying the appropriate intersection control for the new interchange. This task is not to be initiated without COUNTY written approval.

- *Deliverable: ENGINEER shall prepare an Intersection Control Evaluation.*

ARTICLE AIV • PLANS, SPECIFICATIONS AND ESTIMATES TASK LIST (PHASE II)

ENGINEER shall provide Plans, Specifications and Estimates for the PROJECT. The following task list is consistent with the project schedule.

TASK 1.0 PROJECT MANAGEMENT

Project Management shall be conducted to ensure a smooth flow of information between Project Development Team (PDT) members. A project schedule shall be developed and periodically updated. A comprehensive Quality Assurance/Quality Control (QA/QC) plan shall be implemented. Monthly PDT Meetings shall be held.

1.1 KICK-OFF MEETING

ENGINEER shall schedule and conduct a kick-off meeting within two weeks of Notice to Proceed (NTP). ENGINEER shall contact all members of the PDT to coordinate the scheduled meeting date. A Meeting Notice, an Agenda and Meeting Minutes shall be prepared for the kick-off meeting.

1.2 PROJECT COORDINATION AND MONTHLY PROJECT TEAM MEETINGS

ENGINEER shall coordinate and attend Project Development Team (PDT) meetings with COUNTY, Caltrans, City of Palm Desert staff and other representatives from resource agencies as necessary. Minutes shall be prepared by the ENGINEER at each meeting and distributed to the COUNTY'S Project Manager and other attendees at each meeting. An Action Item List and a Deliverables Status Matrix shall be updated and prepared for each PDT meeting.

1.3 MONTHLY PROGRESS REPORTS

ENGINEER shall prepare progress reports to record the progress of the project and as supporting data for invoices presented monthly to the COUNTY. The Progress Report shall include accomplished tasks for the month, anticipated progress for the next month, pending issues and schedule completion target dates. ENGINEER shall mail progress reports with the monthly invoices.

1.4 PROJECT SCHEDULE

ENGINEER shall, within 2 weeks of Notice to Proceed (NTP), provide a detailed project baseline schedule, indicating milestones, major activities and deliverables, to the COUNTY and Caltrans for review and comments. ENGINEER shall update the schedule as required.

1.5 QUALITY CONTROL

ENGINEER shall have a quality control plan to be in effect during the entire course of the project. ENGINEER shall develop a plan establishing a process to ensure design calculations are independently checked. Exhibits and plans shall also be checked, corrected and back-checked for accuracy and completeness. ENGINEER shall review environmental and engineering Sub-consultant report submittals to ensure that appropriate background information, study methodology, interpretation of data, format and content are completed in accordance with current standards.

1.6 COST ACCOUNTING

ENGINEER shall prepare monthly reports of expenditures for the PROJECT by task and milestone. Expenditures include direct labor costs, other direct costs and sub-consultant costs. These reports shall be included as supporting data for invoices presented to the COUNTY every month.

- *Deliverable: ENGINEER shall prepare meeting notices, agendas and minutes, schedules, monthly progress reports and invoices.*

TASK 2.0 UPRR & PUC APPLICATION AND AGREEMENT COORDINATION & LIAISON SERVICES

2.1 UPRR COORDINATION AND RIGHT OF ENTRY (BORINGS & SURVEYS)

ENGINEER will coordinate with the UPRR on issues related to the proposed project and impacts to the UPRR property. It is anticipated that the following agreements will be required from the UPRR for the project:

- Easements (aerial and footing) for the proposed bridge

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- Temporary construction licenses for project construction
- Temporary rail crossing agreements for construction access ("Private Crossing Agreements")
- A Construction and Maintenance Agreement (C&M Agreement) for project construction and ongoing bridge maintenance
- Rights of entry for field visits, utility potholing, soil borings, surveying, and other design activities.
- Utilities within the bridge

ENGINEER shall develop the necessary exhibits and attachments to obtain approval from the UPRR for all of the above agreements.

Key project submittals to address railroad issues include:

- Design A Submittal – Concept (Plans and Site Pictures)
- Design B Submittal – 30% (Application Response, Design Plans, Project Specs, Drainage Report, Construction Staging Plans)
- Design C Submittal – 100% (Application Response, Design Plans, Project Specs, Drainage Report, Construction Staging Plans)

ENGINEER shall prepare Submittals A, B, and C for UPRR review and feedback. These plans will include the Plan, Elevation and Typical Section of the proposed grade separation with structure clearances to railroad dimensioned, photo log with pictures of the proposed project location and site pictures in all controlling directions including, but not limited to looking North, East, South and West. The plan view will show a reference location and direction for each picture. ENGINEER shall prepare exhibits for project meetings and coordination. These exhibits will include roadway striping, drainage concepts, railroad features, utilities, and structure limits. The exhibits are intended to show design information on an easy to read and discuss format for use in meetings.

This task also includes the cost of up to five days of UPRR flagging services to allow survey, geotechnical, and potholing work in the railroad right-of way.

- **Deliverable:** ENGINEER shall prepare Submittals A, B, and C and Preferred Alternative Alignment Exhibits

2.2 UPRR VARIANCE LETTER AND CONCURRENCE LETTER

ENGINEER shall coordinate with UPRR for the conceptual approval of the interchange as it encroaches into the UPRR r/w. ENGINEER shall prepare a variance letter for justification of UPRR r/w encroachment.

The variance letter will include justification for encroachment into the UPRR right of way, including preparation of various alternatives, cost estimates of each alternative, plan view exhibits, bridge advance planning study, and general discussion of variances necessary to encroach into UPRR right of way.

ENGINEER shall obtain a UPRR concurrence upon selection of the preferred alignment to be the basis for the bridge type selection and 65% design. Once the bridge design advances to the "C" Submittal, a formal concurrence letter to use in the PUC application will be obtained.

- *Deliverable: ENGINEER shall prepare UPRR Variance Letter and Concurrence Letter*

2.3 PUC APPLICATION FOR NEW CROSSING

ENGINEER shall prepare and process a Grade Separation Permit application from the CPUC. The application will be signed by the COUNTY and must include written concurrence by the UPRR.

- *Deliverable: ENGINEER shall prepare CPUC Grade Separation Permit*

2.4 UPRR AGREEMENTS

ENGINEER shall process agreements as required to accomplish construction and the entitlement of the bridge. COUNTY will negotiate with assistance from ENGINEER to acquire permanent entitlement rights (easement and C&M agreements) and construction access rights for the Project (temporary construction license(s), Private Crossing agreements and/or Rights of Entry) from the UPRR Railway. Appraisals that may be required by UPRR for the easement are to be provided by the COUNTY as provided for in Article A1.G

- *Deliverable: ENGINEER shall assist the COUNTY with the preparation of Private Crossing Agreement, Construction and Maintenance (C&M) Agreement, Right of Way Agreement/Permits, Temporary Construction Licenses, and Easement Documents. Although fees for encroachment permits to access UPRR r/w to obtain information for PS&E are included, fees for construction permits are not included.*

TASK 3.0 SURVEYING/RIGHT OF WAY ENGINEERING

3.1 COORDINATION WITH COUNTY/CALTRANS/UPRR RAILWAY

Prior to field survey work, COUNTY will verify survey controls and right of way base mapping. COUNTY will obtain encroachment permits from Caltrans and UPRR Railway and provide training for survey work within UPRR property. ENGINEER shall coordinate and assist COUNTY with obtaining encroachment permits.

3.2 SUPPLEMENTAL FIELD SURVEY

COUNTY will perform supplemental field surveys as needed. COUNTY will obtain supplement field shots as needed along the centerline of the project alignments. Supplemental surveying includes but not limited to field shots along all conforms, I-10 auxiliary lanes, and UPRR Railway tracks including existing features such as culverts, utilities, etc. Field survey work includes traffic control. Field survey crews will locate potholed utilities and geotechnical borings by coordinates and elevations that may be in conflict with project features. ENGINEER shall review supplemental field surveys and provide feedback to the COUNTY.

- *Deliverable: ENGINEER shall assist COUNTY with obtaining encroachment permits, prepare survey request, and review supplemental field surveys.*

3.3 PROPERTY OWNER COORDINATION AND EXHIBITS

After reconciliation of the right of way base map by County surveyor, ENGINEER shall determine permanent right-of-way and temporary construction easement requirements for each parcel. These needs will be depicted on individual parcel exhibits. These exhibits will include an aerial photograph of the parcel, with the County boundary survey information, owner, APN, address, parcel size and take area all shown. The exhibits will be used by ENGINEER and COUNTY staff during the appraisal and acquisition discussions with the property owner. ENGINEER shall prepare permanent and temporary right of way base mapping for preparation of plats and legals. ENGINEER shall assist the COUNTY in coordinating with local property owners and developers to communicate project needs and right of way requirements for the project.

- *Deliverable: ENGINEER shall prepare Property Owner Exhibits & Right of Way Mapping*

3.4 PLATS AND LEGAL EXHIBITS

COUNTY shall prepare the necessary permanent right of way, temporary construction easement, and railroad easements plats and legal exhibits. ENGINEER shall review, check, and verify the plats and legals to the right of way base mapping.

- *Deliverable: ENGINEER shall review, check, and verify plats and legal exhibits for right of way, temporary construction easements, and railroad easements.*

TASK 4.0 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 and State of California Department of Transportation (CALTRANS) utility coordination staff with respect to all utility related matters, including but not limited to:

- a. Requests for utility as-built plans and inventory maps.
- b. Request for property rights information.
- c. Design coordination meetings and communications.
- d. Notices to owner to initiate design.
- e. Notices to owner and agreements to pothole including submissions to CALTRANS for encroachment permits.
- f. Inclusion of utility information, including sub-surface engineering data, on improvement plans.
- g. Notices to owner to relocate conflicting utilities.
- h. Coordination and communication with respect to utility facilities that are to be installed within planned bridge structures including preparation of agreements as required.

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- i. Coordination and communication with respect to utility facilities that are to be installed prior to or concurrent with COUNTY's construction project, including preparation of agreements as required.
- j. No conflict letters.
- k. Other procedures and communications as required.

ENGINEER shall provide copies of all correspondence with utility companies and other utility related information to the COUNTY and CALTRANS as required.

ENGINEER shall act as extension of staff to implement utility coordination and relocation in accordance with CALTRANS Right of Way Manual, Chapter 13 and necessary COUNTY procedures, including but not limited to:

- a. Preparation of Letters to Owners of Utilities

Many letters will require signature by County's utility coordination or project management staff.

ENGINEER shall prepare letters for County signature as required. ENGINEER shall prepare and send correspondence under ENGINEER's signature when feasible and appropriate.

- b. Phone, Email and Office Communication

ENGINEER shall communicate effectively as needed to achieve necessary and required utility coordination and relocations via all communication methods.

- c. Meetings

ENGINEER shall set up utility coordination meetings as needed.

- d. Agreements

ENGINEER shall prepare Agreements utilizing CALTRANS format and language, modified as necessary for execution by the County of Riverside.

- e. Submittals

ENGINEER shall submit letters, notices to owner, agreements, and other documents to COUNTY and CALTRANS for reviews and approvals.

- f. CALTRANS Procedures, General

ENGINEER shall comply fully with CALTRANS utility coordination procedures, as outlined in Chapter 13 of the CALTRANS Right of Way manual. ENGINEER shall be knowledgeable in the required procedures, and shall coordinate with COUNTY and CALTRANS as required. ENGINEER shall

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maintain files in accordance with CALTRANS filing requirements, and shall provide CALTRANS with duplicate files and shall provide COUNTY with original files upon completion of construction.

Other and related duties of ENGINEER are as follows, as appropriate and as required:

ENGINEER shall 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 and CALTRANS staff to arrange with the respective utility owner to pothole its facility. ENGINEER shall coordinate the use 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 to owning utility companies within the project limits with request for review and comments on the plans relevant to their respective facilities, and 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 as early as practical. Utility conflict issues shall be resolved prior to the completion of the final design plans as follows:

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- 1 • ENGINEER, through COUNTY staff, shall request and obtain a written acknowledgement of any
2 conflicts from the respective utility owners.
- 3 • Reasonable efforts shall be taken to accommodate utility company requests for minor design changes
4 to accommodate their facilities. ENGINEER understands that the utility companies are generally
5 operating within the COUNTY or CALTRANS right-of-way, but may have prior rights to that of the
6 COUNTY / CALTRANS or may have rights prescribed by Master Utility Agreements between
7 CALTRANS and utility companies.
- 8 • ENGINEER shall coordinate inclusion of special provisions in County's bid documents for adjustments
9 and relocations of utility facilities as alternate bid items, if requested by the owning utility. Said work
10 may require that cooperative agreements be prepared between the County of Riverside and the owning
11 utility companies. Engineer shall prepare agreements and shall provide information and exhibits as
12 required to support the preparation of cooperative agreements, if needed.

13 ENGINEER shall conduct utility coordination meetings, as needed, regarding adjustments and relocations, to
14 resolve conflict issues, and with respect to performing work for utility companies by COUNTY contractors.

15 For utility conflicts that require relocating, ENGINEER shall prepare notices to owner relocate conflicting facilities.
16 However, it is expected that COUNTY staff will sign the orders.

17 ENGINEER shall make recommendations for special provision language with regard to utility issues,
18 recommendations for construction windows of time for utility relocation activities, recommendations for inclusion of
19 utility bid items, etc.

20 ENGINEER shall coordinate with COUNTY survey and utility companies as required with respect to prior rights
21 claims and determinations.

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

- 24 • Obtain approved water service point from the serving water company for each water meter to be installed,
25 and identify requirements that the serving water company has for the provision of service. Coordinate with
26 water company with respect to design issues associated with the provision of service. Coordinate with
27 serving water company to fulfill serving water company requirements as appropriate, including preparation
28 of all utility company forms and submission to County for execution. Advise COUNTY of requirements that
29

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are beyond the scope of the ENGINEER (e.g.: execution of applications for service). However, ENGINEER is expected to provide turn-key service.

- **Deliverable:** ENGINEER shall prepare the following:

- 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

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 or Caltrans 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, Consultant 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. Consultant's Project Manager shall arrange for a second qualified person to periodically review work of the consultant staff that is assigned this responsibility, and that person shall independently verify the accuracy of the information on a regular basis. The Consultant 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 Consultant.
- ***Deliverable:***ENGINEER shall prepare the following:
 - *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.*

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- *Service spreadsheet and exhibit as described herein.*
- *Plans, special provisions, and electric company drawings, details and requirements for inclusion in bid package.*

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, CALTRANS requirements 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.

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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 Right-of-Way branch 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 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, 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.

- **Deliverable:** ENGINEER shall prepare Utility Letters, Report of Investigations, Notice of Owners, Utility Agreements

TASK 5.0 GEOTECHNICAL DESIGN REPORT

Geotechnical work will include conducting a field investigation, performing laboratory tests, and conducting analyses to develop geotechnical parameters and recommendations for the design and construction of proposed structures, roadway embankment, and pavement structural sections.

5.1 GEOTECHNICAL FIELD INVESTIGATIONS

The geotechnical field investigation plan to be performed by ENGINEER is presented in Table 1 below.

TABLE 1. PROPOSED SOIL BORING INFORMATION

Design Element	Number of Borings/CPTs and Approximate Depth
Portola Road OH	6 borings: 70 feet each

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Design Element	Number of Borings/CPTs and Approximate Depth
EB Off-Ramp	5 borings: 70 feet each (Bridge)
	3 borings: 40 feet each (MSE Walls)
EB On-Ramp	4 borings: 70 feet each (Bridge)
	4 borings: 40 feet each (MSE Walls)
Sound Wall	6 borings: 30 feet each
Overhead Signs	4 borings: 35 feet each
Roadway Embankments	7 borings: 30 feet each
Roadway Pavement	28 borings: 5 feet or Grab sample each

Note: Some of the above borings are used for more than one Design Element.

The boreholes will be excavated using a truck-mounted or track-mounted drilling rig equipped with 8-inch diameter hollow-stem augers. ENGINEER may substitute some of the soil borings with cone penetration test (CPT) soundings. ENGINEER will collect soil samples for laboratory testing, including bulk samples of near-surface soils and small disturbed and relatively undisturbed ring samples of deeper soils. The small disturbed and relatively undisturbed soil samples will be collected using split-spoon samplers at a vertical interval of about 5 feet, alternating between the Standard Penetration Test (SPT) sampler and the Modified California Drive (MCD) sampler. ENGINEER shall prepare a boring location plan and this plan will be used to secure encroachment permits from the City of Palm Desert, COUNTY, Caltrans and UPRR.

COUNTY surveyor will stake the road centerline in the field so that the ENGINEER can locate the borings. Upon completion of the field exploration program, ENGINEER shall coordinate with COUNTY surveyor to determine the stationing, offset and top-of-hole elevation of each boring.

Spoils generated from the borehole excavations will be mixed with cement and water and used to backfill the boreholes. Spoils generated from the borings will not be stored in drums, tested for contaminants, or disposed of off-site. Asphalt concrete cold-patch will be used to replace asphalt that is removed by excavations, and quick-set cement will be used to replace concrete that is removed by excavations.

ENGINEER proposes five infiltration basins for this project. ENGINEER proposes the following work plan to estimate the infiltration rate of onsite soils inside each basin.

ENGINEER will drill a boring and three temporary wells at each basin site. Maximum target borehole depth is estimated to be 30 feet, and the depth of the wells will depend on the design invert elevation of the proposed basin. Sampling schedule will be at 5-foot intervals in the soil boring. The three wells will not be sampled, though the soil type will be observed for comparison and documented in well logs. Each well will be soaked overnight and infiltration testing will commence the following day. Well infiltration testing will be performed following USBR 7300-89 method.

5.2 LABORATORY TESTING

ENGINEER shall select representative soil samples for laboratory testing. Various laboratory tests will be performed to determine or derive physical and engineering characteristics of soils. Anticipated laboratory soil tests include: in-situ density and moisture content, grain size, direct shear, R-value, maximum density and optimum moisture content, and soil corrosion tests. All tests will be conducted in general accordance with Caltrans Test Methods and/or ASTM Standards.

5.3 GEOTECHNICAL ENGINEERING ANALYSIS

Results obtained from the field and laboratory testing program will be used to characterize subsurface soils and conditions and create idealized soil profiles for design purposes. The following analyses will be performed for the project:

- Evaluation of seismicity, estimation of Peak Bedrock Acceleration based on the Caltrans design criteria, and recommendations of an ARS curve for the bridge structural design.
- Assessment of liquefaction potential
- Foundation analysis for three new bridges, MSE walls, OH signs, and a soundwall.
- Assessment of global stability and settlement of embankments.
- Evaluation of soil corrosivity conditions and recommendations for mitigation measures.
- Design of pavement structural section in accordance with the Caltrans method.

5.4 GEOTECHNICAL REPORTS

5.4.1 Foundation Report

ENGINEER shall prepare a Preliminary and Final Foundation Report that includes Portola Road OH, EB Off-Ramp, EB On-Ramp, MSE Walls and overhead signs, following completion of the geotechnical field investigation and laboratory testing. The report will include descriptions of

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subsurface soil conditions, geological conditions, boring logs, site seismicity, geotechnical analysis, and recommendations for structure foundations, including spread footing and/or pile foundation data tables and soil springs for use in structure analysis. The Foundation Report will be prepared in general accordance with the Caltrans Guidelines for Structure Foundation Report dated February 2017. The Foundation Report for MSE walls will be prepared in accordance with the Caltrans Guideline – Foundation Reports for Earth Retaining Systems (ERS) dated August 2015. ENGINEER will prepare the necessary revisions to obtain approval of the submittal.

- **Deliverable:** ENGINEER shall prepare a Preliminary and Final Foundation Report

5.4.2 Final Geotechnical Design Report

ENGINEER shall prepare a Geotechnical Design Report for design and construction of soundwalls, embankments and infiltration basins and shall present the data obtained during field exploration and laboratory testing. The Geotechnical Design Report will summarize design parameters for soundwalls, roadway embankments, and infiltration basins. The Geotechnical Design Report (GDR) will be prepared in accordance with Caltrans guideline dated December 2006. The Materials Report will be prepared in accordance with Caltrans Highway Design Manual Topic 114 dated December 2015. ENGINEER will prepare the necessary revisions to obtain final approval of the submittal.

- **Deliverable:** ENGINEER shall prepare Final Geotechnical Design Report

5.4.3 Final Roadway Materials Report

ENGINEER shall prepare a Roadway Materials Report that will provide the recommended pavement structural section design based on traffic indices and results of the R-value test.

ENGINEER shall obtain the necessary encroachment permits from the County, City of Palm Desert and Caltrans to allow the placement of exploratory borings on necessary roads. Several exploratory borings along the alignment will be obtained in order to characterize existing soil and pavement conditions and to sample the underlying soil for sand equivalent, sieve analysis and R-value testing. Samples of probable pavement subgrade soils will be obtained along with existing pavement information. ENGINEER will prepare the necessary revisions to obtain final approval of the submittal.

- 1 - *Deliverable: ENGINEER shall prepare Final Roadway Materials Report*

2 **TASK 6.0 HYDRAULICS**

3 **6.1 STORM WATER DATA REPORT (SWDR)**

4 ENGINEER shall update and expand upon the SWDR that was prepared during the PA/ED phase of the
5 project to reflect the final proposed project improvements. Any new information, changes, and/or
6 refinements to the project design will be addressed. ENGINEER shall ensure that the programmed project
7 includes sufficient right-of-way and budget for required storm water controls and identify project specific
8 permanent and temporary Best Management Practices (BMPs) that may be required to mitigate impacts.
9 Drainage areas and total disturbed area shall be defined, as shall climatic conditions, existing drainage site
10 conditions, site permeability, soil texture, existing vegetation and groundwater.

11 ENGINEER shall submit the draft document for review by Caltrans Maintenance, Landscape, and Storm
12 Water units. ENGINEER will prepare the necessary revisions to obtain final approval of the submittal.

- 13 - *Deliverable: ENGINEER shall prepare Draft and Final SWDR*

14 **6.2 DRAINAGE REPORT**

15 ENGINEER shall update and expand upon the Preliminary Drainage Report that was prepared during the
16 PA/ED phase of the project. ENGINEER has previously determined the existing drainage patterns and
17 storm drain facilities in the project area, including existing channels/ditches, pipe/culvert locations, sizes,
18 local rainfall intensities, and flows. This information will be used for on- and off-site hydrologic analyses of
19 the existing and post-project condition, emphasizing the primary objective of maintaining existing flow
20 patterns and runoff amounts.

21 The on-site analyses will include identifying where new facilities are needed, developing drainage
22 boundaries for the areas within the project limits, developing flows for each facility based on Rational
23 Method calculations, and laying out the new/retrofitted storm drain facilities. The off-site analyses involve
24 obtaining flows for the water courses draining toward and/or through the project area from outside the
25 project limits and designing new or upgraded facilities for these flows. If flows are not readily available for
26 these water courses and the contributing watersheds exceed 0.5 square miles, ENGINEER shall
27 approximate the off-site flows based on the conveyance of facilities immediately up- or downstream. For

off-site watersheds less than 0.5 square miles in area, drainage boundaries will be developed and flows calculated based on the Rational Method where appropriate.

ENGINEER shall prepare a draft Drainage Report to document the hydrologic and hydraulic analysis and will provide a detailed discussion of the following: existing conditions and facilities in the project area, the on- and off-site hydrologic analyses, existing and post-project drainage patterns, conditions and any issues of special concern or significance, results of the on- and off-site hydraulic analyses and any issues of special concern or significance. The draft report will be submitted to the COUNTY for review at the 65% milestone and will be finalized upon completion of the 100% PS&E. ENGINEER will prepare the necessary revisions to obtain final approval of the submittal.

- *Deliverable: ENGINEER shall prepare Draft and Final Drainage Report/Responses to Comments*

6.3 HYDRAULIC DESIGN REPORT

ENGINEER shall update and expand upon the SWDR that was prepared during the PA/ED phase of the project to reflect the final proposed project improvements. Any new information, changes, and/or refinements to the project design will be addressed. ENGINEER shall ensure that the programmed project includes sufficient right-of-way and budget for required storm water controls and identify project specific permanent and temporary Best Management Practices (BMPs) that may be required to mitigate impacts. Drainage areas and total disturbed area shall be defined, as shall climatic conditions, existing drainage site conditions, site permeability, soil texture, existing vegetation and groundwater.

ENGINEER shall submit the draft document for review by Caltrans Maintenance, Landscape, and Storm Water units. ENGINEER will prepare the necessary revisions to obtain final approval of the submittal.

- *Deliverable: ENGINEER shall prepare Draft and Final SWDR*

6.4 NPDES GENERAL CONSTRUCTION PERMIT

ENGINEER shall update and expand upon the SWDR that was prepared during the PA/ED phase of the project to reflect the final proposed project improvements. Any new information, changes, and/or refinements to the project design will be addressed. ENGINEER shall ensure that the programmed project includes sufficient right-of-way and budget for required storm water controls and identify project specific permanent and temporary Best Management Practices (BMPs) that may be required to mitigate impacts.

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Drainage areas and total disturbed area shall be defined, as shall climatic conditions, existing drainage site conditions, site permeability, soil texture, existing vegetation and groundwater.

ENGINEER shall submit the draft document for review by Caltrans Maintenance, Landscape, and Storm Water units. ENGINEER will prepare the necessary revisions to obtain final approval of the submittal.

- *Deliverable: ENGINEER shall prepare Draft and Final SWDR/Responses to Comments*

TASK 7.0 35% SUBMITTAL / STRUCTURES TYPE SELECTION

7.1 35% PLANS

ENGINEER shall prepare the plans for the roadway improvements necessary to obtain approval of 35% design submittal. ENGINEER shall prepare 35% plans in accordance to Caltrans standards for PS&E and will be submitted for review by the COUNTY, City of Palm Desert, and Caltrans. The 35% plan submittal will include title sheet, typical sections, key map, layouts, profiles & superelevations, existing drainage, utilities, construction staging and detour, and pavement delineation. ENGINEER will prepare the necessary revisions to obtain approval of the submittal.

- *Deliverable: ENGINEER shall prepare 35% Roadway Plans*

7.2 STRUCTURES TYPE SELECTION (BRIDGE OVERHEAD and MSE WALLS)

The Type Selection Package will follow the format provided in Caltrans Memo to Designers and include a memorandum with discussions of the following: bridge types considered, wall types considered, site geometric and hydraulic constraints, life cycle costs of considered alternatives, environmental impacts, community concerns, construction duration, UPRR clearance requirements and any maintenance requirements. Specific bridge and wall treatment ideas will be discussed in the memo including abutment, barrier, approach walls, bridge lighting, and any unique sidewalk scoring pattern. Included with the Package submittal will be the memorandum, the Bridge General Plans, the Bridge Foundation Plan, the MSE Wall General Plan, the MSE Wall Foundation Plan, the Preliminary Foundation Report, and Drainage Report.

A meeting to confirm the selected bridge and wall types and functional/aesthetic features will be scheduled at the COUNTY or at Caltrans to conclude the type selected bridge prior to the start of detailed design. Any changes to the Structures Type Selection Memo will be recorded in the meeting minutes. ENGINEER shall initiate a request through the COUNTY for a type selection meeting with Caltrans Office of Special Funded Projects.

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The Structures Type Selection Memo will be submitted to UPRR and concurrence from UPRR on structure clearances will be obtained before proceeding with bridge design beyond General Plan development. ENGINEER will prepare the necessary revisions to obtain approval of the submittal.

- **Deliverable:** ENGINEER shall prepare Bridge Type Selection Package, including Bridge General Plan, Bridge Draft Foundation Plan, Bridge General Plan Estimate, Bridge Preliminary Foundation Report and MSE Wall Type Selection Package, including Wall General Plan, Wall Draft Foundation Plan, Wall General Plan Estimate, and Wall Preliminary Foundation Report

7.3 35% COST ESTIMATES

ENGINEER shall prepare a cost estimate for the 35 % Design. The unit costs for construction items shall be based on current bids.

Deliverable: ENGINEER shall prepare 35% Cost Estimates

TASK 8.0 65% SUBMITTAL

8.1 65% ROADWAY PLANS

ENGINEER shall prepare the plans for the roadway improvements, which will follow the 35% roadway plans. Upon receipt of comments on the 35% submittal, ENGINEER shall prepare a written response to each comment from the COUNTY, City of Palm Desert, and Caltrans. Resolution of any difficult comments will be facilitated in a meeting with the COUNTY, City of Palm Desert, or Caltrans. The 65% roadway plans will be submitted for review by the COUNTY, City of Palm Desert, and Caltrans. The 65% submittal will include construction details, contour grading, drainage layouts / profiles / details / quantities, staging and detour, traffic handling, pavement delineation, summary of roadway quantities, sign plans, landscape plans, temporary and permanent water pollution control, and electrical and signal.

ENGINEER shall develop a comprehensive conceptual landscape plan for the proposed interchange with a focus on the ramp areas on the north and along Portola Avenue on the south. This plan will designate the location of proposed "drought tolerant and low maintenance" trees, shrubs, desert accent areas, ground cover and inert materials. A proposed plant palette will also be provided for review and approval by the City of Palm Desert / County and Caltrans and will be use for the final planting and irrigation plans. Concept plan will include design of hardscape features to address hardscape aesthetics throughout the interchange

and Varner Road. Hardscape features will be incorporated within the ramps, medians, and other concrete features. The final conceptual plan will be prepared in color with images of the proposed plant materials. This task includes one set of revisions to the conceptual plan to obtain approval prior to moving forward with the final design plans. ENGINEER will prepare the necessary revisions to obtain approval of the submittal.

- *Deliverable: ENGINEER shall prepare 65% Roadway Plans / Responses to Comments*

8.2 65% STRUCTURES PLANS

ENGINEER shall use the conceptual Advance Planning Study bridge type and span configuration previously approved by COUNTY, City of Palm Desert, Caltrans and UPRR during the 35% submittal. ENGINEER shall develop a General Plan for the proposed bridge. The Bridge General Plan for the preferred alternative will be prepared showing the plan, profile and typical section views. Denoted on these views will be the lanes, shoulders, sidewalks, utility locations, horizontal and vertical permanent clearances, falsework opening sizes, abutment heights, barrier types, lighting, aesthetic treatments, and slope protections.

This task includes the structure design and the preparation of plans, specifications and quantities for the Portola Road Overhead, EB Ramps, and Retaining Walls.

The 65% bridge plans comprise all anticipated plan sheets and details for the unchecked bridge design.

The bridge design will follow UPRR and Caltrans structure design procedures, specifications, manuals and standards including following publications: BNSF Railway – UP Railroad Guidelines for Railroad Grade Separation Projects, AREMA Manual for Railway Engineering, AASHTO LRFD Bridge Design Specifications 2007 Edition with California Amendments, Caltrans Memo to Designers, Caltrans Bridge Design Aids, Caltrans Seismic Design Criteria (Version 1.7) and Caltrans Bridge Design Details manual.

The design of the foundations for each structure will be coordinated between the bridge design engineer and the geotechnical engineer.

ENGINEER shall prepare the bridge design, detailing all elements of the bridge and completing the full design with a set of stamped calculations prepared by a Registered Civil Engineer.

The overhead structure will be submitted to the COUNTY, City of Palm Desert, Caltrans and UPRR. ENGINEER will prepare the necessary revisions to obtain approval of the submittal.

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- *Deliverable: ENGINEER shall prepare 65% Draft Structure Plans / Structure Pay Item List/Responses to Comments*

8.3 65% QUANTITIES AND ESTIMATE

ENGINEER shall prepare detailed quantity calculations from the 65% roadway and structure plans. The quantities will be based on estimated calculations, using a contingency of 20%. Unit prices will be estimated from Caltrans cost data, other projects recently advertised and other COUNTY or regional project bid results.

- *Deliverable: ENGINEER shall prepare 65% Quantities and Estimates / Responses to Comments*

8.5 65% DRAFT SPECIAL PROVISIONS

Project Special Provisions will be based upon the Caltrans 2015 Standard Specifications and Standard Special Provisions, COUNTY, and City of Palm Desert as applicable. ENGINEER shall prepare draft special provisions for the project in Microsoft Word for the 65% submittal, gathering all necessary input from each design discipline.

- *Deliverable: ENGINEER shall prepare 65% Draft Special Provisions*

TASK 9.0 95% SUBMITTAL

9.1 95% ROADWAY PLANS

ENGINEER shall prepare the plans for the roadway improvements, which will follow the 65% roadway plans. Upon receipt of comments on the 65% submittal, ENGINEER shall prepare a written response to each comment from the COUNTY, City of Palm Desert, and Caltrans. Resolution of any difficult comments will be facilitated in a meeting with the COUNTY, City of Palm Desert, or Caltrans. The 95% submittal will also include temporary and permanent water pollution control plans.

ENGINEER shall update the 65% plans and prepare the 95% plan submittal. ENGINEER will prepare the necessary revisions to obtain final approval of the submittal.

- *Deliverable: ENGINEER shall prepare 95% Roadway Plans / Responses to Comments*

9.2 95% STRUCTURE PLANS

9.2.1 95% PS&E Structure Plans

ENGINEER shall address any comments from the COUNTY, Caltrans and UPRR 65% review. The designer will also address ENGINEER Quality Control Review comments as well as coordination

input from roadway design, electrical design, drainage design and the utility coordinator. The designer and checker will meet to resolve any discrepancies noted in the design and the structure plans will be updated accordingly.

In addition to submitting to the COUNTY, the overhead structure will be submitted to Caltrans and UPRR. ENGINEER will prepare the necessary revisions to obtain approval of the submittal.

9.2.2 Independent Design Check

ENGINEER shall complete the independent design check for each of the bridges to be performed by a registered civil engineer completely independent from the designer. The design checker will prepare a complete set of design check calculations to verify the capacity of all substructure and superstructure elements. All structure plan details will be reviewed by the check engineer for completeness and accuracy.

- *Deliverable: ENGINEER shall prepare 95% Checked Structure Plans/Structure Design Calculations/Structure Design Check Calculations/ Final Foundation Report / Responses to Comments.*

9.3 95% QUANTITIES AND ESTIMATE

ENGINEER shall prepare detailed quantity calculations from the 95% plans. The detailed item list will be updated for any new items added between the 65% and 95% design. The quantities will now be based on detailed calculations, allowing the contingency to be reduced to 10%. Quantities will be calculated using the roadway design software and checked using hand calculations and the design plans. Unit prices will be estimated from Caltrans cost data, other projects recently advertised and other County or regional project bid results.

- *Deliverable: ENGINEER shall prepare 95% Checked Quantities and Estimates / Responses to Comments*

9.4 95% SPECIAL PROVISIONS

ENGINEER shall review COUNTY, City of Palm Desert, and Caltrans comments on the draft special provisions. ENGINEER shall make recommendations for special provisions language with regard to utility issues, recommendations for construction windows of time for utility relocation activities, recommendations for inclusion of utility bid items, etc.

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ENGINEER shall work with COUNTY and City of Palm Desert staff to make edits to the Special Provisions as necessary and to make the project requirements clear.

- *Deliverable: ENGINEER shall prepare 95% Special Provisions / Responses to Comments*

TASK 10.0 100% SUBMITTAL

10.1 100% ROADWAY PLANS (INCLUDING CROSS SECTIONS)

ENGINEER shall prepare 100% Roadway Design plans based on comments received from the COUNTY, City of Palm Desert, and Caltrans on the 95% plans. The plans will be checked for accuracy and completeness, and will incorporate any changes to the other roadway plans that may have been updated or modified.

Cross sections will be generated along the alignment at a minimum of 50 ft intervals. Additional cross sections will be generated at points such as the following: begin/end of tapers and unique features.

ENGINEER will prepare the necessary revisions to obtain approval of the submittal.

- *Deliverable: ENGINEER shall prepare 100% Roadway including Title Sheet, Typical Sections, Key Map, Layouts / Profiles / Superelevation, Construction Details, Contour Grading, Drainage Layouts / Profiles / Details, Utility Relocation, Staging and Detour, Traffic Handling, Delineation, Summary of Roadway Quantities, Sign Plans, Retaining Walls and Sound Walls, Retaining Wall Aesthetics, Planting, Irrigation, Temporary and Permanent Water Pollution Control, and Electrical and Signal Plans / Responses to Comments*

10.2 100% STRUCTURE PLANS

ENGINEER shall prepare the 100% Structure Design plans submittal and coordinate all last comments from the COUNTY or other agency to obtain approval. ENGINEER shall provide final plans to the COUNTY, City of Palm Desert, and Caltrans. ENGINEER will prepare the necessary revisions to obtain approval of the submittal.

- *Deliverable: ENGINEER shall prepare 100% Structure Plans, Supplemental Structure Design and Check Calculations / Responses to Comments*

10.3 100% QUANTITIES AND ESTIMATE

ENGINEER shall update the quantities from the 95% submittal. Quantities will be updated in the calculations, the estimate and on the quantity plan sheets for any changes made between the 95% and Final Submittals.

The Engineer's Estimate will be updated for current and projected unit prices at the time of bidding.

- *Deliverable: ENGINEER shall prepare 100% Quantities and Estimate / Responses to Comments*

10.4 100% SPECIAL PROVISIONS

ENGINEER shall review the COUNTY and City of Palm Desert comments on the 95% special provisions and meet with the COUNTY and City to discuss any revisions that could have a major impact on construction. The draft special provisions will be updated and revised as many times as necessary to obtain COUNTY and City approval. The special provisions will be prepared and stamped and by a licensed Civil Engineer in the State of California. ENGINEER shall respond to each comment made by the COUNTY with a written response explaining how the comment was addressed.

- *Deliverable: ENGINEER shall prepare 100% Special Provisions / Responses to Comments*

TASK 11.0 FINAL APPROVED SUBMITTAL

11.1 FINAL SUBMITTAL

Final Roadway Design

ENGINEER shall prepare Final Roadway Design plans based on comments received from the COUNTY and City of Palm Desert on the 100% plans. The plans will be checked for accuracy and completeness, and will incorporate any changes to the other roadway plans that may have been updated or modified.

Upon approval, ENGINEER shall provide signed plans to be incorporated into the bid package. ENGINEER will prepare the necessary revisions to obtain final approval of the submittal.

- *Deliverable: ENGINEER shall prepare Final Roadway Design / Roadway Cross Sections / Responses to Comments*

Final Structure Design

ENGINEER shall prepare the Final Structure Design plans based on comments received from the COUNTY and City of Palm Desert on the 100% plans. The plans will be checked for accuracy and completeness, and will incorporate any changes to the other structure plans that may have been updated or modified. Upon

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approval, ENGINEER shall provide signed plans to be incorporated into the bid package. ENGINEER will prepare the necessary revisions to obtain final approval of the submittal.

- *Deliverable: ENGINEER shall prepare Final Structure Design Plans/ Responses to Comments*

Final Quantities and Estimate

ENGINEER shall update the quantities from the 100% submittal. Quantities will be updated in the calculations, the estimate and on the quantity plan sheets for any changes made between the 100% and Final Submittals.

- *Deliverable: ENGINEER shall prepare Final Bid Item List with Quantities/Final Engineer's Estimate/Responses to Comments*

Final Special Provisions

ENGINEER shall prepare the final special provisions and meet with the COUNTY and City of Palm Desert to discuss any revisions that could have a major impact on construction. Upon approval, ENGINEER shall provide signed special provisions to be incorporated into the bid package

- *Deliverable: ENGINEER shall prepare Final Signed Special Provisions / Responses to Comments*

ARTICLE AV • CONSTRUCTION BID SUPPORT (PHASE III)

Contract Award, Contract Analysis, and Construction Bidding Support. As part of the bid support tasks, the ENGINEER is to present the project at the pre-bid meeting, discuss project details and document the comments/questions raised by potential bidders. In the event that clarification is needed during the bid phase, ENGINEER shall be available to provide a written response. Corrective action taken will be in the form of an addendum prepared by ENGINEER and issued by the COUNTY or by a covering change order after the award of the construction contract.

ARTICLE AVI • CONSTRUCTION SUPPORT (PHASE IV)

A. CONSTRUCTION SUPPORT AND AS-BUILT PLANS

ENGINEER shall attend the pre-construction meeting with the successful construction contractor. During construction, ENGINEER shall furnish all necessary additional drawings as required and will review shop drawings submitted by the construction contractor. ENGINEER shall be available to visit the job site for on-site review of

construction and other visits to the job site as requested to resolve any discrepancies in the contract documents. ENGINEER shall prepare and deliver to the COUNTY "As-Built" plans at the completion of project construction. The plans will be delivered in Microstation format and/or mylar hard copies as desired by the COUNTY within three months of completion of the project.

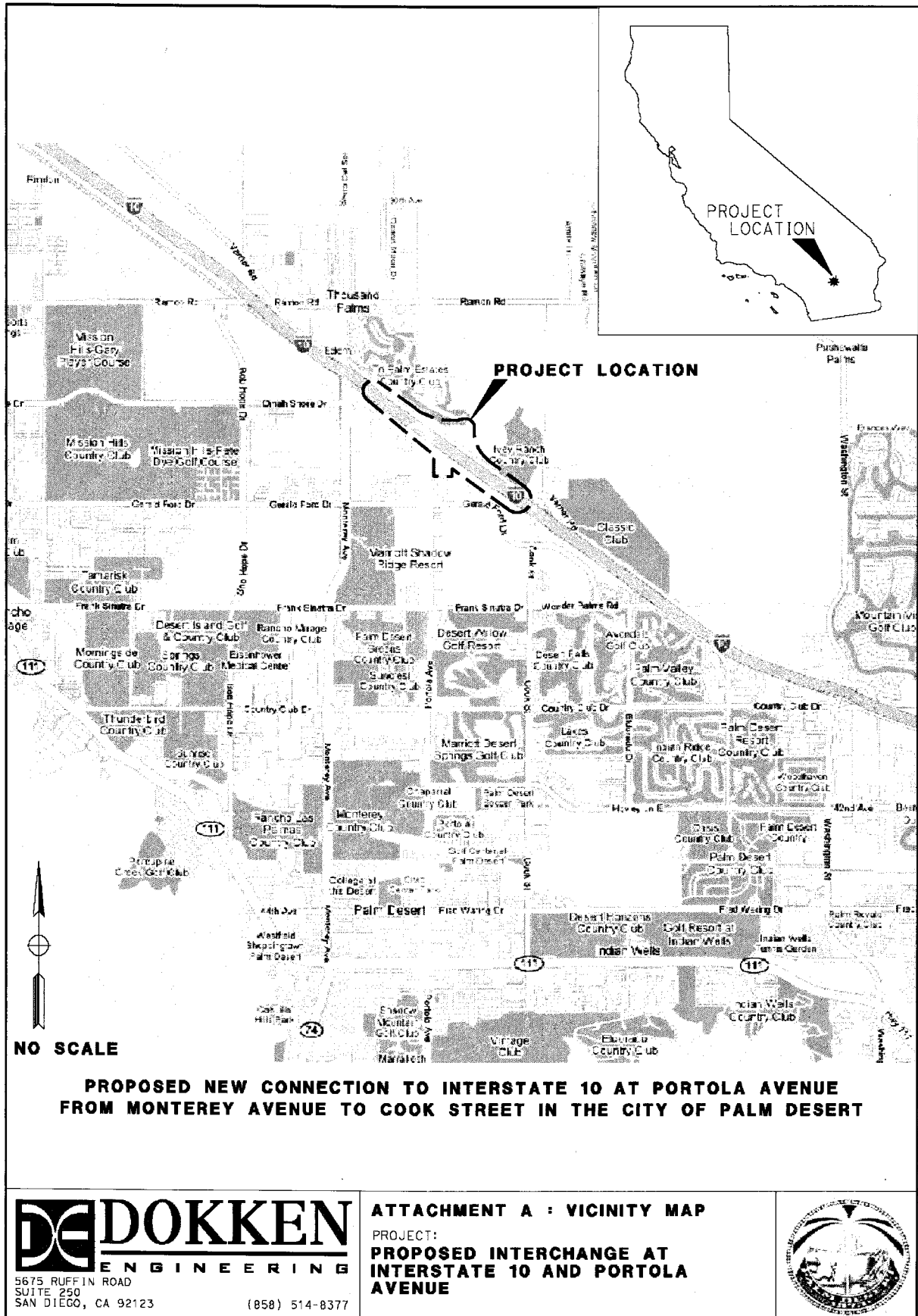
- **Deliverable:** *Pre-Construction Meeting, Job Site Visits, Additional Drawings / Clarification, Shop Drawing Reviews, As-built Plans*

B. ENVIRONMENTAL MITIGATION MONITORING

ENGINEER shall provide environmental support during construction of the project. The ENGINEER shall oversee implementation of the construction mitigation measures cited in the NEPA and CEQA environmental documents and permits. Environmental staff shall provide documentation of the mitigation efforts through completion of an Environmental Commitments Record/Mitigation Monitoring and Reporting Program matrix and site visits during pre-construction, the beginning of construction, and towards the completion of construction.

- **Deliverable:** *Environmental Commitments Record/Mitigation Monitoring and Reporting Program matrix for the project files.*

Portola Avenue / I-10 Interchange Project



APPENDIX B – SCHEDULE OF SERVICES**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 1, 2022, unless extended by a supplemental agreement.

A. PHASES

The Schedule is divided into the following phases:

Phase I - Preliminary Engineering and Environmental

Phase II - Plans, Specifications, and Estimates

Phase II - Bid Support

Phase IV - Construction Support

B. GANTT CHART

A Gantt chart is provided below that graphically illustrates the sequencing and completion of the project phases.

Project / Task	Task Start	Task Finish	2017												2018												2019												2020												
			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	
Preliminary Engineering & Environmental	Mar 2017	Oct 2017																																																	
Plans, Specifications & Estimates	Apr 2017	Oct 2018																																																	
Bidding & Construction	Nov 2018	Feb 2020																																																	

APPENDIX C1 • PRELIMINARY ENGINEERING & ENVIRONMENTAL FEE PROPOSAL WORKSHEETS

Portola Avenue / I-10 Interchange Project

June 12, 2017

COMPANIES	PHASE I	PHASE II	PHASE III	PHASE IV	TOTAL
Dokken Engineering Prime	\$ 262,600.51	\$ 3,027,763.56	\$ 27,614.08	\$ 196,461.28	\$ 3,514,439.43
PACE Advance Water Engineering Hydraulics & Hydrology	\$ 76,343.08				\$ 76,343.08
Earth Mechanics Inc. Geotechnical		\$ 368,410.11	\$ 5,831.64	\$ 13,478.19	\$ 387,719.93
David Evans and Associated, Inc. Planting and Irrigation		\$ 102,446.95			\$ 102,446.95
Fehr & Peers Traffic	\$ 78,054.68				\$ 78,054.68
TOTAL	\$ 416,998.27	\$ 3,498,620.62	\$ 33,445.72	\$ 209,939.46	\$ 4,159,004.07

Phase I Preliminary Engineering & Environmental

Phase II Plans, Specs & Estimates

Phase III Bid Support

Phase IV Construction Support

Portola Avenue / I-10 Interchange Project

FEE PROPOSAL WORKSHEET		
COMPANY: Dokken Engineering	SCOPE OF WORK: Project Summary	PHASE: All Phases
PROJECT: Portola Avenue / I-10 Interchange Project	DATE: June 12, 2017	

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Elizabeth Diamond	QA/QC Engineer	100	@ \$90.00	\$9,000.00
Juann Ramos	Project Manager	1,620	@ \$80.00	\$129,600.00
Kristopher Kofoed	Project Engineer	2,536	@ \$50.00	\$126,800.00
Charles Tornaci	Structures Engineer	1,566	@ \$59.00	\$92,394.00
Staff	Senior Engineer	2,368	@ \$60.00	\$142,080.00
Tim Chamberlain	Senior Environ Planner	146	@ \$44.00	\$6,424.00
Staff	Associate Engineer	5,638	@ \$50.00	\$281,900.00
Staff	Assistant Engineer	8,008	@ \$32.00	\$256,256.00
Staff	Assoc. Env. Planner	182	@ \$38.00	\$6,916.00
Staff	Env. Planner/Biologist	124	@ \$29.00	\$3,596.00
Staff	SR CAD/Detailer	2,360	@ \$48.00	\$113,280.00
Staff	Engineering Technician	700	@ \$25.00	\$17,500.00

TOTAL HOURS 25,348 AL DIRECT LABOR \$1,185,746.00

MULTIPLIERS

ESCALATION @	3.00%	(Rates Vary by Phase)	\$33,498.06
OVERHEAD @	84.85%	(of Direct Labor + Escalation)	\$1,034,528.58
PAYROLL ADDITIVES @	72.19%	(of Direct Labor + Escalation)	\$880,172.29
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$313,394.49
TOTAL MULTIPLIERS			\$2,261,593.43

OTHER DIRECT COSTS

*** Billed at Actual Cost ***

ITEM	QUANTITY	UNIT	UNIT-COST	AMOUNT
UPRR Permitting for Haz Mat Testing	1	LS	@ \$12,000.00	\$12,000.00
Haz Mat Sample Collection and Testing	1	LS	@ \$7,100.00	\$7,100.00
Utility Potholing & Flagging	1	LS	@ \$35,000.00	\$35,000.00
Historic Evaluation and Finding of Effect Report	1	LS	@ \$13,000.00	\$13,000.00

TOTAL ODC'S \$67,100.00

SUB CONSULTANT SERVICES

COMPANY	LABOR	MULTIPLIERS	ODC's	TOTAL
PACE Advance Water Engineering	\$23,766.00	\$52,577.08		\$76,343.08
Earth Mechanics Inc.	\$93,710.40	\$201,049.53	\$92,960.00	\$387,719.93
David Evans and Associated, Inc	\$30,038.00	\$65,873.95	\$6,535.00	\$102,446.95
Fehr & Peers	\$23,517.00	\$48,537.68	\$6,000.00	\$78,054.68

TOTAL SUBCONSULTANT SERVICES \$644,564.65

TOTAL \$4,159,004.07

FEE PROPOSAL WORKSHEET		
COMPANY: Dokken Engineering	SCOPE OF WORK: Preliminary Engineering & Environmental	PHASE: Phase I
PROJECT: Portola Avenue / I-10 Interchange Project		DATE: June 12, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Elizabeth Diamond	QA/QC Engineer			\$90.00	
Juann Ramos	Project Manager	110	@	\$80.00	\$8,800.00
Kristopher Kofoed	Project Engineer	234	@	\$50.00	\$11,700.00
Charles Tornaci	Structures Engineer	20	@	\$59.00	\$1,180.00
Staff	Senior Engineer	24	@	\$60.00	\$1,440.00
Tim Chamberlain	Senior Environ Planner	78	@	\$44.00	\$3,432.00
Staff	Associate Engineer	364	@	\$50.00	\$18,200.00
Staff	Assistant Engineer	456	@	\$32.00	\$14,592.00
Staff	Assoc. Env. Planner	138	@	\$38.00	\$5,244.00
Staff	Env. Planner/Biologist	124	@	\$29.00	\$3,596.00
Staff	SR CAD/Detailer	20	@	\$48.00	\$960.00
Staff	Engineering Technician			\$25.00	
		TOTAL HOURS		1,568	AL DIRECT LABOR
					\$69,144.00

MULTIPLIERS

ESCALATION @	(of Direct Labor)	
OVERHEAD @	84.85% (of Direct Labor + Escalation)	\$58,668.68
PAYROLL ADDITIVES @	72.19% (of Direct Labor + Escalation)	\$49,915.05
PROFIT (FIXED FEE) @	10.0% (of Direct Labor + Escalation + Overhead + Payroll Additives)	\$17,772.77
TOTAL MULTIPLIERS		\$126,356.51

OTHER DIRECT COSTS

... Billed at Actual Cost ...

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
UPRR Permitting for Haz Mat Testing	1	LS	@ \$12,000.00	\$12,000.00
Haz Mat Sample Collection and Testing	1	LS	@ \$7,100.00	\$7,100.00
Utility Potholing & Flagging	1	LS	@ \$35,000.00	\$35,000.00
Historic Evaluation and Finding of Effect Report	1	LS	@ \$13,000.00	\$13,000.00
TOTAL ODC'S				\$67,100.00

SUB CONSULTANT SERVICES

COMPANY	LABOR	MULTIPLIERS	ODC's	TOTAL
PACE Advance Water Engineering	\$23,766.00	\$52,577.08		\$76,343.08
Fehr & Peers	\$23,517.00	\$48,537.68	\$6,000.00	\$78,054.68
TOTAL SUBCONSULTANT SERVICES				\$154,397.76
TOTAL				\$416,998.27

FEE PROPOSAL WORKSHEET		
COMPANY: Dokken Engineering	SCOPE OF WORK: Plans, Specs & Estimates	PHASE: Phase II
PROJECT: Portola Avenue / I-10 Interchange Project		DATE: June 12, 2017

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Elizabeth Diamond	QA/QC Engineer	100	@	\$90.00	\$9,000.00
Juann Ramos	Project Manager	1,400	@	\$80.00	\$112,000.00
Kristopher Kofoed	Project Engineer	1,962	@	\$50.00	\$98,100.00
Charles Tornaci	Structures Engineer	1,216	@	\$59.00	\$71,744.00
Staff	Senior Engineer	2,156	@	\$60.00	\$129,360.00
Tim Chamberlain	Senior Environ Planner	40	@	\$44.00	\$1,760.00
Staff	Associate Engineer	5,254	@	\$50.00	\$262,700.00
Staff	Assistant Engineer	7,152	@	\$32.00	\$228,864.00
Staff	Assoc. Env. Planner	4	@	\$38.00	\$152.00
Staff	Env. Planner/Biologist			\$29.00	
Staff	SR CAD/Detailer	2,260	@	\$48.00	\$108,480.00
Staff	Engineering Technician	700	@	\$25.00	\$17,500.00

MULTIPLIERS

OTHER DIRECT COSTS

Billed at Actual Cost -				
ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT

SUB CONSULTANT SERVICES

COMPANY	LABOR	MULTIPLIERS	ODC's	TOTAL
Earth Mechanics Inc.	\$87,571.40	\$187,878.71	\$92,960.00	\$368,410.11
David Evans and Associated, Inc	\$30,038.00	\$65,873.95	\$6,535.00	\$102,446.95

TOTAL	\$3,498,620.62
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FEE PROPOSAL WORKSHEET		
COMPANY: Dokken Engineering	SCOPE OF WORK: Bid Support	PHASE: Phase III
PROJECT: Portola Avenue / I-10 Interchange Project		DATE: June 12, 2017

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Elizabeth Diamond	QA/QC Engineer			\$90.00	
Juann Ramos	Project Manager	20	@	\$80.00	\$1,600.00
Kristopher Kofoed	Project Engineer	60	@	\$50.00	\$3,000.00
Charles Tornaci	Structures Engineer	30	@	\$59.00	\$1,770.00
Staff	Senior Engineer	8	@	\$60.00	\$480.00
Tim Chamberlain	Senior Environ Planner	8	@	\$44.00	\$352.00
Staff	Associate Engineer	20	@	\$50.00	\$1,000.00
Staff	Assistant Engineer	40	@	\$32.00	\$1,280.00
Staff	Assoc. Env. Planner			\$38.00	
Staff	Env. Planner/Biologist			\$29.00	
Staff	SR CAD/Detailer			\$48.00	
Staff	Engineering Technician			\$25.00	
TOTAL HOURS		186		AL DIRECT LABOR	\$9,482.00

ESCALATION @	3.00%	(of Direct Labor)	\$284.46
OVERHEAD @	84.85%	(of Direct Labor + Escalation)	\$8,286.84
PAYROLL ADDITIVES @	72.19%	(of Direct Labor + Escalation)	\$7,050.41
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$2,510.37
		TOTAL MULTIPLIERS	\$18,132.08

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COMPANY	LABOR	MULTIPLIERS	ODC's	TOTAL
Earth Mechanics Inc.	\$1,854.00	\$3,977.64		\$5,831.64

TOTAL	\$33,445.72
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FEE PROPOSAL WORKSHEET		
COMPANY: Dokken Engineering	SCOPE OF WORK: Construction Support	PHASE: Phase IV
PROJECT: Portola Avenue / I-10 Interchange Project		DATE: June 12, 2017

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Elizabeth Diamond	QA/QC Engineer			\$90.00	
Juann Ramos	Project Manager	90	@	\$80.00	\$7,200.00
Kristopher Kofoed	Project Engineer	280	@	\$50.00	\$14,000.00
Charles Tornaci	Structures Engineer	300	@	\$59.00	\$17,700.00
Staff	Senior Engineer	180	@	\$60.00	\$10,800.00
Tim Chamberlain	Senior Environ Planner	20	@	\$44.00	\$880.00
Staff	Associate Engineer			\$50.00	
Staff	Assistant Engineer	360	@	\$32.00	\$11,520.00
Staff	Assoc. Env. Planner	40	@	\$38.00	\$1,520.00
Staff	Env. Planner/Biologist			\$29.00	
Staff	SR CAD/Detailer	80	@	\$48.00	\$3,840.00
Staff	Engineering Technician			\$25.00	

ESCALATION @	3.00%	(of Direct Labor)	\$2,023.80
OVERHEAD @	84.85%	(of Direct Labor + Escalation)	\$58,957.00
PAYROLL ADDITIVES @	72.19%	(of Direct Labor + Escalation)	\$50,160.36
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$17,860.12

[illegible]

COMPANY	LABOR	MULTIPLIERS	ODC's	TOTAL
Earth Mechanics Inc.	\$4,285.00	\$9,193.19		\$13,478.19

TOTAL	\$209,939.46
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