

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



ITEM
3.16
(ID # 5905)

MEETING DATE:

Tuesday, February 27, 2018

FROM : ECONOMIC DEVELOPMENT AGENCY (EDA):

SUBJECT: ECONOMIC DEVELOPMENT AGENCY (EDA): Jacqueline Cochran Regional Airport-Rehabilitation of Runway 17-35, Taxiway F & Connector Taxiways-Design Services, District 4, [\$158,472] Federal Aviation Administration Airport Improvement Grant Funds 90%, Airport Budget Fund (22350) 10%.

RECOMMENDED MOTION: That the Board of Supervisors:

1. Approve and authorize the Chairman of the Board to execute the attached work order agreement between the County of Riverside and Mead & Hunt, Inc. for the Rehabilitation of the Runway 17-35, Taxiway F and Connector Taxiway Pavements – Design Services work order agreement at Jacqueline Cochran Regional Airport; and
2. Delegate Change Order authority to the Assistant County Executive Officer/EDA or designee in accordance with Board Policy B-11.

ACTION: Policy

Robert Field, Assistant County Executive Officer/EDA 1/8/2018

MINUTES OF THE BOARD OF SUPERVISORS

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

Ayes: Jeffries, Tavaglione, Washington, Perez and Ashley
Nays: None
Absent: None
Date: February 27, 2018
xc: EDA

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	\$158,472	\$0	\$158,472	\$0
NET COUNTY COST	\$0	\$0	\$0	\$0
SOURCE OF FUNDS: Federal Aviation Administration Airport Improvement Grant Funds 90%, Airport Budget Fund (22350) 10%			Budget Adjustment: No	
			For Fiscal Year: 2017/2018	

C.E.O. RECOMMENDATION: Approve

BACKGROUND:

Summary

The purpose of this project is to design a pavement rehabilitation process for the asphalt concrete runway and adjacent and connecting taxiways at the Airport. The runway pavement was constructed in two phases with the first phase constructed prior to 1995, and the second phase constructed in 2001 which included an overlay of the original pavement section. Both sections received a slurry seal treatment in 2007. The pavements are in satisfactory condition. A visual inspection revealed low severity longitudinal cracking primarily along the construction joints with some low severity transverse cracking.

The Rehabilitation of the Runway 17-35, Taxiway F and Connector Taxiway Pavements at Jacqueline Cochran Regional Airport is consistent with the Airport's Capital Improvement Program and Master Plan. Mead & Hunt Inc. were selected by Request for Qualification (RFQ) as the County's Airports Project Consultant, per the Federal Aviation Administration's (FAA) five-year consultant selection criteria.

Staff proposes to have Mead & Hunt, Inc. provide design engineering services and recommend that the Board of Supervisors approve the necessary design work order agreement for the project. County Counsel has reviewed and approved the attached documents as to legal form.

Impact on Residents and Businesses

The rehabilitation of the Runway 17-35, Taxiway F and Connector Taxiway Pavements will improve the airport operations and enhance capacity and safety.

Additional Fiscal Information

There will be no impact on the County's general fund.


ATTACHMENTS:

- Work Order Agreement

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

RF:HM:TM:SG:VP:mm


Nehni Bana, Principal Management Analyst 2/20/2018


Gregory V. Priaplos, Director County Counsel 2/14/2018

WORK ORDER AGREEMENT
FOR
JACQUELINE COCHRAN REGIONAL AIRPORT
REHABILITATION OF RUNWAY 17-35, TAXIWAY F,
AND CONNECTOR TAXIWAY PAVEMENTS REHABILITATION
ENGINEERING DESIGN SERVICES
BY AND BETWEEN
RIVERSIDE COUNTY ECONOMIC DEVELOPMENT AGENCY
AND
MEAD & HUNT, INC.

This Agreement is made and entered into this 27th day of February, 2018, by and between the COUNTY OF RIVERSIDE by and through the Economic Development Agency (EDA), a public body corporate politic in the State of California (hereinafter "COUNTY"), and MEAD AND HUNT, INC., (hereinafter "CONSULTANT").

RECITALS

WHEREAS, the proposed services provided in this Agreement are necessary to design rehabilitation of runway and taxiway pavements critical to the airport's operation.

WHEREAS, the COUNTY has selected CONSULTANT to provide services based on Request for Proposal (RFP) for Airport Consulting Services that included runway and taxiway rehabilitation; and

WHEREAS, the COUNTY and the CONSULTANT have entered into a MASTER SERVICE AGREEMENT, dated 9th day of September 2014, the terms of which apply to this Work Order Agreement; and

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WHEREAS, CONSULTANT is uniquely qualified based on their prior knowledge by completing design and construction projects for Jacqueline Cochran Regional Airport; and

WHEREAS, CONSULTANT has agreed to provide such services to COUNTY.

NOW THEREFORE, in consideration of the mutual covenants contained herein, the parties hereto agree as follows:

1. **DESCRIPTION OF SERVICES**: CONSULTANT shall provide services for the design engineering for the Rehabilitation of the Runway 17-35, Taxiway F, and Connector Taxiways Pavement project at Jacqueline Cochran Regional Airport, as outlined and specified in Exhibit "A", which is attached hereto and by this reference incorporated herein.

1.1 CONSULTANT represents and maintains that it is skilled in the professional calling necessary to perform all services, duties, and obligations required by this Agreement to fully and adequately complete the project. CONSULTANT shall perform the services and duties in conformance to and consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California. CONSULTANT further represents and warrants to the COUNTY that it has all licenses, permits, qualifications, and approvals of whatever nature are legally required to practice its profession. CONSULTANT further represents that it shall keep all such licenses and approvals in effect during the term of this Agreement.

2. **PERIOD OF PERFORMANCE**: CONSULTANT shall commence performance upon date of execution of this Agreement and complete performance within twelve (12) months. CONSULTANT will diligently and responsibly pursue the performance of the services required of it by this Agreement through project completion unless the work is altered by written amendment(s) pursuant to the MASTER SERVICES AGREEMENT between COUNTY and CONSULTANT, dated September 9, 2014, currently in place. In the event the services described in this fully executed work order are not completed during the term of the MASTER SERVICES

AGREEMENT, though the work order was executed by the parties while the MASTER SERVICES AGREEMENT was in effect, CONSULTANT shall continue to be obligated to perform the services and the COUNTY shall be obligated to pay for such services as provided in this work order.

3. **COMPENSATION:** The COUNTY shall pay the CONSULTANT for services performed and expenses incurred in accordance with Exhibit A, Scope of Services.

3.1 CONSULTANT shall be paid a LUMP SUM amount not-to-exceed One Hundred Fifty-eight Thousand Four Hundred Seventy-two Dollars (\$158,472.00) for Engineering Design and Bidding Services described in Exhibit "A", Description of Tasks in Phases I, II, III & IV. CONSULTANT shall submit invoices monthly to the COUNTY for progress payments based on the performance of the total work completed to date.

4. **CONFLICT OF INTEREST:** CONSULTANT shall have no interest, and shall not acquire any interest, direct or indirect, which will conflict in any manner or degree with the performance of services required under this Agreement.

5. **DESIGNATED REPRESENTATIVES:** The following individuals are designated as representatives of the AGENCY and CONSULTANT respectively to act as liaison between the parties:

AGENCY

Tim Miller
Aviation Director
Economic Development Agency for the
County of Riverside
3403 10th St., Suite 400
Riverside, CA 92501
Phone: (951) 955-4838
Fax: (951) 955-6686
Email: TLMiller@rivco.org

CONSULTANT

Robert Casagrande
Department Manager
Mead and Hunt, Inc.
1360 19th Hole Drive, Suite 200
Windsor, CA 95492
Phone: 707-526-5010
Fax: 608-273-6391
Email: bob.casagrande@meadhunt.com

Any change in designated representatives shall be promptly reported to the other party in order to ensure proper coordination.

6. **NOTICES:** All correspondence and notices required or contemplated by this Agreement shall be delivered to the respective parties at the addresses set forth below and are deemed submitted one (1) day after their deposit in the United States Mail, postage prepaid:

AGENCY

Tim Miller
Aviation Director
Riverside County, EDA
3403 10th Street, Suite 400
Riverside, CA 92501

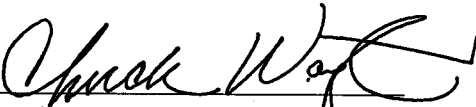
CONSULTANT

Jon J. Faucher
Vice President
Mead & Hunt, Inc.
1360 19th Hole Drive, Suite 200
Windsor, CA 95492


IN WITNESS WHEREOF, the parties hereto have caused their duly representatives to execute this Agreement.

COUNTY OF RIVERSIDE

MEAD AND HUNT, INC.

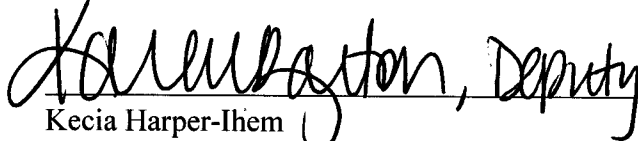


Chuck Washington, Chairman
Board of Supervisors



Jon Faucher
Vice President

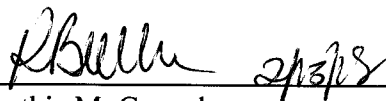
ATTEST:



Kecia Harper-Ihem
Clerk of the Board

APPROVED AS TO FORM:

Gregory P. Priamos
County Counsel



Synthia M. Gunzel
Deputy County Counsel

EXHIBIT A

DESIGN ENGINEERING SCOPE OF SERVICES

for

JACQUELINE COCHRAN REGIONAL AIRPORT, RIVERSIDE COUNTY

Runway 17-35, Taxiway F, & Connector Taxiway Pavements Rehabilitation

September 2017

PROJECT DESCRIPTION

The Engineering Design Services to be provided by Mead & Hunt, Inc. (Consultant) are described herein and detail the Runway 17-35, Taxiway F, and Connector Taxiway pavement rehabilitation improvements for the Jacqueline Cochran Regional Airport – TRM (Airport) on behalf of the County of Riverside (County). This project is to be funded by the Federal Aviation Administration's allocation of Airport Improvement Program (AIP) funds for a Development project.

This project involves the design of a pavement rehabilitation process for the asphalt concrete runway (8501'x150') and adjacent and connecting taxiways (50') at the Airport. The runway pavement was constructed in two phases with the first phase constructed prior to 1995, and the second phase constructed in 2001 which included an overlay of the original pavement section. Both sections received a slurry seal treatment in 2007. The pavements are in satisfactory condition. A visual inspection revealed low severity longitudinal cracking primarily along the construction joints with some low severity transverse cracking indicating a PCI range of 70-85.

In general, this scope of services is for engineering design to provide plans, specifications, and an engineer's construction estimate to address the runway pavement rehabilitation. This design will be based on survey information and geotechnical reports collected in the field. Bid Alternates will be employed to maximize the amount of pavement that can be rehabilitated based on accepted bids. The Base Bid will address the main runway pavement and adjacent connectors out to the hold bars. The design will meet the appropriate Federal Aviation Administration (FAA) Advisory Circulars.

CONSULTANT EXPERTISE

The Consultant's Team ("project team") includes Civil Engineers, registered in the State of California to practice their professions, and are experienced in the evaluation and design of airport improvement projects in accordance with Caltrans and FAA standards.

DESIGN SERVICES PHASES

The following details the scope of services to be provided by Consultant.

Phase I Contract Administration and Coordination

This phase involves those activities required for defining the scope of the project, negotiating the contract and subcontracts, and the general coordination and administration activities for the duration of the project, including (but not limited to) the following activities:

1.0 PROJECT SCOPING

1.1 Preliminary Meetings with the County

Consultant will confer with the County to ascertain project requirements, finances, schedules, and other pertinent matters. The County shall provide the Consultant with any existing environmental documents available. Meetings with the County shall also determine the limits for topographical surveying and pavement geotechnical testing. It is anticipated that there will be one meeting with the County occurring at the project location.

1.2 Prepare Project Scope of Services and Proposal

This includes preparing the scope and fee proposal and negotiating the contract scope and fee with the County. This also includes coordination with subconsultants for scopes and fees if required.

2.0 PREPARE CONTRACT AND SUBCONTRACTS

This includes preparing the Consultant-County contract and preparing subconsultant contracts if needed.

3.0 PROJECT COORDINATION (coordination with project team, County, etc.)

Consultant will coordinate with the project team, subconsultants, County and other applicable agencies to complete the work elements in the Contract. Weekly progress meetings will be held via telecon with the project team and County.

4.0 GENERAL CONTRACT COORDINATION

A Project Manager (PM) will be assigned to this project to ensure continuity through all phases of work. The PM will be responsible for all work performed by the project team. The PM shall:

- a. Define tasks, schedules, and costs.
- b. Monitor work progress and address problems.
- c. Maintain up-to-date schedules.
- d. Coordinate with the County to receive their input; address their concerns; keep them informed regarding project status; obtain their concurrence on project scope, cost, and schedule; and obtain their input and approval of concepts through final design.
- e. Focus the efforts of the Consultant and subconsultants to expedite the design of a quality based, cost-effective project that meets the needs of the County.
- f. Provide internal quality control on the work of the Consultant and subconsultants by implementation and monitoring of a Quality Control (QC) and Quality Assurance (QA) program.
- g. Prepare project invoices for submittal to the County in accordance with the County's accounts receivable requirements.

5.0 GRANT APPLICATION AND ADMINISTRATION

This element of work includes the preparation of the Grant Application before design has been completed and revisions to the Application after bids are accepted. Preparation of the Application will include the following:

- a. Federal form SF-424 with correct current information
- b. Federal form 5100 with current information, costs and calculations, and requested funding.
- c. Calculate the Project's FAA National Priority Rating (or research available pavement PCN and PCI ratings if required)
- d. Draft the program narrative (scope of work), discussing the purpose and need of the work and the method of accomplishment
- e. Generate a draft project schedule
- f. Prepare a Project cost estimate summary for Project elements involved
- g. Calculate FAA, State, and local funding amounts
- h. Prepare a current Exhibit A Property Map from available resources
- i. Prepare a Project Sketch, indicating the proposed Project area to be submitted with application
- j. Prepare updated, draft, County's Certifications (that pertain to this project; usually 4 certifications) for County Signatures.
- k. Prepare updated, draft, Grant Assurances for County Signatures.
- l. Prepare updated, draft, Title VI Assurances for County Signatures.
- m. Assist County with information submittal to FAA.
- n. Communicate with FAA on behalf of the County if so requested.

The Consultant will prepare an electronic "application package" as a pdf. and submit to the County for approval and signatures. County will send signed application package to the FAA for grant processing.

PHASE I DELIVERABLES

- 1) Draft Scope of Services – One (1) electronic file
- 2) Final Scope of Services – Two (2) original hard copies
- 3) Executed Contract – Two (2) originals hard copies
- 4) Grant Application – One (1) electronic file to County

Phase II Preliminary Design – 60%

6.0 TOPOGRAPHICAL SURVEYING

6.1. Coordination to Collect Existing Data and Locate Existing Facilities and Utilities

Consultant will coordinate the collection of existing data and locate known utilities. This task includes collection and review of as-built plans and available existing survey information in order to gather information on existing topography, facilities, and utilities. This also includes coordination for field utility locates with County and FAA. The Consultant will coordinate with field survey crews to establish survey limits, coordinate access, establish survey schedule, and provide available survey control information.

6.2. Survey Control

Survey control will be established and used for design surveys. The Consultant will provide the surveyor a drawing showing the location of the existing or established control for the project. The Consultant will coordinate necessary bench loop and traverse procedures to verify accuracy of vertical and horizontal control points. The Consultant will establish runway end coordinates and runway centerline alignments, and tie these into the project survey control.

6.3. Field Work

Limits of survey work to be shown on a site plan. Consultant may meet with subconsultant in the field to coordinate collection of survey data for the project.

6.4. Convert Survey Data for Design Software

This work includes analyzing the topographical surveying data and preparing the data for use with computer modeling. Included are the following separate tasks:

- a. Establish design coordinates and alignments to be used for CAD drawings.
- b. Input raw survey data into the computer program in order to sort data into company standard layers for efficient analyzing.
- c. Verify survey data from previous project with latest field survey.
- d. Sort all data points by layers and description for computer modeling.
- e. Verify surveyor horizontal and vertical control.
- f. Prepare digital terrain model (DTM) of existing ground contours, pavement edges, roadways, electrical equipment, drainage features, buildings, fences, and other miscellaneous entities.
- g. Generate three-dimensional contour model from the DTM.
- h. Prepare and process data for pavement profiles, grading and/or paving cross sections, and drainage features.

7.0 GEOTECHNICAL INVESTIGATION

7.1 Coordination for Geotechnical Work (Consultant and Subconsultant)

This task includes data collection, review of as-built plans, and compiling available existing geotechnical information in order to gather information on existing soil conditions and past geotechnical or pavement test results. Coordination will be done with the geotechnical subconsultant to schedule work and establish any work constraint parameters.

7.2 Establish Project Testing Requirements

The Consultant will determine the type and frequency of geotechnical testing required for the project. The testing shall consider such items as pavement type, design methodology, type of wheel loading, and weight of design aircraft (e.g. greater than or less than 60,000 lbs.). The Consultant will use this information to perform the following tasks:

- a. Determine soil boring locations and frequency of testing.
- b. Develop a project sketch showing location and coordinates of borings.
- c. Determine soil sampling locations and types of soils testing required.

7.3 Field Work and Laboratory Testing

Limits of geotechnical work will be shown on a site plan. Consultant may meet with subconsultant in the field to coordinate collection of field data for the project.

7.4 Analyze Data

After receiving the testing report from the geotechnical firm, the Consultant will analyze the data and any existing previous geotechnical data, consisting of the following tasks:

- a. Review geotechnical recommendations.
- b. Determine appropriate data for pavement design.
- c. Input data for computer modeling with topographical survey data.
- d. Prepare pavement data and soil information for incorporation onto plan sheets.
- e. Evaluate existing pavement sections for potential recycling and reuse.
- f. Evaluate shrink, swell, and consolidation potential.

8.0 PREPARE PROJECT PLAN SHEETS FOR PRELIMINARY SUBMITTAL

Consultant will prepare the project plan sheets set that will depict the proposed major improvements for the runway rehabilitation.

9.0 PREPARE FAA PAVEMENT DESIGN REPORT AND FAA FORM 5100. – NIC

10.0 PREPARE PRELIMINARY SURFACE DRAINAGE ANALYSIS – NIC

11.0 PREPARE PRELIMINARY COST ESTIMATE

11.1 Calculate Estimated Preliminary Quantities

The Consultant will calculate necessary quantities for the various work items. Quantities will be consistent with the specifications and acceptable quantity calculation practices.

11.2 Prepare Preliminary Cost Estimate

The Consultant will provide a Preliminary Cost Estimate based on record cost data and similar work.

12.0 PREPARE PRELIMINARY DESIGN REPORT (PDR)

To document the results of a preliminary design, a PDR will be prepared. The report will include the summary of the project scope, geometrics, pavement rehabilitation design, pavement marking, environmental issues, construction phasing plans, and a project schedule. The report will also contain details on alternative design concepts that were investigated as part of the preliminary design effort, and recommendations on which alternatives to pursue. An analysis of the impacts of construction on Airport operations will be included, as well as an Engineer's Preliminary Cost Estimate. This report will also discuss funding, budget, strategies for bidding the project, and potential use of bid alternates. The information will be presented in letter report format for review by the County.

13.0 PREPARE FAA FORM 7460 (if required)

Consultant will complete a Notice of Proposed Construction or Alteration as per FAA guidelines and will send the form to the County to be submitted to the FAA.

14.0 PREPARATION OF ENVIRONMENTAL DOCUMENTATION - CATEX

The Categorical Exclusion for Jacqueline Cochran Regional Airport was approved and issued by the FAA in March 2017. No additional environmental documentation is required at this time.

14.1 Preparation of Draft Categorical Exclusion

The Consultant will prepare a Documented Categorical Exclusion (CATEX) to meet the requirements of the National Environmental Policy Act (NEPA). The Consultant will use the format specified in the current FAA checklist (ARP SOP No. 5.00, dated October 2, 2014). A draft CATEX with any attachments will be provided to the County in PDF format for review. Any County comments will be addressed and a final draft provided to the County. The County will be responsible for forwarding the CATEX to the FAA for review.

14.2 Preparation of Final CATEX

Based upon any comments received by the County from the FAA, the Consultant will revise the CATEX. The final CATEX with any attachments will be provided to the County in PDF format. The County will be responsible for forwarding the CATEX to the FAA for review.

15.0 PRELIMINARY DESIGN PROJECT MEETINGS

The Consultant will arrange and lead one phone meeting at the conclusion of Phase II – Preliminary Design, as described in the subtasks below. The Consultant will produce drawings and handouts, as needed, to conduct the meeting and will prepare minutes to document the discussions.

15.1 Present Preliminary Design and Cost Recommendations to County

The Consultant will prepare for and conduct a phone meeting with the County to present the findings of the preliminary design engineering phase presenting any alternatives and recommendations for the project.

15.2 Coordination Meetings (with FAA, County, subconsultants, etc. and site investigation visit)

The Consultant will conduct coordination efforts and attend one meeting coinciding with the Preliminary Design presentation to include a site visit to the Airport (or other named site as needed).

PHASE II DELIVERABLES

Prior to the completion of Phase II, the Consultant will deliver the following information to the County:

- 1) Preliminary Design Report – Three (3) hard copies and one electronic file
- 2) Plans in support of preliminary design – Three (3) hard copies and one electronic file
- 3) Geotechnical Report – Three (3) hard copies
- 4) TopoGraphical data – Three (3) hard copies of survey data collected
- 5) FAA Form 7460 –Electronic file
- 6) CAT EX – Three (3) hard copies

Phase III Final Design – (95% & Final)

16.0 PREPARE PLANS

Plan sheets will be prepared depicting the proposed improvements as indicated under Project Description. The following is a general list of drawings that will be used as a guideline. Actual number and title of drawings may be modified during the design phase, as required.

General:

- G-001 Cover Sheet, Sheet Index and Symbols
- G-002 Legend and Abbreviations
- G-021 Project Layout Plan
- G-041 Survey Control Plan
- G-081 Construction Safety and Phasing Plan

Geotechnical:

- B-051 Soil Boring Log Plan

Civil:

General

- C-021 Erosion Control Plans
- C-031 Erosion Control Details

Site

- C-201 Surface Preparation Plan
- C-202 Surface Preparation Plan
- C-203 Surface Preparation Plan
- C-204 Surface Preparation Plan
- C-301 Typical Sections
- C-311 Paving Details

Marking

- C-651 Marking Plan
- C-652 Marking Plan
- C-653 Marking Plan Details

17.0 PREPARE SPECIFICATIONS (CONSTRUCTION DOCUMENTS)

The Consultant will assemble the specifications and bid documents for County to use in obtaining competitive bids for the work. All documents shall meet current FAA Standards for Airport Improvement Program (AIP) funded projects.

17.1 Prepare Bidding and Contract Documents

The Consultant will prepare bidding and contract documents including, but not limited to, Invitation for Bids (Notice to Bidders), Instruction to Bidders, Proposal (Bid Form), FAA Required Certification forms, DBE Requirements, Sample Construction Contract/Agreement, Bid Bond, Performance Bond, and Payment Bond. All documents shall be based on the current County standards, modified to include all FAA required provisions and bid forms.

17.2 Required Federal Provisions

Federal laws and regulations require that specific contract provisions be included in federally funded contracts, as established within the grant assurances. Consultant will include the Required Federal Provisions in the bid documents. These requirements cover items such as:

- Affirmative Action Plan
- Buy American Preferences
- Civil Rights
- Disadvantaged Business Enterprises
- Federal Fair Labor Standards Act (Minimum Wage)
- Lobbying and Influencing Federal Employees
- Occupational Safety and Health Act
- Davis Bacon Requirements
- Equal Employment Opportunity
- Nonsegregated Facilities
- Drug-free Workplace
- Texting and Driving

17.3 FAA General Provisions (Advisory Circular 150-5370-10G)

FAA requires these provisions be included and complied with for all projects funded with federal grant monies through the Airport Improvement Program (AIP), as established within the grant assurances. The Consultant will include the FAA General Provisions, and modify as applicable for Project. The Consultant will review and incorporate necessary County additions and identify any conflicts with FAA requirements and shall submit any recommended modifications to the County for approval.

17.4 Prepare Special Provisions for Airport Construction

The Consultant will prepare Special Provisions to address, or expand on, conditions specific to construction on airports that require additional clarification. They will include (as applicable), but are not limited to the following items:

- General Safety Requirements, Airfield Safety and Traffic Control
- Record Drawings
- Time Limitations
- Liquidated Damages
- Barricades and Runway Closure Markers
- Radio Communication
- Access and Security
- Work Hour Limitations
- SWPPP Requirements and guidance for Contractor

17.5 Prepare Technical Specifications

The Consultant will prepare Technical Specifications using FAA Standard Specifications and FAA Specification format whenever possible. For work not covered by FAA Standards, County or Caltrans Standard Specifications shall be used. Technical Specifications anticipated for this project include, but not limited to, the following:

- a. G-105, Mobilization

- b. P-101, Surface Preparation
- c. P-605, Joint Sealants for Concrete Pavements
- d. P-620, Runway and Taxiway Marking
- e. P-626, Emulsified Asphalt Slurry Seal Surface Treatment

18.0 PREPARE FINAL SURFACE DRAINAGE ANALYSIS - NIC

19.0 PREPARE LIGHTING LAYOUT AND CIRCUIT CALCULATIONS – NIC

20.0 UPDATE AIRPORT SIGNING AND MARKING PLAN - NIC

21.0 EROSION CONTROL PLAN

The Consultant will develop an Erosion Control Plan for the project that is in general conformance with BAT (Best Available Technology) management practices. The plan will detail types of erosion control measures recommended for the site in addition to other information needed for the NPDES permitting application. The Contractor shall prepare the SWPPP. This information shall include, but not be limited to:

- a. Project Location
- b. Size of Disturbance of Project
- c. Amount of Impervious Surface
- d. Hydrologic Classification of Site
- e. Receiving Waters
- f. Site Drainage Overview

22.0 PREPARE SPONSOR CERTIFICATIONS, JUSTIFICATIONS FOR MODIFICATIONS TO FAA STANDARD SPECIFICATIONS, AND MODIFICATION OF AIRPORT CONSTRUCTION STANDARDS (if required).

22.1 Sponsor Certifications

The Consultant will complete the required Sponsor Certifications verifying the plans and specifications were developed in accordance with Federal guidelines, and the Equipment/Construction certification.

22.2 Justifications for Modification of Standards

If any minor additions or modifications are required to be made to FAA Standards (General Provisions and/or Technical Specifications) for project clarification,, justifications for the change must be provided to the FAA. Consultant will prepare justifications as needed.

22.3 Modification of Airport Standards

If necessary, the Consultant will prepare a Request for Modification of Airport Standards, if found to be necessary for the project. The form will be submitted to the County for acceptance and signature. Signed copies will be uploaded to the FAA online portal.

Any justifications / modifications documents will be included in the final Engineer's Design Report.

23.0 PREPARE CONSTRUCTION SAFETY AND PHASING PLAN

Consultant will prepare a Construction Safety and Phasing Plan (CSPP) in conformance with Federal Aviation Administration (FAA) Advisory Circular 150/5370-2F. The CSPP will be submitted to the County for approval and uploaded to the FAA online portal for review and approval. The final CSPP will be included with the project specifications/bid documents. The CSPP will be incorporated into the plans and specifications and will include the following items:

- a. Overview & Purpose
- b. Construction Safety Responsibility of Each Party
- c. Construction Phasing, including (but not limited to):
 - Phasing and time limitations
 - Areas and operations affected by construction
 - Wildlife management
 - Hazardous materials management
 - Inspection requirements
 - Marking and signs for access routes
 - Protection of runway and taxiway critical areas
 - Safety plan compliance document
- d. Construction Safety and Phasing Plan Sheet(s)

24.0 PREPARE 95% SUBMITTAL

Based on the County's written review comments on the Preliminary Design submittal, prepare 95% engineering and design documents of all improvements. This work shall include:

- a. Prepare and submit 95% plans.
- b. Prepare and submit 95% specifications and bid documents.
- c. Prepare and submit 95% cost estimate.
- d. Perform internal QA/QC for all documents included in the 95% submittal.
- e. Conduct 95% review meeting with the County and FAA via teleconference to go over submitted data and discuss schedule for upcoming submittals.

25.0 PREPARE AND SUBMIT FINAL PLANS AND SPECIFICATIONS

A final set of plans, specifications, and contract documents will be prepared incorporating revisions, modifications, and corrections determined during the County and FAA's review of the 95% submittal.

26.0 PREPARE AND SUBMIT FINAL COST ESTIMATE

26.1 Calculate Estimated Final Quantities.

Update estimated quantities from the 95% submittal review to reflect County and FAA comments included to produce Final Plans.

26.2 Prepare Final Cost Estimate.

Using the final quantities calculated following the completion of the plans and specifications, the Consultant will prepare the final construction cost estimate. The estimate will be based on information obtained from previous projects, contractors, material suppliers, and other databases available.

27.0 PREPARE AND SUBMIT ENGINEER'S DESIGN REPORT (EDR)

Prepare the Engineer's Design Report in conformance with FAA requirements. The report will include a summary and explanation of the project design including (as applicable) geometrics, pavement design, pavement marking, environmental issues, phasing plans, and a project schedule. The report will also contain any alternative design concepts that were investigated and evaluated and the final Engineer's cost estimate. The EDR will also include details for bidding the project and recommended bid alternates. The report shall include, but not be limited to, the following:

- a. Project Scope
- b. Design Standards
- c. Topographic Survey Summary
- d. Geotechnical Investigation Summary (report included as an Appendix)
- e. Design Geometrics (reference Federal Advisory Circular 150/5300-13A)
- f. Pavement Design Analysis (reference Federal Advisory Circular 150/5320-6E)
- g. Drainage Considerations
- h. Electrical Considerations
- i. Utility Considerations
- j. Pavement Marking Considerations
- k. Airport Operational Safety (reference Federal Advisory Circular 150/5370-2F)
- l. Construction Estimate
- m. Project Schedule and Construction Phasing
- n. Summary of Contract Documents
- o. Construction Inspection and Testing
- p. Deviations From FAA Standards
- q. Sponsor/Engineer's Certification for Project Plans and Specifications

28.0 PHASE III PROJECT MEETING

The Consultant will conduct a final submittal review meeting with the County by teleconference if required. The Consultant will produce drawings and handouts, as needed, to conduct the meeting and shall issue minutes to document the discussions.

Phase IV Bidding Services

29.0 PREPARE ADVERTISEMENT FOR BIDS

Required advertisement dates and bidding dates will be established. Consultant will prepare the Advertisement in conformance with FAA and local standards and submit a copy of the advertisement to the County. The County shall arrange for the legal advertising in conformance with local and FAA standards and shall pay for the associated cost of advertising. County will place ads in the various national trade journals.

30.0 BID DOCUMENTS DISTRIBUTION

Consultant shall prepare and upload Contract Documents to Quest Construction Data Network (QuestCDN.com). Contractors interested in bidding on the project can register and pay a fee (approximately \$20) to download the Contract Documents. Bidders will be responsible for submitting their bids to the County similar to previous projects.

This task also includes coordination time and services required to facilitate and monitor the online service.

31.0 RESPOND TO BIDDERS QUESTIONS

During the bidding process, the Consultant will be available to clarify bidding issues with contractors and suppliers, and for consultation with the various entities associated with the project.

32.0 PREPARE AND DISTRIBUTE ADDENDUM

Consultant will issue up to one (1) bid addendum as appropriate to interpret, clarify, or change the bidding documents as required by the County or FAA. Addendum will be made available to the plan holders and bidder's online via QuestCDN. Any addenda generated as a sole result of the County's error or omission, or FAA request, will be considered as extra services, and the Consultant will be reimbursed for this effort as an amendment to this contract.

33.0 PRE-BID CONFERENCE

Consultant will arrange for and conduct Pre-Bid Conference. The Project Manager and Project Engineer will attend and conduct the Pre-Bid Conference with potential contractors and the County to review the project and answer questions. The conference will be conducted at the Airport and will include a site inspection. Meeting minutes will be prepared and distributed.

34.0 BID OPENING – NIC

35.0 BID REVIEW AND BID TABULATION

Consultant will advise County as to the acceptability of any subcontractors, suppliers, and other persons and organizations proposed by the bidders and as to the acceptability of substitute materials and equipment proposed by bidders. The Consultant will prepare a spreadsheet that includes all bid items for the purpose of evaluating the lowest bidder. The Consultant will input the as-bid unit prices into the spreadsheet and verify mathematical computations of the bids. The Consultant will then provide recommendations to the County as to the name of the Apparent Low Bidder.

36.0 PREPARE RECOMMENDATION FOR AWARD

The Consultant will prepare a Recommendation of Award for the County to accept or reject the bids as submitted. If rejection is recommended, the Consultant will supply an explanation for their recommendation and possible alternative actions that the County can pursue to complete the project. Once the Contract Award is made, the Consultant will distribute the bid tabulations at request of the County.

PHASE IV DELIVERABLES

- 1) Bid Documents – upload to Quest site.
- 2) Bid Tabulation –One electronic file.
- 3) Recommendation for Award –One electronic file.

SCHEDULE OF COMPLETION

The Consultant will start work described under Phase I – Contract Administration and Coordination (including performing topographical survey and geotechnical investigation of the site) upon Notice to

Proceed from the County. The work described under Phase II – Preliminary Design will be completed within forty-five (45) working days from the date of receipt of final topographical survey and the final geotechnical report. A ten (10) working day review period is scheduled for the County to review preliminary plans, cost estimates, and the Preliminary Design Report. The Consultant will complete the 95% submittal detailed in Phase III – 95% within twenty (20) working days of the Preliminary Design Project Meeting and will incorporate the County's review comments from the Preliminary Design submittal. Another ten (10) working days review period is scheduled for both County and FAA review for the 95% submittal. The Consultant will complete the Engineer's Design Report and FINAL contract documents for use in bidding within ten (10) working days of the receipt of County and FAA review comments on the 95% submittal.

COMPENSATION FOR SERVICES

Payment for all work outlined in this Scope of Services, Phase I, II, III, and IV shall be a lump sum fee of One Hundred Fifty-eight Thousand Four Hundred Seventy-two Dollars (\$158,472.00). This fee shall include labor, materials, expenses, and incidentals necessary to complete the work as described herein. An Engineering Services Cost Estimate is included as *Exhibit B* to this Scope of Services

Aviation Services Design Engineering Cost Estimate

AIRPORT: Jacqueline Cochran Regional Airport
 LOCATION: Thermal, California
 AIP PROJECT NO. 3-06-0255-023-2017
 PROJECT DESCRIPTION: Runway 17-35, Taxiway F and Connector Taxiway Pavement Rehabilitation
 PROJECT NUMBER: 3172800-170220.01
 DATE: 9/1/17
 REV. NO: 0

DIRECT SUB CONSULTANTS FEES	
Additional Topographic Surveying (for Design)	\$ 15,000.00
Additional Geotechnical Investigation (for Design)	\$ 13,000.00
TOTAL DIRECT SUB CONSULTANTS	\$ 28,000.00

PHASE I - CONTRACT ADMINISTRATION AND COORDINATION		ENGINEERING FEES
1.0	Project Scoping	\$ 6,017.00
2.0	Prepare Contract and Sub-Contracts	\$ 1,661.00
3.0	Project Coordination	\$ 15,591.00
4.0	General Contract Administration	\$ 7,522.00
5.0	Grant Application and Administration Expenses	\$ 2,851.00
TOTAL PHASE I - CONTRACT ADMINISTRATION		\$ 34,735.63
PHASE II - PRELIMINARY DESIGN (60%)		
6.0	Topographic Surveying	\$ 6,004.00
7.0	Geotechnical Investigation	\$ 4,402.00
8.0	Prepare Plan Sheets for Preliminary Submittal	\$ 4,245.00
9.0	Prepare FAA Pavement Design Report and FAA Form 5100 - NIC	\$ -
10.0	Prepare Preliminary Surface Drainage Analysis - NIC	\$ -
11.0	Prepare Preliminary Cost Estimate	\$ 2,990.00
12.0	Prepare Preliminary Design Report	\$ 4,887.50
13.0	Prepare FAA Form 7480	\$ 540.00
14.0	Prepare Environmental Documentation - CATEX	\$ 8,552.00
15.0	Preliminary Design Project Meetings Expenses	\$ 3,688.00
TOTAL PHASE II - PRELIMINARY DESIGN (60%)		\$ 36,402.13
PHASE III - FINAL DESIGN (95% & Final)		
16.0	Prepare Plans	\$ 21,479.50
17.0	Prepare Specifications	\$ 7,227.50
18.0	Prepare Final Surface Drainage Analysis and Final Storm Sewer Design - NIC	\$ -
19.0	Prepare Lighting Layout and Circuit Calculations - NIC	\$ -
20.0	Update Airport Signing and Marking Plan - NIC	\$ -
21.0	Erosion Control Plan	\$ 1,224.00
22.0	Prepare Sponsor Certifications	\$ 416.00
23.0	Prepare 95% Submittal	\$ 3,130.00
24.0	Prepare and Submit Final Plans and Specifications	\$ 2,062.00
25.0	Prepare and Submit Final Cost Estimate	\$ 2,056.00
26.0	Prepare and Submit Engineers Design Report (EDR)	\$ 3,609.00
27.0	Prepare Construction Safety and Phasing Plan	\$ 1,786.00
28.0	Phase III Project Meetings Expenses	\$ 1,962.00
TOTAL PHASE III - FINAL DESIGN (95% & Final)		\$ 46,190.63
PHASE IV - BIDDING SERVICES		
29.0	Prepare Advertisement for Bids	\$ 397.00
30.0	Bid Documents Distribution	\$ 1,352.00
31.0	Respond to Bidders Questions	\$ 1,410.00
32.0	Prepare and Distribute Addendums	\$ 2,942.00
33.0	Pre-Bid Conference	\$ 2,706.00
34.0	Bid Opening - NIC	\$ -
35.0	Bid Review and Bid Tabulation	\$ 1,819.50
36.0	Prepare Recommendation for Award Expenses	\$ 1,258.00
TOTAL PHASE IV - BIDDING SERVICES		\$ 13,143.13
TOTAL MEAD & HUNT FEES		\$ 130,471.50
TOTAL DIRECT SUBCONSULTANT FEES		\$ 28,000.00
TOTAL PROJECT FEES		\$ 158,471.50

Item No.	Senior Associate	Senior Project Engineer	Project Engineer	Engineer III	Engineer II	Senior Engineering Technician	Technician III	Administrative Assistant	Clerical	Total Hours	Cost Summary
PHASE I - CONTRACT ADMINISTRATION AND COORDINATION											
1.0											
1.1	0	8	8	0	0	0	0	0	0	16	\$ 3,216.00
1.2	1	8	0	4	0	0	0	1	1	15	\$ 2,801.00
	Estimated Total Man-hours	16	8	4	0	0	0	1	1	31	
	Summary Costs	\$271.00	\$3,520.00	\$592.00	\$0.00	\$0.00	\$0.00	\$98.00	\$80.00		\$ 6,017.00
2.0											
	Estimated Total Man-hours	1	3	4	0	0	0	1	0.5	9.5	\$ 1,661.00
	Summary Costs	\$271.00	\$660.00	\$592.00	\$0.00	\$0.00	\$0.00	\$98.00	\$40.00		\$ 1,661.00
3.0											
	Estimated Total Man-hours	1	20	20	0	20	0	10	0.5	91.5	\$ 15,591.00
	Summary Costs	\$271.00	\$4,400.00	\$2,960.00	\$0.00	\$3,300.00	\$0.00	\$980.00	\$40.00		\$ 15,591.00
4.0											
	Estimated Total Man-hours	2	10	0	0	0	0	10	2	44	\$ 7,522.00
	Summary Costs	\$542.00	\$2,200.00	\$0.00	\$0.00	\$0.00	\$0.00	\$980.00	\$160.00		\$ 7,522.00
5.0											
	Estimated Total Man-hours	1	5	0	0	0	0	5	1	17	\$ 2,851.00
	Summary Costs	\$271.00	\$1,100.00	\$0.00	\$0.00	\$0.00	\$0.00	\$490.00	\$80.00		\$ 2,851.00
	Expenses										
	Subconsultant	0	0	0	0	0	0	0	0	0 Days	\$ -
	Auto Rental	0	1	0	0	0	0	0	0	1 Days	\$ 75.00
	Mileage	0	175	0	0	0	0	0	0	175 Miles	\$ 93.63
	Lodging	0	1	0	0	0	0	0	0	1 Days	\$ 150.00
	Airline Costs	0	1	0	0	0	0	0	0	1 Trips	\$ 600.00
	Meals	0	2	0	0	0	0	0	0	2	\$ 100.00
	Trips	0	0	0	0	0	0	0	0	0 Days	\$ -
	Miscellaneous	0	0	0	0	0	0	1	0	1 Days	\$ 75.00
	Total Expenses										\$ 1,093.63
PHASE I - CONTRACT ADMINISTRATION AND COORDINATION TOTAL											\$ 34,735.63

Item No.	Senior Associate	Senior Project Engineer	Project Engineer	Engineer III	Engineer II	Senior Engineering Technician	Technician III	Administrative Assistant	Clerical	Total Hours	Cost Summary
PHASE II - PRELIMINARY DESIGN (60%)											
6.0											
6.1	0	4	0	4	0	0	4	1	0.5	13.5	\$ 2,066.00
6.2	0	0	0	0	0	2	0	0	0	2	\$ 330.00
6.3	0	0	2	0	0	0	0	0	0	2	\$ 364.00
6.4	0	0	0	1	0	16	4	0	0	21	\$ 3,244.00
	Estimated Total Man-hours	4	2	5	0	18	8	1	0.5	38.5	
	Summary Costs	\$880.00	\$364.00	\$740.00	\$0.00	\$2,970.00	\$912.00	\$98.00	\$40.00		\$ 6,004.00
7.0											
7.1	0	4	0	4	0	0	4	1	0.5	13.5	\$ 2,066.00
7.2	0	0	4	0	0	2	0	0	0	6	\$ 1,058.00
7.3	0	0	2	0	0	2	0	0	0	2	\$ 364.00
7.4	0	1	2	0	0	2	0	0	0	5	\$ 914.00
	Estimated Total Man-hours	5	8	4	0	4	4	1	0.5	26.5	
	Summary Costs	\$1,100.00	\$1,456.00	\$592.00	\$0.00	\$660.00	\$456.00	\$98.00	\$40.00		\$ 4,402.00
8.0											
	Prepare Plan Sheets for Preliminary Submittal										
	Estimated Total Man-hours	1	1	0	0	15	12	0	0	29	\$ 4,245.00
	Summary Costs	\$0.00	\$182.00	\$0.00	\$0.00	\$2,475.00	\$1,368.00	\$0.00	\$0.00		\$ 4,245.00
9.0											
	Prepare FAA Pavement Design Report and FAA Form 5100 - NIC										
	Estimated Total Man-hours	0	0	0	0	0	0	0	0	0	
	Summary Costs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
10.0											
	Prepare Preliminary Surface Drainage Analysis - NIC										
	Estimated Total Man-hours	0	0	0	0	0	0	0	0	0	
	Summary Costs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
11.0											
	Prepare Preliminary Cost Estimate										
	Estimated Total Man-hours	0	1	2	0	4	4	0	0	11	\$ 1,700.00
	Summary Costs	\$0.00	\$220.00	\$182.00	\$0.00	\$2,475.00	\$1,368.00	\$0.00	\$0.00		\$ 1,230.00
12.0											
	Prepare Preliminary Design Report										
	Estimated Total Man-hours	0.5	8	16	0	0	2	5	0	32.5	\$ 4,897.50
	Summary Costs	\$135.50	\$1,456.00	\$2,368.00	\$0.00	\$0.00	\$228.00	\$490.00	\$0.00		\$ 4,897.50
13.0											
	Prepare FAA Form 7460										
	Estimated Total Man-hours	0	1	0	0	0	0	1	0.5	3.5	\$ 540.00
	Summary Costs	\$0.00	\$220.00	\$0.00	\$0.00	\$0.00	\$0.00	\$98.00	\$40.00		\$ 540.00
14.0											
	Prepare Environmental Documentation - CATEX										
	Estimated Total Man-hours	0	8	16	0	0	0	0	0	16	\$ 2,944.00
	Summary Costs	\$0.00	\$80.00	\$160.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	35	\$ 5,608.00
15.0											
	Preliminary Design Project Meetings										
	Estimated Total Man-hours	0	16	24	0	0	0	5	1	51	\$ 5,592.00
	Summary Costs	\$0.00	\$3,520.00	\$3,552.00	\$0.00	\$0.00	\$0.00	\$490.00	\$80.00		
15.1											
	Preliminary Design and Cost Recommendations										
	Estimated Total Man-hours	0	4	0	0	0	0	1	0	9	\$ 1,706.00
	Summary Costs	\$0.00	\$40.00	\$0.00	\$0.00	\$0.00	\$0.00	\$30.00	\$0.00	12	\$ 1,982.00
15.2											
	Coordination meeting										
	Estimated Total Man-hours	0	8	8	0	0	0	4	1	21	\$ 3,688.00
	Summary Costs	\$0.00	\$1,760.00	\$0.00	\$0.00	\$0.00	\$0.00	\$992.00	\$80.00		
Expenses											
	Subconsultant	0	0	0	0	0	0	0	0	0	Rate
	Auto Rental	0	1	0	0	0	0	0	0	0	\$ -
	Mileage	0	175	0	0	0	0	0	0	2	\$ 75.00
	Lodging	0	1	0	0	0	0	0	0	1	\$ 0.54
	Airline Costs	0	1	0	0	0	0	0	0	1	\$ 150.00
	Meals	0	2	1	0	0	0	0	0	3	\$ 600.00
	Trips	0	0	0	0	0	0	0	0	0	\$ 50.00
	Miscellaneous	0	0	0	0	0	0	0	0	0	\$ -
	Total Expenses										\$ 1,143.63
PHASE II - PRELIMINARY DESIGN (60%) TOTAL											\$ 36,402.13

Item No.	Senior Associate	Senior Project Engineer	Project Engineer	Engineer III	Engineer II	Senior Engineering Technician	Technician III	Administrative Assistant	Clerical	Total Hours	Cost Summary
	\$271.00	\$220.00	\$182.00	\$148.00	\$137.00	\$165.00	\$114.00	\$98.00	\$80.00		
PHASE III - FINAL DESIGN (95% & Final)											
16.0 Prepare Plans											
General											
G-001	0	0.5	1	0	0	0.5	1	0	0	3	\$ 488.50
G-002	0	0.5	1	0	0	0.5	1	0	0	3	\$ 488.50
G-021	0	0.5	1	0	0	2	1	0	0	4.5	\$ 736.00
G-041	0	0.5	1	0	0	2	1	0	0	4.5	\$ 736.00
G-081	0.5	0.5	6	6	0	4	6	0	0	23	\$ 3,569.50
Geotechnical											
B-051	0	0	1	0.5	0	1	2	0	0	4.5	\$ 649.00
Civil - General											
C-021	0	0.5	1	0	0	4	2	0	0	7.5	\$ 1,180.00
C-031	0	0.5	1	0	0	1	1	0	0	3.5	\$ 571.00
Civil - Site											
C-201	0.5	0.25	1	2	0	4	3	0	0	10.75	\$ 1,670.50
C-202	0	0.25	1	2	0	4	3	0	0	10.25	\$ 1,535.00
C-203	0	0.25	1	2	0	4	3	0	0	10.25	\$ 1,535.00
C-204	0	0.25	1	2	0	4	3	0	0	10.25	\$ 1,535.00
C-301	0	0.5	1	0	0	4	2	0	0	7.5	\$ 1,180.00
C-311	0	0.5	1	2	0	1	1	0	0	5.5	\$ 867.00
Civil - Marking											
C-651	0.5	1	1	2	0	5	4	0	0	13.5	\$ 2,114.50
C-652	0	1	1	2	0	5	4	0	0	13	\$ 1,979.00
C-671	0	0.5	1	0.5	0	1	1	0	0	4	\$ 645.00
Estimated Total Man-hours	1.5	8	22	21	0	47	39	0	0	138.5	\$ 21,479.50
Summary Costs	\$406.50	\$1,760.00	\$4,004.00	\$3,108.00	\$0.00	\$7,755.00	\$4,446.00	\$0.00	\$0.00		
17.0 Prepare Specifications											
17.1	0	1	4	0	0	0	0	4	0	9	\$ 1,340.00
17.2	0	1	4	0	0	0	0	4	0	9	\$ 1,340.00
17.3	0	1	4	0	0	0	0	4	0	9	\$ 1,340.00
17.4	0	1	4	0	0	0	0	4	0	9	\$ 1,340.00
17.5	0.5	1	4	0	0	0	0	8	0	13.5	\$ 1,867.50
Estimated Total Man-hours	0.5	5	20	0	0	0	0	24	0	49.5	\$ 7,227.50
Summary Costs	\$135.50	\$1,100.00	\$3,640.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,352.00	\$0.00		
18.0 Prepare Final Surface Drainage Analysis and Final Storm Sewer Design - NIC											
Estimated Total Man-hours	0	0	0	0	0	0	0	0	0	0	\$
Summary Costs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		

Item No.	Senior Associate	Senior Project Engineer	Project Engineer	Engineer III	Engineer II	Senior Engineering Technician	Technician III	Administrative Assistant	Clerical	Total Hours	Cost Summary
19.0	\$271.00	\$220.00	\$182.00	\$148.00	\$137.00	\$165.00	\$114.00	\$98.00	\$80.00		
	0	0	0	0	0	0	0	0	0	0	\$
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	\$
20.0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
	0	0	0	0	0	0	0	0	0	0	\$
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	\$
21.0	\$0.00	\$220.00	\$182.00	\$0.00	\$822.00	\$0.00	\$0.00	\$0.00	\$0.00	8	\$ 1,224.00
	0	1	1	0	6	0	0	0	0	8	\$ 1,224.00
	\$0.00	\$220.00	\$182.00	\$0.00	\$822.00	\$0.00	\$0.00	\$0.00	\$0.00		
22.0	\$0.00	\$220.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$196.00	\$0.00	3	\$ 416.00
	0	1	0	0	0	0	0	2	0	3	\$ 416.00
	\$0.00	\$220.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$196.00	\$0.00		
23.0	\$0.00	\$220.00	\$0.00	\$1,184.00	\$0.00	\$0.00	\$0.00	\$392.00	\$0.00	13	\$ 1,796.00
	0	1	0	8	0	0	0	4	0	13	\$ 1,796.00
	\$0.00	\$220.00	\$0.00	\$1,184.00	\$0.00	\$0.00	\$0.00	\$392.00	\$0.00		
24.0	\$0.00	\$220.00	\$1,092.00	\$0.00	\$0.00	\$990.00	\$0.00	\$588.00	\$240.00	22	\$ 3,130.00
	0	1	6	0	0	6	0	6	3	22	\$ 3,130.00
	\$0.00	\$220.00	\$1,092.00	\$0.00	\$0.00	\$990.00	\$0.00	\$588.00	\$240.00		
25.0	\$0.00	\$440.00	\$364.00	\$592.00	\$0.00	\$660.00	\$0.00	\$0.00	\$0.00	14	\$ 2,062.00
	0	1	4	0	0	4	0	3	2	14	\$ 2,062.00
	\$0.00	\$220.00	\$728.00	\$0.00	\$0.00	\$660.00	\$0.00	\$294.00	\$160.00		
26.0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	6	\$ 1,028.00
26.1	0	1	1	2	0	2	0	0	0	6	\$ 1,028.00
26.2	0	1	1	2	0	2	0	0	0	6	\$ 1,028.00
	0	2	2	4	0	4	0	0	0	12	\$ 2,056.00
	\$0.00	\$440.00	\$364.00	\$592.00	\$0.00	\$660.00	\$0.00	\$0.00	\$0.00		
27.0	\$271.00	\$1,760.00	\$364.00	\$296.00	\$0.00	\$330.00	\$0.00	\$588.00	\$0.00	21	\$ 3,609.00
	1	8	2	2	0	2	0	6	0	21	\$ 3,609.00
	\$271.00	\$1,760.00	\$364.00	\$296.00	\$0.00	\$330.00	\$0.00	\$588.00	\$0.00		
28.0	\$0.00	\$880.00	\$728.00	\$0.00	\$0.00	\$0.00	\$0.00	\$294.00	\$80.00	12	\$ 1,982.00
	0	4	4	0	0	0	0	3	1	12	\$ 1,982.00
	\$0.00	\$880.00	\$728.00	\$0.00	\$0.00	\$0.00	\$0.00	\$294.00	\$80.00		
Expenses											
Subcontractant	0	0	0	0	0	0	0	0	0	0 Days	\$
Auto Rental	0	1	0	0	0	0	0	0	0	1 Days	\$ 75.00
Mileage	0	175	0	0	0	0	0	0	0	175 Miles	\$ 93.63
Lodging	0	1	0	0	0	0	0	0	0	1 Days	\$ 150.00
Airline Costs	0	1	0	0	0	0	0	0	0	1 Trips	\$ 600.00
Meals	0	1	0	0	0	0	0	0	0	1	\$ 50.00
Printing/Plotting	0	0	0	0	0	0	0	2	0	2	\$ 150.00
Shipping	0	0	0	0	0	0	0	0	0	2	\$ 45.00
										Total Expenses	\$ 1,208.63
										PHASE III - FINAL DESIGN (95% & Final) TOTAL	\$ 46,190.63

MEAD & HUNT, Inc.
Western Standard Billing Rate Schedule
Effective January 1, 2017

Standard Billing Rates

Clerical.....	\$80.00 / hour
Interior Designer, Technical Editor.....	\$106.00 / hour
Senior Editor.....	\$156.00 / hour
Registered Land Surveyor.....	\$120.00 / hour
Accounting, Administrative Assistant.....	\$98.00 / hour
Technician I, Technical Writer.....	\$91.00 / hour
Technician II, Surveyor - Instrument Person.....	\$106.00 / hour
Technician III.....	\$114.00 / hour
Technician IV.....	\$138.00 / hour
Senior Technician.....	\$165.00 / hour
Engineer I, Scientist I, Architect I, Planner I.....	\$125.00 / hour
Engineer II, Scientist II, Architect II, Planner II.....	\$137.00 / hour
Engineer III, Scientist III, Architect III, Planner III.....	\$148.00 / hour
Senior Engineer, Senior Scientist, Senior Architect, Senior Planner, Senior Economist.....	\$169.00 / hour
Project Engineer, Project Scientist, Project Architect, Project Planner.....	\$182.00 / hour
Senior Project Engineer, Senior Project Scientist, Senior Project Architect, Senior Project Planner.....	\$222.00 / hour
Senior Associate.....	\$271.00 / hour
Principal.....	\$281.00 / hour
Senior Client/Project Manager.....	\$281.00 / hour

Expenses

Geographic Information or GPS Systems.....	\$32.00 / hour
Total Station Survey Equipment.....	\$16.00 / hour
Charges for other equipment may appear in a proposal	
Out-Of-Pocket Direct Job Expenses.....	cost plus 15%
Such as reproductions, sub-consultants / contractors, etc.	

Travel Expense

Company or Personal Car Mileage.....	\$ IRS rate / mile*
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* the current IRS rate as of Feb. 2, 2017 is: **53.5 cents per mile**

Air and Surface Transportation.....	cost plus 15%
Lodging and Sustenance.....	cost plus 15%

Billing & Payment

Travel time is charged for work required to be performed out-of-office. A minimum of two hours will be billed for any work out-of-office.

Invoicing is on a monthly basis for work performed. Payment for services is due within 30 days from the date of the invoice. An interest charge of 1.5% per month is made on the unpaid balance starting 30 days after the date of invoice.

This schedule of billing rates is effective January 1, 2017, and will remain in effect until December 31, 2017, unless unforeseen increases in operational costs are encountered. We reserve the right to change rates to reflect such increases.