



BOARD OF COUNTY COMMISSIONERS

DATE: April 21, 2015

AGENDA ITEM NO. 18

Consent Agenda ☐

Regular Agenda ☒

Public Hearing ☐

 **County Administrator's Signature:**

Subject:

Approval of Ranking and Final Negotiated Agreement – Professional Engineering Consulting Service Roadway Drainage, Pond, and Intersection Improvements with Small Bridge Replacement.
Contract No. 134-0220-NC(SS)

Department:

Engineering and Technical Support / Purchasing

Staff Member Responsible:

Kevin Becotte / Joe Lauro

Recommended Action:

I RECOMMEND THE BOARD OF COUNTY COMMISSIONERS (BOARD) APPROVE THE RANKING OF FIRMS AND FINAL NEGOTIATED AGREEMENT WITH VOLKERT, INC. (VOLKERT), TAMPA, FLORIDA, THE NUMBER ONE RANKED FIRM, FOR PROFESSIONAL ENGINEERING CONSULTING SERVICES FOR ROADWAY, DRAINAGE, POND, AND INTERSECTION IMPROVEMENTS WITH SMALL BRIDGE REPLACEMENT FOR:

- 1) SUNSET POINT ROAD AND NORTH BETTY LANE, PID NO. 001018A, (SUNSET POINT ROAD)
- 2) WHITNEY ROAD AT WOLFORD ROAD, PID NO. 002109A (WHITNEY ROAD)

IT IS FURTHER RECOMMENDED THAT THE CHAIRMAN SIGN THE AGREEMENT AND THE CLERK ATTEST.

Summary Explanation/Background:

On April 25, 2014, in accordance with the Consultant Competitive Negotiation Act, the Purchasing Department, on behalf of the Engineering and Technical Support Department, let a Request for Proposal. The purpose of hiring a consulting engineering firm is to provide design services, environmental permitting and assessment, and preparation of roadway construction for the Sunset Point Road and Whitney Road projects.

The Sunset Point Road project will replace a functionally obsolete bridge crossing, construct turn lanes for more efficient vehicular movement, construct signal mast arms and construct sidewalks to address pedestrian needs.

The Whitney Road project will address safety issues by closing a large roadside ditch, which has been temporarily secured. Additional roadside safety issues will be resolved with the addition of turn lanes for more efficient vehicular movement, sidewalks to satisfy pedestrian needs and associated drainage improvements.

In coordination with the Public Works Department, Natural Resources Division, the Long Branch Creek Realignment and Maintenance Project will be included in the Whitney Road project.

The ranking of firms was completed in June 2014 and the negotiation and scoping process was concluded in February 2015. The negotiation process and drafting of the agreement was protracted due to the complexity of the work to be performed. The firms rank order, after committee evaluation, is attached on the Ranking Spreadsheet.

(PSS)

The final negotiated lump sum fee of \$654,699.46 is based on a rate structure that is fully burdened. The hourly rates include all labor, direct/indirect overhead, margins/profit, and travel within the Tampa Bay Metropolitan Statistical Area. Travel outside of the Tampa Bay Metropolitan Statistical Area will be reimbursed in accordance with Florida Statutes. There is no markup allowance for sub-consultants and the rates are fixed for the full term of the contract. The contract term is for thirty-six (36) months effective from the commencement date. Design work is expected to be completed within three hundred five (305) consecutive calendar days. Volkert will provide assistance with construction administration, as needed, once construction is underway.

Fiscal Impact/Cost/Revenue Summary:

| | |
|---|--------------|
| Sunset Point Road Project: | \$298,550.23 |
| Whitney Road Project: | \$296,149.23 |
| Contingency: | \$ 60,000.00 |
| Estimated thirty-six (36) month expenditure not to exceed: | \$654,699.46 |

Funding sources will be provided by the Infrastructure Sales Tax (Penny for Pinellas): Transportation and Traffic Flow, Countywide Road Improvement Program Allocation.

Exhibits/Attachments:

Contract Review

Agreement

Exhibit (s) Scope of Services, Hourly Work Efforts and Rate Schedule

Ranking Spreadsheet



**PURCHASING DEPARTMENT
CONTRACT REVIEW TRANSMITTAL**

CATS
NO.: 44301

PROJECT: Engineering Consulting Services Sunset Point Road at North Betty Lane – Bridge Replacement, Roadway, Pond and Intersection Improvements PID 001018A

BID NUMBER: 134-0220-NC

REQ. NUMBER:

TYPE: ☐ Purchase Contract ☒ Other: CCNA ☐ Construction-Less than \$100,000 ☐ One Time

In accordance with the policy guide for Contract Administration, the attached documents are submitted for review and comment.

Upon completion of review, complete Contract Review Transmittal and forward to next Review Authority listed. Please indicate suggested changes by revising, in RED, the appropriate section of the document reflecting the exact wording of the change.

RISK MANAGEMENT: Please enter required liability coverage on pages:14-17 **PRODUCT ONLY** ☐

This is 36 month contract. Estimated Expenditure: \$425,000.00 inclusive of scope of work services

| REVIEW SEQUENCE | REVIEW AUTHORITY | REVIEW DATE | REVIEW SIGNATURE | COMMENTS (Attach Separate page if necessary) | COMMENTS INCORPORATED |
|-----------------|---|--------------------|------------------|---|-----------------------|
| 1. | <u>Purchasing Dept.</u> J. Lauro, Director C. Mancuso, Ass't. Director Ruby McKenzie, PA | | | Attachments on CD | |
| 2. | <u>DEI Eng and Tech Support</u> Jorge Qunitas, Director Ivan Fernandez Div Mgr Merry Celeste | 2/26/14 3/12/14 | | See red line suggested changes per discussions w/ Ruby M. and make single RFP | |

Using Dept please provide below information:

☐ Yes, funding for this requisition is using grant Funding. ☒ No, funding for this requisition is not using grant Funding.
If grant funding is being used you must provide Purchasing with the exact clauses that need to be on attached document.

Please check attached vendor list. Circle vendors you want bids mailed to. Add additional vendors with complete information (Name, Address, Phone and Fax)

| | | | | | |
|----|--|---------|------------|---|----------------------------|
| 3. | <u>Risk Management Director</u> Attn: Virginia E. Holscher (Check applicable box at right) | 3-14-14 | GW | Pls see changes p. 16-17 Please use updated Template New one has them | HIGH RISK NOT HIGH RISK |
| 4. | <u>BCC Finance</u> Attn: Cassandra Williams | 3/19/14 | CBW | | |
| 5. | <u>Legal</u> Attn: Miles Belknap | 3/26/14 | MB | | |
| 6. | <u>Executive Director</u> David Scott | 3/29/14 | RP for DES | | |
| 7. | <u>Asst. County Administrator</u> Attn: M. Woodard | 4/8/14 | CMA | | |

RETURN ALL DOCUMENTS TO PURCHASING

Make all inquiries to: Ruby McKenzie at Extension 4-3795
In order to meet the following schedule, please return your requirements to Purchasing by: **Mar 6, 2014**

TENTATIVE DATES

Bid Mail Out: TBD
Bid Opening: TBD
Purchasing Director Approval:



Combined
w/134-0221-NC

**PURCHASING DEPARTMENT
CONTRACT REVIEW TRANSMITTAL**

CATS
NO.: 44304

PROJECT: Engineering Consulting Services Whitney Road at Wolford Road – Roadway, Drainage and Intersection Improvements PID 000412A

BID NUMBER: 134-0221-NC

REQ. NUMBER:

TYPE: ☐ Purchase Contract ☒ Other: CCNA ☐ Construction-Less than \$100,000 ☐ One Time

In accordance with the policy guide for Contract Administration, the attached documents are submitted for review and comment.

Upon completion of review, complete Contract Review Transmittal and forward to next Review Authority listed. Please indicate suggested changes by revising, in RED, the appropriate section of the document reflecting the exact wording of the change.

RISK MANAGEMENT: Please enter required liability coverage on pages:14-17 **PRODUCT ONLY** ☐

This is 36 month contract. Estimated Expenditure: \$25,000.00 inclusive of scope of work services

| REVIEW SEQUENCE | REVIEW AUTHORITY | REVIEW DATE | REVIEW SIGNATURE | COMMENTS (Attach Separate page if necessary) | COMMENTS INCORPORATED |
|-----------------|---|--------------------|------------------|--|-----------------------|
| 1. | <u>Purchasing Dept.</u> J. Lauro, Director C. Mancuso, Ass't. Director Ruby McKenzie, PA | 3/26/14 | | Please see sticky note on attachment 1 & fix attachments on WCO | Corrected |
| 2. | <u>DEI Eng and Tech Support</u> Jorge Qunitas, Director Ivan Fernandez Div Mgr Merry Celeste | 3/12/14 3/12/14 | | COMBINE SUNSET + WHITNEY PROTECTS TO SINGLE RFP per discussion w/RUBY M. | |

Using Dept please provide below information:

☐ Yes, funding for this requisition is using grant Funding. ☒ No, funding for this requisition is not using grant Funding.

If grant funding is being used you must provide Purchasing with the exact clauses that need to be on attached document.

Please check attached vendor list. Circle vendors you want bids mailed to. Add additional vendors with complete information (Name, Address, Phone and Fax)

| | | | | | |
|----|--|---------|---------------|---|---------------|
| 3. | <u>Risk Management Director</u> Attn: Virginia E. Holscher (Check applicable box at right) | 3-14-14 | GW | Pls see changes p 16-17 Please use updated TEMPLATE no one has them | HIGH RISK |
| 4. | <u>BCC Finance</u> Attn: Cassandra Williams | 3/19/14 | CBW | | NOT HIGH RISK |
| 5. | <u>Legal</u> Attn: Miles Belknap | 3/24/14 | AB | | |
| 6. | <u>Executive Director</u> David Scott | 3/29/14 | RP for DES | | |
| 7. | <u>Asst. County Administrator</u> Attn: M. Woodard | 4/8/14 | CW | | |

RETURN ALL DOCUMENTS TO PURCHASING

Make all inquiries to: Ruby McKenzie at Extension 4-3795

In order to meet the following schedule, please return your requirements to Purchasing by: Mar 6, 2014

TENTATIVE DATES

Bid Mail Out: TBD

Bid Opening: TBD

**PROFESSIONAL ENGINEERING SERVICES NON-CONTINUING SERVICES
SAMPLE AGREEMENT
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**SECTION 1
INTENT OF AGREEMENT**

AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES FOR

THIS AGREEMENT, entered into on the ____ day of _____, 20____, between PINELLAS COUNTY, a political subdivision of the State of Florida, hereinafter referred to as the COUNTY, represented by its Board of County Commissioners, and Volkert, Inc. with offices in Tampa, Florida hereinafter referred to as the CONSULTANT.

WITNESSETH, That:

WHEREAS, Pinellas County, herein referred to as the COUNTY, requires **PROFESSIONAL ENGINEERING SERVICES** associated with support to develop plans and specifications and perform all other professional engineering services as may be required during the construction of Roadway, Drainage, Pond, and Intersection Improvements with Small Bridge Replacement for both Intersections of Sunset Point Road at North Betty Lane, and Whitney Road at Wolford Road Pinellas County, Florida

WHEREAS, the COUNTY desires the CONSULTANT provide PROFESSIONAL ENGINEERING SERVICES requisite to the development of the PROJECT; and

WHEREAS, the CONSULTANT has expressed the willingness and ability to provide the aforementioned Services; and

NOW THEREFORE, the COUNTY and the CONSULTANT, in consideration of the mutual covenants hereinafter set forth, agree as follows:

SECTION 2 SCOPE OF PROJECT

2.1 PROJECT DESCRIPTION AND PROFESSIONAL REQUIREMENTS

For the purposes of this Agreement the term PROJECT shall include all areas of proposed improvements, all areas that may reasonably be judged to have an impact on the PROJECT, and all PROJECT development phases and the services and activities attendant thereto. It is not the intent of this Agreement to identify the exact limits or details involved in providing satisfactorily completed PROJECT construction documents. The CONSULTANT shall provide the following professional services to prepare construction plans, specifications, and complete applications for and receive all federal, state, and local permits required for construction of the PROJECT. The PROJECT design shall be based on the following data:

Sunset Point Road at Betty Lane: Professional engineering design services related to Intersection Improvements at Sunset Point Road and Betty Lane. Project improvements include roadway, major drainage, signalization, bridge replacement, the addition of bicycle lanes, ADA compliant sidewalks, and left turn lanes along Sunset Point Road.

Whitney Road at Wolford Road: Professional engineering design services related to Intersection Improvements at Whitney Road and Wolford Road. Project improvements include extension of triple barrel cross drain box culvert, major drainage improvements, the addition of bicycle lanes and ADA compliant sidewalks on both sides of the roadway. The project limits are anticipated to be from Oak Street N. / Long Branch Lane to Hidden Springs Place. The project will include realignment of Whitney Road and a portion of Wolford Road within these limits in order to straighten the curves east of the box culvert and accommodate proposed sidewalk within the existing right-of-way. Long Branch Creek has meandered to the west of its original location. This project will include plans to restore the creek bottom to its original profile, clean the culvert under Whitney Road, realign Long Branch Creek (north of Whitney Road) to its original position, and add embankment protection along the westerly side.

All required permits shall be obtained by the engineering consultant. Plans shall be prepared in accordance with Civil 3D Pinellas County Requirements. Exhibits A(1) & A(2), Scope of Services is attached.

a) Required Deliverables

- Civil 3D file (eTransmit) of construction plans and for each transmittal phase. The plans shall be provided electronically, plus two (2) paper prints signed and sealed by a Professional Engineer certified in the State of Florida.
- All technical specifications required for construction of project.

2.2 PROJECT PHASES

All project phases shall be completed on or before the milestone dates provided in the COUNTY approved PROJECT design schedule referenced in 2.3 E.

2.3 CONSULTING RESPONSIBILITIES

- A. It is the intention of the COUNTY that the CONSULTANT is held accountable for its work, including checking and review of plans, and that submittals are complete.
- B. The CONSULTANT shall be responsible for the accuracy of the work and shall promptly correct its errors and omissions without additional compensation. Acceptance of the work by the COUNTY will not relieve the CONSULTANT of the responsibility for subsequent correction of any errors and the clarification of any ambiguities.

- C. The CONSULTANT represents that it has secured or will secure, at its own expense, all personnel necessary to complete this Agreement; none of whom shall be employees of or have any contractual relationship with the COUNTY. Primary liaison with the COUNTY will be through the CONSULTANT'S Project Manager. All of the services required hereunder will be performed by the CONSULTANT or under the CONSULTANT'S supervision, and all personnel engaged in the work shall be fully qualified and shall be authorized or permitted under law to perform such services.
- D. The CONSULTANT shall endorse all reports, calculations, contract plans, and survey data. Services shall be prepared under the direction of an engineer registered in the State of Florida and qualified in the required discipline. Products or services performed or checked shall be signed and sealed by the CONSULTANT'S Florida registered engineer.
- E. The CONSULTANT shall be responsible for the preparation of a PROJECT design schedule, prepared in Microsoft Project 2013 or later, which shows a breakdown of all tasks to be performed, and their relationship in achieving the completion of each phase of work. A bar chart schedule showing overall PROJECT time frames should also be prepared. These schedules must be submitted for COUNTY approval within ten (10) days of the initial PROJECT Notice to Proceed. These schedules will be used to verify CONSULTANT performance in relationship to Fees claimed and to allow the COUNTY'S Project Manager to monitor the CONSULTANT'S efforts. The CONSULTANT shall be responsible for any updates to these schedules and for documenting in writing to the COUNTY any major deviations in the actual versus estimated PROJECT time frames.
- F. The CONSULTANT shall respond, in writing, to all review comments made by the COUNTY, and shall incorporate appropriate design adjustments into the PROJECT, in a timely manner, resulting from the review exchange.

2.4 GENERAL DESIGN CONDITIONS

2.4.1 The CONSULTANT shall coordinate and solicit appropriate input, with the knowledge of the COUNTY.

2.4.2 All design data, plans, and drawings shall be delivered Electronically and or on CD ROM formatted to .DXF or .DWG utilizing Civil 3D 2012 or later; as well as providing reproducible hard copies of plans and drawings. All specification and other documents shall be delivered electronically and or on a CD ROM, Microsoft Word & ExCel format as required, as well as the reproducible hard copies.

2.4.3 One (1) original and nine (9) copies of all deliverables are required unless specific submittal requirements are specified elsewhere in this Agreement.

2.4.4 The CONSULTANT shall develop acceptable alternates to any and all design recommendations that may be declared unacceptable.

2.5 GOVERNING SPECIFICATIONS REGULATIONS AND PERTINENT DOCUMENTS

The PROJECT shall be designed by the CONSULTANT in accordance with applicable industry standards. The CONSULTANT shall be responsible for utilizing and maintaining current knowledge of any laws, ordinances, codes, rules, regulations, standards, guidelines, special conditions, specifications, or other mandates relevant to the PROJECT or the services to be performed.

SECTION 3 SERVICES TO BE FURNISHED BY THE CONSULTANT

3.1 SEE EXHIBITS A(1) & A(2) – SCOPE OF SERVICES.

3.2 BIDDING PHASE

The CONSULTANT shall prepare with the COUNTY'S assistance the necessary bidding information, bidding forms, the conditions of the contract, and the form of agreement between the COUNTY and the Contractor. The CONSULTANT also, shall bear the cost of two (2) complete sets of documents (plans and specifications), two (2) of which shall be signed and sealed by the CONSULTANT as original record sets for the PROJECT. Each sheet in the two (2) construction plans print sets shall be signed, sealed and dated. The title sheet only of the two (2) specifications sets shall be signed, sealed, and dated. Additionally, any required addenda shall be signed, sealed, and dated.

3.2.1 The CONSULTANT, following the COUNTY'S review of the Construction Documents and of the latest Statement of Probable Construction Cost, shall be available to assist the COUNTY in obtaining bids, and in preparing and awarding construction contracts for each bid package. The CONSULTANT shall assist conducting pre-bid conferences, and shall prepare a Bid Tabulation spreadsheet following receipt of bids.

3.2.2 If the Advertisement for bids has not commenced within sixty (60) days after the CONSULTANT submits the approved Construction Documents to the COUNTY, any fixed limit of Construction Cost established as a condition of this Agreement shall be adjusted to reflect any change in the general level of prices which may have occurred during that period of time in construction industry. The adjustment shall reflect changes between the date of submission of the Construction Documents to the COUNTY and the date on which the Advertisement for Bids occurred.

3.2.3 The CONSULTANT shall prepare any required addenda to construction plans and specifications on the PROJECT during the bidding phase affecting the CONSULTANT'S plans and specifications. The CONSULTANT shall also provide any addenda during the Construction Phase in sufficient quantity to distribute to all necessary parties as determined by the COUNTY. Addenda material shall be placed in envelopes by the CONSULTANT for mailing by the COUNTY. The CONSULTANT shall also furnish certified mail receipt material and prepare mailing labels. The COUNTY shall mail all addenda.

3.3 CONSTRUCTION PHASE

All contact and/or communication from the CONSULTANT to the Contractor shall be coordinated with the knowledge of the COUNTY.

A. Construction Consultation Services

1. Processing, review, approval and distribution of shop drawings, product data, samples and other submittals required by the Contract Documents.
2. Maintenance of master file of submittals with duplicate for COUNTY.
3. Construction Field Observation Services consisting of visits to the site as frequent as necessary, but not less than once every week, to become generally familiar with the progress and quality of the work and to determine in general if the work is proceeding in accordance with the Contract Documents and prepare related reports and communications. Provide written report of each visit. This field observation requirement shall include any sub-consultants at appropriate construction points.
4. Review for comment or approval any and all proposal requests, supplemental drawings and information and change orders.
5. Review for correctness Contractors pay requests for the COUNTY.
6. Prepare, reproduce and distribute supplemental drawings, specifications and interpretations in response to requests for clarification by the Contractor or the

COUNTY as required by construction exigencies. Response to any request must be received by the COUNTY within twenty-four (24) hours of request, or the next available working day when the request is prior to a weekend or holiday.

7. Review, upon notice by the Contractor that work is ready for final inspection and acceptance.
8. Notify the COUNTY of any deficiencies found in follow-up reviews.
9. Evaluate all testing results and make recommendations to the COUNTY.
10. Assist in the establishment by the COUNTY of programs of operation and maintenance of the physical plant and equipment.
11. Arrange for and coordinate instructions on operations and maintenance of equipment in conjunction with manufacturer's representatives.
12. Prepare an operation and maintenance manual for the COUNTY'S use.
13. The CONSULTANT shall visit the project as necessary, but at a minimum of three (3) month, six (6) month and upon construction completion in order to certify that the permit conditions have been met satisfactorily. This shall not relieve the CONSULTANT of other needed visits to the project should specific issues arise.
14. Assistance in the training of the facility operation and maintenance personnel in proper operations, schedules, procedures and maintenance inventory.
15. Prepare as-built record drawings, based on information furnished by the Contractors including significant changes in the work made during construction. The CONSULTANT will provide one (1) set of signed and sealed prints and one (1) CADD disk of the as-built record construction documents.
16. Transmit certified as-built record drawings and general data, appropriately identified, to the COUNTY within thirty (30) days following completion of construction.
17. Consult with, and recommend solutions to, the COUNTY during the duration of warranties in connection with inadequate performance of materials, systems, and equipment under warranty.
18. Review facilities or equipment prior to expiration of warranty period(s) to ascertain adequacy of performance, materials, systems and equipment.
19. Document noted defects or deficiencies and assist the COUNTY in preparing instructions to the Contractor for correction of noted defects.
20. The Contractor shall provide the CONSULTANT with all the required project close out material for CONSULTANT'S use in the warranty period services.
21. The Contractor shall have prime responsibility in the warranty period for all services herein. The CONSULTANT shall assist, consult, observe review and document as noted.

3.4 PROVISIONS RELATED TO ALL PHASES

3.4.1 The CONSULTANT will investigate and confirm in writing to the COUNTY, to the best of the CONSULTANT'S knowledge, conformance with all applicable local public and utility regulations.

3.4.2 The CONSULTANT will coordinate work designed by various disciplines.

3.4.4 The CONSULTANT shall submit to the COUNTY design notes and computations to document the design conclusions reached during the development of the construction plans.

a. Five (5) copies of the design notes and computations shall be submitted to the COUNTY with the design development review plans. When the plans are submitted for final review, the design notes and computations corrected for any COUNTY comments shall be resubmitted. At the PROJECT completion, a final set of the design notes and computations, properly endorsed by the CONSULTANT, shall be submitted with the record set of plans and tracings.

b. The design notes and calculations shall include, but not be limited to, the following data:

- 1) Design criteria used for the PROJECT.
- 2) Roadway geometric calculations
- 3) Structural calculations.
- 4) Drainage calculations.
- 5) Traffic design calculations
- 6) Traffic control calculations
- 7) Calculations as required by provisions of the Florida Energy Conservation Manual (Department of General Services), latest revision.
- 8) Calculations showing probable cost comparisons of various alternatives considered.
- 9) Documentation of decisions reached resulting from meetings, telephone conversations or site visits.
- 10) Other PROJECT-related correspondences as appropriate.

3.4.5 Each set of plans for the PROJECT shall be accurate, legible, complete in design, suitable for bidding purposes and drawn to scales acceptable to the COUNTY. The completed plans shall be furnished on reproducible material and in a format, which is acceptable to the COUNTY.

3.4.6 The CONSULTANT shall make such reviews, visits, attend such meetings and conferences and make such contacts as are necessary for the proper preparation of plans and specifications for the PROJECT.

3.4.7 The COUNTY in no way obligates itself to check the CONSULTANT'S work and further is not responsible for maintaining project schedules.

3.4.8 Other CONSULTANT responsibilities shall be as listed below:

- a. Provide necessary sealed drawings to obtain building permits or any utility permit.
- b. Assist the COUNTY in Contractor claims and/or litigation.
- c. Review the Adequacy and completeness of documents submitted by the Contractor to protect the COUNTY against claims by suppliers or third parties.

3.4.9 The CONSULTANT must be familiar with the intent, thoroughness, safety factors and design assumptions of all structural calculations.

3.4.10 All work prepared and/or submitted shall be reviewed and checked by a CONSULTANT (Architect/Engineer) registered in Florida. All plans shall be signed and sealed by the Professional CONSULTANT in responsible charge.

3.5 PERMIT APPLICATIONS AND APPROVALS

3.5.1 The CONSULTANT shall prepare all permit applications, data and drawings required for submittal BY THE COUNTY for approval of local, state and federal agencies.

3.5.2 The CONSULTANT shall, at no additional cost to the COUNTY, make all reasonable and necessary construction plans revisions required to obtain the necessary permit approvals for construction of the PROJECT.

3.5.3 For the purpose of ensuring the timely approval of all permits necessary for the construction of the PROJECT, the CONSULTANT shall schedule the necessary contacts and liaison with all agencies having permit jurisdiction over the PROJECT, and shall furnish, on a timely basis, such plans, data and information as may be necessary to secure approval of the required permits.

3.6 COORDINATION WITH UTILITY SERVICES AND AFFECTED PUBLIC AGENCIES

3.6.1 The requirements of the various utility services shall be recognized and properly coordinated with the PROJECT design.

3.6.2 Drainage investigations and drainage design shall be coordinated with any city or drainage district that may be affected by or have an effect on the PROJECT.

SECTION 4 SERVICES TO BE FURNISHED BY THE COUNTY

4.1 The COUNTY shall provide the following for the CONSULTANT'S use and guidance:

- A. Copies of existing maps, existing aerial photographs, as-built construction plans and data pertinent to the PROJECT design, which the COUNTY may have in its possession.
- B. Reproducibles of the COUNTY Engineering Department Standard Drawings applicable to the PROJECT.
- C. Sample copies of the COUNTY standard contract documents and specifications.
- D. Preparation of legal (front-end) section of the specifications.

SECTION 5 PRESENTATIONS, PUBLIC MEETINGS AND TECHNICAL LIAISON

The following services shall be provided at no additional cost to the COUNTY:

5.1 Prior to the commencement of design activities, the COUNTY will conduct with the CONSULTANT a pre-design conference for the purpose of discussing issues relative to the PROJECT, plans preparation and submittal procedures and to convey to the CONSULTANT such items provided for under Section 4 as may be required and available at that time.

5.2 The CONSULTANT shall make presentations to the COUNTY'S Director of Engineering and Technical Support or designee as often as reasonably requested and at any point in the PROJECT development should issues arise which make additional presentations other than those listed elsewhere in this Agreement, in the COUNTY'S best interest.

5.3 The CONSULTANT shall participate in Monthly PROJECT Conferences with COUNTY staff personnel. The meetings will be scheduled by the COUNTY at a location provided by the COUNTY.

5.4 The CONSULTANT shall attend, as technical advisor to the COUNTY all meetings or hearings conducted by permitting agencies or public bodies in connection with any permit required for the construction of the PROJECT, and shall prepare all presentation aids, documents and data required in connection with such meetings or hearings, and at the discretion of the COUNTY, shall either plead the COUNTY'S case or provide engineering and technical assistance to the COUNTY in its pleading of the case.

5.5 The CONSULTANT shall keep accurate minutes of all meetings and distribute copies to all attending. These meetings shall be set up through the COUNTY and appropriate COUNTY staff shall attend.

SECTION 6 PAYMENT GUIDELINES AND CATEGORY OF SERVICES

6.1 BASIC SERVICES

The services described and provided for under Sections 2, 3 and Exhibits A(1) & A(2) shall constitute the Basic Services to be performed by the CONSULTANT under this Agreement.

6.2 OPTIONAL SERVICES

Services noted in Exhibits A(1) & A(2) of this Agreement as "Optional" shall constitute the Optional Services to be performed by the CONSULTANT under this Agreement. Optional Services shall be rendered by the CONSULTANT only upon written authorization by the COUNTY's Executive Director of the Department of Engineering and Technical Support, or designee.

6.3 CONTINGENCY SERVICES

When authorized in writing by the COUNTY'S Director of Engineering and Technical Support or designee, the CONSULTANT shall furnish services resulting from unforeseen circumstances not anticipated under Basic Services due to minor changes in the PROJECT scope.

Compensation for any Contingency Services assignments shall be negotiated between the COUNTY and the CONSULTANT at the time the need for services becomes known.

6.4 ADDITIONAL SERVICES

When executed by the County Administrator or Board of County Commissioners as an amendment to this Agreement, the CONSULTANT shall provide such additional services as may become necessary because of changes in the Scope of PROJECT. Additional Services shall be classified as any change beyond the Contingency Services upset limit for compensation.

6.5 INVOICING

The CONSULTANT may submit invoices for fees earned on a monthly basis. Such invoicing shall be supported by a Progress Report showing the actual tasks performed and their relationship to the percentage of fee claimed for each phase. Billings within each phase of work shall be for the percentage of work effort completed to date for that phase. The COUNTY shall make payments to the CONSULTANT for work performed in accordance with the Local Government Prompt Payment Act, Section 218.70 et. seq., F.S.

The following services shall be considered reimbursable services and may be filled in full upon their completion and acceptance. The CONSULTANT shall provide copies of supporting receipts/invoices/billing documentation. Self-performed reimbursable work shall be reimbursed at the firm's standard hourly rates for all related services. A breakdown of man hours and billing rates shall be provided with each invoice. An hourly rate sheet is attached (Exhibit C).

- A. Soil Analysis/Geotechnical Investigations.
- B. Contamination Assessments/Hazardous Material Analysis (if required).
- C. Aerial Photography (if required).
- D. Payment of Permit Fees (if required).
- E. Payment of the Public Information Meeting Advertisements, if required.
- F. Payment of the Court Reporter for public meetings, if required.
- G. Printing and Binding Services.

Should an invoiced amount for fees earned appear to exceed the work effort believed to be completed, the COUNTY may, prior to processing of the invoice for payment, require the CONSULTANT to submit satisfactory evidence to support the invoice.

All progress reports shall be mailed to the attention of the designated Project Manager, Department of Engineering and Technical Support, 14 S. Ft. Harrison Ave, Clearwater, FL 33756.

SUPPLIER shall submit invoices for payment due as provided herein with such documentation as required by Pinellas County and all payments shall be made in accordance with the requirements of Section 218.70 *et. seq.*, Florida Statutes, "The Local Government Prompt Payment Act." Invoices shall be submitted to the address below unless instructed otherwise on the purchase order, or if no purchase order, by the ordering department:

Finance Division Accounts Payable
Pinellas County Board of County Commissioners
P. O. Box 2438
Clearwater, FL 33757

Each invoice shall include, at a minimum, the Supplier's name, contact information and the standard purchase order number. The County may dispute any payments invoiced by SUPPLIER in accordance with the County's Dispute Resolution Process for Invoiced Payments, established in accordance with Section 218.76, Florida Statutes, and any such disputes shall be resolved in accordance with the County's Dispute Resolution Process.

Fees for contingent or additional services authorized shall be invoiced separately, and shall be due and payable in full upon the presentation of satisfactory evidence that the corresponding services have been performed.

SECTION 7 COMPENSATION TO THE CONSULTANT

7.1 For the Sunset Point Road at North Betty Lane BASIC SERVICES provided for in this Agreement, as defined in Section 3.1, the COUNTY agrees to pay the CONSULTANT as follows:

A Lump Sum Fee of: Twenty-One Thousand Eight Hundred Forty-Eight and 00/100 Dollars (\$21,848.00) for the Task 1 – General Task Phase of the PROJECT

- A Lump Sum Fee of: Seventy-Eight Thousand Eight Hundred Ninety-Nine and 00/100 Dollars (\$78,899.00) for the Task 2 - Intersection Design Analysis Phase of the PROJECT
- A Lump Sum Fee of: Twenty-Three Thousand Seven Hundred Fifty-One and 00/100 Dollars (\$23,751.00) for the Task 3 – Drainage Analysis Phase of the PROJECT
- A Lump Sum Fee of: Sixteen Thousand Three Hundred Sixteen and 00/100 Dollars (\$16,316.00) for the Task 4 – Environmental Permitting Phase of the PROJECT
- A Lump Sum Fee of: Nineteen Thousand Nine Hundred Twelve and 00/100 Dollars (\$19,912.00) for the Task 5 – Traffic Design Phase of the PROJECT
- A Lump Sum Fee of: Twenty-Nine Thousand Three Hundred Twenty-Four and 00/100 Dollars (\$29,324.00) for the Task 6 – Miscellaneous Structures Phase of the PROJECT
- A Lump Sum Fee of: Thirteen Thousand Four Hundred Twenty-Three and 00/100 Dollars (\$13,423.00) for the Task 7 – Utility Coordination Assistance Phase of the PROJECT
- A Lump Sum Fee of: Fourteen Thousand One Hundred Ninety-Four and 23/100 Dollars (\$14,194.23) for the Task 8 – Geotechnical and Contamination Investigation Phase of the PROJECT
- A Lump Sum Fee of: Thirty-Seven Thousand Eight Hundred Eighty-Three and 00/100 Dollars (\$37,883.00) for the Task 9 – Design Plans Phase of the PROJECT

7.2 For the Sunset Point Road at North Betty Lane OPTIONAL SERVICES provided for in the Agreement, as defined in Exhibit A(1), the COUNTY agrees to pay the CONSULTANT as follows:

- A Lump Sum Fee of: Twenty-Three Thousand and 00/100 Dollars (\$23,000.00) for the Task 10 – Optional Services Phase of the PROJECT
- A Not to Exceed of: Twenty Thousand and 00/100 Dollars (\$20,000.00) for the Task 11 – Optional Services for Time & Materials Phase of the PROJECT

The above fees shall constitute the total not to exceed amount of Two Hundred Ninety-Eight Thousand Five Hundred Fifty and 23/100 Dollars (\$298,550.23) to the CONSULTANT for the performance of Sunset Point Road at North Betty Lane Basic Services and Optional Services. All man hours are billed per the established and agreed hourly rates. The hourly rates are fully loaded and include all labor, overhead, expenses and profit of any nature including travel within the Tampa Bay Metropolitan Statistical area. Travel outside of that area will be reimbursed in accordance with Section 112.061 F.S.

7.3 For the Whitney Road at Welford Road BASIC SERVICES provided for in this Agreement, as defined in Section 3.1, the COUNTY agrees to pay the CONSULTANT as follows:

- A Lump Sum Fee of: Twenty-One Thousand Eight Hundred Forty-Eight and 00/100 Dollars (\$21,848.00) for the Task 1 – General Task Phase of the PROJECT
- A Lump Sum Fee of: Eighty-Four Thousand Two Hundred Five and 00/100 Dollars (\$84,205.00) for the Task 2 - Intersection Design Analysis Phase of the PROJECT
- A Lump Sum Fee of: Twenty-Seven Thousand Nine Hundred Six and 00/100 Dollars (\$27,906.00) for the Task 3 – Drainage Analysis Phase of the PROJECT

A Lump Sum Fee of: Ten Thousand Six Hundred Fifty-Five and 00/100 Dollars (\$10,655.00) for the Task 4 – Environmental Permitting Phase of the PROJECT

A Lump Sum Fee of: Nine Thousand One Hundred Seventy-Eight and 00/100 Dollars (\$9,178.00) for the Task 5 – Traffic Design Phase of the PROJECT

A Lump Sum Fee of: Thirty-Three Thousand Thirty Seven and 00/100 Dollars (\$33,037.00) for the Task 6 – Miscellaneous Structures Phase of the PROJECT

A Lump Sum Fee of: Fifteen Thousand Four Hundred Sixty-Four and 00/100 Dollars (\$15,464.00) for the Task 7 – Utility Coordination Assistance Phase of the PROJECT

A Lump Sum Fee of: Thirteen Thousand One Hundred Ninety-Nine and 23/100 Dollars (\$13,199.23) for the Task 8 – Geotechnical and Contamination Investigation Phase of the PROJECT

A Lump Sum Fee of: Forty-Seven Thousand Six Hundred Fifty-Seven and 00/100 Dollars (\$47,657.00) for the Task 9 – Design Plans Phase of the PROJECT

7.4 For the Whitney Road at Wolford Road OPTIONAL SERVICES provided for in the Agreement, as defined in Exhibit A(2), the COUNTY agrees to pay the CONSULTANT as follows:

A Lump Sum Fee of: Twenty-Three Thousand and 00/100 Dollars (\$23,000.00) for the Task 10 – Optional Services Phase of the PROJECT

A Not to Exceed of: Ten Thousand and 00/100 Dollars (\$10,000.00) for the Task 11 – Optional Services for Time & Materials Phase of the PROJECT

The above fees shall constitute the total not to exceed amount of Two Hundred Ninety-Six Thousand One Hundred Forty-Nine and 23/100 Dollars (\$296,149.23) to the CONSULTANT for the performance of Whitney Road at Wolford Road Basic Services and Optional Services. All man hours are billed per the established and agreed hourly rates. The hourly rates are fully loaded and include all labor, overhead, expenses and profit of any nature including travel within the Tampa Bay Metropolitan Statistical area. Travel outside of that area will be reimbursed in accordance with Section 112.061 F.S.

7.5 For any CONTINGENCY SERVICES performed, the COUNTY agrees to pay the CONSULTANT, a negotiated fee based on the assignment, up to a maximum amount not to exceed Sixty Thousand and 00/100 Dollars (**\$60,000.00**) for all assignments performed.

7.6 Total agreement amount Six Hundred Fifty-Four Thousand Six Hundred Ninety-Nine and 46/100 Dollars (**\$654,699.46**).

7.7 For any ADDITIONAL SERVICES, the COUNTY agrees to pay the CONSULTANT a negotiated total fee based on the work to be performed as detailed by a written amendment to this Agreement.

7.8 In the event that this Agreement is terminated under the provisions of this contract the total and complete compensation due the CONSULTANT shall be as established by the COUNTY based on the COUNTY'S determination of the percentage of work effort completed to date of termination.

SECTION 8 PERFORMANCE SCHEDULE

Time is of the essence in this Agreement. The CONSULTANT shall plan and execute the performance of all services provided for in this Agreement in such manner as to ensure their proper and timely completion in accordance with the following schedule:

8.1 The services to be rendered by the CONSULTANT shall be commenced upon receipt from the COUNTY of written "NOTICE TO PROCEED."

8.2 All project phases shall be completed on or before the milestone dates provided in the COUNTY approved PROJECT design schedule referenced in 2.3 E.

8.3 The CONSULTANT shall not be held responsible for delays in the completion of the PROJECT design when the COUNTY causes such delays. The COUNTY reviews related to the above submittals shall not exceed twenty-one (21) days.

SECTION 9 AUTHORIZATION FOR CONTINGENT OR ADDITIONAL SERVICES

9.1 The CONTINGENCY services provided for under this Agreement shall be performed only upon prior written authorization from the Director of Engineering and Technical Support or designee.

9.2 The ADDITIONAL services provided for under this Agreement shall be performed only upon approval of the County Administrator or Board of County Commissioners.

9.3 The CONSULTANT shall perform no services contemplated to merit compensation beyond that provided for in this Agreement unless such services, and compensation therefore, shall be provided for by appropriate written authorization or amendment(s) to this Agreement.

SECTION 10 FIRMS AND INDIVIDUALS PROVIDING SUBCONSULTING SERVICES

The COUNTY reserves the right to review the qualifications of any and all subconsultants, and to reject any subconsultant in a proper and timely manner, deemed not qualified to perform the services for which it shall have been engaged. Any subconsultant not listed as part of the prime consultants team at time of award must be approved by the Director of Purchasing prior to performing any service.

SECTION 11 SATISFACTORY PERFORMANCE

All services to be provided by the CONSULTANT under the provisions of this Agreement, including services to be provided by subcontractors, shall be performed to the reasonable satisfaction of the COUNTY'S Director of Engineering and Technical Support or designee.

SECTION 12 RESOLUTION OF DISAGREEMENTS

12.1 The COUNTY shall reasonably decide all questions and disputes, of any nature whatsoever, that may arise in the execution and fulfillment of the services provided for under this Agreement.

12.2 The decision of the COUNTY upon all claims, questions, disputes and conflicts shall be final and conclusive, and shall be binding upon all parties to this Agreement, subject to judicial review.

SECTION 13 CONSULTANT'S ACCOUNTING RECORDS

13.1 Records of expenses pertaining to all services performed shall be kept in accordance with generally accepted accounting principles and procedures.

13.2 The CONSULTANT'S records shall be open to inspection and subject to examination, audit, and/or reproduction during normal working hours by the COUNTY'S agent or authorized representative to the extent necessary to adequately permit evaluation and verification of any invoices,

payments or claims submitted by the CONSULTANT or any of his payees pursuant to the execution of the Agreement. These records shall include, but not be limited to, accounting records, written policies and procedures, subcontractor files (including proposals of successful and unsuccessful bidders), original estimates, estimating worksheets, correspondence, change order files (including documentation covering negotiated settlements), and any other supporting evidence necessary to substantiate charges related to this Agreement. They shall also include, but not be limited to, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with this Agreement. The COUNTY shall not audit payroll and expense records on task assignments paid by lump sum fee.

13.3 For the purpose of such audits, inspections, examinations and evaluations, the COUNTY'S agent or authorized representative shall have access to said records from the effective date of the Agreement, for the duration of work, and until three (3) years after the date of final payment by the COUNTY to the CONSULTANT pursuant to this Agreement.

13.4 The COUNTY'S agent or authorized representative shall have access to the CONSULTANT'S facilities and all necessary records in order to conduct audits in compliance with this Section. The COUNTY'S agent or authorized representative shall give the CONSULTANT reasonable advance notice of intended inspections, examinations, and/or audits.

SECTION 14 OWNERSHIP OF PROJECT DOCUMENTS

Upon completion or termination of this Agreement, all records, documents, tracings, plans, specifications, maps, evaluations, reports and other technical data, other than working papers, prepared or developed by the CONSULTANT under this Agreement shall be delivered to and become the property of the COUNTY. The CONSULTANT, at its own expense, may retain copies for its files and internal use. The COUNTY shall not reuse any design plans or specifications to construct another project at the same or a different location without the CONSULTANT'S specific written verification, adaptation or approval.

SECTION 15 INSURANCE COVERAGE AND INDEMNIFICATION

15.1 The Contractor must maintain insurance in at least the amounts required in the Request for Proposal throughout the term of this contract. The contractor must provide a Certificate of Insurance in accordance with Insurance Requirements of the Request for Proposal, evidencing such coverage prior to issuance of a purchase order or commencement of any work under this Contract. See Section C Insurance Requirements – Attached

15.2 If the CONSULTANT is an individual or entity licensed by the state of Florida who holds a current certificate of registration under Chapter 481, Florida Statutes, to practice architecture or landscape architecture, under Chapter 472, Florida Statutes, to practice land surveying and mapping, or under Chapter 471, Florida Statutes, to practice engineering, and who enters into a written agreement with the COUNTY relating to the planning, design, construction, administration, study, evaluation, consulting, or other professional and technical support services furnished in connection with any actual or proposed construction, improvement, alteration, repair, maintenance, operation, management, relocation, demolition, excavation, or other facility, land, air, water, or utility development or improvement, the CONSULTANT will indemnify and hold harmless the COUNTY, and its officers and employees, from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys' fees, to the extent caused by the negligence, recklessness, or intentionally wrongful conduct of the CONSULTANT and other persons employed or utilized by the CONSULTANT in the performance of the Agreement.

SECTION 16
EQUAL EMPLOYMENT OPPORTUNITY CLAUSE
FOR CONTRACTS NOT SUBJECT TO EXECUTIVE ORDER 11246

In carrying out the contract, the CONSULTANT shall not discriminate against employee or applicant for employment because of race, color, religion, sex or national origin.

SECTION 17
INDEPENDENT CONTRACTOR STATUS AND COMPLIANCE WITH THE
IMMIGRATION REFORM AND CONTROL ACT OF 1986

CONSULTANT acknowledges that it is functioning as an independent contractor in performing under the terms of this Agreement, and it is not acting as an employee of COUNTY. CONSULTANT acknowledges that it is responsible for complying with the provisions of the Immigration Reform and Control Act of 1986, located at 8 U.S.C. Section 1324, et seq., and regulations relating thereto. Failure to comply with the above provisions of this contract shall be considered a material breach and shall be grounds for immediate termination of the contract.

SECTION 18
PROHIBITION AGAINST CONTINGENT FEE

The CONSULTANT warrants that he has not employed or retained any company or person, other than a bona fide employee working solely for the CONSULTANT to solicit or secure this Agreement, and that he has not paid or agreed to pay any person, company, corporation, individual, or firm other than a bona fide employee working solely for the CONSULTANT, any fee, commission, percentage, gift or any other consideration, contingent upon or resulting from the award or making of this Agreement.

SECTION 19
TRUTH IN NEGOTIATIONS

By execution of this Agreement, the CONSULTANT certifies to truth-in-negotiations and that wage rates and other factual unit costs supporting the compensation are accurate, complete and current at the time of contracting. Further, the original contract amount and any additions thereto shall be adjusted to exclude any significant sums where the COUNTY determines the contract price was increased due to inaccurate, incomplete or non-current wage rates and other factual unit costs. Such adjustments must be made within one (1) year following the end of the contract.

SECTION 20
SUCCESSORS AND ASSIGNS

The CONSULTANT shall not assign, sublet, or transfer his interest in this Agreement without the written consent of the COUNTY.

SECTION 21
INTEREST ON JUDGMENTS

In the event of any disputes between the parties to this Agreement, including without limitation thereto, their assignees and/or assigns, arising out of or relating in any way to this Agreement, which results in litigation and a subsequent judgment, award or decree against either party, it is agreed that any entitlement to post judgment interest, to either party and/or their attorneys, shall be fixed by the proper court at the rate of five percent (5%), per annum, simple interest. Under no circumstances shall either party be entitled to pre-judgment interest. The parties expressly acknowledge and, to the extent allowed by law, hereby opt out of any provision of federal or state statute not in agreement with this paragraph.

SECTION 22 TERMINATION OF AGREEMENT

22.1 The COUNTY reserves the right to cancel this Agreement, without cause, by giving thirty (30) days prior written notice to the CONSULTANT of the intention to cancel. Failure of the CONSULTANT to fulfill or abide by any of the terms or conditions specified shall be considered a material breach of contract and shall be cause for immediate termination of the contract at the discretion of COUNTY. Alternatively, at the COUNTY'S discretion, the COUNTY may provide to CONSULTANT thirty (30) days to cure the breach. Where notice of breach and opportunity to cure is given, and CONSULTANT fails to cure the breach within the time provided for cure, COUNTY reserves the right to treat the notice of breach as notice of intent to cancel the Agreement for convenience.

22.2 If COUNTY terminates the Agreement for convenience, other than where the CONSULTANT breaches the Agreement, the CONSULTANT'S recovery against the COUNTY shall be limited to that portion of the CONSULTANT'S compensation earned through date of termination, together with any costs reasonably incurred by the CONSULTANT that are directly attributable to the termination. The CONSULTANT shall not be entitled to any further recovery against the COUNTY, including but not limited to anticipated fees or profit on work not required to be performed.

22.3 Upon termination, the CONSULTANT shall deliver to the COUNTY all original papers, records, documents, drawings, models, and other material set forth and described in this Agreement.

22.4 In the event that conditions arise, such as lack of available funds, which in the COUNTY'S opinion make it advisable and in the public interest to terminate this Agreement, it may do so upon written notice.

SECTION 23 AGREEMENT TERM

This Agreement will become effective on the date of execution first written above and shall remain in effect for **thirty-six (36) months** from the commencement date on the Notice to Proceed unless terminated at an earlier date under other provisions of this Agreement, or unless extended for a longer term by amendment.

SECTION 24 CONFLICT OF INTEREST

24.1 By accepting award of this Contract, the CONSULTANT, which shall include its directors, officers and employees, represents that it presently has no interest in and shall acquire no interest in any business or activity which would conflict in any manner with the performance of services required hereunder, including as described in the CONSULTANT'S own professional ethical requirements. An interest in a business or activity which shall be deemed a conflict includes but is not limited to direct financial interest in any of the material and equipment manufacturers suppliers, distributors, or contractors who will be eligible to supply material and equipment for the PROJECT for which the CONSULTANT is furnishing its services required hereunder.

24.2 If, in the sole discretion of the County Administrator or designee, a conflict of interest is deemed to exist or arise during the term of the contract, the County Administrator or designee may cancel this contract, effective upon the date so stated in the Written Notice of Cancellation, without penalty to the COUNTY.

SECTION 25 ENTIRE AGREEMENT

This Agreement represents, together with all Exhibits and Appendices, the entire written Agreement between the COUNTY and the CONSULTANT and may be amended only by written instrument signed by both the COUNTY and the CONSULTANT.

SECTION 26 PUBLIC ENTITY CRIMES

CONSULTANT is directed to the Florida Public Entity Crime Act, Fla. Stat. 287.133, and Fla. Stat. 287.135 regarding Scrutinized Companies, and CONSULTANT agrees that its bid and, if awarded, its performance of the agreement will comply with all applicable laws including those referenced herein. CONSULTANT represents and certifies that CONSULTANT is and will at all times remain eligible to bid for and perform the services subject to the requirements of these, and other applicable, laws. CONSULTANT agrees that any contract awarded to CONSULTANT will be subject to termination by the County if CONSULTANT fails to comply or to maintain such compliance.

SECTION 27 PUBLIC RECORDS

Contractor acknowledges that information and data it manages as part of the services may be public records in accordance with Chapter 119, Florida Statutes and Pinellas County public records policies. Contractor agrees that prior to providing services it will implement policies and procedures to maintain, produce, secure, and retain public records in accordance with applicable laws, regulations, and County policies, including but not limited to the Section 119.0701, Florida Statutes. Notwithstanding any other provision of this Agreement relating to compensation, the Contractor agrees to charge the County, and/or any third parties requesting public records only such fees allowed by Section 119.07, Florida Statutes, and County policy for locating and producing public records during the term of this Agreement.

**SECTION 28
GOVERNING LAW AND AGREEMENT EXECUTION**

This Agreement shall be governed by the laws of the State of Florida.

IN WITNESS WHEREOF, the parties herein have executed this Agreement as of the day and year first written above.

PINELLAS COUNTY, by and through its
Board of County Commissioners

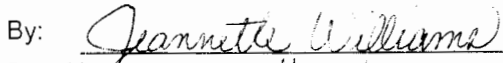
By: 
Print Name: MICHAEL A. OSBORN
Title: VICE PRESIDENT Date: 03/24/15

By: _____
Name _____ Date: _____
Chairman

ATTEST:

ATTEST:

Ken Burke, clerk of the Circuit Court

By: 
Print Name: Jeannette Williams
Title: BUSINESS OPERATIONS Date: 3/24/15

By: _____
Deputy Clerk _____ Date: _____

(CORPORATE SEAL)

APPROVAL AS TO FORM:

By: 
Office of the County Attorney

Exhibit A(1)

SCOPE OF SERVICES

**Design Services
For
Betty Lane at Sunset Point Road
Intersection Improvements**

County PID: 001018A

Prepared for:

**Pinellas County
Office of Engineering & Technical Support
14 S. Fort Harrison Avenue
Clearwater, FL 33756**

Prepared by:

**Volkert, Inc.
1408 North Westshore Blvd., Suite 600
Tampa, FL 33607**

February, 2015

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SCOPE OF SERVICES FOR CONSULTING ENGINEERING SERVICES

This Exhibit forms an integral part of the agreement between Pinellas County (hereinafter referred to as the COUNTY) and Volkert, Inc. (hereinafter referred to as the CONSULTANT) relative to the transportation facility described as follows:

I. PROJECT TITLE

Sunset Point Road – Betty Lane Intersection & Roadway Improvements Including Major Drainage.

II. OBJECTIVE

The overall objective of this proposal is to seek the professional engineering services for the Intersection Improvements at Sunset Point Road and Betty Lane and major drainage improvements. Volkert, Inc. shall complete all Tasks and Options, described in this agreement, to the satisfaction of the COUNTY.

III. PROJECT DESCRIPTION

The project consists of construction of operational intersection improvements, roadway reconstruction, signalization improvements, bridge replacement, and incidental work at the intersection of Betty Lane and Sunset Point Road, Pinellas County, Florida. Addition of bicycle lanes, ADA compliant sidewalks, and left turn lanes along Sunset Point Road will also be included as part of this project.

IV. SCOPE OF WORK

The CONSULTANT shall investigate the status of the project and become familiar with concepts and commitments developed from prior Preliminary Engineering Report evaluations and other miscellaneous studies, and shall use the approved concepts as a basis for the design unless otherwise noted herein or directed by the COUNTY.

The general objective is for the CONSULTANT to prepare a set of plans and specifications to be used by the construction contractor to build the project and by the COUNTY to ensure that the project is built as designed and to specifications. All required permits shall be obtained by the engineering CONSULTANT. Plans shall be prepared in accordance with Pinellas County CADD Standard Manual for Survey & Civil Engineering and using the latest Civil 3D Pinellas County Kit Requirement.

Required Documents and Deliverables

- a) All meeting minutes (within 2 days of meeting date)
 - b) Design Criteria Memorandum (prior to the start of design)
 - c) Geotechnical Report (with 60% Plans submittal)
 - d) Pavement Design Memorandum (with 60% Phase submittal)
 - e) Design Report (with every phase submittal)
 - f) Drainage Design Documentation Report (with 60% Plans submittal)
 - g) Constructability Review Mark-ups (with 60% Phase submittal)
 - h) Bidability Review Mark-ups (with 100% Phase submittal)
 - i) Plan and Cost Estimate Phase submittals at 15%, 60%, 100%, and Final.
- CONSULTANT shall provide a Civil 3D file (ETransmit) of construction plans and two (2) 11" x 17" paper prints for the 60% and 100% design phases and cost estimates for the 15%, 60%, and 100% design phases.
 - CONSULTANT shall provide a roll plot with no Civil 3D files for the 15% design phase.
 - CONSULTANT shall provide a Civil 3D file (ETransmit) of FINAL construction plans, plus

two (2) 11" x 17" and one (1) 24" x 36" paper prints signed and sealed by a professional engineer, certified in the State of Florida and a signed and sealed Cost Estimate in COUNTY format.

- All technical specifications required for construction of project.

The Design services include:

1. General Tasks
 - 1.1. Specifications Package Preparation Support
 - 1.2. Project Meetings
2. Intersection Design Analysis
 - 2.1. Pavement Design Memo
 - 2.2. 15% Line & Grade
 - 2.3. Horizontal/Vertical Master Design Files
 - 2.4. Cross Section Design Files
 - 2.5. Traffic Control Analysis
 - 2.6. Design Report
 - 2.7. Computation & Quantities
 - 2.8. Cost Estimates
 - 2.9. Right-of-way Consideration
 - 2.10. Roadway Field Reviews
 - 2.11. Right-of-way / Easement Acquisition
3. Drainage Analysis
 - 3.1. Base Clearance Water Elevation Memo
 - 3.2. Data Collection
 - 3.3. Design of Flood Plain Compensation Area
 - 3.4. Hydraulic Analysis
 - 3.5. Drainage Design Documentation Report
 - 3.6. Drainage Field Reviews & Technical Meetings
4. Environmental Permitting
 - 4.1. Pre-application meeting
 - 4.2. Permit Preparation package and submittal
5. Traffic Design Analysis
 - 5.1. Signing & Pavement Marking Plans
 - 5.2. Signalization Plans
6. Misc. Structures
 - 6.1. Mast Arms
 - 6.2. Box Culvert
 - 6.3. Retaining Wall
7. Utility Coordination Assistance
8. Geotechnical and Contamination Investigation
9. Design Plans
 - 9.1. Roadway Plans Preparation
 - 9.2. Signing & Pavement Marking Plans
 - 9.3. Signal Plans

- 10. Optional Services
 - 10.1. Design of Mitigation Area
 - 10.2. Public Involvement Meeting Support

11. Optional Services (Time & Materials)

Task 1: GENERAL TASKS

Specification Package Preparation Support: The CONSULTANT shall assist the COUNTY in preparation of a complete specifications package. The CONSULTANT shall provide all applicable Technical Special Provisions and review of all required COUNTY and FDOT supplemental specifications for all items and areas of work. The CONSULTANT shall utilize the appropriate COUNTY approved pay item structure.

Project Meetings: The CONSULTANT shall attend ten (10) Monthly progress meetings (assumed 10 month schedule). The CONSULTANT shall provide meeting minutes for review and approval to the COUNTY.

Bidability and Constructability Review: The CONSULTANT shall provide a Peer Review as follows:

1. Perform a constructability review as part of the 60% Plans review. This process shall include providing clear decisions and directions and documentation of all decisions, assumptions and recommendations.
2. Perform a Bidability review as part of the 100% Plans review. This process shall include providing clear decisions and directions and documentation of all decisions, assumptions and recommendations.

Field Reviews & Technical Meetings: The CONSULTANT shall conduct four (4) field reviews and attend two (2) phase review meetings.

Design Criteria Memorandum: The CONSULTANT shall develop, prepare, and submit to the COUNTY for approval a Design Criteria Memorandum identifying design criteria and standards applicable to the PROJECT. The Design Criteria Memorandum shall be completed prior to beginning the Preliminary Engineering Report work effort.

The Design Criteria Memorandum shall contain a listing of the design criteria and standard values to be utilized for the design development, as well as the source references document(s) from which the criteria and standard values are derived, and shall include:

- Design Speed
- Functional Classification
- Design Vehicle
- Clear Zone Width
- Roadway Elevation
- Horizontal and Vertical Alignment
- Drainage Criteria
- Lane Widths
- Pavement Structure Design
- Bicycle Lanes
- Medians
- Shoulders
- Intersection Radii

- Access Management
- Signing & Pavement Marking
- Sight Distance
- Grades
- Border Widths
- Roadway Cross-slopes
- Signalization
- Roadway Lighting Plan Design
- Traffic Analysis Methodology
- Maintenance of Traffic Design
- Structural Design
- Americans With Disabilities Act Elements

Task 2: INTERSECTION DESIGN ANALYSIS

Pavement Design Memo: The CONSULTANT shall evaluate the pavement design selections and all necessary coordination to resolve issues related to pavement design when provided by the COUNTY. Initial set-up includes collecting all data necessary for entire project limits. A final pavement design memo shall be generated and placed in the file.

15% Line & Grade: The CONSULTANT shall develop and provide to the COUNTY a “15%” line and grade submittal for review and approval prior to proceeding with 60% design and plans. The submittal will include a continuous roll of plan and profile views. The horizontal alignment or plan portion shall include as a minimum: entire mainline baseline and or centerline of construction with the proposed sidewalks, existing topography; existing and proposed right-of-way limits; begin and end transitions, begin and end project limits, geometric parameters. Plan scale should be 1" = 40' for rural facilities. The vertical alignment or profile grade shall also be plotted on this roll in the profile portion (lower half of sheet). The proposed profile shall indicate respective geometric controls such as length of vertical curves, vertical points of intersections, and percent grades. Existing ground line shall also be shown as a reference in the profile portion. The profile stationing shall depict formats with beginning and ending stations with intermediate tick marks matched with the plan portion along the alignment, or as close as possible in curved alignments. Profile scale should be the same as is for horizontal but 10% of the horizontal assigned for vertical. (e.g. Plan: 1" = 40'; Profile: 1" = 40' Horizontal and 1"= 10' Vertical). The profile portion shall also indicate drainage basin(s) delimited by station call-outs just above the profile. Cross drain(s) and or Design High Water(s) shall be shown in the profile portion as well. The submittal shall also include a summary of design criteria used to establish the horizontal and vertical alignments. Examples of such parameters include but are not limited to: Intersection sight distance; design speed; design vehicle; stopping sight distance; decision sight distance; length of horizontal and vertical curves; etc. Any anticipated design variations and or design exceptions should also be listed.

The CONSULTANT shall provide a typical section package with the 15% Line and Grade submittal. The typical section shall be developed and obtain approval by the COUNTY. The typical section package must meet County standards and meet requirements from the selected alternatives established in the pre-scoping meeting.

The CONSULTANT shall prepare an assessment of the following items:

- Environmental impacts
- Cost Estimate
- Typical Section Package
- Consistency with 2035 Pinellas County LRTP

Horizontal/Vertical Master Design Files: The CONSULTANT shall design the geometrics based on the selected alternatives established in the previous studies and pre-scoping meeting using the design standards that give proper consideration to the adjacent land use, design consistency and driver expectancy, aesthetics, pedestrian and bicycle concerns, ADA requirements, elder road user policy, and scope of work. At a minimum, the Florida Greenbook Standards (2013) shall be met. This includes all work to create elements showing the alignment for both horizontal and vertical geometrics in plan and profile portion of plan sheets. Includes efforts required to place labels and required information in accordance with the COUNTY'S CADD manual in master design file.

Cross Section Design Files: The CONSULTANT shall establish and develop cross section design files in accordance with the COUNTY Civil 3D CADD manual and FDOT Plans Preparation manual. Assume sections every 50 ft. for earthwork.

Traffic Control Analysis: The CONSULTANT shall design a safe and effective Traffic Control Plan to move vehicular and pedestrian traffic during all phases of construction. The design shall include construction phasing of roadways ingress and egress to existing property owners and businesses, routing, signing and pavement markings, and detour quantity tabulations. Special consideration shall be given to the construction of the drainage system when developing the construction phases. Positive drainage shall be maintained at all times.

Design Report: The CONSULTANT also shall develop project specific design criteria which shall be included in the design report. The CONSULTANT shall evaluate the approved intersection geometrics approved by the COUNTY documented in the Preliminary Engineering Report for the purpose of estimating design and construction needs based on initial observations. The CONSULTANT shall recommend to the COUNTY, either correction of any deficiencies, or obtaining the appropriate design variation or exceptions.

The CONSULTANT shall submit a request for variance for design criteria not conforming to the minimum requirements of the FDOT Greenbook or Pinellas County Land Development Code.

The CONSULTANT shall submit to the COUNTY design notes, data, and calculations to document the design conclusions reached during the development of the contract plans.

The design notes, data, and computations shall be recorded on size 8-1/2"x11" sheets, fully titled, numbered, dated, indexed and signed by the designer and the checker. Computer output forms and other oversized sheets shall be folded to 8-1/2"x11" size. The data shall be in a hardback folder for submittal to the COUNTY.

Engineer's Estimate & Quantities: The CONSULTANT shall prepare an estimate of probable construction costs for the design. The CONSULTANT shall utilize existing cost data available from the COUNTY and FDOT Construction Contract History as applicable.

CONSULTANT shall prepare bid quantities that include all bid items, which comprise the project design. Bid items shall include reference to applicable COUNTY & FDOT Measurement and Payment items. Bid proposal sheets to be included in the contract documents shall be prepared by the COUNTY based on the CONSULTANT'S quantities. The Consultant shall also provide supporting quantities take-off calculations with a summary of each pay items on size 8 1/2" x 11" sheets fully folded, numbered, dated, indexed and signed by the designer and the checker. Oversized sheets shall be folded to 8 1/2" x 11" size.

Preliminary bid quantities shall be submitted with the 15% Line & Grade and 60% design review submittals. Final bid quantities shall be submitted with the 100% design review submittal. Preliminary opinion of probable construction costs shall be submitted with the 60% design review submittal. Final construction costs opinion based on the final bid quantities shall be submitted with the 100% design

review submittal. Construction costs are to be based on the most current costs obtained from the FDOT Construction Contract and County bid pay item history.

Right-Of-Way Consideration: The CONSULTANT shall establish right of way requirements at locations where insufficient right-of-way is available to construct the proposed sidewalk. The COUNTY shall then provide direction and coordinate with the property owners on how to proceed with these locations.

Roadway Field Reviews: The CONSULTANT shall conduct one (1) site review prior to the 15% Line and Grade submittal, 60% plans submittal, and 100% plans submittal and attend two (2) phase review meetings.

Task 3: DRAINAGE ANALYSIS

Base Clearance: The CONSULTANT shall analyze, determine, and document high water elevations which shall be used to set roadway profile grade for the widening. Determine surface water elevations at cross drains, floodplains, outfalls and adjacent ponds. Determine groundwater elevations at intervals between the above-mentioned surface waters. This memo shall be added to the drainage documentation for the project and state recommendations for addressing potential high water elevations with raising profile, pavement base options and/or underdrain.

Data Collection: The CONSULTANT shall review all existing plans, documentation, and reports to determine current drainage patterns and systems.

Design of Flood Plain Compensation Area: The CONSULTANT shall determine flood plain encroachments, coordinate with regulatory agencies, and develop proposed compensation area(s) layout (shape, contours, slopes, etc.), and document the design following the requirements of the regulatory agency. If compensation is needed it would occur along the banks of Spring Branch through modification of the canal slopes.

Hydraulic Analysis: The proposed box culvert crossing improvements at Spring Branch will be analyzed for upstream and downstream water surface elevations, velocities, and flows. A bridge culvert hydraulic analysis will evaluate the proposed bridge culvert to determine if the channel and adjacent properties upstream and downstream will be negatively impacted by certain storm events. The water surface elevation resulting from the 100-year flood event defines the base flood plain that should not be raised upstream or downstream of the bridge culvert. If fill or other volume encroaches into the floodplain, an equal compensating volume should be excavated within the impacted floodplain basin so water surfaces will not rise. The existing crossing will be analyzed to determine the baseline flood elevations.

The Sunset Point Road crossing of Spring Branch was analyzed when the Stevenson Creek Watershed Management Plan (SCWMP) was developed for Pinellas County. The SCWMP was modeled using the hydrologic and hydraulic modeling software "Interconnected Pond Routing" (ICPR). The SCWMP ICPR model will be obtained from Pinellas County and be utilized to analyze the proposed crossing. This hydraulic analysis will be performed utilizing information from field surveys and Geographic Information System (GIS) used in the ICPR model. Upstream structures will be included in the bridge hydraulic analysis to determine their effects on the project. Spring Branch could be affected by hydraulic velocities therefore slope protection will be analyzed if necessary.

Since this is a safety improvement project, it is anticipated that no stormwater ponds will be required.

Drainage Design Documentation Report: The CONSULTANT shall compile drainage design

documentation into report format. The documentation will include necessary drainage analyses, their results, and design tasks listed below and associated meetings minutes and decisions. The drainage analysis will include preparation of working drawings to identify the drainage areas which drain to the impacted inlets for use in sizing any new inlets and stormdrain pipes required. Calculations for any new inlets and stormdrain pipes shall be performed for sizing these facilities and shall be included in a technical memorandum/report. In locations where proposed curbing is to be added in conjunction with the added sidewalk, spread of flow calculations shall be provided in accordance with COUNTY Stormwater requirements described in the code of ordinances.

The drainage design shall have the following features: is consistent with requirements of FDEP, SWFWMD and USACOE. Pinellas County and any other regulatory agencies which have jurisdiction over the project; additionally is consistent with requirements the COUNTY Stormwater related criteria in the County's code of ordinance; utilizes existing facilities where possible; is cost effective; does not create flooding problems upstream or downstream; provides for safety of roadway users; and is consistent with work being performed by other municipalities, regulatory agencies and private developments in the area. The CONSULTANT shall be responsible for coordinating with projects or work being performed in the area.

Drainage Field Reviews & Technical Meetings: The CONSULTANT shall conduct two (2) drainage field reviews and attend two (2) phase review meetings and one (1) WMD meeting.

Task 4: ENVIRONMENTAL PERMITTING

Permitting and Environmental Assessment: The CONSULTANT shall prepare permit applications, technical data and supporting documentation for all state and federal permits to be submitted by the COUNTY.

The CONSULTANT shall establish the landward extent of state and federal jurisdictional wetlands and surface waters pursuant to all current state and federal regulations and standards.

The CONSULTANT shall conduct an environmental analysis (and in-water surveys if necessary) to identify endangered or threatened species, species of special concern, and the presence or absence of submerged aquatic vegetation, within the proposed project limits.

The CONSULTANT shall develop conservation measures to mitigate for impacts to protected species and management strategies to insure that protected species are not adversely affected during construction.

The CONSULTANT shall prepare assessments of the value of wetlands proposed for impact. Assessments shall be done using the current Uniform Mitigation Assessment Methodology (UMAM), or other current method required by SWFWMD and the USACE.

The CONSULTANT shall prepare a Technical Memorandum for the COUNTY detailing the results of the environmental analysis.

The CONSULTANT shall submit a completed permit applications to the COUNTY for review and signature after receiving and incorporating comments from the 60% design QC review, unless agreed upon otherwise by the COUNTY. Upon approval of permit applications, the CONSULTANT shall submit all applicable permits to the appropriate agencies.

All permit and wetland and protected species mitigation fees shall be paid for by the COUNTY.

Meetings: Upon completion of the 15% Line & Grade phase, the CONSULTANT shall contact the COUNTY Permit Coordinator to schedule a pre-application meeting with applicable permitting agencies to identify specific permitting requirements for the project.

The CONSULTANT shall attend the pre-application meetings with COUNTY staff and provide a meeting agenda to the COUNTY for review 2 business days prior to the meeting. The CONSULTANT shall provide written minutes within 7 business days of the meeting for COUNTY approval prior to distribution to attendees.

If required, The CONSULTANT shall conduct a field review with COUNTY and permit agencies staff to verify the limits of the surveyed jurisdictional limits and to determine the applicability of permits.

Coordination: The CONSULTANT shall coordinate with the COUNTY Permit Coordinator until all permits are obtained.

The CONSULTANT shall prepare responses to all agency requests for additional information (RAI), including completion of design revisions that may be required to secure the required permits, and provide a response package to COUNTY Permit Coordinator.

The CONSULTANT shall coordinate with COUNTY Permit Coordinator to meet with the regulatory agencies as necessary to resolve permitting issues.

The CONSULTANT shall provide the COUNTY with survey requirements

Task 5: TRAFFIC ANALYSIS

Signing & Pavement Marking Analysis: At the intersection where cross walks or curb ramps shall need to be added or realigned the CONSULTANT shall provide yellow truncated domes/detectable warnings, analyze and document, Signing and Pavement Markings Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

Reference and Master Design File- the CONSULTANT shall prepare the Signing & Pavement Marking Design file to include all necessary design elements and all associated reference files.

Quantities - The CONSULTANT shall provide quantity take off for the project at 60% Plans, 100% Plans and Final Plans for the signing and pavement-marking component of the entire project.

Signing & Pavement Marking Field Reviews: The CONSULTANT shall conduct two (2) field reviews.

Signalization Analysis: The CONSULTANT shall analyze and document Signalization Analysis Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

FDOT Standard Specifications shall be used for the project. CONSULTANT shall prepare the special conditions section of the specifications as required by the design. COUNTY designee shall provide a typical outline of the special conditions to the CONSULTANT. The special conditions shall include specifications pertaining to project specific details and special construction methods or sequencing that may be required to construct the project. Special conditions shall be prepared and submitted electronically which can be inserted directly into the COUNTY'S specifications. Once complete the consultant shall be the engineer of record for all of the specifications (i.e. must accept as their own). We shall prepare updated Signalization Plans utilizing mast arms at the intersection of Betty Lane at Sunset Point as part of this project.

A separate signalization plan shall be prepared for this location where signalization has been recommended. Plot proposed topography (existing where applicable). Show right-of-way. Show existing/proposed utilities where there is a potential conflict with signal installation components. Show elevations at each signal pole site and highest point of intersection. Station and offset of mast arm installations. Mast arm structure mounted signs including street name signs and any regulatory signs. Show all installation components labeled with pay item number and quantity (where quantities are greater or less than 1). Include signal head details, controller operations notes, controller timing chart and loop/detector chart. If a special signal operation plan is used, it shall be detailed on the signal plan including any preemption phases.

Local Signal Timing parameters shall be determined as necessary to complete the Controller Timing Chart. Yellow and all-red clearance intervals shall be calculated based the posted speed limit. Pedestrian walk and clearance intervals shall be calculated if a pedestrian crosswalk is determined necessary by the COUNTY and FDOT. Clearance timing calculations shall be based on FOOT Traffic Engineering Manual criteria.

Intersection traffic analysis with a full report and signal timing analysis using the existing signal timing information and per the Institute of Traffic Engineers (ITE) Guidelines.

Queue length analysis with recommendation for queue lengths of new turn lanes based on FDOT's queue length work sheet.

Signalization Field Reviews: The CONSULTANT shall conduct two (2) field reviews.

Task 6: MISC. STRUCTURES

Structures plans and design documentation shall be developed in accordance with:

- 1) Florida Greenbook
- 2) AASHTO LRFD Bridge Design Specifications

Plans shall be developed utilizing FDOT Standard Indexes.

Mast Arms: The mast arms shall be determined by selecting from four standard FDOT Mast Arm designs. The CONSULTANT shall choose the appropriate design and make adjustments, if necessary, to truncating the arm and/or the upright. The CONSULTANT shall Quality Check the selections to verify that the mast arm design shall not fail with the proposed loading. If necessary a special design shall be used if all designs do not meet the design requirements. The calculations for the special design shall be accompanying the Signalization Plan submittals.

Box Culvert: Box culvert design shall be developed utilizing FDOT's LRFD Box Culvert Design Program. Plans will include a box culvert data table which references FDOT Standard Index 289. Special design headwalls will be designed with hand calculations and details provided in the plans.

Retaining Wall/Gravity Wall: Retaining wall design shall be developed utilizing FDOT's LRFD Retaining Wall Design Program or hand calculations. Plans will include a retaining wall data table which references FDOT Standard Index 6010 or 6011. A wall control drawing will be included for retaining walls which indicates beginning, end, top, and bottom of wall along with ground line at face of wall.

Structural Field Reviews & Technical Meetings: The CONSULTANT shall conduct two (2) structure field reviews and attend two (2) Technical meeting reviews (1 prior to 60%, 1 prior to

100%) regarding structural design.

Task 7: UTILITY COORDINATION ASSISTANCE

Utility Coordination - COUNTY is responsible for coordinating its design work with the public and private utility agencies and companies having existing and/or planned facilities within the limits of the project. COUNTY shall provide the utility agencies and companies' plans at the 60% and 100% design phases, as drafted by the CONSULTANT. After the 60% design phase, the utility agencies and companies shall be instructed to return one set of plans to the COUNTY showing their utilities relocation, adjustment and new facilities designs, and existing utilities to remain. COUNTY'S utility coordination responsibilities shall continue throughout the design process to assist with resolving utilities conflicts.

Utility Adjustment Plans - CONSULTANT shall prepare utility adjustments on the roadway plans to show existing public and private utilities to remain, detailed design of utilities to be relocated and utilities to be removed. Utility adjustment plans shall be prepared on screened reproducible copies of the roadway plan and cross sections sheets and shall be made part of the roadway plans. The 60% design review submittal shall include all existing utilities drawn on the roadway plans, cross section and drainage structure sheets. CONSULTANT is to identify all potential conflicts based on the information provided by the utility agencies and companies and horizontal and vertical field investigations. The 100% design review submittal shall include utility adjustment plans that reflect the final disposition of all public and private utilities. Any subsequent utilities conflicts are to be resolved and all final design revisions complete, at the final design submittal.

Utility Coordination Meetings - CONSULTANT shall attend utility coordination meetings to be held within thirty days of the 60% and 100% design review submittals. COUNTY shall be responsible for organizing these meetings. CONSULTANT shall prepare detailed meeting minutes and distribute to all attendees. Representation at the meeting should consist of all Utility Companies/Agencies, Project Manager, and support services as necessary. The County shall moderate the meeting and discuss the design with particular emphasis on drainage, maintenance of traffic and traffic signalization. Additional discussion on special construction activities, project scheduling, and agreement options available, shall be addressed. Based on commitments made at the Utility Pre-Design Meeting, the CONSULTANT shall prepare and distribute minutes and recommended course of action to accomplish each item to each utility located on the project.

The CONSULTANT shall determine areas of apparent potential conflict and request that the COUNTY schedule subsurface utility excavation to confirm whether or not a conflict exists and degree of conflict. A report itemizing utility conflicts by company, shall be prepared by the CONSULTANT, and mailed to each utility located on the project. Four weeks, on an average, shall be allowed the Utility to respond with their color-coded plans submittal.

Final Agreements to Utilities (100% Plans) - The COUNTY shall transmit the necessary legal drafts, plans, and documents to each Utility Company/Agency as required. One complete set of plans and one partial set of plans (Key Sheet, Typical Section, and Plan and Profile Sheets) shall be furnished to each involved utility agency. The partial plan set shall be color coded by the utility company showing proposed relocation and returned to be transmitted per the COUNTY'S Engineer or designee.

Review and Acceptance - The CONSULTANT shall be responsible for making all necessary reviews and acceptance of utility related materials

Task 8: GEOTECHNICAL AND CONTAMINATION INVESTIGATION

The CONSULTANT shall be responsible for a limited geotechnical and contamination investigation. All work performed by the CONSULTANT shall be in accordance with County standards, or as otherwise directed. The SUB CONSULTANT specific scope and proposal can be found in **Appendix 1** of this Document.

Task 9: DESIGN PLANS

Roadway Plans: The CONSULTANT shall prepare roadway construction plans within the project limits. These plans shall be in accordance with the Plans Preparation Manual and County standards that includes the following:

- a. Key sheet
- b. Box Culvert Detail
- c. Retaining Wall Details
- d. Pay Item Notes
- e. Typical Sections
- f. Typical Section Details
- g. General Notes
- h. Roadway Plan
- i. Roadway Profile
- j. Curb return profiles
- k. Back of Sidewalk Profiles
- l. Ditch Profiles
- m. Drainage structures sheets
- n. Soil Boring Logs
- o. Canal Grading Plan
- p. Roadway cross sections & Driveways
- q. Stormwater Pollution Prevention Plan
- r. Erosion Control Plans
- s. Temporary Traffic Control Plans
- t. Utility Adjustment Plans
- u. Signing and Pavement Markings Plans
- v. Guide sign worksheet
- w. Signal General Notes
- x. Signalization Plans
- y. Mast Arm Data Table and schedule
- z. General Notes
- aa. Plan and Elevation
- bb. Report of Core Borings
- cc. Bridge Culvert Table
- dd. Reinforcing Bar List

Task 10: OPTIONAL SERVICES

The COUNTY shall evaluate early in the design phase whether these task below shall be performed by the CONSULTANT. The project manager shall provide authorization if these services shall be implemented.

Design of Mitigation Area: If mitigation for wetland impacts is required, and the use of a private mitigation bank or previously permitted COUNTY mitigation area is not utilized, the CONSULTANT shall prepare mitigation planting plans, narratives, and other documentation that may be required by the permitting agencies. CONSULTANT shall coordinate with COUNTY Permit Coordinator to submit mitigation plans to the permitting agencies.

Although not required by permitting agencies, COUNTY requires all wet littoral ponds be planted. As such, CONSULTANT shall prepare planting plans for wet littoral ponds and provide to COUNTY Permit Coordinator. This deliverable shall be separate from, and in addition to, the construction plans.

Public Involvement Meeting Support: Includes Coordination and preparation of a roll plot with design

overlay shall be created for public open house meeting. A frequently Asked questions handout shall be created and used at the open house. Other activities may include coordination and review of materials such as: meeting notification mailing (assemble and mail); newspaper display ad; meeting exhibits; sign-in sheet; comment form; flyer preparation; fact sheet; site selection and development of meeting layout.

Task includes set-up, attendance at the public meeting and preparation of a meeting summary. The summary scrapbook includes a copy of all slides, boards, handouts, completed sign-in sheets and completed comment forms. At least two participants shall be required at meetings.

Contamination: See Appendix 2 for additional optional services for contamination.

Task 11: OPTIONAL SERVICES (Time & Materials)

The CONSULTANT shall provide any exhibits required for acquisition of easements and/or Right of Way. Exhibits shall be hard copy and/or electronic format as directed by the COUNTY. Compensation for this work shall be Time & Materials. The CONSULTANT shall provide appropriate timesheets when invoicing under this task.

V. COMPENSATION

The CONSULTANT shall provide the above outlined Basic Services for the following fixed fee or estimate amounts.

| | | | |
|-----------|--|--------------|------------------|
| Task 1 | General Task | \$21,848.00 | Lump Sum |
| Task 2 | Intersection Design Analysis | \$78,899.00 | Lump Sum |
| Task 3 | Drainage Analysis | \$23,751.00 | Lump Sum |
| Task 4 | Environmental Permitting | \$16,316.00 | Lump Sum |
| Task 5 | Traffic Design | \$19,912.00 | Lump Sum |
| Task 6 | Misc. Structures | \$29,324.00 | Lump Sum |
| Task 7 | Utility Coordination Assistance | \$13,423.00 | Lump Sum |
| Task 8 | Geotechnical and Contamination Investigation | \$14,194.23 | Lump Sum |
| Task 9 | Design Plans | \$37,883.00 | Lump Sum |
| Task 10 | Optional Services | \$23,000.00 | Lump Sum |
| Task 11 | Optional Services (Not to Exceed) | \$20,000.00 | Time & Materials |
| | | | Under Section V |
| | | | Compensation |
| Total Fee | | \$298,550.23 | Lump Sum |

VI. SCHEDULE

The conceptual plan and preliminary design and construction cost opinion shall be provided to the COUNTY within eight weeks from receipt of survey. The CONSULTANT shall also provide a Microsoft Project Schedule (using the COUNTY provided template) with updates to be included with each monthly invoice submittal.

CONSULTANT'S services shall commence upon receipt of written notice to proceed issued by COUNTY. CONSULTANT shall complete the final design in accordance with the following or better project schedule:

|

PROJECT SCHEDULE

| <u>Milestone</u> | <u>Due Date After receive the Survey</u> |
|---|--|
| 15% Complete Plans Submittal 15 day COUNTY review | 61 Calendar Days |
| 60% Complete Plans Submittal 30 day COUNTY review | 152 Calendar Days |
| 100% Complete Plans Submittal 30 day COUNTY review | 274 Calendar Days |
| Final Plans Submittal | 305 Calendar Days |

The CONSULTANT shall also provide responses to COUNTY comments for the various required submittals. Any other delays beyond CONSULTANT'S control shall be documented in writing by CONSULTANT and submitted to COUNTY for consideration to grant a schedule time extension.

Roadway Plan design reviews shall occur at the 15% line and grade, 60% Phase, 100% phases and final complete phases. CONSULTANT shall submit a draft of the special conditions with the 60% design review submittal and final versions at the 100% design review submittal. Bid quantities and opinion of probable construction cost shall be submitted. The requirements for each design review shall be as specified in the COUNTY'S "Checklists for Design Review Submittals". CONSULTANT shall continue its design work during the review periods. CONSULTANT shall respond to the COUNTY'S design review comments in writing and by making corresponding revisions to the plans. Written responses and plans revisions are to be included with the next design review submittal. CONSULTANT shall respond to regulatory agencies review comments in the same manner. Design revisions are to be completed by CONSULTANT at no additional time and/or cost unless the revisions result from COUNTY making changes to the horizontal or vertical alignment or other changes or similar impact to the project design. In such cases, COUNTY shall evaluate the CONSULTANT'S request for additional time and/or compensation. COUNTY may require CONSULTANT to make plans revisions and resubmit the plans at the same phase of completion if it is found that the plans do not meet the requirements of the "Checklist for Review Submittals". No additional time shall be allotted to the CONSULTANT'S schedule if a resubmittal is required.

VII. INVOICES & PROGRESS REPORTS

Invoicing shall take place monthly and will include a progress report summarizing the work completed during the invoice period as well as a schedule update. The CONSULTANT shall pre-submit invoices to the Project Manager prior to an official monthly submittal. The final invoice will be marked "FINAL" on the invoice and be accompanied by a letter from the CONSULTANT stating that this is the Final Invoice and that compensation for tasks completed, as described in the Scope of Services Agreement, is now concluded.

APPENDIX 1: GEOTECHNICAL SERVICES

Geotechnical services will be provided to support the proposed roadway and intersection improvements, which include widening of Sunset Point Rd to accommodate additional turn lanes and intersection improvements. In addition, the intersection of Sunset Point and North Betty Lane will include a total of two (2) new mast arm signal structures. Existing geotechnical data is available for the project. This information will be used for informational purposes and provided as an appendix to the geotechnical report.

In order to meet the preceding objectives, we propose to provide the following services:

1. Review published soils and topographic information. This published information will be obtained from the appropriate Florida Quadrangle Map published by the United States Geological Survey (USGS) and the Soil Survey for Pinellas County, published by the United States Department of Agriculture (USDA) Soil Conservation Service (SCS).
2. Perform site reconnaissance, coordinate utility clearances with Sunshine One Call and provided maintenance of traffic (MOT) activities, as required.
3. Execute a program of subsurface exploration consisting of borings and subsurface sampling along the limits of the proposed roadway widening, including:
 - a. A total of six (6) pavement cores through the existing asphalt and base materials, to be determined in the field. One (1) core will be performed in each leg of the intersection at North Betty Lane. At each core location, a hand auger boring will be completed to a depth of approximately 4 feet below the pavement section to determine base thickness and subgrade type, if apparent.
 - b. A total of ten (10) hand auger borings to a depth of five feet. The hand augers will be performed in accessible areas within the footprint of the proposed roadway improvements to explore subsurface and groundwater conditions.
 - c. A total of two (2) Standard Penetration Test (SPT) borings to a depth of 25 feet below existing grades at the locations of the proposed mast arm foundations.
 - d. A total of one (1) SPT boring to a depth of 50 feet below existing grade at the location of the box culvert/bridge replacement.
4. Visually classify the soil samples in the laboratory using the American Association of State and Highway Transportation Officials (AASHTO) classification system and/or Unified Soil Classification System (USCS). Identify soil conditions at each core/boring location. Visually classify the pavement mixtures obtained in each core sample using FDOT asphalt mixture nomenclature. Perform grain-size analyses on soil samples for D_{50} particles size scour recommendations.
5. Collect groundwater level measurements and estimate the Seasonal High Groundwater Table (SHGWT) along the limits of the proposed improvements.
6. Prepare a formal engineering report that summarizes the course of study pursued, the field data generated and subsurface conditions encountered in each of the pertinent topic areas.

APPENDIX 2: CONTAMINATION SCREENING SERVICES

Contamination screening services will be provided to support the proposed roadway and intersection improvements, which include widening of Sunset Point Rd to accommodate additional turn lanes and intersection improvements.

In order to meet the preceding objectives, we propose to provide the following services:

1. Perform the necessary analysis to complete the Contamination Screening Evaluation for the intersection improvement as described in Part 2, Chapter 22, of the PD&E Manual. The analysis and results will be documented in a Contamination Screening Evaluation Report (CSER). A separate pond siting CSER should be prepared for all pond site alternatives.
2. All Bridge structures should include a National Emissions Standards for Hazardous Air Pollutants (NESHAP) Asbestos and Protective Coatings Survey. The CONSULTANT shall perform an asbestos assessment on all bridge structures using the services of a licensed asbestos consultant (LAC) in accordance with FDOT Directive 625-020-020-c, dated July 21, 2009. The bridge structures should also be evaluated for Class V coatings including Lead Based Paint (LBP) if applicable.

Optional Services:

1. Provide Level II field screening for all “Medium” and “High” risk ranked sites from the preliminary review. Level II screening shall include a site specific scope of work showing proposed boring locations, temporary monitoring wells, and analytical testing proposed for each location. Results of the Level II screening shall be incorporated into the final CSER.

Exhibit A(2)

SCOPE OF SERVICES

**Design Services
For
Whitney Road – Wolford Road Intersection & Roadway Improvements
Including Major Drainage**

County PID: 002109A

Prepared for:

**Pinellas County
Office of Engineering & Technical Support
14 S. Fort Harrison Avenue
Clearwater, FL 33756**

Prepared by:

**Volkert, Inc.
1408 North Westshore Blvd., Suite 600
Tampa, FL 33607**

January, 2015

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SCOPE OF SERVICES FOR CONSULTING ENGINEERING SERVICES

This Exhibit forms an integral part of the agreement between Pinellas County (hereinafter referred to as the COUNTY) and Volkert, Inc. (hereinafter referred to as the CONSULTANT) relative to the transportation facility described as follows:

I. PROJECT TITLE

Whitney Road – Wolford Road Intersection & Roadway Improvements Including Major Drainage.

II. OBJECTIVE

The overall objective of this proposal is to seek the Professional Engineering services for Intersection Improvements at Whitney Road and Wolford Road, Major drainage improvements, and Long Branch Creek improvements and realignment. Volkert, Inc. shall complete all Tasks and Options, described in this agreement, to the satisfaction of the County.

III. PROJECT DESCRIPTION

The project consists of construction of operational intersection improvements, extension of triple barrel cross drain box culvert, major drainage improvements, and incidental work at the intersection of Whitney Road and Wolford Road, Pinellas County, Florida. Addition of bicycle lanes and ADA compliant sidewalks on both sides of the roadway will also be included as part of this project. The project limits are anticipated to be from Oak St. N. / Long Branch Ln. to Hidden Springs Pl., and the project will include realignment of Whitney Road and a portion of Wolford Road within these limits in order to straighten the curves east of the box culvert and accommodate proposed sidewalk within the existing right-of-way. Long Branch Creek has meandered to the west of its original location. This project will include plans to restore the creek bottom to its original profile, clean the culvert under Whitney Road, realign Long Branch Creek (north of Whitney Road) to its original position, and add embankment protection along the westerly side.

IV. SCOPE OF WORK

The CONSULTANT shall investigate the status of the project and become familiar with concepts and commitments developed from prior Engineering Studies, and shall use the approved concepts as a basis for the design unless otherwise noted herein or directed by the COUNTY.

The general objective is for the CONSULTANT to prepare a set of plans and specifications to be used by the construction contractor to build the project and by the COUNTY to ensure that the project is built as designed and to specifications. All required permits shall be obtained by the engineering CONSULTANT. Plans shall be prepared in accordance with Pinellas County CADD Standard Manual for Survey & Civil Engineering and using the latest Civil 3D Pinellas County Kit Requirement.

Required Documents and Deliverables

- a) All meeting minutes (within 2 days of meeting date)
- b) Design Criteria Memorandum (prior to the start of design)
- c) Geotechnical Report (with 60% Plans submittal)
- d) Pavement Design Memorandum (with 60% Phase submittal)
- e) Design Report (with every phase submittal)
- f) Drainage Design Documentation Report (with 60% Plans submittal)
- g) Constructability Review Mark-ups (with 60% Phase submittal)
- h) Bidability Review Mark-ups (with 100% Phase submittal)

i) Plan and Cost Estimate Phase submittals at 15%, 60%, 100%, and Final.

- CONSULTANT shall provide a Civil 3D file (ETransmit) of construction plans and two (2) 11" x 17" paper prints for the 60% and 100% design phases and cost estimates for the 15%, 60%, and 100% design phases.
- CONSULTANT shall provide a roll plot with no Civil 3D files for the 15% design phase.
- CONSULTANT shall provide a Civil 3D file (ETransmit) of FINAL construction plans, plus two (2) 11" x 17" and one (1) 24" x 36" paper prints signed and sealed by a professional engineer, certified in the State of Florida and a signed and sealed Cost Estimate in COUNTY format.
- All technical specifications required for construction of project.

The Design services include:

1. General Tasks
 - 1.1. Specifications Package Preparation Support
 - 1.2. Project Meetings
2. Intersection Design Analysis
 - 2.1. Pavement Design Memo
 - 2.2. 15% Line & Grade
 - 2.3. Horizontal/Vertical Master Design Files
 - 2.4. Cross Section Design Files
 - 2.5. Traffic Control Analysis
 - 2.6. Design Report
 - 2.7. Computation & Quantities
 - 2.8. Cost Estimates
 - 2.9. Right-of-way Consideration
 - 2.10. Roadway Field Reviews
3. Drainage Analysis
 - 3.1. Data Collection
 - 3.2. Design of Flood Plain Compensation Area
 - 3.3. Hydraulic Analysis
 - 3.4. Drainage Design Documentation Report
 - 3.5. Drainage Field Reviews & Technical Meetings
4. Environmental Permitting
 - 4.1. Pre-application meeting
 - 4.2. Permit Preparation package and submittal
5. Traffic Design Analysis
 - 5.1. Signing & Pavement Marking Plans
6. Misc. Structures
 - 6.1. Box Culvert Extension
 - 6.2. Retaining Wall
7. Utility Coordination Assistance
8. Geotechnical Investigation

9. Design Plans
 - 9.1. Roadway Plans Preparation
 - 9.2. Signing & Pavement Marking Plans
10. Optional Services
 - 10.1. Design of Floodplain Compensation Area
 - 10.2. Design of Mitigation Area
 - 10.3. Right-Of-Way / Easement Acquisition
 - 10.4. Public Involvement Meeting Support
11. Optional Services (Time & Materials)

Task 1: GENERAL TASKS

Specification Package Preparation Support: The CONSULTANT shall assist the COUNTY in preparation of a complete specifications package. The CONSULTANT shall provide all applicable Technical Special Provisions and review of all required COUNTY and FDOT supplemental specifications for all items and areas of work. The CONSULTANT shall utilize the appropriate COUNTY approved pay item structure.

Project Meetings: The CONSULTANT shall attend ten (10) Monthly progress meetings (assumed 10 month schedule). The CONSULTANT shall provide meeting minutes for review and approval to the COUNTY.

Bidability and Constructability Review: The CONSULTANT shall provide a Peer Review as follows:

1. Perform a constructability review as part of the 60% Plans review. This process shall include providing clear decisions and directions and documentation of all decisions, assumptions and recommendations.
2. Perform a Bidability review as part of the 100% Plans review. This process shall include providing clear decisions and directions and documentation of all decisions, assumptions and recommendations.

Field Reviews & Technical Meetings: The CONSULTANT shall conduct four (4) field reviews and attend two (2) phase review meetings.

Design Criteria Memorandum: The CONSULTANT shall develop, prepare, and submit to the COUNTY for approval a Design Criteria Memorandum identifying design criteria and standards applicable to the PROJECT. The Design Criteria Memorandum shall be completed prior to beginning the Preliminary Engineering Report work effort.

The Design Criteria Memorandum shall contain a listing of the design criteria and standard values to be utilized for the design development, as well as the source references document(s) from which the criteria and standard values are derived, and shall include:

- Design Speed
- Functional Classification
- Design Vehicle
- Clear Zone Width
- Roadway Elevation
- Horizontal and Vertical Alignment

- Drainage Criteria
- Pond Design Criteria
- Lane Widths
- Pavement Structure Design
- Bicycle Lanes
- Medians
- Shoulders
- Intersection Radii
- Access Management
- Signing & Pavement Marking
- Superelevation
- Sight Distance
- Grades
- Border Widths
- Roadway Cross-slopes
- Traffic Analysis Methodology
- Maintenance of Traffic Design
- Structural Design
- Americans With Disabilities Act Elements

Task 2: INTERSECTION DESIGN ANALYSIS

Pavement Design Memo: The CONSULTANT shall evaluate the pavement design selections and all necessary coordination to resolve issues related to pavement design when provided by the COUNTY. Initial set-up includes collecting all data necessary for entire project limits. A final pavement design memo shall be generated and placed in the file.

15% Line & Grade: The CONSULTANT shall develop and provide to the COUNTY a “15%” line and grade submittal for review and approval prior to proceeding with 60% design and plans. The submittal will include a continuous roll of plan and profile views. The horizontal alignment or plan portion shall include as a minimum: entire mainline baseline and or centerline of construction with the proposed sidewalks, existing topography; existing and proposed right-of-way limits; begin and end transitions, begin and end project limits, geometric parameters. Plan scale should be 1" = 40' for rural facilities. The vertical alignment or profile grade shall also be plotted on this roll in the profile portion (lower half of sheet). The proposed profile shall indicate respective geometric controls such as length of vertical curves, vertical points of intersections, and percent grades. Existing ground line shall also be shown as a reference in the profile portion. The profile stationing shall depict formats with beginning and ending stations with intermediate tick marks matched with the plan portion along the alignment, or as close as possible in curved alignments. Profile scale should be the same as is for horizontal but 10% of the horizontal assigned for vertical. (e.g. Plan: 1" = 40'; Profile: 1" = 40' Horizontal and 1"= 10' Vertical). The profile portion shall also indicate drainage basin(s) delimited by station call-outs just above the profile. Cross drain(s) and or Design High Water(s) shall be shown in the profile portion as well. The submittal shall also include a summary of design criteria used to establish the horizontal and vertical alignments. Examples of such parameters include but are not limited to: Intersection sight distance; design speed; design vehicle; stopping sight distance; decision sight distance; length of horizontal and vertical curves; etc. Any anticipated design variations and or design exceptions should also be listed.

The CONSULTANT shall provide a typical section package with the 15% Line and Grade submittal. The typical section shall be developed and obtain approval by the COUNTY. The typical section package must meet County standards and meet requirements from the selected alternatives established in the pre-scoping

meeting.

The CONSULTANT shall prepare an assessment of the following items:

- Environmental impacts
- Cost Estimate
- Typical Section Package
- Consistency with 2035 Pinellas County LRTP

Horizontal/Vertical Master Design Files: The CONSULTANT shall design the geometrics based on the selected alternatives established in the previous studies and pre-scoping meeting using the design standards that give proper consideration to the adjacent land use, design consistency and driver expectancy, aesthetics, pedestrian and bicycle concerns, ADA requirements, elder road user policy, and scope of work. At a minimum, the Florida Greenbook Standards (2013) shall be met. This includes all work to create elements showing the alignment for both horizontal and vertical geometries in plan and profile portion of plan sheets. Includes efforts required to place labels and required information in accordance with the COUNTY'S CADD manual in master design file.

Cross Section Design Files: The CONSULTANT shall establish and develop cross section design files in accordance with the COUNTY Civil 3D CADD manual and FDOT Plans Preparation manual. Assume sections every 50 ft. for earthwork.

Traffic Control Analysis: The CONSULTANT shall design a safe and effective Traffic Control Plan to move vehicular and pedestrian traffic during all phases of construction. The design shall include construction phasing of roadways ingress and egress to existing property owners and businesses, routing, signing and pavement markings, and detour quantity tabulations. Special consideration shall be given to the construction of the drainage system when developing the construction phases. Positive drainage shall be maintained at all times.

Design Report: The CONSULTANT also shall develop project specific design criteria which shall be included in the design report. The CONSULTANT shall evaluate the approved intersection geometrics approved by the COUNTY documented in the prior Engineering Studies for the purpose of estimating design and construction needs based on initial observations. The CONSULTANT shall recommend to the COUNTY, either correction of any deficiencies, or obtaining the appropriate design variation or exceptions.

The CONSULTANT shall submit a request for variance for design criteria not conforming to the minimum requirements of the FDOT Greenbook or Pinellas County Land Development Code.

The CONSULTANT shall submit to the COUNTY design notes, data, and calculations to document the design conclusions reached during the development of the contract plans.

The design notes, data, and computations shall be recorded on size 8-1/2"x11" sheets, fully titled, numbered, dated, indexed and signed by the designer and the checker. Computer output forms and other oversized sheets shall be folded to 8-1/2"x11" size. The data shall be in a hardback folder for submittal to the COUNTY.

Engineer's Estimate & Quantities: The CONSULTANT shall prepare an estimate of probable construction costs for the design. The CONSULTANT shall utilize existing cost data available from the COUNTY and FDOT Construction Contract History as applicable.

CONSULTANT shall prepare bid quantities that include all bid items, which comprise the project design. Bid items shall include reference to applicable COUNTY & FDOT Measurement and Payment items. Bid

proposal sheets to be included in the contract documents shall be prepared by the COUNTY based on the CONSULTANT'S quantities. The Consultant shall also provide supporting quantities take-off calculations with a summary of each pay items on size 8 1/2" x 11" sheets fully folded, numbered, dated, indexed and signed by the designer and the checker. Oversized sheets shall be folded to 8 1/2" x 11" size.

Preliminary bid quantities shall be submitted with the 15% Line & Grade and 60% design review submittals. Final bid quantities shall be submitted with the 100% design review submittal. Preliminary opinion of probable construction costs shall be submitted with the 60% design review submittal. Final construction costs opinion based on the final bid quantities shall be submitted with the 100% design review submittal. Construction costs are to be based on the most current costs obtained from the FDOT Construction Contract and County bid pay item history.

Right-Of-Way Consideration: The CONSULTANT shall establish right of way requirements at locations where insufficient right-of-way is available to construct the proposed sidewalk. The COUNTY shall then provide direction and coordinate with the property owners on how to proceed with these locations.

Roadway Field Reviews: The CONSULTANT shall conduct one (1) site review prior to the 15% Line and Grade submittal, 60% plans submittal, and 100% plans submittal and attend two (2) phase review meetings.

Task 3: DRAINAGE ANALYSIS

Data Collection: The CONSULTANT shall review all existing plans, documentation, and reports to determine current drainage patterns and systems.

Hydraulic Analysis: The proposed box culvert crossing improvements at Long Branch will be analyzed for upstream and downstream water surface elevations, velocities, and flows. A bridge culvert hydraulic analysis will evaluate the proposed bridge culvert to determine if the channel and adjacent properties upstream and downstream will be negatively impacted by certain storm events. The water surface elevation resulting from the 100-year flood event defines the base flood plain that should not be raised upstream or downstream of the bridge culvert. If fill or other volume encroaches into the floodplain, an equal compensating volume should be excavated within the impacted floodplain basin so water surfaces will not rise. The existing crossing will be analyzed to determine the baseline flood elevations.

There are two interconnected stormwater ponds located north and south of Whitney Road and east of Long Branch Creek. At least one pond will be impacted due to the roadway realignment shift. As part of the design they will be analyzed and modified to function as permitted.

Channel Restoration Design: The proposed hydraulics shall also consider fill along the west bank of the creek and excavation to restore the channel to its historic condition. Velocities from this hydraulic model will be used to determine erosion protection requirements along the west bank of the channel.

The existing ditch along the south side of Whitney Road, between Long Branch Lane/Oak Street North and Long Branch Creek, is part of the Long Branch Creek Watershed modeled for the Pinellas County Watershed Management Divisions using "Interconnected Pond Routing" (ICPR). This model will be modified to include the improvements proposed for this project. Information from field surveys and Geographic Information System (GIS) will be used in developing the proposed ICPR model for the proposed design.

Drainage Design Documentation Report: The CONSULTANT shall compile drainage design

documentation into report format. The documentation will include necessary drainage analyses, their results, and design tasks listed below and associated meetings minutes and decisions. The drainage analysis will include preparation of working drawings to identify the drainage areas which drain to the impacted inlets for use in sizing any new inlets and stormdrain pipes required. Calculations for any new inlets and stormdrain pipes shall be performed for sizing these facilities and shall be included in a technical memorandum/report. In locations where proposed curbing is to be added in conjunction with the added sidewalk, spread of flow calculations shall be provided in accordance with COUNTY Stormwater requirements described in the code of ordinances.

The drainage design shall have the following features: is consistent with requirements of FDEP, SWFWMD and USACOE. Pinellas County and any other regulatory agencies which have jurisdiction over the project; additionally is consistent with requirements the COUNTY Stormwater related criteria in the County's code of ordinance; utilizes existing facilities where possible; is cost effective; does not create flooding problems upstream or downstream; provides for safety of roadway users; and is consistent with work being performed by other municipalities, regulatory agencies and private developments in the area. The CONSULTANT shall be responsible for coordinating with projects or work being performed in the area.

Drainage Field Reviews & Technical Meetings: The CONSULTANT shall conduct two (2) drainage field reviews and attend two (2) phase review meetings and one (1) WMD meeting.

Task 4: ENVIRONMENTAL PERMITTING

Permitting and Environmental Assessment: The CONSULTANT shall prepare permit applications, technical data and supporting documentation for all state and federal permits to be submitted by the COUNTY.

The COUNTY shall establish the landward extent of state and federal jurisdictional wetlands and surface waters pursuant to all current state and federal regulations and standards.

The CONSULTANT shall conduct an environmental analysis (and in-water surveys if necessary) to identify endangered or threatened species, species of special concern, and the presence or absence of submerged aquatic vegetation, within the proposed project limits.

The CONSULTANT shall develop conservation measures to mitigate for impacts to protected species and management strategies to insure that protected species are not adversely affected during construction.

The CONSULTANT shall prepare assessments of the value of wetlands proposed for impact. Assessments shall be done using the current Uniform Mitigation Assessment Methodology (UMAM), or other current method required by SWFWMD and the USACE.

The CONSULTANT shall prepare a Technical Memorandum for the COUNTY detailing the results of the environmental analysis.

The CONSULTANT shall submit a completed permit applications to the COUNTY for review and signature after receiving and incorporating comments from the 60% design QC review, unless agreed upon otherwise by the COUNTY. Upon approval of permit applications, the CONSULTANT shall submit all applicable permits to the appropriate agencies.

All permit and wetland and protected species mitigation fees shall be paid for by the COUNTY.

Meetings: Upon completion of the 15% Line & Grade phase, the CONSULTANT shall contact the COUNTY Permit Coordinator to schedule a pre-application meeting with applicable permitting agencies to identify specific permitting requirements for the project.

The CONSULTANT shall attend the pre-application meetings with COUNTY staff and provide a meeting agenda to the COUNTY for review 2 business days prior to the meeting. The CONSULTANT shall provide written minutes within 7 business days of the meeting for COUNTY approval prior to distribution to attendees.

The CONSULTANT shall conduct a field review with COUNTY and permit agencies staff to verify the limits of the surveyed jurisdictional limits and to determine the applicability of permits.

Coordination: The CONSULTANT shall coordinate with the COUNTY Permit Coordinator until all permits are obtained.

The CONSULTANT shall prepare responses to all agency requests for additional information (RAI), including completion of design revisions that may be required to secure the required permits, and provide a response package to COUNTY Permit Coordinator.

The CONSULTANT shall coordinate with COUNTY Permit Coordinator to meet with the regulatory agencies as necessary to resolve permitting issues.

The COUNTY will stake and survey the existing wetlands with input.

Task 5: TRAFFIC ANALYSIS

Signing & Pavement Marking Analysis: At the intersection where cross walks or curb ramps shall need to be added or realigned the CONSULTANT shall provide yellow truncated domes/detectable warnings, analyze and document, Signing and Pavement Markings Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

Reference and Master Design File- the CONSULTANT shall prepare the Signing & Pavement Marking Design file to include all necessary design elements and all associated reference files.

Quantities - The CONSULTANT shall provide quantity take off for the project at 60% Plans, 100% Plans and Final Plans for the signing and pavement-marking component of the entire project.

Signing & Pavement Marking Field Reviews: The CONSULTANT shall conduct two (2) field reviews.

Task 6: MISC. STRUCTURES

Structures plans and design documentation shall be developed in accordance with:

1. Florida Greenbook
2. AASHTO LRFD Bridge Design Specifications

Plans shall be developed utilizing FDOT Standard Indexes.

Box Culvert Extension: Box culvert design shall be developed utilizing FDOT's LRFD Box Culvert Design Program. Plans will include a box culvert data table which references FDOT Standard Index 289.

Retaining Wall/Gravity Wall: Retaining wall design shall be developed utilizing FDOT's LRFD Retaining Wall Design Program or hand calculations. Plans will include a retaining wall data table which references

FDOT Standard Index 6010 or 6011. A wall control drawing will be included for retaining walls which indicates beginning, end, top, and bottom of wall along with ground line at face of wall.

Structural Field Reviews & Technical Meetings: The CONSULTANT shall conduct two (2) structure field reviews and attend two (2) Technical meeting reviews (1 prior to 60%, 1 prior to 100%) regarding structural design.

Task 7: UTILITY COORDINATION ASSISTANCE

Utility Coordination –COUNTY is responsible for coordinating its design work with the public and private utility agencies and companies having existing and/or planned facilities within the limits of the project. COUNTY shall provide the utility agencies and companies' plans at the 60% and 100% design phases, as drafted by the CONSULTANT. After the 60% design phase, the utility agencies and companies shall be instructed to return one set of plans to the COUNTY showing their utilities relocation, adjustment and new facilities designs, and existing utilities to remain. COUNTY'S utility coordination responsibilities shall continue throughout the design process to assist with resolving utilities conflicts.

Utility Adjustment Plans - CONSULTANT shall prepare utility adjustments on the roadway plans to show existing public and private utilities to remain, detailed design of utilities to be relocated and utilities to be removed. Utility adjustment plans shall be prepared on screened reproducible copies of the roadway plan and cross sections sheets and shall be made part of the roadway plans. The 60% design review submittal shall include all existing utilities drawn on the roadway plans, cross section and drainage structure sheets. CONSULTANT is to identify all potential conflicts based on the information provided by the utility agencies and companies and horizontal and vertical field investigations. The 100% design review submittal shall include utility adjustment plans that reflect the final disposition of all public and private utilities. Any subsequent utilities conflicts are to be resolved and all final design revisions complete, at the final design submittal.

Utility Coordination Meetings - CONSULTANT shall attend utility coordination meetings to be held within thirty days of the 60% and 100% design review submittals. COUNTY shall be responsible for organizing these meetings. CONSULTANT shall prepare detailed meeting minutes and distribute to all attendees. Representation at the meeting should consist of all Utility Companies/Agencies, Project Manager, and support services as necessary. The County shall moderate the meeting and discuss the design with particular emphasis on drainage, maintenance of traffic and traffic signalization. Additional discussion on special construction activities, project scheduling, and agreement options available, shall be addressed. Based on commitments made at the Utility Pre-Design Meeting, the CONSULTANT shall prepare and distribute minutes and recommended course of action to accomplish each item to each utility located on the project.

The CONSULTANT shall determine areas of apparent potential conflict and request that the COUNTY schedule subsurface utility excavation to confirm whether or not a conflict exists and degree of conflict. A report itemizing utility conflicts by company, shall be prepared by the CONSULTANT, and mailed to each utility located on the project. Four weeks, on an average, shall be allowed the Utility to respond with their color- coded plans submittal.

Final Agreements to Utilities (100% Plans) - The COUNTY shall transmit the necessary legal drafts, plans, and documents to each Utility Company/Agency as required. One complete set of plans and one partial set of plans (Key Sheet, Typical Section, and Plan and Profile Sheets) shall be furnished to each involved utility agency. The partial plan set shall be color coded by the utility company showing proposed relocation and returned to be transmitted per the COUNTY'S Engineer or designee.

Review and Acceptance - The CONSULTANT shall be responsible for making all necessary reviews and acceptance of utility related materials

Task 8: GEOTECHNICAL INVESTIGATION

The CONSULTANT shall be responsible for a limited geotechnical investigation. All work performed by the CONSULTANT shall be in accordance with County standards, or as otherwise directed. The SUB CONSULTANT specific scope and proposal can be found in **Appendix 1** of this Document.

Task 9: DESIGN PLANS

Roadway Plans: The CONSULTANT shall prepare roadway construction plans within the project limits. These plans shall be in accordance with the Plans Preparation Manual and County standards that includes the following:

- a. Key sheet
- b. Box Culvert Detail
- c. Retaining Wall Details
- d. Pay Item Notes
- e. Typical Sections
- f. Typical Section Details
- g. General Notes
- h. Roadway Plan
- i. Roadway Profile
- j. Curb return profiles
- k. Back of Sidewalk Profiles
- l. Ditch Profiles
- m. Drainage structures sheets
- n. Soil Boring Logs
- o. Pond Plan
- p. Canal Grading Plan
- q. Roadway cross sections & Driveways
- r. Stormwater Pollution Prevention Plan
- s. Erosion Control Plans
- t. Temporary Traffic Control Plans
- u. Utility Adjustment Plans
- v. Signing and Pavement Markings Plans
- w. General Notes
- x. Plan and Elevation
- y. Report of Core Borings
- z. Rubble Riprap Details/Geotextile Key-In Details
- aa. Bridge Culvert Table
- bb. Reinforcing Bar List

Task 10: OPTIONAL SERVICES

The COUNTY shall evaluate early in the design phase whether these task below shall be performed by the CONSULTANT. The project manager shall provide authorization if these services shall be implemented.

Design of Flood Plain Compensation Area: The CONSULTANT shall determine flood plain encroachments, coordinate with regulatory agencies, and develop proposed compensation area(s) layout (shape, contours, slopes, etc.) and document the design following the requirements of the regulatory agency.

Design of Mitigation Area: If mitigation for wetland impacts is required, and the use of a private mitigation bank or previously permitted COUNTY mitigation area is not utilized, the CONSULTANT shall prepare mitigation planting plans, narratives, and other documentation that may be required by the permitting agencies. CONSULTANT shall coordinate with COUNTY Permit Coordinator to submit mitigation plans to the permitting agencies.

Although not required by permitting agencies, COUNTY requires all wet littoral ponds be planted. As such, CONSULTANT shall prepare planting plans for wet littoral ponds and provide to COUNTY Permit Coordinator. This deliverable shall be separate from, and in addition to, the construction plans.

Public Involvement Meeting Support: Includes Coordination and preparation of a roll plot with design overlay shall be created for public open house meeting. A frequently Asked questions handout shall be created and used at the open house. Other activities may include coordination and review of materials such as: meeting notification mailing (assemble and mail); newspaper display ad; meeting exhibits; sign-in sheet; comment form; flyer preparation; fact sheet; site selection and development of meeting layout.

Task includes set-up, attendance at the public meeting and preparation of a meeting summary. The summary scrapbook includes a copy of all slides, boards, handouts, completed sign-in sheets and completed comment forms. At least two participants shall be required at meetings.

Task 11: OPTIONAL SERVICES (Time & Materials)

The CONSULTANT shall provide any exhibits required for acquisition of easements and/or Right of Way. Exhibits shall be hard copy and/or electronic format as directed by the COUNTY. Compensation for this work shall be Time & Materials. The CONSULTANT shall provide appropriate timesheets when invoicing under this task.

V. COMPENSATION

The CONSULTANT shall provide the above outlined Basic Services for the following fixed fee or estimate amounts.

| | | | |
|-----------|-----------------------------------|---------------------|------------------|
| Task 1 | General Task | <u>\$21,848.00</u> | Lump Sum |
| Task 2 | Intersection Design Analysis | <u>\$84,205.000</u> | Lump Sum |
| Task 3 | Drainage Analysis | <u>\$27,906.00</u> | Lump Sum |
| Task 4 | Environmental Permitting | <u>\$10,655.00</u> | Lump Sum |
| Task 5 | Traffic Design | <u>\$9,178.00</u> | Lump Sum |
| Task 6 | Misc. Structures | <u>\$33,037.00</u> | Lump Sum |
| Task 7 | Utility Coordination Assistance | <u>\$15,464.00</u> | Lump Sum |
| Task 8 | Geotechnical Investigation | <u>\$13,199.23</u> | Lump Sum |
| Task 9 | Design Plans | <u>\$47,657.00</u> | Lump Sum |
| Task 10 | Optional Services | <u>\$23,000.00</u> | Lump Sum |
| Task 11 | Optional Services (Not to Exceed) | <u>\$10,000.00</u> | Time & Materials |
| | | | Under Section V |
| | | | Compensation |
| <hr/> | | | |
| Total Fee | | <u>\$296,149.23</u> | Lump Sum |

VI. SCHEDULE

The conceptual plan and preliminary design and construction cost opinion shall be provided to the COUNTY within eight weeks from receipt of survey. The CONSULTANT shall also provide a Microsoft Project Schedule (using the COUNTY provided template) with updates to be included with each monthly invoice submittal.

CONSULTANT'S services shall commence upon receipt of written notice to proceed issued by COUNTY. CONSULTANT shall complete the final design in accordance with the following or better project schedule:

PROJECT SCHEDULE

| <u>Milestone</u> | <u>Due Date After receive the Survey</u> |
|---|--|
| 15% Complete Plans Submittal 15 day COUNTY review | 61 Calendar Days |
| 60% Complete Plans Submittal 30 day COUNTY review | 152 Calendar Days |
| 100% Complete Plans Submittal 30 day COUNTY review | 274 Calendar Days |
| Final Plans Submittal | 305 Calendar Days |

COUNTY design review period is twenty-one calendar days from the date of each milestone submittal. The CONSULTANT shall also provide responses to COUNTY comments for the various required submittals. Any other delays beyond CONSULTANT'S control shall be documented in writing by CONSULTANT and submitted to COUNTY for consideration to grant a schedule time extension.

Roadway Plans design reviews shall occur at the 15% line and grade, 60% Phase, 100% phases and final complete phases. CONSULTANT shall submit a draft of the special conditions with the 60% design review submittal and final versions at the 100% design review submittal. Bid quantities and opinion of probable construction cost shall be submitted. The requirements for each design review shall be as specified in the COUNTY'S "Checklists for Design Review Submittals". CONSULTANT shall continue its design work during the review periods. CONSULTANT shall respond to the COUNTY'S design review comments in writing and by making corresponding revisions to the plans. Written responses and plans revisions are to be included with the next design review submittal. CONSULTANT shall respond to regulatory agencies review comments in the same manner. Design revisions are to be completed by CONSULTANT at no additional time and/or cost unless the revisions result from COUNTY making changes to the horizontal or vertical alignment or other changes or similar impact to the project design. In such cases, COUNTY shall evaluate the CONSULTANT'S request for additional time and/or compensation. COUNTY may require CONSULTANT to make plans revisions and resubmit the plans at the same phase of completion if it is found that the plans do not meet the requirements of the "Checklist for Review Submittals". No additional time shall be allotted to the CONSULTANT'S schedule if a resubmittal is required.

VII. INVOICES & PROGRESS REPORTS

Invoicing shall take place monthly and will include a progress report summarizing the work completed during the invoice period as well as a schedule update. The CONSULTANT shall pre-submit invoices to the Project Manager prior to an official monthly submittal. The final invoice will be marked "FINAL" on the invoice and be accompanied by a letter from the CONSULTANT stating that this is the Final Invoice and that compensation for tasks completed, as described in the Scope of Services Agreement, is now concluded.

APPENDIX 1: GEOTECHNICAL SERVICES

Geotechnical services will be provided to support the proposed roadway improvements, which include widening and/or realignment of Whitney Road at the intersection of Wolford Road. The limits of proposed improvements is approximately 2500 feet along Whitney Road and approximately 550 feet along Wolford Road, and is to include milling and resurfacing of the existing pavement sections.

In order to meet the preceding objectives, we propose to provide the following services:

1. Review published soils and topographic information. This published information will be obtained from the appropriate Florida Quadrangle Map published by the United States Geological Survey (USGS) and the Soil Survey for Pinellas County, published by the United States Department of Agriculture (USDA) Soil Conservation Service (SCS).
2. Perform site reconnaissance, coordinate utility clearances with Sunshine One Call and provided maintenance of traffic (MOT) activities, as required.
3. Execute a program of subsurface exploration consisting of borings and subsurface sampling along the limits of the proposed roadway widening, including:
 - a. A total of six (6) pavement cores through the existing asphalt and base materials, to be determined in the field, along the limits of the proposed roadway improvements. At each core location, a hand auger boring will be completed to a depth of approximately 4 feet below the pavement section to determine base thickness and subgrade type, if apparent.
 - b. A total of fifteen (15) hand auger borings to a depth of five feet. The hand augers will be performed in accessible areas within the footprint of the proposed roadway improvements to explore subsurface and groundwater conditions.
 - c. One (2) Standard Penetration Test (SPT) boring to a depth of 25 feet below existing grades at the location of the box culvert extension.
 - d. A total of two (2) SPT borings to a depth of 25 feet below existing grades along the limits of the proposed retaining wall system alignments.
4. Visually classify the soil samples in the laboratory using the American Association of State and Highway Transportation Officials (AASHTO) classification system and/or Unified Soil Classification System (USCS). Identify soil conditions at each core/boring location. Visually classify the pavement mixtures obtained in each core sample using FDOT asphalt mixture nomenclature. Perform grain-size analyses on soil samples for D_{50} particles size scour recommendations.
5. Collect groundwater level measurements and estimate the Seasonal High Groundwater Table (SHGWT) along the limits of the proposed improvements.
6. Prepare a formal engineering report that summarizes the course of study pursued, the field data generated and subsurface conditions encountered in each of the pertinent topic areas.

EXHIBIT B(1)

Project Staff Hour Summary

Name of Consultant:

Volkert, Inc

Sunset Point Road and Betty Lane Intersection

N/A

Form Revised 5/06/05

| Project Staff Hours | | | | | | | | | | | | | | | |
|----------------------|-----------------------------------|---------------|------------|------------|------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------|
| Activity No. | Activity | Volkert, Inc. | Scheda | Tierra | American Quality Consultants | Sub 4 | Sub 5 | Sub 6 | Sub 7 | Sub 8 | Sub 9 | Sub 10 | Sub 11 | Sub 12 | Total Hours |
| 3 | General Task | 132 | | | | | | | | | | | | | 132 |
| 4 | Roadway Analysis | 470 | | | | | | | | | | | | | 470 |
| 5 | Roadway Plans | 276 | | | | | | | | | | | | | 276 |
| 6 | Drainage Analysis | 188 | | | | | | | | | | | | | 188 |
| 7 | Utility | 96 | | | | | | | | | | | | | 96 |
| 8 | Permits | | 111 | 50 | | | | | | | | | | | 161 |
| 9 | Structural Analysis Summary | 55 | | | | | | | | | | | | | 55 |
| 10 | BDR | | | | | | | | | | | | | | 0 |
| 11 | Temporary Bridge | | | | | | | | | | | | | | 0 |
| 12 | Short Span Concrete | 24 | | | | | | | | | | | | | 24 |
| 13 | Medium Span Concrete | | | | | | | | | | | | | | 0 |
| 14 | Structural Steel | | | | | | | | | | | | | | 0 |
| 15 | Segmental Concrete | | | | | | | | | | | | | | 0 |
| 16 | Movable Span | | | | | | | | | | | | | | 0 |
| 17 | Retaining Walls | 60 | | | | | | | | | | | | | 60 |
| 18 | Miscellaneous Structures | 122 | | | | | | | | | | | | | 122 |
| 19 | Signing & Marking Analysis | 90 | | | | | | | | | | | | | 90 |
| 20 | Signing & Marking Plans | 24 | | | | | | | | | | | | | 24 |
| 21 | Signalization Analysis | | | | 160 | | | | | | | | | | 160 |
| 22 | Signalization Plans | 27 | | | | | | | | | | | | | 27 |
| 23 | Lighting Analysis | | | | | | | | | | | | | | 0 |
| 24 | Lighting Plans | | | | | | | | | | | | | | 0 |
| 25 | Landscape Architecture Analysis | | | | | | | | | | | | | | 0 |
| 26 | Landscape Architecture Plans | | | | | | | | | | | | | | 0 |
| 27 | Survey - Field and Office Support | 0 | | | | | | | | | | | | | 0 |
| 28 | Photogrammetry | | | | | | | | | | | | | | 0 |
| 29 | Mapping | | | | | | | | | | | | | | 0 |
| 30 | Geotechnical | | | 81 | | | | | | | | | | | 81 |
| 31 | Architecture | | | | | | | | | | | | | | 0 |
| 32 | Noise Wall Analysis | | | | | | | | | | | | | | 0 |
| Project Total | | 1,564 | 111 | 131 | 160 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,966 |
| 27 | Survey Field Crew Days | 0 | | | | | | | | | | | | | 0 |

- Notes
- 1 Staff hours for prime consultant come directly from each discipline's worksheet.
 - 2 Staff hours for subconsultants are to be entered manually into columns D through O.
 - 3 For workbooks prepared by subconsultants, their project hours will be totaled in column C.

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number N/A
FAP Number N/A

Project Name: Sunset Point Road and Betty Lane Int
Date: 2/3/2015 Name of Consultant: Volkert, Inc

| WORK ACTIVITY | Hours from "Summary" sheet | EMPLOYEE CLASSIFICATION | | | | | | | | | | | | TOTAL STAFF HOURS | | ON CADD |
|--|----------------------------------|-------------------------|-------------------|--------------------|---------------------|---------------------------|----------|-------|-------|-------|-------|-------|-------|----------------------|---------|---------|
| | Firm Total Hours | Project Manager | Chief Engineer | Senior Engineer | Project Engineer | Senior Engineerin g | Clerical | | | | | | | RANGE | | |
| | | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | PERCENT | |
| 3. Project General Tasks | 132 | 106 | 13 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 132 | 145 | |
| 4. Roadway Analysis | 470 | 24 | 47 | 235 | 94 | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 471 | 518 | |
| 5. Roadway Plans | 276 | 14 | 28 | 28 | 110 | 96 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 276 | 304 | |
| 6. Drainage Analysis | 188 | 9 | 19 | 56 | 46 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 186 | 205 | |
| 7. Utilities | 96 | 5 | 0 | 58 | 24 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 97 | 107 | |
| 8. Environmental Permits | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9. Structures - Misc Tasks Dwg Non-Tech. | 55 | 0 | 6 | 14 | 11 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 61 | |
| 10. Structures - BDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11. Structures - Temporary Bridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12. Structures - Short Span Concrete | 24 | 0 | 1 | 5 | 6 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 26 | |
| 13. Structures - Medium Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 14. Structures - Structural Steel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 15. Structures - Segmental Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 16. Structures - Movable Span | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 17. Structures - Retaining Walls | 60 | 0 | 3 | 12 | 14 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 59 | 65 | |
| 18. Structures - Miscellaneous | 122 | 0 | 6 | 31 | 31 | 55 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 123 | 135 | |
| 19. Signing & Marking Analysis | 90 | 5 | 9 | 36 | 23 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 100 | |
| 20. Signing & Marking Plans | 24 | 1 | 2 | 1 | 5 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 25 | |
| 21. Signalization Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 22. Signalization Plans | 27 | 1 | 3 | 1 | 6 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 30 | |
| 23. Lighting Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 24. Lighting Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 25. Landscape Architecture Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 26. Landscape Architecture Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 27. Survey (Field & Office Support) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 28. Photogrammetry | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 29. Mapping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 30. Geotechnical | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 31. Architecture Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 32. Noise Wall Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| TOTALS | 1,564 | 165 | 137 | 477 | 370 | 402 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 1,564 | 1,721 | |

Notes

- This worksheet provides the distribution of a firm's total staff hours for a project.
- Percentages for staff hour distribution by classification are entered below in rows 35 to 34 of this sheet.
- Total Staff Hours (column P) may not match staff hours from Summary Worksheet (column G) due to rounding. Staff hours calculated for employees classifications are to be adjusted so totals in columns C and P match.
- Formulas under "Total Staff Hours Range" (columns P & Q) may be adjusted to provide desired range.

Field Survey Estimate

0 4-man crew days

FIRM TOTAL

1,564 1,721

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number N/A

Project Name Sunset Point Road and Betty Lane Int

FAP Number N/A

Date 2/3/2015

Name of Consultant Volkert, Inc

| Staff Hour Distribution Percentages - Firm Total | | | | | | | | | | | | | | |
|--|--|--------------------|-------------------|--------------------|---------------------|-------------------------------|----------|------|------|------|------|------|------|---------|
| | Hours from "Summary" sheet Firm Total | Project Manager | Chief Engineer | Senior Engineer | Project Engineer | Engineerin g Technician | Clerical | | | | 0 | 0 | 0 | Total |
| 3. Project General Tasks | 132 | 80.0% | 10.0% | 0.0% | 0.0% | 0.0% | 10.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 4. Roadway Analysis | 470 | 5.0% | 10.0% | 50.0% | 20.0% | 15.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 5. Roadway Plans | 276 | 5.0% | 10.0% | 10.0% | 40.0% | 35.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 6. Drainage Analysis | 188 | 5.0% | 10.0% | 30.0% | 25.0% | 30.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 7. Utilities | 96 | 5.0% | 0.0% | 60.0% | 25.0% | 10.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 8. Environmental Permits | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 9. Structures - Misc. Tasks Dwgs Non-Tech | 55 | 0.0% | 10.0% | 25.0% | 20.0% | 45.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 10. Structures - BDR | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 11. Structures - Temporary Bridge | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 12. Structures - Short Span Concrete | 24 | 0.0% | 5.0% | 20.0% | 25.0% | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 13. Structures - Medium Span Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 14. Structures - Structural Steel | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 15. Structures - Segmental Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 16. Structures - Movable Span | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 17. Structures - Retaining Walls | 60 | 0.0% | 5.0% | 20.0% | 25.0% | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 18. Structures - Miscellaneous | 122 | 0.0% | 5.0% | 25.0% | 25.0% | 45.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 19. Signing & Marking Analysis | 90 | 5.0% | 10.0% | 40.0% | 25.0% | 20.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 20. Signing & Marking Plans | 24 | 5.0% | 10.0% | 5.0% | 20.0% | 60.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 21. Signalization Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 22. Signalization Plans | 27 | 5.0% | 10.0% | 5.0% | 20.0% | 60.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 23. Lighting Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 24. Lighting Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 25. Landscape Architecture Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 26. Landscape Architecture Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 27. Survey (Field & Office Support) | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 28. Photogrammetry | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 29. Mapping | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 30. Geotechnical | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 31. Architecture Development | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 32. Noise Wall Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: N/A

Project Name: Sunset Point Road and Betty Lane Int

FAP Number: N/A

Date: 2/3/2015

Name of Consultant: American Quality Consultant

| WORK ACTIVITY | Hours from "Summary" sheet | EMPLOYEE CLASSIFICATION | | | | | | | | | | | TOTAL STAFF HOURS | | ON CADD |
|---|----------------------------------|-------------------------|--------------------|---------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|----------------------|---------|---------|
| | | Chief Engineer | Senior Engineer | Project Engineer | Senior Engineer g | | | | | | | | | | |
| | Firm Total Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | RANGE | PERCENT | |
| 3. Project General Tasks | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4. Roadway Analysis | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5. Roadway Plans | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6. Drainage Analysis | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7. Utilities | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8. Environmental Permits | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9. Structures - Misc. Tasks Dwgs Non-Tech | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10. Structures - BDR | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11. Structures - Temporary Bridge | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12. Structures - Short Span Concrete | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 13. Structures - Medium Span Concrete | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 14. Structures - Structural Steel | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 15. Structures - Segmental Concrete | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 16. Structures - Movable Span | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 17. Structures - Retaining Walls | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 18. Structures - Miscellaneous | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 19. Signing & Marking Analysis | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 20. Signing & Marking Plans | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 21. Signalization Analysis | 160 | 24 | 40 | 48 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 160 | 176 | |
| 22. Signalization Plans | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 23. Lighting Analysis | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 24. Lighting Plans | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 25. Landscape Architecture Analysis | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 26. Landscape Architecture Plans | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 27. Survey (Field & Office Support) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 28. Photogrammetry | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 29. Mapping | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 30. Geotechnical | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 31. Architecture Development | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 32. Noise Wall Analysis | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| TOTALS | 160 | 24 | 40 | 48 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 160 | 176 | |

Notes

- This worksheet provides the distribution of a firm's total staff hours for a project.
- Percentages for staff hour distribution by classification are entered below in rows 58 to 64 of this sheet.
- Total Staff Hours (column P) may not match staff hours from Summary worksheet (column C) due to rounding. Staff hours calculated for employee classifications are to be adjusted so totals in columns C and P match.
- Formulas under "Total Staff Hours Range" (columns P & Q) may be adjusted to provide desired range.

Field Survey Estimate

0 4-man crew days

FIRM TOTAL 160 176

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number N/A

Project Name Sunset Point Road and Betty Lane Int

FAP Number N/A

Date 2/3/2015

Name of Consultant American Quality Consultant

| Staff Hour Distribution Percentages - Firm Total | | | | | | | | | | | | | |
|--|--|-------------------|--------------------|---------------------|-------------------------------|------|------|------|------|------|------|------|---------|
| | Hours from "Summary" sheet Firm Total | Chief Engineer | Senior Engineer | Project Engineer | Engineerin g Technician | | | | | 0 | 0 | 0 | Total |
| 3. Project General Tasks | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 4. Roadway Analysis | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 5. Roadway Plans | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 6. Drainage Analysis | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 7. Utilities | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 8. Environmental Permits | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 9. Structures - Misc. Tasks, Dwgs Non-Tech | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 10. Structures - BDR | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 11. Structures - Temporary Bridge | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 12. Structures - Short Span Concrete | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 13. Structures - Medium Span Concrete | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 14. Structures - Structural Steel | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 15. Structures - Segmental Concrete | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 16. Structures - Movable Span | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 17. Structures - Retaining Walls | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 18. Structures - Miscellaneous | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 19. Signing & Marking Analysis | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 20. Signing & Marking Plans | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 21. Signalization Analysis | 160 | 15.0% | 25.0% | 30.0% | 30.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 22. Signalization Plans | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 23. Lighting Analysis | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 24. Lighting Plans | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 25. Landscape Architecture Analysis | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 26. Landscape Architecture Plans | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 27. Survey (Field & Office Support) | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 28. Photogrammetry | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 29. Mapping | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 30. Geotechnical | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 31. Architecture Development | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 32. Noise Wall Analysis | | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number N/A
FAP Number N/A

Project Name: Sunset Point Road and Betty Lane Int
Date: 2/3/2015
Name of Consultant: Scheda

| WORK ACTIVITY | Hours from "Summary" sheet | EMPLOYEE CLASSIFICATION | | | | | | | | | | | | TOTAL STAFF HOURS | | ON CADD |
|--|----------------------------------|-------------------------|---------------------|---------------------------------|-----|----------|---|---|---|---|---|---|---|----------------------|-----|---------|
| | Firm Hours | Chief Scientist | Senior Scientist | Environme ntal Specialist | GIS | Clerical | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 3. Project General Tasks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4. Roadway Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5. Roadway Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6. Drainage Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7. Utilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8. Environmental Permits | 111 | 11 | 44 | 44 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 110 | 121 | |
| 9. Structures - Misc. Tasks Dwgs Non-Tech. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10. Structures - BDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11. Structures - Temporary Bridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12. Structures - Short Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 13. Structures - Medium Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 14. Structures - Structural Steel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 15. Structures - Segmental Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 16. Structures - Movable Span | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 17. Structures - Retaining Walls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 18. Structures - Miscellaneous | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 19. Signing & Marking Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 20. Signing & Marking Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 21. Signalization Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 22. Signalization Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 23. Lighting Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 24. Lighting Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 25. Landscape Architecture Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 26. Landscape Architecture Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 27. Survey (Field & Office Support) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 28. Photogrammetry | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 29. Mapping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 30. Geotechnical | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 31. Architecture Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 32. Noise Wall Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| TOTALS | 111 | 11 | 44 | 44 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 110 | 121 | |

Notes

1. This worksheet provides the distribution of a firm's total staff hours for a project.
2. Percentages for staff hour distribution by classification are entered below in rows 35 to 38 of this sheet.
3. Total Staff Hours (column P) may not match staff hours from Summary worksheet (column Q) due to rounding. Staff hours calculated for employee classifications are to be adjusted so totals in columns C and P match.
4. Formulas under "Total Staff Hours Range" (columns P & Q) may be adjusted to provide desired range.

Field Survey Estimate:

0 4-man crew days

FIRM TOTAL

110

121

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: N/A

Project Name: Sunset Point Road and Betty Lane Int

FAP Number: N/A

Date: 2/3/2015

Name of Consultant: Scheda

| Staff Hour Distribution Percentages - Firm Total | | | | | | | | | | | | | | |
|--|--|--------------------|---------------------|---------------------------------|------|----------|------|------|------|------|------|------|------|---------|
| | Hours from "Summary" sheet Firm Total | Chief Scientist | Senior Scientist | Environme ntal Specialist | GIS | Clerical | | | | | | | | Total |
| 3. Project General Tasks | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 4. Roadway Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 5. Roadway Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 6. Drainage Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 7. Utilities | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 8. Environmental Permits | 111 | 10.0% | 40.0% | 40.0% | 9.0% | 1.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 9. Structures - Misc. Tasks Dwgs. Non-Tech | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 10. Structures - BDR | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 11. Structures - Temporary Bridge | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 12. Structures - Short Span Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 13. Structures - Medium Span Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 14. Structures - Structural Steel | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 15. Structures - Segmental Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 16. Structures - Movable Span | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 17. Structures - Retaining Walls | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 18. Structures - Miscellaneous | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 19. Signing & Marking Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 20. Signing & Marking Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 21. Signalization Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 22. Signalization Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 23. Lighting Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 24. Lighting Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 25. Landscape Architecture Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 26. Landscape Architecture Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 27. Survey (Field & Office Support) | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 28. Photogrammetry | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 29. Mapping | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 30. Geotechnical | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 31. Architecture Development | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 32. Noise Wall Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: N/A

FAP Number: N/A

Project Name: Sunset Point Road and Betty Lane Int

Date: 2/3/2015

Name of Consultant: Tierra

| WORK ACTIVITY | Hours from "Summary" sheet | EMPLOYEE CLASSIFICATION | | | | | | | | | | | | | TOTAL STAFF HOURS | | ON CADD |
|--|----------------------------------|-------------------------|-------|--------------------|-------------------------------|---------------------|--------------------|------------------------|---------------------------|-------------------------------|-----------------------|-------|-------|-------|----------------------|-----|---------|
| | | Firm | | Project Manager | Senior Project Engineer | Project Engineer | Engineer Intern | Computer Technician | Senior Engineerin g | Engineerin g Technician | Secretary Clerical | | | | | | |
| | | Hours | Total | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | RANGE | | |
| 3. Project General Tasks | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 4 Roadway Analysis | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 5. Roadway Plans | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 6. Drainage Analysis | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 7. Utilities | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 8. Environmental Permits | 50 | | 3 | 5 | 8 | 9 | 8 | 8 | 5 | 8 | 0 | 0 | 0 | 0 | 54 | 59 | |
| 9. Structures - Misc. Tasks Dwgs Non-Tech. | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 10 Structures - BDR | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 11. Structures - Temporary Bridge | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 12 Structures - Short Span Concrete | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 13 Structures - Medium Span Concrete | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 14 Structures - Structural Steel | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 15. Structures - Segmental Concrete | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 16. Structures - Movable Span | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 17. Structures - Retaining Walls | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 18. Structures - Miscellaneous | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 19. Signing & Marking Analysis | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 20. Signing & Marking Plans | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 21. Signalization Analysis | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 22. Signalization Plans | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 23. Lighting Analysis | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 24 Lighting Plans | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 25. Landscape Architecture Analysis | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 26. Landscape Architecture Plans | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 27 Survey (Field & Office Support) | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 28 Photogrammetry | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 29. Mapping | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 30 Geotechnical | 81 | | 4 | 8 | 12 | 21 | 8 | 12 | 12 | 4 | 0 | 0 | 0 | 0 | 81 | 89 | |
| 31. Architecture Development | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 32 Noise Wall Analysis | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| TOTALS | 131 | | 7 | 13 | 20 | 30 | 16 | 20 | 17 | 12 | 0 | 0 | 0 | 0 | 135 | 148 | |

Notes

- This worksheet provides the distribution of a firm's total staff hours for a project.
- Percentages for staff hour distribution by classification are entered below in rows 56 to 94 of this sheet.
- Total Staff Hours (column P) may not match staff hours from Summary worksheet (column C) due to rounding. Staff hours calculated for employees' classifications are to be adjusted so totals in columns C and P match.
- Formulas under "Total Staff Hours Range" (columns P & Q) may be adjusted to provide desired range.

Field Survey Estimate:

0 4-man crew days

FIRM TOTAL

135

148

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: N/A

FAP Number: N/A

Project Name: Sunset Point Road and Betty Lane Int

Date: 2/3/2015

Name of Consultant: Tierra

| Staff Hour Distribution Percentages - Firm Total | | | | | | | | | | | | | | |
|--|--|--------------------|-------------------------------|---------------------|--------------------|------------------------|-------------------------------|-------------------------------|-----------------------|------|------|------|------|---------|
| | Hours from "Summary" sheet Firm Total | Project Manager | Senior Project Engineer | Project Engineer | Engineer Intern | Computer Technician | Engineerin g Technician | Engineerin g Technician | Secretary Clerical | | 0 | 0 | 0 | Total |
| 3. Project General Tasks | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 4. Roadway Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 5. Roadway Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 6. Drainage Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 7. Utilities | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 8. Environmental Permits | 50 | 5.0% | 10.0% | 14.0% | 17.0% | 15.0% | 15.0% | 9.0% | 15.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 9. Structures - Misc. Tasks, Dwgs. Non-Tech. | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 10. Structures - BDR | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 11. Structures - Temporary Bridge | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 12. Structures - Short Span Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 13. Structures - Medium Span Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 14. Structures - Structural Steel | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 15. Structures - Segmental Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 16. Structures - Movable Span | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 17. Structures - Retaining Walls | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 18. Structures - Miscellaneous | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 19. Signing & Marking Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 20. Signing & Marking Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 21. Signalization Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 22. Signalization Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 23. Lighting Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 24. Lighting Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 25. Landscape Architecture Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 26. Landscape Architecture Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 27. Survey (Field & Office Support) | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 28. Photogrammetry | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 29. Mapping | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 30. Geotechnical | 81 | 5.0% | 10.0% | 15.0% | 25.0% | 10.0% | 15.0% | 15.0% | 5.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 31. Architecture Development | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 32. Noise Wall Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |

EXHIBIT B: ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project: Sunset Point Road and Betty Lane Intersection
County: Pinellas County
FPN: N/A
FAP No.: N/A

Consultant Name: Volkert, Inc
Consultant No.: enter consultants proj. number
Date: 2/3/2015
Estimator: REW

| Staff Classification | Total Staff Hours From "SH Summary - Firm" | Project Manager | Chief Engineer | Senior Engineer | Project Engineer | Senior Engineering Technician | Clerical | | | | | | | SH | Salary | Average |
|---|--|-----------------|----------------|-----------------|------------------|-------------------------------|----------|--------|--------|--------|--------|--------|--------|----------|--------------|----------|
| | | | | | | | | | | | | | | By | Cost By | Rate Per |
| | | \$173.00 | \$204.00 | \$155.00 | \$117.00 | \$76.00 | \$66.00 | | | | | | | Activity | Activity | Task |
| 3. Project General Tasks | 132 | 106 | 13 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 132 | \$21,848 | \$165.52 |
| 4. Roadway Analysis | 470 | 24 | 47 | 235 | 94 | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 471 | \$66,559 | \$141.31 |
| 5. Roadway Plans | 276 | 14 | 28 | 28 | 110 | 96 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 276 | \$32,640 | \$118.26 |
| 6. Drainage Analysis | 188 | 9 | 19 | 56 | 46 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 186 | \$23,751 | \$127.69 |
| 7. Utilities | 96 | 5 | 0 | 58 | 24 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 97 | \$13,423 | \$138.38 |
| 8. Environmental Permits | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 9. Structures - Misc. Tasks, Dwgs. Non-Tech | 55 | 0 | 6 | 14 | 11 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | \$6,505 | \$118.27 |
| 10. Structures - BDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 11. Structures - Temporary Bridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 12. Structures - Short Span Concrete | 24 | 0 | 1 | 5 | 6 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | \$2,593 | \$108.04 |
| 13. Structures - Medium Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 14. Structures - Structural Steel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 15. Structures - Segmental Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 16. Structures - Movable Span | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 17. Structures - Retaining Walls | 60 | 0 | 3 | 12 | 14 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 59 | \$6,390 | \$108.31 |
| 18. Structures - Miscellaneous | 122 | 0 | 6 | 31 | 31 | 55 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 123 | \$13,836 | \$112.49 |
| 19. Signing & Marking Analysis | 90 | 5 | 9 | 36 | 23 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | \$12,340 | \$135.60 |
| 20. Signing & Marking Plans | 24 | 1 | 2 | 1 | 5 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | \$2,385 | \$103.70 |
| 21. Signalization Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 22. Signalization Plans | 27 | 1 | 3 | 1 | 6 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | \$2,858 | \$105.85 |
| 23. Lighting Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 24. Lighting Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 25. Landscape Architecture Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 26. Landscape Architecture Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 27. Survey (Field & Office Support) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 28. Photogrammetry | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 29. Mapping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 30. Geotechnical | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 31. Architecture Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 32. Noise Wall Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| Total Staff Hours | 1,564 | 165 | 137 | 477 | 370 | 402 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 1,564 | | |
| Total Staff Cost | | \$28,545.00 | \$27,948.00 | \$73,935.00 | \$43,290.00 | \$30,552.00 | \$858.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | | \$205,128.00 | \$131.16 |

Check = \$205,128.00

Survey Field Days by Subconsultant
4 - Person Crew:

| | | |
|---|---------------------|--------------|
| SALARY RELATED COSTS | | \$205,128.00 |
| OVERHEAD | 0.00% | \$0.00 |
| OPERATING MARGIN | 0.00% | \$0.00 |
| FCCM (Facilities Capital Cost Money) | 0.000% | \$0.00 |
| EXPENSES | 0.00% | \$0.00 |
| Survey (Field - if by Prime) | 0 @ 4-man crew days | \$0.00 |
| SUBTOTAL ESTIMATED FEE: | | \$205,128.00 |
| Subconsultant Scheda | | \$11,635.00 |
| Subconsultant Tierra | | \$11,883.00 |
| Subconsultant American Quality Consultants | | \$19,912.00 |
| Subconsultant Sub 4 | | |
| Subconsultant Sub 5 | | \$0.00 |
| Subconsultant Sub 6 | | \$0.00 |
| Subconsultant Sub 7 | | \$0.00 |
| Subconsultant Sub 8 | | \$0.00 |
| Subconsultant Sub 9 | | \$0.00 |
| Subconsultant Sub 10 | | \$0.00 |
| Subconsultant Sub 11 | | \$0.00 |
| Subconsultant Sub 12 | | \$0.00 |
| SUBTOTAL ESTIMATED FEE: | | \$248,558.00 |
| Geotechnical Field and Lab Testing (Tierra) | | \$6,992.23 |
| SUBTOTAL ESTIMATED FEE | | \$255,550.23 |
| Optional Services | | \$0.00 |
| GRAND TOTAL ESTIMATED FEE: | | \$255,550.23 |

- Notes
1. This sheet to be used by Prime Consultant to calculate the Grand Total fee
2. Manually enter fee from each subconsultant. Unused subconsultant rows may be hidden

EXHIBIT B: ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project: Sunset Point Road and Betty Lane Intersection
 County: Pinellas County
 FPN: N/A
 FAP No.: N/A

Consultant Name: Tierra
 Consultant No.: enter consultants proj. number
 Date: 2/3/2015
 Estimator: Tierra

| Staff Classification | Total Staff Hours From "SH Summary - Firm" | Project Manager | Senior Project Engineer | Project Engineer | Engineer Intern | Computer Technician | Senior Engineering Technician | Engineering Technician | Secretary Clerical | | | | | SH By Activity | Salary Cost By Activity | Average Rate Per Task |
|--|--|-----------------|-------------------------|------------------|-----------------|---------------------|-------------------------------|------------------------|--------------------|--------|--------|--------|--------|----------------|-------------------------|-----------------------|
| | | \$159.00 | \$129.00 | \$109.00 | \$90.00 | \$80.00 | \$67.00 | \$57.00 | \$52.00 | | | | | | | |
| 3. Project General Tasks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 4. Roadway Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 5. Roadway Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 6. Drainage Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 7. Utilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 8. Environmental Permits | 50 | 3 | 5 | 8 | 9 | 8 | 5 | 5 | 5 | 0 | 0 | 0 | 0 | 54 | \$4,681 | \$86.69 |
| 9. Structures - Misc. Tasks Dwgs Non-Tec | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 10. Structures - BDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 11. Structures - Temporary Bridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 12. Structures - Short Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 13. Structures - Medium Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 14. Structures - Structural Steel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 15. Structures - Segmental Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 16. Structures - Movable Span | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 17. Structures - Retaining Walls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 18. Structures - Miscellaneous | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 19. Signing & Marking Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 20. Signing & Marking Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 21. Signalization Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 22. Signalization Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 23. Lighting Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 24. Lighting Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 25. Landscape Architecture Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 26. Landscape Architecture Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 27. Survey (Field & Office Support) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 28. Photogrammetry | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 29. Mapping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 30. Geotechnical | 81 | 4 | 8 | 12 | 21 | 8 | 12 | 12 | 4 | 0 | 0 | 0 | 0 | 81 | \$7,202 | \$88.91 |
| 31. Architecture Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 32. Noise Wall Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| Total Staff Hours | 131 | 7 | 13 | 20 | 30 | 16 | 20 | 17 | 12 | 0 | 0 | 0 | 0 | 135 | | |
| Total Staff Cost | | \$1,113.00 | \$1,677.00 | \$2,180.00 | \$2,700.00 | \$1,280.00 | \$1,340.00 | \$969.00 | \$624.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | | \$11,883.00 | \$88.02 |

Check = \$11,883.00

Worksheet: EXHIBIT B

Survey Field Days by Subconsultant
 4 - Person Crew:

SALARY RELATED COSTS

| | | |
|--------------------------------------|-------|--------------------|
| OVERHEAD | 0.00% | \$0.00 |
| OPERATING MARGIN | 0.00% | \$0.00 |
| FCCM (Facilities Capital Cost Money) | 0.00% | \$0.00 |
| EXPENSES | 0.00% | \$0.00 |
| Survey (Field - If by Prime) | 0 | \$0.00 |
| 4-man crew days | @ | day |
| SUBTOTAL ESTIMATED FEE: | | \$11,883.00 |
| Geotechnical Field and Lab Testing | | \$6,992.23 |
| SUBTOTAL ESTIMATED FEE: | | \$18,875.23 |
| GRAND TOTAL ESTIMATED FEE | | \$18,875.23 |

Notes

- 1 This sheet to be used by Prime Consultant to calculate the Grand Total fee
- 2 Manually enter fee from each subconsultant Unused subconsultant rows may be hidden.

EXHIBIT B: ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project: Sunset Point Road and Betty Lane Intersection
 County: Pinellas County
 FPN: N/A
 FAP No.: N/A

Consultant Name: Scheda
 Consultant No.: enter consultants proj. number
 Date: 2/3/2015
 Estimator: Scheda

| Staff Classification | Total Staff Hours From "SH Summary - Firm" | Chief Scientist | Senior Scientist | Environmental Specialist | GIS | Clerical | | | | | | | | SH By Activity | Salary Cost By Activity | Average Rate Per Task |
|--|--|-----------------|------------------|--------------------------|----------|----------|--------|--------|--------|--------|--------|--------|--------|----------------|-------------------------|-----------------------|
| | | \$160.00 | \$120.00 | \$85.00 | \$80.00 | \$55.00 | | | | | | | | | | |
| 3. Project General Tasks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 4. Roadway Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 5. Roadway Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 6. Drainage Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 7. Utilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 8. Environmental Permits | 11 | 11 | 44 | 44 | 10 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 110 | \$11,635 | \$105.77 | |
| 9. Structures - Misc. Tasks Dwgs Non-Tec | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 10. Structures - BDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 11. Structures - Temporary Bridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 12. Structures - Short Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 13. Structures - Medium Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 14. Structures - Structural Steel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 15. Structures - Segmental Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 16. Structures - Movable Span | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 17. Structures - Retaining Walls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 18. Structures - Miscellaneous | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 19. Signing & Marking Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 20. Signing & Marking Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 21. Signalization Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 22. Signalization Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 23. Lighting Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 24. Lighting Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 25. Landscape Architecture Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 26. Landscape Architecture Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 27. Survey (Field & Office Support) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 28. Photogrammetry | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 29. Mapping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 30. Geotechnical | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 31. Architecture Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 32. Noise Wall Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| Total Staff Hours | 111 | 11 | 44 | 44 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 110 | | | |
| Total Staff Cost | | \$1,760.00 | \$5,280.00 | \$3,740.00 | \$800.00 | \$55.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | | \$11,635.00 | \$105.77 |

Check = \$11,635.00

Survey Field Days by Subconsultant
 4 - Person Crew

| | | |
|--------------------------------------|---------------------|--------------------|
| SALARY RELATED COSTS | | \$11,635.00 |
| OVERHEAD | 3.00% | \$0.00 |
| OPERATING MARGIN | 0.00% | \$0.00 |
| FCCM (Facilities Capital Cost Money) | 0.000% | \$0.00 |
| EXPENSES | 0.00% | \$0.00 |
| Survey (Field - if by Prime) | 0 @ 4-man crew days | \$0.00 |
| SUBTOTAL ESTIMATED FEE: | | \$11,635.00 |
| GRAND TOTAL ESTIMATED FEE | | \$11,635.00 |

Notes

- This sheet to be used by Prime Consultant to calculate the Grand Total fee
- Manually enter fee from each subconsultant. Unused subconsultant rows may be hidden.

EXHIBIT B: ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project
County
FPN:
FAP No.

Sunset Point Road and Betty Lane Intersection
Pinellas County
N/A
N/A

Consultant Name
Consultant No.:
Date:
Estimator:

American Quality Consultants
enter consultants proj. number
2/3/2015
American Quality Consultants

| Staff Classification | Total Staff Hours From "SH Summary - Firm" | Chief Engineer | Senior Engineer | Project Engineer | Senior Engineering Technician | | | | | | | | SH | Salary | Average |
|---|--|----------------|--------------------|---------------------|-------------------------------------|--------|--------|--------|--------|--------|--------|--------|----------|-------------|----------|
| | | | | | | | | | | | | | By | Cost By | Rate Per |
| | | \$170.00 | \$145.00 | \$114.00 | \$95.00 | | | | | | | | Activity | Activity | Task |
| 3. Project General Tasks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 4. Roadway Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 5. Roadway Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 6. Drainage Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 7. Utilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 8. Environmental Permits | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 9. Structures - Misc. Tasks Dwgs Non-Tech | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 10. Structures - BDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 11. Structures - Temporary Bridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 12. Structures - Short Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 13. Structures - Medium Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 14. Structures - Structural Steel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 15. Structures - Segmental Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 16. Structures - Movable Span | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 17. Structures - Retaining Walls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 18. Structures - Miscellaneous | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 19. Signing & Marking Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 20. Signing & Marking Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 21. Signalization Analysis | 160 | 24 | 40 | 48 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 160 | \$19,912 | \$124.45 |
| 22. Signalization Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | \$0 | \$0.00 |
| 23. Lighting Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 24. Lighting Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 25. Landscape Architecture Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 26. Landscape Architecture Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 27. Survey (Field & Office Support) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 28. Photogrammetry | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 29. Mapping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 30. Geotechnical | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 31. Architecture Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 32. Noise Wall Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| Total Staff Hours | 160 | 24 | 40 | 48 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 161 | | |
| Total Staff Cost | | \$4,080.00 | \$5,800.00 | \$5,472.00 | \$4,560.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | | \$19,912.00 | \$123.68 |

Check = \$19,912.00

Survey Field Days by Subconsultant

4 - Person Crew:

SALARY RELATED COSTS

OVERHEAD

OPERATING MARGIN

FCCM (Facilities Capital Cost Money)

EXPENSES

0.00%

0.00%

0.00%

0.00%

4-man crew days

Survey (Field - If by Prime)

0

@

day

SUBTOTAL ESTIMATED FEE

GRAND TOTAL ESTIMATED FEE

\$19,912.00

\$0.00

\$0.00

\$0.00

\$0.00

\$0.00

\$19,912.00

\$19,912.00

Notes

1 This sheet to be used by Prime Consultant to calculate the Grand Total fee

2 Manually enter fee from each subconsultant Unused subconsultant rows may be hidden

Project Activity 3: General Tasks

Estimator: REW

Sunset Point Road and Betty Lane Intersection

Form Revised 4.15/07

N/A

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|-------------------------------|--|-------|-------------|--------------|-------------|---|
| 3.1 | Public Involvement | LS | 0 | 0 | 0 | |
| 3.2 | Joint Project Agreements | EA | 0 | 0 | 0 | |
| 3.3 | Specifications Package Preparation | LS | 1 | 16 | 16 | Prepare any requ'd TSPs or revise TSPs as necessary |
| 3.4 | Contract Maintenance | LS | 1 | 56 | 56 | 16 hrs initial + (4 hrs/month x 10months schedule) = 56 hrs Which Includes monthly schedule and Progress Report updates |
| 3.5 | Value Engineering (Multi-discipline Team) Review | LS | 0 | 0 | 0 | |
| 3.6 | Prime Consultant Project Manager Meetings | LS | 1 | 44 | 44 | see below |
| 3.7 | Plans Update | LS | 0 | 0 | 0 | |
| 3.8 | Post Design Services | LS | 0 | | 0 | |
| 3.9 | Other Project General Tasks | LS | 1 | 16 | 16 | Biddability Review (8) at 100% and Constructability Review (8) at 60% |
| 3. General Tasks Total | | | | | 132 | |

Project Activity 3: General Tasks

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|---|------------------------|-------|-------------|--------------|-------------|----------------------------|
| 3.6 - List of Project Manager Meetings | | | | | | See notes below |
| | Roadway Analysis | EA | 0 | 0 | 0 | |
| | Drainage | EA | 0 | 0 | 0 | |
| | Utilities | EA | 0 | 0 | 0 | |
| | Environmental | EA | 0 | 0 | 0 | |
| | Structures | EA | 0 | 0 | 0 | |
| | Signing & Marking | EA | 0 | 0 | 0 | |
| | Signalization | EA | 0 | 0 | 0 | |
| | Lighting | EA | 0 | 0 | 0 | |
| | Landscape Architecture | EA | 1 | 0 | 0 | |
| | Survey | EA | 0 | 0 | 0 | |
| | Photogrammetry | EA | 0 | 0 | 0 | |
| | ROW & Mapping | EA | 0 | 0 | 0 | |
| | Geotechnical | EA | 0 | 0 | 0 | |
| | Architecture | EA | 0 | 0 | 0 | |
| | Noise Walls | EA | 0 | 0 | 0 | |
| | Progress Meetings | EA | 10 | 2 | 20 | |
| | Phase Reviews | EA | 2 | 4 | 8 | 15% Line and Grade and 60% |
| | Field Reviews | EA | 4 | 4 | 16 | Topo, 15%, 60%, & 100% |
| Total Project Manager Meetings | | | 17 | | 44 | |

Notes:

1. If the hours per meeting vary in length (hours) enter the average in the hour/unit column.
2. Do not double count agency meetings between permitting agencies.
3. Project manager meetings are calculated in each discipline sheet and brought forward to column D except for Photogrammetry.

Project Activity 4: Roadway Analysis

Estimator: REW

Sunset Point Road and Betty Lane Intersection

Form Revised 6/6/05

N/A

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|---|--|-------|-------------|--------------|-------------|--|
| 4.1 | Typical Section Package | LS | 0 | 0 | 0 | No official submittal, for this effort is covered under Item 4.13, Other Roadway Analysis |
| 4.2 | Pavement Design Package | LS | 1 | 8 | 8 | Provide pavement core locations to the geotech sub, evaluate the pavement core for overbuild vs. new pavement. After COUNTY concurrence, generate a Pavement Disposition memo. |
| 4.3 | Access Management | LS | 0 | 0 | 0 | |
| 4.4 | Horizontal /Vertical Master Design Files | LS | 1 | 76 | 76 | 280 hrs/mile x 0.27 miles = 76 which includes R/W Considerations |
| 4.5 | Cross Section Design Files | LS | 35 | 2 | 70 | 50 foot sections for 1,450 feet = 30 + 3 driveways + 2 cross roads = 35 |
| 4.6 | Traffic Control Analysis | LS | 1 | 24 | 24 | Assume Level I Traffic Control |
| 4.7 | Master TCP Design Files | LS | 0 | 0 | 0 | |
| 4.8 | Design Variations and Exceptions | LS | 0 | 0 | 0 | |
| 4.9 | Design Report | LS | 1 | 28 | 28 | Design Criteria Memorandum (12) + Design Report (8) + 2 hrs/update x 4 updates (8) = 28 |
| 4.10 | Computation Book & Quantities | LS | 4 | 14 | 56 | Quantity Documentation at 15%, 60%, 100%, & Final (No Comp. Book) |
| 4.11 | Cost Estimate | LS | 4 | 8 | 32 | Cost Estimates at 15%, 60%, 100%, and Final Plans |
| 4.12 | Technical Special Provisions | LS | 0 | 0 | 0 | |
| 4.13 | Other Roadway Analysis | LS | 1 | 100 | 100 | 15% Line and Grade (2 Typical (16), 15% Line and Grade Roll Plot (15), and one (1) alternative analysis on SPR (30)), and no safety analysis needed) R/W easement Acquisition at 10hrs/drwy x 3 drwy = 24 hrs Project Research (15) Total = 100 |
| Roadway Analysis Technical Subtotal | | | | | 394 | |
| 4.14 | Field Reviews | LS | 1 | 24 | 24 | 2 people * 4 hr field review * 3 field reviews |
| 4.15 | Technical Meetings | LS | 1 | 12 | 12 | Meetings are listed below |
| 4.16 | Quality Assurance/Quality Control | LS | % | 5% | 20 | |
| 4.17 | Independent Peer Review | LS | % | 0% | 0 | N/A |
| 4.18 | Supervision | LS | % | 5% | 20 | |
| Roadway Analysis Nontechnical Subtotal | | | | | 76 | |
| 4.19 | Coordination | LS | % | 0% | 0 | |

Project Activity 4: Roadway Analysis

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|----------------------------------|------|-------|-------------|--------------|-------------|----------|
| 4. Roadway Analysis Total | | | | | 470 | |

Technical Meetings

| | | | | | |
|---|----|---|---|----------|-------------------|
| Typical Section | EA | 0 | 0 | 0 | |
| Pavement | EA | 0 | 0 | 0 | |
| Access management | EA | 0 | 0 | 0 | |
| 15% line and grade | EA | 0 | 0 | 0 | |
| Driveways | EA | 0 | 0 | 0 | |
| Local Governments (cities, counties, MPO) | EA | 0 | 0 | 0 | |
| Work zone traffic control | EA | 0 | 0 | 0 | |
| 30/60/90/100% comment review meetings | EA | 0 | 0 | 0 | |
| Other meetings | EA | 1 | 4 | 4 | PSTA Coordination |
| Subtotal technical meetings | | | | 4 | |

| | | | | | |
|---|----|---|---|---|-------------|
| Progress Meetings (if required by FDOT) | EA | 0 | 0 | 0 | |
| Phase Review Meetings | EA | 2 | 4 | 8 | 15% and 60% |

| | | | | | |
|-----------------------|--|--|--|-----------|--|
| Total Meetings | | | | 12 | |
|-----------------------|--|--|--|-----------|--|

Carries to 4.15

Project manager

Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3

Project Activity 6: Drainage Analysis

Estimator: Charles Samuels

Sunset Point Road and Betty Lane Intersection

Form Revised 12/08/14

N/A

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|----------|--|-------------------------------|-------------|--------------|-------------|--|
| 6.1 | Data Collection | LS | 1 | 20 | 20 | Base clearance (6) and Data Collection (14) = 20 |
| 6.2 | Pond Siting Analysis and Report | Per Basin | 0 | 0 | 0 | N/A |
| 6.3 | Design of Cross Drains | EA | 0 | 0 | 0 | N/A |
| 6.4 | Design of Roadway Ditches | Per Ditch Mile | 0.3 | 12 | 4 | Approximately 0.3 miles of intermittent ditches |
| 6.5 | Design of Outfalls | EA | 0 | 0 | 0 | N/A |
| 6.6 | Design of Stormwater Management Facility (Offsite Pond) | EA | 0 | 0 | 0 | N/A |
| 6.7 | Design of Stormwater Management Facility (Roadside Ditch as Linear Pond or Infield Pond) | Per System | 0 | 0 | 0 | N/A |
| 6.8 | Design of Flood Plain Compensation Area | Per Encroachment | 1 | 30 | 30 | Regrading canal |
| 6.9 | Design of Storm Drains | EA | 12 | 3 | 36 | 1500'/300' per inlet x 2 = 10 + 2 = 12 Inlets and analysis (Results to be included in the Drainage Documentation Report) |
| 6.10 | Optional Culvert Material | LS | 0 | 0 | 0 | N/A |
| 6.11 | French Drain Systems | Per 1000 Feet of French Drain | 0 | 0 | 0 | N/A |
| 6.12 | Drainage Wells | EA | 0 | 0 | 0 | N/A |
| 6.13 | Drainage Design Documentation Report | LS | 1 | 32 | 32 | |
| 6.14 | Bridge Hydraulic Report | EA | 1 | 24 | 24 | Box culvert hydraulics analysis (no report needed) |
| 6.15 | Temporary Drainage Analysis | LS | 1 | 0 | 0 | N/A |
| 6.16 | Cost Estimate | LS | 0 | 0 | 0 | |
| 6.17 | Technical Special Provisions | LS | 1 | 0 | 0 | |

Project Activity 6: Drainage Analysis

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|--|-----------------------------------|-------|-------------|--------------|-------------|--|
| 6.18 | Other Drainage Analysis | LS | 1 | 0 | 0 | |
| Drainage Analysis Technical Subtotal | | | | | 146 | |
| 6.19 | Field Reviews | LS | 1 | 16 | 16 | 2 people * 4 hr field review * 2 field reviews |
| 6.20 | Technical Meetings | LS | 1 | 12 | 12 | Meetings are listed below |
| 6.21 | Quality Assurance/Quality Control | LS | % | 5% | 7 | |
| 6.22 | Independent Peer Review | LS | % | 0% | 0 | |
| 6.23 | Supervision | LS | % | 5% | 7 | |
| Drainage Analysis Nontechnical Subtotal | | | | | 42 | |
| 6.24 | Coordination | LS | % | 0% | 0 | |
| 6. Drainage Analysis Total | | | | | 188 | |

Technical Meetings

| | | | | | |
|--------------------------------------|----|---|---|----------|--------------------------|
| Base clearance water elevation | EA | 0 | 0 | 0 | |
| Pond Siting | EA | 0 | 0 | 0 | |
| Agency | EA | 0 | 0 | 0 | |
| Local Governments (cities, counties) | EA | 0 | 0 | 0 | |
| FDOT Drainage | EA | 0 | 0 | 0 | |
| Other meetings | EA | 2 | 4 | 8 | SWFWMD (1 mtg, 2 people) |
| Subtotal technical meetings | | | | 8 | |

| | | | | | |
|---|----|---|---|---|----------------------------|
| Progress Meetings (if required by FDOT) | EA | 0 | 0 | 0 | |
| Phase Review Meetings | EA | 1 | 4 | 4 | 15% Line and Grade and 60% |

| | | | | | |
|-----------------------|--|--|--|-----------|--|
| Total Meetings | | | | 12 | |
|-----------------------|--|--|--|-----------|--|

Project manager

Carries to 6 20

Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3

Project Activity 8: Environmental Permits

Estimator: Scheda
Form Revised 5/5/05

Sunset Point Road and Betty Lane Intersection
N/A

| Task No. | Task | Units | No. of Units | Hours/Units | Total Hours | Comments |
|--|--|-------|--------------|-------------|-------------|---|
| 8.1 | Preliminary Project Research | LS | 1 | 12 | 12 | Review existing permits: GIS desk-top research for NWI, hydric soils, FLUCFCS. Obtain/review CAD file of previously delineated wetland line. |
| 8.2 | Complete Permit Involvement Form | LS | 0 | 0 | 0 | NA |
| 8.3 | Establish Wetland Jurisdictional Lines | LS | 1 | 20 | 20 | Two scientists to compare previously delineated wetland line to current conditions in the field. Scheda will obtain CAD file of previous delineation, review file, and upload to GPS. Scheda will delineate any new or revised boundaries in field. Set seasonal high water elevations where possible and needed (16). GPS/GIS download and data review; coordinate with surveyor to locate points (4). |
| 8.4 | Agency Verification of Wetland Data | LS | 1 | 4 | 4 | One scientist, coordination and field review of wetland lines and seasonal high water elevations with SWFWMD. Coordinate with surveyor for any modifications. |
| 8.5 | Complete And Submit All Required Permit Applications | LS | 1 | 40 | 40 | A SWFWMD General Permit may be required if all work is located within Pinellas County owned right-of-way (ROW). If work conducted outside of ROW, then SWFWMD Individual Permit may be required. |
| 8.6 | Prepare Dredge and Fill Sketches | LS | 1 | 2 | 2 | Review Prime's sketches as needed. |
| 8.7 | Prepare USCG Permit Sketches | LS | 0 | 0 | 0 | NA |
| 8.8 | Prepare Easement Sketches | LS | 0 | 0 | 0 | NA |
| 8.9 | Prepare R/W Occupancy Sketches | LS | 0 | 0 | 0 | NA |
| 8.10 | Prepare Coastal Construction Control Line (CCCL) Permit Sketches | LS | 0 | 0 | 0 | NA |
| 8.11 | Prepare Tree Permit Information | LS | 0 | 0 | 0 | NA |
| 8.12 | Mitigation Coordination and Meetings | LS | 0 | 0 | 0 | Optional Services |
| 8.13 | Mitigation Design | LS | 0 | 0 | 0 | No mitigation design anticipated. |
| 8.14 | Environmental Clearances | LS | 1 | 8 | 8 | Conduct listed species survey of project limits, data to be included in environmental documentation itemized elsewhere. |
| 8.15 | Other Environmental | LS | 1 | 8 | 8 | Prepare Technical memorandum for Pinellas County detailing the results of the environmental analysis. |
| Environmental Permits Technical Subtotal | | | | | 94 | |
| 8.16 | Technical Meetings | LS | 1 | 7 | 7 | |
| 8.17 | Quality Assurance/Quality Control | LS | % | 5% | 5 | |
| 8.18 | Supervision | LS | % | 5% | 5 | |
| Environmental Permits Nontechnical SubTotal | | | | | 17 | |
| 8.19 | Coordination | LS | % | 0% | 0 | |
| 8. Environmental Permits Total | | | | | 111 | |

Technical Meetings

| | | | | | |
|------------------------------------|----|---|---|----------|---|
| WMD | EA | 1 | 2 | 2 | Prep for and attend pre-app meeting |
| ACOE | EA | 1 | 2 | 2 | Prep for and attend pre-app meeting |
| USCG | EA | 0 | 0 | 0 | |
| USFWS | EA | 0 | 0 | 0 | |
| FFWCC | EA | 0 | 0 | 0 | |
| FDOT | EA | 0 | 0 | 0 | |
| Other meetings | EA | 1 | 3 | 3 | Meeting with Pinellas County Permit Coordinator |
| Subtotal technical meetings | | | | 7 | |

| | | | | | |
|-----------------------|----|---|---|----------|--|
| Progress Meetings | EA | 0 | 0 | 0 | |
| Phase Review Meetings | EA | 0 | 0 | 0 | |
| Total Meetings | | | | 7 | |

Continued to B-10

Project m

Project Activity 8: Environmental Permits

Estimator: Tierra
Form Revised 5/5/05

Sunset Point Road and Betty Lane Intersection
N/A

| Task No. | Task | Units | No. of Units | Hours/ Units | Total Hours | Comments |
|--|--|-------|--------------|--------------|-------------|--|
| 8.1 | Preliminary Project Research | LS | 0 | 0 | 0 | |
| 8.2 | Complete Permit Involvement Form | LS | 0 | 0 | 0 | |
| 8.3 | Establish Wetland Jurisdictional Lines | LS | 0 | 0 | 0 | |
| 8.4 | Agency Verification of Wetland Data | LS | 0 | 0 | 0 | |
| 8.5 | Complete And Submit All Required Permit Applications | LS | 0 | 0 | 0 | |
| 8.6 | Prepare Dredge and Fill Sketches | LS | 0 | 0 | 0 | |
| 8.7 | Prepare USCG Permit Sketches | LS | 0 | 0 | 0 | |
| 8.8 | Prepare Easement Sketches | LS | 0 | 0 | 0 | |
| 8.9 | Prepare R/W Occupancy Sketches | LS | 0 | 0 | 0 | |
| 8.10 | Prepare Coastal Construction Control Line (CCCL) Permit Sketches | LS | 0 | 0 | 0 | |
| 8.11 | Prepare Tree Permit Information | LS | 0 | 0 | 0 | |
| 8.12 | Mitigation Coordination and Meetings | LS | 0 | 0 | 0 | |
| 8.13 | Mitigation Design | LS | 0 | 0 | 0 | |
| 8.14 | Environmental Clearances | LS | 1 | 46 | 46 | 1,500 ft of mainline (24hrs)/ removal of Sunset Point Rd bridge (22hrs) |
| 8.15 | Other Environmental | LS | 1 | 0 | 0 | Optional Services (Provide Level II screening for all "Medium" and "High" risk |
| Environmental Permits Technical Subtotal | | | | | 46 | |
| 8.16 | Technical Meetings | LS | 0 | 0 | 0 | |
| 8.17 | Quality Assurance/Quality Control | LS | 5% | 5% | 2 | |
| 8.18 | Supervision | LS | 5% | 5% | 2 | |
| Environmental Permits Nontechnical SubTotal | | | | | 4 | |
| 8.19 | Coordination | LS | 0% | 0% | 0 | |
| 8. Environmental Permits Total | | | | | 50 | |

Technical Meetings

| | | | | |
|------------------------------------|----|---|---|----------|
| WMD | EA | 0 | 0 | 0 |
| ACOE | EA | 0 | 0 | 0 |
| USCG | EA | 0 | 0 | 0 |
| USFWS | EA | 0 | 0 | 0 |
| FFWCC | EA | 0 | 0 | 0 |
| FDOT | EA | 0 | 0 | 0 |
| Other meetings | EA | 0 | 0 | 0 |
| Subtotal technical meetings | | | | 0 |

| | | | | |
|-----------------------|----|---|---|----------|
| Progress Meetings | EA | 0 | 0 | 0 |
| Phase Review Meetings | EA | 0 | 0 | 0 |
| Total Meetings | | | | 0 |

Project manager

Note: Project Manager attendance at progress phase and field review meetings are manually entered on General Task 3

Project Activity 19: Signing and Pavement Marking Analysis

Estimator: REW

Sunset Point Road and Betty Lane Intersection

Form Revised 6/6/05

N/A

| Task No. | Task | Units | No. of Units | Hours/ Units | Total Hours | Comments |
|--|---------------------------------------|-------|--------------|--------------|-------------|---|
| 19.1 | Traffic Data Analysis | LS | 1 | 0 | 0 | Included in Signal Analysis |
| 19.2 | No Passing Zone Study | LS | 1 | 0 | 0 | N/A |
| 19.3 | Reference and Master Design File | LS | 1 | 45 | 45 | 35hrs + 40hrs/mile x 0.27 mile = 45 hrs |
| 19.4 | Multi Post Sign Support Calculations | EA | 2 | 3 | 6 | One multi-post sign per direction |
| 19.5 | Sign Panel Design Analysis | EA | 1 | 2 | 2 | 2 Signs anticipated (2 Street Next Signal) |
| 19.6 | Sign Lighting/Electrical Calculations | EA | 0 | 0 | 0 | N/A |
| 19.7 | Quantities | LS | 3 | 3 | 9 | 60, 100 & Final |
| 19.8 | Computation Book | LS | 1 | 0 | 0 | No Comp Book Required |
| 19.9 | Cost Estimate | LS | 3 | 2 | 6 | 60, 100 & Final |
| 19.10 | Technical Special Provisions | LS | 1 | 0 | 0 | N/A |
| 19.11 | Other Signing and Pavement Marking | LS | 1 | 0 | 0 | |
| Signing & Pavement Marking Analysis Technical Subtotal | | | | | 68 | |
| 19.12 | Field Reviews | LS | 1 | 16 | 16 | 2 people * 4 hr field review * 2 field reviews (60, 100) = 16 |
| 19.13 | Technical Meetings | LS | 1 | 0 | 0 | Meetings are listed below |
| 19.14 | Quality Assurance/Quality Control | LS | % | 5% | 3 | |
| 19.15 | Independent Peer Review | LS | % | 0% | 0 | |
| 19.16 | Supervision | LS | % | 5% | 3 | |
| Signing & Pavement Marking Analysis Nontechnical Subtotal | | | | | 22 | |
| 19.17 | Coordination | LS | % | 0% | 0 | |

Project Activity 19: Signing and Pavement Marking Analysis

| Task No. | Task | Units | No. of Units | Hours/ Units | Total Hours | Comments |
|--|------|-------|--------------|--------------|-------------|----------|
| 19. Signing & Pavement Marking Analysis Total | | | | | 90 | |

Technical Meetings

| | | | | |
|--------------------------------------|----|---|---|---|
| Sign panel design | EA | 0 | 0 | 0 |
| Queue length analysis | EA | 0 | 0 | 0 |
| Local Governments (cities, counties) | EA | 0 | 0 | 0 |
| Other meetings | EA | 0 | 0 | 0 |

| | |
|------------------------------------|----------|
| Subtotal technical meetings | 0 |
|------------------------------------|----------|

| | | | | |
|-----------------------|----|---|---|---|
| Progress Meetings | EA | 0 | 0 | 0 |
| Phase Review Meetings | EA | 0 | 0 | 0 |

| | |
|-----------------------|----------|
| Total Meetings | 0 |
|-----------------------|----------|

Carries to 19.13

Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3

Project Activity 21: Signalization Analysis

Estimator: American Quality Consultants
Form Revised 4/15/07

Sunset Point Road and Betty Lane Intersection
N/A

| Task No. | Task | Units | No. of Units | Hours/ Units | Total Hours | Comments |
|---|---|-------|--------------|--------------|-------------|---|
| 21.1 | Traffic Data Collection | LS | 1 | 0 | 0 | See Traffic Signal Report |
| 21.2 | Traffic Data Analysis | PI | 1 | 0 | 0 | See Traffic Signal Report |
| 21.3 | Signal Warrant Study | LS | 0 | 0 | 0 | N/A |
| 21.4 | System Timings | LS | 1 | 0 | 0 | See Traffic Signal Report |
| 21.5 | Reference and Master Signalization Design File | PI | 1 | 30 | 30 | Full intersection design |
| 21.6 | Reference and Master Interconnect Communication Design File | LS | 0 | 0 | 0 | No interconnect shown on the scope |
| 21.7 | Overhead Street Name Sign Design | EA | 4 | 2 | 8 | One sign on each mastarm |
| 21.8 | Pole Elevation Analysis | LS | 4 | 1 | 4 | One hour per pole location |
| 21.9 | Traffic Signal Operation Report | LS | 1 | 70 | 70 | Intersection traffic analysis - compile all computations for queue lengths, timings etc. - 38 hours. Perform Queue Length Analysis - 14 hours. Perform timings for the intersection - 8 hours. Turning movement counts for the queue analysis - 10 hours. Total 70 hours. |
| 21.10 | Quantities | LS | 1 | 8 | 8 | One Signal Plan 8 hours |
| 21.11 | Cost Estimate | LS | 1 | 4 | 4 | |
| 21.12 | Technical Special Provisions | LS | 0 | 0 | 0 | None anticipated |
| 21.13 | Other Signalization | LS | 0 | 0 | 0 | None anticipated |
| Signalization Analysis Technical Subtotal | | | | | 124 | |
| 21.14 | Field Reviews | LS | 1 | 16 | 16 | Two field reviews. One at 60% and one before final plans. 4 hours x 2 people x 2 trips = 16 hrs |
| 21.15 | Technical Meetings | LS | 1 | 8 | 8 | One meeting with the County. One power coordination meeting. 2 meetings x 4hrs./meeting = 8 hrs. |
| 21.16 | Quality Assurance/Quality Control | LS | % | 5% | 6 | |
| 21.17 | Independent Peer Review | LS | % | 0% | 0 | |
| 21.18 | Supervision | LS | % | 5% | 6 | |
| Signalization Analysis Nontechnical Subtotal | | | | | 36 | |
| 21.19 | Coordination | LS | % | 0% | 0 | |
| 19. Signalization Analysis Total | | | | | 160 | |

Project Activity 9: Structures Summary and Miscellaneous Tasks and Drawings

Estimator: Ed Brekhus

Sunset Point Road and Betty Lane Intersection

Form Revised 4/15/07

N/A

| Task No. | Task | Units | Design and Production Staffhours | | | | Comments | | | | |
|--|---|-------|----------------------------------|----------------|---------------|---------------------------|----------|---------|---------|---------|---------|
| | | | No. of Units | Hours per Unit | No. of Sheets | Total | | | | | |
| | General Drawings | | | | | | | | | | |
| 9.1 | Index of Drawings | sheet | 0 | 0 | 0 | 0 | | | | | |
| 9.2 | Project Layout | sheet | 0 | 0 | 0 | 0 | | | | | |
| 9.3 | General Notes and Bid Item Notes | sheet | 1 | 12 | 1 | 12 | | | | | |
| 9.4 | Miscellaneous Common Details | sheet | 0 | 0 | 0 | 0 | | | | | |
| 9.5 | Incorporate Report of Core Borings | sheet | 1 | 1 | 1 | 1 | | | | | |
| 9.6 | Existing Bridge Plans | LS | 0 | 0 | | 0 | | | | | |
| 9.7 | Assembly of Computation Book and Quantities | LS | 1 | 2 | | 2 | | | | | |
| 9.8 | Cost Estimate | LS | 1 | 2 | | 2 | | | | | |
| 9.9 | Technical Special Provisions | LS | 0 | 0 | | 0 | | | | | |
| Structures - Miscellaneous Tasks & Drawings Subtotal | | | | | 2 | 17 | | | | | |
| Task No. | Task | Total | Task 10 | Task 11 | Task 12 | Task 13 | Task 14 | Task 15 | Task 16 | Task 17 | Task 18 |
| 10-16 | Bridge 1 | 24 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | | |
| 10-16 | Bridge 2 | 0 | | | | | | | | | |
| 10-16 | Bridge 3 | 0 | | | | | | | | | |
| 17 | Retaining Walls | 60 | | | | | | | | 60 | |
| 18 | Miscellaneous Structures | 122 | | | | | | | | | 122 |
| Structures Technical Subtotals | | 206 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 60 | 122 |
| Task No. | Task | Units | No. of Units | Hours per Unit | Total | Comments | | | | | |
| 9.10 | Field Reviews | LS | 2 | 4 | 8 | Meetings are listed below | | | | | |
| 9.11 | Technical Meetings | LS | 1 | 8 | 8 | | | | | | |
| 9.12 | Quality Assurance / Quality Control | LS | % | 5% | 11 | | | | | | |
| 9.13 | Independent Peer Review | LS | 1 | 0 | 0 | | | | | | |
| 9.14 | Supervision | LS | % | 5% | 11 | | | | | | |
| Structures Non-Technical Subtotal | | | | | 38 | | | | | | |
| 9.15 | Coordination | LS | 1 | 0 | 0 | | | | | | |

Project Activity 9: Structures Summary and Miscellaneous Tasks and Drawings

| | | | | |
|--|--|--|-----------|--|
| 9. Structures - Miscellaneous Tasks & Drawings, Non-Technical, & Coordination Total | | | 55 | |
|--|--|--|-----------|--|

Technical Meetings

PM Attendance at Meeting Required?

| | | | | | Yes / No | Number |
|--------------------------------------|----|---|---|----------|----------------------|--------|
| BDR coordination / review | EA | 0 | 0 | 0 | no | 0 |
| 90/100% comment review | EA | 0 | 0 | 0 | no | 0 |
| Aesthetics coordination | EA | 0 | 0 | 0 | no | 0 |
| Regulatory agency | EA | 0 | 0 | 0 | no | 0 |
| Local governments (cities, counties) | EA | 0 | 0 | 0 | no | 0 |
| Utility companies | EA | 0 | 0 | 0 | no | 0 |
| Other meetings | EA | 0 | 0 | 0 | no | 0 |
| Subtotal technical meetings | | | | 0 | | |
| Progress Meetings | EA | 0 | 0 | 0 | | |
| Phase Review Meetings | EA | 2 | 4 | 8 | 15% and 60% meetings | |

| | |
|-----------------------|----------|
| Total Meetings | 8 |
|-----------------------|----------|

Project mgr. meetings = **0**

Carries to 9.11

Carries to Task 3, Project General

Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3

Project Activity 18: Miscellaneous Structures

Estimator: Ed Brekhus
Form Revised 4/15/07

Sunset Point Road and Betty Lane Intersection
N/A

| Task No. | Task | Unit | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|---------------------------------------|---|-----------------|--------------|-------------|---------------|-------------|--|
| Concrete Box Culvert | | | | | | | |
| 18.1 | Concrete Box Culverts | EA | 1 | 90 | 1 | 90 | High MHR's due to a non-standard headwalls and wingwalls |
| 18.2 | Concrete Box Culverts Extensions | EA Extension | 0 | 0 | 0 | 0 | |
| Strain Poles | | | | | | | |
| 18.3 | Steel Strain Poles | Initial Config | 0 | 0 | 0 | 0 | |
| | | EA Add'l Config | 0 | 0 | 0 | 0 | |
| 18.4 | Concrete Strain Poles | Initial Config | 0 | 0 | 0 | 0 | |
| | | EA Add'l Config | 0 | 0 | 0 | 0 | |
| Mast Arms | | | | | | | |
| 18.5 | Mast Arms | EA Pole | 2 | 16 | 2 | 32 | |
| Overhead & Cantilever Sign Structures | | | | | | | |
| 18.6 | Cantilever Sign Structures | EA Design | 0 | 0 | 0 | 0 | |
| 18.7 | Overhead Span Sign Structures | EA Design | 0 | 0 | 0 | 0 | |
| 18.8 | Special (Long Span) Overhead Span Sign Structures | EA Design | 0 | 0 | 0 | 0 | |
| 18.9 | Monotube Overhead Sign Structure | EA Design | 0 | 0 | 0 | 0 | |
| 18.10 | Bridge Mounted Signs (Attached to Superstr) | EA Design | 0 | 0 | 0 | 0 | |
| High Mast Lighting | | | | | | | |
| 18.11 | High Mast Lighting Structures | EA Design | 0 | 0 | 0 | 0 | |
| Sound Barrier Walls (Ground Mount) | | | | | | | |
| 18.12 | Horizontal Wall Geometry | EA Wall | 0 | 0 | 0 | 0 | |
| 18.13 | Vertical Wall Geometry | EA Wall | 0 | 0 | 0 | 0 | |
| 18.14 | Summary of Quantities - Aesthetic Requirements | Sheet | 0 | 0 | 0 | 0 | |
| 18.15 | Control Drawings | Sheet | 0 | 0 | 0 | 0 | |
| 18.16 | Design for Wall Height Covered by Standards | EA Design | 0 | 0 | 0 | 0 | |

Project Activity 18: Miscellaneous Structures

| | | | | | | | |
|---|---|-----------|---|---|----------|------------|--|
| 18.17 | Design for Wall Height Not Covered by Standards | EA Design | 0 | 0 | 0 | 0 | |
| 18.18 | Aesthetic Details | LS | 0 | 0 | 0 | 0 | |
| Special Structures | | | | | | | |
| 18.19 | Fender System | LS | 1 | 0 | | 0 | |
| 18.20 | Fender System Access | LS | 1 | 0 | | 0 | |
| 18.21 | Special Structures | LS | 1 | 0 | | 0 | |
| 18.22 | Other Structures | LS | 0 | 0 | | 0 | |
| 18. Miscellaneous Structures Total | | | | | 3 | 122 | |

Project Activity 12: Structures- Short Span Concrete

Estimator: Ed Brekhus

Sunset Point Road and Betty Lane Intersection

Bridge Identifier (Number or Name):

N/A

| Task No. | Task | Units | No. of Units | Hours / Unit | No. of Sheets | Total Hours | Comments |
|--|------------------------------------|-------------|--------------|--------------|---------------|-------------|-------------|
| General Layout Design and Plans | | | | | | | |
| 12.1 | Overall Bridge Final Geometry | LS | 1 | 0 | | 0 | |
| 12.2 | Expansion/Contraction Analysis | EA Unit | 0 | 0 | | 0 | |
| 12.3 | General Plan and Elevation | Sheet | 1 | 24 | 1 | 24 | Box Culvert |
| 12.4 | Construction Staging | Sheet | 0 | 0 | 0 | 0 | |
| 12.5 | Approach Slab Plan and Details | Sheet | 0 | 0 | 0 | 0 | |
| 12.6 | Miscellaneous Details | Sheet | 0 | 0 | 0 | 0 | |
| End Bent Design and Plans | | | | | | | |
| 12.7 | End Bent Geometry | EA End Bent | 0 | 0 | | 0 | |
| 12.8 | End Bent Structural Design | EA Design | 0 | 0 | | 0 | |
| 12.9 | End Bent Plan and Elevation | Sheet | 0 | 0 | 0 | 0 | |
| 12.10 | End Bent Details | Sheet | 0 | 0 | 0 | 0 | |
| Intermediate Bent Design and Plans | | | | | | | |
| 12.11 | Bent Geometry | EA Bent | 0 | 0 | | 0 | |
| 12.12 | Bent Stability Analysis | EA Analysis | 0 | 0 | | 0 | |
| 12.13 | Bent Structural Design | EA Design | 0 | 0 | | 0 | |
| 12.14 | Bent Plan and Elevation | Sheet | 0 | 0 | 0 | 0 | |
| 12.15 | Bent Details | Sheet | 0 | 0 | 0 | 0 | |
| Misc. Substructure Design and Plans | | | | | | | |
| 12.16 | Foundation Layout | Sheet | 0 | 0 | 0 | 0 | |
| Superstructure Design and Plans | | | | | | | |
| 12.17 | Finish Grade Elevation Calculation | LS | 1 | 0 | | 0 | |
| 12.18 | Finish Grade Elevations | Sheet | 0 | 0 | 0 | 0 | |

Project Activity 12: Structures- Short Span Concrete

| Task No. | Task | Units | No. of Units | Hours / Unit | No. of Sheets | Total Hours | Comments |
|---|--|-----------|--------------|--------------|---------------|-------------|----------|
| Cast-in-Place Slab Bridges | | | | | | | |
| 12.19 | Bridge Deck Design | EA Unit | 0 | 0 | | 0 | |
| 12.20 | Superstructure Plan | Sheet | 0 | 0 | 0 | 0 | |
| 12.21 | Superstructure Sections and Details | Sheet | 0 | 0 | 0 | 0 | |
| Prestressed Slab Unit Bridges | | | | | | | |
| 12.22 | Prestressed Slab Unit Design | EA Design | 0 | 0 | | 0 | |
| 12.23 | Prestressed Slab Unit Layout | Sheet | 0 | 0 | 0 | 0 | |
| 12.24 | Prestressed Slab Unit Details and Schedule | Sheet | 0 | 0 | 0 | 0 | |
| 12.25 | Deck Topping Reinforcing Layout | Sheet | 0 | 0 | 0 | 0 | |
| 12.26 | Superstructure Sections and Details | Sheet | 0 | 0 | 0 | 0 | |
| Reinforcing Bar List | | | | | | | |
| 12.27 | Preparation of Reinforcing Bar List | Sheet | 0 | 0 | 0 | 0 | |
| Load Rating | | | | | | | |
| 12.28 | Load Rating | EA Unit | 0 | 0 | | 0 | |
| 12. Structures-Short Span Concrete Total | | | | | 1 | 24 | |

Project Activity 17: Retaining Walls

Estimator: Ed Brekhus

Sunset Point Road and Betty Lane Intersection

Form Revised 4/15/07

N/A

| Task No. | Task | Unit | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|--------------------------------------|---|-----------|--------------|-------------|---------------|-------------|----------|
| General Requirements | | | | | | | |
| 17.1 | Key Sheet | Sheet | 0 | 0 | 0 | 0 | |
| 17.2 | Horizontal Wall Geometry | Per Wall | 4 | 3 | 4 | 12 | |
| Permanent Proprietary Walls | | | | | | | |
| 17.3 | Vertical Wall Geometry | Per Wall | 0 | 0 | 0 | 0 | |
| 17.4 | Semi-Standard Drawings | Sheet | 0 | 0 | 0 | 0 | |
| 17.5 | Wall Plan and Elevations (Control Drawings) | Sheet | 0 | 0 | 0 | 0 | |
| 17.6 | Details | Sheet | 0 | 0 | 0 | 0 | |
| Temporary Proprietary Walls | | | | | | | |
| 17.7 | Vertical Wall Geometry | Per Wall | 0 | 0 | 0 | 0 | |
| 17.8 | Semi-Standard Drawings | Sheet | 0 | 0 | 0 | 0 | |
| 17.9 | Wall Plan and Elevations (Control Drawings) | Sheet | 0 | 0 | 0 | 0 | |
| 17.10 | Details | Sheet | 0 | 0 | 0 | 0 | |
| Cast in Place Retaining Walls | | | | | | | |
| 17.11 | Design | EA Design | 1 | 14 | 1 | 14 | |
| 17.12 | Vertical Wall Geometry | EA Wall | 4 | 3 | 4 | 12 | |
| 17.13 | General Notes | Sheet | 1 | 2 | 1 | 2 | |
| 17.14 | Wall Plan and Elevations (Control Drawings) | Sheet | 1 | 16 | 1 | 16 | |
| 17.15 | Sections and Details | Sheet | 0 | 0 | 0 | 0 | |
| 17.16 | Reinforcing Bar List | Sheet | 1 | 4 | 1 | 4 | |

Project Activity 17: Retaining Walls

| Task No. | Task | Unit | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|--|---------------------------------------|-----------|--------------|-------------|---------------|-------------|----------|
| Other Retaining Walls and Bulkheads | | | | | | | |
| 17.17 | Design | EA Design | 0 | 0 | 0 | 0 | |
| 17.18 | Vertical Wall Geometry | EA Wall | 0 | 0 | 0 | 0 | |
| 17.19 | General Notes, Tables & Misc. Details | Sheet | 0 | 0 | 0 | 0 | |
| 17.20 | Wall Plan and Elevations | Sheet | 0 | 0 | 0 | 0 | |
| 17.21 | Details | Sheet | 0 | 0 | 0 | 0 | |
| 17. Retaining Walls Total | | | | | 12 | 60 | |

Project Activity 7: Utilities

Estimator: REW

Sunset Point Road and Betty Lane Intersection

Form Revised 4/15/07

N/A

| Task No. | TASK | Units | No of Units | Hours / Unit | Total Hours | Comments |
|----------|--|-------|-------------|--------------|-------------|--|
| 7.1 | Kickoff Meeting | LS | 1 | 0 | 0 | |
| 7.2 | Identify Existing UAOs | LS | 1 | 7 | 7 | 7 UAOs |
| 7.3 | Make Utility Contacts | LS | 1 | 0 | 0 | By County |
| 7.4 | Exception Coordination | LS | 1 | 0 | 0 | N/A |
| 7.5 | Preliminary Utility Meeting | LS | 1 | 0 | 0 | N/A |
| 7.6 | Individual/Field Meetings | LS | 1 | 0 | 0 | N/A |
| 7.7 | Collect and Review Plans and Data from UAO(s) | LS | 7 | 2 | 14 | 7 utilities |
| 7.8 | Subordination of Easements Coordination | LS | 1 | 0 | 0 | N/A |
| 7.9 | Utility Design Meeting | LS | 2 | 5 | 10 | 60% and 100% Design Meetings + meeting minutes |
| 7.10 | Review Utility Markups, Work Schedules, Processing of Schedules and Agreements | LS | 7 | 3 | 21 | 4 hrs x 7 utilities = 28 hrs |
| 7.11 | Utility Coordination / Followup | LS | 0 | 0 | 0 | By County |
| 5.71 | Utility Constructability Review | LS | 7 | 5.71 | 40 | Utility Conflict Matrix |
| 7.13 | Additional Utility Services | LS | 1 | 4 | 4 | Coordination on SUE |
| 7.14 | Processing Utility Work by Highway Contractor (UWHC) | LS | 1 | 0 | 0 | By County |
| 7.15 | Contract Plans to UAO(s) | LS | 0 | 0 | 0 | By County |
| 0.00 | Certification/Close-out | LS | 0 | 0 | 0 | |
| 7.17 | Other Utilities | LS | 0 | 0 | 0 | |

Project Activity 7: Utilities

| | | | |
|---------------------------|--|-----------|--|
| 7. Utilities Total | | 96 | |
|---------------------------|--|-----------|--|

Technical Meetings

| | | | |
|-------------------------|----|---|--------------------------------|
| Kickoff | EA | 0 | |
| Preliminary meeting | EA | 0 | |
| Individual UAO meetings | EA | 0 | |
| Field meetings | EA | 0 | |
| Design meeting | EA | 2 | 60% and 100% + Meeting minutes |
| Other meetings | EA | 0 | |

| | |
|---------------------------------|----------|
| Total technical meetings | 2 |
|---------------------------------|----------|

Project manager

Project Activity 5: Roadway Plans

Estimator: REW

Sunset Point Road and Betty Lane Intersection
N/A

| Task No. | Task | Scale | Units | No. of Units | Hours / Unit | No. of Sheets | Total Hours | Comments |
|----------|---|-------|-------|--------------|--------------|---------------|-------------|--|
| 5.1 | Key Sheet | | Sheet | 1 | 8 | 1 | 8 | County Key Sheet |
| 5.2 | Summary of Pay Items-including Quantity Input | | Sheet | 0 | 0 | 0 | 0 | NA |
| 5.3 | Drainage Map | | Sheet | 0 | 0 | 0 | 0 | No Drainage Map as part of deliverable plan set |
| 5.4 | Interchange Drainage Map | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.5 | Typical Section Sheets | | Sheet | 1 | 8 | 1 | 8 | Roadway Typ. Section only and typ. Section details |
| 5.6 | General Notes/Pay Item notes | | Sheet | 2 | 8 | 2 | 16 | Based on 2 Sheet of Gen. Notes, Utility Notes, and MOT notes |
| 5.7 | Summary of Quantities | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.8 | Box Culvert Data Sheet | | Sheet | 1 | 6 | 1 | 6 | One Box Culvert |
| 5.9 | Bridge Hydraulics Recommendation Sheets | | Sheet | 0 | 0 | 0 | 0 | N/A - Bridge Hydraulics Previously Calculated |
| 5.10 | Summary of Drainage Structures | | Sheet | 0 | 0 | 0 | 0 | |
| 5.11 | Optional Pipe/ Culvert Material | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.12 | Project Layout | 500 | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.13 | Plan/Profile Sheet | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.14 | Profile Sheet | 40 | Sheet | 3 | 6 | 3 | 18 | 40 Scale, 1450 ft for Sunset Point Road, approx. 500 ft. per sheet, 3 sheets. Includes ditch profiles. |
| 5.15 | Plan Sheet | 40 | Sheet | 3 | 6 | 3 | 18 | 40 Scale, 1450 ft for Sunset Point Road, approx. 500 ft. per sheet, 3 sheets |
| 5.16 | Special Profile | | Sheet | 1 | 12 | 1 | 12 | Curb Ramp Profiles - 1 sht x 12 hrs/sht = 12 hrs |
| 5.17 | Back of Sidewalk Profile Sheet | | Sheet | 1 | 6 | 1 | 6 | 1 sheets (SE Quadrant of intersection) |
| 5.18 | Interchange Layout Sheet | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.19 | Ramp Terminal Details (Plan View) | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.20 | Intersection Layout Details | | Sheet | 0 | 0 | 0 | 0 | |
| 5.21 | Miscellaneous Detail Sheets | | Sheet | 0 | 8 | 0 | 0 | N/A |
| 5.22 | Drainage Structure Sheet (per Structure) | | EA | 12 | 3 | 0 | 36 | 12 Drainage structures |
| 5.23 | Miscellaneous Drainage Detail Sheets | | Sheet | 1 | 12 | 1 | 12 | Canal Grading Plan (1 sheet) |

Project Activity 5: Roadway Plans

| Task No. | Task | Scale | Units | No. of Units | Hours / Unit | No. of Sheets | Total Hours | Comments |
|---|--|-------|-------|--------------|--------------|---------------|-------------|--|
| 5.24 | Lateral Ditch Plan/Profile | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.25 | Lateral Ditch Cross Sections | | EA | 0 | 0 | 0 | 0 | N/A |
| 5.26 | Retention/Detention Ponds Detail Sheet | | Sheet | 0 | 0 | 0 | 0 | |
| 5.27 | Retention Pond Cross Sections | | EA | 0 | 0 | 0 | 0 | N/A |
| 5.28 | Cross-section Pattern Sheet | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.29 | Roadway Soil Survey Sheet | | Sheet | 1 | 1 | 1 | 1 | N/A |
| 5.30 | Cross Sections | | EA | 35 | 0.75 | 2 | 26 | 50' sections for 1,450 feet (30 sections)+ 3 drwys + 2 cross roads = 35 Geotechnical data (unsuitable soil) to be input into XS |
| 5.31 | Traffic Control Plan Sheets | | Sheet | 1 | 16 | 1 | 16 | One Sheet depicting one detour route |
| 5.32 | Traffic Control Cross Section Sheets | | EA | 0 | 0 | 0 | 0 | N/A |
| 5.33 | Traffic Control Detail Sheets | | Sheet | 4 | 7 | 4 | 28 | General Notes and Typ. Section |
| 5.34 | Utility Adjustment Sheets | | Sheet | 3 | 8 | 0 | 24 | 1" = 40' (3 sheets) |
| 5.35 | Selective Clearing and Grubbing | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.36 | Erosion Control Plan | 40 | Sheet | 3 | 3 | 3 | 9 | 3 sheets |
| 5.37 | SWPPP | | Sheet | 2 | 3 | 2 | 6 | 2 Sheets |
| 5.38 | Project Control Network Sheet | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.39 | Interim Standards | | LS | 0 | 0 | 0 | 0 | N/A |
| 5.40 | Utility Verification Sheet (SUE Data) | | Sheet | 0 | 0 | 0 | 0 | Not anticipated |
| Roadway Plans Technical Subtotal | | | | | | 27 | 250 | |
| 5.41 | Quality Assurance/Quality Control | | LS | % | 5% | 0 | 13 | |
| 5.42 | Supervision | | LS | % | 5% | 0 | 13 | |
| 5. Roadway Plans Total | | | | | | 27 | 276 | |

Project Activity 20: Signing and Pavement Marking Plans

Estimator:REW

Sunset Point Road and Betty Lane Intersection
N/A

| Task No. | Task | Scale | Units | No of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|--|--|-------|-------|-------------|-------------|---------------|-------------|--------------------------------------|
| 20.1 | Key Sheet | | Sheet | 0 | 0 | 0 | 0 | Included in Roadway Plans |
| 20.2 | Summary of Pay Items-including CES Input | | LS | 0 | 0 | | 0 | N/A |
| 20.3 | Tabulation of Quantities | | Sheet | 0 | 0 | 0 | 0 | Included in Roadway Plans |
| 20.4 | General Notes / Pay Item Notes | | Sheet | 1 | 4 | 1 | 4 | 1 GN sheet x 4 hrs/sheet |
| 20.5 | Project Layout | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 20.6 | Plan Sheet | 40 | Sheet | 4 | 4 | 4 | 16 | 4 Plan Sheets x 4 hrs/sheet = 16 hrs |
| 20.7 | Typical Details | | EA | 0 | 0 | | 0 | N/A |
| 20.8 | Guide Sign Work Sheet (s) | | EA | 1 | 2 | | 2 | 1 sign x 2 hrs/sign = 2 hrs |
| 20.9 | Traffic Monitoring Site | | EA | 0 | 0 | | 0 | N/A |
| 20.10 | Cross Sections | | EA | 0 | 0 | | 0 | N/A |
| 20.11 | Special Service Point Detail | | EA | 0 | 0 | | 0 | N/A |
| 20.12 | Special Details | | LS | 0 | 0 | | 0 | N/A |
| 20.13 | Interim Standards | | LS | 0 | 0 | | 0 | N/A |
| Signing & Pavement Marking Plans Technical Subtotal | | | | | | 5 | 22 | |
| 20.14 | Quality Assurance/Quality Control | | LS | % | 5% | | 1 | |
| 20.15 | Supervision | | LS | % | 5% | | 1 | |
| 20. Signing & Pavement Marking Plans Total | | | | | | 5 | 24 | |

Project Activity 22: Signalization Plans

Estimator: REW

Sunset Point Road and Betty Lane Intersection
N/A

| Task No. | Task | Scale | Units | No of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|---|--|-------|-------|-------------|-------------|---------------|-------------|---|
| 22.1 | Key Sheet | | Sheet | 0 | 4 | 0 | 0 | Included in Roadway Plans |
| 22.2 | Summary of Pay Items-including CES Input | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 22.3 | Tabulation of Quantities | | Sheet | 0 | 8 | 0 | 0 | Included in Roadway Plans |
| 22.4 | General Notes/Pay Item notes | | Sheet | 1 | 8 | 1 | 8 | One General Notes Sheet per Pinellas County |
| 22.5 | Plan Sheet | 20 | Sheet | 1 | 6 | 1 | 6 | One Sheet |
| 22.6 | Interconnect Plans | | Sheet | 0 | 0 | 0 | 0 | None Anticipated per scope |
| 22.7 | Traffic Monitoring Site | | EA | 0 | 0 | | 0 | N/A |
| 22.8 | Guide Sign Work Sheet | | EA | 4 | 1 | 1 | 4 | Four signs |
| 22.9 | Special Details | | Sheet | 1 | 4 | 1 | 4 | Mast Arm Details (Attachment details) |
| 22.10 | Special Service Point Details | | EA | 0 | 0 | 0 | 0 | None anticipated. Will be per FDOT Design Standards |
| 22.11 | Mast Arm / Monotube Tabulation Sheet | | PI | 1 | 3 | 1 | 3 | One Intersection |
| 22.12 | Strain Pole Schedule | | PI | 0 | 0 | | 0 | N/A |
| 22.13 | TCP Signal (Temporary) | | EA | 0 | 0 | | 0 | N/A |
| 22.14 | Temporary Detection Sheet | | PI | 0 | 0 | | 0 | Will cover with notes |
| 22.15 | Utility Conflict Sheet | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 22.16 | Interim Standards | | LS | 0 | 0 | | 0 | N/A |
| Signalization Plans Technical Subtotal | | | | | | 5 | 25 | |
| 22.17 | Quality Assurance/Quality Control | | LS | % | 5% | | 1 | |
| 22.18 | Supervision | | LS | % | 5% | | 1 | |
| 22. Signalization Plans Total | | | | | | 5 | 27 | |

Project Activity 30: Geotechnical

Estimator: Tierra
Form Revised 4/15/07

Sunset Point Road and Betty Lane Intersection
N/A

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|--------------------------------------|---|-------------------|-------------|--------------|-------------|---|
| Roadway | | | | | | |
| 30.1 | Document Collection and Review | LS | 1 | 2 | 2 | The project consists of construction of operational intersection improvements, roadway reconstruction, signalization improvements, bridge replacement, and incidental work at the intersection of Betty |
| 30.2 | Develop Detailed Boring Location Plan | LS | 1 | 3 | 3 | |
| 30.3 | Stake Borings/Utility Clearance | Boring | 16 | 0.2 | 3 | Total of 6 pavement cores w/5-foot auger within pavement section |
| 30.4 | Coordinate and Develop MOT Plans for Field Investigation | EA | 1 | 2 | 2 | 10 augers along roadway improvements to 5 feet |
| 30.5 | Drilling Access Permits | Location | 0 | 0 | 0 | |
| 30.6 | Property Clearances | EA | 0 | 0 | 0 | |
| 30.7 | Groundwater Monitoring | EA | 0 | 0 | 0 | |
| 30.8 | LBR Sampling | EA | 0 | 0 | 0 | |
| 30.9 | Coordination of Field Work | 100 lf of boring | 0.8 | 1 | 1 | |
| 30.10 | Soil and Rock Classification - Roadway | 100 lf of boring | 0.8 | 1.5 | 1 | |
| 30.11 | Determine Design LBR | LS | 1 | 0 | 0 | |
| 30.12 | Tabulate all Laboratory Data | 100 lf of boring | 0.8 | 0.5 | 0 | |
| 30.13 | Estimate Seasonal High Water Table | Boring | 4 | 0.75 | 3 | |
| 30.14 | Calculate Parameters for Water Retention Areas | EA | 0 | 0 | 0 | |
| 30.15 | Delineate Limits of Unsuitable Material | Cross-section | 4 | 0.5 | 2 | Estimate 4 cross-sections |
| 30.16 | ASCII Files for Cross-Sections | 100 lf of boring | 0.8 | 1 | 1 | |
| 30.17 | Embankment settlement and Stability | Embankment Boring | 0 | 0 | 0 | |
| 30.18 | Stormwater Volume Recovery and/or Background Seepage Analysis | EA | 0 | 0 | 0 | |
| 30.19 | Geotechnical Recommendations | LS | 1 | 4 | 4 | |
| 30.20 | Preliminary Roadway Report and Pavement Evaluation Report | LS | 1 | 0 | 0 | |
| 30.21 | Final Report | EA | 1 | 6 | 6 | |
| 30.22 | Auger Boring Drafting | 100 lf boring | 0.8 | 2 | 2 | |
| 30.23 | SPT Boring Drafting | 100 lf boring | 0 | 0 | 0 | |
| 30.23 | SPT Boring Drafting | 100 lf boring | 0 | 0 | 0 | |
| Roadway Geotechnical Subtotal | | | | | 30 | |

Project Activity 30: Geotechnical

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|---|---|------------------|-------------|--------------|-------------|--|
| Structural | | | | | | |
| 30.24 | Develop Detailed Boring Location Plan | LS | 1 | 3 | 3 | The project consists of construction of operational intersection improvements, roadway reconstruction, signalization improvements, bridge replacement, and incidental work at the intersection of Betty Lane and Sunset Point Road |
| 30.25 | Stake Borings/Utility Clearance | Boring | 3 | 0.5 | 2 | |
| 30.26 | Coordinate and Develop MOT Plans for Field Investigation | EA | 1 | 2 | 2 | Total of 3 SPT borings |
| 30.27 | Drilling Access Permits | Location | 0 | 0 | 0 | 2 @25 ft for mast arm structures |
| 30.28 | Property Clearances | EA | 0 | 0 | 0 | 1 @50 ft for bridge foundations |
| 30.29 | Collection of Corrosion Samples | EA | 2 | 0.5 | 1 | |
| 30.30 | Coordination of Field Work | 100 lf of boring | 1 | 0.75 | 1 | |
| 30.31 | Soil and Rock Classification - Structures | 100 lf of boring | 1 | 1.5 | 2 | |
| 30.32 | Tabulate all Laboratory Data | 100 lf of boring | 1 | 0.75 | 1 | |
| 30.33 | Estimate Design Groundwater Level for Structures | EA | 2 | 1 | 2 | |
| 30.34 | Evaluation and Selection of Foundation Alternatives (BDR) | Bridge boring | 0 | 0 | 0 | |
| 30.35 | Detailed Analysis of Selected Foundation Alternate(s) | Bridge boring | 0 | 0 | 0 | |
| 30.36 | Bridge Construction and Testing Recommendations | Bridge boring | 1 | 3 | 3 | |
| 30.37 | Lateral Load Analysis | Bridge boring | 0 | 0 | 0 | |
| 30.38 | Walls | Wall Boring | 0 | 3 | 0 | |
| 30.39 | Sheetpile Wall Analysis | Wall Boring | 1 | 2 | 2 | |
| 30.40 | Design Soil Parameters for Signs, Signals, High Mast Lights, and Strain Poles and Geotechnical Recommendations. | Boring | 2 | 1 | 2 | |
| 30.41 | Box Culvert Analysis | EA | 0 | 0 | 0 | |
| 30.42 | Preliminary Report - BDR | EA | 0 | 0 | 0 | |
| 30.43 | Final Report - Bridge and Associated Walls | EA | 1 | 12 | 12 | |
| 30.44 | Final Reports - Signs, Signals, Box Culvert, Walls and High Mast Lights. | EA | 0 | 0 | 0 | |
| 30.45 | SPT Boring Drafting | 100 lf of boring | 1 | 2 | 2 | |
| 30.46 | Other Geotechnical | LS | 1 | 0 | 0 | |
| 30.46 | Other Geotechnical | LS | 1 | 0 | 0 | |
| Structural Geotechnical Subtotal | | | | | 35 | |
| Geotechnical Technical Subtotal | | | | | 65 | |

Project Activity 30: Geotechnical

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|---|---|-------|-------------|--------------|-------------|--|
| 30.48 | Technical Special Provisions | EA | 0 | 0 | 0 | |
| 30.49 | Field Reviews | LS | 2 | 4 | 8 | 2 field reviews x 2 people/review x 2 hrs/review = 8 hrs |
| 30.50 | Technical Meetings | LS | 1 | 2 | 2 | Meetings listed below |
| 30.51 | Quality Assurance/Quality Control | LS | % | 5% | 3 | |
| 30.52 | Supervision | LS | % | 5% | 3 | |
| Geotechnical Nontechnical Subtotal | | | | | 16 | |
| 30.52 | Coordination | LS | % | 0% | 0 | |
| 30.53 | Optional Preliminary Contamination Assessment | LS | 1 | 0 | 0 | |
| 30. Geotechnical Total | | | | | 81 | |

Technical Meetings

| | | | | |
|------------------------------------|----|---|---|----------|
| Kickoff Meeting with FDOT | EA | 0 | 0 | 0 |
| Boring Layout Approval | EA | 0 | 0 | 0 |
| Attend in BDR Review Meeting | EA | 0 | 0 | 0 |
| 30/60/90% Submittal Review | EA | 0 | 0 | 0 |
| Other meetings | EA | 0 | 0 | 0 |
| Subtotal technical meetings | | | | 0 |

| | | | | |
|-----------------------|----|---|---|---|
| Progress Meetings | EA | 0 | 0 | 0 |
| Phase Review Meetings | EA | 0 | 0 | 0 |

| | | | | |
|-----------------------|--|--|--|----------|
| Total Meetings | | | | 0 |
|-----------------------|--|--|--|----------|

Carries to 30.49

Project manager

Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3

EXHIBIT B (2)

Project Staff Hour Summary

Name of Consultant:

Volkert, Inc

Wilford Road at Whitney Road

N/A

Form Revised 6/06/05

| | | Project Staff Hours | | | | | | | | | | | | | |
|----------------------|-----------------------------------|---------------------|-----------|-----------|------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------|
| Activity No. | Activity | Volkert, Inc | Tierra | Scheda | American Quality Consultants | Sub 4 | Sub 5 | Sub 6 | Sub 7 | Sub 8 | Sub 9 | Sub 10 | Sub 11 | Sub 12 | Total Hours |
| 3 | General Task | 132 | | | | | | | | | | | | | 132 |
| 4 | Roadway Analysis | 515 | | | | | | | | | | | | | 515 |
| 5 | Roadway Plans | 351 | | | | | | | | | | | | | 351 |
| 6 | Drainage Analysis | 209 | | | | | | | | | | | | | 209 |
| 7 | Utility | 96 | | | | | | | | | | | | | 96 |
| 8 | Permits | | | 99 | | | | | | | | | | | 99 |
| 9 | Structural Analysis Summary | 59 | | | | | | | | | | | | | 59 |
| 10 | BDR | | | | | | | | | | | | | | 0 |
| 11 | Temporary Bridge | | | | | | | | | | | | | | 0 |
| 12 | Short Span Concrete | 24 | | | | | | | | | | | | | 24 |
| 13 | Medium Span Concrete | 0 | | | | | | | | | | | | | 0 |
| 14 | Structural Steel | 0 | | | | | | | | | | | | | 0 |
| 15 | Segmental Concrete | 0 | | | | | | | | | | | | | 0 |
| 16 | Movable Span | 0 | | | | | | | | | | | | | 0 |
| 17 | Retaining Walls | 68 | | | | | | | | | | | | | 68 |
| 18 | Miscellaneous Structures | 143 | | | | | | | | | | | | | 143 |
| 19 | Signing & Marking Analysis | 85 | | | 73 | | | | | | | | | | 158 |
| 20 | Signing & Marking Plans | 22 | | | | | | | | | | | | | 22 |
| 21 | Signalization Analysis | | | | | | | | | | | | | | 0 |
| 22 | Signalization Plans | | | | | | | | | | | | | | 0 |
| 23 | Lighting Analysis | | | | | | | | | | | | | | 0 |
| 24 | Lighting Plans | | | | | | | | | | | | | | 0 |
| 25 | Landscape Architecture Analysis | | | | | | | | | | | | | | 0 |
| 26 | Landscape Architecture Plans | | | | | | | | | | | | | | 0 |
| 27 | Survey - Field and Office Support | | | | | | | | | | | | | | 0 |
| 28 | Photogrammetry | | | | | | | | | | | | | | 0 |
| 29 | Mapping | | | | | | | | | | | | | | 0 |
| 30 | Geotechnical | | 82 | | | | | | | | | | | | 82 |
| 31 | Architecture | | | | | | | | | | | | | | 0 |
| 32 | Noise Wall Analysis | | | | | | | | | | | | | | 0 |
| Project Total | | 1,704 | 82 | 99 | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,958 |
| 27 | Survey Field Crew Days | 0 | | | | | | | | | | | | | 0 |

- Notes: 1. Staff hours for prime consultant come directly from each discipline's worksheet.
 2. Staff hours for subconsultants are to be entered manually into columns D through O.
 3. For workbooks prepared by subconsultants, their project hours will be totaled in column C.

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: N/A

Project Name: Wilford Road at Whitney Road

FAP Number: N/A

Date: 2/3/2015

Name of Consultant: Volkert, Inc

| WORK ACTIVITY | Hours from "Summary" sheet | EMPLOYEE CLASSIFICATION | | | | | | | | | | | | TOTAL STAFF HOURS | | ON CADD |
|--|----------------------------------|-------------------------|-------------------|--------------------|---------------------|---------------------------|----------|-------|-------|-------|-------|-------|-------|----------------------|---------|---------|
| | Firm Total Hours | Project Manager | Chief Engineer | Senior Engineer | Project Engineer | Senior Engineerin g | Clerical | | | | | | | RANGE | | |
| | | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | PERCENT | |
| 3. Project General Tasks | 132 | 106 | 13 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 132 | 145 | |
| 4. Roadway Analysis | 515 | 52 | 26 | 258 | 103 | 77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 516 | 568 | |
| 5. Roadway Plans | 351 | 35 | 18 | 140 | 35 | 123 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 351 | 386 | |
| 6. Drainage Analysis | 209 | 21 | 10 | 105 | 10 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 209 | 230 | |
| 7. Utilities | 96 | 43 | 0 | 48 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 96 | 106 | |
| 8. Environmental Permits | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9. Structures - Misc. Tasks Dwgs Non-Tech. | 59 | 0 | 6 | 15 | 12 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 66 | |
| 10. Structures - BDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11. Structures - Temporary Bridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12. Structures - Short Span Concrete | 24 | 0 | 1 | 5 | 6 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 26 | |
| 13. Structures - Medium Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 14. Structures - Structural Steel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 15. Structures - Segmental Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 16. Structures - Movable Span | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 17. Structures - Retaining Walls | 68 | 0 | 3 | 14 | 17 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 75 | |
| 18. Structures - Miscellaneous | 143 | 0 | 7 | 36 | 36 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 143 | 157 | |
| 19. Signing & Marking Analysis | 85 | 9 | 4 | 46 | 13 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 | 94 | |
| 20. Signing & Marking Plans | 22 | 2 | 1 | 9 | 2 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 24 | |
| 21. Signalization Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 22. Signalization Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 23. Lighting Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 24. Lighting Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 25. Landscape Architecture Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 26. Landscape Architecture Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 27. Survey (Field & Office Support) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 28. Photogrammetry | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 29. Mapping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 30. Geotechnical | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 31. Architecture Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 32. Noise Wall Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| TOTALS | 1 704 | 268 | 89 | 676 | 239 | 421 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 1,706 | 1,877 | |

Notes

- This worksheet provides the distribution of a firm's total staff hours for a project.
- Percentages for staff hour distribution by classification are entered below in rows 25 to 32 of this sheet.
- Total Staff Hours (column P) may not match staff hours from Summary worksheet (column C) due to rounding. Staff hours calculated by employee classifications are to be adjusted so totals in columns C and P match.
- Formulas under "Total Staff Hours Range" (columns P & Q) may be adjusted to provide desired range.

Field Survey Estimate:

0 4-man crew days

FIRM TOTAL

1,706

1,877

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: N/A

Project Name: Wilford Road at Whitney Road

FAP Number: N/A

Date: 2/3/2015

Name of Consultant: Volkert, Inc.

| Staff Hour Distribution Percentages - Firm Total | | | | | | | | | | | | | | |
|--|--|--------------------|-------------------|--------------------|---------------------|-------------------------------|----------|------|------|------|------|------|------|---------|
| | Hours from "Summary" sheet Firm Total | Project Manager | Chief Engineer | Senior Engineer | Project Engineer | Engineerin g Technician | Clerical | 0 | 0 | 0 | 0 | 0 | 0 | Total |
| 3. Project General Tasks | 132 | 80.0% | 10.0% | 0.0% | 0.0% | 0.0% | 10.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 4. Roadway Analysis | 515 | 10.0% | 5.0% | 50.0% | 20.0% | 15.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 5. Roadway Plans | 351 | 10.0% | 5.0% | 40.0% | 10.0% | 35.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 6. Drainage Analysis | 209 | 10.0% | 5.0% | 50.0% | 5.0% | 30.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 7. Utilities | 96 | 45.0% | 0.0% | 50.0% | 5.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 8. Environmental Permits | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 9. Structures - Misc. Tasks, Dwgs, Non-Tech. | 59 | 0.0% | 10.0% | 25.0% | 20.0% | 45.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 10. Structures - BDR | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 11. Structures - Temporary Bridge | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 12. Structures - Short Span Concrete | 24 | 0.0% | 5.0% | 20.0% | 25.0% | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 13. Structures - Medium Span Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 14. Structures - Structural Steel | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 15. Structures - Segmental Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 16. Structures - Movable Span | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 17. Structures - Retaining Walls | 68 | 0.0% | 5.0% | 20.0% | 25.0% | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 18. Structures - Miscellaneous | 143 | 0.0% | 5.0% | 25.0% | 25.0% | 45.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 19. Signing & Marking Analysis | 85 | 10.0% | 5.0% | 35.0% | 15.0% | 15.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 20. Signing & Marking Plans | 22 | 10.0% | 5.0% | 40.0% | 10.0% | 35.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 21. Signalization Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 22. Signalization Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 23. Lighting Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 24. Lighting Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 25. Landscape Architecture Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 26. Landscape Architecture Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 27. Survey (Field & Office Support) | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 28. Photogrammetry | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 29. Mapping | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 30. Geotechnical | 82 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 31. Architecture Development | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 32. Noise Wall Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: N/AProject Name: Wilford Road at Whitney RoadFAP Number: N/ADate: 2/3/2015Name of Consultant: Tierra

| WORK ACTIVITY | Hours from "Summary" sheet | EMPLOYEE CLASSIFICATION | | | | | | | | | | | | TOTAL STAFF HOURS | | ON CADD |
|--|----------------------------------|-------------------------|----------------------------|------------------|-----------------|------------------------|-------------------------------------|---------------------------|-----------------------|-------|-------|-------|-------|----------------------|---------|---------|
| | Firm Total | Project Manager | Senior Project Engineer | Project Engineer | Engineer Intern | Computer Technician | Senior Engineering Technician | Engineering Technician | Secretary Clerical | | | | | RANGE | | |
| | | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | | PERCENT | |
| 3. Project General Tasks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4. Roadway Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5. Roadway Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6. Drainage Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7. Utilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8. Environmental Permits | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9. Structures - Misc. Tasks, Dwgs. Non-Tech. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10. Structures - BDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11. Structures - Temporary Bridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12. Structures - Short Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 13. Structures - Medium Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 14. Structures - Structural Steel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 15. Structures - Segmental Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 16. Structures - Movable Span | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 17. Structures - Retaining Walls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 18. Structures - Miscellaneous | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 19. Signing & Marking Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 20. Signing & Marking Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 21. Signalization Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 22. Signalization Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 23. Lighting Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 24. Lighting Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 25. Landscape Architecture Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 26. Landscape Architecture Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 27. Survey (Field & Office Support) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 28. Photogrammetry | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 29. Mapping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 30. Geotechnical | 82 | 4 | 8 | 12 | 22 | 8 | 12 | 12 | 4 | 0 | 0 | 0 | 0 | 82 | 90 | |
| 31. Architecture Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 32. Noise Wall Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| TOTALS | 82 | 4 | 8 | 12 | 22 | 8 | 12 | 12 | 4 | 0 | 0 | 0 | 0 | 82 | 90 | |

Notes

1. This worksheet provides the distribution of a firm's total staff hours for a project.

2. Percentages for staff hour distribution by classification are entered below in rows 30 to 84 of this sheet.

Field Survey Estimate:

0

4-man crew days

FIRM TOTAL

82

90

Notes

- 1 This worksheet provides the distribution of a firm's total staff hours for a project.
2 Percentages for staff hour distribution by classification are entered below in rows 5 to 84 of this sheet.
3 Total Staff Hours (column P) may not match staff hours from Summary worksheet (column Q) due to rounding. Staff hours calculated from employee
4 classifications are to be adjusted so totals in columns C and P match.
5 4 Formulas under "Total Staff Hours Range" (columns P & Q) may be adjusted to provide desired range

Field Survey Estimate:

0 4-man crew days

FIRM TOTAL

82

90

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: N/A

Project Name: Wilford Road at Whitney Road

FAP Number: N/A

Date: 2/3/2015

Name of Consultant: Tierra

| Staff Hour Distribution Percentages - Firm Total | | | | | | | | | | | | | | |
|--|--|--------------------|-------------------------------|---------------------|--------------------|------------------------|-----------------------------|-----------------------------|-----------------------|------|-------|-------|-------|---------|
| | Hours from "Summary" sheet Firm Total | Project Manager | Senior Project Engineer | Project Engineer | Engineer Intern | Computer Technician | Engineer g Technician | Engineer g Technician | Secretary Clerical | 0 | 0 | 0 | 0 | Total |
| 3. Project General Tasks | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 4. Roadway Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 5. Roadway Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 6. Drainage Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 7. Utilities | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 8. Environmental Permits | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 9. Structures - Misc. Tasks, Dwgs, Non-Tech. | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 10. Structures - BDR | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 11. Structures - Temporary Bridge | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 12. Structures - Short Span Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 13. Structures - Medium Span Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 14. Structures - Structural Steel | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 15. Structures - Segmental Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 16. Structures - Movable Span | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 17. Structures - Retaining Walls | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 18. Structures - Miscellaneous | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 19. Signing & Marking Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 20. Signing & Marking Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 21. Signalization Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 22. Signalization Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 23. Lighting Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 24. Lighting Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 25. Landscape Architecture Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 26. Landscape Architecture Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 27. Survey (Field & Office Support) | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 15.0% | 35.0% | 50.0% | 100.00% |
| 28. Photogrammetry | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 29. Mapping | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 30. Geotechnical | 82 | 5.0% | 10.0% | 15.0% | 25.0% | 10.0% | 15.0% | 15.0% | 5.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 31. Architecture Development | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 32. Noise Wall Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: N/A

Project Name: Wilford Road at Whitney Road

FAP Number: N/A

Date: 2/3/2015

Name of Consultant: Scheda

| WORK ACTIVITY | Hours from "Summary" sheet | EMPLOYEE CLASSIFICATION | | | | | | | | | | | | TOTAL STAFF HOURS | | ON CADD |
|--|----------------------------------|-------------------------|---------------------|-----------------------------|-------|----------|-------|-------|-------|-------|-------|-------|-------|----------------------|---------|---------|
| | Firm Total Hours | Chief Scientist | Senior Scientist | Environmental Specialist | GIS | Clerical | | | | | | | | RANGE | | |
| | | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | PERCENT | |
| 3. Project General Tasks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4. Roadway Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5. Roadway Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6. Drainage Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7. Utilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8. Environmental Permits | 99 | 10 | 40 | 40 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 101 | 111 | |
| 9. Structures - Misc. Tasks, Dwgs. Non-Tech. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10. Structures - BDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11. Structures - Temporary Bridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12. Structures - Short Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 13. Structures - Medium Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 14. Structures - Structural Steel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 15. Structures - Segmental Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 16. Structures - Movable Span | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 17. Structures - Retaining Walls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 18. Structures - Miscellaneous | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 19. Signing & Marking Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 20. Signing & Marking Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 21. Signalization Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 22. Signalization Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 23. Lighting Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 24. Lighting Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 25. Landscape Architecture Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 26. Landscape Architecture Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 27. Survey (Field & Office Support) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 28. Photogrammetry | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 29. Mapping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 30. Geotechnical | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 31. Architecture Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 32. Noise Wall Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| TOTALS | 99 | 10 | 40 | 40 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 101 | 111 | |

- Notes
1. This worksheet provides the distribution of a firm's total staff hours for a project.
 2. Percentages for staff hour distribution by classification are entered below in rows 56 to 64 of this sheet.
 3. Total Staff Hours (column P) may not match staff hours from Summary worksheet (column C) due to rounding. Staff hours calculated for employee classifications are to be adjusted so totals in columns C and P match.
 4. Formulas under "Total Staff Hours Range" (columns P & Q) may be adjusted to provide desired range.

Field Survey Estimate

0 4-man crew days

FIRM TOTAL

101

111

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: N/A
 FAP Number: N/A

Project Name: Wilford Road at Whitney Road
 Date: 2/3/2015 Name of Consultant: Scheda

| Staff Hour Distribution Percentages - Firm Total | | | | | | | | | | | | | | |
|--|--|--------------------|---------------------|-----------------------------|------|----------|------|------|------|------|------|------|------|---------|
| | Hours from "Summary" sheet Firm Total | Chief Scientist | Senior Scientist | Environmental Specialist | GIS | Clerical | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Total |
| 3. Project General Tasks | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 4. Roadway Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 5. Roadway Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 6. Drainage Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 7. Utilities | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 8. Environmental Permits | 99 | 10.0% | 40.0% | 40.0% | 9.0% | 1.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.00% |
| 9. Structures - Misc. Tasks, Dwgs. Non-Tech. | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 10. Structures - BDR | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 11. Structures - Temporary Bridge | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 12. Structures - Short Span Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 13. Structures - Medium Span Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 14. Structures - Structural Steel | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 15. Structures - Segmental Concrete | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 16. Structures - Movable Span | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 17. Structures - Retaining Walls | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 18. Structures - Miscellaneous | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 19. Signing & Marking Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 20. Signing & Marking Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 21. Signalization Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 22. Signalization Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 23. Lighting Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 24. Lighting Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 25. Landscape Architecture Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 26. Landscape Architecture Plans | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 27. Survey (Field & Office Support) | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 28. Photogrammetry | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 29. Mapping | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 30. Geotechnical | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 31. Architecture Development | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |
| 32. Noise Wall Analysis | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.00% |

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: N/A

Project Name: Wilford Road at Whitney Road

FAP Number: N/A

Date: 2/3/2015

Name of Consultant: American Quality Consultants

| WORK ACTIVITY | Hours from "Summary" sheet | EMPLOYEE CLASSIFICATION | | | | | | | | | | | | TOTAL STAFF HOURS | | ON CADD |
|---|----------------------------------|-------------------------|-------------------|--------------------|---------------------|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|----------------------|---------|---------|
| | | Firm Total Hours | Chief Engineer | Senior Engineer | Project Engineer | Senior Engineering Technician | | | | | | | | | | |
| | | | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | Hours | RANGE | PERCENT | |
| 3. Project General Tasks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4. Roadway Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5. Roadway Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 6. Drainage Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7. Utilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8. Environmental Permits | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9. Structures - Misc. Tasks Dwgs, Non-Tech. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10. Structures - BDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11. Structures - Temporary Bridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12. Structures - Short Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 13. Structures - Medium Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 14. Structures - Structural Steel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 15. Structures - Segmental Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 16. Structures - Movable Span | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 17. Structures - Retaining Walls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 18. Structures - Miscellaneous | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 19. Signing & Marking Analysis | 73 | 7 | 26 | 22 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | 80 | |
| 20. Signing & Marking Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 21. Signalization Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 22. Signalization Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 23. Lighting Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 24. Lighting Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 25. Landscape Architecture Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 26. Landscape Architecture Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 27. Survey (Field & Office Support) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 28. Photogrammetry | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 29. Mapping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 30. Geotechnical | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 31. Architecture Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 32. Noise Wall Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| TOTALS | 0 | 7 | 26 | 22 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | 80 | |

Notes

- This worksheet provides the distribution of a firm's total staff hours for a project.
- Percentages for staff hour distribution by classification are entered below in rows 35 to 84 of this sheet.
- Total Staff Hours (column P) may not match staff hours from Summary worksheet (column C) due to rounding. Staff hours calculated for employee classifications are to be adjusted so totals in columns C and P match.
- Formulas under "Total Staff Hours Range" (columns P & Q) may be adjusted to provide desired range.

Field Survey Estimate

0 4-man crew days

FIRM TOTAL

73

80

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: N/A

Project Nam Wilford Road at Whitney Road

FAP Number: N/A

Date: 2/3/2015

Name of Consultant: American Quality Consultants

[illegible]

EXHIBIT B: ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project: Wilford Road at Whitney Road
 County: Pinellas County
 FPN: N/A
 FAP No.: N/A

Consultant Name: Volkert, Inc.
 Consultant No.: enter consultants proj. number
 Date: 2/3/2015
 Estimator: REW

| Staff Classification | Total Staff Hours From "SH Summary - Firm" | Project Manager | Chief Engineer | Senior Engineer | Project Engineer | Senior Engineering Technician | Clerical | | | | | | | SH By Activity | Salary Cost By Activity | Average Rate Per Task |
|---|--|-----------------|----------------|-----------------|------------------|-------------------------------|----------|--------|--------|--------|--------|--------|--------|----------------|-------------------------|-----------------------|
| | | \$173.00 | \$204.00 | \$155.00 | \$117.00 | \$76.00 | \$66.00 | | | | | | | | | |
| 3. Project General Tasks | 132 | 106 | 13 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 132 | \$21,848 | \$165.52 |
| 4. Roadway Analysis | 515 | 52 | 26 | 258 | 103 | 77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 516 | \$72,193 | \$139.91 |
| 5. Roadway Plans | 351 | 35 | 18 | 140 | 35 | 123 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 351 | \$44,870 | \$127.83 |
| 6. Drainage Analysis | 209 | 21 | 10 | 105 | 10 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 209 | \$27,906 | \$133.52 |
| 7. Utilities | 96 | 43 | 0 | 48 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 96 | \$15,464 | \$161.08 |
| 8. Environmental Permits | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 9. Structures - Misc. Tasks, Dwgs Non-Tec | 59 | 0 | 6 | 15 | 12 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | \$7,005 | \$116.75 |
| 10. Structures - BDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 11. Structures - Temporary Bridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 12. Structures - Short Span Concrete | 24 | 0 | 1 | 5 | 6 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | \$2,593 | \$108.04 |
| 13. Structures - Medium Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 14. Structures - Structural Steel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 15. Structures - Segmental Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 16. Structures - Movable Span | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 17. Structures - Retaining Walls | 68 | 0 | 3 | 14 | 17 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | \$7,355 | \$108.16 |
| 18. Structures - Miscellaneous | 143 | 0 | 7 | 36 | 36 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 143 | \$16,084 | \$112.48 |
| 19. Signing & Marking Analysis | 85 | 9 | 4 | 46 | 13 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 | \$12,012 | \$141.32 |
| 20. Signing & Marking Plans | 22 | 2 | 1 | 9 | 2 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | \$2,787 | \$126.68 |
| 21. Signalization Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 22. Signalization Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 23. Lighting Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 24. Lighting Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 25. Landscape Architecture Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 26. Landscape Architecture Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 27. Survey (Field & Office Support) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 28. Photogrammetry | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 29. Mapping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 30. Geotechnical | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 31. Architecture Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 32. Noise Wall Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| Total Staff Hours | 1,704 | 268 | 89 | 676 | 239 | 421 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 1,706 | | |
| Total Staff Cost | | \$46,364.00 | \$18,156.00 | \$104,780.00 | \$27,963.00 | \$31,996.00 | \$858.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | | \$230,117.00 | \$134.89 |

Check = \$230,117.00

Worksheet: EXHIBIT B

1

Survey Field Days by Subconsultant
 15% Line and Grade

Notes

- This sheet to be used by Prime Consultant to calculate the Grand Total fee.
- Manually enter fee from each subconsultant. Unused subconsultant rows may be hidden.

SALARY RELATED COSTS

| | | |
|--|---------------------|---------------------|
| OVERHEAD | 0.00% | \$0.00 |
| OPERATING MARGIN | 0.00% | \$0.00 |
| FCCM (Facilities Capital Cost Money) | 0.000% | \$0.00 |
| EXPENSES: | 0.00% | \$0.00 |
| Survey (Field - if by Prime) | 0 @ 4-man crew days | \$0.00 |
| SUBTOTAL ESTIMATED FEE: | | \$230,117.00 |
| Subconsultant: Tierra | | \$7,292.00 |
| Subconsultant: Schemata | | \$10,655.00 |
| Subconsultant: | | \$0.00 |
| Subconsultant: American Quality Consultants | | \$9,178.00 |
| Subconsultant: Sub 5 | | \$0.00 |
| Subconsultant: Sub 6 | | \$0.00 |
| Subconsultant: Sub 7 | | \$0.00 |
| Subconsultant: Sub 8 | | \$0.00 |
| Subconsultant: Sub 9 | | \$0.00 |
| Subconsultant: Sub 10 | | \$0.00 |
| Subconsultant: Sub 11 | | \$0.00 |
| Subconsultant: Sub 12 | | \$0.00 |
| SUBTOTAL ESTIMATED FEE: | | \$257,242.00 |
| Geotechnical Field and Lab Testing (Tierra) | | \$5,907.23 |
| SUBTOTAL ESTIMATED FEE: | | \$263,149.23 |
| Optional Services | | \$0.00 |
| GRAND TOTAL ESTIMATED FEE: | | \$263,149.23 |

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT1

Name of Project: Wilford Road at Whitney Road
 County: Pinellas County
 FPN: N/A
 FAP No.: N/A

Consultant Name: Tierra
 Consultant No.: enter consultants proj. number
 Date: 2/3/2015
 Estimator: Tierra

| Staff Classification | Total Staff Hours From "SH Summary Firm" | Project Manager | Senior Project Engineer | Project Engineer | Engineer Intern | Computer Technician | Senior Engineering Technician | Engineering Technician | Secretary Clerical | | | | | SH By Activity | Salary Cost By Activity | Average Rate Per Task |
|--|--|-----------------|-------------------------|------------------|-----------------|---------------------|-------------------------------|------------------------|--------------------|--------|--------|--------|--------|----------------|-------------------------|-----------------------|
| | | \$159.00 | \$129.00 | \$109.00 | \$90.00 | \$80.00 | \$67.00 | \$57.00 | \$52.00 | | | | | | | |
| 3. Project General Tasks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 4. Roadway Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 5. Roadway Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 6. Drainage Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 7. Utilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 8. Environmental Permits | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 9. Structures - Misc. Tasks, Dwgs, Non-Tec | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 10. Structures - BDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 11. Structures - Temporary Bridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 12. Structures - Short Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 13. Structures - Medium Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 14. Structures - Structural Steel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 15. Structures - Segmental Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 16. Structures - Movable Span | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 17. Structures - Retaining Walls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 18. Structures - Miscellaneous | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 19. Signing & Marking Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 20. Signing & Marking Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 21. Signalization Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 22. Signalization Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 23. Lighting Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 24. Lighting Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 25. Landscape Architecture Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 26. Landscape Architecture Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 27. Survey (Field & Office Support) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 28. Photogrammetry | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 29. Mapping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 30. Geotechnical | 82 | 4 | 8 | 12 | 22 | 8 | 12 | 12 | 4 | 0 | 0 | 0 | 0 | 82 | \$7,292 | \$88.93 |
| 31. Architecture Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 32. Noise Wall Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| Total Staff Hours | 82 | 4 | 8 | 12 | 22 | 8 | 12 | 12 | 4 | 0 | 0 | 0 | 0 | 82 | | |
| Total Staff Cost | | \$636.00 | \$1,032.00 | \$1,308.00 | \$1,980.00 | \$640.00 | \$804.00 | \$684.00 | \$208.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | | \$7,292.00 | \$88.93 |

Check = \$7,292.00

15% Line and Grade

1

15% Line and Grade

Notes

1 This sheet to be used by Subconsultant to calculate its fee

SALARY RELATED COSTS

| | | |
|--------------------------------------|------------------------|--------------------|
| OVERHEAD | 0% | \$0.00 |
| OPERATING MARGIN | 0% | \$0.00 |
| FCCM (Facilities Capital Cost Money) | 0.00% | \$0.00 |
| EXPENSES | 0.00% | \$0.00 |
| SUBTOTAL ESTIMATED FEE: | | \$7,292.00 |
| Survey (Field) | 0 | \$0.00 |
| Geotechnical Field and Lab Testing | 4-man crew di \$ / day | \$5,907.23 |
| SUBTOTAL ESTIMATED FEE: | | \$13,199.23 |
| Optional Services | | \$0.00 |
| GRAND TOTAL ESTIMATED FEE: | | \$13,199.23 |

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project: Wilford Road at Whitney Road
 County: Pinellas County
 FPN: N/A
 FAP No.: N/A

Consultant Name: Scheda
 Consultant No.: enter consultants proj. number
 Date: 2/3/2015
 Estimator: Scheda

| Staff Classification | Total Staff Hours From "SH Summary Firm" | Chief Scientist | Senior Scientist | Environmental Specialist | GIS | Clerical | | | | | | | | | SH By Activity | Salary Cost By Activity | Average Rate Per Task |
|---|--|-----------------|------------------|--------------------------|----------|----------|--------|--------|--------|--------|--------|--------|--------|-----|----------------|-------------------------|-----------------------|
| 3. Project General Tasks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 4. Roadway Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 5. Roadway Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 6. Drainage Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 7. Utilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 8. Environmental Permits | 99 | 10 | 40 | 40 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 101 | \$10,655 | \$105.50 | #DIV/0! |
| 9. Structures - Misc. Tasks, Dwgs Non-Tec | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 10. Structures - BDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 11. Structures - Temporary Bridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 12. Structures - Short Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 13. Structures - Medium Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 14. Structures - Structural Steel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 15. Structures - Segmental Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 16. Structures - Movable Span | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 17. Structures - Retaining Walls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 18. Structures - Miscellaneous | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 19. Signing & Marking Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 20. Signing & Marking Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 21. Signalization Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 22. Signalization Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 23. Lighting Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 24. Lighting Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 25. Landscape Architecture Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 26. Landscape Architecture Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 27. Survey (Field & Office Support) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 28. Photogrammetry | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 29. Mapping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 30. Geotechnical | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 31. Architecture Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 32. Noise Wall Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| Total Staff Hours | 99 | 10 | 40 | 40 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 101 | | | |
| Total Staff Cost | | \$1,600.00 | \$4,800.00 | \$3,400.00 | \$800.00 | \$55.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | | \$10,655.00 | \$105.50 | |

Check = \$10,655.00

15% Line and Grade

1

15% Line and Grade

Notes

1 This sheet to be used by Subconsultant to calculate its fee

| | | |
|--------------------------------------|------------------------|--------------------|
| SALARY RELATED COSTS | | \$10,655.00 |
| OVERHEAD | 0% | \$0.00 |
| OPERATING MARGIN | 0% | \$0.00 |
| FCCM (Facilities Capital Cost Money) | 0.00% | \$0.00 |
| EXPENSES | 0.00% | \$0.00 |
| SUBTOTAL ESTIMATED FEE: | | \$10,655.00 |
| Survey (Field) | 0 | \$0.00 |
| Geotechnical Field and Lab Testing | 4-man crew d: \$ / day | \$0.00 |
| SUBTOTAL ESTIMATED FEE: | | \$10,655.00 |
| Optional Services | | \$0.00 |
| GRAND TOTAL ESTIMATED FEE: | | \$10,655.00 |

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project: Wilford Road at Whitney Road
 County: Pinellas County
 FPN: N/A
 FAP No.: N/A

Consultant Name: American Quality Consultants
 Consultant No.: enter consultants proj. number
 Date: 2/3/2015
 Estimator: American Quality Consultants

| Staff Classification | Total Staff Hours From "SH Summary Firm" | Chief Engineer | Senior Engineer | Project Engineer | Senior Engineering Technician | | | | | | | | SH | Salary | Average |
|--|--|----------------|-----------------|------------------|-------------------------------|--------|--------|--------|--------|--------|--------|--------|-------------|------------------|---------------|
| | | \$170.00 | \$145.00 | \$114.00 | \$95.00 | | | | | | | | By Activity | Cost By Activity | Rate Per Task |
| 3. Project General Tasks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 4. Roadway Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 5. Roadway Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 6. Drainage Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 7. Utilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 8. Environmental Permits | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 9. Structures - Misc. Tasks, Dwgs. Non-Tec | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 10. Structures - BDR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 11. Structures - Temporary Bridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 12. Structures - Short Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 13. Structures - Medium Span Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 14. Structures - Structural Steel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 15. Structures - Segmental Concrete | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 16. Structures - Movable Span | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 17. Structures - Retaining Walls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 18. Structures - Miscellaneous | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 19. Signing & Marking Analysis | 73 | 7 | 26 | 22 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | \$9,178 | \$125.73 |
| 20. Signing & Marking Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 21. Signalization Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 22. Signalization Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 23. Lighting Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 24. Lighting Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 25. Landscape Architecture Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 26. Landscape Architecture Plans | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 27. Survey (Field & Office Support) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 28. Photogrammetry | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 29. Mapping | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 30. Geotechnical | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 31. Architecture Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| 32. Noise Wall Analysis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$0 | #DIV/0! |
| Total Staff Hours | 73 | 7 | 26 | 22 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | | |
| Total Staff Cost | | \$1,190.00 | \$3,770.00 | \$2,508.00 | \$1,710.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | | \$9,178.00 | \$125.73 |

Check = \$9,178.00

FORM 700-000-01 (2-2012)

1

15% Line and Grade

Notes:

1 This sheet to be used by Subconsultant to calculate its fee

| | | | |
|--------------------------------------|-------|--------------------------|-------------------|
| SALARY RELATED COSTS | | | |
| OVERHEAD: | 0% | | \$0.00 |
| OPERATING MARGIN: | 0% | | \$0.00 |
| FCCM (Facilities Capital Cost Money) | 0.00% | | \$0.00 |
| EXPENSES: | 0.00% | | \$0.00 |
| SUBTOTAL ESTIMATED FEE: | | | \$9,178.00 |
| Survey (Field) | 0 | 4-man crew d: \$ - / day | \$0.00 |
| Geotechnical Field and Lab Testing | | | \$0.00 |
| SUBTOTAL ESTIMATED FEE: | | | \$9,178.00 |
| Optional Services | | | \$0.00 |
| GRAND TOTAL ESTIMATED FEE: | | | \$9,178.00 |

Project Activity 3: General Tasks

Estimator: REW

Wilford Road at Whitney Road

Form Revised 4/15/07

N/A

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|-------------------------------|--|-------|-------------|--------------|-------------|---|
| 3.1 | Public Involvement | LS | 0 | 0 | 0 | |
| 3.2 | Joint Project Agreements | EA | 0 | 0 | 0 | |
| 3.3 | Specifications Package Preparation | LS | 1 | 16 | 16 | Prepare any requ'd TSPs or revise TSPs as necessary |
| 3.4 | Contract Maintenance | LS | 1 | 56 | 56 | 16 hrs initial + (4 hrs/month x 10months schedule) = 56 hrs Which Includes monthly schedule and Progress Report updates |
| 3.5 | Value Engineering (Multi-discipline Team) Review | LS | 0 | 0 | 0 | |
| 3.6 | Prime Consultant Project Manager Meetings | LS | 1 | 44 | 44 | see below |
| 3.7 | Plans Update | LS | 0 | 0 | 0 | |
| 3.8 | Post Design Services | LS | 0 | | 0 | |
| 3.9 | Other Project General Tasks | LS | 1 | 16 | 16 | Biddability Review (8) at 100% and Constructability Review (8) at 60% |
| 3. General Tasks Total | | | | | 132 | |

Project Activity 3: General Tasks

| Task No. | Task | Units | Nb of Units | Hours / Unit | Total Hours | Comments |
|---|------------------------|-------|-------------|--------------|-------------|----------------------------|
| 3.6 - List of Project Manager Meetings | | | | | | See notes below |
| | Roadway Analysis | EA | 0 | 0 | 0 | |
| | Drainage | EA | 0 | 0 | 0 | |
| | Utilities | EA | 0 | 0 | 0 | |
| | Environmental | EA | 0 | 0 | 0 | |
| | Structures | EA | 0 | 0 | 0 | |
| | Signing & Marking | EA | 0 | 0 | 0 | |
| | Signalization | EA | 0 | 0 | 0 | |
| | Lighting | EA | 0 | 0 | 0 | |
| | Landscape Architecture | EA | 0 | 0 | 0 | |
| | Survey | EA | 0 | 0 | 0 | |
| | Photogrammetry | EA | 0 | 0 | 0 | |
| | ROW & Mapping | EA | 0 | 0 | 0 | |
| | Geotechnical | EA | 0 | 0 | 0 | |
| | Architecture | EA | 0 | 0 | 0 | |
| | Noise Walls | EA | 0 | 0 | 0 | |
| | Progress Meetings | EA | 10 | 2 | 20 | |
| | Phase Reviews | EA | 2 | 4 | 8 | 15% Line and Grade and 60% |
| | Field Reviews | EA | 4 | 4 | 16 | Topo, 15%, 60%, & 100% |
| Total Project Manager Meetings | | | 16 | | 44 | |

Notes:

1. If the hours per meeting vary in length (hours) enter the average in the hour/unit column.
2. Do not double count agency meetings between permitting agencies.
3. Project manager meetings are calculated in each discipline sheet and brought forward to column D except for Photogrammetry.

Project Activity 4: Roadway Analysis

Estimator: REW
Form Revised 6/6/05

Wilford Road at Whitney Road
N/A

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|---|--|-------|-------------|--------------|-------------|---|
| 4.1 | Typical Section Package | LS | 0 | 0 | 0 | No official submittal, for this effort is covered under Item 4.13, Other Roadway Analysis |
| 4.2 | Pavement Design Package | LS | 1 | 4 | 4 | New Pavement |
| 4.3 | Access Management | LS | 0 | 0 | 0 | |
| 4.4 | Horizontal /Vertical Master Design Files | LS | 1 | 93 | 93 | $(1,271.24+242.69+143.66) = 1,657.59 \text{ ft} = 0.31 \text{ miles}$ $<0.31 \times 300 = 93>$ which includes R/W Considerations |
| 4.5 | Cross Section Design Files | LS | 39 | 2 | 78 | 50 foot sections for 1650 feet + 5 driveways |
| 4.6 | Traffic Control Analysis | LS | 1 | 24 | 24 | Assume Level I Traffic Control |
| 4.7 | Master TCP Design Files | LS | 1 | 0 | 0 | |
| 4.8 | Design Variations and Exceptions | LS | 0 | 0 | 0 | |
| 4.9 | Design Report | LS | 1 | 28 | 28 | Design Criteria Memorandum (12) + Design Report (8) + 2 hrs/update x 4 updates (8) = 28 |
| 4.10 | Computation Book & Quantities | LS | 4 | 14 | 56 | Quantity Documentation at 15%, 60%, 100%, & Final (No Comp. Book) |
| 4.11 | Cost Estimate | LS | 4 | 8 | 32 | Cost Estimates at 15%, 60%, 100%, and Final Plans |
| 4.12 | Technical Special Provisions | LS | 1 | 0 | 0 | |
| 4.13 | Other Roadway Analysis | LS | 1 | 120 | 120 | 15% Line and Grade (3 Typical (24), 15% Line and Grade Roll Plot (20), and one (1) alternative analysis on Whitney (50)), and no safety analysis needed) Project Reasearch (26) Total = 120 |
| Roadway Analysis Technical Subtotal | | | | | 435 | |
| 4.14 | Field Reviews | LS | 1 | 24 | 24 | 2 people * 4 hr field review * 3 field reviews = 24 hrs |
| 4.15 | Technical Meetings | LS | 1 | 12 | 12 | Meetings are listed below |
| 4.16 | Quality Assurance/Quality Control | LS | % | 5% | 22 | |
| 4.17 | Independent Peer Review | LS | % | 0% | 0 | N/A |
| 4.18 | Supervision | LS | % | 5% | 22 | |
| Roadway Analysis Nontechnical Subtotal | | | | | 80 | |

Project Activity 4: Roadway Analysis

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|----------------------------------|--------------|-------|-------------|--------------|-------------|----------|
| 4.19 | Coordination | LS | % | 0% | 0 | |
| 4. Roadway Analysis Total | | | | | 515 | |

Technical Meetings

| | | | | | |
|---|----|---|---|----------|-------------------|
| Typical Section | EA | 0 | 0 | 0 | |
| Pavement | EA | 0 | 0 | 0 | |
| Access management | EA | 0 | 0 | 0 | |
| 15% line and grade | EA | 0 | 0 | 0 | |
| Driveways | EA | 0 | 0 | 0 | |
| Local Governments (cities, counties, MPO) | EA | 0 | 0 | 0 | |
| Work zone traffic control | EA | 0 | 0 | 0 | |
| 30/60/90/100% comment review meetings | EA | 0 | 0 | 0 | |
| Other meetings | EA | 1 | 4 | 4 | PSTA Coordination |
| Subtotal technical meetings | | | | 4 | |
| Progress Meetings (if required by FDOT) | EA | 0 | 0 | 0 | |
| Phase Review Meetings | EA | 2 | 4 | 8 | 15% and 60% |

| | |
|-----------------------|-----------|
| Total Meetings | 12 |
|-----------------------|-----------|

1 Carries to 4.1 15% Line and Grade

Project m:

Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3

Project Activity 6: Drainage Analysis

Estimator: Charles Samuels

Wilford Road at Whitney Road

Form Revised 12/08/14

N/A

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|----------|--|-------------------------------|-------------|--------------|-------------|---|
| 6.1 | Data Collection | LS | 1 | 20 | 20 | Data Collection (20) = 20 |
| 6.2 | Pond Siting Analysis and Report | Per Basin | 0 | 0 | 0 | N/A |
| 6.3 | Design of Cross Drains | EA | 0 | 0 | 0 | N/A |
| 6.4 | Design of Roadway Ditches | Per Ditch Mile | 0.63 | 20 | 13 | Approximately 0.63 mile of ditches |
| 6.5 | Design of Outfalls | EA | 0 | 0 | 0 | |
| 6.6 | Design of Stormwater Management Facility (Offsite Pond) | EA | 1 | 30 | 30 | Modify an 2 existing ponds |
| 6.7 | Design of Stormwater Management Facility (Roadside Ditch as Linear Pond or Infield Pond) | Per System | 0 | 0 | 0 | N/A |
| 6.8 | Design of Flood Plain Compensation Area | Per Encroachment | 0 | 0 | 0 | N/A |
| 6.9 | Design of Storm Drains | EA | 6 | 3 | 18 | 6 inlets and analysis (Results to be included in the Drainage Documentation Report) |
| 6.10 | Optional Culvert Material | LS | 0 | 0 | 0 | N/A |
| 6.11 | French Drain Systems | Per 1000 Feet of French Drain | 0 | 0 | 0 | N/A |
| 6.12 | Drainage Wells | EA | 0 | 0 | 0 | N/A |
| 6.13 | Drainage Design Documentation Report | LS | 1 | 32 | 32 | |
| 6.14 | Bridge Hydraulic Report | EA | 1 | 24 | 24 | Box culvert hydraulics analysis (no report needed) |
| 6.15 | Temporary Drainage Analysis | LS | 1 | 0 | 0 | N/A |
| 6.16 | Cost Estimate | LS | 1 | 8 | 8 | |
| 6.17 | Technical Special Provisions | LS | 1 | 0 | 0 | |

Project Activity 6: Drainage Analysis

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|--|-----------------------------------|-------|-------------|--------------|-------------|--|
| 6.18 | Other Drainage Analysis | LS | 1 | 16 | 16 | Channel Modification Analysis |
| Drainage Analysis Technical Subtotal | | | | | 161 | |
| 6.19 | Field Reviews | LS | 1 | 16 | 16 | 2 people * 4 hr field review * 2 field reviews |
| 6.20 | Technical Meetings | LS | 1 | 16 | 16 | Meetings are listed below |
| 6.21 | Quality Assurance/Quality Control | LS | % | 5% | 8 | |
| 6.22 | Independent Peer Review | LS | % | 0% | 0 | |
| 6.23 | Supervision | LS | % | 5% | 8 | |
| Drainage Analysis Nontechnical Subtotal | | | | | 48 | |
| 6.24 | Coordination | LS | % | 0% | 0 | |
| 6. Drainage Analysis Total | | | | | 209 | |

Technical Meetings

| | | | | | |
|--------------------------------------|----|---|---|----------|--------------------------|
| Base clearance water elevation | EA | 0 | 0 | 0 | |
| Pond Siting | EA | 0 | 0 | 0 | |
| Agency | EA | 0 | 0 | 0 | |
| Local Governments (cities, counties) | EA | 0 | 0 | 0 | |
| FDOT Drainage | EA | 0 | 0 | 0 | |
| Other meetings | EA | 2 | 4 | 8 | SWFWMD (1 mtg, 2 people) |
| Subtotal technical meetings | | | | 8 | |

| | | | | | |
|---|----|---|---|---|----------------------------|
| Progress Meetings (if required by FDOT) | EA | 0 | 0 | 0 | |
| Phase Review Meetings | EA | 2 | 4 | 8 | 15% Line and Grade and 60% |

| | | | | | |
|-----------------------|--|--|--|-----------|--|
| Total Meetings | | | | 16 | |
|-----------------------|--|--|--|-----------|--|

Project manager

Carries to 6 20

Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3

Project Activity 8: Environmental Permits

Estimator: Scheda
Form Revised 6/6/05

Wilford Road at Whitney Road
N/A

| Task No. | Task | Units | No. of Units | Hours/ Units | Total Hours | Comments |
|--|--|-------|--------------|--------------|-------------|---|
| 8.1 | Preliminary Project Research | LS | 1 | 12 | 12 | Review existing permits; GIS desk-top research for NWM, hydric soils, FLUCFCS. Obtain/review CAD file of previously delineated wetland line. |
| 8.2 | Complete Permit Involvement Form | LS | 1 | 0 | 0 | NA |
| 8.3 | Establish Wetland Jurisdictional Lines | LS | 1 | 8 | 8 | County scientist will set wetland line to compare previously delineated wetland line to current conditions in the field. County scientists will delineate any new or revised wetland boundaries in field. Two Scheda scientists will set seasonal high water elevations where possible and needed and will conduct GPS/GIS download and data review (8) County scientists will coordinate with surveyor to locate wetland and SHW points. |
| 8.4 | Agency Verification of Wetland Data | LS | 1 | 0 | 0 | County scientists will coordinate and conduct field review of wetland lines and seasonal high water elevations with SWFWMD. County scientists will coordinate with surveyor for any modifications. |
| 8.5 | Complete And Submit All Required Permit Applications | LS | 1 | 40 | 40 | A SWFWMD General Permit may be required if all work is located within Pinellas County owned right-of-way (ROW). If work conducted outside of ROW, then SWFWMD Individual Permit may be required. A USACE Nationwide Permit may be required. Complete Uniform Mitigation Assessment Methodology forms and USACE Wetland Determination and ENG4345 Data Forms (latter includes addresses of all adjacent property owners). Prime to serve as permit clearinghouse, compile permit app items, and compile RAI letter responses. County to submit applications and pay permit fees. Scheda to provide environmental support items and assist with RAI responses pertaining to environmental. Assume documentation for SWFWMD General Permit will satisfy as required technical memorandum described in scope of services. |
| 8.6 | Prepare Dredge and Fill Sketches | LS | 1 | 2 | 2 | Review Prime's sketches as needed. |
| 8.7 | Prepare USCG Permit Sketches | LS | 1 | 0 | 0 | N/A |
| 8.8 | Prepare Easement Sketches | LS | 1 | 0 | 0 | N/A |
| 8.9 | Prepare R/W Occupancy Sketches | LS | 1 | 0 | 0 | N/A |
| 8.10 | Prepare Coastal Construction Control Line (CCCL) Permit Sketches | LS | 1 | 0 | 0 | N/A |
| 8.11 | Prepare Tree Permit Information | LS | 1 | 0 | 0 | N/A |
| 8.12 | Mitigation Coordination and Meetings | LS | 1 | 10 | 10 | Assist County with estimate of mitigation need (functional loss) and consideration of mitigation options including credit purchase from private mitigation bank or use of existing County-owned mitigation sites. |
| 8.13 | Mitigation Design | LS | 1 | 0 | 0 | No mitigation design anticipated. |
| 8.14 | Environmental Clearances | LS | 1 | 4 | 4 | Conduct listed species survey of project limits. data to be included in environmental documentation itemized elsewhere. |
| 8.15 | Other Environmental | LS | 1 | 8 | 8 | Scheda scientist will prepare the required technical memorandum described in scope of services |
| Environmental Permits Technical Subtotal | | | | | 84 | |
| 8.16 | Technical Meetings | LS | 1 | 7 | 7 | Meetings are listed below |
| 8.17 | Quality Assurance/Quality Control | LS | % | 5% | 4 | |
| 8.18 | Supervision | LS | % | 5% | 4 | |
| Environmental Permits Nontechnical SubTotal | | | | | 15 | |
| 8.19 | Coordination | LS | % | 0% | 0 | |
| 8. Environmental Permits Total | | | | | 99 | |

Technical Meetings

Project Activity 8: Environmental Permits

| Task No. | Task | Units | No. of Units | Hours/ Units | Total Hours | Comments |
|----------|------------------------------------|-------|--------------|--------------|-------------|---|
| | WMD | EA | 1 | 2 | 2 | Prep for and attend one joint pre-app meeting with WMD and USACE. |
| | ACOE | EA | 1 | 2 | 2 | Prep for and attend one joint pre-app meeting with WMD and USACE. |
| | USCG | EA | 0 | 0 | 0 | |
| | USFWS | EA | 0 | 0 | 0 | |
| | FFWCC | EA | 0 | 0 | 0 | |
| | FDOT | EA | 0 | 0 | 0 | |
| | Other meetings | EA | 1 | 3 | 3 | Meeting with Pinellas County Permit Coordinator. |
| | Subtotal technical meetings | | | | 7 | |
| | Progress Meetings | EA | 0 | 0 | 0 | |
| | Phase Review Meetings | EA | 0 | 0 | 0 | |
| | Total Meetings | | | | 7 | |

Carries to 8.16

Project m

1

15% Line and Grade

Note: Project Manager attendance at progress phase and field review meetings are manually entered on General Task 3

Project Activity 19: Signing and Pavement Marking Analysis

Estimator: REW
Form Revised 6/6/05

Wilford Road at Whitney Road
N/A

| Task No. | Task | Units | No. of Units | Hours/ Units | Total Hours | Comments |
|--|---------------------------------------|-------|--------------|--------------|-------------|---|
| 19.1 | Traffic Data Analysis | LS | 1 | 0 | 0 | N/A |
| 19.2 | No Passing Zone Study | LS | 1 | 0 | 0 | N/A |
| 19.3 | Reference and Master Design File | LS | 1 | 48 | 48 | 35 Initial + 40hrs/mile x 0.31 mile = 48 |
| 19.4 | Multi Post Sign Support Calculations | EA | 0 | 0 | 0 | N/A |
| 19.5 | Sign Panel Design Analysis | EA | 0 | 0 | 0 | N/A |
| 19.6 | Sign Lighting/Electrical Calculations | EA | 0 | 0 | 0 | N/A |
| 19.7 | Quantities | LS | 3 | 3 | 9 | 60, 100 & Final |
| 19.8 | Computation Book | LS | 0 | 0 | 0 | |
| 19.9 | Cost Estimate | LS | 3 | 2 | 6 | 60, 100 & Final |
| 19.10 | Technical Special Provisions | LS | 1 | 0 | 0 | |
| 19.11 | Other Signing and Pavement Marking | LS | 1 | 0 | 0 | |
| Signing & Pavement Marking Analysis Technical Subtotal | | | | | 63 | |
| 19.12 | Field Reviews | LS | 1 | 16 | 16 | 2 people * 4 hr field review * 2 field reviews (60, 100) = 16 |
| 19.13 | Technical Meetings | LS | 1 | 0 | 0 | Meetings are listed below |
| 19.14 | Quality Assurance/Quality Control | LS | % | 5% | 3 | |
| 19.15 | Independent Peer Review | LS | % | 0% | 0 | |
| 19.16 | Supervision | LS | % | 5% | 3 | |
| Signing & Pavement Marking Analysis Nontechnical Subtotal | | | | | 22 | |
| 19.17 | Coordination | LS | % | 0% | 0 | |

Project Activity 19: Signing and Pavement Marking Analysis

| Task No. | Task | Units | No. of Units | Hours/ Units | Total Hours | Comments |
|--|------|-------|--------------|--------------|-------------|----------|
| 19. Signing & Pavement Marking Analysis Total | | | | | 85 | |

Technical Meetings

| | | | | |
|--------------------------------------|----|---|---|----------|
| Sign panel design | EA | 0 | 0 | 0 |
| Queue length analysis | EA | 0 | 0 | 0 |
| Local Governments (cities, counties) | EA | 0 | 0 | 0 |
| Other meetings | EA | 0 | 0 | 0 |
| Subtotal technical meetings | | | | 0 |

| | | | | |
|-----------------------|----|---|---|---|
| Progress Meetings | EA | 0 | 0 | 0 |
| Phase Review Meetings | EA | 0 | 0 | 0 |

| | | | | |
|-----------------------|--|--|--|----------|
| Total Meetings | | | | 0 |
|-----------------------|--|--|--|----------|

Carries to 19.13

Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3

Project Activity 19: Signing and Pavement Marking Analysis

Estimator: American Quality Consultants
Form Revised 6/6/05

Wilford Road at Whitney Road
N/A

| Task No. | Task | Units | No. of Units | Hours/ Units | Total Hours | Comments |
|---|---------------------------------------|-------|--------------|--------------|-------------|--|
| 19.1 | Traffic Data Analysis | LS | 1 | 45 | 45 | Prepare traffic analysis report. Analyze existing signing and propose signing suggestions for intersection. Review traffic counts and traffic operations. Insert intersection photos. Prepare existing conditions. Prepare recommendations. 45 hours |
| 19.2 | No Passing Zone Study | LS | 1 | 0 | 0 | N/A |
| 19.3 | Reference and Master Design File | LS | 1 | 0 | 0 | N/A |
| 19.4 | Multi Post Sign Support Calculations | EA | 0 | 0 | 0 | N/A |
| 19.5 | Sign Panel Design Analysis | EA | 0 | 0 | 0 | N/A |
| 19.6 | Sign Lighting/Electrical Calculations | EA | 0 | 0 | 0 | N/A |
| 19.7 | Quantities | LS | 0 | 0 | 0 | N/A |
| 19.8 | Computation Book | LS | 0 | 0 | 0 | N/A |
| 19.9 | Cost Estimate | LS | 0 | 0 | 0 | N/A |
| 19.10 | Technical Special Provisions | LS | 0 | 0 | 0 | N/A |
| 19.11 | Other Signing and Pavement Marking | LS | 0 | 0 | 0 | N/A |
| Signing & Pavement Marking Analysis Technical Subtotal | | | | | 45 | |
| 19.12 | Field Reviews | LS | 1 | 16 | 16 | One field review, two people 8 hours |
| 19.13 | Technical Meetings | LS | 1 | 8 | 8 | |
| 19.14 | Quality Assurance/Quality Control | LS | % | 5% | 2 | |
| 19.15 | Independent Peer Review | LS | % | 0% | 0 | |
| 19.16 | Supervision | LS | % | 5% | 2 | |

Project Activity 19: Signing and Pavement Marking Analysis

| Task No. | Task | Units | No. of Units | Hours/ Units | Total Hours | Comments |
|--|--------------|-------|--------------|--------------|-------------|----------|
| Signing & Pavement Marking Analysis Nontechnical Subtotal | | | | | 28 | |
| 19.17 | Coordination | LS | % | 0% | 0 | |
| 19. Signing & Pavement Marking Analysis Total | | | | | 73 | |

Technical Meetings

| | | | | |
|--------------------------------------|----|---|---|---|
| Sign panel design | EA | 0 | 0 | 0 |
| Queue length analysis | EA | 0 | 0 | 0 |
| Local Governments (cities, counties) | EA | 0 | 0 | 0 |
| Other meetings | EA | 0 | 0 | 0 |

Subtotal technical meetings **0**

| | | | | |
|-----------------------|----|---|---|---|
| Progress Meetings | EA | 0 | 0 | 0 |
| Phase Review Meetings | EA | 0 | 0 | 0 |

| | |
|-----------------------|----------|
| Total Meetings | 0 |
|-----------------------|----------|

Carries to 19.13

Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3

Project Activity 9: Structures Summary and Miscellaneous Tasks and Drawings

Estimator: Ed Brekhus

Wilford Road at Whitney Road

Form Revised 4/15/07

N/A

| Task No. | Task | Units | Design and Production Staffhours | | | | Comments | | | | |
|--|---|-------|----------------------------------|----------------|---------------|---------------------------|----------|---------|---------|---------|---------|
| | | | No. of Units | Hours per Unit | No. of Sheets | Total | | | | | |
| | General Drawings | | | | | | | | | | |
| 9.1 | Index of Drawings | sheet | 0 | 0 | 0 | 0 | | | | | |
| 9.2 | Project Layout | sheet | 0 | 0 | 0 | 0 | | | | | |
| 9.3 | General Notes and Bid Item Notes | sheet | 1 | 12 | 1 | 12 | | | | | |
| 9.4 | Miscellaneous Common Details | sheet | 0 | 0 | 0 | 0 | | | | | |
| 9.5 | Incorporate Report of Core Borings | sheet | 1 | 1 | 1 | 1 | | | | | |
| 9.6 | Existing Bridge Plans | LS | 0 | 0 | | 0 | | | | | |
| 9.7 | Assembly of Computation Book and Quantities | LS | 1 | 2 | | 2 | | | | | |
| 9.8 | Cost Estimate | LS | 1 | 2 | | 2 | | | | | |
| 9.9 | Technical Special Provisions | LS | 0 | 0 | | 0 | | | | | |
| Structures - Miscellaneous Tasks & Drawings Subtotal | | | | | 2 | 17 | | | | | |
| Task No. | Task | Total | Task 10 | Task 11 | Task 12 | Task 13 | Task 14 | Task 15 | Task 16 | Task 17 | Task 18 |
| 10-16 | Bridge 1 | 24 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | | |
| 10-16 | Bridge 2 | 0 | | | | | | | | | |
| 10-16 | Bridge 3 | 0 | | | | | | | | | |
| 17 | Retaining Walls | 68 | | | | | | | | 68 | |
| 18 | Miscellaneous Structures | 143 | | | | | | | | | 143 |
| Structures Technical Subtotals | | 235 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 68 | 143 |
| Task No. | Task | Units | No. of Units | Hours per Unit | Total | Comments | | | | | |
| 9.10 | Field Reviews | LS | 2 | 4 | 8 | | | | | | |
| 9.11 | Technical Meetings | LS | 1 | 8 | 8 | Meetings are listed below | | | | | |
| 9.12 | Quality Assurance / Quality Control | LS | % | 5% | 13 | | | | | | |
| 9.13 | Independent Peer Review | LS | 1 | 0 | 0 | | | | | | |
| 9.14 | Supervision | LS | % | 5% | 13 | | | | | | |
| Structures Non-Technical Subtotal | | | | | 42 | | | | | | |
| 9.15 | Coordination | LS | 0 | 0 | 0 | | | | | | |

Project Activity 9: Structures Summary and Miscellaneous Tasks and Drawings

| | | | | |
|--|--|--|-----------|--|
| 9. Structures - Miscellaneous Tasks & Drawings, Non-Technical, & Coordination Total | | | 59 | |
|--|--|--|-----------|--|

Technical Meetings

PM Attendance at Meeting Required?

Yes / No Number

| | | | | |
|--------------------------------------|----|---|---|---|
| BDR coordination / review | EA | 0 | 0 | 0 |
| 90/100% comment review | EA | 0 | 0 | 0 |
| Aesthetics coordination | EA | 0 | 0 | 0 |
| Regulatory agency | EA | 0 | 0 | 0 |
| Local governments (cities, counties) | EA | 0 | 0 | 0 |
| Utility companies | EA | 0 | 0 | 0 |
| Other meetings | EA | 0 | 0 | 0 |

| | |
|----|---|
| no | 0 |
| no | 0 |
| no | 0 |
| no | 0 |
| no | 0 |
| no | 0 |
| no | 0 |

Subtotal technical meetings **0**

0

| | | | | |
|-----------------------|----|---|---|---|
| Progress Meetings | EA | 0 | 0 | 0 |
| Phase Review Meetings | EA | 2 | 4 | 8 |

15% and 60% meetings

Total Meetings **8**

Project mgr. meetings = **0**

Carries to 9.11

Carries to Task 3, Project General

Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3

Project Activity 18: Miscellaneous Structures

Estimator: Ed Brekhus
Form Revised 4/15/07

Wilford Road at Whitney Road
N/A

| Task No. | Task | Unit | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|---------------------------------------|---|-----------------|--------------|-------------|---------------|-------------|---|
| Concrete Box Culvert | | | | | | | |
| 18.1 | Concrete Box Culverts | EA | 0 | 0 | 0 | 0 | |
| 18.2 | Concrete Box Culverts Extensions | EA Extension | 1 | 130 | 1 | 130 | MHR's high due to a non-standard bend, non-standard wingwalls, pipe penetration |
| Strain Poles | | | | | | | |
| 18.3 | Steel Strain Poles | Initial Config | 0 | 0 | 0 | 0 | |
| | | EA Add'l Config | 0 | 0 | 0 | 0 | |
| 18.4 | Concrete Strain Poles | Initial Config | 0 | 0 | 0 | 0 | |
| | | EA Add'l Config | 0 | 0 | 0 | 0 | |
| Mast Arms | | | | | | | |
| 18.5 | Mast Arms | EA Pole | 0 | 0 | | 0 | |
| Overhead & Cantilever Sign Structures | | | | | | | |
| 18.6 | Cantilever Sign Structures | EA Design | 0 | 0 | 0 | 0 | |
| 18.7 | Overhead Span Sign Structures | EA Design | 0 | 0 | 0 | 0 | |
| 18.8 | Special (Long Span) Overhead Span Sign Structures | EA Design | 0 | 0 | 0 | 0 | |
| 18.9 | Monotube Overhead Sign Structure | EA Design | 0 | 0 | 0 | 0 | |
| 18.10 | Bridge Mounted Signs (Attached to Superstr.) | EA Design | 0 | 0 | 0 | 0 | |
| High Mast Lighting | | | | | | | |
| 18.11 | High Mast Lighting Structures | EA Design | 0 | 0 | 0 | 0 | |
| Sound Barrier Walls (Ground Mount) | | | | | | | |
| 18.12 | Horizontal Wall Geometry | EA Wall | 0 | 0 | 0 | 0 | |
| 18.13 | Vertical Wall Geometry | EA Wall | 0 | 0 | 0 | 0 | |
| 18.14 | Summary of Quantities - Aesthetic Requirements | Sheet | 0 | 0 | 0 | 0 | |
| 18.15 | Control Drawings | Sheet | 0 | 0 | 0 | 0 | |
| 18.16 | Design for Wall Height Covered by Standards | EA Design | 0 | 0 | 0 | 0 | |

Project Activity 18: Miscellaneous Structures

| | | | | | | | |
|---|---|-----------|---|----|----------|------------|-----------------------|
| 18.17 | Design for Wall Height Not Covered by Standards | EA Design | 0 | 0 | 0 | 0 | |
| 18.18 | Aesthetic Details | LS | 0 | 0 | 0 | 0 | |
| Special Structures | | | | | | | |
| 18.19 | Fender System | LS | 1 | 0 | | 0 | |
| 18.20 | Fender System Access | LS | 1 | 0 | | 0 | |
| 18.21 | Special Structures | LS | 1 | 0 | | 0 | |
| 18.22 | Other Structures | LS | 1 | 13 | | 13 | Rubble Riprap details |
| 18. Miscellaneous Structures Total | | | | | 1 | 143 | |

Project Activity 12: Structures- Short Span Concrete

Estimator: Ed Brekhus

Wilford Road at Whitney Road

Bridge Identifier (Number or Name):

N/A

| Task No. | Task | Units | No. of Units | Hours / Unit | No. of Sheets | Total Hours | Comments |
|--|------------------------------------|-------------|--------------|--------------|---------------|-------------|-------------|
| General Layout Design and Plans | | | | | | | |
| 12.1 | Overall Bridge Final Geometry | LS | 1 | 0 | | 0 | |
| 12.2 | Expansion/Contraction Analysis | EA Unit | 0 | 0 | | 0 | |
| 12.3 | General Plan and Elevation | Sheet | 1 | 24 | 1 | 24 | Box Culvert |
| 12.4 | Construction Staging | Sheet | 0 | 0 | 0 | 0 | |
| 12.5 | Approach Slab Plan and Details | Sheet | 0 | 0 | 0 | 0 | |
| 12.6 | Miscellaneous Details | Sheet | 0 | 0 | 0 | 0 | |
| End Bent Design and Plans | | | | | | | |
| 12.7 | End Bent Geometry | EA End Bent | 0 | 0 | | 0 | |
| 12.8 | End Bent Structural Design | EA Design | 0 | 0 | | 0 | |
| 12.9 | End Bent Plan and Elevation | Sheet | 0 | 0 | 0 | 0 | |
| 12.10 | End Bent Details | Sheet | 0 | 0 | 0 | 0 | |
| Intermediate Bent Design and Plans | | | | | | | |
| 12.11 | Bent Geometry | EA Bent | 0 | 0 | | 0 | |
| 12.12 | Bent Stability Analysis | EA Analysis | 0 | 0 | | 0 | |
| 12.13 | Bent Structural Design | EA Design | 0 | 0 | | 0 | |
| 12.14 | Bent Plan and Elevation | Sheet | 0 | 0 | 0 | 0 | |
| 12.15 | Bent Details | Sheet | 0 | 0 | 0 | 0 | |
| Misc. Substructure Design and Plans | | | | | | | |
| 12.16 | Foundation Layout | Sheet | 0 | 0 | 0 | 0 | |
| Superstructure Design and Plans | | | | | | | |
| 12.17 | Finish Grade Elevation Calculation | LS | 1 | 0 | | 0 | |
| 12.18 | Finish Grade Elevations | Sheet | 0 | 0 | 0 | 0 | |

Project Activity 12: Structures- Short Span Concrete

| Task No. | Task | Units | No. of Units | Hours / Unit | No. of Sheets | Total Hours | Comments |
|---|--|--------------|---------------------|---------------------|----------------------|--------------------|-----------------|
| Cast-in-Place Slab Bridges | | | | | | | |
| 12.19 | Bridge Deck Design | EA Unit | 0 | 0 | | 0 | |
| 12.20 | Superstructure Plan | Sheet | 0 | 0 | 0 | 0 | |
| 12.21 | Superstructure Sections and Details | Sheet | 0 | 0 | 0 | 0 | |
| Prestressed Slab Unit Bridges | | | | | | | |
| 12.22 | Prestressed Slab Unit Design | EA Design | 0 | 0 | | 0 | |
| 12.23 | Prestressed Slab Unit Layout | Sheet | 0 | 0 | 0 | 0 | |
| 12.24 | Prestressed Slab Unit Details and Schedule | Sheet | 0 | 0 | 0 | 0 | |
| 12.25 | Deck Topping Reinforcing Layout | Sheet | 0 | 0 | 0 | 0 | |
| 12.26 | Superstructure Sections and Details | Sheet | 0 | 0 | 0 | 0 | |
| Reinforcing Bar List | | | | | | | |
| 12.27 | Preparation of Reinforcing Bar List | Sheet | 0 | 0 | 0 | 0 | |
| Load Rating | | | | | | | |
| 12.28 | Load Rating | EA Unit | 0 | 0 | | 0 | |
| 12. Structures-Short Span Concrete Total | | | | | 1 | 24 | |

Project Activity 17: Retaining Walls

Estimator: Ed Brekhus

Wilford Road at Whitney Road

Form Revised 4/15/07

N/A

| Task No. | Task | Unit | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|--------------------------------------|---|-----------|--------------|-------------|---------------|-------------|----------------|
| General Requirements | | | | | | | |
| 17.1 | Key Sheet | Sheet | 0 | 0 | 0 | 0 | |
| 17.2 | Horizontal Wall Geometry | Per Wall | 2 | 3 | 2 | 6 | |
| Permanent Proprietary Walls | | | | | | | |
| 17.3 | Vertical Wall Geometry | Per Wall | 0 | 0 | 0 | 0 | |
| 17.4 | Semi-Standard Drawings | Sheet | 0 | 0 | 0 | 0 | |
| 17.5 | Wall Plan and Elevations (Control Drawings) | Sheet | 0 | 0 | 0 | 0 | |
| 17.6 | Details | Sheet | 0 | 0 | 0 | 0 | |
| Temporary Proprietary Walls | | | | | | | |
| 17.7 | Vertical Wall Geometry | Per Wall | 0 | 0 | 0 | 0 | |
| 17.8 | Semi-Standard Drawings | Sheet | 0 | 0 | 0 | 0 | |
| 17.9 | Wall Plan and Elevations (Control Drawings) | Sheet | 0 | 0 | 0 | 0 | |
| 17.10 | Details | Sheet | 0 | 0 | 0 | 0 | |
| Cast in Place Retaining Walls | | | | | | | |
| 17.11 | Design | EA Design | 1 | 14 | 1 | 14 | |
| 17.12 | Vertical Wall Geometry | EA Wall | 2 | 4 | 2 | 8 | |
| 17.13 | General Notes | Sheet | 1 | 2 | 1 | 2 | |
| 17.14 | Wall Plan and Elevations (Control Drawings) | Sheet | 1 | 16 | 1 | 16 | Elevation Only |
| 17.15 | Sections and Details | Sheet | 1 | 16 | 1 | 16 | |
| 17.16 | Reinforcing Bar List | Sheet | 1 | 6 | 1 | 6 | |

Project Activity 17: Retaining Walls

| Task No. | Task | Unit | No. of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|--|---------------------------------------|-----------|--------------|-------------|---------------|-------------|----------|
| Other Retaining Walls and Bulkheads | | | | | | | |
| 17.17 | Design | EA Design | 0 | 0 | 0 | 0 | |
| 17.18 | Vertical Wall Geometry | EA Wall | 0 | 0 | 0 | 0 | |
| 17.19 | General Notes, Tables & Misc. Details | Sheet | 0 | 0 | 0 | 0 | |
| 17.20 | Wall Plan and Elevations | Sheet | 0 | 0 | 0 | 0 | |
| 17.21 | Details | Sheet | 0 | 0 | 0 | 0 | |
| 17. Retaining Walls Total | | | | | 9 | 68 | |

Project Activity 7: Utilities

Estimator: REW

Wilford Road at Whitney Road

Form Revised 4/15/07

N/A

| Task No. | TASK | Units | No of Units | Hours / Unit | Total Hours | Comments |
|---------------------------|--|-------|-------------|--------------|-------------|--|
| 7.1 | Kickoff Meeting | LS | 1 | 0 | 0 | |
| 7.2 | Identify Existing UAOs | LS | 1 | 7 | 7 | 7 UAOs |
| 7.3 | Make Utility Contacts | LS | 1 | 0 | 0 | By County |
| 7.4 | Exception Coordination | LS | 1 | 0 | 0 | N/A |
| 7.5 | Preliminary Utility Meeting | LS | 1 | 0 | 0 | N/A |
| 7.6 | Individual/Field Meetings | LS | 1 | 0 | 0 | N/A |
| 7.7 | Collect and Review Plans and Data from UAO(s) | LS | 7 | 2 | 14 | 7 utilities |
| 7.8 | Subordination of Easements Coordination | LS | 1 | 0 | 0 | N/A |
| 7.9 | Utility Design Meeting | LS | 2 | 5 | 10 | 60% and 100% Design Meetings + meeting minutes |
| 7.10 | Review Utility Markups and Work Schedules | LS | 7 | 3 | 21 | 4 hrs x 7 utilities = 28 hrs |
| 7.11 | Utility Coordination / Followup | LS | 0 | 0 | 0 | By County |
| 7.12 | Utility Constructability Review | LS | 7 | 5.71 | 40 | Utility Conflict Matrix |
| 7.13 | Additional Utility Services | LS | 1 | 4 | 4 | Coordination on SUE |
| 7.14 | Processing Utility Work by Highway Contractor (UWHC) | LS | 1 | 0 | 0 | By County |
| 7.15 | Contract Plans to UAO(s) | LS | 0 | 0 | 0 | By County |
| 7.16 | Certification/Close-out | LS | 0 | 0 | 0 | |
| 7.17 | Other Utilities | LS | 0 | 0 | 0 | |
| 7. Utilities Total | | | | | 96 | |

Project Activity 7: Utilities

Technical Meetings

| | | | |
|---------------------------------|----|----------|--------------------------------|
| Kickoff | EA | 0 | |
| Preliminary meeting | EA | 0 | |
| Individual UAO meetings | EA | 0 | |
| Field meetings | EA | 0 | |
| Design meeting | EA | 2 | 60% and 100% + Meeting minutes |
| Other meetings | EA | 0 | |
| Total technical meetings | | 2 | |

Project manager

Project Activity 5: Roadway Plans

Estimator: REW

Wilford Road at Whitney Road
N/A

| Task No. | Task | Scale | Units | No. of Units | Hours / Unit | No. of Sheets | Total Hours | Comments |
|----------|---|-------|-------|--------------|--------------|---------------|-------------|--|
| 5.1 | Key Sheet | | Sheet | 1 | 8 | 1 | 8 | County Key Sheet |
| 5.2 | Summary of Pay Items-including Quantity Input | | Sheet | 1 | 0 | 0 | 0 | N/A |
| 5.3 | Drainage Map | 200 | Sheet | 0 | 0 | 0 | 0 | No Drainage Map as part of deliverable plan set |
| 5.4 | Interchange Drainage Map | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.5 | Typical Section Sheets | | Sheet | 1 | 8 | 1 | 8 | Roadway Typ. Section only and typ. Section details |
| 5.6 | General Notes/Pay Item notes | | Sheet | 2 | 8 | 2 | 16 | Based on 2 Sheet of Gen. Notes, Utility Notes, and MOT notes |
| 5.7 | Summary of Quantities | | Sheet | 0 | 18 | 0 | 0 | N/A |
| 5.8 | Box Culvert Data Sheet | | Sheet | 1 | 6 | 1 | 6 | One Box Culvert |
| 5.9 | Bridge Hydraulics Recommendation Sheets | | Sheet | 0 | 0 | 0 | 0 | N/A - Bridge Hydraulics Previously Calculated |
| 5.10 | Summary of Drainage Structures | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.11 | Optional Pipe/ Culvert Material | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.12 | Project Layout | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.13 | Plan/Profile Sheet | | Sheet | 0 | 0 | 0 | 0 | |
| 5.14 | Profile Sheet | | Sheet | 5 | 6 | 5 | 30 | 1"=40' (3 Sheets Whitney +1 Wilford + 1 Canal Grading = 5) |
| 5.15 | Plan Sheet | | Sheet | 4 | 6 | 4 | 24 | 1"=40' (3 Sheets Whitney +1Wilford = 4) |
| 5.16 | Special Profile | | Sheet | 1 | 12 | 1 | 12 | Curb Ramp Profiles - 1 sht x 12 hrs/sht = 12 hrs |
| 5.17 | Back of Sidewalk Profile Sheet | | Sheet | 5 | 5 | 5 | 25 | 5 Sheets |
| 5.18 | Interchange Layout Sheet | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.19 | Ramp Terminal Details (Plan View) | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.20 | Intersection Layout Details | | Sheet | 0 | 0 | 0 | 0 | |
| 5.21 | Miscellaneous Detail Sheets | | Sheet | 0 | 0 | 0 | 0 | |
| 5.22 | Drainage Structure Sheet (per Structure) | | EA | 6 | 3 | 3 | 18 | 6 Drainage structures |
| 5.23 | Miscellaneous Drainage Detail Sheets | | Sheet | 1 | 24 | 1 | 24 | Canal Grading Plan |
| 5.24 | Lateral Ditch Plan/Profile | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.25 | Lateral Ditch Cross Sections | | EA | 0 | 0 | 0 | 0 | N/A |
| 5.26 | Retention/Detention Ponds Detail Sheet | | Sheet | 2 | 12 | 2 | 24 | Modifying 2 existing ponds |

24

12

Project Activity 5: Roadway Plans

| Task No. | Task | Scale | Units | No. of Units | Hours / Unit | No. of Sheets | Total Hours | Comments |
|---|---------------------------------------|-------|-------|--------------|--------------|---------------|-------------|--|
| 5.27 | Retention Pond Cross Sections | | EA | 0 | 0 | 0 | 0 | N/A |
| 5.28 | Cross-section Pattern Sheet | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.29 | Roadway Soil Survey Sheet | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.30 | Cross Sections | | EA | 40 | 0.75 | 20 | 30 | 50' sections for 1650 feet (34 sections) + 5 drwy + 1 cross road = 40 Geotechnical data (unsuitable soil) to be input into XS |
| 5.31 | Traffic Control Plan Sheets | | Sheet | 1 | 16 | 1 | 16 | One Sheet depicting one detour route |
| 5.32 | Traffic Control Cross Section Sheets | | EA | 0 | 0 | 0 | 0 | N/A |
| 5.33 | Traffic Control Detail Sheets | | Sheet | 4 | 7 | 4 | 28 | General Notes and Typ. Section |
| 5.34 | Utility Adjustment Sheets | | Sheet | 4 | 8 | 4 | 32 | 1"=40' (5 Sheets) |
| 5.35 | Selective Clearing and Grubbing | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.36 | Erosion Control Plan | 40 | Sheet | 4 | 3 | 4 | 12 | 1"=40' (4 Sheets) |
| 5.37 | SWPPP | | Sheet | 2 | 3 | 2 | 6 | Two Sheets |
| 5.38 | Project Control Network Sheet | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 5.39 | Interim Standards | | LS | 0 | 0 | 0 | 0 | N/A |
| 5.40 | Utility Verification Sheet (SUE Data) | | Sheet | 0 | 0 | 0 | 0 | N/A |
| Roadway Plans Technical Subtotal | | | | | | 61 | 319 | |
| 5.41 | Quality Assurance/Quality Control | | LS | % | 5% | 0 | 16 | |
| 5.42 | Supervision | | LS | % | 5% | 0 | 16 | |
| 5. Roadway Plans Total | | | | | | 61 | 351 | |

Project Activity 20: Signing and Pavement Marking Plans

Estimator:REW

Wilford Road at Whitney Road
N/A

| Task No. | Task | Scale | Units | No of Units | Hours/ Unit | No. of Sheets | Total Hours | Comments |
|--|--|-------|-------|-------------|-------------|---------------|-------------|--------------------------------------|
| 20.1 | Key Sheet | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 20.2 | Summary of Pay Items-including CES Input | | LS | 0 | 0 | 0 | 0 | N/A |
| 20.3 | Tabulation of Quantities | | Sheet | 0 | 0 | 0 | 0 | Included in Roadway Plans |
| 20.4 | General Notes / Pay Item Notes | | Sheet | 1 | 4 | 1 | 4 | 1 GN sheet x 4 hrs/sheet |
| 20.5 | Project Layout | | Sheet | 0 | 0 | 0 | 0 | N/A |
| 20.6 | Plan Sheet | | Sheet | 4 | 4 | 4 | 16 | 4 Plan Sheets x 5 hrs/sheet = 20 hrs |
| 20.7 | Typical Details | | EA | 0 | 0 | | 0 | N/A |
| 20.8 | Guide Sign Work Sheet (s) | | EA | 0 | 0 | | 0 | N/A |
| 20.9 | Traffic Monitoring Site | | EA | 0 | 0 | | 0 | N/A |
| 20.10 | Cross Sections | | EA | 0 | 0 | | 0 | N/A |
| 20.11 | Special Service Point Detail | | EA | 0 | 0 | | 0 | N/A |
| 20.12 | Special Details | | LS | 0 | 0 | | 0 | N/A |
| 20.13 | Interim Standards | | LS | 0 | 0 | | 0 | N/A |
| Signing & Pavement Marking Plans Technical Subtotal | | | | | | 5 | 20 | |
| 20.14 | Quality Assurance/Quality Control | | LS | % | 5% | | 1 | |
| 20.15 | Supervision | | LS | % | 5% | | 1 | |
| 20. Signing & Pavement Marking Plans Total | | | | | | 5 | 22 | |

Project Activity 30: Geotechnical

Estimator: Tierra
Form Revised 4/15/07

Wilford Road at Whitney Road
N/A

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|--------------------------------------|---|-------------------|-------------|--------------|-------------|---|
| Roadway | | | | | | |
| 30.1 | Document Collection and Review | LS | 1 | 2 | 2 | The project consists of construction of operational intersection improvements, roadway reconstruction, extension of triple-barrel box culvert, and incidental work at the intersection of Whitney Road and Wolford) |
| 30.2 | Develop Detailed Boring Location Plan | LS | 1 | 3 | 3 | |
| 30.3 | Stake Borings/Utility Clearance | Boring | 0 | 0.2 | 0 | |
| 30.4 | Coordinate and Develop MOT Plans for Field Investigation | EA | 0 | 2 | 0 | |
| 30.5 | Drilling Access Permits | Location | 0 | 0 | 0 | Total of 6 pavement cores w/5-foot auger within pavement section |
| 30.6 | Property Clearances | EA | 0 | 0 | 0 | 15 augers along roadway and drainage improvements to 5 feet |
| 30.7 | Groundwater Monitoring | EA | 0 | 0 | 0 | |
| 30.8 | LBR Sampling | EA | 0 | 0 | 0 | |
| 30.9 | Coordination of Field Work | 100 lf of boring | 1 | 1 | 1 | |
| 30.10 | Soil and Rock Classification - Roadway | 100 lf of boring | 1 | 1.5 | 2 | |
| 30.11 | Determine Design LBR | LS | 0 | 0 | 0 | |
| 30.12 | Tabulate all Laboratory Data | 100 lf of boring | 1 | 0.5 | 1 | |
| 30.13 | Estimate Seasonal High Water Table | Boring | 5 | 0.75 | 4 | |
| 30.14 | Calculate Parameters for Water Retention Areas | EA | 0 | 0 | 0 | |
| 30.15 | Delineate Limits of Unsuitable Material | Cross-section | 0 | 0.5 | 0 | |
| 30.16 | ASCII Files for Cross-Sections | 100 lf of boring | 1 | 1 | 1 | |
| 30.17 | Embankment settlement and Stability | Embankment Boring | 0 | 0 | 0 | |
| 30.18 | Stormwater Volume Recovery and/or Background Seepage Analysis | EA | 0 | 0 | 0 | |
| 30.19 | Geotechnical Recommendations | LS | 1 | 4 | 4 | |
| 30.20 | Pavement Condition Survey and Pavement Evaluation Report | LS | 1 | 8 | 8 | |
| 30.21 | Preliminary Roadway Report | LS | 1 | 6 | 6 | |
| 30.21 | Final Report | EA | 0 | 6 | 0 | |
| 30.22 | Auger Boring Drafting | 100 lf boring | 1 | 2 | 2 | |
| 30.23 | SPT Boring Drafting | 100 lf boring | 0 | 0 | 0 | |
| Roadway Geotechnical Subtotal | | | | | 34 | |

Project Activity 30: Geotechnical

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|---|---|------------------|-------------|--------------|-------------|---|
| Structural | | | | | | |
| 30.25 | Develop Detailed Boring Location Plan | LS | 1 | 3 | 3 | The project consists of construction of operational intersection improvements, roadway reconstruction, extension of triple-barrel box culvert, and incidental work at the intersection of Whitney Road and Wolford Road |
| 30.26 | Stake Borings/Utility Clearance | Boring | 3 | 0.5 | 2 | |
| 30.27 | Coordinate and Develop MOT Plans for Field Investigation | EA | 1 | 2 | 2 | Total of 3 SPT borings |
| 30.28 | Drilling Access Permits | Location | 0 | 0 | 0 | 2 @25 ft for retaining wall structures |
| 30.29 | Property Clearances | EA | 0 | 0 | 0 | 1 @25 ft for box culvert foundations |
| 30.30 | Collection of Corrosion Samples | EA | 2 | 0.5 | 1 | |
| 30.31 | Coordination of Field Work | 100 lf of boring | 0.75 | 0.75 | 1 | |
| 30.32 | Soil and Rock Classification - Structures | 100 lf of boring | 0.75 | 1.5 | 1 | |
| 30.33 | Tabulate all Laboratory Data | 100 lf of boring | 0.75 | 0.75 | 1 | |
| 30.34 | Estimate Design Groundwater Level for Structures | EA | 2 | 1 | 2 | |
| 30.35 | Evaluation and Selection of Foundation Alternatives (BDR) | Bridge boring | 0 | 0 | 0 | |
| 30.36 | Detailed Analysis of Selected Foundation Alternate(s) | Bridge boring | 0 | 0 | 0 | |
| 30.37 | Bridge Construction and Testing Recommendations | Bridge boring | 0 | 3 | 0 | |
| 30.38 | Lateral Load Analysis | Bridge boring | 0 | 0 | 0 | |
| 30.39 | Walls | Wall Boring | 1 | 3 | 3 | |
| 30.40 | Sheetpile Wall Analysis | Wall Boring | 1 | 2 | 2 | |
| 30.41 | Design Soil Parameters for Signs, Signals, High Mast Lights, and Strain Poles and Geotechnical Recommendations. | Boring | 2 | 1 | 2 | |
| 30.42 | Box Culvert Analysis | EA | 0 | 0 | 0 | |
| 30.43 | Preliminary Report - BDR | EA | 0 | 0 | 0 | |
| 30.44 | Final Report - Bridge and Associated Walls | EA | 1 | 12 | 12 | |
| 30.45 | Final Reports - Signs, Signals, Box Culvert, Walls and High Mast Lights. | EA | 0 | 0 | 0 | |
| 30.46 | SPT Boring Drafting | 100 lf of boring | 0.75 | 2 | 2 | |
| 30.47 | Other Geotechnical | LS | 1 | 0 | 0 | |
| Structural Geotechnical Subtotal | | | | | 34 | |
| Geotechnical Technical Subtotal | | | | | 68 | |

Project Activity 30: Geotechnical

| Task No. | Task | Units | No of Units | Hours / Unit | Total Hours | Comments |
|---|---|-------|-------------|--------------|-------------|--------------------------------|
| 30.48 | Technical Special Provisions | EA | 2 | 4 | 8 | 2 meetings x 4 hrs/mtg = 8 hrs |
| 30.49 | Field Reviews | LS | 0 | 0 | 0 | |
| 30.50 | Technical Meetings | LS | 0 | 0 | 0 | Meetings listed below |
| 30.51 | Quality Assurance/Quality Control | LS | % | 5% | 3 | |
| 30.52 | Supervision | LS | % | 5% | 3 | |
| Geotechnical Nontechnical Subtotal | | | | | 14 | |
| 30.52 | Coordination | LS | % | 0% | 0 | |
| 30.53 | Optional Preliminary Contamination Assessment | LS | 1 | 0 | 0 | |
| 30. Geotechnical Total | | | | | 82 | |

Technical Meetings

| | | | | |
|------------------------------------|----|---|---|----------|
| Kickoff Meeting with FDOT | EA | 0 | 0 | 0 |
| Boring Layout Approval | EA | 0 | 0 | 0 |
| Attend in BDR Review Meeting | EA | 0 | 0 | 0 |
| 30/60/90% Submittal Review | EA | 0 | 0 | 0 |
| Other meetings | EA | 0 | 0 | 0 |
| Subtotal technical meetings | | | | 0 |

| | | | | |
|-----------------------|----|---|---|---|
| Progress Meetings | EA | 0 | 0 | 0 |
| Phase Review Meetings | EA | 0 | 0 | 0 |

| | | | | |
|-----------------------|--|--|--|----------|
| Total Meetings | | | | 0 |
|-----------------------|--|--|--|----------|

Carries to 30.49

Project manager

Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3

CERTIFIED WAGE RATE FORM

Contract 134-0220-NC Fixed Fee Schedule for Term of Contract

(Exhibit C-Fully Burdened Hourly Rates)

Consultant Name: Volkert, Inc.

| Job Classification | Fully Burdened Hourly Rate |
|----------------------------|----------------------------|
| Project Manager | \$ 173.00 |
| Chief Engineer | \$ 204.00 |
| SR. Project Engineer | \$ 155.00 |
| Project Engineer | \$ 117.00 |
| Engineer Intern | \$ 62.00 |
| Sr. Designer | \$ 162.00 |
| SR Technician | \$ 76.00 |
| Public Information Officer | \$ 91.00 |
| Utility Coordinator | \$ 107.00 |
| Clerical | \$ 66.00 |
| SR. Surveyor | \$ 166.00 |
| Surveyor | \$ 100.00 |
| Survey Technician | \$ 76.00 |

| | | |
|-------------------|----------------|----------------|
| 3 Man Survey Crew | \$ 149.00 hour | \$1,192.00 Day |
| 4 Man Survey Crew | \$ 198.00 hour | \$1,585.00 Day |

**Pinellas County
Contract 134-0221-NC Fixed Fee Schedule
For the Contract Term**

**Exhibit A- Pinellas County
TIERRA, INC
UNIT FEE
SCHEDULE**

**Sunset Point Road at North Betty Lane
Whitney Road and Wolford Road**

| | Unit | | Unit Price | Total |
|---|------|----|------------|-------|
| I. FIELD INVESTIGATION | | | | |
| Mobilization of Men and Equipment | | | | |
| Truck-Mounted Equipment | Trip | \$ | 324.00 | 0.00 |
| Specialized ATV/Mudbug | Trip | \$ | 649.00 | 0.00 |
| Support Vehicle | Trip | \$ | 145.00 | 0.00 |
| Cone Penetrometer Equipment | Trip | \$ | 340.00 | 0.00 |
| Barge-Mounted Equipment | Trip | \$ | 7138.00 | 0.00 |
| Barge Equipment with Tug | Day | \$ | 2575.00 | 0.00 |
| Safety Boat | Day | \$ | 515.00 | 0.00 |
| Standard Penetration Test Borings (By Truck-Mounted Equipment) | | | | |
| Land: 0 - 50 ft depth | L.F. | \$ | 12.00 | 0.00 |
| 50 - 100 ft depth | L.F. | \$ | 16.00 | 0.00 |
| 100 - 150 ft depth | L.F. | \$ | 29.00 | 0.00 |
| 150 - 200 ft depth | L.F. | \$ | 43.00 | 0.00 |
| Standard Penetration Test Borings (By ATV/Mudbug) | | | | |
| Land: 0 - 50 ft depth | L.F. | \$ | 14.00 | 0.00 |
| 50 - 100 ft depth | L.F. | \$ | 17.00 | 0.00 |
| 100 - 150 ft depth | L.F. | \$ | 30.00 | 0.00 |
| 150 - 200 ft depth | L.F. | \$ | 43.00 | 0.00 |
| Standard Penetration Test Borings (Track-Mounted) | | | | |
| Land: 0 - 50 ft depth | L.F. | \$ | 18.00 | 0.00 |
| 50 - 100 ft depth | L.F. | \$ | 24.00 | 0.00 |
| 100 - 150 ft depth | L.F. | \$ | 28.00 | 0.00 |
| 150 - 200 ft depth | L.F. | \$ | 43.00 | 0.00 |
| Standard Penetration Test Borings (By Barge-Mounted Equipment) | | | | |
| 0 - 50 ft depth | L.F. | \$ | 20.00 | 0.00 |
| 50 - 100 ft depth | L.F. | \$ | 26.00 | 0.00 |
| 100 - 150 ft depth | L.F. | \$ | 49.00 | 0.00 |
| 150 - 200 ft depth | L.F. | \$ | 73.00 | 0.00 |
| Cone Penetrometer Test Borings | | | | |
| 0 - 100 ft depth | L.F. | \$ | 12.00 | 0.00 |
| 100 - 200 ft depth | L.F. | \$ | 15.00 | 0.00 |
| Grout-Seal Boreholes (By Truck-Mounted Equipment) | | | | |
| Land: 0 - 50 ft depth | L.F. | \$ | 5.00 | 0.00 |
| 50 - 100 ft depth | L.F. | \$ | 6.00 | 0.00 |
| 100 - 150 ft depth | L.F. | \$ | 9.00 | 0.00 |
| 150 - 200 ft depth | L.F. | \$ | 12.00 | 0.00 |

**Pinellas County
Contract 134-0221-NC Fixed Fee Schedule
For the Contract Term**

**Exhibit A- Pinellas County
TIERRA, INC
UNIT FEE
SCHEDULE**

**Sunset Point Road at North Betty Lane
Whitney Road and Wolford Road**

| | | | | |
|--|------|----|-------|------|
| Grout-Seal Boreholes (By ATV/Mudbug) | | | | |
| Land: 0 - 50 ft depth | L.F. | \$ | 6.00 | 0.00 |
| 50 - 100 ft depth | L.F. | \$ | 7.00 | 0.00 |
| 100 - 150 ft depth | L.F. | \$ | 9.00 | 0.00 |
| 150 - 200 ft depth | L.F. | \$ | 11.00 | 0.00 |
| Grout-Seal Boreholes (Track-Mounted) | | | | |
| Land: 0 - 50 ft depth | L.F. | \$ | 7.00 | 0.00 |
| 50 - 100 ft depth | L.F. | \$ | 9.00 | 0.00 |
| 100 - 150 ft depth | L.F. | \$ | 14.00 | 0.00 |
| 150 - 200 ft depth | L.F. | \$ | 18.00 | 0.00 |
| Grout-Seal Boreholes (By Barge-Mounted Equipment) | | | | |
| 0 - 50 ft depth | L.F. | \$ | 8.00 | 0.00 |
| 50 - 100 ft depth | L.F. | \$ | 10.00 | 0.00 |
| 100 - 150 ft depth | L.F. | \$ | 16.00 | 0.00 |
| 150 - 200 ft depth | L.F. | \$ | 21.00 | 0.00 |
| Casing Allowance (By Truck-Mounted Equipment) | | | | |
| Land: 0 - 50 ft depth | L.F. | \$ | 8.00 | 0.00 |
| 50 - 100 ft depth | L.F. | \$ | 9.00 | 0.00 |
| 100 - 150 ft depth | L.F. | \$ | 11.00 | 0.00 |
| 150 - 200 ft depth | L.F. | \$ | 14.00 | 0.00 |
| Casing Allowance (By ATV/Mudbug) | | | | |
| Land: 0 - 50 ft depth | L.F. | \$ | 10.00 | 0.00 |
| 50 - 100 ft depth | L.F. | \$ | 13.00 | 0.00 |
| 100 - 150 ft depth | L.F. | \$ | 16.00 | 0.00 |
| 150 - 200 ft depth | L.F. | \$ | 20.00 | 0.00 |
| Casing Allowance (Track-Mounted) | | | | |
| Land: 0 - 50 ft depth | L.F. | \$ | 12.00 | 0.00 |
| 50 - 100 ft depth | L.F. | \$ | 14.00 | 0.00 |
| 100 - 150 ft depth | L.F. | \$ | 16.00 | 0.00 |
| 150 - 200 ft depth | L.F. | \$ | 21.00 | 0.00 |
| Casing Allowance (By Barge-Mounted Equipment) | | | | |
| 0 - 50 ft depth | L.F. | \$ | 13.00 | 0.00 |
| 50 - 100 ft depth | L.F. | \$ | 16.00 | 0.00 |
| 100 - 150 ft depth | L.F. | \$ | 18.00 | 0.00 |
| 150 - 200 ft depth | L.F. | \$ | 33.00 | 0.00 |
| Rock Coring (Structures) (By Truck-Mounted Equipment) | | | | |
| 0 - 50 ft deep | L.F. | \$ | 34.00 | 0.00 |
| 50 - 100 ft deep | L.F. | \$ | 47.00 | 0.00 |
| 100 - 150 ft deep | L.F. | \$ | 57.00 | 0.00 |

**Pinellas County
Contract 134-0221-NC Fixed Fee Schedule
For the Contract Term**

**Exhibit A- Pinellas County
TIERRA, INC
UNIT FEE
SCHEDULE**

**Sunset Point Road at North Betty Lane
Whitney Road and Wolford Road**

| | | | | |
|---|------|----|--------|------|
| Rock Coring (Structures) (By ATV/Mudbug) | | | | |
| 0 - 50 ft deep | L.F. | \$ | 41.00 | 0.00 |
| 50 - 100 ft deep | L.F. | \$ | 48.00 | 0.00 |
| 100 - 150 ft deep | L.F. | \$ | 62.00 | 0.00 |
| Rock Coring (Structures) (Track-Mounted) | | | | |
| 0 - 50 ft deep | L.F. | \$ | 40.00 | 0.00 |
| 50 - 100 ft deep | L.F. | \$ | 53.00 | 0.00 |
| 100 - 150 ft deep | L.F. | \$ | 72.00 | 0.00 |
| Rock Coring (Structures) (By Barge-Mounted Equipment) | | | | |
| 0 - 50 ft deep | L.F. | \$ | 44.00 | 0.00 |
| 50 - 100 ft deep | L.F. | \$ | 58.00 | 0.00 |
| 100 - 150 ft deep | L.F. | \$ | 77.00 | 0.00 |
| Field Permeability Tests | Test | \$ | 270.00 | 0.00 |
| Flagmen & Barricades (2 man crew) | Day | \$ | 854.00 | 0.00 |
| Florida Patrolmen (Traffic Control) | Hour | \$ | 35.00 | 0.00 |
| Arrow Rental Sign | Day | \$ | 71.00 | 0.00 |
| Permit Costs \$100 per six borings | Day | \$ | 103.00 | 0.00 |
| Auger Borings Roadway and Ponds | L.F. | \$ | 10.00 | 0.00 |
| Extra Split Spoon Samples | Each | \$ | 37.00 | 0.00 |
| Hand Muck Probes (2-man crew) | Day | \$ | 854.00 | 0.00 |
| Thin Walled Shelby Tube Samples (Land) | Each | \$ | 184.00 | 0.00 |
| 2-Inch Piezometer Installation | L.F. | \$ | 42.00 | 0.00 |
| Standby/Decontamination (Drill Rig & Crew) | Hour | \$ | 195.00 | 0.00 |
| Lee County Permit | Each | \$ | 103.00 | 0.00 |
| Double Ring Infiltration Test | Test | \$ | 497.00 | 0.00 |
| Organic Vapor Analyzer (OVA) | Day | \$ | 227.00 | 0.00 |
| Power Auger Boring (includes steam cleaning to a depth of 25 feet) | L.F. | \$ | 12.00 | 0.00 |
| Pavement Cores, Asphalt | Each | \$ | 95.00 | 0.00 |
| Concrete Cores | Each | \$ | 206.00 | 0.00 |
| Per Diem-Two Man Crew | Day | \$ | 155.00 | 0.00 |

II. LABORATORY TESTING

| | | | | |
|---|---------|----|---------|------|
| Visual Examination/Stratify 1 set = 5 feet | Per Set | \$ | 4.00 | 0.00 |
| Natural Moisture Content Tests | Test | \$ | 8.00 | 0.00 |
| Grain-Size Analysis - Full Gradation | Test | \$ | 61.00 | 0.00 |
| Grain-Size Analysis - Single Sieve | Test | \$ | 39.00 | 0.00 |
| Organic Content Tests | Test | \$ | 40.00 | 0.00 |
| Atterberg Limit Tests | Test | \$ | 91.00 | 0.00 |
| Liquid Limit Tests (Only) | Test | \$ | 56.00 | 0.00 |
| Plastic Limit Tests (Only) | Test | \$ | 36.00 | 0.00 |
| Environmental Tests (pH, sulfates, chlorides, resistivity) | Set | \$ | 162.23 | 0.00 |
| Unit Weight Determination | Test | \$ | 41.00 | 0.00 |
| a) Consolidation Tests | Test | \$ | 405.00 | 0.00 |
| b) Each additional load increment above 4TSF | Each | \$ | 26.00 | 0.00 |
| Specific Gravity | Test | \$ | 58.00 | 0.00 |
| Triaxial Shear Tests (3 Points) | Test | \$ | 346.00 | 0.00 |
| Rock Compression Test | Test | \$ | 108.00 | 0.00 |
| Split Tension Test | Test | \$ | 108.00 | 0.00 |
| LBR Test | Test | \$ | 314.00 | 0.00 |
| Permeability Test | Test | \$ | 270.00 | 0.00 |
| Grain-Size with Hydrometer | Test | \$ | 124.00 | 0.00 |
| Proctor Test a) Modified | Test | \$ | 117.00 | 0.00 |
| b) Standard | Test | \$ | 110.00 | 0.00 |
| Concrete Compression | Test | \$ | 155.00 | 0.00 |
| Chloride Testing | Test | \$ | 155.00 | 0.00 |
| Petrographic Testing | Test | \$ | 1648.00 | 0.00 |
| Swell Test | Test | \$ | 162.00 | 0.00 |

**Pinellas County
Contract 134-0221-NC Fixed Fee Schedule
For the Contract Term**

**Exhibit A- Pinellas County
TIERRA, INC
UNIT FEE
SCHEDULE**

**Sunset Point Road at North Betty Lane
Whitney Road and Wolford Road**

| | | | | |
|---|------|----|---------|---------|
| Sample Preparation | Hour | \$ | 74.00 | 0.00 |
| Direct Shear Strength Test (1 Point) | Test | \$ | 270.00 | 0.00 |
| Soil Cement Mix Designs | Each | \$ | 1051.00 | 0.00 |
| pH Test | Test | \$ | 29.00 | 0.00 |
| Fines Content | Test | \$ | 43.00 | 0.00 |
| Extrusion of UD | Test | \$ | 28.00 | 0.00 |
| Bitumen Extraction | Test | \$ | 113.00 | 0.00 |
| Bitumen Gradation | Test | \$ | 113.00 | 0.00 |
| RCRA Metals (Method 6010/7471) | Each | \$ | 88.00 | \$ 0.00 |
| Arsenic (Method 6010/7471) | Each | \$ | 13.40 | \$ 0.00 |
| SPLP/TCLP Metals | Each | \$ | 198.00 | \$ 0.00 |
| Asbestos Samples | Each | \$ | 25.00 | \$ 0.00 |
| III. FIELD ENGINEERING AND TECHNICAL SERVICES | | | | |
| Site Recon./Utility Coordination/Traffic Control Senior Specialist | Hour | \$ | 101.00 | 0.00 |
| Sr. Engineering Technician | Hour | \$ | 67.00 | 0.00 |
| Engineering Technician | Hour | \$ | 57.00 | 0.00 |
| IIIA. ENGINEERING AND TECHNICAL SERVICES | | | | |
| Project Manager | Hour | \$ | 159.00 | 0.00 |
| Senior Project Engineer | Hour | \$ | 129.00 | 0.00 |
| Senior Specialist | Hour | \$ | 101.00 | 0.00 |
| Project Engineer | Hour | \$ | 109.00 | 0.00 |
| Engineering Intern | Hour | \$ | 90.00 | 0.00 |
| Computer Technician | Hour | \$ | 80.00 | 0.00 |
| Sr Engineering Technician | Hour | \$ | 67.00 | 0.00 |
| Engineering Technician | Hour | \$ | 57.00 | 0.00 |
| Secretary/Clerical | Hour | \$ | 52.00 | 0.00 |
| Senior Scientist | Hour | \$ | 76.00 | 0.00 |

Estimated Project Fee



STANDARD FEE SCHEDULE
Scheda Ecological Associates, Inc.

January – December 2014
Pinellas County Contract No. 134-0220-NC
Fees listed are fixed for the term of the contract

| Classification | Hourly Rate |
|---------------------------|-------------|
| Expert Witness | \$175.00 |
| Principal Scientist | \$160.00 |
| Senior Scientist IV | \$130.00 |
| Senior Scientist III | \$120.00 |
| Senior Scientist I and II | \$100.00 |
| Environmental Scientist | \$85.00 |
| GIS Analyst | \$80.00 |
| CADD | \$80.00 |
| Environmental Technician | \$60.00 |
| Clerical | \$55.00 |

Scientific Diver Fee Schedule – SCUBA*

| Depths ≤30 Feet | Hourly Rate** |
|-------------------------|---------------|
| Environmental Scientist | \$137.50 |
| Senior Scientist | \$162.50 |
| Depths > 30 Feet | |
| Environmental Scientist | \$175.00 |
| Senior Scientist | \$200.00 |

* Dive Team (three member team) and boat captain rates are available

** Minimum billing of four (4) hours. Includes SCUBA equipment.



Pinellas County Public Works
Senior Procurement Analyst
440 Court Street
Clearwater, FL 33756

March 12, 2015

Reference: Traffic Engineering Consultant Services for ATMS-Intelligent Transportation System
Proposal Number 101-0464-CN (AM)
Adjusted 2012 Billable Rates

And Contract 134-0220-NC

Below are the adjusted 2012 Billable Rates for American Quality Consultants, LLC , using the FDOT job classifications.

Exhibit A

| American Quality Consultants, LLC | |
|-----------------------------------|-------------------------|
| Job Classification | Billable Rate (\$/hour) |
| Chief Engineer | \$ 170 |
| Engineer | \$ 95 |
| Engineer Intern | \$ 82 |
| Project Engineer | \$ 114 |
| Secretary/Clerical | \$ 53 |
| Senior Engineer | \$ 145 |
| Senior Project Engineer | \$ 124 |
| Senior Planner | \$ 112 |

Please Note:

The above billable rates are fixed for the term of Contract 134-0220-NC.

Should you have any additional questions or need additional information please call me at 727-543-1458. We look forward to providing Pinellas County with services for this contract.

Sincerely,

American Quality Consultants

Mahshid Arasteh, PE
Principal