

TASK ORDER 1-20 ENGINEERING

ENGINEERING SERVICES FOR DESIGN OF PAVEMENT AND RIGHT OF WAY IMPROVEMENTS TO WHITEHEAD, DUVAL AND FRONT STREETS

This TASK ORDER 1-20 ENG is issued under the terms and conditions of the AGREEMENT TO FURNISH GENERAL ENGINEERING SERVICES TO THE CITY OF KEY WEST ("AGREEMENT") between the City of Key West ("CITY") and CH2M HILL, Engineers, Inc. ("CONSULTANT") dated November 3, 2017 which is incorporated herein by this reference.

A. SCOPE OF SERVICES

Specific services which the CONSULTANT agrees to furnish are summarized on the attached statement entitled TASK ORDER 1-20 ENG "SCOPE OF SERVICES." The "Scope of Services" defines the work effort anticipated for the Task Order.

This Task Order, when executed, shall be incorporated in and shall become an integral part of the November 3, 2017, Master Agreement.

B. TIME OF COMPLETION

Work under this Task Order will begin immediately following acceptance and completed expeditiously subject to coordination with the City of Key West staff.

C. COMPENSATION

Compensation for the labor portions of TASK ORDER 1-20 ENG, Tasks A will be on a lump sum fee basis as stipulated in Article 2, Paragraph 2.1 of the AGREEMENT. Compensation for subconsultants and all expenses will be on a Cost Reimbursable-Per Diem basis as stipulated in Article 2, Paragraph 2.2 of the AGREEMENT. The estimated compensation is shown on the attached statement entitled TASK ORDER 1-20 ENG COMPENSATION.

D. ACCEPTANCE

By signature, the parties each accept the provisions of this TASK ORDER 1-20 ENG and authorize the CONSULTANT to proceed at the direction of the CITY's representative in accordance with the "SCOPE OF SERVICES." Start date for this project will be no later than two (2) days after execution of this authorization.

For CH2M HILL, INC.

For CITY OF KEY WEST

By: _____
Sirpa H. Hall, P.E.
Senior Business Vice President

By: _____
Greg Veliz
City Manager

Sean McCoy, P.E.
Key West Project Manager

Dated the ____ day of _____, 2019

ATTEST: _____

TASK ORDER 1-20 ENGINEERING

ENGINEERING SERVICES FOR DESIGN OF PAVEMENT AND RIGHT OF WAY IMPROVEMENTS TO WHITEHEAD, DUVAL & FRONT STREETS

SCOPE OF SERVICES

Project Description

Using the Pavement Assessment document completed August 2019, the City of Key West (CITY) is taking a systematic approach to roadway and right of way improvements. The City has tasked Jacobs (CONSULTANT) with developing design documents for constructing improvements to City Owned segments of Whitehead Street, between and including the intersections of Eaton and Front Streets; Front Street, between and including the intersection of Whitehead to 400 ft east of Simonton St; and Duval Street, between and including the intersections of Eaton and Wall Streets. These City Owned Segments will be referred to as Area 1 and are shown in the attached Exhibit 1.

The City will be coordinating with Monroe County to improve County owned segments of Whitehead from Eaton St. to and including the intersection of Fleming St., as well as Duval St. from Eaton St. to and including the intersection of Truman Ave. These County owned segments will be referred to as Area 2 and are shown in the attached Exhibit 2.

Areas 1 and 2 are delineated only to show design cost estimates. The project will be designed and bid as a single package.

Road and Right of Way Improvements for segments of roadway in both areas will include:

- Pavement Design – full mill & pave, itemizing & correcting any trench failures
- Pavement Marking – will match limits of mill & pave and replace existing crosswalks
- Signing – recommend if existing panels should be replaced, and identify proposed signs, if any
- Pedestrian Facilities:
 - Curb Ramps – upgrade existing crosswalks to ADA compliance within existing Right of Way
 - Sidewalks and Driveways -
- Drainage improvements – the CITY has identified ponding along Front Street between Duval and Simonton. The CONSULTANT will analyze existing Line and Grade, and adjust design Line and Grade, where available, to minimize ponding.

Additionally, the Florida Keys Aqueduct Authority (FKAA) has agreed to coordinate and construct their planned replacement of the water system pipelines within the proposed project road sections, as part of this project. Design of the waterline replacement will be produced by FKAA, and their design documents will be appended as a separate component set into a single bid package for bidding and construction.

Purpose

The CITY has requested that the CONSULTANT provide engineering services for the design of roadway improvements to lengths of Whitehead Street, Front Street, and Duval Street (see Exhibits 1 and 2). This Task Order describes the CONSULTANT's Scope of Services.

Specific activities to be performed by the CONSULTANT under this Task Order include:

- Roadway pavement cores, Lime rock Bearing Ratio (LBR) testing, and laboratory analysis to determine resilient modulus, existing pavement layers and pavement condition.
- Preparation of one (1) Bid Ready Document package. Note: Separation of the construction plans into multiple packages will be considered an additional service.

Specific activities to be provided by the CITY include:

- Full width Right of Way Survey, to develop existing topography, and map existing utilities
- Coordination of consultants' product delivery schedule (FKAA and Jacobs (formerly CH2M))
- Stakeholder coordination not related to roadway design or design related activities.

Specific design activities to be provided by the Florida Keys Aqueduct Authority (FKAA), include:

- Production of bid ready documents for the replacement of water system conveyance piping, valves, and other appurtenances as required. Documents shall include design drawings, and technical specifications that are Bid Ready.
- Milestone submittals, and attendance at milestone review meetings as described below.
- No environmental permits are anticipated for this project. If the scope of drainage improvements requires more extensive impacts then permit applications and applicable fees for all waterline related work will be provided by the CITY

Specific activities to be provided by the County include:

- Reviews of design milestone documents occurring concurrently with City review periods (10 days)
- Attendance at milestone review meetings

Scope of Services

The following tasks describe the activities to be performed and the work products to be prepared by the CONSULTANT.

Task A – Design

This task details the activities related to the Roadway Improvements design. During this task, the CONSULTANT will provide the following:

- Project Kick-off Meeting
 - Attended in person by CONSULTANT's Project AND Design Managers. Assumed two (2) days. As part of this task, CONSULTANT's Project and Design managers will walk the alignments with City Staff, including City Arborist.
- Subconsultants
 - Pavement cores and LBR testing is proposed to be obtained and analyzed by Nutting Engineer's Inc. The proposal attached as Exhibit 2 includes work for 26 pavement cores, 4 LBR tests, laboratory analysis, Maintenance of Traffic (MOT), and development of a findings report.

- Documentation of Design Criteria & Standards:
 - Florida Greenbook (FDOT Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways), Americans With Disabilities Act (ADA) Standards for Accessible Design, Manual on Uniform Traffic Control Devices (FHWA's MUTCD)
 - City of Key West Transportation / Roadway Standard Details
 - 25 mph Design Speed is desired; minimum 20 mph Design Speed based on 2017 Speed Study
 - Traffic Data for Pavement Design will be extrapolated from 2017 Speed Study.
 - FDOT Standard Plans for Road and Bridge Construction 2019/20.
- Project limits of Milling & Resurfacing (M & R):
 - M & R limits to include existing striped pedestrian crossings on side streets (approx. 15 ft. from each mainline edge of travel)
 - No improvements to brick pavement adjacent to or within the project limits, additionally CITY preference is to minimize disruptions to existing brick
- Pavement Design:
 - The following pavement designs are anticipated:
 - Whitehead Street – ~1-2 inch milling & resurfacing
 - Includes 70 feet of asphalt near intersection of Whitehead/Front
 - Same design for both City and County maintained limits
 - Front Street – ~1-2 inch milling & resurfacing
 - Front Street – Full reconstruction due to apparent failing base between Duval and Simonton, limits TBD. Duval Street south (County-maintained) - ~1-2 inch milling & resurfacing
 - Includes 90 feet of asphalt on adjacent Wall Street
 - Duval Street north (City-maintained) - ~1-2 inch milling & resurfacing
 - Includes 90 feet of asphalt on adjacent Wall Street
 - Includes 90 of concrete pavement near brick parking area
 - Pavement Details:
 - anticipate that during milling operation the contractor will disturb brick base and simple rehabilitation alternatives should be provided
 - detail for Trench Restoration, based on Survey & Geotech investigation
- Signing & Pavement Marking:
 - Identify existing signs to be replaced based on loss of reflectivity and/or compliance with MUTCD
 - Consideration to revise Caroline/Whitehead from existing one-way stop to three-way stop with new post-mounted signs
 - Crosswalks –

- Any special crosswalk details will be provided by the CITY and/or COUNTY (example: Duval/Petronia contains existing rainbow paint in crosswalk)
 - Existing crosswalks that cannot be upgraded to ADA criteria due to constraints such as existing drainage inlets, will be identified at the 60% submittal.
 - Other new post-mounted signs as needed
- Sidewalk and Curb Ramps:
 - Intersecting projects propose curb ramp upgrades which may not be reflected in survey and improvements by others will need to be reflected in plans
 - Coordinate meeting with Planning, Urban Forester, and Historic Architectural Review Commission (HARC) to identify concerns and requirements, as well as tree roots that may need trimming to prevent sidewalk vertical displacement. Assumed to occur same day as design Kick-off meeting.
 - Preference is to hold back of sidewalk elevations
 - Special Details will be provided for non-standard curb ramps (where applicable)
 - Curb, sidewalk and ramp tie-in elevations for standard curb ramps will be presented in table format
 - Non-compliant curb ramps and driveways that cannot be corrected within existing R/W will be identified at the 60% submittal
- Driveways:
 - Coordinate driveway access with Conch Tour Train on Front Street
 - Special details may be required near Front/Simonton for grading existing driveways to ADA compliance
- Temporary Traffic Control:
 - Provide plan notes to contractor and basic phasing typicals with references to FDOT Standard Plans
 - FCAA will provide Traffic Control details for pipeline work
- Utility Coordination:
 - Identify potential conflicts with utilities through survey and as-built information, and provide information to Contractor
 - Agencies anticipated: CITY sewer/solid waste/stormwater, Florida Keys Aqueduct Authority (FCAA), Keys Energy Services
- Landscaping:
 - Preserve existing landscaping locations provided they do not interfere with current ADA requirements and standard Line of Sight requirements. Non-compliant landscaping will be identified at the 60% submittal.
 - Coordinate meeting with Planning, Urban Forester, and HARC representative(s) to identify design requirements as well as tree roots that may need cutting to prevent sidewalk popping
- *Exclusions to scope:*

- *No signalization upgrades or adjustments to timing;*
- *No lighting analyses or upgrades;*
- *No changes to on-street parking;*
- *No drainage modeling;*
- *No 3D deliverables.*

Deliverables

The deliverables for the Roadway Improvements Design will include:

- Topography and features developed from the Survey provided by CITY and relevant to design will be included in the design drawing package.
- Kickoff meeting Agenda and Minutes (Submitted Digitally, .pdf)
- Site Visit observations, and any direction received from City Staff will be compiled into a Site Visit TM Draft. Following City Staff review for correctness, this TM will be issued as Final, and will become part of the design criteria.
- 60/90 percent design documents, submitted digitally for City Staff review (see Assumptions below for anticipated drawing list)
 - 60% Submittal will include Construction Plans and also:
 - Design Documentation – includes Project Design Criteria, Pavement Design Recommendations, AutoTURN exhibits at signalized intersections using WB-40 Design Vehicle
 - Geotechnical Findings Report (by others)
 - Engineer’s Class V Estimate of Construction Costs.
 - Draft Technical Specifications
 - 90% Submittal will include Construction Plans and also:
 - Engineer’s Class III Estimate of Construction Costs.
 - Specifications
- Review meetings at each milestone will be held with City Staff and the CONSULTANT’s Project Manager, with design staff attending by phone as needed.
 - Budget has been included to allow CONSULTANTS’ Design Manager to attend Kick-off, (16 hours + Travel expenses) See COMPENSATION.
 - Additional Budget for a one-day Site visit by CONSULTANTS’ Design Manager has been included (16 hours + Travel expenses). This visit shall occur at the direction of the CITY.
- Bid Ready Documents shall include:
 - Digital CADD files
 - Contract Specifications with Half size drawings for upload to Demand Star (Digital .pdf)

- Pavement Core(s) laboratory analysis report shall be included in the Technical Specifications as an Appendix
- Full Size Drawings (Digital .pdf)
- 3 (three) Half Size Signed and Sealed drawing sets for City Permitting (if required)

Assumptions

The scope and fee for this Task Order are based on the following assumptions:

- Whitehead Front and Duval Streets, including both City and County owned segments will be Designed, Bid and Constructed under one construction contract. The Bid form will be coordinated with FKAA and Monroe County to delineate stakeholder responsibility. Appropriate notes will be added to drawings.
- Design of both County and City road segments will be based on the codes and standards listed under Documentation of Design Criteria & Standards as bulleted under Task A – Design.
- The following drawings are assumed to be included in the bid package, and are the basis for the labor compensation estimate:
 - 77 Total
 - assumes separate sheets for Signing & Pavement Marking
 - 1 Key Sheet
 - 1 Signature Sheet
 - 2 Summary of Pay Items
 - 1 Drainage Map show basin boundaries
 - 4 Typical Section includes paving details
 - 1 Project Layout
 - 2 Project Control from Survey
 - 15 Roadway Plan
 - 1 Special Profile on Front street
 - 2 Back-of-Sidewalk Profile - only where curb is needed at ROW line
 - 17 Intersection Layout/Detail - assumes all curb ramps need detail
 - 2 Roadway Soil Survey from Geotech
 - 1 Stormwater Pollution Prevention Plan
 - 2 Temporary Traffic Control Plans
 - 2 Utility Adjustments
 - 15 Signing and Pavement Marking Plans
 - 4 SPM – key sheet, EOR, Quantities, special details
 - 4 Summary of Quantities
- The kickoff meeting is assumed to take place in Key West with two (2) CONSULTANT's staff attending. Other staff may attend via conference call. Subsequent review meetings will be attended in person by one (1) CONSULTANT's Staff, with others attending via conference call as required.
- The design will be based on the federal, state, and local codes and standards in effect at the start of the project. Any changes in these codes may necessitate a change in scope.

- The CONSULTANT's master specifications will be used as the basis for all technical sections in Divisions 1 through 49. The CONSULTANT's master specifications incorporating CITY requirements will be used for General Conditions, Supplemental Conditions, and other front-end documents. *(Except as noted below.)
- *Technical Specifications for the complete construction of waterline replacement including piping and mechanical appurtenances, bedding and pipe zone, material and compaction requirements shall be provided by FKAA.
- Design drawings and Bid Specifications provided by FKAA are assumed to be complete and Bid ready. No labor has been budgeted for review of design by others.
- Legal, easement, or plat surveys are not included in the scope of work. If additional property is required it shall be the responsibility of the City to obtain.
- Federal, State, County, and City Permitting efforts (if needed) are not included in this Task Order.

Obligations of the CITY

To assist meeting schedule and budget estimates contained in this proposal, the CITY will provide the following:

- Retain Professional Land Surveyor to provide Topographic and Surface Feature survey. Provide Data in RAW format to CONSULTANT
- Prompt review and comment on all deliverables (within 10 working days of receipt).
- Access to any required facilities.
- Provide recent contractor bids to be used for unit costs
- Attendance of key personnel at meeting as requested.
- Preparation of permit applications, and Payment of all fees (if required).
- Stakeholder coordination: assist with scheduling, review periods, and other design related coordination efforts.

Additional Services

The CONSULTANT will, as directed, provide additional services that are related to the project but not included within this Scope of Services. These and other services can be provided, if desired by the CITY, as an amendment to the Task Order. Work will begin for the Additional Services after receipt of a written notice to proceed from the CITY. Additional services may include the following:

- Permitting assistance
- Drainage Modeling and analysis
- Design of subsurface drainage improvements
- Bid Phase Services
- Construction Phase Services
- Other related work as requested.

Compensation

The estimated compensation for TASK ORDER 1-20 ENG, has been separated into two Areas. Area 1 being City owned streets, and Area 2 being County owned Streets (shown in exhibits 1 and 2 respectively). Total project costs are shown below. Detailed compensation tables for the labor portion for each area are included in Attachment A, entitled TASK ORDER 1-20 ENG, COMPENSATION.

Area 1 City Controlled Street Segments Design Costs	\$123,100
Area 2 County Controlled Street Segments Design Costs	\$89,962
Geotechnical Costs (Areas 1 and 2)	\$30,250
TO 1-20 Total	\$243,312

Completion Dates

The estimated time of completion for TASK ORDER 1-20 ENG is shown in the following table.

Task	Proposed Dates
Notice to Proceed	November 14 th , 2019
Conduct kickoff meeting	Week of November 25 th , 2019
Mobilize Geotechnical Subconsultants	November 21 st , 2019
60% Design	January 20 th , 2020
90% Design	February 24 th , 2020
FKAA bid documents	March 16 th , 2020
Bid Documents	March 20 th , 2020

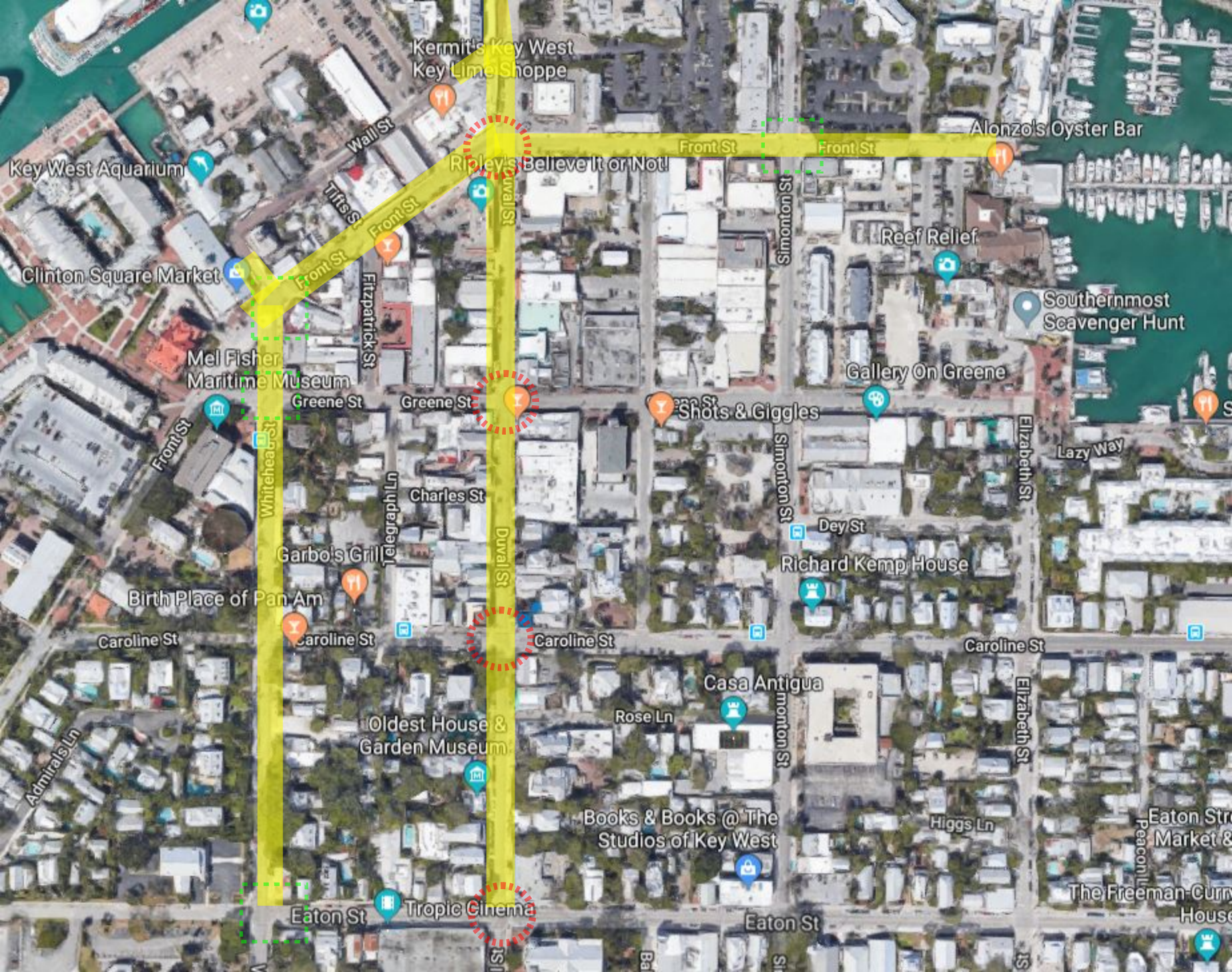
ATTACHMENT A
TASK ORDER 1-20 ENG, COMPENSATION

Task Order 1-20 AREA 1 Whitehead, Front and Duval Streets Roadway Improvements										
Title	Engineer 6	Engineer 5	Engineer 5	Engineer 4	Technician 5	Tech 3	Technician 6	Spec Processor	Clerical / Office	Subtask Labor Total
Rate	\$210.82	\$192.96	\$192.96	\$166.76	\$121.50	\$94.09	\$133.40	\$84.56	\$76.23	
A.1 - Design										
Kickoff Meeting			8	8		4			4	\$3,559.04
Project Site Visit - with Arborist			8	8						\$2,877.76
Data Collection/ Organization Design Criteria & Standards Adjacent City Projects in Design				12	2	8				\$2,996.84
Typical Sections Three mainlines (3) + 2 sidestreets (2)				4		8				\$1,419.76
Pavement Design Report Details for crown restoration Details to minimize brick impacts Details for Trench failure Rehabilitation +1 Update			2	32		12		4		\$7,189.56
Roadway Design Analysis & Documentation - Design decisions (email correspondence), Intersection analysis (Line of Sight, AutoTurn), sidewalk ADA compliance, Driveways Xsects				32	8	16				\$7,813.76
Profile Analysis at Front St flooding				12		8				
Signing & Pavement Marking Analysis				20			8			\$4,402.40
Engineer's Estimate & Specifications + 2 updates (100) + Finals		20		16	4	12		8		\$8,819
60% Plan Production: Sidewalk Improvement Details - ~8 intersections @ 4 crossings = 32 locations Signing & Pavement Marking Details - includes new Stop condition at Caroline/Whitehead			3	64	8	80	24		4	\$23,257
Mid-Project Site Visit + Monthly Supervision			20	16						\$6,527
60% Client Review Meeting			4	4						\$1,439
90% Plan Production			2	40	4	60	12	16	4	\$16,446
90% Client Review Meeting			4	4						\$1,439
Coordination with FCAA Plan Production / Utility Information / Specification Cross-Coordination			8	4	8					\$3,183
Final Plans (Bid Documents)			2	40		30	6	8	4	\$11,661
Peer Review - Internal QC	10		12	16		6				\$7,656
Hours Subtotal	10	20	73	332	34	244	50	36	16	815
Cost Subtotal	\$2,108	\$3,859	\$14,086	\$55,364	\$4,131	\$22,958	\$6,670	\$3,044	\$1,220	\$113,441
A.2 - Third Party Data Collection										
Develop and manage scopes for sub performance			12	8					8	\$4,259
Subconsultant fees										\$0
Hours Subtotal	0	0	12	8	0	0	0	0	8	28
Cost Subtotal	\$0	\$0	\$2,316	\$1,334	\$0	\$0	\$0	\$0	\$610	\$4,259
Total Hours by Per Diem Rate	10	20	85	340	34	244	50	36	24	
Total Fee Estimate by Per Diem Rate	\$2,108	\$3,859	\$16,402	\$56,698	\$4,131	\$22,958	\$6,670	\$3,044	\$1,830	
									TO Total Labor	\$117,700.04
									Expense Travel	\$5,000.00
									Expense Repro/Ship	\$400.00
									TO 3-18 Contract Total	\$123,100.04

Task Order 1-20 AREA 2 Segments Whitehead and Duval Streets Roadway Improvements											
Title	Engineer 6	Engineer 5	Engineer 5	Engineer 4	Technician 5	Tech 3	Technician 6	Spec Processor	Clerical / Office	Subtask Labor Total	
Rate	\$210.82	\$192.96	\$192.96	\$166.76	\$121.50	\$94.09	\$133.40	\$84.56	\$76.23		
A.1 - Design											
Project Site Visit			4	4						\$1,439	
Data Collection/ Organization Adjacent COUNTY Projects in Design				4	0	4				\$1,043	
Typical Sections Two mainlines (2)				1		3				\$449	
Pavement Design Report Details for resurfacing +1 Update			2	20		8		4		\$4,812	
Roadway Design Analysis & Documentation - Design decisions (email correspondence), Intersection analysis (Line of Sight, AutoTurn), sidewalk ADA compliance, Driveways Xsects				20	8	16				\$5,813	
Profile Analysis - N/A				0		0				\$0	
Signing & Pavement Marking Analysis				16			8			\$3,735	
Engineer's Estimate & Specifications + 2 updates (100) + Finals		20		16	4	12		2		\$8,312	
60% Plan Production: Sidewalk Improvement Details - ~9 intersections @ 4 crossings = 36 locations Signing & Pavement Marking Details - includes special crosswalk detail coordination			3	64	8	80	20		4	\$22,724	
Mid-Project Site Visit + Monthly Supervision			10	8						\$3,264	
60% Respond to County Review Comments			2	8						\$1,720	
90% Plan Production			2	40	4	60	10	2	4	\$14,996	
90% Respond to County Review Comments			2	8						\$1,720	
Final Plans (Bid Documents)			2	40		30	4	2	4	\$10,887	
Peer Review - Internal QC	10		8	8		4				\$5,362	
Hours Subtotal	10	20	35	257	24	217	42	10	12	627	
Cost Subtotal	\$2,108	\$3,859	\$6,754	\$42,857	\$2,916	\$20,418	\$5,603	\$846	\$915	\$86,275	
A.2 - Third Party Data Collection											
Develop and manage scopes for sub performance			12	4					4	\$3,287	
Subconsultant fees										\$0	
Hours Subtotal	0	0	12	4	0	0	0	0	4	20	
Cost Subtotal	\$0	\$0	\$2,316	\$667	\$0	\$0	\$0	\$0	\$305	\$3,287	
Total Hours by Per Diem Rate	10		47	261	24	217	42	10	16		
Total Fee Estimate by Per Diem Rate	\$2,108	\$0	\$9,069	\$43,524	\$2,916	\$20,418	\$5,603	\$846	\$1,220		
									TO Total Labor	\$89,562	
									TO Expenses	\$400	
									TO 1-20 COUNTY Total	\$89,962	

Exhibit 1

Project Limits – City Owned Streets



Kermit's Key West
Key Lime Shoppe

Alonzo's Oyster Bar

Ripley's Believe It or Not!

Key West Aquarium

Clinton Square Market

Reef Relief

Southernmost
Scavenger Hunt

Mel Fisher
Maritime Museum

Gallery On Greene

Shots & Giggles

Lazy Way

Garbo's Grill

Richard Kemp House

Birth Place of Pan Am

Charles St

Dey St

Caroline St

Caroline St

Caroline St

Caroline St

Oldest House &
Garden Museum

Casa Antigua

Rose Ln

Books & Books @ The
Studios of Key West

Higgs Ln

Eaton St

Tropic Cinema

Eaton St

The Freeman-Curry
House

Exhibit 2

Project Limits – County Owned Streets

Exhibit 2 – AREA 2: County owned Road Segments
Duval (Eaton St. – Truman Ave)
Whitehead (Eaton St. – Fleming St)

