

TASK ORDER 4-22 ENGINEERING

ENGINEERING SERVICES FOR PAVEMENT REHABILITATION

This TASK ORDER 4-22 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 4-22 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. Work may be performed at any time as requested by the CITY within 12 months after the date of execution of this Task Order, at which time the Task Order will expire.

C. COMPENSATION

Compensation for the labor portions of TASK ORDER 4-22 ENG, Task A will be on a lump sum fee basis as stipulated in Article 5, Paragraph 5.1 of the AGREEMENT. Compensation for the labor and expenses for Tasks B and C will be on a Cost Reimbursable-Per Diem basis as stipulated in Article 5, Paragraph 5.2.1 of the AGREEMENT. The estimated compensation is shown on the attached statement entitled TASK ORDER 4-22 ENG COMPENSATION.

D. ACCEPTANCE

By signature, the parties each accept the provisions of this TASK ORDER 4-22 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 Engineers, Inc.

For CITY OF KEY WEST

By: _____

By: _____

Sirpa H. Hall, P.E.
Senior Business Vice President

Patti McLauchlin
City Manager

Krystal H. Burns 09/02/22

Krystal H. Burns, P.E.
Key West Technical Lead

Dated the _____ day of _____, 2022

ATTEST: _____

TASK ORDER 4-22 ENGINEERING
ENGINEERING SERVICES TO DEVELOP PAVEMENT REHABILITATION
PROGRAM BY IMPLEMENTATION OF EARLY LIFE CYCLE TECHNIQUES

SCOPE OF SERVICES

Project Description

Using the *Pavement Management Analysis Report (PMAR)* completed October 2019, the City of Key West (CITY) is taking a systematic approach to roadway and right-of-way improvements. As detailed in the 2019 PMAR, agencies cannot efficiently fund pavement rehabilitation if the program is focused only on the lowest rated streets. The preferred basis of rehabilitation is to capture roadway segments in their need year as estimated based on the incremental cost of rehabilitation deferral. This approach maximizes each dollar spent by avoiding costly rehabilitation.

The CITY has tasked the CONSULTANT with assisting the CITY in development of a pilot project and establishing the foundation for a citywide pavement rehabilitation program focused on early life cycle techniques to extend pavement life such as Crack Sealing, Micro Surfacing, Hot In-Place Recycling and other possible methods.

Purpose

The CITY has requested that the CONSULTANT document the program approach, establish a pilot project, and create bid documents. This Task Order describes the CONSULTANT's Scope of Services. Specific activities to be performed under this Task Order include:

- Research Contractor parameters: capabilities, costs, experience including proof projects
- Identify Pilot Project: scope at least one pilot projects implementing at least two rehabilitation techniques and obtain CITY agreement as to project function, size and cost.
- Design Bid Documents: obtain competitive bids for the pilot project(s). Establish the foundation for a future multi-year contract to provide pavement rehabilitation using similar strategies at a variety of City locations.

Scope of Services

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

Task A – Research Contractor Parameters

During this task, the CONSULTANT will provide the following:

- Document Pavement Rehabilitation Scoping Meeting Minutes (May 3, 2022)
 - Confirm understanding of City goals

- Explore applicable rehabilitation strategies: including but not limited to crack sealing, micro surfacing, hot in-place recycling
- Document Pavement Rehabilitation Methodologies with regional Contractors such as:
 - Document production rates, stakeholder impacts, construction costs
 - Outline capability to combine pavement rehabilitation types – what are reasonable combinations for one contractor
 - Obtain list of nearby proof projects including costs and construction durations, with client references

The deliverables for Task A will include:

- DRAFT *Pavement Rehabilitation Program for Early Life Cycle Techniques* Technical Memorandum to summarize the findings from Task A

Task B – Identify Pilot Project Location

This task details the activities related to identifying a viable Pilot Project with an estimated cost of \$250,000 based on the research compiled during Task A. During this task, the CONSULTANT will provide the following:

- Update Key West’s 2019 Pavement Condition Index (PCI) values to reflect projects implemented since 2019
 - Update PCI ratings in master spreadsheet, using deterioration rates
 - Update Exhibit of City Roads with color-coded PCI ratings
- Field visit for two (2) staff to visually inspect roadway conditions of potential pilot project site(s)
 - Location(s) will depend on roadway condition and contractor information
- Virtual Meeting with the City Staff to discuss the findings of the field visit and to obtain concurrence for the pilot project location(s)

The deliverables for Task B will include:

- FINAL *Pavement Rehabilitation Program for Early Life Cycle Techniques* Technical Memorandum
 - Append Report to summarize the methodology and findings of Task B
 - Provide brief outline of potential multi-year Pavement Rehabilitation Program that reflects the goals and values of the City and community. Program will outline the process by which rehabilitation techniques and project locations are prioritized in an impartial and transparent manner. This Program can be updated as resources and priorities change.

Task C –Design of Bid Documents

This task details the activities related to creating Bid Documents for the Pilot Project selected in Task B. During this task, the CONSULTANT will provide the following:

- 90% Submittal will include:

- 90% Construction Plans for paving and pavement marking
 - Project size will be approximately 2,000 LF; equating to 4 sheets at 40 Scale
- 90% Specifications - based upon relevant FDOT Standard Specifications and modified to meet project requirements as required by Task A findings
- 90% Engineer's Estimate of Construction Costs (Target is \$250,000)
- Virtual Comment Review Meeting will be held with the City Staff at the end of a 10-day review period
- Bid Ready Submittal will include:
 - Construction Plans for paving and pavement marking (digitally signed & sealed)
 - Specifications (digitally signed & sealed)
 - Engineer's Estimate of Construction Costs

The deliverables for Task C will include:

- Draft/Bid Ready Construction Plans, submitted digitally for City Staff review
- Updates, if any, to *Pavement Rehabilitation Program for Early Life Cycle Techniques* Technical Memorandum

Assumptions

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

- CONSULTANT will reasonably rely upon the accuracy, and completeness of the information/data provided by the City or other third parties.
- The roadway network of the City-owned streets in Key West and Stock Island includes approximately 62.5 centerline miles of City maintained streets. Condition assessment for additional mileage will be considered as an Additional Service.
- Providing Construction/Cost Estimates - In providing opinions of cost, financial analyses, economic feasibility projections, for the project, Jacobs has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by operating personnel or third parties; and other economic and operational factors that may materially affect the ultimate project cost or schedule. Therefore, Jacobs makes no warranty that Client's actual project costs, financial aspects, economic feasibility, will not vary from Jacobs' opinions, analyses, projections., or estimates.
- 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 all required documentation and property rights.
- The following drawings are assumed to be included in the bid package, and are the basis for the labor compensation estimate:

1 Key Sheet

1 Signature Sheet

1 Summary of Pay Items/Quantities

2 Typical Section & Details showing paving and striping – one detail for each rehabilitation technique

4 Roadway Plans – assumes coverage of ~2,000 linear feet at 40 Scale

1 Stormwater Pollution Prevention Plan

2 Temporary Traffic Control Notes & Special Details

- Only Task B City Site Visit will be attended in-person. This visit will determine pilot project locations with two (2) CONSULTANT's staff attending and inviting attendance from CITY Staff. All other meetings will be virtual.

Obligations of the CITY

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

- Prompt review and comment on all deliverables (within 10 working days of receipt).
- Provide recent contractor bids to be used for unit costs.
- Provide list of pavement rehabilitation projects since 2019
- Provide list of programmed/funded pavement rehabilitation projects within 5-years
- Attendance of key personnel at meeting as requested.

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 this 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:

- Task C will require an Amendment if the Pilot Project requires more than 4 Sheets at ~40 scale
- Bid Phase Services
- Construction Phase Services
- Developing scope for CITY to award multi-year contract providing similar rehabilitations to a variety of City locations

Compensation

The estimated compensation for TASK ORDER 4-22 ENG, is shown on Attachment A, entitled TASK ORDER 4-22 ENG, COMPENSATION.

Task A	\$19,175
Task B	\$23,468
Task C	\$41,291
TO 4-22 Total	\$83,934

Completion Dates

The estimated time of completion for TASK ORDER 4-22 ENG is shown in the following table.

Task	Proposed Dates
NTP	Kickoff meeting within 10 days after NTP
Task A	4 weeks - Submit Draft Tech Memo
Task B	Site Visit 5 weeks - Submit Final Tech Memo
Task C	5 weeks later – DRAFT Bid Documents 9 weeks later – FINAL Bid Documents

ATTACHMENT A
TASK ORDER 4-22 ENG, COMPENSATION

Task Order 4-22												
Title	Engineer 8	Engineer 6	Engineer 4	Engineer 2	Technician 5	Technician 4	Technician 3	Clerical / Office	Subtask Labor Total	Expenses	Travel	Task/Line Item Subtotal
Rate	\$264.09	\$223.66	\$176.92	\$132.68	\$128.90	\$115.00	\$99.82	\$80.87				
Task A - Research Contractor Parameters												
Meetings Kick-Off Meeting Monthly Contract Supervision	4	4	4		8				\$3,690			\$3,690
Data Collection/ Organization Design Criteria & Standards Understanding of City Goals			4				4		\$1,107			\$1,107
Research Contractor Methodologies explore applicable pavement preservation strategies		24	8		8				\$7,814			\$7,814
Tech Memo summarize data collection Contractor parameters	1	6	20		6			8	\$6,565			\$6,565
Task A Hours Subtotal	5	34	36	0	22	0	4	8	109	---	---	--
Task A Fee Subtotal	\$1,320	\$7,604	\$6,369	\$0	\$2,836	\$0	\$399	\$647	\$19,175	\$0	\$0	\$19,175

Task Order 4-22													
Title	Engineer 8	Engineer 6	Engineer 4	Engineer 2	Technician 5	Technician 4	Technician 3	Clerical / Office	Subtask Labor Total	Expenses	Travel	Task/Line Item Subtotal	
Rate	\$264.09	\$223.66	\$176.92	\$132.68	\$128.90	\$115.00	\$99.82	\$80.87					
Task B - Identify Pilot Project Location													
Update 2019 Pavement Condition Index use deterioration rates for all segments estimate improved values for recent resurfacing		4					20		\$2,891			\$2,891	
Update Exhibit with Color-Coded line segments			4				6						
City Site Visit 2 Jacobs staff x 2 days		32							\$7,157	\$ 150	\$3,000	\$10,307	
Virtual Meeting - with City to select Pilot Project location(s)		2	2						\$801			\$801	
Tech Memo summarize methodology for selecting Pilot Project; briefly outline multi-year Program		20	10				16	4	\$8,163			\$8,163	
Task B Hours Subtotal	0	58	16	0	0	0	42	4	120	---	---	--	
Task B Fee Subtotal	\$0	\$12,972	\$2,831	\$0	\$0	\$0	\$4,192	\$323	\$20,318	\$150	\$3,000	\$23,468	
Task C - Design of Bid Documents													
90% Plan Production includes Internal Quality Control		4	20	12	44	14	20		\$15,303	\$100		\$15,403	
90% Engineer's Estimate & Specifications + 1 updates (Bid set)	2	24	30				16	4	\$13,124			\$13,124	
90% Client Review Meeting		2	4				2		\$1,355			\$1,355	
Final Plans (Bid Documents) includes Internal Quality Control Engineer's Estimate & Specifications		8	24	10	12	7	16		\$11,311	\$100		\$11,411	
Task C Hours Subtotal	2	38	78	22	56	21	54	4	275	---	---	--	
Task C Fee Subtotal	\$528	\$8,499	\$13,799	\$2,919	\$7,218	\$2,415	\$5,390	\$323	\$41,091	\$200	\$0	\$41,291	
Total Hours by Per Diem Rate	7	130	130	22	78	21	100	16	504	---	---	--	
Total Fee Estimate by Per Diem Rate	\$1,848	\$29,075	\$22,999	\$2,919	\$10,054	\$2,415	\$9,981	\$1,293	\$80,584	\$350	\$3,000	\$83,934	
Task Order 4-22 Total Labor									\$80,584				

EXHIBIT A

TASK ORDER 4-22 ENG

PAVEMENT CONDITION RATING
FROM 2019 PAVEMENT MANAGEMENT REPORT

Pavement Analysis

Pavement Condition Rating (Descriptive GFP)

by Segment

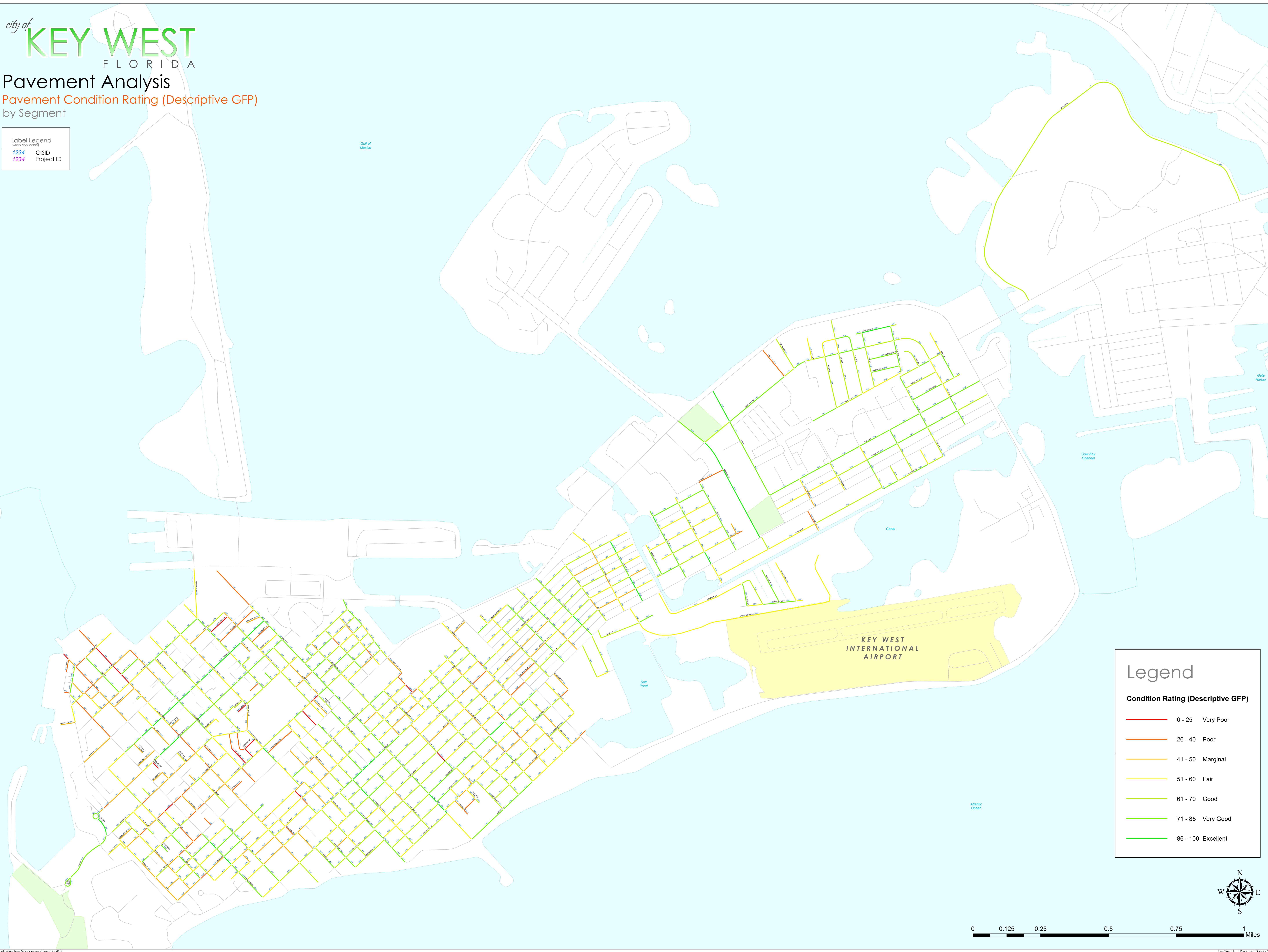
Label Legend
(when applicable)

1234

GISID

1234

Project ID



Legend

Condition Rating (Descriptive GFP)

<div></div>	0 - 25	Very Poor
<div></div>	26 - 40	Poor
<div></div>	41 - 50	Marginal
<div></div>	51 - 60	Fair
<div></div>	61 - 70	Good
<div></div>	71 - 85	Very Good
<div></div>	86 - 100	Excellent