

ATTACHMENT "A"

Scope of Services

Manatee County Diversion and Evacuation Routes Definition and Signal Timing Development

Manatee County ATMS Phase II
Traffic Signal Retiming Project RFP# 11-3174DW

February 4, 2013



1911 North US 301
Tampa, Florida 33619

Scope of Services
Manatee County Diversion and Evacuation Routes
Definition and Signal Timing Development

OVERVIEW

The purpose of this exhibit is to describe the scope of work and responsibilities of Albeck Gerken, Inc., Manatee County, and the Florida Department of Transportation, District One, for the conduct and successful completion of the Manatee County Diversion and Evacuation Routes Definition and Signal Timing Development project assignment.

This assignment addresses multiple scenarios that impact arterial roadways within Manatee County:

- The closure (mono-directional or bi-directional) of a segment of Interstate 75 due to an incident, requiring the diversion of mainline traffic onto the surface street arterial network. Multiple segments fall within the Manatee County jurisdiction.
- The closure (mono-directional or bi-directional) of either of the US 41 Business or US 301 bridges across the Manatee River due to an incident, requiring the diversion of traffic to the alternate bridge.
- The issuance of an evacuation order for the barrier islands of Manatee County, resulting in the use of State Routes 64 (Manatee Avenue) and 684 (Cortez Road) as highly directional evacuation routes.

It is generally understood that the surface street arterial network will not provide the capacity necessary to accommodate the traffic volumes anticipated during these scenarios without significant vehicular delay and congestion. The objective of this assignment is to develop a strategic plan for addressing these scenarios by maximizing the throughput of the diversion or evacuation route through traffic engineering and traffic operations practices. This includes:

- The development and implementation of traffic signal timing patterns that can be deployed via the County's *ATMS.now* advanced traffic management system. These patterns would be configured to maximize the throughput of the diversion route's predominant direction of travel.
- The identification of traffic engineering improvements that would improve the flow of traffic through the diversion route, including, but not limited to, signing improvements, phasing changes, lane configuration changes, and minor geometric changes. Concepts for each route would be identified with sufficient detail for subsequent projects to be developed for implementation.
- The identification of locations where law enforcement could effectively be deployed to maintain traffic flow where the severest congestion is anticipated.
- The development of a decision matrix and operations guide, for use by agency personnel when a subject incident occurs, to provide readily accessible information on the deployment of the countermeasures.

The implementation of diversion and evacuation routes and the deployment of associated resources will require the coordination with and buy-in of multiple agencies across several jurisdictions. This coordination would undoubtedly involve the Florida Highway Patrol, the Manatee County Sheriff's Department, the Florida Department of Transportation's Traffic Operations, Maintenance, and Emergency Management groups, the City of Bradenton's Public Works and Police Departments, Manatee County Public Works and Traffic

Scope of Services
Manatee County Diversion and Evacuation Routes
Definition and Signal Timing Development

Engineering, and Manatee County Emergency Management. This assignment will be closely coordinated with those agencies as stakeholders, with primary access through the local Traffic Incident Management Team (TIM Team).

The following steps provide a framework for project execution, timelines and deliverables.

TASK 1: PROJECT MANAGEMENT, COORDINATION, AND MEETINGS

Task 1 includes all project activities related to project management, coordination between stakeholders, and the scheduling, agenda preparation, conduct, and documentation of project meetings.

- a) Kickoff meeting - Albeck Gerken, Inc., Manatee County, and the Florida Department of Transportation District One (FDOT-D1) will initiate the project at a kickoff meeting. In addition to discussing administrative issues, the kickoff meeting will be a working technical meeting. Key outcomes from the kickoff meeting will be:
- Discussion of project goals, how the project came about and any specific definitions of project success. Identify any project constraints, restraints or special conditions. Determine what constitutes success of the project.
 - Discussion of Interstate 75 diversion routes as defined in the Manatee County I-75 Corridor Trailblazer Project Draft Concept of Operations¹, with information on past incidents and how they were addressed.
 - Discussion of Manatee River Bridge diversions, with information on past incidents and how they were addressed.
 - Discussion of hurricane evacuation plans and routes, with information on how they were addressed in the past.
 - Discussion of administrative issues such as invoicing procedures, number of reports required, report format, any administrative routing procedures, etc.
 - Development of the Project Schedule to include additional meetings, key delivery dates, any impacts to operations, and any other issues associated to schedule.

Deliverables:

- Project schedule
 - Meeting minutes following the meeting.
- b) Traffic Incident Management Team Meeting #1 – Albeck Gerken, Inc., will present an overview of the project at a Traffic Incident Management (TIM) Team meeting². This meeting will include a discussion of a qualitative analysis of the Interstate 75 diversion routes as defined in the Draft Concept of Operations, the River Bridge diversion routes, the hurricane evacuation routes, the strategies and tools needed to implement such diversions, and the resources needed from participating agencies for various levels of implementation. Feedback received at this presentation will provide the basis for the development of the draft design of the routes.

¹ Manatee County I-75 Corridor Trailblazer Project, Draft Concept of Operations, Version 1.0, September 28, 2010. Prepared for FDOT District One's Intelligent Transportation Systems Section by Metric Engineering.

² A current roster of the Team is included as an attachment to this Scope.

Scope of Services
Manatee County Diversion and Evacuation Routes
Definition and Signal Timing Development

Technical Memorandum 1, an overview of the project and a quantitative discussion of route suitability, would be submitted in advance of this meeting.

- c) Traffic Incident Management Team Meeting #2 – Albeck Gerken, Inc., will present the draft designs of the various diversion scenarios, including recommendations related to intersection operations (signalization, signing, temporary lane configuration, law enforcement presence, etc.), corridor operations (timing patterns, signing), and other design concepts, with the intention of obtaining concurrence to advance to the development of diversion signal timing patterns.

Technical Memorandum 2, the recommended strategies and draft designs for various diversion scenarios, would be submitted in advance of this meeting.

- d) Project Review Meeting - Albeck Gerken, Inc., Manatee County, and FDOT-D1 will meet to review proposed timing patterns for the diversion routes. The objective of this meeting is to obtain concurrence on the timing patterns and approval to initiate implementation in the field.

Technical Memorandum 3, the proposed timing patterns for diversion routes, would be submitted in advance of this meeting. Minutes of the meeting will be developed.

- e) Traffic Incident Management Team Meeting # 3 –The project team will present the proposed plan to the TIM Team. An Implementation guide, showing each route, the proposed deployment of signs and resources, and decision tree for the determination of the appropriate strategies, would be submitted in advance of this meeting.
- f) Project Closure Meeting - Albeck Gerken, Inc., Manatee County, and FDOT-D1 will meet to review the final report for the project. Minutes of the meeting will be developed.

The Draft Final Report will be submitted in advance of this meeting. Based on comments received at the Project Closure meeting, a Final Report will be developed and distributed to the project participants.

TASK 2: ESTABLISH INTERSTATE AND RIVER BRIDGE DIVERSION ROUTE AND ARTERIAL EVACUATION ROUTE SCENARIOS AND CRITERIA

This task will establish the routes to be utilized for the various diversion and evacuation scenarios.

- a) Review the routes and strategies included within the Interstate 75 Trailblazer project Draft Concept of Operations from a qualitative traffic engineering standpoint, to determine if there are major bottlenecks, restrictions, or other impediments to implementation that would suggest the need for an alternate route. Include a discussion of assumptions of traffic volumes that might be diverted during different scenarios, the current traffic volumes along the diversion routes, and the relative opportunities for success.

Scope of Services
Manatee County Diversion and Evacuation Routes
Definition and Signal Timing Development

- b) Develop proposed strategies for diversion routes for the two Manatee River bridge crossings (Business US 41 and US 301) based on a qualitative traffic engineering review, considering any major bottlenecks, restrictions, or other impediments to implementation that would suggest the need for an alternate route. Include a discussion of assumptions of traffic volumes that might be diverted during different scenarios, the current traffic volumes along the diversion routes, and the relative opportunities for success.
- c) Identify the current hurricane evacuation route plans, as developed by Manatee County Emergency Management, and develop proposed strategies that would enhance the capacity of the evacuation routes. Include a discussion of the traffic volumes that might be encountered during such an event, the current traffic volumes along the evacuation routes, and the relative opportunities for success.
- d) Develop a technical memorandum that summarizes Task 2 activities, providing an overview of the project and quantitative discussion of route suitability. This would be the primary discussion document for the Traffic Management Team meeting #1.

Deliverable:

- Technical Memorandum 1 – Overview of project and quantitative discussion of route suitability. Ten (10) copies will be provided.

TASK 3: DEVELOP CONCEPTUAL STRATEGIES FOR DIVERSION / EVACUATION ROUTE IMPLEMENTATION

Task 3 develops the conceptual strategies for the implementation of the various scenarios, and includes the following elements:

- a) Develop draft designs of the various diversion scenarios, including recommendations related to intersection operations (signalization, signing, temporary lane configuration, law enforcement presence, etc.), corridor operations (timing patterns, signing), and other design concepts.
- b) Develop appropriate GIS mapping of impacted signalized intersections, by scenario.
- c) Develop a series of Synchro models for the affected corridors based on Phase I & II signal timing work products.
- d) Develop a technical memorandum that summarizes Task 3 activities, providing a discussion of the proposed implementation scenarios and the various elements therein. This would be the primary discussion document for the Traffic Management Team meeting #2.

Deliverable:

- Technical Memorandum 2 – Recommended strategies and draft designs for various diversion scenarios. Ten (10) copies will be provided.

TASK 4: DEVELOP TIMING PATTERNS FOR DIVERSION / EVACUATION ROUTES

Task 4 develops the timing patterns to be implemented along the Diversion and Evacuation routes.

- a) Based upon the efforts of Tasks 2 and 3, develop signal timing patterns for the various diversion and evacuation scenarios.
 1. Determine affected intersections and flex groups for each scenario, establishing additional flex groups as needed
 2. Estimate diversion scenario volumes based on capacities of evacuation route
 3. Design diversion route timing plans using Synchro & Tru-Traffic. The objective of the timing patterns will be to maximize the throughput along the corridor in the predominant direction of travel for the diversion or evacuation scenario being evaluated. Cycle lengths will be maximized to minimize the disruptions to the predominant travel flow; side streets and minor movements will be serviced as necessary to provide reasonable cross access, but significant delays on the non-predominant approaches will occur. Offsets will be set to allow for progression in the predominant direction.
- b) A report documenting the proposed draft timing patterns will be developed and submitted to Manatee County and FDOT-D1 for review. This report will be prepared in the standard FDOT District One specified timing report format. All Synchro files, Tru-Traffic files, and Excel spreadsheet files of the timing sheets will be included on a CD-ROM as part of the deliverables.

Deliverable:

- Technical Memorandum 3 - Draft timing pattern report. Four (4) copies will be provided.

TASK 5: FINALIZE AND IMPLEMENT TIMING PATTERNS FOR DIVERSION / EVACUATION ROUTES

Task 5 finalizes the timing patterns for the Diversion and Evacuation routes and implements the patterns on the *ATMS.now* system.

- a) Based upon comments received in the review of Technical Memorandum 3, the timing patterns will be updated and finalized and submitted in a signed and sealed report with updated files on a CD-ROM.
- b) Albeck Gerken, Inc. will download the new patterns via *ATMS.now*. Albeck Gerken, Inc. staff can perform all implementation tasks without required participation from the Manatee County; however we realize the County will likely be involved at least initially. Albeck Gerken, Inc. will place an *ATMS* operator in the client's Traffic Management Center as needed to monitor the central software as well as being in contact with the field crew.
- c) Once downloaded, Albeck Gerken, Inc. staff will review the operation of each intersection and pattern without exception. The goal of this step is to ensure the timing plans have been implemented as designed and no system configuration errors have occurred that would preclude a smooth fine-tuning process. This will be conducted during the overnight hours to minimize disruption to traffic on the street.

Scope of Services
Manatee County Diversion and Evacuation Routes
Definition and Signal Timing Development

- d) Albeck Gerken, Inc. field implementation team will review the pattern timing by driving the corridor under study and by using the Tru-Traffic display features. Fine-tuning will generally consist of offset and split changes. This would occur during the overnight hours to minimize disruption to traffic flow. Albeck Gerken, Inc. and the County (and FDOT District One, where signals on state roads are involved) will agree as to final acceptance prior to closing out implementation efforts. This would typically involve a check ride of the corridor to ensure performance improvements are in line with project goals.

Deliverable:

- Signed and sealed final timing report. Two (2) copies will be provided.
- Implemented and field verified timing patterns.

TASK 6: DEVELOP IMPLEMENTATION GUIDE

Task 6 is the development of an easy to use Implementation Guide intended to be utilized as a reference during incident conditions and the deployment of a diversion route. It will include a decision tree matrix to select when to implement - and de-implement – diversion routes based on the nature of the incident being addressed. It will also include recommended deployment locations for signs, channelizing devices, law enforcement personnel, and other strategies related with each scenario.

This Implementation Guide would be the basis for the third and final meeting with the Traffic Incident Management Team. The draft of the Guide would be distributed to the Traffic Incident Management Team members at least two weeks in advance of the meeting for review. The meeting discussion will go through the roles of all involved, with the goal of achieving concurrence from all agencies. If necessary to achieve this concurrence, changes and modifications to the Guide will be discussed and agreed upon at the meeting. Based on comments from the meeting, a finalized Guide will be developed.

Deliverable:

- Draft Implementation Guide. Twenty (20) copies will be provided.
- Final Implementation Guide. Twenty (20) copies and an electronic (PDF format) copy will be provided.

TASK 7: DEVELOP FINAL REPORT

Task 7 is the development of a Final Report documenting the project. It is envisioned that the final report will be based heavily on the previously submitted and reviewed Technical Memoranda and project submittals, assembled into a single easy to access project document.

A draft of the Final Report will be submitted to the County and FDOT-D1 for review; after comments are received, a signed and sealed Final Report will be submitted.

Deliverable:

- Final Report. Four (4) copies will be provided.

Scope of Services
Manatee County Diversion and Evacuation Routes
Definition and Signal Timing Development

COUNTY AND FDOT-D1 RESPONSIBILITIES

In order to ensure the appropriate input into the project, as well as to maintain project schedules, it is critical for Manatee County and FDOT-D1 to review submittals in a timely manner. It is requested that all reviews of technical memoranda and other report submissions be completed within three weeks of receipt.

PROJECT SCHEDULE

The anticipated duration of this project is approximately 280 days from the Notice to Proceed. As meetings with the Traffic Incident Management Team are a key element of this project, it may be necessary to adjust this duration to reflect their meeting schedule. A detailed schedule will be included at the kick-off meeting for discussion.

Scope of Services
Manatee County Diversion and Evacuation Routes
Definition and Signal Timing Development

Roster – Sarasota/Manatee Traffic Incident Management Team

511 Tampa Bay / Traffic.Com
AAA
Alligator Towing
American Compliance Technologies
Anchor Towing
Bradenton Fire Department
Bradenton Police Department
Cedar Hammock Fire Rescue
Center for Urban Transportation Research (CUTR)-USF
City of North Port
City of Sarasota
City of Sarasota Public Works
City of Venice Fire
Clear Channel Radio
Coastland Auto Road Rangers, Inc.
DBI Services
Delcan Corp
Direct Towing
Duette Fire and Rescue District
East Manatee Fire Rescue
ELVIS Towing
FDOT-SWIFT SunGuide Center
Federal Highway Administration
Flagship Towing
Florida Department of Environmental Protection
Florida Department of Transportation
Florida Highway Patrol
Florida Independent Towing & Recovery Assoc.
Highway Technology (Formerly United Rentals)
HNTB Corp
Hoffer & Associates
Holmes Beach Police Department
Johnsons Towing
Kimley-Horn & Associates, Inc.
Longboat Key, Town of
Manatee County Emergency Medical Services
Manatee County Public Works

Scope of Services
Manatee County Diversion and Evacuation Routes
Definition and Signal Timing Development

Roster – Sarasota/Manatee Traffic Incident Management Team (continued)

Manatee County Transportation Department
Media Relations Group
Metric Engineering, Inc.
Metro Networks/Westwood One
Miller Industries & Towing
Myakka City Fire District
Nokomis Fire Department
North Point Fire Rescue
North Port Fire Rescue District
North Port Police Department
North River Fire District
Parrish Fire District
Prompt Towing
Public Works Department- City of North Port
Road Rangers – District One
Sarasota County
Sarasota County Fire Department
Sarasota County Sheriff's Office
Sarasota Operations Center
Sarasota/Manatee MPO
Sarasota-Bradenton Airport
SCFD
South Manatee Fire District
Southern Manatee Fire & Rescue
Southwest Florida Regional Planning Council
SQG Sarasota County
T&T Towing
Town of Longboat Key
Trailer Estates Fire Department
USF Center for Urban Transportation Research
Venice Fire Department
Venice Police Department
West Manatee Fire Rescue

**Manatee County Diversion and Evacuation Routes
Definition and Signal Timing Development**

Manatee County ATMS Phase II -- Traffic Signal Retiming Project RFP# 11-3174DW

DRAFT WORKING SCHEDULE

