

County Road 437 Realignment and Multi-Modal Study

SCOPE OF SERVICES CR 437 Realignment and Multi-Modal Study

SECTION 1.0 – SCOPE OF WORK

1.1 Scope of Work:

Provide corridor planning, preliminary engineering and environmental analysis services for CR 437 corridor from Adair Avenue to State Road 44 (SR 44) approximately (4.4) miles (See Exhibit A. Project Location Map). The Consultant shall perform those engineering services required for location/design studies, including consideration of all social and environmental effects, along with environmental documents, engineering reports and public hearings.

The County will provide contract administration and provide management services and technical reviews of all work associated with the development and preparation of the engineering/environmental study reports for the transportation facility.

The Consultant shall study the existing two-lane corridor sections of CR 437 from Adair Avenue to SR 44 (See Exhibit A. Project Location Map). The study shall also address short-term strategies, which shall include, but not be limited to, the following:

- a) Traffic operations improvements such as intersection and minor roadway widening, improved signage, improved lighting, geometric improvements and signalization improvements (including new traffic signals as warranted and Roundabout).
- b) Evaluation of crossroads up to 600 feet in each direction, where necessary, to provide intersection operation at adopted Level of Service or higher
- c) Bicycle and pedestrian facility and Multi Use Trail improvements.
- d) Improvements to school access routes and Parks.
- e) Transit service improvements, including fixed route consideration, van pool and car pool opportunities, park & ride facility development.
- f) Transportation amenities to mitigate impacts, such as landscaping and noise barrier walls.
- g) Complete Street Design concepts, including traffic calming, roundabouts, etc.

The short-term strategies will be conceptual improvements, to include a benefit/cost analysis.

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1. Administration
2. Public Involvement
3. Data Collection
4. Improvement Alternatives Development and Analysis
5. Preferred Improvement Concept
6. Deliverables

This proposal addresses each task within these elements and serves to further define specific tasks within the Scope of Services.

Task 1 Administration

A. Attend Notice to Proceed / Project Overview Meeting

The Consultant will prepare for and attend a Notice to Proceed Meeting or internal Project Overview meeting with the Lake County Project Manager and staff. At this meeting, Lake County staff and key members of the consulting team will set the final parameters for the project and formally initiate the study.

B. Project Status Meetings

The appropriate members of the consulting team will attend periodic meetings with the Lake County Project Manager and staff to discuss project progress and status and upcoming events and activities. The purpose of these meetings is to maintain clear communication between the County and the project team. The Consultant will prepare and distribute meeting minutes following each of these meetings.

C. Project Schedule

The Consultant will submit a detailed project schedule identifying major tasks, their duration and task relationships. An electronic submittal, compatible with MS Project, is also required.

Task 2 Public Involvement

The public involvement element of this project is a primary component distinguishing this project from a roadway design project. The purpose of the public involvement element is to involve the community in the project development and decision making process so that the County can develop a project that not only meets the transportation needs of the area, but is also supported by the community it is intended to serve. Therefore, the Consultant will conduct the following public involvement activities throughout the project:

A. Public Involvement Plan

The Consultant will prepare a Public Involvement Plan (PIP), and submit it to the County Project Manager for review and approval. The PIP will delineate the Consultant's efforts to inform and involve the citizens of the County, the appropriate state and local agencies, and the responsible appointed and elected public officials in the project planning, review and approval process.

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B. Public Information/Participation Meetings

The Consultant will prepare for and conduct six (6) public information/participation meetings as described below.

- Project Overview Meeting - The Consultant will coordinate and conduct a project overview meeting. The purpose of this meeting will be to inform the *affected property owners* of the initiation of the project and its purpose, planned project activities and the project schedule. The meeting will provide a short project overview followed by a discussion period.
- Public Alternative Concepts Workshop – The Consultant will coordinate and conduct a public meeting for the purpose of presenting alternative improvement concepts developed by the project study team to the public for review and comment. Public input and discussion at this meeting will be considered for incorporation in the alternative analysis process, leading to the identification and selection of a preferred improvement concept.

This meeting will have an open house format, in addition to a short formal presentation. The alternative concepts will be displayed on aerial photography for review by the public. The consulting team will be available to respond to questions and hold one-on-one conversations with members of the public.

- Public Information Meeting on the Draft Recommended Improvement – Following completion of the alternative analysis activities and identification of a preferred improvement concept, the Consultant will coordinate and conduct a third public meeting. The purpose of this meeting will be to present the project team's Draft Recommended Improvement Concept to the public for review and comment prior to presentation to the Board of County Commissioners (BCC). The Consultant will present the recommended improvement concept to the public and respond to their questions and comments.

The Consultant will conduct all meetings for the County and will ensure an adequate number of personnel are present in addition to the County staff. The Consultant will be responsible for all presentation and handout materials, as directed by the County, and will provide a summary of each meeting. The Consultant will prepare written responses to all questions not adequately addressed at the meetings and will provide follow-up information necessary to adequately respond to the public's comments and questions.

C. Board of County Commissioners Public Hearing

The Consultant will provide all support necessary for the County to conduct a Final Public Hearing on the recommended improvement concept. The Consultant will provide an aerial photo of the corridor in digital format. The Consultant will prepare a Power Point presentation for the BCC Public Hearing using county standard format.

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D. Coordination Meetings

The Consultant will coordinate and conduct up to ten (10) meetings (according to Lake County Public Meeting Guidelines) with the following local and state organizations to inform them of the project and solicit their input:

- Florida Department of Transportation
- Mt. Plymouth /Sorrento CRA
- Lake Sumter MPO
- Local Utilities
- Department of Environmental Protection/Water Management District
- Others

D. Small Group Meetings

The Consultant will be available to conduct up to three (3) meetings/presentations with organizations interested in the study. These meetings may be held with informal homeowners groups, formal homeowner associations, Chambers of Commerce, or other formal organizations such as Citizens Advisory Committee. The Consultant will be responsible for all presentations and handout materials.

E. Mailing List

The Consultant will prepare a mailing list of interested parties which includes any person or institution expressing an interest in the project, potential permitting or review agencies, elected and appointed officials in the area, community leaders, media representatives and all homeowners/property owners located within 300 feet of any improvement concept.

The Consultant will regularly update the mailing list during the course of the study.

F. Newsletters / Notices

The Consultant will coordinate the preparation and distribution of newsletters at the start of the three (3) Public Meetings and One (1) Public Hearings BCC) listed above.

The newsletters will be double-sided and printed in color on 8 ½” x 11” sheets. The newsletters will be sent to each entry included in the data base mailing list. Those newsletters not mailed will be distributed as needed through the small group meetings, workshops and public meetings.

G. Notices

The Consultant will coordinate the preparation of a public notice to announce with Lake County Public Information Officer (PIO) for all meeting and public hearing. The newsletters will be sent to each entry included in the data base mailing list.

H. WEB Page Creation / Maintenance

The Consultant will prepare an Internet WEB site for the study. This site will be linked to the *Lake County Citizens First Page/Public Works*. The Consultant will coordinate with the appropriate county offices to ensure compatibility. The Consultant will create and post the site prior to the Project Overview meeting listed above. The Consultant will

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then update the site prior to the Alternative Concepts Workshop, prior to the Public Information Meeting and following the Public Hearing.

I. Advertisements / News Releases

The Consultant will coordinate the preparation and distribution of three (*or 3*) news releases to the appropriate agencies prior to each public meeting (Project Overview, Alternative Concepts Meeting, and Draft Concept Meeting) and following the final BCC Public Hearing. All news releases/ advertisement shall be coordinated with the project manager and the Lake County Public Information Officer (PIO).

The Consultant will also be responsible for placing the public meeting dates on the Lake County Extra Calendar of events and local new papers as may be required.

To summarize, the consultant will attend the following meetings with the identified number of staff:

Lake County Project Briefings: Monthly and as needed

Agency Coordination Meetings: (FDOT, Mt Plymouth/Sorrento CRA, LSMPO, East Lake Chambers of Commerce , Mt. Plymouth Landowners League)

Small Group Meetings: As needed

Public Meetings: 3 Meetings.

Lake County Right of Way Team Meetings: 2

Lake County Board of County Commissioners, 2 Briefings, 1 Hearing, 3 Staff

In Summary, the consultant will prepare for and attend meetings with the staffs of Lake County, involved agencies and jurisdictions, community organizations, Homeowners Associations and small groups. The consultant will prepare for and attend up to three (3) presentations before the Lake County BCC and up to three (3) public workshops/meetings/hearing for the general public and affected residents and business owners.

Task 3 Data Collection

Immediately upon receipt of the Notice to Proceed, the consulting team will begin collecting the engineering, drainage, hydraulic and environmental data necessary to develop and evaluate a reasonable range of alternative improvement concepts to meet the multi- modal travel demand within the CR 437 Study Area. The Consultant will utilize information gathered in the CR 437 Improvements Final Engineering Report by Right-of-Way maps prepared at the completion of the study.

A. Aerial Photography/Base Maps

The Consultant will prepare 1"=100 and (1"= 40 for Public Meeting)' scale base map verified aerial based raster image maps. This photography will be used to present the master drainage basins, the alternative improvement concepts, the recommended improvement concept, right-of-way requirements and any other required information. The Consultant will prepare the color aerial photography on a minimum size of 22" x 34"

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sheets with appropriate title blocks, suitable for public display. Color aerial photography will also be prepared at a scale of 1"=100'. This will be used to present the overall project concept and the final preferred improvement alternative to the public at the various public meetings.

B. Existing Roadway Characteristics

The Consultant will conduct field investigations to collect all pertinent existing roadway information necessary to develop, evaluate and compare the alternative improvement concepts. The roadway data will be compiled, documented and mapped on the aerial photography base maps for public presentations.

C. Traffic Data

The Consultant will collect the traffic data and develop the traffic factors and design traffic projections listed below:

1. Traffic Counts

The Consultant will collect a combination of 72-hour, 24-hour and classification traffic counts (by 15-minute increments) at the locations listed below.

- **72-hour count locations at key locations**

- **24-hour additional count locations, as needed, at key locations along the corridor.**

- **Turning movement (with Ped Counts) count locations at major intersections along the corridor:**
 - A. **Sundance Drive @ CR 437**
 - B. **Oak Lane @ CR 437**
 - C. **Adair @ CR 437**
 - D. **Central Ave @ CR 437**
 - E. **SR 46 @ CR 437**
 - F. **SR 44 @ CR 43**
 - G. **Wolf Branch Road @CR 437**

- **Others as needed**

2. Traffic Factors

Using the data collected through the traffic count program described above, the Consultant will develop current and future year values for the following traffic factors:

- **Peak to Daily Ratio (K) Factor**
- **Directional Split (D) Factor**
- **Truck Factor (T)**

3. Design Traffic Projections

Using the Lake-Sumter Metropolitan Planning Organization (MPO) approved

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travel forecasting model (Central Florida Regional Planning Model (CFRPM)), the Consultant will prepare opening year, interim year, and design year travel forecasts for the CR 437 study segment for Build and No-Build conditions.

The traffic projections will be presented as average annual daily traffic (AADT) and directional design hour volumes (DDHV) with projected Bus, Ped and Bike. For the purpose of this study, the following horizon years will be assumed:

Opening Year 2020
Interim Year 2030
Design Year 2040

The Consultant will also prepare peak-hour turning movement forecasts for each major intersection.

The design traffic volumes will be used to establish the basic design requirements for the roadway typical section and each intersection. Using the design traffic volumes, the Consultant will perform an operational analysis of each major intersection (for both the Build and No-Build alternatives) to establish the minimum required lane geometry needed to adequately serve the projected turning movements.

4. Design Traffic Technical Memorandum

The Consultant will document the traffic data, travel forecasting and analysis activities in an interim *Design Traffic Technical Memorandum* that will be submitted to the County for review and approval. The final Design Traffic Technical Memorandum will be documented in the *CR 437 Conceptual Analysis Report*.

D. Accident Data

The Consultant will collect available accident data/information from local sources for the most recent five (5) years. The data collected will, at a minimum, include number and type, location, fatalities and injuries.

E. Utilities

The Consultant will identify the following existing and proposed utilities that may influence location and design consideration:

- Overhead transmission lines, microwave towers, etc.
- Underground water, gas, sanitary sewer, force mains, power cables, etc.

The Consultant will document this information in the Utility Section of the *CR 437 Realignment and Multi-Modal Study Report*, which will summarize how the existing utilities will influence location and design considerations.

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F. Transportation Plans

The Consultant will review and document plans for all modes of transportation, including automobile, transit, and non-motorized vehicles. The information received from these plans will be used to reaffirm the project needs and to develop and evaluate the alternative improvement concepts. (Examples are LSMPO Long Range Transportation Plan, FDOT East Lake County Transportation Network Assessment by HNTB, Wekiva Park Way PD&E Study and Wekiva Trail PD&E Study, and Mt. Plymouth/ Sorrento CRA Plan etc.). The consultant will include the Sorrento Ave Concept Plans and the Wekiva Trail plans with this study and to show a coordinated effort for the Public Meetings.

ftp://ftp.co.lake.fl.us/Public_Works/Engineering/CR437RealignmentandMulti-ModalStudyPlans/

G. Soil Survey and Geotechnical Data

The Consultant will review existing soil maps and available geotechnical information for the study area.

The Consultant will also perform one soil boring to a depth of fifteen (15) feet for each proposed stormwater retention pond site. For this study, it is assumed that up to five (5) locations will be evaluated as potential pond sites.

The results of the geotechnical data collection activities will be documented in the Geotechnical Section of the *CR 437 Realignment and Multi-Modal Study Report*. This section will document existing data and boring results and will contain preliminary recommendations relevant to the project.

H. Contamination/Hazardous Material Sites

The Consultant will review available records to identify sites with documented or possible undocumented contamination. To supplement this recorded information, the Consultant will perform a field review of the study area to identify non-reported sites that may potentially be contaminated with hazardous materials. The contamination data and analysis activities will be documented in the Contamination section of the *CR 437 Realignment and Multi-Modal Study Report*.

I. Right-of-Way Mapping

The Consultant will prepare right-of-way identification maps for the project at a 1"=40' scale suitable for use at the public meetings. The maps will include section line ties, existing right-of-way, subdivisions and property lines. Utilize the Lake County LIDAR for contour information and tax collector property GIS base maps. Provide proposed right of way mapping.

J. Land Use Plans

The Consultant will collect all land use information (existing and future) necessary to develop and evaluate a reasonable range of alternative roadway improvements and to

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identify locations where right-of-way could potentially be dedicated for the roadway improvement. Information to be collected will include future land use plans, proposed development plans, zoning regulations, Lake County's Comprehensive Policy Plan, and preliminary and final plats. This information will be updated regularly throughout the study period (Mt. Plymouth/ Sorrento CRA Plan, Trails Plans, LSMPO Plans etc.). The Consultant will map pertinent information on the aerial base maps.

K. Cultural Features

The Consultant will collect information on cultural facilities such as parks, schools and recreation areas, as well as the neighborhoods they serve that are located within the vicinity of the CR 437 study corridor. This information will be mapped and documented.

L. Archaeological and Historic Features

The Consultant will review sources to identify recorded historical and archaeological sites within the study area. Utilizing this information, the Consultant will map all sites that may influence the location and evaluation of alternative improvement concepts. This information will be documented in the Cultural Resource section of the *CR 437 Realignment and Multi-Modal Study Report*.

M. Hydraulic and Natural Features

The Consultant will review existing information to identify significant hydraulic and natural features found within the study area. The Consultant will supplement documented information with field reviews of the study area. Information to be documented will, at a minimum, include the following:

- Wetlands
- Water Quality
- Floodplains and Floodways
- Drainage outfalls

The Consultant will document, in report and map format, all information that may influence the location and evaluation of alternative improvement concepts.

The Consultant will also collect permit-related information on sites that may require environmental resource permits, dredge and fill permits, water quality permits or stormwater discharge permits. This activity will include identifying all relative permitting agencies and all existing permits and their conditions.

N. Threatened and Endangered Species

The Consultant will review existing information to determine the potential presence of threatened or endangered plant and animal species within the study area. The Consultant will supplement documented information with field reviews of the study area. The Consultant will document in report and map format (in the *CR 437 Conceptual Roadway Analysis Report*) all information that may influence the location and evaluation of alternative improvement concepts.

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O. Corridor Analysis/Project Need

Following completion of the data collection and evaluation activities, the Consultant will perform a corridor analysis for the study area. This analysis will determine if the existing CR 437 corridor is the most appropriate corridor within which alternative improvement concepts should be developed and evaluated.

The Corridor Analysis activities will, at a minimum, reconfirm the improvement need and address the existing and projected travel demand within the corridor, the current and projected development pattern within the corridor and the presence of any environmentally sensitive features within the corridor.

The Consultant will prepare an interim *Corridor Analysis Technical Memorandum* with typical sections that will document the Corridor Analysis activities. The technical memorandum will be submitted to the County for approval and will be finalized in the Corridor Analysis section of the CR 437 Realignment and Multi-Modal Study Report.

Task 4 Improvement Alternatives Development and Analysis

The Consultant will perform the following tasks to develop, analyze and compare alternative improvement concepts within the CR 437 corridor.

A. Access Management Determination

The Consultant will review the current Florida Department of Transportation State Highway System Access Management Classification System and standards and define alternative access management classifications for the County that may be applicable to CR 437.

The Consultant will evaluate the effects of two (2) alternative access management classifications and recommend the most appropriate application for the CR 437 study segment.

The Consultant will document the evaluation and recommendation of the alternative access management classifications in the *CR 437 Realignment and Multi-Modal Study Report*.

B. Alternative Typical Sections

Based on the Draft Design Traffic Technical Memorandum, the Consultant will develop three (3) alternative typical sections. The Consultant will then evaluate these three alternatives using criteria that will include, but not be limited to, established access management criteria, right-of-way requirements and impacts and traffic volumes. The analysis will be documented in the *CR 437 Realignment and Multi-Modal Study Report* and submitted to the County with a recommendation of a preferred typical section as ranked by the community.

C. Alternative Improvement Concepts

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1. Develop Alternative Improvement Concepts

The Consultant will develop up to three (3) alternative alignment improvement concepts using the recommended typical section. The alternatives will be prepared on the aerial base maps.

The proposed right-of-way requirements will be depicted on each Improvement Alternative Concept display. The approximate square footage of each parcel affected by the alternative will be shown on the aerial within the parcel.

2. Analyze Alternative Improvement Concepts

The Consultant will analyze the benefits and impacts associated with each alternative alignment improvement concept as well as the No-Build concept. The analyses to be performed for each alternative that will include engineering and environmental measures (i.e. environmental assessment) are described below:

Cost Analysis – The Consultant will develop engineering design and construction cost estimates for each alternative. Right-of-way cost estimates will be required for each alternative.

Conceptual Drainage Analysis – The Consultant will perform a preliminary drainage analysis of each alternative to determine the potential outfall locations and preliminary sizes (volume and area) of required detention and/or retention facilities for storm water treatment or attenuation. Two locations will be recommended for each site.

Community (social-economic) Impact Analysis – The Consultant will estimate the number of residences, businesses, neighborhoods and community facilities impacted by each alternative. The right-of-way cost estimate will reflect the cost of these impacts while this measure will reflect the number of each impacted. The Consultant will prepare aerial photography with proposed right-of-way lines for each alternative. The square footage of each parcel affected by the alternative will be printed on the aerial within the parcel.

Visual/Aesthetics – The Consultant will prepare concept renderings at three (3) locations for each alternative improvement concept. These renderings will be used to convey the future appearance (i.e. visual and aesthetics) of each alternative improvement concept to the public at the various meetings.

Wetland Impacts – The Consultant will estimate the acres of wetlands impacted by each alternative and identify potential mitigation requirements.

Flood Plain Impacts – The Consultant will estimate the extent of flood plain encroachment of each alternative.

T&E Species Impacts – The Consultant will quantify/qualify the potential impacts to threatened and endangered species habitat associated with each

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alternative.

Archaeological and Historic Feature Impacts – The Consultant will estimate the number and extent of impacts caused to archaeologically significant or historical structures.

Contaminated Sites Impacted – The Consultant will estimate the number and extent of contaminated sites in each alternative

Geotechnical Analysis – The Consultant will evaluate the suitability of the soil underlying each alternative for roadway construction.

3. Alternatives Comparison Matrix

The Consultant will prepare an evaluation matrix to document and compare the results of the evaluation tasks. This matrix will be used to clearly identify the most viable improvement concept. It will be prepared in a manner suitable for presentation to the public. A draft Alternatives Evaluation and Comparison Matrix will be provided by the Consultant. The draft Alternative will be presented to the Lake County Right of Way Team for questions and evaluation at a scheduled meeting.

D. Select Preferred Alternative

Following completion of the alternative analysis and second public meeting, the Consultant, in association with the County Project Team, will select a preferred improvement alternative to be evaluated at a more detailed level.

Task 5 Preferred Improvement Concepts

The Consultant will refine the preferred improvement concept to finalize the major elements of the project. These refinements will include estimating the final right-of-way limits, pond locations, social impact estimates, cost and other major features needed to advance the project to the subsequent design phase.

The Consultant will prepare the draft *CR 437 Realignment and Multi-Modal Study Report* documenting all activities leading to and including selection of the preferred improvement concept. This draft will be prepared and available for public review prior to the final public meeting, LPA and BCC public hearing.

The Consultant will finalize the document following the BCC Public Hearing by incorporating the final public input received and the BCC's final action on the recommendation.

Task 6 Deliverables

One primary document entitled the *CR 437 Realignment and Multi-Modal Study Report* which will record all public involvement activities, alternatives development and analysis efforts, and

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the final recommendation will be prepared. A report outline will be submitted to the County for review and approval prior to initiating documentation. It will contain summaries and recommendations pertaining to the preferred alternative and potential impacts associated with it. Following the Public Hearing and final action by the BCC, the Consultant will finalize the ***CR 437 Realignment and Multi-Modal Study Report*** by formally documenting BCC action and the public involvement process.

Brief technical memorandums will be prepared throughout the course of the study to document interim decision on the traffic forecasts and the initial corridor analysis process. These technical memorandums will be formally incorporated into the ***CR 437 Realignment and Multi-Modal Study Report*** prior to the final public meetings.

Interim and final right-of-way identification maps will also be prepared to the County's specifications.

The number and format of the deliverables are presented below. All draft and interim reports are due a minimum of two (2) weeks prior to the Senior Staff Presentation.

<i>Public Involvement Plan Technical Memorandum</i>	3 Copies
Corridor Analysis Technical Memorandum	3 Copies
Design Traffic Technical Memorandum	3 Copies
Draft Design Traffic Report	3 Copies
<i>CR 437 Realignment and Multi-Modal Study Report</i>	
Draft Report submitted prior to the BCC Public Hearing	3 Copies
Final Report submitted following the BCC Public Hearing	3 Copies
Digital files	3 CD's
<i>Right-of-way Identification Maps</i>	
Hard Copy – paper, full size	3 Copies
Digital Files	3CD Copies
<i>Short Term Improvements</i>	
Draft Short-Term Improvement Package (11x17 color)	5 Copies
Final Short-Term Improvement Package (11x17 color)	5 Copies

