1. **BACKGROUND** 
   1. A qualified Engineering Firm shall provide engineering design services for the Lake Amos Basin Project located in Lake County, Florida. This project will seek Federal Funds and Florida Department of Transportation funding for construction of improvements and right of way acquisition.
   2. The project consists of the engineering and design services for the Lake Amos Basin in the Sorrento Area. Lake Amos lies half a mile northeast of the SR 453 and State Road 46 interchange. Lake County has experienced historical flooding on Round Lake Road during tropical storms and wet season events. Round Lake Road has experienced water flowing over the pavement surface and inundating adjacent properties. During the recent Hurricane Milton event of October 9th and 10th 2024, a flash flood overtook the area flooding homes on Round Lake Road and in the Wolf Branch Estates subdivision. The Consultant is tasked with providing expert analysis of the watershed and determining the 100-year and 500-year Lake Amos Flood elevation to be utilized in further evaluation of the basin.
   3. The historical flow-way for properties west of Round Lake Road has been to Lake Amos. New residential and agricultural development in the area has contributed to increased flows and redirection of the historical flow-way causing part of the Hurricane Milton flash flood to spill over Wolf Branch Road and into the Wolf Branch Estates subdivision. Lake County wants to restore the historical flow way and design a new drainage system to take the water from west of Round Lake Road to Lake Amos as nature had intended. The Consultant will evaluate the Flood Elevation for Lake Amos in the proposed condition to determine if there is a negative impact to adjacent private property landowners including structures within the Flood Zone.
   4. The Consultant will provide final plans and permits necessary to perform a permanent plan to restore the flow to the Lake Amos Basin and protect property owners and Lake County road right of way from flooding. The selected firm shall be responsible for the preparation and submittal of any and all supporting documentation necessary for SJRWMD, FDOT and/or FHWA approval of a permanent repair project. Lake County has performed surveying including topographic, above and below ground utilities and right of way of Round Lake Road and Wolf Branch Road in house and this information and data will be provided to the Engineer. Any additional Survey which is required is the responsibility of the Consultant. It is expected that consultant may utilize LIDAR to further map the Lake Amos Basin area. The Consultant will be required to coordinate with the County’s staff and FDOT on plan review. Consultant shall prepare Division II and III specifications, and the County will prepare Division I specifications and the bid documents based on FDOT Standard Plans and Specifications and Florida Greenbook (the edition in place at the time of bid opening). The governing Standard Plans and Specifications must be the edition in place at the time of bid opening when referencing FDOT Standard Specifications.
   5. Additional Background Information is available.
      1. Round Lake Road PD&E Study
      2. Round Lake Road Widening Construction Plans
      3. Documentation of the recent flooding event due Hurricane Milton with Photos, Videos, and Emergency Pumping
      4. Preliminary Analysis of historical conditions and Hurricane Milton flash flood event causation prepared by Devo Engineering, under current evaluation, to be provided when completed.
      5. For additional information, a public meeting with 300 residents, officials, and landowners was held on November 21, 2024, in Sorrento with a presentation by Devo of Devo Engineering. Meeting was not recorded.
      6. Stormwater Management Report dated September 2023 for Wolf Branch Road/Round Lake Road Watershed by Halff Engineering.
      7. Construction plans and drainage permits for development projects in this area are generally located on the SJRWMD online permit search application.
2. **DEFINITIONS**

The following terms or pronouns used in place of them, will have the following meanings:

* 1. Addendum – A modification, revision or clarification of this RSQ.
  2. BCC Board of County Commissioners - The governing board for Lake County, Florida.
  3. Consultant – The Professional Engineer or Engineering Firm registered in the State of Florida who performs Professional Engineering Services for County, other than County personnel. The awarded respondent.
  4. County – Lake County, Florida
  5. CCNA – Consultants’ Competitive Negotiation Act, Florida Statute 287.055
  6. FDOT - Florida Department of Transportation
  7. FHWA – Federal Highway Administration
  8. LAP - Local Agency Program
  9. RSQ – Request for Proposal – A formal solicitation inviting proposals from qualified firms.
  10. Response - The information package submitted by qualified firms.
  11. Respondent, Consultant, Firm, You and Your - Consultant, person, firm, or corporation who submits a response.
  12. Shall, Must or Will – Indicates a mandatory requirement or condition, the material deviation from which will not be waived by County.
  13. Should or May - Are permissive in nature. Deviation from such a condition or requirement will not by itself cause automatic rejection of a qualifications package but may be a factor considered in the overall evaluation process.

1. **GENERAL REQUIREMENTS**
   1. Consultant shall refer to County’s “Expected Deliverable Guidelines” for additional expectations for completion of project milestones and deliverables.
   2. Consultant shall prepare a project schedule and present to County at the project kickoff meeting.
   3. Consultant shall create and prepare project deliverable Cad files utilizing AutoCAD. Microstation files converted to AutoCAD shall not be acceptable for plan production using AutoCad. Microstation using GIS is allowable for Basin mapping and stormwater analysis.
   4. Consultant construct and maintain a web page detailing the project.
   5. Consultant shall schedule, conduct, and present all public meetings according to the approved public meeting scope and public meeting checklist.
   6. Consultant shall advertise and notify the public of the public meeting schedule and location according to the approved public meeting scope and public meeting checklist.
   7. Consultant will attend monthly progress meetings for the life of the project at the Public Works Department facility. At the discretion of County, telephone conference calls may substitute for face-to-face meetings.
2. **SURVEY REQUIREMENTS**
   1. Consultant shall prepare the Record Survey under the direction and supervision of a Professional Surveyor and Mapper licensed in the State of Florida. Survey shall be in accordance with the adopted “Standards of Practice” for Land Surveying as required by Chapter 5J-17, Florida Administrative Code pursuant to Section 472.027, Florida State Statutes”.
   2. Consultant shall submit all survey notes and computations to document the surveys. All field survey work shall be recorded and submitted to County. Field notes shall include all sketches, bench level runs and instrument set up information that supports electronic data collection methodology. Computations shall include any adjustment reports for Horizontal and Vertical control.
   3. Consultant shall establish or recover Horizontal Project Control (HPC) relative to Florida State Plane Coordinate System, Florida East Zone, 1983 North American Datum, and 1990 Adjustment (NAD83/90). All Primary Control values shall be established with independent, redundant measurement methods. A report depicting residual statistics shall be submitted with the computations portion of the project report.
   4. Consultant shall establish or recover Vertical Project Control (VPC) relative to North American Vertical Datum 1988 (NAVD88). Benchmarks shall be placed at intervals not to exceed 500 feet along the project route and in safe areas that minimize the possibility of the mark being lost or disturbed.
   5. Prior to beginning survey, Consultant will request a copy of a Right of Way package from County Right of Way Supervisor. This package will include all the right of way information available in the County Public Works Department.
   6. Consultant shall recover monumentation along existing right of way lines according to all available recorded Public Records. Establish, recover, or re-establish project alignment. Also includes analysis and processing of all field collected data, existing maps, and/or reports for identifying existing right of way lines per County maps, platted or dedicated rights of way. Survey shall show existing recorded right of way with recording information for the dedication document clearly identified (deed, plat, court order, or recorded maintenance or right of way maps). This information shall include intersecting side street right of way shown on the survey. All other evidence of right of way that is shown on the survey shall be shown in different line type, with the source clearly identified (i.e. property line per deed, State Road Department (SRD)/FDOT monument found, RW per unrecorded plat, recorded plat, etc.)
   7. Consultant shall file Certified Corner Records (CCR) to Florida Department of Environmental Protection unless one already exists in the state database. Included shall be Section Corners, ¼ Section Corners or other General Land Office (G.L.O.) recognized corners.
   8. Consultant shall map existing conditions to include (but not limited to) location and identification of all constructed or fixed improvements and features within the survey area, identification and location of all relevant property information such as deed lines, plat lines, designated roads, right of way lines, easements and other matters of public record or information referenced in title report. In addition, a 2-dimension location of any Jurisdictional Wetlands that fall within the scope limits will be located. A notation of the environmental agency that performed the wetlands designation shall be depicted on the survey. When required, elevation data with sufficient density and coverage to develop a Digital Terrain Model supported by determining all existing break lines and high and low points. Ground elevations shall extend a minimum of 25 feet beyond survey limits. Survey limits may change due to certain conditions and any request for deviation from the original scope must be submitted in writing and approved by County.
   9. Consultant shall comply with all Right of Way Engineering Project Requirements as set forth by County Public Works / Engineering / Right of Way Section.
   10. Consultant shall contact Sunshine One Call @ 811 for utility designation. Include 2-dimensional collection of existing utilities and selected 3-dimensional verification as needed for designation. Location includes non-destructive excavation to determine size, type and location of existing utility, as necessary for final 3-dimensional verification. Survey includes collection of data on points as needed for designates and locates. Includes analysis and processing of all field collected data, and delivery of all appropriate electronic files.
   11. Consultant shall detail existing underground storm water and sanitary sewer structures including pipe size, type, condition, and flow direction. Included shall be at least one structure outside the scope limits and in some cases the extent of the system outfall shall be investigated and included in the mapping.
   12. Consultant shall map any water bodies that fall within the scope limits. If available, the Base Flood Elevation should be determined and shown.
   13. Contractors and subcontractors must have capability to work from plans in AutoCAD format. County does not provide hard copy detailed plans for the purpose of survey stakeout.
   14. The Final signed and sealed survey shall be provided to the Project Manager for review by County. Upon approval, three (3) signed and sealed copies of the survey, along with an electronic file in appropriate format shall be provided to the Project Manager for distribution to County.
3. **FLOOD AND STORMWATER ANALYSIS AND DELIVERABLES**
   1. Full report, analysis, and calculations of the existing Lake Amos basin including stormwater subbasin contributions, graphical representations of flow and flow ways, and Lake Amos Flood Elevation. Provide analysis of improvements within the existing flood plain.
   2. Full report, analysis, and calculations for proposed improvements of flow way drainage and Lake Amos Flood Elevation after improvement is effectively placed. Analysis of structures and improvement impacts, if any.
   3. The Consultant will reference FEMA Guidelines and Guidance and Technical documents in the analysis of Flood Zones, Floodways, and Flow ways for National Flood Insurance Program (NFIP) Mapping. These include:
   4. FEMA Guidance for Flood Risk Analysis and Mapping
   5. FEMA Risk Map Assessment
   6. Flood Risk Analysis and Mapping Policy #204-078-1 (Rev. 14) or latest edition
   7. Consultant will provide Lake Amos Basin GIS mapping for final deliverable.
   8. Consultant will provide a draft report for County review and approval prior to issuance of a final report.
   9. Acceptable stormwater modeling will use widely accepted and utilized programs including ICPR3, ICPR4, and models approved by FEMA and ACOE.
   10. FEMA permitting and flood plain updates are required for the adopted flood plain. The consultant will model the 100-year storm and the 500-year storm and evaluate impacts to existing properties and structures.
4. **ENVIRONMENTAL ANALYSIS**
   1. Consultant will provide environmental impact assessment for proposed options and final plan development.
   2. The environmental impact assessment will be prepared in accordance with FDOT requirements and FHWA requirements in order to enable Lake County to seek future State or Federal funding for the construction of the project.
5. **PLAN DELIVERABLES**
   1. Expected Plan sheet Divisions:

NO. DESCRIPTION

1 COVER / KEY SHEET

2 DRAINAGE MAP

3-4 TYPICAL SECTIONS

5-6 GENERAL NOTES

7-8 PROJECT LAYOUT

9-10 REFERENCE POINTS / CONTROL

11-12 ROADWAY PLAN

13-14 ROADWAY PROFILE

15-16 SPECIAL PROFILES

17-18 DRIVEWAY DETAILS

19-20 DRAINAGE STRUCTURE DATA

21-22 CROSS SECTION PATTERN

23-24 CROSS SECTIONS

27-28 STORMWATER POLLUTION PREVENTION PLAN

29-30 EROSIONS CONTROL PLAN

33-34 UTILITY ADJUSTMENT PLAN

37-38 GEOTECHNICAL PLAN

* 1. General Plan sheet requirements:
     1. Plan production (e.g., size and scale) are to be provided in accordance with the Florida Greenbook.
        1. Post Designs Services are not included or required.
     2. Plans shall be printed to standard scale to size B (11”x17”).
     3. Plotting scales should typically be provided as follows:
        1. Plan & Profile – horizontal scale of 1” = 40’, vertical scale should typically be 10% of horizontal scale.
        2. Roadway Cross Sections – horizontal scale of 1” = 20’, but not smaller than 1” = 40’, vertical scale should be 50% of horizontal scale.
        3. Drainage Structure Sections – horizontal scale of 1” = 10’, vertical scale 50% of horizontal scale
        4. Signage & Marking – plot to scale such that details are clear and legible, but not smaller than 1” = 100’.
     4. Plan & Profiles should typically be provided on the same sheet (i.e., plan over profile) unless right-of-way width or change in vertical elevation is too great, then separate plan and profile sheets will be acceptable.
  2. Deliverables at the 30% design submittal level:
     1. Three (3) signed and sealed copies of the project survey, an electronic signed copy of survey in pdf format, and an electronic file in an AutoCAD format identified by County.
     2. A letter from Consultant to County Project Manager listing all permits that will be required for the project and what agency the permit will be sought from.
     3. Consultant will complete an initial threatened and endangered species survey and present a copy of the results to County Project Manager.
     4. Consultant will complete a phase one environmental survey (if applicable) and submit results to County Project Manager.
     5. Consultant will complete a planned storm water and initial pond siting report and submit to County Project Manager for review.
     6. Submitted plans will include “line and grade” plan view and:
        1. Exceed the construction boundaries by 300 feet running longitudinally with the travel way and show existing conditions.
        2. Include a cover page acceptable to County Project Manager.
        3. Include County typical sections.
        4. Include County general notes pages.
        5. Show centerline of proposed roadway as the baseline of project. The baseline of survey and centerline of project shall match.
        6. Show stationing with beginning and ending project station limits.
        7. Show existing pavement striping (on additional sheet if needed for legibility).
        8. Show existing conditions (grades, signalization, right-of-way, property lines, parcels, trees, driveways, fences, gates, utilities, everything relevant from the survey, etc.).
        9. Show proposed edge of pavement on plans.
        10. Show pond locations relative to roadways on plans.
        11. Signal plans are to be initiated with proposed Pole locations on plans for review.
     7. Submittal will include three (3) sets of review plans (11” x 17” paper to proper legible scale) and a CD with an electronic copy of submitted plans in pdf format, and an electronic file in an AutoCAD format identified by County of the submitted plans.
  3. Deliverables at the 60% design submittal level:
     1. A copy of the transmittals for the utility companies notified within the limits of the project for “red – brown – green” markups. All utilities within the project limits shall be notified.
     2. A copy of all permit plans, permit package (including calculations if necessary) that will be submitted to required permitting agencies, or copy of a letter of request for exemption from needing a permit that will be sent to the permitting agency.
     3. Two (2) signed and sealed copies of the Geotechnical Report with an electronic copy of submitted report in pdf format in submitted CD.
     4. Submitted plans shall include the elements identified for a ‘Phase I’ submittal as defined in the Florida Greenbook, Vol 2, section 2.3.2.1 for the Drainage Map, Typical Sections, Project Layout, Plan and Profile, and Cross Sections sheets and include all items listed under the 30% submittal and:
        1. All corrections made to the 30% reviewed plans addressing the comments made by County Project Manager.
        2. Failure to make corrections to the 30% plans as identified by County Project Manager may result in the requirement of a resubmittal of 60% plans, when deemed necessary by County Project Manager.
        3. Any problem areas that may exist with utilities noted on the plans.
        4. Plan views, profile views, and cross section views (interval to be set by County Project Manager).
        5. Show proposed stormwater management system.
        6. Show the relevant Geotechnical information on the plans.
        7. Show approximate location of listed species and/or environmental impacts.
        8. Provide preliminary signal plans.
     5. Submittal will include 3 sets of review plans (11” x 17” paper to proper legible scale) and a CD with an electronic copy in pdf format and in an AutoCAD format identified by County of the project and submitted plans.
     6. Submittal of a technical memorandum providing the supporting documentation, as well as any independent reports needed, for all items on the Type 1 Categorical Exclusion (CE) Checklist.
  4. Submittal to include Construction/Engineer cost estimates.
  5. Deliverables at the 90% design submittal level:
     1. A copy of all needed permits for the project approved by the permitting agency with an electronic copy in pdf format provided on the submittal CD.
     2. A copy of an exemption letter from needing a permit from a permitting agency (if applicable) with an electronic copy in pdf format provided on the submittal CD.
     3. An electronic copy (AutoCAD, pdf, etc.) of the 60% plan submittal “red – brown – green” markups from all utilities within the limits of the project shall be included on the submittal CD.
     4. Copies of any correspondence between a utility and Consultant shall be provided to County Project Manager with an electronic copy in pdf format provided on the submittal CD.
     5. Submitted plans shall include the elements identified for a ‘Phase II’ submittal as defined in the Florida Greenbook, Vol 2, section 2.3.2.2 for the Drainage Map, Typical Sections, Project Layout, Plan and Profile, Cross Sections, and include all items listed under the 60% submittal and:
        1. All corrections made to the 60% reviewed plans addressing the comments made by County Project Manager.
        2. All corrections made to the reviewed plans by the utilities (incorporate the information from the red – brown – green markups).
        3. Failure to make corrections to the 60% plans as identified by County Project Manager may result in the requirement of a resubmittal of 90% plans, when deemed necessary by County Project Manager.
        4. Proposed signing and pavement marking plan does not need to be on a separate sheet from plan view.
        5. Signalization plans provided in accordance with the Florida Greenbook.
     6. Submittal will include 3 sets of review plans (11” x 17” paper to proper legible scale) and a CD with an electronic copy in pdf format and in an AutoCAD format identified by County of the project and submitted plans
     7. Submittal to include updated Construction/Engineer cost estimates.
     8. Submittal to include contract duration calculation and schedule.
     9. Submittal to include of Lane Closure Analysis (for lane closures within on-system facilities).
  6. Deliverables at the 100% design submittal level:
     1. Submitted plans will include all items listed under the 90% submittal and:
        1. All corrections made to the 90% reviewed plans addressing the comments made by County Project Manager.
        2. All corrections made to the reviewed plans by the utilities (incorporate the information from the red – brown – green markups if any).
     2. Submittal will include three (3) sets of review plans (11” x 17” paper to proper legible scale) and a CD in AutoCAD format of the submitted plans
     3. Submittal to include updated Construction/Engineer cost estimates.
  7. Deliverables at the Final submittal level:
     1. Two (2) copies each of all permits with pdf copy provided on submittal DVD.
     2. Two (2) copies each of any agency permit exemption letter with pdf copy provided on submittal DVD.
     3. Two (2) copies of any geotechnical reports with pdf copy all on submittal DVD.
     4. Two (2) copies of any environmental reports with pdf copy all on submittal DVD.
     5. Three (3) signed and sealed project plan record sets.
     6. Three (3) Hard Copies of the Original Signed and Sealed Engineering Plan.
     7. One (1) Scanned pdf copy of the Original Signed and Sealed Set clearly showing the engineers signature, date, and seal provided on the submittal DVD.
     8. Provide (1) GIS-ready electronic file (shapefile or file geodatabase) and (1) KMZ file on submittal DVD.

1. **EASEMENT ACQUISITION**

Assist Lake County in acquisition of easements needed for the project including meetings with property owners and/or their representatives.

1. **GEOTECHNICAL and HYDROGEOLOGICAL SERVICES**

Provide geotechnical and hydrogeological services for the study, and implementation of a successful project design, including evaluation of ground water, springs, or other natural sources of water causing high water levels or long-term impacts to pond and lake levels in the area.

1. **INVOICE REQUIREMENTS**
   1. Consultant is free to submit required deliverable items before the listed submittal percentage level with the approval of County Project Manager
   2. Design submittals will not be considered complete until all items listed under the appropriate design submittal level are delivered and approved by County
   3. Invoices will be put thru for payment by County Project Manager only when County is in possession of all deliverables for the relevant submittal.
   4. Advancement to the next design submittal level shall not take place until the previous submittal is approved by County and considered complete.
2. **DESIGN AREA LOCATION**

**Map

Description automatically generated**