

REQUEST FOR PROPOSAL FOR AERONAUTICAL OBSTRUCTION SURVEY

TISHOMINGO COUNTY BOARD OF SUPERVISORS requests proposals from qualified firms or individuals to provide professional services for aeronautical obstruction survey at the Tishomingo County Airport (01M) located in Belmont, MS. Interested parties are invited to submit a proposal, in accordance with this request, to Michael Busby, President, 1008 Battleground Drive, Iuka, MS 38852, not later than 10:00 p.m. on June 20, 2023. Proposals must either be submitted in a sealed envelope and marked on the outside as "Proposal for Aeronautical Obstruction Survey Tishomingo County Airport" or via email to pcook@co.tishomingo.ms.us. Professionals shall ensure delivery/receipt confirmation for email submissions. The Professional will be responsible for completing the project in compliance with Airports GIS Program policies and will include an airport airspace analysis for vertically guided operations for existing Runway 17/35. A detailed Scope of Work is available from Dean McRae Engineering at 308 Grisham Street in Iuka, Mississippi by calling 662-423-9104. The Advisory Circulars identified below detail the data collection requirements and accuracies for the project and the verification process by the Federal Aviation Administration (FAA) and the National Geodetic Survey (NGS).

- ☐ AC 150/5300-16B "General Guidance and Specifications for Aeronautical Surveys: Establishment of Geodetic Control and Submission to the National Geodetic Survey"
- ☐ AC 150/5300-17C, Change 1 "Standards for Using Remote Sensing Technologies in Airport Surveys"
- ☐ AC 150/5300-18B, Change 1 "General Guidance and Specifications for Submission of Aeronautical Surveys to NGS: Airport Survey Data Collection and Geographic Information System (GIS) Standards"

Tishomingo County is an Equal Opportunity Employer. Tishomingo County encourages Minority-owned Businesses (MBEs) and Women-owned Businesses (WBEs) to submit proposals. Tishomingo County also encourages Section 3 eligible businesses to submit proposals. Section 3 of the Housing and Urban Development Act of 1968, as amended (12 U.S.C. 17010) requires, to the greatest extent feasible, that Tishomingo County and its contractors that participate in the above-referenced Program give opportunities for job training and employment to lower-income residents of Tishomingo County. Section 3 also requires that contracts for work in connection with the Section 3 area be awarded to Section 3 eligible business concerns. All proposals must be submitted in a sealed envelope and marked with the following language: "Proposal for Aeronautical Obstruction Survey Tishomingo County Airport" or emailed to pcook@co.tishomingo.ms.us. Proposals will be evaluated on the following factors: Qualifications (40 points), Experience (40 points), and Capacity for Performance (20 points). To be evaluated properly the following must be addressed in detail:

1. Qualifications (40 points) – List of qualifications of persons to be assigned to the project;
2. Experience (40 points) – Information regarding the firm's experience and the projects previously undertaken, including the type and amount of awarded, the project's activities, and the status of the projects;
3. Capacity for Performance (20 points) – Identify the number and title of staff assigned to provide services. Proposals will be reviewed by the Tishomingo County Board of Supervisors. Using the above selection criteria, the Board will assign points to each criteria based on the content of the

proposal. The Board may hold proposals for a period not to exceed thirty (30) days for the purpose of reviewing the content of the proposals and investigating the qualifications of the firms and assigned individuals. The Board reserves the right to reject any or all proposals. Subject to FAA grant award, the Board will award a contract with the qualified individual or firm whose proposal has the highest number of cumulative points issued by the Tishomingo County Board and determined to be the most advantageous to the Board, price and other factors considered. The contract shall include scope and extent of work and other essential requirements. An individual contract will be executed for each awarded project, and the contract will be on a fixed price basis. The Board has the authority to terminate the selection at any time.

Michael Busby, Board President

8 June 2023

AERONAUTICAL SURVEY SCOPE OF WORK FOR TISHOMINGO COUNTY AIRPORT (01M)

This summary of work describes the scope of work and services required for an aeronautical obstruction survey at the Tishomingo County Airport (01M) located in Belmont, MS. The project will be done in compliance with Airports GIS Program policies and will include an airport airspace analysis for vertically guided operations for existing Runway 17/35. The Advisory Circulars identified below detail the data collection requirements and accuracies for the project and the verification process by the Federal Aviation Administration (FAA) and the National Geodetic Survey (NGS).

- AC 150/5300-16B "General Guidance and Specifications for Aeronautical Surveys: Establishment of Geodetic Control and Submission to the National Geodetic Survey"
- AC 150/5300-17C, Change 1 "Standards for Using Remote Sensing Technologies in Airport Surveys"
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Summary of Work

The purpose of this project is to accomplish an FAA Airport Airspace Analysis Survey for all surfaces defined in FAA Advisory Circular 150/5300 - 18B: 2.7.1.1 Runways with Vertical Guidance.

For this project, acquire new vertical stereo digital imagery at a physical image scale of 1"=3,846' of the obstruction surface areas and 1"=1,923' of the VGPS surfaces area. The aerial imagery will cover all of the VG Airspace Analysis surfaces using a Digital Mapping Camera III (DMC-III) camera system, or comparable, during leaf-on conditions.

From the 1"=3,846' imagery, produce the following:

- Limited landmark feature planimetric mapping
- Color digital orthophotos with a 1.0' pixel resolution
- Identification and mapping of obstruction obstacles for all of the VG surfaces

From the 1"=1,923' imagery, produce the following:

- Identification and mapping of obstruction obstacles for the VGRPS, VGPCS, and VGPS surfaces

Quality Standards

The project has been designed to conform to the National Map Accuracy Standards for limited landmark planimetric feature collection and twelve inch orthophoto production. In addition, ensure that the photogrammetric mapping will meet all FAA and NGS standards. Exercise reasonable care and conform to the standards of practice ordinarily used by the photogrammetric profession.

Project Area

The project area encompasses all of Tishomingo County Airport (01M) inclusive of the obstruction surfaces

Control Surveying

The aerial photography will be completed with ABGPS control which will be used for the base control for the geo-referencing of the aerial imagery. Process the ABGPS data using COR stations and reference it to the project control datums:

Horizontal: North American Datum of 1983/2011 (NAD 83(2011)), in the MS State Plane Coordinate System, East Zone, US survey feet.

Vertical: North American Vertical Datum of 1988 (NAVD 88)

Complete all of the remaining on-site ground control surveys, including:

- Geodetic control validation of the existing airport PACS and SACS stations or establish temporary airport control according to the guidelines established in AC 150/5300-16B
- Establishing all necessary photo-identifiable ground control and FAA mandated check-points required to validate the ABGPS and IMU control.
- Collection of the airport runway end positions
- Collection of vertical profile for runway
- Collection of the position, elevation, and where required the appropriate navigational aid perpendicular point of all electronic and visual navigational aids (NAVAIDS) located on the airport and associated with any current instrument approach servicing the airport
- All other tasks, not specifically listed above, as outlined in FAA AC-18B, Table 2-1 "Survey Requirements Matrix" for Instrument Procedure Development.
- Final Survey Report

Orthophoto Mapping

Use the control solution and imagery to generate a Digital Elevation Model (DEM) of the VG surfaces. The imagery will be processed into color digital orthophotos using the aforementioned DEM to rectify the images. Orthophotos for the entire project area will be developed with a 1.0' pixel resolution. Orthos will be delivered in a GeoTIFF file format.

18B Obstruction Surveys

The Obstructions Surfaces to be uploaded to ADIP will satisfy the requirements of AC 150/5300-18B:

- 2.7.1.2 Analysis of Existing Runway 17/35 with Vertically Guided Operations
(Surfaces include the VGRPS, VGPCS, VGAS, VGPS, VGATS, VGHS and VGCS)
- Review and update of existing Runway 17/35 obstacles in FAA OAS file using the FAA's Runway Airspace Management Tool

Other Obstruction Surveys

Other obstructions to be provided directly to Dean McRae Engineering:

- Existing Runway 17/35 – Proposed PAPIs - OCS and LSCS Analysis for one PAPI location on each end

The specific types and quantities of obstructions for each surface are outlined and clearly defined for the particular surface in each circular section. Any obstructions that meet the requirement of the circular, but are of a nature that elevations at the highest point of the obstruction are virtually impossible to read through photogrammetric methods (cell tower, electrical tower, etc.), will be identified and relayed to the surveyor to initiate field surveyed elevations for the obstruction.

The obstruction delivery will include the limited landmark planimetric feature collection.

The final data will be uploaded to ADIP in ESRI Shapefile format.

Production Schedule

Work with Engineer to finalize a mutually agreeable schedule for the project. Make a reasonable effort to maintain the agreed-upon schedule. However, should the project be interrupted by technical problems beyond the control of the parties, including control deficiencies or map file re-deliveries, rescheduling may become necessary.

Deliverables

Submit all data collected and associated required deliverable in the formats specified in the appropriate advisory circulars to the FAA Office of Airports, Airports Surveying-GIS Program. All data submissions to the FAA will be through the program's web site at <https://adip.faa.gov/agis/public/>.

The AC 150/5300-17C project data deliveries that will not be submitted through the web site will be delivered on external hard drives or DVDs.

The 18B deliverables that will be uploaded to ADIP include:

- Imagery Plan and Survey and Quality Control Plan
- Image Delivery (sent to FAA)
- Color digital orthophotos (sent to FAA)
- Digital limited landmark detail outside the airport
- Obstruction survey data for **Existing** Runway 17/35
- Photogrammetrically derived and surveyed attributes in defined format
- Surveyed ends and profile for runway
- NAVAID data
- FGDC compliant metadata
- Final Report

Provide online services to review and update the existing Runway 17/35 obstacles in the FAA OAS using the FAA Runway Airspace Management Tool.

Deliver the following items to Dean McRae Engineering:

- Color digital orthophotos with a 1.0' pixel resolution in GeoTIFF (project area)
- Obstruction survey data in AutoCAD/Excel/CSV file format

All digital files will be delivered on external hard drive, FTP or CD/DVD.