

A. OVERVIEW

1. The consultant will provide specified survey services in support of roadway, bridge, drainage, right-of-way and other NDOT projects. Such services, some of which are described in NDOT's "Standard Work Categories", may include, but are not limited to, the following:
 - a. Engineering Surveys
 - b. Topographic Surveys
 - c. Geodetic Surveys
 - d. Land Surveys (see ROW Design and Survey Scope)
 - e. Hydraulic Surveys
 - f. Mobile LiDAR Surveys
 - g. UAS Surveys
 - h. Above ground Utility Surveys

B. QUALIFICATIONS, KNOWLEDGE AND EXPERIENCE

1. The services must be provided under the direction of a Nebraska licensed surveyor who is experienced with the specified types of survey work to be performed under this agreement.
2. The consultant shall have working knowledge of and follow, when applicable:
 - a. Survey industry standards
 - b. Local, State and federal laws and regulations pertaining to the practice of surveying
 - c. Nebraska Department of Transportation, Roadway Design Division Procedure for Preliminary Surveys
 - d. Nebraska Department of Transportation Survey Crew Traffic Control Policy
 - e. Nebraska Department of Transportation "Instructions to Flaggers"
 - f. Nebraska Department of Transportation Employee Safety Manual
 - g. Nebraska State Plane Coordinate System Datum Adjustment Computations Lambert Conformal System
 - h. Manual on Uniform Traffic Control Devices
3. Before surveying on Railroad Property, the consultant's personnel shall complete a Railroad approved safety course.
4. Before surveying on the project, the consultant's personnel shall possess an NDOT flagger certification card.

C. SOFTWARE AND EQUIPMENT REQUIREMENTS

1. All equipment and supplies required for the work will be provided by the Consultant. The survey and data gathering equipment used by the consultant must be capable of

producing final survey and design files compatible with MicroStation Connect v10.12.00.40 or later (the State's drafting software), and OpenRoads Designer Connect v10.08.01.33 or later (the State's design software). Files must also adhere to the State's drafting procedures, guidelines, and file naming conventions. All surveys will be completed using NDOT's feature code library which will be provided to the Consultant by NDOT.

2. When applicable, all surveys shall be made by real time kinematic methods using Global Positioning System (GPS) technologies tied to the Nebraska State Coordinate System, unless prior alternate methods are approved by NDOT. In areas where GPS signals cannot be obtained, conventional methods will be used.

D. EXPECTATIONS FOR THE DELIVERABLES

1. All surveys shall be completed in accordance with the Nebraska Department of Transportation, Procedure for Preliminary Surveys and applicable local, state and federal laws and regulations pertaining to the practice of surveying.
2. Electronic and paper copies of all survey data will be provided to NDOT. Copies may include but not necessarily be limited to:
 - a. Electronic Files: Data Collector files, Microstation/ORD files, including topographic drawings, Report of Utility Status, Drainage Structure Sheets, Control Point Tie Sheets, Survey notes, etc.
3. NDOT will review all data submitted for conformance to NDOT standards and to the parameters set out in the Task Orders. Necessary revisions based on NDOT review comments will be provided by the Consultant.
4. Work will be performed at the location(s) identified, and within the established schedule, in each Task Order Scope of Services.
5. Survey work will be used to complete designs, construction plans, right of way plans and other documents to be used for NDOT projects.