

EXHIBIT A

SCOPE OF SERVICES FOR UTILITY COORDINATION

The CONSULTANT shall employ qualified, competent, and experienced personnel to provide the services set forth herein. Such services shall be accomplished in accordance with both the prevalent methodologies used by Consultants practicing within the subject area of work and with the DEPARTMENT'S Utility Accommodation and Standards Policy, Plans Development Process, and other such GDOT policies and procedures for the work under consideration. The CONSULTANT shall perform utility coordination, engineering services, and inspection services necessary to identify and resolve, when possible, any foreseeable utility impacts that might delay the DEPARTMENT'S project schedule and perform utility construction inspection. To this end, utility facility conflict identification and resolution and inspection are significant tasks involved with this scope of services. These services will be accomplished fully by the CONSULTANT so that it will be unnecessary for the DEPARTMENT to supplement any of them with its own personnel, except as noted hereinafter. The DEPARTMENT may, however, review the work from time to time to verify adequacy and evaluate the performance of the firm. The following items are not intended to be comprehensive or exclusive; they are merely set forth as a general outline of the work that is expected.

1.0 Definitions and Terms

For purposes of this scope of work the following definitions and terms apply.

1. *CI/ASCE 38-02*: "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data," American Society of Civil Engineers, 2003.
2. *CONSULTANT*: The individual or firm directly, or indirectly through sub-consultants, providing utility coordination, engineering, and design-related services as a party to this contract.
3. *DEPARTMENT*: The Georgia State Department of Transportation (GDOT) and/or its authorized representative(s), as the context implies.
4. *District Utilities Engineer*: The GDOT District employee whose job function is to act as the District expert dealing with utilities and utility issues. The District Utilities Engineer shall also function as the approving authority and shall monitor the performance of the CONSULTANT for all project specific tasks.
5. *Final Utility Plans*: Those plans showing existing and final utility relocations submitted to the DEPARTMENT by the CONSULTANT prior to the Final Field Plan Review Meeting for use in identifying and resolving utility conflicts in the preconstruction phase of the project's development. Specifically these plans are necessary to identify and resolve utility impacts affecting the project schedule, staging, costs, and constructability.

6. *MUTCD*: “Manual on Uniform Traffic Control Devices,” U.S. Department of Transportation, Current Edition.
7. *Overhead/Subsurface Utility Engineering Investigation (SUE Investigation)*: An engineering service/study that incorporates new and existing technologies to designate, locate and map overhead and underground utility facilities to CI/ASCE 38-02, and GDOT Standards.
8. *Preliminary Utility Plans*: Those plans showing existing and preliminary utility relocations submitted to the DEPARTMENT by the CONSULTANT prior to the Preliminary Field Plan Review Meeting for use in identifying and resolving utility conflicts early in the preconstruction phase of a project’s development. Specifically these plans are necessary to identify and resolve utility impacts affecting project schedule, right of way, and environmental resources.
9. *Professional Certification*: For the purpose of this scope of work, “Professional Certification” or “professionally certified” means to professionally seal the completed work product. All completed design and engineering services (see Section 1.4 for specific deliverables) performed by the CONSULTANT shall be certified by a responsible registered professional in the State of Georgia, in the full employment of the CONSULTANT firm on the plans or as directed by the DEPARTMENT. The CONSULTANT shall be responsible for the accuracy of information presented to the DEPARTMENT.
10. *Project Designer*: The engineer (or designee) in charge and responsible for the overall DEPARTMENT project design. Typically this individual is an employee of the DEPARTMENT (and is referred to as the Design Project Manager); however a separate design consultant may also be involved. The CONSULTANT shall be responsible to coordinate with the Project Designer and provide consultation and assistance in regards to resolving utility issues/impacts in order to increase value to the involved project.
11. *State Utilities Engineer*: The State Utilities Office employee who performs statewide railroad and utility coordination and guidance to the District Utilities Engineer. This employee initiates, coordinates, authorizes, and monitors the status of projects statewide. The State Utilities Engineer will serve as the one point of contact for overall contractual issues pertaining to this scope of work.
12. *TOPPS*: The DEPARTMENT’S Transportation Online Policy and Procedures System (Now known as Policy and Procedures).
13. *Utilities*: Include, but are not limited to, private and public facilities storing, carrying or conveying telephone, television and data (henceforth called “communication” facilities), natural gas, electrical power, water (including non-potable), sanitary sewer, steam, petroleum, gaseous vapors, and hazardous liquids, and kaolin (clay) pipelines or any others as identified by State Law.
14. *Utility Adjustment Schedule (UAS)*: A document that is typically generated by each utility owner/operator that describes the proposed work plan for the subject utility relocations required to accommodate the project. This document is prepared in a standardized format prescribed by the DEPARTMENT’S TOPPS policy 6863-9. The CONSULTANT is responsible in compiling and coordinating the Utility Adjustment Schedules for all utilities affected by the project with one another and the project’s proposed staged construction plan.

15. *Utility Agreements:* The legal mechanisms which the DEPARTMENT employs to: 1) reimburse utility owner/operators for utility relocations/adjustments required to accommodate a project; 2) maintain utility owner/operator property interests when the Department acquires right of way over existing utility easements; 3) include utility facilities into the DEPARTMENT project's contract. Please see the DEPARTMENT'S Utility Accommodation and Standards Policy for further information regarding Utility Agreements.

16. *Utility Impact Analysis:* A tabular (matrix) report that identifies potential project utility impacts and provides recommended resolutions. Depending on the project, this report is either generated by the SUE consultant involved with the project or the CONSULTANT.

1.1 General Provisions for Utility Coordination

For all work performed under this agreement, the CONSULTANT shall -

1. Obtain all necessary permits from city, county, municipality, railroad or other entity to allow the CONSULTANT to work on existing streets, roads, and private property.
2. Not begin work until the DEPARTMENT has issued its written Notice to Proceed (NTP) to the CONSULTANT (via e-mail, mail or facsimile).
3. Arrange and conduct a kick-off meeting with the DEPARTMENT to develop a detailed work plan, receive project information gathered by the DEPARTMENT, and finalize the delivery schedule.
4. Compile and translate utility plan data received from multiple sources to the appropriate CADD format (See 1.3 Data Management) for direct incorporation of CONSULTANT'S information into the DEPARTMENT'S or design engineer's CADD file. Utility information shall be clearly delineated as to its "Quality Level" via line codes/symbols and labeling as set forth in the DEPARTMENT'S Electronic Data Guidelines, and Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data, published by the ASCE, current edition.
5. Coordinate and cooperate with involved utility owners/operators to achieve timely project notifications and submittals. The CONSULTANT shall also serve as the single point of contact for utility owner/operators in addressing their need for project information, design requests, utility agreements and project design team representation.
6. Identify foreseeable project utility impacts and provide recommendations to the DEPARTMENT and the respective utility owner/operator for resolution and minimization of project/utility costs and delays. If the Utility Impact Analysis is generated by the SUE Consultant involved with the project; then it is the CONSULTANT'S responsibility to review, and communicate the results to the project design engineer and District Utilities Engineer in the format prescribed by the DEPARTMENT.
7. Secure agreements, certification letters, Utility Adjustment Schedules, and plans from all utility owner/operators located within the subject project's limits within the prescribed timeframe stipulated for each project.

8. Provide the DEPARTMENT with copies of diaries and correspondence that document work-related communications between the CONSULTANT, utility owner/operators, DEPARTMENT, outside agencies, and/or private landowners.
9. Maintain the DEPARTMENT'S project tracking database to ensure that all utility related project information is kept current.
10. Certify (professional certification not required) at a time prescribed by each project schedule that all foreseeable utility conflicts are resolved and that all utility agreements and negotiations have been completed with arrangements made for the physical utility relocation work to be undertaken.
11. Provide advice and assistance in using utility and Overhead/Subsurface Utility Engineering investigation (SUE) data. This includes consultation and assistance to Project Designers and/or their hired consultants to effectively use SUE data as it is applied to the design of DEPARTMENT projects. Utility and SUE data may come from multiple independent sources. The CONSULTANT shall coordinate the collection of utility and SUE data, assess data reliability, assemble data into a single usable format, and deliver to the Project Designer. When applicable, the CONSULTANT shall apply the SUE and utility data to project design plans so as to deliver design correction/enhancement recommendations to the DEPARTMENT in order to increase engineering value to the involved project.

The DEPARTMENT shall –

1. Provide topographic mapping files, and layout maps, when available, in both hard copy and Microstation DGN format.
2. Provide the current Electronic Utility File Guidelines and Plan Presentation Guidelines for the CONSULTANT'S use in preparing plans/files in a format compatible with the DEPARTMENT'S CADD systems (Microstation, InRoads, and CAiCE).
3. When available, provide project design plans, SUE data, and files in Microstation DGN format for each phase or activity assigned.
4. Provide standardized GDOT forms and utility agreement templates.
5. Provide access to the DEPARTMENT'S project tracking database.
6. Establish project timeline, deadlines, and deliverable submittal requirements for each phase or activity assigned.
7. Have final approval authority of all deliverables including Utility Agreements, Encroachment Permits, Utility Adjustment Schedules, Relocation Plans, & CONSULTANT utility certifications (see 1.1.10 above).

1.2 Utility Coordination Services Performed

The following procedures are general for all projects; one or more of the steps may not be necessary depending on the scope of the particular project. The necessary steps will be identified and a schedule of activities set for each project.

A. Project Concept Development

The CONSULTANT shall participate in project scoping tasks, which include but are not limited to utility impact scoping meetings and utility impact site visits with the DEPARTMENT and/or utility representatives either in-group or individually. The purpose of involvement is to provide advice to the concept team in the form of recommendations involving potential utility issues and impacts. These recommendations are required to be included in the project's Concept Report. If not determined by the DEPARTMENT already, the CONSULTANT shall also recommend the SUE quality level of field survey necessary to address utility issues, document conflicts and coordinate relocations. Additionally, the CONSULTANT shall provide the DEPARTMENT with a general estimate of utility costs associated with the project, pertinent to 1) SUE work, and 2) utility relocations. In obtaining and presenting these recommendations the CONSULTANT shall perform the following:

1. Identify potential utility impacts in the project corridor by referring to the following resources as a minimum:
 - DEPARTMENT'S Utilities Offices for all permits.
 - Georgia Utilities Protection Center.
 - Available Overhead/Subsurface Utility Engineering investigation (SUE) data.
 - Available plans and record drawings.
 - On-site inspection to ensure familiarity with existing conditions and project requirements.
2. Begin coordination with utility owner/operators and the DEPARTMENT to ensure each stakeholder is aware of the general scope and nature of the DEPARTMENT'S project and the potential utility impacts thereof. Coordination activities should include the following tasks:
 - Initial contact with utility owner/operators and written invitation to participate in a project utility impact scoping meeting and/or utility impact site visit. Such invitation should also request each utility owner/operator to bring to the meeting, or supply, copies of as-built and proposed plans or other records showing existing and/or future utility facility installations. The DEPARTMENT'S District Utilities Office and the Project Designer should be invited to this meeting also.
 - Plan and Facilitate a Concept Utility Impact Meeting to ensure that all stakeholders may present information which could impact the project scope. Individual meetings may need to be set up with each utility if it is not possible to setup up this meeting so all utility owner/operators may attend simultaneously. A project layout map should be presented for all attendees for this purpose. Any utility property interest information that is available should be discussed. The CONSULTANT shall take minutes of such meeting and distribute

to the attendees & invitees, in addition to all utility owner/operators found within the project limits, District Utilities Engineer, GDOT Project Designer, and State Utilities Engineer.

- In lieu of, or in addition to the meeting described above; coordinate with each utility owner/operator and respective project stakeholder as required to develop the Concept Utility Report referenced in (3.) below. The CONSULTANT shall obtain DEPARTMENT approval prior to moving forward with the development of the Concept Utility Report if a Concept Utility Impact Meeting is not held.
3. Develop and submit to the DEPARTMENT a Concept Utility Report. Copies of this report should be sent both electronically and in hard copy format to the District Utilities Engineer, GDOT Project Designer, and State Utilities Engineer. This report shall include the following minimum information:
- All utility owner/operators found within the project's limits including utility owner/operator name, a point of contact with address, telephone, and email address.
 - A general description of each utility facility (found through tasks 1 and 2 above), i.e. type, size, material, and general location. If possible, such information should also be provided (in Microstation and hard copy) to the GDOT Project Designer so it may be plotted on the Concept layout.
 - A statement of proposed utilities to be installed in the near or distant future.
 - Recommendation of the required scope for an Overhead/Subsurface Utility Engineering investigation (SUE) to address utility issues, document conflicts, and coordinate relocations. Cost estimate of such SUE investigation shall also be included.
 - Conceptual estimate of reimbursable and non-reimbursable utility relocation costs for each utility (refer to GDOT Utility Accommodation Policy and Standards, Current Edition for reimbursement policy).
 - Summary of potential utility impacts for each utility owner/operator's facilities. Identify potential conflicts with major utilities which could have a substantial economic impact to the project or utility owner/operator.
 - Recommendations of possible alignment and grade alternatives to minimize major project utility impacts. Such impacts and recommendations should be taken into consideration in finalizing the preliminary project scope and Concept Report.

B. Utility Coordination During Project Preliminary Design Phase

The Preliminary Design Phase of the project begins at the project Concept Report approval and is complete upon Environmental Document approval and distribution of the Preliminary Field Plan Review Report. The CONSULTANT shall have the responsibility of coordinating the project development with all utilities that may be affected during this phase. The purpose of such

coordination during this phase is to develop the project plans, preliminary Utility Adjustment Schedules, preliminary utility relocation plans, and associated agreements necessary to identify and avoid all foreseeable utility impacts that might affect the project. Specifically, this includes utility issues affecting right of way acquisition, environmental clearances, and project constructability. Upon successful completion of the coordination tasks required throughout the project preliminary design phase; the DEPARTMENT would be prepared to acquire right of way, address all environmental issues, and develop preliminary utility relocation and staging plans with all foreseeable utility project impacts addressed. Project Preliminary Design Phase coordination responsibilities shall include but not be limited to the following:

1. Coordination with utility owner/operators and the DEPARTMENT to ensure each stakeholder is aware of the design requirements of the DEPARTMENT'S project and the potential utility impacts thereof. Coordination activities should include the following tasks:
 - Compile and translate all available utility data received from multiple sources to the appropriate CADD format (See 1.3 Data Management) for direct incorporation into the DEPARTMENT'S or design engineer's CADD files and project plan sheets. Utility information shall be clearly delineated as to its "Quality Level" via line codes/symbols and labeling as set forth in the DEPARTMENT'S Electronic Data Guidelines, and Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data, published by the ASCE, current edition. The following resources shall be employed as a minimum:
 - DEPARTMENT'S Utilities Offices for all permits.
 - Georgia Utilities Protection Center.
 - Available Overhead/Subsurface Utility Engineering investigation (SUE) data.
 - Available plans and record drawings.
 - On-site inspection to ensure familiarity with existing conditions and project requirements.
 - The CONSULTANT shall be responsible for contacting each utility owner/operator to advise of the proposed project; provide supplemental verification of the locations of existing utility facilities; and determine general requirements for the relocation or adjustment of facilities.
 - The CONSULTANT shall coordinate and conduct a Preliminary Design Utility Impact Meeting with the utility owner/operators to assess and explain the impact of the project. The Department's Project Designer, District Construction Engineer (or designee), and District Utilities Engineer (or designee) shall be included in this meeting. The CONSULTANT shall record the minutes for this meeting and distribute to all attendees & invitees in addition to all utility owner/operators found within the project limits for their review and concurrence.
 - It should be stressed that the CONSULTANT shall make every effort to accommodate all parties to attend the Preliminary Design Utility Impact Meeting described above. However in lieu of, or in addition to the meeting described above; coordinate with each utility owner/operator and respective project stakeholder as required to develop the Preliminary Design Utility Report referenced below. The CONSULTANT shall obtain DEPARTMENT approval prior to moving forward with the development of the Preliminary Design Utility Report if a Preliminary Design Utility Impact Meeting is not held.

2. The CONSULTANT shall research the property interests of each utility owner/operator's facilities. If there is a dispute over property interests with a utility owner/operator, the CONSULTANT shall be responsible for facilitating the resolution of the dispute. The CONSULTANT shall meet with the DEPARTMENT'S District Utilities Engineer (or designee) to present the property interest information gathered. This information must be sufficient for the District Utilities Engineer (or designee) to certify the extent of the utility owner/operator's property interests. The DEPARTMENT shall have final approval authority as to the CONSULTANT'S determination of whether the utility owner/operator has property interests.
3. When coordinating with any local government who may own utility facilities; it shall be the responsibility of the CONSULTANT to forward to the DEPARTMENT on behalf of the local government any requests for financial assistance. Once the request has been submitted to the DEPARTMENT; the CONSULTANT shall be responsible for determining if the DEPARTMENT has agreed to pay for in-kind relocations according to any approved Utility-Aid assistance package for publicly (government) owned utilities found within the project's limits (See the DEPARTMENT'S TOPPS Policy #6863-11 for additional information regarding Utility-Aid). If the DEPARTMENT has approved Utility-Aid; it is the CONSULTANT'S responsibility to assemble the necessary information including any Utility Agreements in a final and complete form and in such a manner that the DEPARTMENT may approve the submittals with minimal review.
4. The CONSULTANT shall provide utility owner/operators with preliminary design plans (in CADD and hard copy format) and preliminary utility plans as soon as the plans have reached a level of completeness adequate to allow them to fully understand the project impacts. The CONSULTANT will coordinate with each utility owner/operator to prepare preliminary utility relocation plans, preliminary cost estimates, and respective preliminary Utility Adjustment Schedules. If the CONSULTANT or a party other than the utility owner/operator prepares utility relocation plans, estimates, or Utility Adjustment Schedules, there shall be a concurrence box on the subject documents where the utility owner/operator signs and accepts the utility submittal as shown. The CONSULTANT shall also certify to the DEPARTMENT that the utility package listed above has been reviewed and accepted by each respective utility owner/operator.
5. The CONSULTANT shall review and comment on all utility relocation plans or plan sketches involved with the highway project and recommend approval of those plans to be incorporated into the project's preliminary design. Upon DEPARTMENT concurrence with such recommendations, the CONSULTANT shall compile and translate all utility plan data received from each utility owner/operator affected by the subject project to the appropriate CADD format (See 1.3 Data Management) for direct incorporation into the DEPARTMENT'S or design engineer's CADD files and project plan sheets. The CONSULTANT shall deliver to the DEPARTMENT complete preliminary utility plans in hard copy and electronic form consistent with DEPARTMENT'S plan presentation standards. The CONSULTANT shall also include all preliminary utility cost estimates and preliminary Utility Adjustment Schedules with this plan submittal to the DEPARTMENT. The DEPARTMENT shall prescribe when this submittal will be due for each respective project.
6. Once all existing and preliminary utility relocations are compiled as described above; the CONSULTANT shall utilize/develop (see section 1.1.6) a Utility Impact Analysis matrix in the

DEPARTMENT'S prescribed format. This analysis will identify all foreseeable utility impacts incurred with respect to the preliminary design and provide recommendations for avoidance. This Utility Impact Analysis matrix shall be submitted as directed by the DEPARTMENT for each project.

7. The CONSULTANT shall meet with the District Utilities Office and GDOT Project Designer to review the Utility Impact Analysis matrix described above and submit a written assessment addressing all anticipated utility related issues/impacts that may adversely affect the project for the Preliminary Field Plan Review Meeting. Specifically, this assessment shall identify conflicts with project staging/constructability, environmental impacts, right of way impacts, and project scheduling. The assessment shall also include recommendations to avoid/minimize such utility impacts. This written assessment shall be submitted in the form prescribed by the DEPARTMENT. Also as directed by the DEPARTMENT, the CONSULTANT shall attend and participate in the Preliminary Field Plan Review meeting.
8. The Consultant shall provide monthly Utility Status updates to the DEPARTMENT. These monthly status reports shall summarize the progression of utility coordination for each utility found within the project's limits and shall be provided in the DEPARTMENT'S prescribed format.
9. The CONSULTANT shall prepare and submit to the DEPARTMENT a Preliminary Design Utility Report at the time prescribed by the DEPARTMENT for each assigned project. The purpose of this report is to summarize and document the utility coordination status through the Preliminary Design Phase of project development. This report shall be submitted as directed by the DEPARTMENT for each project, and shall include the following information as a minimum:
 - A general description of each utility facility, i.e. type, size, material, and location.
 - All utility owner/operators found within the project's limits including utility owner/operator name, a point of contact with address, telephone, and email address and a recommendation as to the extent of each Utility owner/operator's property interests. This report shall include copies of easements, plans, or other supporting documentation that substantiates any property interests of the Utility owner/operators.
 - All Utility-Aid Requests received and the status of their approval/disapproval.
 - A list of potential environmental impacts incurred due to the preliminary utility relocations provided. Recommendations to minimize/mitigate such impacts. This includes recommendations for changes in the roadway and utility relocation design to minimize impacts.
 - An estimate of reimbursable and non-reimbursable utility relocation costs for each utility.
 - Preliminary Utility Adjustment Schedules for each utility owner/operator. Additionally, the CONSULTANT shall develop an overall Utility Adjustment Schedule to ensure that all utility work is coordinated with each other and the project's preliminary staging plans.
 - A statement of proposed utilities to be installed in the near or distant future.

- Recommendation of the required scope for additional Overhead/Subsurface Utility Engineering investigation (SUE) to address utility issues, document conflicts, and coordinate relocations. Cost estimate of such SUE investigation shall also be included.
- Copy of Utility Impact Analysis matrix identifying utility conflicts/impacts and recommendations of avoidance.
- List of required special provisions that will be necessary to be included in the DEPARTMENT'S contract to accommodate the utility relocations/adjustments required to accommodate the project.
- Recommendation of what utilities should be included in the DEPARTMENT project's contract to minimize project construction delays.
- Recommendation of what utilities should be provided early authorization to accommodate the project's schedule. At this stage of project development early authorization will primarily pertain to the authorization of utility owner engineering and right of way/easement acquisition.
- Copy of written comments/assessment provided for the project's Preliminary Field Plan Review Meeting.

C. Utility Coordination During Project Final Design Phase

The Final Design Phase of the project begins with the Environmental Document approval and distribution of the Preliminary Field Plan Review Report and is complete upon submission of final plans/contract documents for project letting. The CONSULTANT shall have the responsibility of coordinating the project development with all utilities that may be affected during this phase. The purpose of such coordination is to further develop the project plans, Utility Adjustment Schedules, utility relocation plans, and associated agreements necessary to certify the project as being ready for construction. Upon successful completion of the coordination tasks required throughout the project final design phase; the DEPARTMENT would be prepared to go to bid for the construction of the project with no foreseeable utility impacts. To this end, utility facility conflict identification and resolution are critical tasks involved with this phase of the scope of services. Project Final Design Phase coordination responsibilities shall include but not be limited to the following:

1. The CONSULTANT shall provide utility owner/operators with updated design plans and updated utility plans as soon as the plans have been revised to minimize all potential utility impacts discovered during the preliminary design. The CONSULTANT will coordinate with each utility owner/operator to prepare final utility relocation plans, final cost estimates, and respective final Utility Adjustment Schedules. If the CONSULTANT or a party other than the utility owner/operator prepares utility relocation plans, estimates, or Utility Adjustment Schedules, there shall be a concurrence box on the subject documents where the utility owner/operator signs and accepts the utility submittal as shown. The CONSULTANT shall also certify to the

DEPARTMENT that the utility package listed above has been reviewed and accepted by the each respective utility owner/operator.

2. The CONSULTANT shall review and comment on all utility relocation plans or plan sketches involved with the highway project and recommend approval of those plans to be incorporated into the project's final design. Upon DEPARTMENT concurrence with such recommendations, the CONSULTANT shall compile and translate all utility plan data received from each utility owner/operator affected by the subject project to the appropriate CADD format (See 1.3 Data Management) for direct incorporation into the DEPARTMENT'S or design engineer's CADD files and project plan sheets. The CONSULTANT shall deliver to the DEPARTMENT complete final utility plans in hard copy and electronic form consistent with DEPARTMENT'S plan presentation standards. The CONSULTANT shall also include all final utility cost estimates and final Utility Adjustment Schedules with this plan submittal to the DEPARTMENT. The CONSULTANT is expected to assemble the information referenced above in a final and complete form and in such a manner that the DEPARTMENT may approve the submittals with minimal review. The DEPARTMENT shall prescribe when this submittal will be due for each respective project.
3. Once the utility relocation plans are compiled as described above; the CONSULTANT shall develop or update the Utility Impact Analysis matrix in the DEPARTMENT'S prescribed format. This analysis will identify all anticipated utility impacts incurred with respect to the final design and provide recommendations for avoidance. This Utility Impact Analysis matrix shall be submitted as directed by the DEPARTMENT for each project.
4. The CONSULTANT shall meet with the District Utilities Office and GDOT Project Designer to review the Utility Impact Analysis matrix described above and submit a written assessment addressing all identified utility related issues/impacts that may adversely affect the project for the Final Field Plan Review Meeting. Specifically, this assessment shall identify conflicts with project staging/constructability, environmental impacts, right of way impacts, and project scheduling. The assessment shall also include recommendations to avoid/minimize such utility impacts. This written assessment shall be submitted in the form prescribed by the DEPARTMENT. Also as directed by the DEPARTMENT, the CONSULTANT shall attend and participate in the Final Field Plan Review meeting.
5. The CONSULTANT shall provide monthly Utility Status updates to the DEPARTMENT. These monthly status reports shall summarize the progression of utility coordination for each utility found within the project's limits and shall be provided in the DEPARTMENT'S prescribed format.
6. The CONSULTANT will assist as required with the utility permit application process between DEPARTMENT and utility owner/operator to minimize delays in the project.
7. The CONSULTANT shall be responsible for performing the tasks referenced in Section 1.2.B.2 of this Exhibit and shall collect the following from each Utility owner/operator that is located within the project limits: A letter of "no cost" where the Utility owner/operator does not have a property interest; Utility Agreements, certificates of eligibility, including cost estimate and Utility Relocation plans where the Utility owner/operator has a property interest; Letters of "no conflict" where the Utility owner/operator's facilities will not be impacted by the Project.

8. When coordinating with any local government who may own utility facilities located within the project's limits; it shall be the responsibility of the CONSULTANT to forward to the DEPARTMENT on behalf of the local government any requests for financial assistance (See the DEPARTMENT'S TOPPS Policy #6863-11 for additional information regarding Utility-Aid). Once the request has been submitted to the DEPARTMENT; the CONSULTANT shall be responsible for tracking the status of the Department's approval/disapproval of such Utility-Aid requests. If the DEPARTMENT has approved Utility-Aid; it is the CONSULTANT'S responsibility to assemble the necessary information including any Utility Agreements in a final and complete form and in such a manner that the DEPARTMENT may approve the submittals with minimal review.
9. The CONSULTANT shall prepare and submit to the DEPARTMENT a Final Design Utility Report at the time prescribed by the DEPARTMENT for each assigned project. The purpose of this report is to summarize and document the utility coordination status through the Final Design Phase of project development. This report shall be submitted as directed by the DEPARTMENT for each project, and shall include the following information as a minimum:
 - A general description of each utility facility, i.e. type, size, material, and location.
 - All utility owner/operators found within the project's limits including a point of contact with address, telephone, and email address and a recommendation as to the extent of each Utility owner/operator's property interests. This report shall also include copies of the documents listed in Section 1.2.C.7, easements, plans, or other supporting documentation that substantiates any property interests of the Utility owner/operators.
 - All Utility-Aid Requests received and the status of their approval/disapproval.
 - A list of potential environmental impacts incurred due to the preliminary utility relocations provided. Recommendations to minimize/mitigate such impacts. This includes recommendations for changes in the roadway and utility relocation design to minimize impacts.
 - An Estimate of reimbursable and non-reimbursable utility relocation costs for each utility.
 - Final Utility Adjustment Schedules for each utility owner/operator. Additionally, the CONSULTANT shall develop an overall Project Utility Adjustment Schedule to ensure that proposed utility work is coordinated with each other and the project's staging plans.
 - A statement of proposed utilities (and associated permits as applicable) to be installed in the near or distant future.
 - Final Utility Impact Analysis matrix identifying utility conflicts/impacts and recommendations of avoidance.
 - List of required special provisions that will be necessary to be included in the Department's contract to accommodate the utility relocations/adjustments required to accommodate the project.

- Recommendation of what utilities should be included in the DEPARTMENT project's contract to minimize project construction delays.
- Recommendation of what utilities should be provided early authorization to relocate their facilities prior to the DEPARTMENT'S project letting to accommodate the project's schedule.
- Copy of written comments/assessment provided for the project's Final Field Plan Review Meeting.

1.3 Data Management

Data management involves assembling and presenting information gathered in a format compatible with the DEPARTMENT'S CADD systems (Microstation, InRoads, and CAiCE) for use by the DEPARTMENT'S staff or the DEPARTMENT'S designated Consultant. This information will include but not be limited to designating, locating, aerial utilities, gravity flow sanitary utilities, or other facilities where horizontal and vertical location is determined.

Microstation, InRoads, and CAiCE files shall be developed in accordance with the DEPARTMENT'S *Electronic Utility File Guidelines* (unless otherwise indicated by the State Utilities Engineer. These guidelines can be obtained from the State Utilities Engineer.

The CONSULTANT shall submit completed electronic files and reproducible plan sheets to the appropriate District Utilities Engineer for review and comments. The CONSULTANT will make changes or adjustments to the utility related data as necessary. Work will not be considered complete until the CONSULTANT has responded to the comments from this review to the satisfaction of the District Utilities Engineer.

1.4 Delivery of Documents by CONSULTANT

Reference Section 1.2.A - Project Concept Development			
Delivery Date	Document	Professional Certification	Deliver Copies to
No later than 7 days after Concept Utility Impact meeting.	Concept Utility Impact Meeting Minutes	Not Required	All meeting attendees & invitees, District Utilities Engineer, Project Designer, and State Utilities Office.
As determined by the DEPARTMENT for each project, but no later than 14 days prior to the Concept Team Meeting.	Concept Utility Report	Not Required	District Utilities Engineer, Project Designer, and State Utilities Office.

Reference Section 1.2.B – Project Preliminary Design Phase			
Delivery Date	Document	Professional Certification	Deliver Copies to
No later than 7 days after Preliminary Utility Impact meeting.	Preliminary Design Utility Impact Meeting Minutes	Not Required	All meeting attendees & invitees, District Utilities Engineer, Project Designer, and State Utilities Office.
As determined by the DEPARTMENT for each project.	Utility property interest data, preliminary utility relocation plans, Utility-Aid status, preliminary UAS & cost estimates.	Relocation Plans, UAS, & Cost Estimates if prepared by CONSULTANT	Project Designer through the District Utilities Engineer
As determined by the DEPARTMENT for each project, but no later than 30 days prior to the Preliminary Field Plan Review meeting.	Utility Impact Analysis.	Required if prepared by CONSULTANT	District Utilities Engineer, Project Designer, and State Utilities Office, Utility Owners.
As determined by the DEPARTMENT for each project, but no later than 14 days prior to the Preliminary Field Plan Review meeting.	Written Preliminary Field Plan Review assessment w/ recommendations.	Not Required	District Utilities Engineer, Project Designer, and State Utilities Office.
As determined by the DEPARTMENT for each project, but no later than the last business day of each month.	Monthly Utility Coordination “Let-Status” Reports.	Not Required	District Utilities Engineer, Project Designer, and State Utilities Office.
As determined by the DEPARTMENT for each project, but no later than 30 days after the Preliminary Field Plan Review meeting.	Preliminary Design Utility Report	Not Required	District Utilities Engineer, Project Designer, and State Utilities Office.

Reference Section 1.2.C – Project Final Design Phase			
Delivery Date	Document	Professional Certification	Deliver Copies to:
As determined by the DEPARTMENT for each project.	Utility property interest data, Utility-Aid status, final utility relocation plans, UAS.	Relocation Plans, & UAS if prepared by CONSULTANT	Project Designer through the District Utilities Engineer
As determined by the DEPARTMENT for each project, but no later than 12 weeks prior to letting.	Utility letters of “no-cost” and “no-conflict”; Utility Agreements; certificates of eligibility; cost estimates.	Cost Estimates if prepared by CONSULTANT	State Utilities Office through the District Utilities Engineer.
As determined by the DEPARTMENT for each project, but no later than 30 days prior to the Final Field Plan Review meeting.	Utility Impact Analysis.	Required if prepared by CONSULTANT	District Utilities Engineer, Project Designer, and State Utilities Office, Utility Owners.
As determined by the DEPARTMENT for each project, but no later than 14 days prior to the Final Field Plan Review meeting.	Written Final Field Plan Review assessment w/ recommendations.	Not Required	District Utilities Engineer, Project Designer, and State Utilities Office.
As determined by the DEPARTMENT for each project, but no later than the last business day of each month.	Monthly Utility Coordination “Let-Status” Reports.	Not Required	District Utilities Engineer, Project Designer, and State Utilities Office.
As determined by the DEPARTMENT for each project, but no later than 30 days after the Final Field Plan Review meeting.	Final Design Utility Report	Not Required	District Utilities Engineer, Project Designer, and State Utilities Office.

Reference Section 1.8 Utility Construction Engineering and Inspection Services Performed			
Delivery Date	Document	Professional Certification	Deliver Copies to:
As determined by the DEPARTMENT for each project, but no later than the last business day of each month.	Contract Diaries, Inspector Diaries, Inspector Reports, DOT Form 8465	Not Required	Project Engineer, Area Engineer, and District Utilities Engineer
As determined by the Department for each project, but no later than 30 days after completion of the project.	Utility “As-Built” Plans, Contract Diaries, Inspector Diaries, Inspector Reports, DOT Form 8465	Not Required	Project Engineer, Area Engineer, and District Utilities Engineer

1.5 Relocation Design

When requested, the CONSULTANT shall prepare utility relocation design plans for inclusion in the DEPARTMENT’S construction plans. The CONSULTANT shall design the required utility relocations / adjustments for water, sanitary sewer, natural gas, telecommunications, and electrical distribution within the designated project limits. This work shall be coordinated with the roadway design, utility owner/operators, and other Consultants / owners who are designing the relocations / adjustments for other utilities. Additionally, once the subject utility relocations / adjustments designed by the CONSULTANT have moved into the construction phase; the CONSULTANT shall remain available to clarify and answer questions in regards to the CONSULTANT’S design intentions. Such design clarification shall be made to the DEPARTMENT and its contractor as necessary so as to minimize and remedy project delays incurred on construction. Design deliverables will typically be:

- CADD files with existing, proposed, and temporary utilities
- Professionally Certified plans, profiles, special provisions and details
- Summary of Quantity sheets showing utility quantities
- Utility relocation cost estimates
- Utility Adjustment Schedules
- Utility Permits (as applicable)

1.6 Training

A. The CONSULTANT shall participate in and conduct portions of training sessions for DEPARTMENT personnel and consultants. The sessions will be at a location provided by the DEPARTMENT. The topics of the training session will typically be:

- SUE best uses and practices
- Accommodation of utilities within public road Rights-of-Way.
- Utility Impact identification, analysis, avoidance, and resolution.
- Utility design standards, construction methods and staging sequencing needs, and cost efficiency.
- Utility locate request notification best practices (how to make an effective One-Call locate request).

- Writing accurate project and permit specifications for utility work and requirements, respectively.
 - Utility Construction Inspection and Documentation for reimbursable utilities, non-reimbursable utilities, and utility work in the DEPARTMENT's construction project as pay items.
- B. When requested by the DEPARTMENT, the CONSULTANT shall conduct training on construction inspection of utility facilities. .

1.7 Miscellaneous Services

- A. When specifically requested by the DEPARTMENT, the CONSULTANT shall provide construction/utility claims assistance, assessment and consultation services including the prevention and risk management of claims received by the GDOT when construction delays are a result of alleged or potential utility hindrances. The CONSULTANT shall assess claim viability and accountability and damage order of magnitude and review mitigating circumstances and counter claim issues.
- B. When specifically requested by the DEPARTMENT, other services may include providing staff support to the DEPARTMENT'S State and District Utilities Offices. Such support shall include but not be limited to: phase inspection of the physical utility relocation, review of relocation plan and estimates, and any other required engineering, technical, or inspection services that the DEPARTMENT deems necessary.

1.8 Utility Construction Engineering and Inspection Services Performed

The services performed under this section describes and defines the Utility Construction Engineering and Inspection (UCEI) services which are required for utility contract and agreement administration, inspection, documentation, and materials sampling and testing for construction projects.

1.9 General Provisions for Utility Construction Engineering and Inspection

For all work performed under this agreement, the CONSULTANT shall -

1. Perform, to the satisfaction of the DEPARTMENT, all utility construction engineering services necessary or incidental to accomplish the scope of services consistent with applicable professional standards.
2. Monitor and inspect the utility work, whether reimbursable, non-reimbursable, or contract items, such that the utility work is constructed in reasonable conformity with the agreements, permits, plans, specifications, and special provisions.
3. Furnish all equipment, labor, material, and services to accomplish the scope of services.
4. Prior to performing the engineering and inspection, the CONSULTANT shall be familiar with the DEPARTMENT's standard procedures and practices set forth in the Utility Accommodation Policy and Standards Manual, current edition, the Source, and associated documents and with informal procedures and practices including the record keeping system for reimbursable utilities and construction contract administration used by the DEPARTMENT.
5. Perform the utility engineering and inspection in accordance with the established standard procedures and practices of the DEPARTMENT.
6. Ensure the utility construction engineering and inspection complies with all applicable federal and state laws and regulations.

7. Shall furnish information or data relating to the scope of work under this agreement as may be required by the DEPARTMENT to enable it to carry out or to proceed with related phases of the project not covered by this agreement, or which may be necessary to enable the DEPARTMENT to furnish information to the CONSULTANT upon which to proceed with further work.
8. The outlined scope of services shall be within the purview of this agreement and shall not constitute a basis for additional or extra compensation.

2.0 Engineering and Inspection Services Performed by the Consultant

For all work performed under this agreement, the CONSULTANT shall –

1. Observe, inspect, and document the utility work, whether performed by the DEPARTMENT's contractor or by the Utility company, or the utility company's contractor to determine the progress and quality of work, identify discrepancies, report significant discrepancies to the Department, and direct the contractor, utility owner, or utility contractor to correct such observed discrepancies.
2. Attend utility and construction conferences and/or meetings required to carry out the scope of services.
3. Become familiar with the standard utility construction practices of the DEPARTMENT, the utility construction plans, utility adjustment schedules, utility agreements, and utility permits for the project, and the Contractor's proposed schedule of operations prior to beginning field work under this agreement.
4. Assign a sufficient number of technically qualified and experienced personnel to the project to perform the work required under the agreement, in a timely manner to avoid delay to the utilities and contractor.
5. Notify the DEPARTMENT immediately of any unanticipated project conditions.
6. Withdraw any personnel or halt any services no longer required, at the request of the DEPARTMENT, or within a reasonable time after the lack of need becomes apparent to the CONSULTANT.
7. Perform field operations in accordance with the DEPARTMENT's regulations and accepted safety practices.
8. Provide its personnel transportation equipped with appropriate safety equipment, communication devices, hard hat, high visibility vests, and incidentals as are needed to accomplish the work required under the agreement.
9. As Utility Inspector, abide by the Specifications, Special Provisions, the Utility Accommodation Policy and Standards Manual, current edition, the utility permit, the utility adjustment schedule, and The Source of the State of Georgia Department of Transportation.
10. As required by DEPARTMENT's Sampling and Testing Standards, sample and test materials for utility work in the construction project as pay items and reject any work and materials not meeting the Utility Relocation Plans, Specifications, Special Provisions, or The Source of the State of Georgia Department of Transportation.
11. Make certain that test report records or certificates of compliance for utility work in the project as pay items have been received, prior to the incorporation of materials in the work, for materials tested off the project site.
12. Maintain contract and inspector diaries, inspector reports (when the utility work is in the project as pay items), and DOT 8465's consistent with DEPARTMENT practice as are needed for a record of the contractor's, utility owner's, or utility owner's contractor's progress.
13. For items of utility work in the project as pay items, perform measurement and payment, including computation of quantities.

14. For items of utility work in the project as pay items, review contractor submittals of records and reports required by the DEPARTMENT as applicable to the project which may include, weekly payroll, statement of wage compliance, and any other reports and records as required for the individual PROJECT by the DEPARTMENT representative.
15. Collect, properly label or identify, and deliver to the DEPARTMENT all original diaries, logs, notebooks, accounts, records, reports and other documents prepared by the CONSULTANT in the performance of the agreement, upon completion or termination of the agreement.
16. Return, upon completion or termination of the agreement, all specifications, manuals, guides, written instructions, construction contracts and plans, unused forms and record keeping books, and other documents and materials furnished by the DEPARTMENT.
17. The CONSULTANT may be responsible for replacing lost documents or materials at a fair and reasonable price.
18. For each utility facility/owner, prepare and deliver one copy of the "as-built" or "record" plan to the DEPARTMENT. There shall be an "as-built" or "record" for each utility on the project, whether the utility work is in the project as a pay item, or the utility work is performed by the utility owner or the utility's contractor.

2.1 SERVICES TO BE PROVIDED BY THE DEPARTMENT

For all work performed under this agreement, the DEPARTMENT shall -

1. Make available to the CONSULTANT copies of the construction contract(s) and plans, utility plans, utility reimbursable agreements, utility permits (including utility adjustment schedules) shop drawings, plan revisions, specifications, manuals, guides, written instructions and other information and data necessary to enable the CONSULTANT to perform the scope of services under this agreement to the same standards required of the DEPARTMENT'S personnel. Provide for the use of the CONSULTANT a supply of the blank diaries, logs, record keeping books and reporting forms necessary for the CONSULTANT to perform the Services under this agreement to the same standards required of the DEPARTMENT'S personnel.
2. Provide space in the field office and field laboratory furnished by the Contractor under the terms of the construction contract, for the occupancy and use of the CONSULTANT until completion of the utility work.
3. Provide for laboratory testing of materials requiring off-site testing facilities, and authorize CONSULTANT to obtain test reports or certificates of compliance for such testing.

2.2 PERFORMANCE OF THE CONSULTANT

During the term of this agreement and all supplements thereof, the DEPARTMENT will review various phases of CONSULTANT operations to determine compliance with this agreement. These reviews will be conducted semi-annually. The CONSULTANT shall cooperate and assist the DEPARTMENT in conducting the reviews. If deficiencies are indicated, the CONSULTANT shall implement remedial action immediately. DEPARTMENT recommendations and CONSULTANT responses/actions are to be properly and thoroughly documented. No additional compensation shall be allowed for remedial action taken by the CONSULTANT to correct deficiencies. Remedial actions and required response times may include but are not necessarily limited to the following:

1. Further subdivide assigned inspection responsibilities, reassign inspection personnel, or assign additional inspection personnel, within one week of notification.

2. Replace personnel whose performance has been determined by the DEPARTMENT to be inadequate. Personnel whose performance has been determined to be unsatisfactory shall be removed immediately.
3. Immediately increase the frequency of monitoring and inspection activities in phases of work that are the Consultant's responsibility.
4. Increase the scope and frequency of training of the Consultant personnel.

2.3 QUALITY ASSURANCE (QA)

The CONSULTANT shall conduct semi-annual reviews to make certain their own organization is in compliance with the requirements cited in the scope of services. Quality Reviews shall be conducted to evaluate the adequacy of materials, processes, documentation, procedures, training, guidance, and staffing included in the execution of this agreement. Quality Reviews shall also be developed and performed to achieve compliance with specific QA provisions contained in this agreement. The semi-annual reviews shall be submitted to the District Construction Engineer, District Utilities Engineer, State Construction Engineer, and State Utilities Engineer in written form no later than one (1) month after the review.

Within thirty (30) days after receiving award of an agreement, the CONSULTANT shall furnish a QA Plan to the District Utilities Engineer, District Construction Engineer, and State Utilities Engineer. The QA Plan shall detail the procedures, evaluation criteria, and instructions of the CONSULTANT'S organization for providing services pursuant to this agreement. Unless specifically waived, no payment shall be made until the DEPARTMENT approves the CONSULTANT'S QA Plan. Significant changes to the work requirements may require the CONSULTANT to revise the QA Plan. It shall be the responsibility of the CONSULTANT to keep the plan current with the work requirements. The Plan shall include, but not be limited to, the following areas:

1. A description is required of the CONSULTANT'S QA Organization and its functional relationship to the part of the organization performing the work under the agreement. The authority, responsibilities and autonomy of the QA organization shall be detailed as well as the names and qualifications of personnel in the quality control organization.
2. The CONSULTANT'S QA shall detail the methods used to monitor and achieve organization compliance with agreement requirements for services and products.
3. The CONSULTANT will outline the types of records, which will be generated and maintained during the execution of his QA program.
4. The CONSULTANT will detail the methods used to control sub-consultants and vendor quality.
5. An officer of the CONSULTANT firm shall certify that the inspection and documentation was done in accordance with GDOT specifications, plans, standard indexes, Utility Accommodation Policy and Standards Manual, current edition, utility reimbursable agreements, utility permits, and Department procedures outlined in The Source.

2.4 PERSONNEL

The Consultant shall staff the project with the qualified personnel necessary to efficiently and effectively carry out its responsibilities under this agreement. Method of compensation for personnel assigned to this project is outlined in Exhibit "C."

The Consultant shall utilize only competent personnel, qualified by experience, and education. The Consultant shall submit in writing to the District Construction Engineer, District Utilities Engineer, and State Utilities Engineer the names of personnel proposed for assignment to the project, including a detailed resume for each containing education, and experience. This request for personnel approval shall be submitted to the DEPARTMENT at least two weeks prior to the date an individual is to report to work.

Personnel identified in the Consultant Statement of Qualifications are to be assigned as proposed and are committed to performing services under this agreement. Personnel changes will require written approval from the DEPARTMENT. Staff that has been removed shall be replaced by the CONSULTANT within one week of DEPARTMENT notification.

Before the project begins, all project staff shall have a working knowledge of the Utility Accommodation Policy and Standards Manual, current edition, and The Source and must possess all the necessary qualifications/certifications for obtaining the duties of the position they hold. Cross training of the CONSULTANT's project staff is highly recommended to achieve a knowledgeable and versatile project inspection team but shall not be at any additional cost to the DEPARTMENT and should occur as workload permits.

Minimum qualifications for the CONSULTANT personnel are set forth as follows. Exceptions to these minimum qualifications will be considered on an individual basis. The CONSULTANT shall submit a training plan detailing when such qualifications/certifications will be obtained and other training to familiarize with DEPARTMENT's procedures, Utility Accommodation Policy and Standards Manual, current edition, Specifications, and The Source. The District Construction Engineer, District Utilities Engineer, and State Utilities Engineer will have the final approval authority on such exceptions.

Utility Inspector I

This is advanced journey level technical work supporting higher level technicians and engineers in functional areas such as construction utility inspection and surveying; scheduling and status; roadway design; traffic signal equipment; traffic signalization and geometrics; materials sampling; inspection and testing. Work usually involves a significant amount of decision making and use of judgment, and may include providing work directions to others.

Employees may perform independent complex inspections of utility work, roadways and structure construction processes and materials to assure compliance with the construction contract, utility and construction plans, reimbursable utility agreement, utility permit, and utility schedule.

Employees may perform moderately complex inspections; or supervise other inspectors conducting routine and standardized inspections. Work may include inspecting and documenting utility relocation, removal, and adjustment work, asphalt and concrete work; roadways, structures, and other related work for conformance to plans, manuals, specifications, and permits; structural materials and members; placement of culverts and pole structures; structural operations such as foundation excavation; placement of piling, reinforcing and structural steel, concrete and backfill; and traffic control and erosion control devices. Employees may also perform the more complex variety of calculations and computations. Employees may perform contract documentation duties,

which may include field measurements of pay items as well as other DEPARTMENT required documentation. Work may include other duties and responsibilities as assigned.

Knowledge, Skills and Abilities: Considerable knowledge of materials, methods, and equipment used in highway and utility construction; and considerable knowledge of mathematical functions including geometry and trigonometry; drafting skill and skill in the use of office equipment such as calculators and computers; ability to read, interpret, and explain such things as utility and construction plans, contract provisions, specifications, utility permits and schedules, and inspection procedures; ability to take notes and prepare or review reports; good communicative ability; and ability to instruct other employees in proper work methods; shall be licensed to operate motor vehicles in accordance with Georgia law.

Minimum Training and Experience Requirements: Graduation from a university with a degree in Civil Engineering or from a four-year college with a degree in Civil Engineering Technology; graduation from a two-year technical college with a degree in Civil Engineering Technology and three (3) years of progressive transportation technical experience; or graduation from high school and five years of progressive transportation technician experience as an employee or consultant for a State Highway Agency; or an equivalent combination of training and directly related experience.

Utility Inspector II

This is advanced journey level technical work supporting higher level technicians and engineers in functional areas such as construction utility inspection and surveying; scheduling and status; roadway design; traffic signal equipment; traffic signalization and geometrics; materials sampling; inspection and testing. Work usually involves a significant amount of decision making and use of judgment, and may include providing work directions to others.

Employees may perform independent complex inspections of utility work, roadways and structure construction processes and materials to assure compliance with the construction contract, utility and construction plans, reimbursable utility agreement, utility permit, and utility schedule.

Employees may perform moderately complex inspections; or supervise other inspectors conducting routine and standardized inspections. Work may include inspecting and documenting utility relocation, removal, and adjustment work, asphalt and concrete work; roadways, structures, and other related work for conformance to plans, manuals, specifications, and permits; structural materials and members; placement of culverts and pole structures; structural operations such as foundation excavation; placement of piling, reinforcing and structural steel, concrete and backfill; and traffic control and erosion control devices. Employees may also perform the more complex variety of calculations and computations. Employees may perform contract documentation duties, which may include field measurements of pay items as well as other Department required documentation. Work may include other duties and responsibilities as assigned.

Knowledge, Skills and Abilities: Considerable knowledge of materials, methods, and equipment used in highway and utility construction; and considerable knowledge of mathematical functions including geometry and trigonometry; drafting skill and skill in the use of office equipment such as calculators and computers; ability to read, interpret, and explain such things as utility and construction plans, contract provisions, specifications, utility permits and schedules, and inspection procedures; ability to take notes and prepare or review reports; good communicative ability; and

ability to instruct other employees in proper work methods; shall be licensed to operate motor vehicles in accordance with Georgia law.

Minimum Training and Experience Requirements: Graduation from a university with a degree in Civil Engineering or from a four-year college with a degree in Civil Engineering Technology and two (2) years of progressive transportation technical experience; graduation from a two-year technical college with a degree in Civil Engineering Technology and five (5) years of progressive transportation technical experience; or graduation from high school and seven (7) years of progressive transportation technician experience as an employee or consultant for a State Highway Agency; or an equivalent combination of training and directly related experience.

Senior Utility Inspector

This is advanced level technical work supporting engineers in functional areas of utility, structure, and roadway construction inspection; materials sampling, inspection and testing. Work usually involves a fairly wide range of decision making and use of judgment, and would normally include providing work direction to others.

Employees may function as lead project inspectors conducting independent complex inspections themselves, and supervising lower level inspectors performing routine to moderately complex inspections of utility, roadway, and structure construction processes and materials to assure compliance with the construction contract, reimbursable utility agreement, utility relocation plans, utility permit, and utility schedule. Employees may perform contract administrative duties such as field measurements of pay items as well as other DEPARTMENT required documentation. Work may include other duties and responsibilities as assigned.

Knowledge, Skills and Abilities: Thorough knowledge of materials, methods and equipment used in utility and highway construction. Considerable knowledge of mathematical functions, including algebra, geometry, and trigonometry; skill in the use of office equipment such as calculators and computers; ability to read, interpret and explain such things as utility and construction plans, contract provisions, specifications, reimbursable utility agreements, utility permits and schedules, and inspection procedures; ability to take notes and prepare or review reports; good communicative ability; and supervisory ability to coordinate the activities of lower level employees and instruct them in proper work methods; shall be licensed to operate motor vehicles in accordance with Georgia law.

Minimum Training and Experience Requirements: Graduation from a university with a degree in Civil Engineering or from a four-year college with a degree in Civil Engineering Technology and three (3) years of progressive transportation technician experience; graduation from a two-year technical college with a degree in Civil Engineering Technology and six (6) years of progressive transportation technician experience; or graduation from high school and eight (8) years of progressive transportation technician experience as an employee or consultant for a State Highway Agency; or an equivalent combination of training and directly related experience.