



February 28, 2025

City of Powder Springs - City Hall  
4484 Marietta Street  
Powder Springs, Georgia 30127

**Attention: Pam Conner, City Manager**

**Subject: Proposal for Professional Engineering Services  
Brownsville Road Connectivity Study  
City of Powder Springs, Georgia**

Dear Ms. Conner:

Croy Engineering, LLC is pleased to submit this Scope of Services to the City of Powder Springs to provide professional services to complete a traffic engineering study for potential new road connection between Brownsville Road and Oglesby Road and prepare conceptual layouts of the proposed alternatives. The finding of this study will be summarized in a Traffic Engineering Report. A more detailed project specific Scope of Services is attached and identified as Exhibit A.

Thank you for this opportunity to submit this proposal. If you have any questions, please feel free to contact me at [REDACTED].

Sincerely,

Croy Engineering, LLC

Aimee S. Turner, P.E., PTOE  
Traffic Engineering Department Manager

Exhibits

CC: Wayne O. McGary, P.E., Croy Engineering  
Roy Acree, Croy Engineering  
Chris Rideout, P.E., Croy Engineering

## EXHIBIT A

### SCOPE OF WORK

Given the existing traffic conditions and proposed new developments in the vicinity of Brownsville Road, a potential new road connection between Brownsville Road and Oglesby Road is being considered to improve safety and operations. The study area and key notes are shown in Figure 1. Croy proposes the following scope of work for a Brownsville Road Connectivity Study.

#### TASK 1: PROJECT MANAGEMENT

**Kick-off Meeting** - The initiation of this study will begin with a kick-off meeting between City of Powder Springs and Croy to gain input into the study process. The purpose of this meeting is to review and define the study objectives, scope, and goals in consultation with relevant city departments.

**Status Meetings** - Following the project's kick-off, our team will also hold monthly virtual Project Management Team (PMT) meetings to discuss the progress through status updates; perform QA/QC on research and findings; as well as provide support and insight throughout the study process.

Coordination Meetings – Coordinate review and concurrence of study with Cobb County Department of Transportation.

#### TASK 2: TRAFFIC DATA COLLECTION

To quantify existing and projected traffic operations at key locations in the study area **traffic counts** will be collected at key intersections and road segments. The proposed count locations for the traffic study, include the following:

- (2) 48-Hour Bi-Directional ADT + Classification Counts
  1. Brownsville Road south of US 278
  2. Oglesby Road east of Brownsville Road
- (4) 12-Hour Turning Movement Counts (6am – 6pm)
  1. Brownsville Road at Oglesby Rd-Zaxby's Driveway
  2. Brownsville Road at Heartwood Apartments Dwy
  3. Brownsville Road at Selig Property
  4. Oglesby Road at Private Driveway
- (4) 4-Hour Turning Movement Counts (7am-9am; 4pm-6pm)
  - Brownsville Road at Hiram Litha Springs Road
  - Brownsville Road at Kroger Driveway (1)
  - Brownsville Road at Kroger Driveway (2)
  - Brownsville Road at US 278

*Data collection will be performed by a subconsultant.*



**Figure 1: Brownsville Road Connectivity Study Area**



## TASK 3: TRAFFIC ENGINEERING STUDY

To complete the traffic operations analysis for the proposed new road connection, the following methodology is proposed:

### EXISTING CONDITIONS ANALYSIS

- Complete a review of existing roadway facilities to document existing conditions of the roadway infrastructure in the study area. All data including signal timing, lanes' configurations and collected traffic volumes will be added to the traffic engineering software simulation model for existing traffic conditions in the study area.
- Quantify existing traffic operating conditions of surrounding roadway network using traffic engineering software. Information associated with Levels of Service (LOS) and controlled delay will be reported.
- Complete crash data analysis within the study area for the most recent available three-year period.
- Conduct field visit at site location to document existing conditions.

### TRAFFIC FORECASTING ANALYSIS

- Identify planned developments and programmed transportation improvement projects in the vicinity of the site location that may impact traffic in the future in the study area.
- Complete growth rate analysis to project the existing traffic data to a future base year (open-to-traffic) and a design year (20-year horizon) following GDOT's Traffic Design Manual guidelines. The calculated annual growth rate (AGR) will be used to forecast traffic volumes within the study area.
- Identify information regarding planned developments and programmed transportation projects to be included in the projection of future conditions.
- Estimate new trips for the planned developments in the study area using the Institute of Transportation Engineers *Trip Generation*, latest edition. The estimate new trips generated by the planned development in the study area will be distributed to the adjacent roadway network using the trip distribution.
- Prepare the following traffic diagrams:

2025 Existing Year	2030 Base Year		2050 Design Year	
<ul style="list-style-type: none"> <li>• AM Peak Hour</li> <li>• PM Peak Hour</li> </ul>	No Build	Build	No Build	Build
	<ul style="list-style-type: none"> <li>• AM Peak Hour</li> <li>• PM Peak Hour</li> </ul>	<ul style="list-style-type: none"> <li>• AM Peak Hour</li> <li>• PM Peak Hour</li> </ul>	<ul style="list-style-type: none"> <li>• AM Peak Hour</li> <li>• PM Peak Hour</li> </ul>	<ul style="list-style-type: none"> <li>• AM Peak Hour</li> <li>• PM Peak Hour</li> </ul>

### TRAFFIC OPERATIONS ANALYSIS

- Complete a capacity analysis to quantify "Existing" and "No Build" traffic operations at the study intersections. For each of the proposed "Build" alternatives, LOS and delay will be analyzed for the base and design years. Traffic simulation software, Synchro™ and HCST™, will be used to determine LOS, delay, and other measures of effectiveness for the study network.
- Conduct a Level of Traffic Stress (LTS) analysis to quantify the amount of discomfort that people feel when they walk or bicycle close to traffic within the study area. This analysis will aid in identifying the most appropriate pedestrian and bicycle recommendations to improvement walkability in the area.
- Document proposed recommendations for improvements in the study area.

## TASK 4: CONCEPT DEVELOPMENT

To aid in visualizing the potential alternatives, **conceptual sketches** (up to 2) of potential alternatives will be drafted.

Potential recommendations will be vetted for feasibility through a high-level benefit-cost screening process and documented in a **tabular comparative matrix**. The comparative matrix criteria to assess the feasibility and effectiveness will include, but is not limited to, project costs, safety and operations impacts, multi-modal impacts, right-of-way impacts, environmental impacts, and any other pertinent considerations.

After the PMT's review of the draft of the proposed intersection control alternatives, a **concept layout plan** of the preferred alternative and corresponding cost estimate will be prepared. The Concept Plan will be developed on high resolution aerial photography at an engineering scale of 1" = 50' or larger.

A **detailed cost estimate** will be prepared for the preferred alternative based on the latest GDOT construction cost data.

## TASK 5: TRAFFIC ENGINEERING REPORT

The findings of the Brownsville Road Connectivity Study intersection improvement analysis will be summarized in a **Traffic Engineering Report**. The report will address existing and future traffic projections; connectivity and multimodal assessments; traffic simulation model outputs for the "Existing", "No Build" and "Build" alternatives; a summary of the recommendations; associated Levels of Service (LOS) and safety improvements; cost estimates; and concept plans. The culmination of this report will be an Implementation Plan that will serve as a framework for tactical decisions and budgeting purposes for the City of Powder Springs.














## PROJECT COST

The lump sum fee breakdown for the scope of work detailed in this proposal is below.

Task Description	Cost
Task 1: Project Management	\$ 4,160.00
Task 2: Traffic Data Collection	\$ 4,420.00
Task 3: Traffic Engineering Report	\$ 14,400.00
Task 4: Concept Development	\$ 10,800.00
Task 5: Traffic Engineering Report	\$ 11,910.00
<b>GRAND TOTAL</b>	<b>\$ 45,690.00</b>

## PROJECT SCHEDULE

Upon the receipt of the Notice to Proceed (NTP), Croy's proposed schedule is detailed per task below.

	Month 1 Apr-24	Month 2 May-24	Month 3 Jun-24	Month 4 Jul-24	Month 5 Aug-24
<b>Task 1: Project Management</b>					
Kick-off Meeting & Status Meetings					
<b>Task 2: Traffic Data Collection</b>					
Traffic Data Collection					
<b>Task 3: Traffic Engineering Study</b>					
Existing Conditions Analysis					
Traffic Forecasting Analysis					
Traffic Operations Analysis					
<b>Task 4: Concept Development</b>					
Concept Development					
Cost Estimation					
Preferred Alternative Concept Layout					
<b>Task 5: Traffic Engineering Report</b>					
Traffic Engineering Report					

## NOTES

Croy Engineering can provide additional services, and add them to the Scope of Work, if requested. These services include, but are not limited to, additional analyses requested by the City of Powder Springs or Cobb County and design services.

## INVOICING

Invoicing will be progressive and will be submitted monthly for percentage work completed to date, less previous payments.