

Effingham County Safe Streets and Roads for All (SS4A) Planning and Demonstration Grant Application

Project Narrative

Effingham County, one of the fastest-growing regions in Georgia, is committed to improving roadway safety through innovative and sustainable infrastructure projects. The county seeks funding under the SS4A Planning and Demonstration Grant to develop a comprehensive Safety Action Plan and implement demonstration activities to reduce roadway fatalities and serious injuries.

The proposed project focuses on installing solar-powered LED light poles along high-risk roadways in Effingham County. These light poles will significantly enhance visibility and safety for all road users, including pedestrians, bicyclists, and motorists, particularly in underserved rural areas. The project aligns with the goals of the SS4A program by employing low-cost, high-impact strategies that improve safety and incorporate equity into infrastructure improvements.

Project Description

The Effingham County Light Installation and Traffic Enhancement (LITE) Project involves installing 100 solar-powered LED light poles along key roadways identified as part of the county's high-injury network. The light poles are designed to provide consistent lighting, reduce energy consumption, and lower maintenance costs. The project will utilize advanced solar technology that ensures reliable power generation, even during periods of low sunlight, making it a resilient and sustainable solution.

The installation includes preparing foundations, erecting poles, and wiring the LED lights. The project leverages local labor and materials to support the county's economic development further while ensuring timely completion. The proposed demonstration activities will test the effectiveness of this solution in reducing nighttime crashes, with data collection and analysis integrated into the county's broader safety strategy.

Budget Table

Below is the estimated budget for the Effingham County LITE Project, detailing the costs associated with developing the Action Plan, conducting supplemental planning, and carrying out the demonstration activities:

Description/Item	Quantity	Price Per Unit	Total Cost	Comments
Solar Light with Battery and associated poll	100	\$12,000	\$1,200,000	All costs are inclusive of acquisition and installation
Solar Powered Speed Monitoring & Messaging Sign	20	\$11,500	\$230,000	Includes installation and 24 months of unlimited data collection and cloud connectivity
Solar Powered Pedestrian Crossing Beacons and striping	6	\$15,000	\$90,000	Two solar ped signs and striping with led pavement lighting with controller
Solar Powered Portable Off Grid EV Charging System	2	\$105,000	\$210,000	Dual port 40kWh of battery storage with trailer for movement of devices

Evaluation and Assessment	1	\$30,000	\$30,000	
Total Demonstration Cost			\$1,760,000	
SS4A Demonstration Federal Share Request			\$1,408,000.00	
Effingham County Match			\$352,000	

Timeline

The expected project completion timeline for the Effingham County LITE Project under the SS4A Planning and Demonstration Grant is as follows:

Initial Phase (Months 1-6):	Planning and Design: This phase includes developing the detailed Safety Action Plan, selecting the site for the light poles, and completing necessary environmental assessments and permitting processes. Based on the solar array battery size and pole locations, the final feasibility study will be completed during this period.
Procurement and Preparation (Months 7-9):	Procurement of Materials and Equipment: All necessary materials, including solar-powered LED light poles, will be procured.
	Foundation Preparation: Foundations for the light poles will be prepared, and it is estimated to take approximately 1 hour per pole.
Installation Phase (Months 10-18):	Installation of Light Poles: Each pole's installation process is expected to take around 2 hours (1 hour for foundation preparation and 1 hour for pole installation). With 120 poles to install, the installation phase is expected to be completed within eight months.
	System Testing and Initial Data Collection: After installation, the system will undergo testing to ensure proper functioning, and initial data on energy consumption and safety improvements will be collected.
Monitoring and Final Evaluation (Months 19-24):	Data Collection and Analysis: Continuous data collection and analysis will be conducted to evaluate the effectiveness of the demonstration activities, mainly focusing on reducing nighttime crashes and energy savings.
	Final Reporting: The final report will be prepared, detailing the project's outcomes, including safety improvements and cost savings, and recommendations for broader implementation.

The project is expected to be fully completed within 24 months of its start date, with all activities and final reporting completed within this timeframe.