

Georgia Electric Vehicle Infrastructure Deployment Plan

A U G U S T 2 0 2 2



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1 INTRODUCTION

This Electric Vehicle Infrastructure Deployment Plan sets forth the State of Georgia's approach to utilizing its apportionment of \$135 million in formula funding (subject to appropriation) from the National Electric Vehicle Infrastructure (NEVI) Program in conformance with the guidance published by the Joint Office of Energy and Transportation on February 10, 2022. This plan specifically outlines how Georgia intends to invest the FY 2022-23 funding and the strategic approach to investing in the following three fiscal years of NEVI funding.

The Georgia Department of Transportation (GDOT) developed this plan with input from the Georgia Department of Economic Development (GDEcD), the Georgia Emergency Management Agency (GEMA), the Georgia Environmental Finance Authority (GEFA), the Governor's Office of Highway Safety (GOHS), the Department of Administrative Services (DOAS), the Department of Natural Resources (DNR), the Georgia Division of the Federal Highway Administration (FHWA), several regional planning councils and MPOs, electric utilities, community-based advocacy groups, electric vehicle charging station providers, potential site hosts, and others. More information on State agency engagement and stakeholder outreach is provided in **Chapters 2 and 3**.

This plan covers the entire State of Georgia. Initial planning began immediately upon the passage of the Bipartisan Infrastructure Law (BIL) in November 2021 (see **Figure 1**). A Statement of Need was issued by GDOT on February 8, 2022, to develop a comprehensive strategy for Electric Vehicles (EVs) in Georgia. GDOT used the Federal Highway Administration's (FHWA) subsequent February 10, 2022, NEVI guidance to focus the initial work on NEVI requirements for Alternative Fuel Corridors (AFCs).

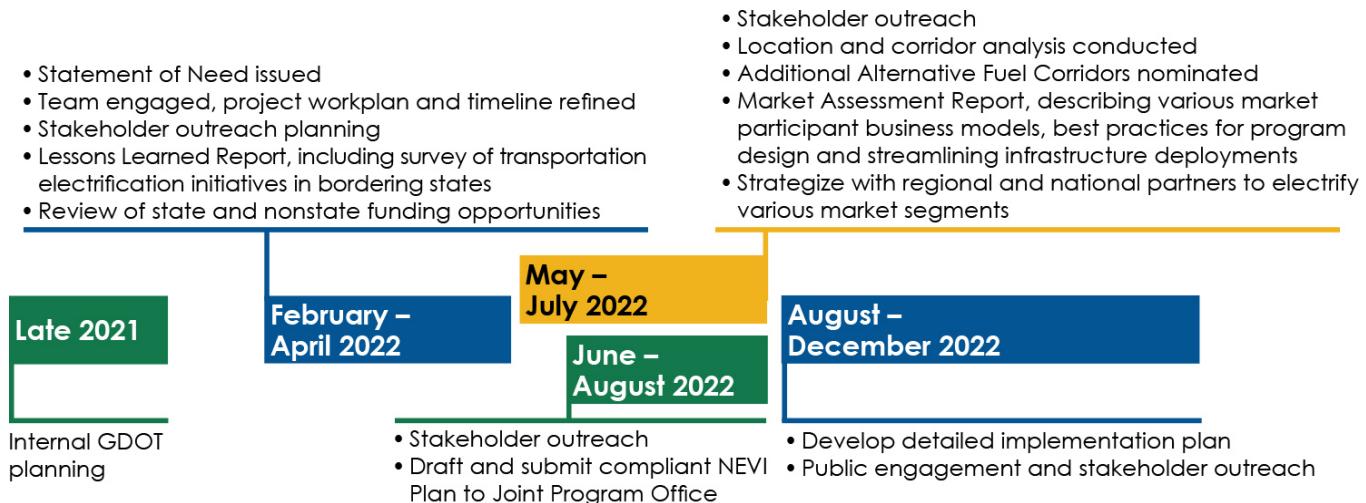


Figure 1: Dates of State Plan for EV Infrastructure Deployment Development and Adoption

In early April 2022, a refined project timeline and workplan was developed along with a stakeholder outreach plan, survey of state and non-state grant funding opportunities and eligibility, and an approach to equity and Justice40 requirements. A summary of transportation

electrification programs and key lessons learned by Departments of Transportation and energy offices in neighboring states was prepared at the end of April to inform the planning underway.

In May 2022, GDOT submitted US-82 (between Albany and Brunswick) and US-441 (between Dublin and Cornelia) as electric vehicle Alternative Fuel Corridors (AFCs) in FHWA's Round 6 nomination to begin to improve EV charging access in rural areas of the state. As part of its AFC evaluation process, GDOT conducted a location and corridor analysis to identify gaps in the network and to determine the feasibility of designating additional AFCs that met several key criteria including adequate traffic, market demand, alignment with emergency evacuation routes, and connectivity to key tourism destinations among others. These two additions to Georgia's Alternative Fuel Corridors were approved by FHWA in July 2022.

Stakeholder outreach to electric vehicle supply equipment (EVSE) providers, electric utilities, and planning partners including metropolitan planning organizations (MPOs), private-business partners, border states, equity community organizations, and others was also conducted. Their insights and expertise have been instrumental in developing recommendations for Round 6 AFC nominations, creating this document, and providing the basis for a Market Assessment Report that informed an initial design of GDOT's EV charging station program.

GDOT will fulfill its obligation, under Federal law, to act as a niche investor in the buildout of a national infrastructure network to enable EV charging where there is clear consumer demand yet also limited private sector interest to invest without the availability of publicly funded subsidy. GDOT's primary focus for approximately the first two years of NEVI funding will be to build out its approved AFCs to NEVI standards, meaning four 150 kW DC fast chargers less than 50 miles apart and within 1 mile of the corridor. Over the life of the NEVI program, GDOT will continue to identify additional investments that align with its niche investor role, looking to fill gaps in areas around the state to meet expected EV utilization.

Upon receipt of the JPO's approval of the plan, GDOT will adopt this plan.

2 STATE AGENCY COORDINATION

GDOT has benefited from active support and engagement throughout the Department and from multiple state stakeholders, including several peer-state agencies. This chapter captures the input of the various entities, details the engagement activities to date, and summarizes these partners' roles, interests, responsibilities, and impacts on the NEVI planning and deployment processes. Through outreach and engagement, the GDOT NEVI team is working to:



Figure 2: Goals of Outreach and Engagement

2.1 INTERNAL GDOT COORDINATION

GDOT's Office of Planning is responsible for preparing the NEVI Plan and soliciting the feedback necessary to reflect a variety of perspectives. The offices and divisions listed in **Table 1** have been engaged in plan development. See **Table 4** for more detail on the phased approach to outreach.

Table 1: Summary of Internal GDOT Office/Division Coordination

Engagement Phase	Office/Division	Input and Impacts
Phase 1: April – August 2022	Transportation Data	Data inputs into planning
	Environmental Services	NEPA and Permitting processes
	Program Delivery	Implementation
	Alternative Delivery	P3 Implementation
	Permits and Operations	Implementation, Operation, and Management
	Legal Services	Set up special assistant to attorney general (SAAG) for contracting
	Equal Employment Opportunity	Equity and Civil Rights
Phase 2: June – September 2022	Intermodal	Airport, rail, transit, waterways
	Procurement	Contracting
	Strategic Communications	General public engagement, engagement with Disadvantaged Communities
	Information Technology	Measurement tools
	Field Services (Districts 1-7)	Understanding of local needs and impacts; coordination across projects; local oversight
Phase 3: October 2022 – April 2023	Equipment Management	State vehicles

*Note: phase dates are approximate; some outreach may deviate to accommodate stakeholder schedules.

2.2 OTHER STATE AGENCY COORDINATION

Transportation electrification and the NEVI program can support many facets of State government. GDOT is coordinating across multiple state agencies to determine roles, responsibilities, and impacts in the deployment and regulation of EVSE funded by the NEVI program. GDOT will coordinate closely with Georgia Environmental Finance Authority (the State's energy office) on opportunities that align USDOE and USDOT interests. GDOT will collaborate with the Georgia Department of Administrative Services (DOAS) on activities that

can be jointly undertaken for NEVI-funded charging stations to expand EV purchasing by State agencies. Additionally, GDOT's Commissioner is named as a member of the 2022 Joint Study Committee on Electrification of Transportation established by the Georgia Legislature with the purpose of recommending legislative proposals for Electric Vehicle Charging. **Table 2** summarizes state agency coordination efforts:

Table 2: Summary of Georgia State Agency Coordination

Engagement Phase	State Agency	Roles	Input and Impacts
Phase 1: April – August 2022	GDOT	Mapping, planning, program management (contracting, ROW, NEPA, procurement, inspection, disbursement, reporting)	Establishing five-year program management of all program aspects (see Section 2.1 above on specific GDOT office interests)
	Governor's Office of Highway Safety	Safety	Considering safety issues beyond emergencies
	Georgia Department of Economic Development	Economic development projects (especially automotive manufacturers and their suppliers) and tourism	Identifying synergies between economic development and tourism goals and NEVI investments and collaborating to enhance program outcomes (e.g., with charging site hosts, and EV manufacturers) and coordination with any work of the Electric Mobility and Innovation Alliance (EMIA)
	Georgia Department of Administrative Services Office of Fleet Management	Responsible for policy administration, data collection, auditing, education, oversight, and guidance for decentralized fleet management functions Approves all vehicle purchases and driver assignments in accordance with OPB Policy 10	Fleet electrification in support of state charging network development goals as budget approval is granted
	Georgia Department of Administrative Services State Purchasing Division	Administers fleet procurement and contracting process	Opportunities for EVSE vendor participation in procurement processes for state vehicles and opportunities to utilize US made EVSE
	Georgia Emergency Management Agency	Prepares for, responds to, and recovers from emergencies	Evacuation planning and EVs Leveraged funding for charger deployments
	Georgia Environmental Finance Authority	Plays role of state department of energy and manages relationship to USDOE grant programs.	Leveraging DOE grant programs and knowledge in the implementation phase

Engagement Phase	State Agency	Roles	Input and Impacts
Phase 2: June – September 2022	Parks, Recreation, and Historic Sites Division (Department of Natural Resource)	Manage state parks, some of which have destination EV charging	Identifying overlap between routes to popular state parks and AFCs
	Environmental Protection Division (Department of Natural Resource)	Issues and enforces state and Federal environmental permits	Considering which permits will be required for EVSE, and any guidance for streamlining opportunities
	State Road and Tollway Authority	Operates tolled transportation facilities, finances transportation improvements, and manages Atlanta regional commuter bus	Considerations of expanding EV bus fleets including charging availability
	Technical College System of Georgia	Training for installation, maintenance, and repair of EV charging stations	Develop curricula focused on EV and EVSE installation, inspection, maintenance, and repair
Phase 3: October 2022 – April 2023	Department of Community Affairs	Oversees comprehensive plans for cities and counties	Coordination between state plans and local/regional plans
	Joint Study Committee on Electrification of Transportation (legislative branch committee)	Consider legislative proposals for EV charging.	Coordination of NEVI implementation with the development of the comprehensive strategic plan
	Public Service Commission	Provides utility coordination, direction, and regulation	Policies re: utility role in the marketplace, rate design, utility "make-ready," rebates and incentives, retail resale of electricity, different ownership and operational models
	Department of Revenue	Collects motor fuel excise tax	Consideration of net impact of EVs on revenues and options to replace shift from gas taxes
	Fuel and Measures Division (Dept of Agriculture)	Regulates the methods of sale, signage, measure, and inspection of energy sold as motor fuel	Potential role in setting standard requirements, type of measurement, types of fees, types of signage, and funding for inspectors
	Georgia Department of Education	Governs public primary and secondary education	Coordination on education to promote workforce development and training efforts in K-12 schools

Engagement Phase	State Agency	Roles	Input and Impacts
	University System of Georgia	Governs public higher education institutions	Coordination on workforce development and education including with Georgia's three public Historically Black Colleges and Universities
	Georgia Technology Authority	Manages the delivery of state information technology infrastructure	Coordination of cybersecurity policies with EVSE deployment
	Georgia Ports Authority	Manages Georgia ports	Coordination of potential freight electrification infrastructure investments

*Note: phase dates are approximate; some outreach may deviate to accommodate stakeholder schedules.

3 PUBLIC AND STAKEHOLDER OUTREACH

Public and stakeholder outreach has been, and will be, key to the successful implementation of Georgia's EV Deployment Plan. It serves to raise awareness and gather valuable input from communities and stakeholders. As noted in **Chapter 2**, GDOT developed this plan in coordination with multiple stakeholders. Public engagement efforts focus on the categories defined by FHWA and are being phased as shown in **Table 3**.

Table 3: Phasing of Stakeholder and Public Outreach

Phase Definition*	Audience	Purpose
Phase 1: April – August 2022	State Agencies and Technical Partners	Technical Coordination
Phase 2: June – September 2022	Stakeholder Organizations, Equity Communities	Organizational Feedback
NEVI Plan Due: August 1, 2022	USDOT FHWA	Federal Review
USDOT Approval (pending): September 30, 2022	USDOT FHWA	Federal Approval
Phase 3: October 2022 – April 2023	General Public	Public Engagement on Plan
Phase 4: 2023 - 2026	All Stakeholder Groups	Ongoing Annual Plan Updates

*Note: phase dates are approximate; some outreach may deviate to accommodate stakeholder schedules.

3.1 STAKEHOLDERS INVOLVED IN PLAN DEVELOPMENT

Stakeholder engagement on EVSE issues predates the NEVI Formula Program. Prior to the passage of the BIL, Governor Brian Kemp convened the Electric Mobility and Innovation Alliance (EMIA) in July 2021, which was led by GDEcD with support from multiple private sector stakeholders and State agencies including GDOT. EMIA is a statewide initiative between government, industry, electric utilities, nonprofits, and other key stakeholders with the goal of

growing Georgia's electric mobility ecosystem and strengthening the state's position in electrification-related manufacturing and innovation.

Since the BIL's enactment in November 2021, GDOT has continued to engage key stakeholders including other state agencies, planning partners, border states, equity community, electric utilities, vehicle manufacturers and their suppliers, private-sector organizations, and other FHWA mandated stakeholders. A preliminary list of stakeholder groups is provided below and will be continuously updated. A more detailed list will be submitted to FHWA as part of the annual Stakeholder Summary Report requirement.

Stakeholders and audiences are categorized in **Figure 3**.



Figure 3. Stakeholder Categories

57 Entities Consulted

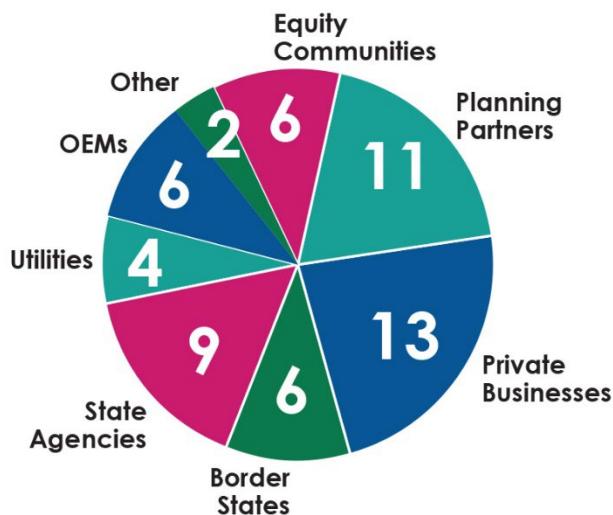


Figure 4: NEVI Outreach to Date

Outreach with these entities is designed to determine stakeholder points of view and requirements. In the case of the electric utilities, GDOT has convened working groups to facilitate a broader, cross-stakeholder discussion of NEVI-related issues. As of July 26, GDOT had held 81 stakeholder meetings or interviews with 57 different entities. **Figure 4** summarizes the diversity of stakeholder meetings that began in November 2021. This list will grow as GDOT continues its outreach efforts. In addition to technical stakeholders, GDOT has met with multiple equity community partners.

The purposes of the Phase 1 and 2 outreach are to:



Figure 5: Purposes of Phase 1 and Phase 2 Outreach

The types of stakeholders influencing the shape of the plan, their relevance for NEVI planning, and their interests in and impacts to the outcomes of the plan are provided in more detail in **Table 4**.

Table 4: Phase 2 and Phase 3 Stakeholders Outreach

Type	Stakeholders	Relevance for NEVI Planning	Examples of Interests and Impacts
Regional Commissions and Clean Cities	<ul style="list-style-type: none"> Clean Cities-Georgia Middle Georgia Atlanta Region Northwest Georgia Georgia Mountains Three Rivers River Valley 	Regional transportation planning, equity planning, stakeholder engagement, and management of regional Federal funding processes	<ul style="list-style-type: none"> How can GDOT align the NEVI plan with regional plans and priorities? Do regional commissions want to participate in equity-based planning and engagement, and public outreach?

Type	Stakeholders	Relevance for NEVI Planning	Examples of Interests and Impacts
	<ul style="list-style-type: none"> • Southwest Georgia • Southern Georgia • Heart of Georgia • Coastal Georgia • Northeast Georgia • Central Savannah River 		
Utilities	<ul style="list-style-type: none"> • Oglethorpe Power • Georgia Power • Georgia Transmission • Electric Cities of Georgia • Electric Membership Cooperatives 	Electric power supply, local customer design, rate/tariffs, demand management, possible EVSE owner/operators	<ul style="list-style-type: none"> • How can utilities help assess grid power availability/site upgrade costs needed for NEVI EVSE? • How can supply chain issues be taken into account? • How can utilities help develop strategies for various approaches to make-ready? • What are rates/tariffs for EVSE? • What is grid/load management for EVSE? • How best can utilities coordinate with other parties to optimize deployment?
EVSE Vendors and Site Hosts	<ul style="list-style-type: none"> • Blink • CBL Properties • ChargePoint • Electrify America • EVgo • Georgia Association of Convenience Stores • RaceTrac • Shell ReCharge • Schneider Electric • Evercharge • National Association of Truck Stop Operators 	EVSE hardware, software, networking vendors; maintenance services; EVSE site hosts; EVSE owners and operators, etc.	<ul style="list-style-type: none"> • Lessons learned from VW settlement? • Challenges unique to Georgia? • Best practices with procurement? • What is the vendor/site host business model? • O&M models and key performance indicator recommendations? • Targeted charger power levels?
Labor Organizations	<ul style="list-style-type: none"> • International Brotherhood of Electrical Workers • North Georgia Labor Council 	Ensure fair labor practices, safety, equity, prevailing wage, and workforce development/training opportunities	<ul style="list-style-type: none"> • Are there enough certified electricians for EVSE installation and ongoing maintenance at NEVI scale? • Does the state need more or upgraded training centers? • What are best practices in training programs and curriculum?
Local Governments	<ul style="list-style-type: none"> • Stakeholders of MPOs such as: • City of Atlanta 		<ul style="list-style-type: none"> • How can GDOT align NEVI plan with local government EVSE plans and priorities?

Type	Stakeholders	Relevance for NEVI Planning	Examples of Interests and Impacts
	<ul style="list-style-type: none"> • City of Macon • City of Savannah • City of Columbus • City of Augusta • City of Decatur • DeKalb County 		<ul style="list-style-type: none"> • Do local governments want to participate in equity-based planning and engagement? • Do local governments want to help streamline local zoning, code, permitting, EV Make-Ready requirements?
Freight and Logistics	<ul style="list-style-type: none"> • Georgia Motor Trucking Association • Freight and logistics companies 	Coordination with concurrent planning exercises including GDOT State Freight Plan Update and Coastal Empire Transportation Study among others	<ul style="list-style-type: none"> • When might freight-hauling companies electrify their fleets? • Will freight-hauling companies use public EVSE? • What key design elements should be considered for freight - ingress/egress and power levels? Other? • Are there key freight corridors and intermodal hubs to prioritize?
Transportation Agencies	<ul style="list-style-type: none"> • MARTA (Atlanta) • The Atlanta Transit Link (The ATL) • Chatham Area Transit (Savannah) • Metra (Columbus) • Augusta Transit • American Association of State Highway and Transportation Officials 	Connect public transit systems to overall state electrification plan to ensure equity and access for citizens who rely on public transit	<ul style="list-style-type: none"> • How can GDOT align NEVI plan with transit electrification plans, park and rides, and mobility priorities? • Will transit agencies want to participate in planning and engagement?
Rural Areas	<ul style="list-style-type: none"> • Georgia Budget and Policy Institute • Georgia Chamber of Commerce – Center for Rural Prosperity 	Ensure locations, power availability, and quantity are designed to meet rural needs	<ul style="list-style-type: none"> • How can the State work with rural communities to “right size” charging to the utility power available, to the level of EV adoption, and to the demand for EVSE?
Underserved/ Disadvantaged Communities	<ul style="list-style-type: none"> • Partnership for Southern Equity • EVNoire • Southern Alliance for Clean Energy • Atlanta Career Rise • Georgia Minority Supplier Development Council • Rural Legislative Caucus • Legislative Black Caucus 	Ensure locations, power availability, and quantity are designed to meet DAC needs. Consider workforce impacts to equity.	<ul style="list-style-type: none"> • How can GDOT use NEVI to help solve for equity and access for community residents? And how can workforce development be supported in electrification transition?

3.2 PUBLIC OUTREACH

In Phase 3 of outreach, GDOT will conduct broader public outreach in line with its published Project Involvement Plan and specifically geared towards entities relevant to the NEVI Program. During general public engagement the team will:



Figure 6: Purposes of Phase 3 Outreach

The program website will continue to be updated as planning and implementation progress. GDOT will provide public presentations and supporting information virtually. Special attention will be paid to ensuring that members of disadvantaged communities participate and provide feedback. Feedback may come in the form of surveys, opinion forms, and email. To the extent possible, the responses will be mapped in relation to disadvantaged communities to measure participation and to identify gaps.

General public group categories, their relevance for NEVI planning, and their interests can be found in **Table 5**.

Table 5: Public Outreach

Category	Relevance for NEVI Planning	Input and Impacts	Stakeholders
General Public	Increase public awareness Ensure locations are designed to comport with preferences of the general public	How can the state work with communities to communicate the use and benefits of electrification? How can EV drivers who live in apartments, park on the street, or rent their homes get access to at-home charging?	General Public Advocacy Groups Local Chambers of Commerce Chambers of Commerce representing minority interests in Georgia
Rural	Ensure locations, power availability, and quantity are designed to meet customer demand in rural areas	How can the state work with rural communities to "right size" charging to the utility power available, to the level of EV adoption, and to the demand for EVSE?	Georgia Budget and Policy Institute Electric Membership Corporations Georgia Chamber of Commerce – Center for Rural Prosperity

Category	Relevance for NEVI Planning	Input and Impacts	Stakeholders
Underserved/ Disadvantaged	Ensure locations, power availability, and quantity are designed to meet DAC needs	How can GDOT use NEVI funds to help solve equity challenges and access for community residents who do not own cars/EVs?	Partnership for Southern Equity EVNoire Southern Alliance for Clean Energy Atlanta Career Rise

4 PLAN VISION AND GOALS

GDOT's vision is to deploy NEVI formula funding in accordance with Federal law to establish an interconnected EV charging network that meets customer demands, reduces range anxiety, facilitates data collection, and ensures secure, convenient, equitable access to publicly available charging infrastructure. GDOT will seek to invest in a way that catalyzes further investment in EV charging stations across the state where utilization is anticipated but the private sector may not otherwise be economically motivated to install and operate EV charging stations.

Specific goals are shown in **Figure 7**.

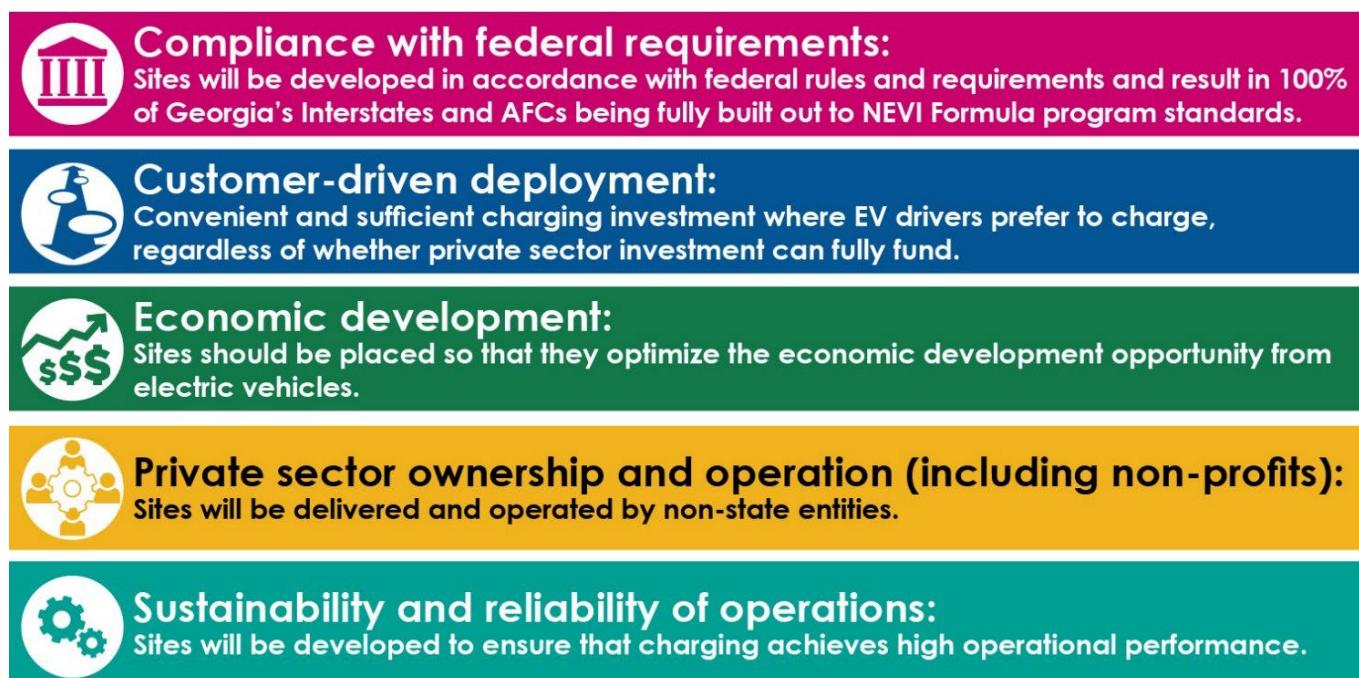


Figure 7: GDOT NEVI Program Goals

5 CONTRACTING

GDOT is exploring options to establish a competitive solicitation for partners to deploy Georgia's EV charging network. Per FHWA guidance, GDOT will initially develop this network along designated AFCs. In subsequent funding years, GDOT will work with stakeholders across the state to identify additional use-cases for NEVI program funding.

In preparation for the competitive solicitation, GDOT has researched and interviewed a broad array of industry representatives to better understand the opportunities and challenges. EV charging developers and site hosts employ various business model, though all report they intend to consider the effort required to comply with the Federally-driven contract requirements. EV charging business models and their related risks are summarized in **Table 6**.

Table 6. EV Charging Business Models and Risks

Owner-Operator Revenue Risk	Facilitator Revenue Risk	Hybrid Revenue Risk
<p>In an Owner-Operator Revenue-Risk model, the EVSE developer owns, operates, and maintains the equipment. The owner-operator sets pricing and controls the overall customer experience.</p> <p>This business model typically appeals to owners with established operational services and software. This model is also attractive to businesses that have an interest in hosting chargers as a customer amenity but are not interested in investing capital or operating and maintaining the systems themselves. Additionally, under this model, EVSE owner-operators will often pay ground rent to the site host.</p>	<p>In a Facilitator Revenue-Risk model, the site host incurs all costs of installation, operations, and maintenance. All revenue is attributed solely to the host. Often, the host will pay for monthly operational software subscriptions, and sometimes benefit from discounted maintenance partnerships provided by a third-party developer.</p> <p>This business model typically appeals to developers who prefer to avoid ongoing operational and revenue risks. Meanwhile, larger fueling and convenience stores have an interest in owning their systems to be able to control the entire customer experience from plugging in the vehicle to purchasing food or merchandise, to using amenities, and interacting with staff.</p>	<p>There are multiple variations of Hybrid Revenue-Risk models through which site hosts and developers can engage. Some developers will own and operate the chargers but offer profit-sharing options to incentivize private businesses to install EVSE infrastructure.</p> <p>Other options include fixed-term service plans, where the developer owns and operates the system throughout an agreed-upon term (typically five to 10 years). The host then has the option to purchase the system after the term ends.</p> <p>Hybrid solutions are typically considered on a case-by-case basis to best match the needs and requests of both the developers and site hosts to reach mutually beneficial agreements.</p>

GDOT has successfully used alternative delivery methods, including public-private partnerships (P3s) and is exploring such options for deploying NEVI funds, which may include competitive alternative delivery contracts. GDOT will seek partners that have experience in this space, possess or have legal access to an appropriate site with requisite space and power, and are committed to managing long-term operations and maintenance (O&M).

GDOT intends to identify a general vicinity for EV chargers (e.g., 1 mile from a specific interchange) and let potential partners conduct the necessary due diligence to install at specific locations for NEVI-compliant charging stations.

GDOT is likely to conduct multiple competitive solicitations and award funding to project partners to develop sites, and install, operate, and maintain, EV charging infrastructure. Competitive solicitations will:

- Include technical standards complying with FHWA requirements, which are currently under development, to build a network that also meets State law and is consistent with GDOT's NEVI Plan vision and goals; and
- Use criteria to evaluate proposals from the competitive solicitation that most efficiently achieve Georgia's goals and Federal requirements, including station uptime, availability of amenities, public access throughout the day and night, cybersecurity, and others.

Specific criteria will be determined as part of developing the competitive solicitation approach (see **Figure 8**). For the site selection processes, refer to Section 7.1.

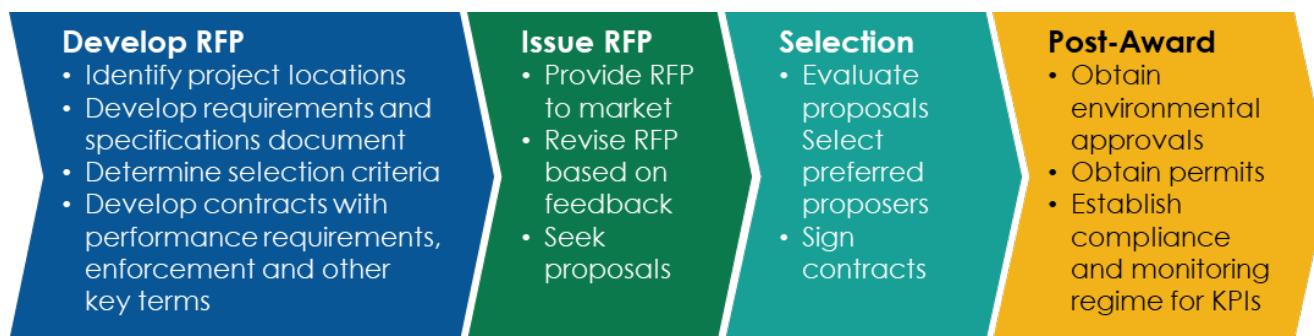


Figure 8: Competitive Solicitation and Contracting Process

Partners selected from the competitive solicitation process will likely be allocated a pre-determined budget to complete the installation of NEVI-compliant charging stations in collaboration with GDOT, electric utilities and local permitting authorities. Project partners will be responsible for adhering to all Federal requirements and guidelines and for working with GDOT to complete environmental and other permitting processes during deployment and operations.

The partnership contract will include key performance indicators (KPIs) to ensure that the selected partners deliver publicly-accessible EV charging infrastructure that meets the goals of the plan over the life of the contract (such contract term is anticipated to align with the useful life of the EVSE). KPIs will be used to ensure that operation and maintenance standards are met, especially with respect to labor, safety, training, cybersecurity, and installation standards that comply with Federal and state requirements.

6 EXISTING AND FUTURE CONDITIONS ANALYSIS

As required by FHWA guidance, GDOT has considered Georgia's specific geographic, industry, and supply chain landscapes in developing this chapter and plan.

6.1 STATE GEOGRAPHY, TERRAIN, CLIMATE, AND LAND-USE PATTERNS

EV performance and EVSE requirements are impacted by Georgia's geography, terrain, climate, and land-use patterns.

6.1.1 Geography and Terrain

As the largest state east of the Mississippi River, Georgia's geographic regions cover a wide range from Coastal Plains in the south, to rolling hills in the Piedmont, to the higher elevation Appalachian Plateau and Valley and Ridge, to the mountains of the Blue Ridge and their peak at Brasstown Bald at 4,784 feet above sea level. The boundary between Coastal Plains and Piedmont is marked by a marked change in elevation along the "fall line," so called

because of the resultant waterfalls. At the northernmost navigable extents of rivers, cities developed where river borne cargo had to be transferred: Augusta on the Savannah River, Milledgeville on the Oconee River, Macon on the Ocmulgee River, and Columbus on the Chattahoochee River. Most of Georgia's population is in the Piedmont, including the Atlanta region.

Roads traversing the north Georgia mountains experience many grade changes as they rise from the Piedmont. These grades have the potential to impact EV battery performance in the same way they impact gas mileage as additional energy is required to overcome changes in elevation. (See **Figure 9**).

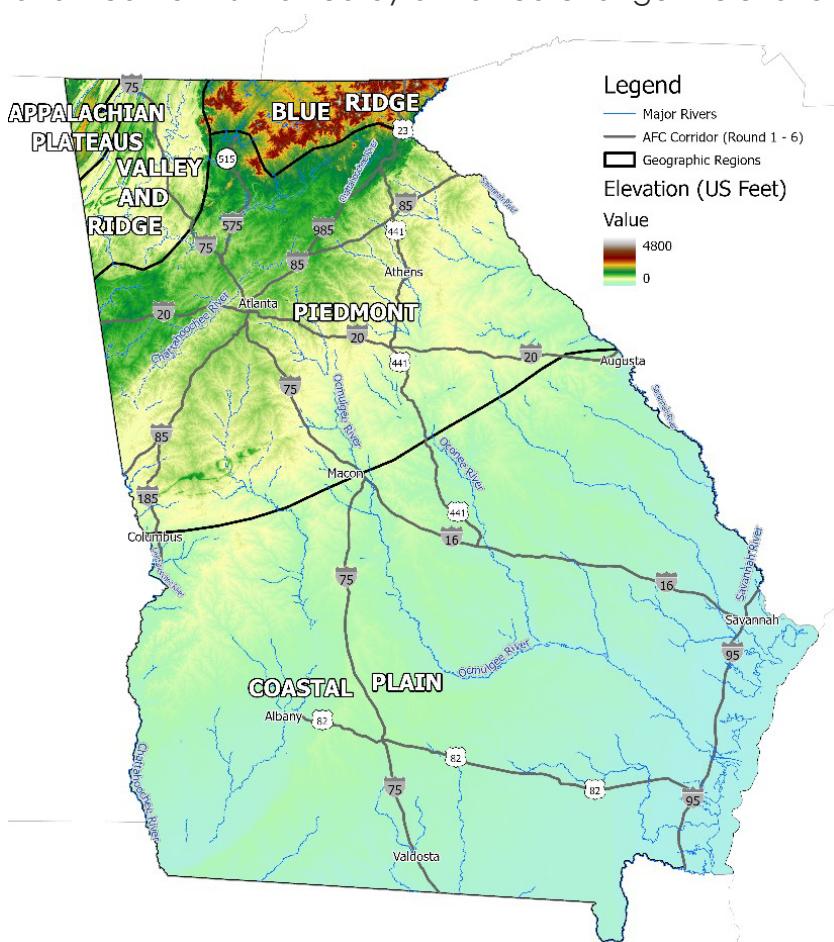


Figure 9: Georgia's Geographic Regions and Terrain

6.1.2 Temperature

According to the Köppen climate classification system, most of Georgia experiences a humid subtropical climate characterized by hot, humid, and long summers and mild, short winters. On the USDA Plant Hardiness scale, which is defined by average annual extreme minimum temperature ranges, Georgia spans from Zone 6a (rarely but occasionally reaching a low of minus 10°F) in Blue Ridge to Zone 9a (rarely but occasionally reaching a low of 20°F) on the coast.

In 2021, the statewide average minimum temperature was 53°F and the average maximum was 76°F.^[1] Although Georgia normally experiences short, mild winters, it is important to consider the impact of low temperatures on EV battery performance. It is generally understood that low temperatures reduce EV range and slow the battery charging rate. A recent study^[1] noted the typical ideal operating temperature range for lithium-ion EV batteries is between 59°F (15°C) and 95°F (35°C) and that preheating of batteries is often needed to improve performance in cold ambient conditions. In Northern Georgia, with the coldest temperatures in the State, GDOT will consider this factor for investing in EV charging stations.

6.1.3 Precipitation and Extreme Weather

Figure 10 shows that annual precipitation has been relatively stable since 1900, averaging 50 inches per year.

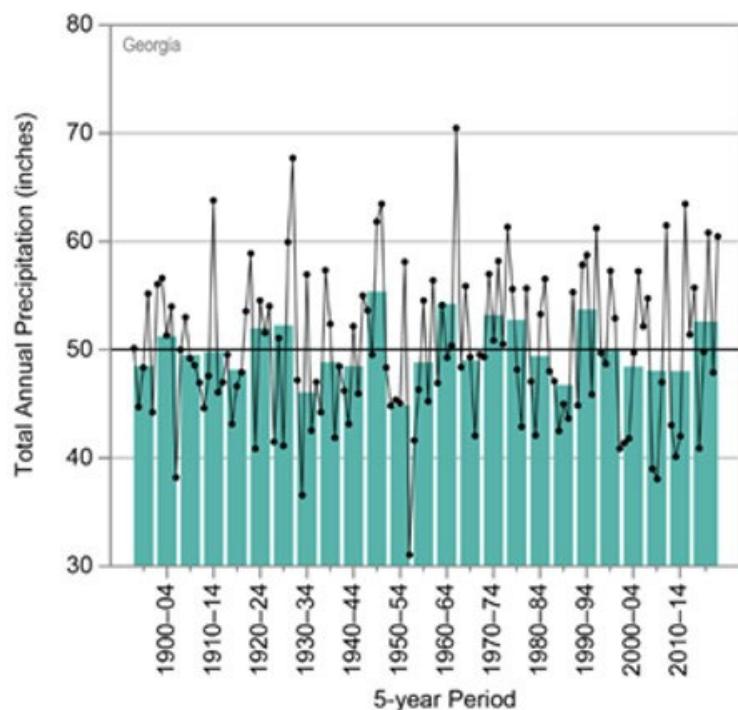


Figure 10: Observed Annual Precipitation

Source: CISESS and NEMAC[3] via Kunkel et al.

The number of extremely hot days and number of freezing days in Georgia have been relatively stable since 1900. Atlantic storms, including hurricanes, rarely strike the Georgia coast though Georgia has historically been a destination for evacuees when Atlantic storms impact border states. As EV adoption grows, more evacuees will require charging in Georgia to arrive at a safe destination. In light of this, GDOT will work to deploy EV charging stations along primary evacuation routes as planning continues.

6.1.4 Land-Use Patterns

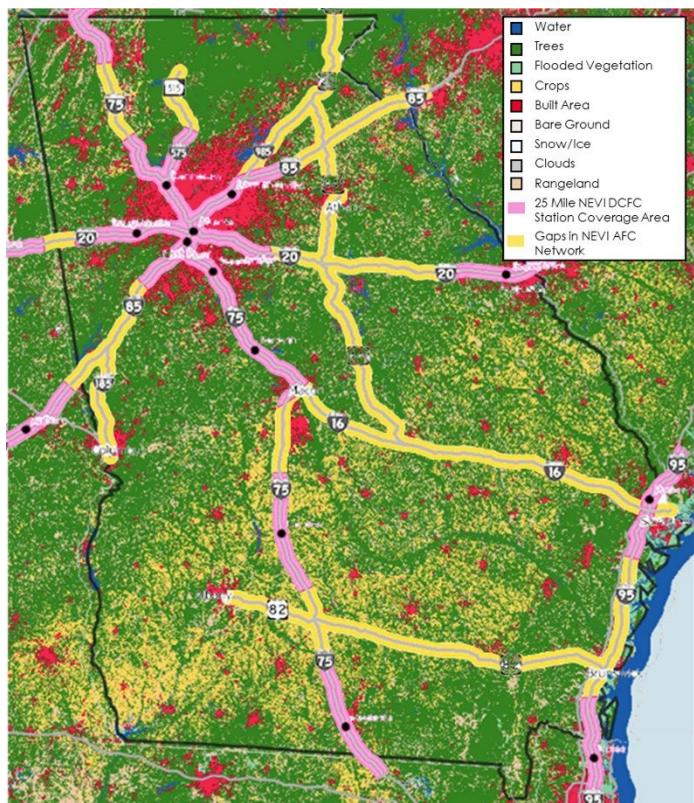


Figure 11: Primary Land Uses and AFCs in Georgia

Georgia's primary land uses are forest, other agricultural, and developed as depicted in **Figure 11**. Much of the developed land (red) occurs in dense metropolitan areas. GDOT does not anticipate significant land use constraints in the expansion of its EV charging network as stations will be sited along existing commercialized corridors in largely low-density areas of the state.

The state's major population centers have the largest concentration of charging station site hosts, because urban land uses correlate to both sufficient electrical capacity and higher prevalence of EV adoption. Identifying potential site hosts in rural areas, however, could be more challenging as sites potentially NEVI-compliant from a distance perspective may not have the adequate electrical capacity and/or may lack the regular consumer traffic necessary for a host to earn a return

on their investment. GDOT anticipates that interchanges (for interstates) or intersections (for the US highways) with amenities such as restaurants, shopping, parks, or hotels, will be prime candidates for locating NEVI-funded EV charging stations.

Georgia's land use is continuously evolving as growth occurs in economic sectors such as healthcare, education, professional services, and tourism. The Georgia Ready for Accelerated Development (GRAD) program, for example, has identified 60 sites for accelerated development in both urban and rural areas. Data that the Georgia Department of Economic Development tracks on major development announcements indicates that major project announcements are occurring in all regions of the State, especially in rural areas. It is likely that economic growth will render increased EV adoption over time. GDOT is taking these shifting land-use patterns and proposed economic developments into account as it prioritizes where NEVI investments will occur. GDOT will continue to monitor land uses and economic development for changes that could impact travel patterns and therefore influence charging station siting feasibility.

6.2 INDUSTRY AND MARKET CONDITIONS

6.2.1 Nationwide Electric Vehicle and Charging Landscape



Figure 12: Technology Changes Accelerating EV Demand

The market for EVs is growing rapidly, and that growth impacts a wide variety of economic sectors including auto manufacturing, real estate, utilities, logistics, and software. EV battery advancements have resulted in more efficient batteries with longer life that are made at lower cost which further fuels the market for EVs as the cars become more affordable and closer to what the typical driver needs.

As more drivers adopt EVs and as the EV batteries advance, the demand for faster on-the-go charging is projected to

rise along intercity travel corridors. EVSE manufacturers have expanded their offerings of all types of charging equipment, but changes are most noticeable in DC Fast Charging (DCFC) where charging times have dropped precipitously to as little as 20 minutes to charge a battery from 10% to 80% – the industry norm for charging a battery with DCFC. This has been in part because the DCFCs are becoming more powerful from a norm of 50 kW a few years ago up to 350 kW today. But vehicle manufacturers have also played a major role in charge time improvements as they are increasingly delivering EVs capable of accepting higher voltage charging with movement towards 800V architecture.

6.2.2 Georgia's EV Landscape

Georgia is a leader in the automotive and manufacturing space with 186 companies making \$2.9 billion in investments and supporting 10,500 jobs in the state in Fiscal Year 2021; and it continues to welcome investment in the electric mobility ecosystem and its substantial Tier 1, 2, and 3 suppliers. GDOT's efforts to use NEVI funds to bridge gaps and provide public charging will help maintain Georgia's leadership in this electric mobility ecosystem. Georgia is already the Southeast's leader with 4.4 EV registrations per 1,000 registered automobiles and offers more EV charging outlets per capita than any other state in the Southeast.

Georgia's success in attracting key manufacturers such as Rivian, SK Innovation, and Hyundai to the state's recognized business-friendly market is indicative of the state's commitment to the electric mobility future. Rivian, an EV truck manufacturer, and Hyundai Motor Group have pledged to build multibillion-dollar EV manufacturing plants in Georgia. SK Innovation plans to expand an existing factory to supply batteries for vehicle OEMs.

6.2.3 Charger Providers

Currently there are six EVSE developers with publicly available DCFC in Georgia—Blink, ChargePoint, Electrify America, EVgo, Volta, and Shell Recharge. These six companies are also the largest public EVSE developers in the United States. Blink, Volta, and Shell Recharge have relatively few sites in Georgia, where the DCFC market is dominated by ChargePoint, Electrify America, and EVgo. These six firms operate with a variety of business models.

- **Blink** was established in 2009 and largely focuses on selling charging systems, though they have the capacity to provide host-owned, Blink-owned, and hybrid solutions. They have focused more on Level 2 chargers but are introducing DCFC.
- **ChargePoint** was established in 2007 and typically sells chargers to its hosts and provides an ongoing software subscription. ChargePoint is unique in that its charging equipment only supports ChargePoint software.
- **Electrify America** was established in 2016 and **EVgo** was established in 2010. Each typically owns and operates their chargers, assuming all project risk. They are experienced with finding hosts and developing sites. On a case-by-case basis, they can consider a site host-owned structure.
- **Shell Recharge** (SR), formerly known as Greenlots, was established in 2008 and is the EV charging division within Shell plc. SR is building out its charging EVSE solutions as an extension of Shell's overall fueling service line, with the intent of siting at Shell's existing fuel stations. SR provides a turnkey model and allows for the flexibility to either own and outsource operations or own and self-perform operation of the systems.
- **Volta** was established in 2010 and provides chargers at host sites and obtains its revenue through advertising as its charging ports include digital screens displaying advertisements. They have primarily focused on Level 2 charging but are beginning to develop DCFC as the demand for fast charging rises.

Other firms seek to capture a segment of the EVSE market, including Georgia-based Heliox that provide fast charging solutions to fleets.

EV manufacturers have a vested interest in ensuring charging stations are operational. In Europe, as a response to Tesla which has a successful, but proprietary, charging station network, BMW, Ford, Hyundai, and VW formed a joint venture operation – Ionity – to install networked, publicly accessible chargers. An alternative model to developing one's own network is to partner with the existing DCFC vendors. Hyundai, for example, offers two years of free DCFC charging to purchasers of its Ioniq 5 model at Electrify America locations while Kia offers 1,000 kWh of free DCFC charging at Electrify America locations for purchasers of its EV6 model. As automakers in the U.S. ramp up their EV production, more rollouts of proprietary networks or partnerships with charger providers can be expected.

The universe of EVSE manufacturing is still at a relatively nascent stage. EVSE manufacturers tend to be small with annual revenue below \$70 million. Several have raised capital via public offerings within the last year. Notably, Electrify America, a subsidiary of VW, has announced plans to seek a \$1 billion outside investment. Given this landscape, it is likely the market will continue to evolve in the coming years. As a result, it is therefore important that charger networks are interoperable with all EVs even if the original owner/service provider is no longer operating. Therefore, GDOT will follow NEVI guidance regarding interoperability.

6.2.4 Site Host Overview

Value Proposition for site hosts:

- Expansion of service offerings
- Amenities for patrons/tenants
- Environmental and reputational benefits
- Competitive edge for early adopters
- Generation of new revenue streams

Site hosts have several reasons for installing chargers. Some hosts, such as traditional gas stations, truck stops, and travel centers, view electric charging to be an opportunity to expand their service lines, whereas others, such as retailers, restaurant chains, and offices, see the benefit in providing amenities to their customers, tenants, their employees, and/or aligning with corporate sustainability strategies.

Safety, accessibility, and customer experience are common major priorities of successful site hosts -- ensuring that drivers have safe, clean, and enjoyable experiences during their charging sessions.

6.3 STATE TRAVEL PATTERNS, PUBLIC TRANSPORTATION NEEDS, FREIGHT, AND OTHER SUPPLY CHAIN NEEDS

6.3.1 State Travel Patterns

Figure 13 captures the 2019 level of Annual Average Daily Traffic (AADT) across Georgia with most of the activity occurring in the Atlanta region. Although more recent traffic data is available, 2019 represents a pre-pandemic view that is perceived to better reflect longer term traffic patterns.

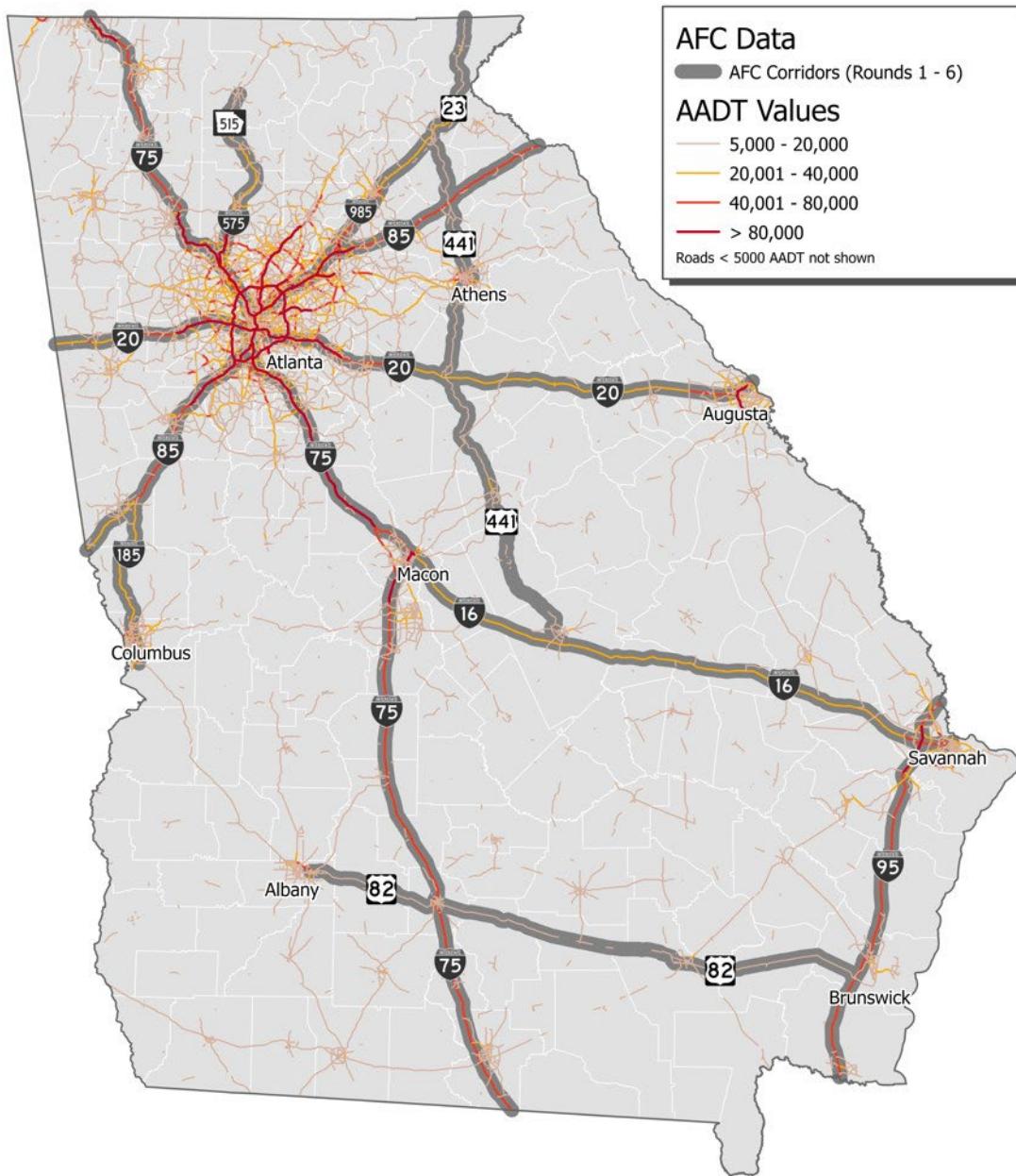


Figure 13: Annual Average Daily Traffic and Alternative Fuel Corridors in Georgia

Roadway travel throughout Georgia consists of a combination of long-distance and local trips on the interstate system, other state routes, and local roads. Primary interstate routes include:

- I-95 through Savannah and Brunswick connecting Florida with points north along the east coast,
- I-75 through metro Atlanta and Macon between Tennessee and Florida,
- I-85 running southwest-northeast through metro Atlanta between Alabama and South Carolina,

- I-20 traversing east from Augusta through metro Atlanta to Alabama,
- I-16 from Savannah to Macon and I-75, and
- I-185 from Columbus to LaGrange.

Traffic varies by route and location. Major freeways within urbanized areas carry the most traffic with many routes exceeding 80,000 AADT. I-75/85 in central Atlanta carries an average of more than 350,000 vehicles per day. I-75 between Macon and Atlanta, I-85 in Gwinnett County, and I-75 in Cobb County all exceed 80,000 vehicles per day. Outside of metropolitan areas, major Interstates drop below 80,000 AADT, examples include the rural segments of I-95, I-75, and I-85.

The most rural interstate segments drop below 40,000 AADT, including I-20, I-185, and I-16. State routes and U.S. Highways also carry substantial traffic volumes and provide connections to communities and destinations beyond the Interstate system. GDOT's interstates and AFCs that will be fully built out generally cover the corridors on the state system with the highest AADTs. GDOT uses AADT to help it steer NEVI investments to where they can be best used as a catalyst to spur EV adoption.

6.3.2 Public Transportation

GDOT's most recent Statewide Transit Plan^[3] and The ATL's 2021 Annual Report and Audit^[4] provide data for an overview of public transportation in Georgia. As of 2017, there are 92 public transportation providers in Georgia that serve 123 of 159, or 77%, of the counties as shown in **Figure 14**. Some counties are served by both urban and rural transit services but not always by the same service provider.

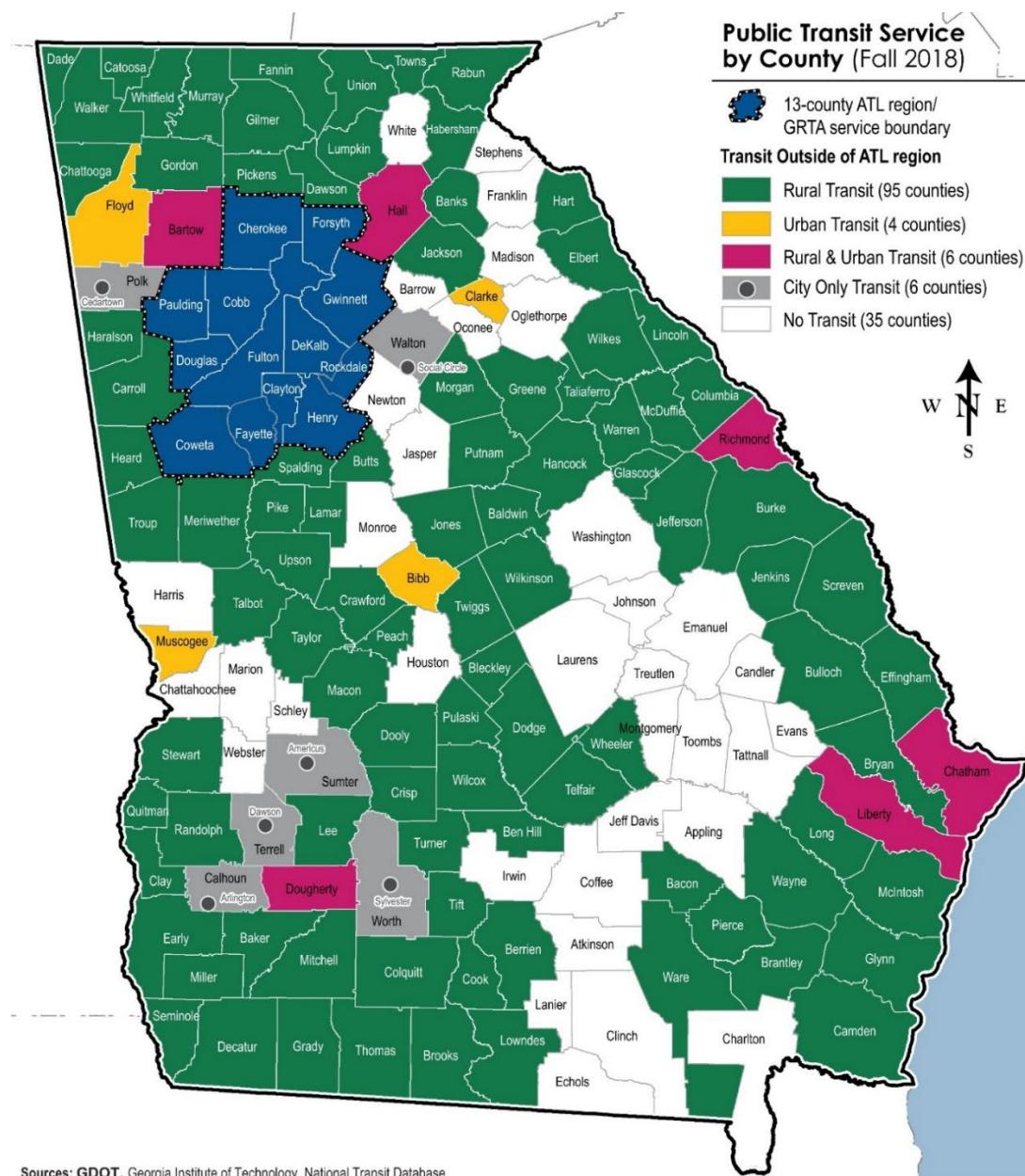


Figure 14: Public Transit Service by County in Georgia

Source: GDOT – Statewide Transit Plan, 2021 – Implementation Report. P. ES-3

Transit services are anticipated to be leaders in the EV transition in the United States, and they will need to purchase vehicles and build EVSE to serve their new electric fleets. Similar to public charging, EVSE expansions for transit buses will need to consider existing electric utility distribution capacity and technology requirements to provide for efficient, sustainable operations. Section 7.3.4 includes additional details on these considerations.

Georgia's transit agencies are already beginning the electrification transition. The Georgia Regional Transportation Authority (GRTA) is electrifying 10 of its vehicles and the Metropolitan

Atlanta Regional Transit Authority (MARTA) has electrified six of its vehicles with six more on order. Both agencies are developing plans to increase their zero emissions fleets in the next few years. The Federal Transit Administration (FTA) is making funding available to support the purchase of battery electric buses and the necessary EVSE to enable their deployment. This funding requires applying transit agencies to develop and execute a fleet transition plan. The Atlanta-Region Transit Link Authority (the ATL), a public and partially state-funded organization, oversees regional transit planning for 13 transit service providers in the Atlanta region. In its upcoming fiscal year, the ATL will pursue a regionwide transit electrification plan to encourage its member agencies to be prepared to apply for discretionary funding.

In addition to transit agencies, Georgia also has one of the leading institutes of higher education when it comes to electrification in the University of Georgia. The University purchased 33 electric buses and installed 12 charging stations across the campus from 2019 to 2021, making it one of the largest electrified university bus fleets in the country. These buses, almost one third of the total fleet, currently serve students, staff, and faculty, saving the University energy and maintenance costs^[5].

6.3.3 Grid Capacity Necessary to Support Additional EV Chargers

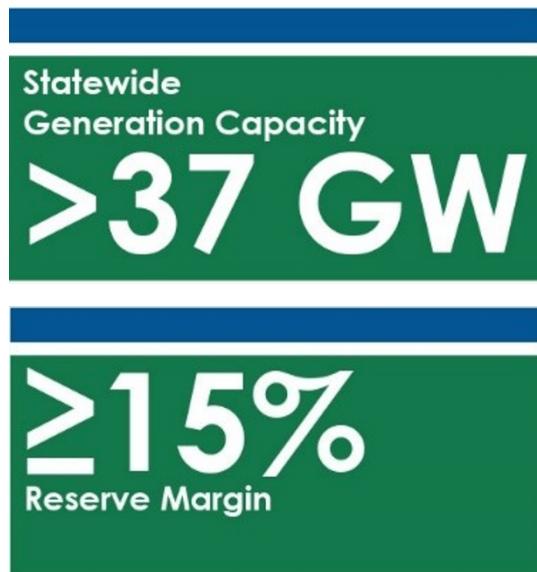


Figure 15: Electrical Generation Capacity and Reserve Margin

Georgia has a substantial and diversified portfolio of power generation that reliably serves the demand for power across the state. In interviews with Georgia's major electric utility providers, they affirmed that providing sufficient power for the EV charging network outlined in this plan is not expected to create undue burdens on the state's generation capacity. Georgia's electricity generation capacity exceeds **37 GW** and the state's utilities operate with a minimum **15%** reserve margin for the system. The concurrent energy demand for the EV charging network outlined in this plan is **162 MW**^[6] or less than 0.5% of generation capacity. Due to the complexity of modeling the variability of battery charging rates across different vehicle types and states of charge, it is simpler to estimate the maximum theoretical power demand and thus provide a

conservative approach to understand the magnitude of the power supply needed. Actual power demand required by the network outlined in this plan will be lower, since all EV chargers will not be fully utilized at the same time, nor do vehicles charge at the same rate throughout a typical battery charging cycle.

While ample power is available, the distribution of that power at the local level may be a challenge especially when considering the minimum 600 kW power capacity needed at NEVI-compliant EV charging stations in rural areas, which could strain locally available capacity in

certain locations. Local distribution capacity depends on the overall capacity at the charging station location and the existing loads from nearby customers served by the same equipment. Potential site locations with older electrical infrastructure serving long-established customers are less likely to have sufficient capacity for EV charging than locations with newer distribution equipment serving a growing customer base, where greater available capacity is likely to be found.

The cost of installing an EV charging station therefore increases as the amount and complexity of power distribution equipment necessary to support the EVSE increases. In other words, it is substantially less costly to install EVSE at locations that already have sufficient power distribution equipment. Utilities may be willing to cover some of these upfront equipment costs, but often only up to the amount they can recover from the site's energy sales – typically this would need to occur **within 2-4 years**. A utility's revenue from EV charging over 2-4 years is unlikely to cover the cost of additional equipment, so a potential EV charging station developer may need to pay for all (or a significant portion) of any additional equipment costs in the many cases where EV charging stations are not expected to be profitable in the years immediately following installation.

6.3.4 Existing Total Charging Infrastructure Along AFCs

The State of Georgia has 10 AFCs for EVs. The corridors are listed in **Table 7** below and shown on the map in **Figure 16**. Corridors have historically been further defined as "corridor pending" or "corridor ready." In the past to be designated as "corridor ready" the corridor needed to have one 50 kW or higher DCFC within 5 miles of the interstate exit every 50 miles. Starting with Round 6 of the AFC nominations, to be "corridor ready" corridors need to meet the same criteria as is necessary to be "fully built out," meaning the corridors needs to have four 150 kW chargers within 1 mile of the interstate at least every 50 miles.

Table 7: Alternative Fuel Corridors (EV) Rounds 1-6

Corridor	From	To	Length (miles)	AFC Round	Status per FHWA (as of June 2022)
I-75	Florida	Tennessee	355	1-5	Ready from Valdosta to TN border Pending from FL border to Valdosta
I-20	Alabama	South Carolina	201	1-5	Ready from AL border to Madison Pending from Madison to Thomson
I-85	Alabama	South Carolina	180	1-5	Ready
I-16	Macon	Savannah	167	1-5	Ready from Macon to I-95

Corridor	From	To	Length (miles)	AFC Round	Status per FHWA (as of June 2022)
					Pending from I-95 to Savannah
US-82	Albany	Brunswick	166	6	Pending
US-441	Dublin	Cornelia	165	6	Pending
I-95	Florida	South Carolina	112	1-5	Ready from FL border to Brunswick Pending from Brunswick to SC border
I-985/US-23	Buford	North Carolina	84	1-5	Ready from I-85 to Gainesville Pending from Gainesville to NC border
I-575/GA515	Town Center	Ellijay	55	1-5	Ready
I-185	Columbus	LaGrange	49	1-5	Ready

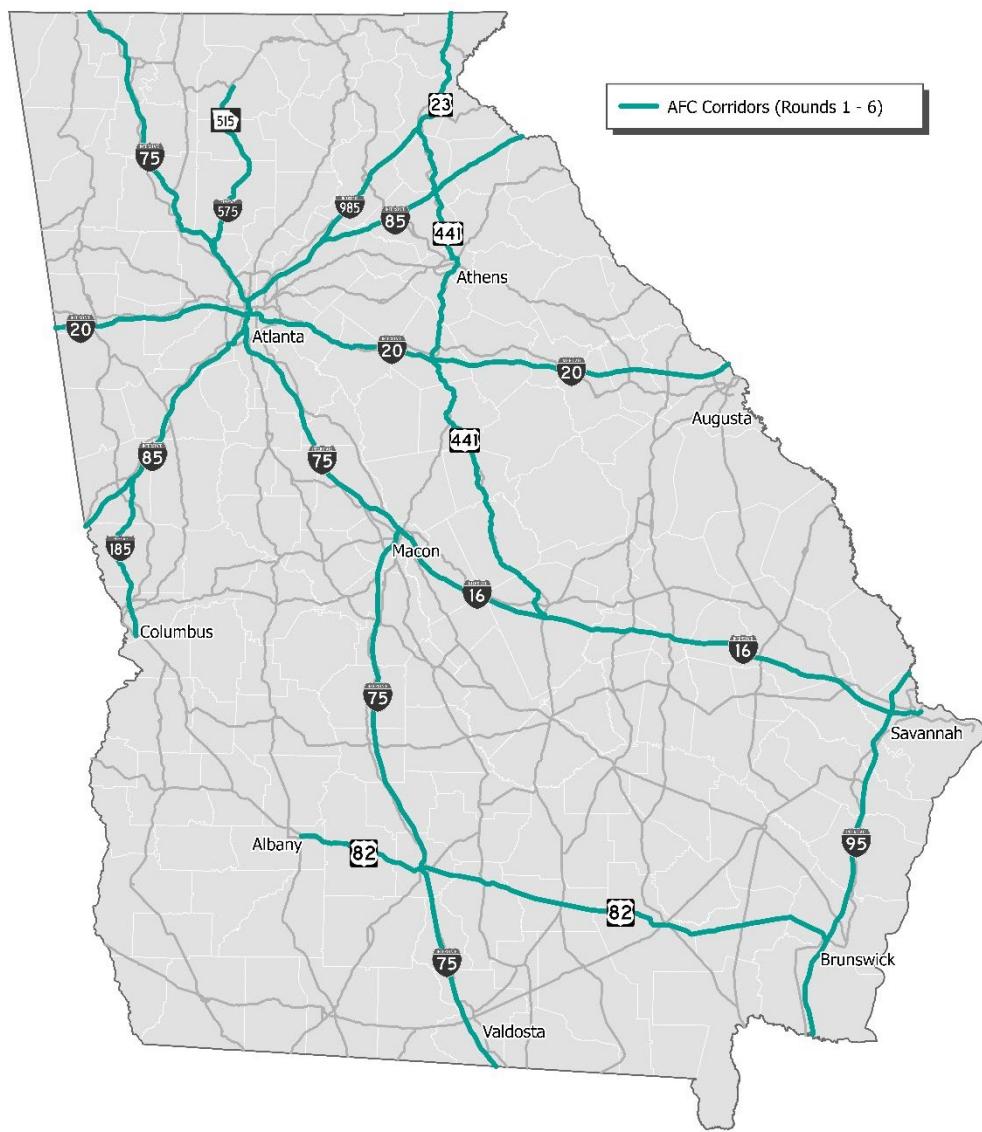


Figure 16: Georgia Alternative Fuel Corridors (Rounds 1 – 6)

AFC Nomination Process

The strategy GDOT employed to evaluate corridors for AFC nomination will inform GDOT's strategy for NEVI investment siting locations and is offered here to help FHWA understand GDOT's methodology. For AFC Round 6, GDOT reviewed more than a dozen corridor options and then selected four corridors to undergo further analysis using key criteria defined as follows:

- **Locations of Existing NEVI Compliance Intersecting with AFC Ready Corridors** was determined by identifying NEVI compliant charging locations along the corridors being evaluated.
- **Average Annual Daily Traffic (AADT) Per Mile** was extracted from the GDOT 2019 traffic count shapefile. GDOT then calculated the link length, multiplied by the AADT to get

VMT per segment, and divided total VMT by total length to obtain the average AADT per corridor mile.

- **Real Estate Feasibility** was determined by analyzing clusters of hotels, gas stations, grocery stores and shopping centers. Where clusters of these property types were found, GDOT concluded that there would be a high likelihood of satisfying customer preferences for amenities during charging sessions, as well as identifying willing and able site hosts. Real estate clusters also provide a proxy for adequate power and appropriate land uses with sufficient amenities.
- **Evacuation Route Impact** was determined by overlaying potential AFCs with GEMA's evacuation route map. Potential corridors with segments on evacuation routes scored higher than those without.
- **Geographic Balance** was scored based on how the corridor would balance coverage across geographic regions of the state – potential corridors that score higher bring coverage to less-covered regions of the state.
- **Tourism** data was provided by GDEcD from inputs to GDOT's 2050 Statewide Transportation Plan. Potential corridors were scored based on proximity and density of top identified tourist destinations.
- **EV Adoption** was mapped using Electric Power Research Institute's "New EV Market Share 2021" (provided by Georgia Power). Potential corridors were analyzed on percentage of segments passing through areas with relatively high EV market share (>1%).

Based on this analysis, GDOT nominated US-82 (between Albany and Brunswick) and US-441 (between Dublin and Cornelia) as electric vehicle AFCs. Both had relatively high average traffic. US-441 also earned high scores for tourism and EV adoption rates, while US-82 earned high scores as an evacuation route and for providing geographic balance. The nominations for both US-441 and US-82 were approved by FHWA in July 2022.

Georgia's Existing DCFC Network

Georgia currently has approximately 1,300 publicly available EV charging stations with more than 3,400 total ports. Of these, 157 stations have 430 DCFC ports.^[8] The majority of Georgia's DCFCs are concentrated in metropolitan Atlanta with relatively few in other areas of the state.

Typically, DCFCs are located at fast-food restaurants, banks, hotels, and car-care facilities. Although they serve as an important part of the overall EV charging eco-system in Georgia, many of these existing sites do not meet the new NEVI standards because they (1) are too far from an AFC, (2) do not have sufficient parking spaces for multiple chargers, and/or (3) do not meet the minimum power levels.

Tesla has a number of supercharger and destination charging DCFCs throughout Georgia. As of this writing, however, the Tesla network is proprietary and therefore not NEVI compliant. NEVI compliance requires CCS-style ports and software designed on an Open Charge Point Protocol (OCPP) – neither of which are characteristic of Tesla chargers. Because of this, GDOT did not include Tesla's charging stations in its DCFC assessment. Should Tesla decide to convert some or all of its stations in Georgia to CCS ports with OCPP managing software, GDOT will adjust its AFC build-out plan accordingly. There are 11 Tesla supercharger sites that, if converted in a NEVI-compliant fashion, would help Georgia achieve AFC build out goals.

As of April 2022, 119 of Georgia's 157 public DCFC stations meet either the distance or power requirements. 93 meet the NEVI AFC distance requirements (located within 1 mile of an AFC), 26 meet NEVI's power requirements (minimum of four 150 kW ports), but only 12 meet both distance and power requirements. All 12 sites are owned and operated by Electrify America and are sited at big box retailers, grocery stores, or shopping centers.

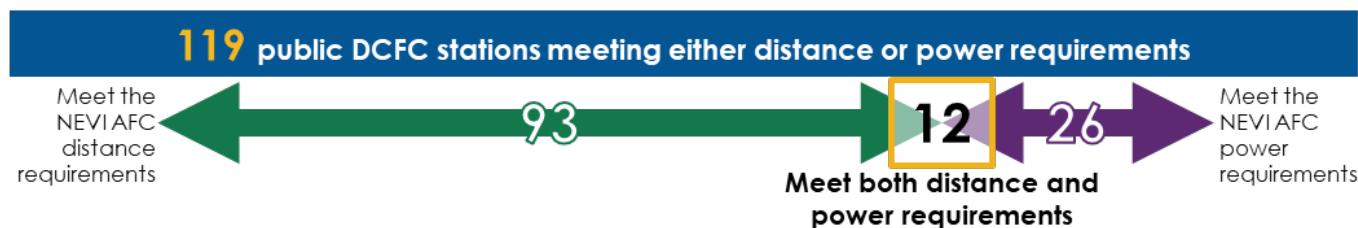


Figure 17: Summary of DCFC and AFC in Georgia

The locations of NEVI-compliant DCFCs within 1 mile of Georgia's alternative fuel corridors are listed in **Table 8** below. While these corridors also have Level 2 chargers, DCFCs below 150 kW of power, and others that are not Open Charge Point Protocol (OCPP) compliant (e.g., Tesla Superchargers), they are not listed in the table as they do not satisfy the Federal requirements.

Table 8: Existing Locations of DCFC Along Georgia AFC Network

State EV Charging Location Unique ID	Charger Level (DCFC, L2)	AFC Route	Location	Number of EV Ports	EV Network
751	DCFC	I-75	Valdosta	4	Electrify America
753	DCFC	I-75	Cordele	4	Electrify America
755	DCFC	I-75	Forsyth	4	Electrify America
756	DCFC	I-75	Stockbridge	4	Electrify America
757	DCFC	I-75	Kennesaw	10	Electrify America
853	DCFC	I-85	East Point	8	Electrify America
854	DCFC	I-85	Lawrenceville	4	Electrify America

State EV Charging Location Unique ID	Charger Level (DCFC, L2)	AFC Route	Location	Number of EV Ports	EV Network
855	DCFC	I-85	Commerce	4	Electrify America
953	DCFC	I-95	Pooler	6	Electrify America
202	DCFC	I-20	Douglasville	4	Electrify America
203	DCFC	I-20	Atlanta	5	Electrify America
208	DCFC	I-20	Grovetown	4	Electrify America

Source: Plugshare.com

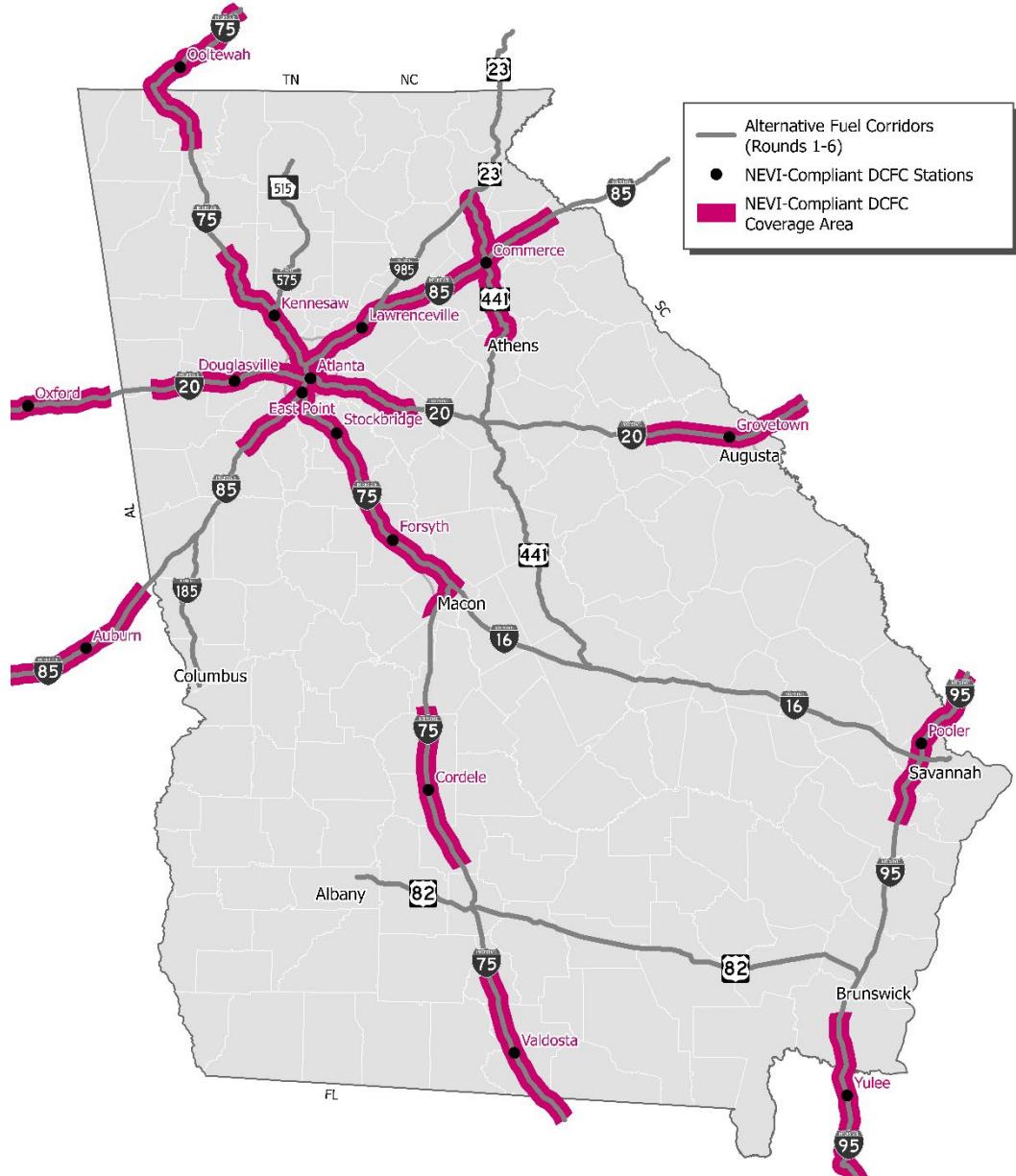


Figure 18: Existing NEVI-Compliant DC Fast Chargers in Georgia

Source: Plugshare.com

Operating more than 60% of Georgia's DCFCs, the ChargePoint network includes 100 DCFC stations, mostly sited at fast-food restaurants, banks, hotels, and other smaller retail or local government sites. The largest owner of the ChargePoint networked stations is Georgia Power, Georgia's major regulated investor-owned utility. Georgia Power received approval from the Public Service Commission to rate base these chargers, which provided the funding to deploy them. While very useful for community-based charging, none of these Georgia Power stations

meets NEVI requirements as there are fewer than four total ports that charge at a rate less than 150kW.

6.3.4.1 INFORMATION DISSEMINATION ABOUT EV CHARGING STATION AVAILABILITY

The U.S. Department of Energy Alternative Fuels Data Center and private-sector firms such as ChargeHub and PlugShare offer apps to help EV driving travelers find charging stations and assess their availability independent of vehicle manufacturer or charging network. EV manufacturers have also developed their own apps for drivers.

Additionally, there are queuing apps, such as ChargePoint's Waitlist that provide virtual queuing. The user of the app receives "a place in line" if the charger station's spots are occupied and is notified when the "next in line" spot is available. During ChargePoint's initial rollout of this feature, the company found that station utilization increased 20% on average and up to 45% at high-traffic stations.

To ensure drivers have maximum visibility into charging station location, pricing, and availability, Georgia will require that NEVI-funded charging stations publish this information so it may be available to EV drivers.

6.4 KNOWN RISKS AND CHALLENGES

Other public agencies in the U.S. have experience implementing contracts to construct EV charging stations. Lessons have been learned and risks have been identified that could occur through the planning, procurement, installation and testing, and operations/ maintenance processes.

Based on this experience, many risks can be anticipated and mitigated in the planning stage. Station designers, utility companies, EVSE vendors, owner/operators, and others involved with responsibility at various stages of setting up EV charging stations should be identified early and assigned responsibilities to mitigate risk. A risk register is an important tool that can be kept and periodically updated from planning through construction and into operations.

The following table identifies some of the risks and challenges of EVSE development and steps to mitigate the risks.

Table 9: Known Risks and Challenges for EV Development

Risks and Challenges	Mitigation
Viable Location A NEVI compliant (4 x 150 kW) station requires significant real estate, which may not be available at many commercial sites. Where space is available, some property owners may be unwilling to offer the required space.	GDOT can conduct due diligence to identify and characterize the available real estate typology where a NEVI compliant site is required. Should challenging locations be identified, GDOT may consider submitting a location waiver.

Risks and Challenges	Mitigation
Low Customer Demand Sites in some rural areas may have low charging utilization rates, making a project less economically viable.	At locations where utilization rates are expected to be lower, GDOT can offer subsidies during construction and operations up to the 80% Federal cap, and consider subsidizing the match requirement, if warranted.
Available Power DCFC will require 3 Phase 480 V power. Not all potential sites have the required power infrastructure to host DCFC.	GDOT can share potential site locations with utilities who can provide feedback on existing power infrastructure, the make-ready costs, and the timeline to complete the make-ready work.
Demand Charges DCFC requires high-power capacity, but relatively small amounts of energy consumed per charge. Utilities assess demand charges to compensate for providing the required power capacity. Demand charges can represent a large portion of the EV charger's electric bill, making economic viability challenging.	GDOT will develop a procurement framework to ensure fair competition while also addressing challenges posed by demand charges to the stations' economics.
Implementation Timelines Given supply chain issues and Buy America requirements, lead times for compliant EVSE and electrical equipment can be long, potentially slowing down charger station deployment.	GDOT will factor in appropriate lead times when developing requirements for installation timelines.
Permitting Lengthy permitting processes can delay deployment of EVSE.	GDOT will collaborate with local governments to consider means of streamlining the permitting process.
Equipment Standardization The EV charging market is still in a nascent stage with several participants possessing different operating standards.	GDOT can adopt standards for EVSE construction, testing, deployment, and O&M. Following NEVI guidance will help to standardize installations across the country.
Charger Communication Connectivity is important as a charger must be able to offer charger-to-EV communication as well as accept various payment methods. Cybersecurity must be provided to protect the information collected and exchanged.	GDOT proposes interoperability requirements for charger-to-EV communication to ensure that chargers are capable of the communication necessary to perform smart charge management. Stations shall include a contactless payment method that accepts major debit and credit cards and Plug and Charge payment capabilities using the ISO 15118 standard. A cybersecurity plan and contractual requirements will be developed to protect both the network and customers.
Equipment Protection Equipment can experience excessive downtime due to vehicular damage and vandalism.	GDOT will adopt specifications to protect equipment such as the use of curbs, bollards, retractable cords, and vandal resistant characteristics.
Charger Availability and Maintenance Reliability and uptime are essential for a successful EV charging network. Assurances for charger uptime and maintenance represent key performance requirements for the NEVI funded chargers.	GDOT's implementation and procurement approach will incorporate qualification criteria and contractual mechanisms to support the monitoring and enforcement of performance standards.

7 EV CHARGING INFRASTRUCTURE DEPLOYMENT

To achieve the Plan's vision and goals, GDOT will deploy charging stations using NEVI funding to meet Federal build-out requirements that fill gaps along interstates and non-interstate AFCs with the goal that the EV charging stations will eventually be able to function without subsidies.

Through the competitive solicitation process, GDOT will identify partners who can best deploy the funds to meet GDOT's NEVI goals. GDOT will judiciously avail operations and maintenance subsidies that enable the private sector to make investments supporting areas with low near-term customer demand forecasts.

7.1 SITE SELECTION PROCESS

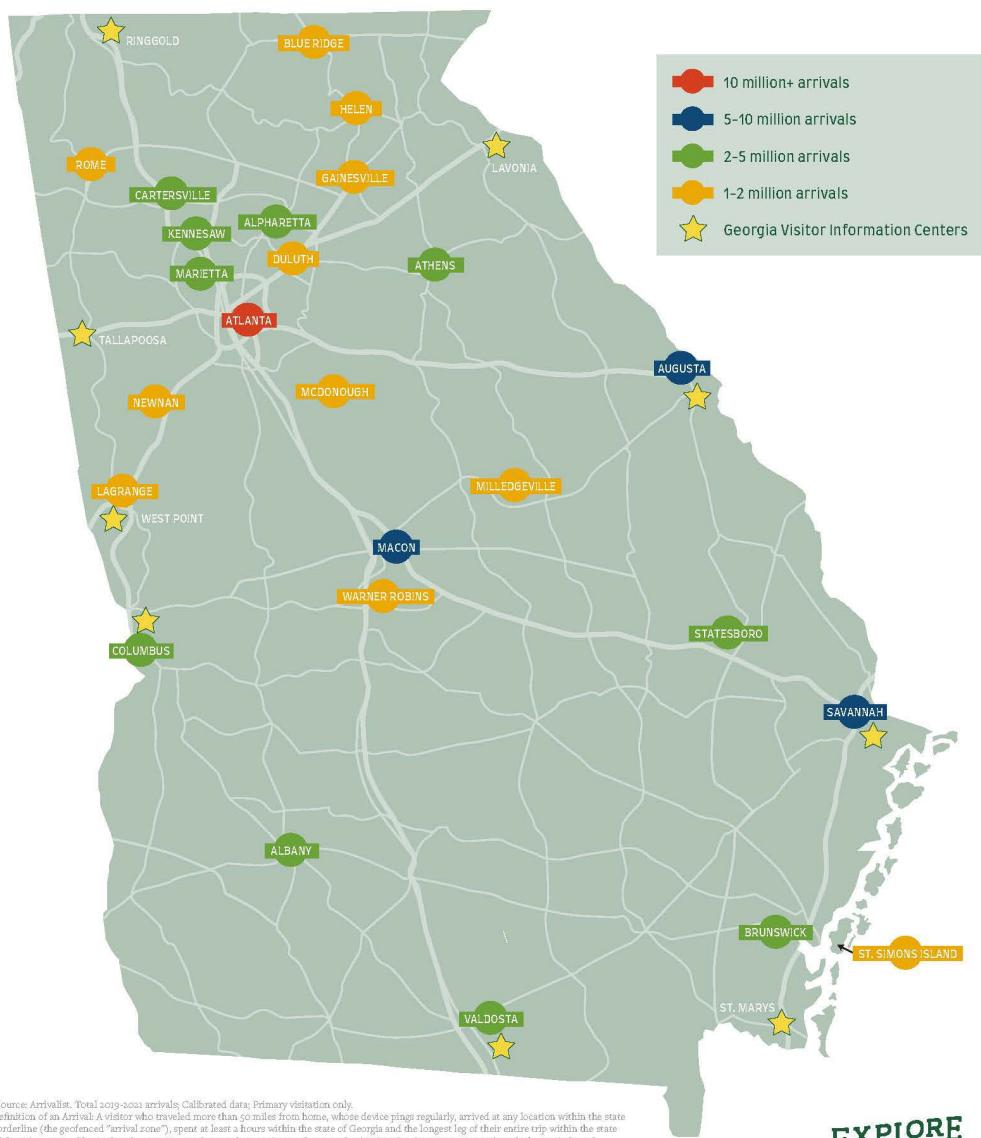
GDOT's initial work to identify approximate locations for the initial competitive solicitation is discussed in this section. GDOT assessment criteria include:

- Average annual daily traffic (AADT) as a proxy for potential charger station utilization (see **Figure 13**).
- Connections to major cross highways to support the overall statewide EV network
- Location of tourist destinations along a route.
- Existing real estate around the interchanges as a proxy for the availability of 3-phase power and the likelihood of amenities customers will seek while charging.

AADT and interconnections with major cross highways are easily quantifiable metrics using GDOT's traffic measurement tools. Highways and cross-highways are ranked numerically from highest to lowest traffic counts. Tourism is a good potential source of demand for EV charging as tourists typically travel longer distances and may have range anxiety when trip planning. Proximity to tourist destinations is therefore a key metric and potential sites are evaluated based on whether they are on the road to such destinations. Data for tourism is provided by GDEcD's Division of Tourism and included in the map in **Figure 19** below:

MOST VISITED CITIES IN GEORGIA

TOTAL 2019-2021 ARRIVALS*



*Source: Arivanda. Total 2019-2021 arrivals. California data. Primary destination only.
Definition of an Arrival: A visitor who traveled more than 50 miles from home, whose device pinged regularly, arrived at any location within the state borderline (the geofenced “arrival zone”), spent at least 2 hours within the state of Georgia and the longest leg of their entire trip within the state of Georgia, returned home, but does not appear frequently over time at the same destination (i.e., is not a commuter), and whose trip lasted between 1 and 14 unique days. An arrival is agnostic of method of transportation (car, train, plane, etc.). This anonymized, multi-source GPS data has been balanced to accurately represent the US population and further calibrated by additional verification datasets for accuracy and bias correction (including lodging data, visitor spending data, rumenite data, etc.)

**EXPLORE
GEORGIA.**

Figure 19: Most visited cities in Georgia

To measure real estate suitability and market potential for hosting charging stations, GDOT analyzed economic activity and separated businesses into types such as gas stations, hotels, grocery stores, shopping centers, big box retailers, fast food restaurants, and full-service restaurants. Potential locations (interchanges or intersections as described in the next section) were evaluated for market potential on a low, medium, high scale.



Figure 20: Real Estate Scores and Scoring Criteria

Below are examples of interchanges, one with high market potential and one with low market potential (**Figure 21**).

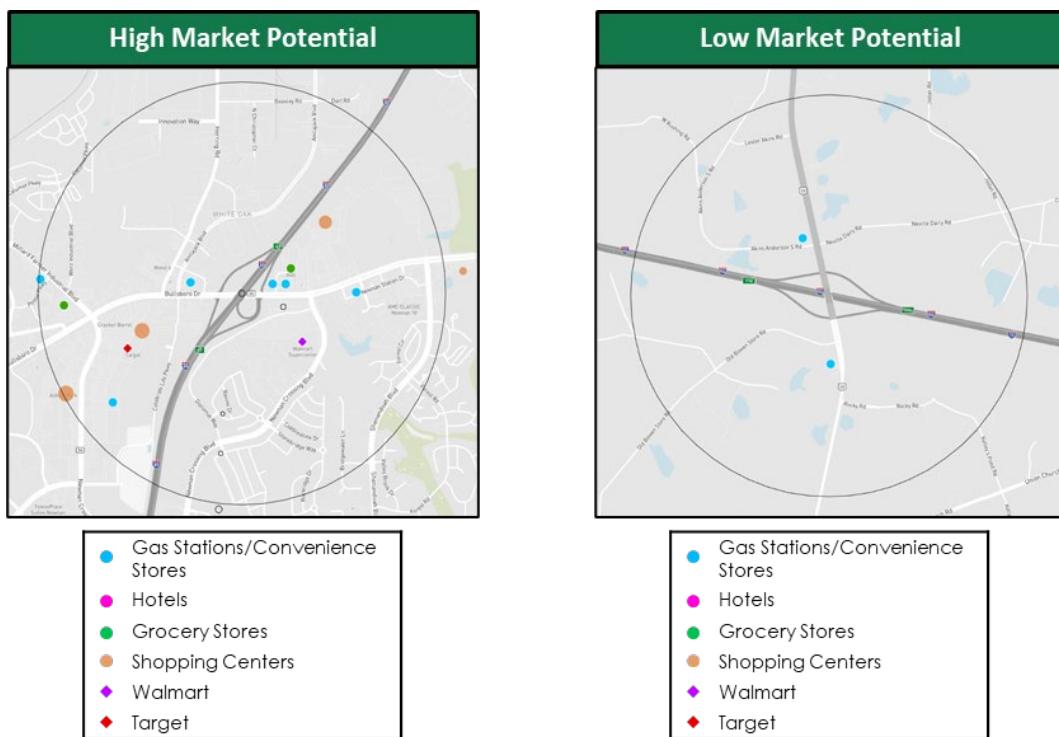


Figure 21: Examples of interchanges with High Market Potential and Low Market Potential

While a low market potential does not preclude the siting of an EV charger, these locations may require higher up-front investment to pay for electrical service to the site or may have a harder time attracting EV driving customers for the project to be financially viable from a market perspective.

This real estate analysis helped GDOT estimate electrical capacity and customer demand for EV charging - two key factors for successful EV charging facilities - as described below:

1. **Electrical Capacity:** Typically, interchanges or intersections with several businesses, especially if some are big box retailers, grocery stores, or distribution centers, provides evidence of the potential availability of electrical transmission and distribution capacity - transformers, 3-phase wiring, etc. Based on these factors, such locations are assumed

to have the electrical infrastructure to support NEVI-compliant chargers. In the example in **Figure 21**, the strong real estate score is given to an interchange because it has several businesses nearby requiring substantial electrical service. The weak real estate score is given to the interchange with very few businesses nearby and the resulting assumption that substantial electricity distribution network upgrades would be necessary to power a NEVI-compliant station.

2. **Customer Demand:** Interchanges or intersections with several businesses nearby indicate sufficient vehicle traffic to support economic activity. This could indicate whether there is (or is not) sufficient activity to support EV charging. In **Figure 20**, a strong real estate score is given to the interchange with several businesses (and different types of businesses) within the 1-mile area of the interchange. In the example with the weak real estate score, there are only 2 small gas stations within 1-mile of the interchange.

At interchanges or intersections within charging gaps along the AFCs, GDOT then applied the real estate scoring criteria. An example of the spatial and real estate analyses of a gap in the EV charging network at Tifton on I-75 is shown in **Figure 22**. In this example, the northern exits offer higher market potential as they host several hotels, gas stations, grocery stores, and a big box store. The most southern exit, on the other hand, has only one fueling/convenience store and one fast-food restaurant and may have less market potential from a real estate perspective.

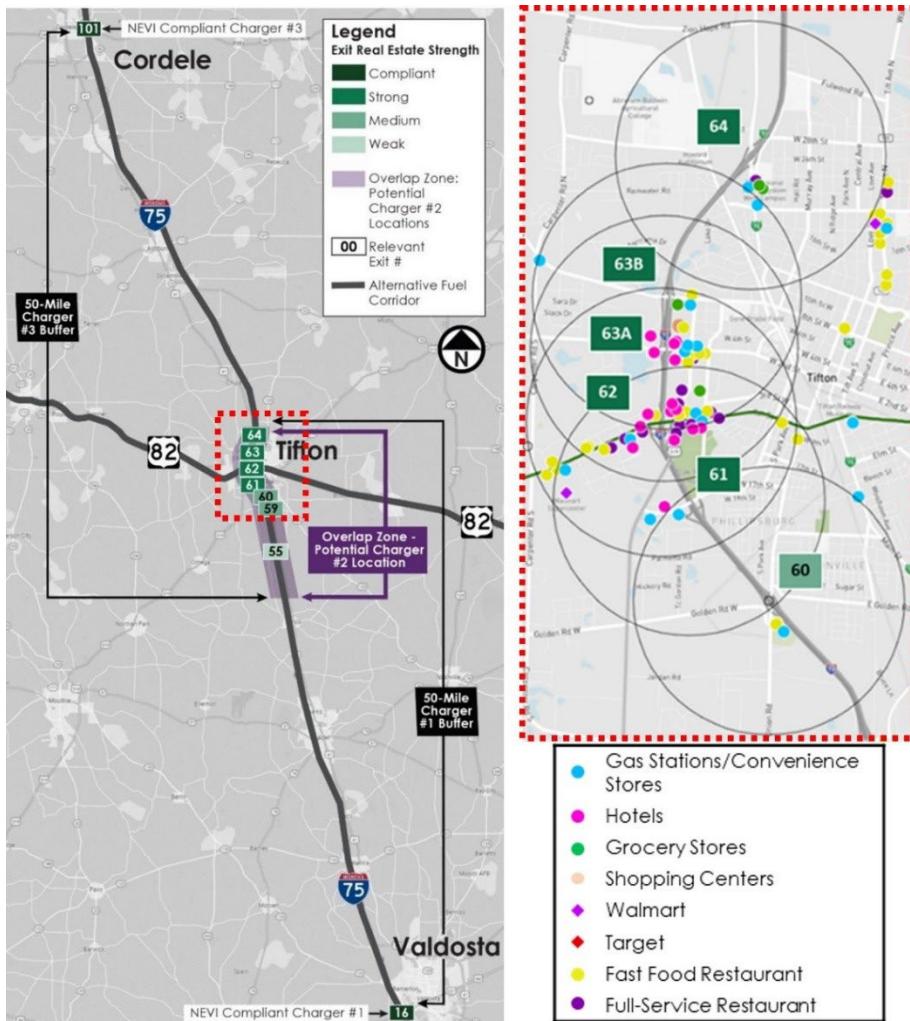


Figure 22: Spatial and Real Estate Analysis for EV Station Siting in South Georgia

While the real estate analysis is an effective proxy for the knowledge of electrical capacity, due to the high-power needs of an AFC NEVI compliant EV charging station, GDOT cannot confirm whether potential sites will have sufficient power immediately available and may need to await developers' and site hosts' attaining confirmation from the utility service provider.

7.2 FUNDING SOURCES

For FY 2022, Georgia has been allocated \$19.9 million in NEVI funding.^[7] Georgia intends to employ a competitive solicitation and create public-private partnerships to advance the work of building out interstate AFCs to meet the $4 \times 150 \text{ kW} = 600 \text{ kW}$ standard using these funds. Selected partners will be the owners and operators of charging stations funded through NEVI. As GDOT has at least 30 gaps to fill, Federal funding along with 20 percent partner match may not be sufficient to complete all the AFCs with FY 2022 funds. It is GDOT's aim to identify non-Federal matching funds from partners through the competitive solicitation process. It is possible

that certain EV charging locations in more remote areas along Georgia's AFCs may require State funding from existing sources as the non-Federal match.

7.3 2022 INFRASTRUCTURE DEPLOYMENTS/UPGRADES

For FY 2022, GDOT intends to focus on working with private partners to build out the state's interstate AFCs. While the site selection analysis summarized in Section 7.1 provides a fundamental understanding of the charging site potential along each AFC, GDOT, in its niche investor role, will look to private sector partners to identify exact charging locations through the competitive solicitation process.

At a high level, GDOT has identified at least 30 gaps in the AFC charging station network. All the charging stations are anticipated to be privately owned and operated. The EV network, the utility territories, anticipated ownership, and match funding will all be identified as part of the competitive solicitation that GDOT will conduct. GDOT notes that some of the gaps have existing DCFC that are geographically compliant but either lack sufficient overall station power, have too few ports, or do not use CCS ports. It is anticipated that such sites will be eligible to be upgraded as part of the program. The gaps in GDOT's AFC network are mapped in **Figure 23**. The exact locations, associated utilities and funding amounts for FY22-funded charging sites will be determined through a competitive solicitation with private partners.

Table 10 below is illustrative and will be filled as these exact site locations are determined.

Table 10: Illustrative Table of Charging Site Locations

Gap ID	EV Charging Location Unique ID	AFC	Location	Utility Territory	FY22 Funding Amount
1	752	I-75	TBD	TBD	TBD
2	754	I-75	TBD	TBD	TBD
3	758	I-75	TBD	TBD	TBD
4	759	I-75	TBD	TBD	TBD
5	161	I-16	TBD	TBD	TBD
6	162	I-16	TBD	TBD	TBD
7	163	I-16	TBD	TBD	TBD

Figure 23 is a map showing the gaps in the AFC network where EV charging infrastructure will be installed in relation to the existing status of DCFC compliance in Georgia's AFC network. The gap locations have been identified but are subject to change pending the competitive solicitation process. Given unknown contractual arrangements at sites that may be location compliant but not power compliant, GDOT is not able to determine at this time whether the gaps will be filled by upgrades or new builds. A detailed analysis of anticipated usage rates and peak demand has not been conducted and GDOT may require this to be the responsibility of program applicants.

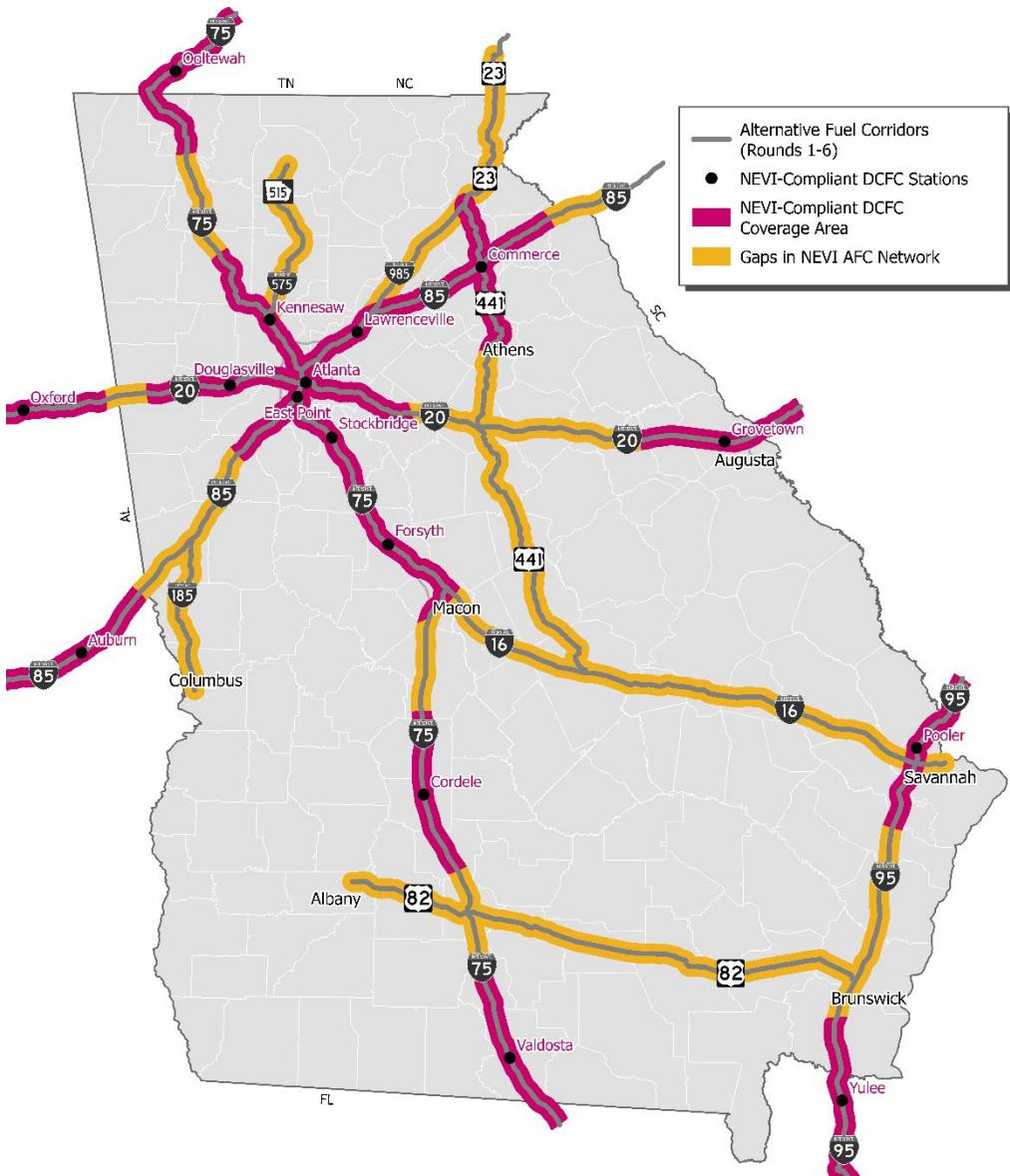


Figure 23: Alternative Fuel Corridors with Existing DCFC and Gaps in NEVI Compliance

7.3.1 Upgrades of Corridor Pending Designations to Corridor Ready Designations

GDOT does not anticipate applying to upgrade any of the current corridors from Corridor Pending to Corridor Ready in the next fiscal year. See **Figure 16** for locations of the existing AFCs in Georgia.

7.3.2 Increases of Capacity/Redundancy along Existing AFC

GDOT will focus its early deployment efforts on building out Georgia's AFC network to NEVI standards of at least four 150 kW ports that can charge simultaneously at no greater than 50 miles apart within 1 mile of the designated AFC. Based on data collected as a result of initial

deployments, when additional capacity is needed GDOT will evaluate whether to add more ports to existing sites or to add additional sites with the standard four 150 kW plugs. GDOT is also evaluating the option of installing even higher power chargers at some locations.

7.3.3 Electric Vehicle Freight Considerations

The 2018 State Freight Plan indicates that trucks carry approximately 75% of the weight of freight and 88 percent of the value of freight in Georgia.^[9] When measured in vehicle volumes, truck-transported freight is primarily carried on Georgia's state freight network, seen in the map below, which consists of the interstates in the National Freight Network plus strategic state and U.S. highways.

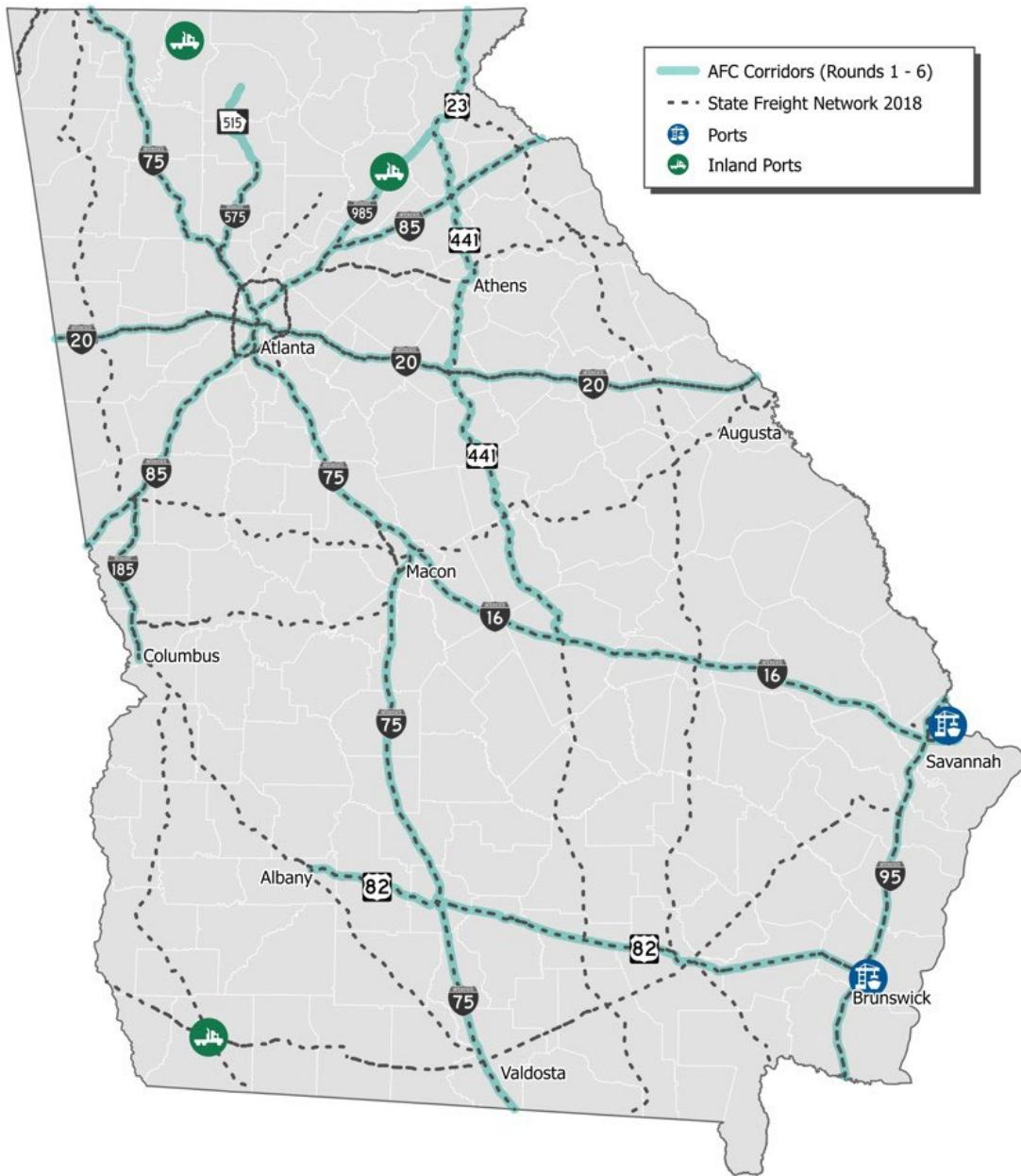


Figure 24: Georgia State Freight Network, Port Assets, and Alternative Fuel Corridors

Source: GDOT State Freight and Logistics Plan 2018

While a major component of traffic throughout the state, truck flows are highest in the Atlanta and Savannah metropolitan areas. As a major intermodal (rail/truck) hub, the Atlanta region is the second busiest inland port in the United States, trailing only Chicago.^[10] Atlanta's warehousing sector has also grown very rapidly in recent years, increasing the demand for truck-based freight. In early 2022, it was the sixth largest industrial big-box market in the United States.^[11]

The Port of Savannah, managed by the Georgia Ports Authority (GPA), is the third busiest and fastest growing container terminal in North America^[12] and enables overnight freight service to a five-state region. The Georgia Ports Authority is investing over \$200 million in the next two years to expand the Port of Savannah's Garden City Terminal West^[13] including expanding truck access and a \$150 million investment to expand the automobile loading and unloading facilities in the Port of Brunswick.^[14]

Georgia currently also has two intermodal “inland ports” – one in Cordele and the other in northwest Georgia near Chattanooga that are part of a freight demand dissemination strategy to leverage the benefits of intermodal strategies and reduce trucking’s impact on Georgia roads. Additional inland ports are under consideration and development, including in northeast Georgia’s Hall County.

Electrification of vehicles in the freight sector, while generally less advanced than that of other transportation sectors, is being evaluated by GDOT in collaboration with freight stakeholders. GDOT will consider the potential of electrifying freight movement in the State Freight Plan currently under development and further as GDOT contemplates design criteria for charging stations in its procurement process.

A major nexus of vehicle electrification is occurring at the Georgia Ports Authority, which is actively pursuing emission reductions at port facilities in Savannah and Brunswick.^[15] GDOT will continue monitoring these developments for possible opportunities to support freight electrification along key corridors to bring the benefits of noise reduction, emissions reductions, and improved working conditions for truck drivers to businesses in and communities impacted by the logistics sector.

7.3.4 Public Transportation Considerations

GDOT’s transit staff coordinates several programs that ensure funding, participation, and quality assurance for Georgia’s transit riders. While GDOT’s initial focus is to build out and receive certification of all its AFCs, GDOT will evaluate opportunities to partner with transit agencies for electrification of their fleets as the program evolves. Options considered or specific plans will be addressed in future NEVI Plan updates, assuming there is still alignment with Federal guidance, as more detailed information is received from the Joint Office and FHWA.

7.4 FY23-26 INFRASTRUCTURE DEPLOYMENTS

Georgia anticipates using FY 2023 funding to build out AFCs, similar to its use of FY 2022 funding, leveraging at least 20% in non-Federal funds from private or public sources to pay for NEVI deployments. Following Federal guidance, GDOT will require that NEVI-funded EVSE be Buy America compliant.

Once the U.S. Secretary of Transportation has certified Georgia's AFCs as built out to NEVI-standards, GDOT will expand NEVI-funded EVSE deployments to address opportunities that are still under evaluation. At a high level, the overall strategy will prioritize the following, as allowable by Federal regulations:

1. Corridors (AFCs, additional corridors)
2. Market segments (freight, fleets)
3. End-use cases (destination charging, community charging, hubs)

Through the competitive solicitation process discussed in **Chapter 5**, GDOT will seek to identify and qualify partners who can deploy funds into site locations that meet NEVI requirements with a minimum of four 150 kW chargers placed at most 50 miles apart, within 1 mile of a corridor. Further, GDOT will seek to leverage its Federal funding in the context of these priorities. At a high level, GDOT will seek to maximize the effectiveness of Federal funding by offering the minimum subsidy necessary to enable the private sector to invest capital and fund the operations and maintenance costs of the EV charging stations, even in places with low near-term customer demand forecasts, dependent on whether the site meets Federal requirements and GDOT priorities. Annual Federal apportionment (subject to appropriation) and matching funds are expected to follow the values noted in **Table 11**.

Table 11: Expected FY22-FY26 Annual Federal and Matching Funds

NEVI Program	FY2022	FY2023	FY2024	FY2025	FY2026	Total
Total Funds	\$1,000.0M	\$1,000.0M	\$1,000.0M	\$1,000.0M	\$1,000.0M	\$5,000.0M
1.5% Administrative takedown	\$15.0M	\$15.0M	\$15.0M	\$15.0M	\$15.0M	\$75.0M
JPO start-up set aside	\$300.0M	\$0.0M	\$0.0M	\$0.0M	\$0.0M	\$300.0M
10% State and local set aside	\$70.0M	\$100.0M	\$100.0M	\$100.0M	\$100.0M	\$470.0M
Total Available for States	\$615.0M	\$885.0M	\$885.0M	\$885.0M	\$885.0M	\$4,155.0M
GDOT's NEVI Funding (80% maximum)	\$19.9M	\$28.8M	\$28.8M	\$28.8M	\$28.8M	\$135.0M
Matching funds (20% minimum)	\$5.0M	\$7.2M	\$7.2M	\$7.2M	\$7.2M	\$33.8M

Source: Bipartisan Infrastructure Law, [*5-year National Electric Vehicle Infrastructure Funding by State](#)

7.5 STATE, REGIONAL, AND LOCAL POLICY

GDOT will continue state, regional, and local policy discussions with stakeholders identified in **Chapter 3**. The GDOT Office of Planning will also coordinate with bordering states to ensure that interstate AFCs meet NEVI requirements while not creating redundant charging station investments. The **Figure 25** and **Table 12** summarize the plan to coordinate with border states.

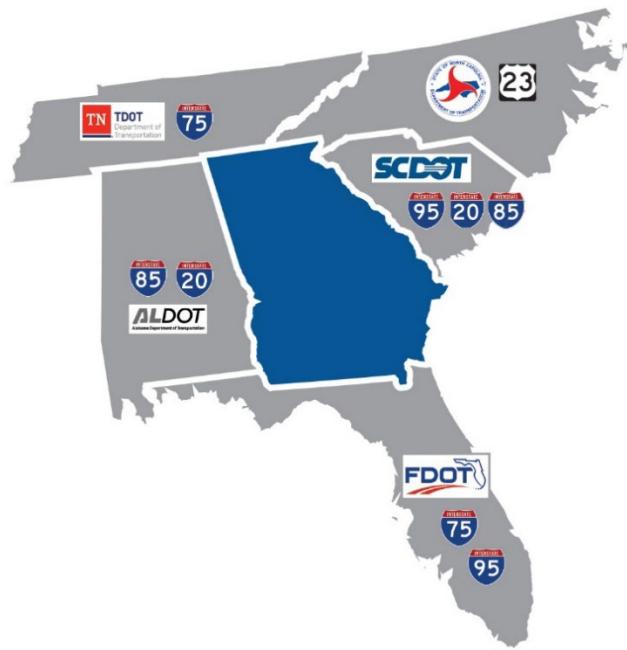


Figure 25: EV Planning Coordination with Border States

Table 12: Border State Coordination

Border State	Stakeholders	AFC Coordination
Alabama	ALDOT, Clean Cities Alabama	I-85 and I-20
Florida	FDOT, Drive Electric Florida	I-75 and I-95
North Carolina	NCDOT, Clean Cities North Carolina, Plug-in NC	US-23
South Carolina	SCDOT – Engineering Support, Palmetto Clean Fuels	I-95, I-20, and I-85
Tennessee	TDOT, Drive Electric Tennessee	I-75

Future Border State Coordination Opportunities

- Alabama/Tennessee:** I-24 and I-59 have very short segments crossing into Georgia territory. Tennessee has indicated they will cover the four-mile segment of I-24 that loops into Georgia from Tennessee. I-59 in Alabama has a larger population center around Ft. Payne, which is less than 50 miles southwest of Chattanooga.
- Florida:** FDOT has recently received approval of five new AFCs that terminate at the Georgia border. GDOT will coordinate with FDOT and FHWA to provide a solution considering the importance of hurricane evacuations along these corridors. The five new corridors with the closest Florida and Georgia population centers are listed below:
 1. US-27 from Tallahassee to Bainbridge
 2. US-41 from Lake City to Valdosta
 3. US-441 from Lake City to Fargo
 4. US-301 from Jacksonville to Folkston
 5. US-17 from Jacksonville to Kingsland

- **North Carolina:** Georgia's segment of US-23 is an AFC that leads from its border to North Carolina into I-985 and the Atlanta metropolitan area. US-23 is not listed as an AFC in North Carolina, nor was it nominated in Round 6. GDOT will coordinate with NCDOT and FHWA to provide a solution and consider the importance of tourism along this corridor.
- **South Carolina:** GDOT will coordinate with SCDOT on ensuring the distances between NEVI-compliant stations on I-95, I-20, and I-85 are within FHWA 50-mile distance requirements.

8 IMPLEMENTATION

As indicated in **Chapter 5**, Contracting, and **Chapter 7**, EV Charging Infrastructure Deployment, GDOT will engage in a competitive solicitation for project partners to own, operate, and maintain charging stations funded through the NEVI program. After receiving FHWA approval of Georgia's NEVI Plan, GDOT will continue stakeholder engagement to determine the most efficient way to conduct its competitive solicitation for project partners

As part of the competitive solicitation process, GDOT will develop a standard contract to work with project partners that includes all Federal requirements as well as key performance indicators that align with the State's goals and enforcement provisions to ensure that work is being conducted in accordance with these priorities.

8.1 STRATEGIES FOR EVSE OPERATIONS AND MAINTENANCE

After EV charging stations have been tested and placed in service, EV drivers and the community will rely on owner/operators to keep charging stations in good working order during and after the five-year NEVI-funded operating period. GDOT is aware of challenges some providers may have had with maintaining uptime in this emerging market and therefore will aim to consider methods to minimize incidences of and ensure prompt repair of damaged cords or equipment, broken screens, unreliable communication, and other similar issues to maintain the 97 percent uptime requirements of NEVI, as best as possible. NEVI-funded chargers will have a call number so equipment or operational problems can be reported and resolved expeditiously. Through defined performance standards, GDOT will seek to ensure that all parties involved understand and meet their responsibilities and drivers feel confident purchasing and driving EVs throughout Georgia.

Table 13: Considerations for EV Charging Operations and Maintenance

Operation <ul style="list-style-type: none"> ▫ Terms and conditions <ul style="list-style-type: none"> ○ Agreements identify responsibility details ○ Contract duration ○ Charging/parking fees and requirements ○ Cost sharing ▫ Site improvements and equipment updates 	Maintenance responsibilities <ul style="list-style-type: none"> ▫ Warranty ▫ On-hand materials and components ▫ Permissible downtime and escalating penalties ▫ Hardware/software upgrades ▫ Property clean-up
Charge management <ul style="list-style-type: none"> ▫ Open Charge Point Protocol (OCPP) network connection ▫ Demand management, and demand response. ▫ Peak operation conditions 	EVSE ownership <ul style="list-style-type: none"> ▫ Public property <ul style="list-style-type: none"> ○ Facilities ○ Right-of-way ▫ Private property
Payment <ul style="list-style-type: none"> ▫ Pricing regime / transparency ▫ Personal Information security ▫ Non membership for charger use ▫ Customer support 	Data collection, monitoring <ul style="list-style-type: none"> ▫ Reporting ▫ Remote restart

8.2 STRATEGIES FOR IDENTIFYING ELECTRIC VEHICLES CHARGING SERVICE PROVIDERS AND STATION OWNERS

GDOT will continue to engage with current and potential charging site hosts: convenience stores, gas stations, big-box retailers, shopping malls, and grocery store owners that could serve as hosts for most of Georgia's charging stations. In some cases, these hosts report that they prefer to partner with a third-party to own and operate the EVSE. Smaller retailers such as fast-food restaurants, banks, and car-care centers are another existing group of DCFC hosts and potential candidates for hosting NEVI-compliant stations.

Convenience store and gas station operators are logical candidates to offer charging services for EVs given that they currently provide fueling services to the nation's drivers. Additionally, their business model aligns well with NEVI requirements, including accessibility 24 hours a day, amenities, attendants who can monitor and rapidly report and remedy EVSE operational issues, and cybersecurity for payment of EV charging fees. Unlike larger retailers willing to engage a third party to own and operate charging stations, fuel/convenience store operators report that they prefer to own and operate the EVSE in order to fully manage the customer experience.

GDOT intends to act as a niche investor in the build out of an infrastructure network to serve EVs where there is both 1) a clear customer demand for EV infrastructure and 2) limited private sector ability to invest without subsidy. Based on interest and feedback from charging service

provider, station owners, and existing and potential hosts, GDOT is confident there will be sufficient private-sector interest in executing its NEVI program.

8.3 STRATEGIES FOR EVSE DATA COLLECTION AND SHARING

Ongoing data collection and sharing are required in order to meet FHWA grant requirements and support continuous program improvement. GDOT will require data collection and sharing through RFP specifications, proposal and bid evaluation, and contract documents. Data privacy and cybersecurity are also a primary concern and addressed in **Chapter 12**.

GDOT will therefore require data collection and data sharing that meets Federal regulations and State law through RFP specifications, proposal and bid evaluation, and all contract documents. The June 9, 2022, NPRM outlined specific data collection and sharing requirements. As the NPRM is not yet a final rule, it is anticipated that there will continue to be changes to final data collection items but the strategy to collect them will remain the same. A snapshot of the data requirements included in the NPRM follows:

State DOT Quarterly Data Submittal (NPRM pg. 43-44; 73-74)

- EVSE location; session start/end time; yes/no completion/port; kWh/port/session; peak kW/port
- For each of the quarter's previous three months provide data on uptime per §680.116(b); cost of electricity to operate EVSE; maintenance and repair costs
- EVSE real property acquisition cost; EVSE acquisition and installation cost, distributed energy resource acquisition and installation cost, and grid connection and upgrade cost on the utility side of the electric meter
- Distributed energy resource installed kW capacity and type (e.g., stationary battery, solar, etc.) per charging station

State DOT Annual Data Submittal (NPRM pg. 44-45; 74)

- For each charging station: name, address, type of private entity involved in installation, operation, and maintenance, respective entity status and designation as MBE/WBE/DBE/SBE/VBE/etc.

State DOT Annual Community Engagement Outcomes Report (NPRM pg. 45-46; 74-75)

- Based on the most recent FHWA approved state NEVI plan, include community engagement type, date, number of attendees, communities represented by attendees, and how state DOT “reflected” information gathered by the engagement to inform the state DOT NEVI Plan.

Third-Party Data Sharing (NPRM pg. 51-52; 77-79)

- The following data fields must be available via API to third-party software developers free of charge: EVSE identifier, address/GPS, operator name/phone, network provider, number of ports/connector type, max kWh/port, if power sharing enabled, date of installation, price structure, vehicle size accessibility, accepted forms/methods of payment, number of ADA accessible ports, OCPP real-time status, and price.

8.4 STRATEGIES TO ADDRESS RESILIENCE, EMERGENCY EVACUATION, SNOW REMOVAL/SEASONAL NEEDS

Relying on electricity for vehicle transportation is new and the market structures and governmental policies for the sale and distribution of electricity are still being developed. Planning for EVs in emergency conditions needs to consider the challenges and opportunities unique to the new technology and the still nascent market and policy frameworks which support it.

GEMA is the lead agency for coordination of emergency and disaster response. They have developed a six-stage categorization for responding to emergencies based on gradually shifting operating conditions to accommodate foreseeable emergencies such as hurricanes (see **Table 14**).

The Georgia Department of Transportation coordinates with other state agencies, including Georgia Emergency Management Agency (GEMA) and Georgia State Patrol, to manage responses to weather-related events and emergencies. The three organizations share an incident management command center in Atlanta, known as the State Operations Center.

To prepare for hurricanes, the three organizations collaboratively developed the GDOT Hurricane Plan^[16] available to all staff members and compliant with the requirements of the Federal National Incident Management System.

To respond to winter weather events, GDOT leads with response teams that monitor and respond to wintry conditions on interstates and state routes. Tools at GDOT's disposal include tankers to dispense brine on the roadways to prevent ice buildup, multilane tow plows to clear snow and ice, dump trucks to distribute salt and gravel where needed, and roadway sensors to provide real-time conditions on roads such as ice, temperature, precipitation, and wind.

Table 14: GDOT Emergency Operating Conditions Matrix

Stage	Condition	Activities
OPCON-5 Preparations	Normal operations and weather monitoring	<ul style="list-style-type: none"> ▫ Conduct normal operations and monitor weather ▫ Update guidelines to reflect new conditions/lessons learned ▫ Conduct training and public outreach
OPCON-4 Enhanced Monitoring	Potential impacts within 120 hours	<ul style="list-style-type: none"> ▫ Maintain situational awareness and monitor weather ▫ Develop staffing roster for ESF activation ▫ Conduct maintenance checks on equipment
OPCON-3 Alerting/ Strategic Planning	Potential impacts within 72 hours	<ul style="list-style-type: none"> ▫ Make decision to implement hurricane weather plan ▫ Notify ESF-1 staff of possible activation ▫ Monitor need for contractor staff ▫ Prepare GDOT crews for travel to staging sites ▫ Notify Traffic Management Center staff ▫ Coordinate stranded motorist assistance programs ▫ Determine need for I-16 contraflow activation
OPCON-2 Readiness and Staging	Potential impacts within 48 hours	<ul style="list-style-type: none"> ▫ Begin hurricane operations with staff ▫ Coordinate with ESF-13, Department of Public Safety, for escort vehicles for hurricane operations ▫ Begin I-16 contraflow (if needed) ▫ Notify contractors of potential need ▫ Move crews to staging sites ▫ Staff ESF-1 desk in State Operations Center

Stage	Condition	Activities
OPCON-1 Final Staging	Potential impacts within 24 hours	<ul style="list-style-type: none"> ▫ Continue hurricane operations ▫ Coordinate with ESF-13, Department of Public Safety, for escort vehicles for hurricane operations ▫ Stage emergency trailers and response vehicles ▫ Notify needed contractors to stage ▫ Identify potential impacts for critical infrastructure and coordinate potential treatments ▫ Identify bridge teams and priorities for inspections
Response	Impact plus 72 hours	<ul style="list-style-type: none"> ▫ Deploy response vehicles from staging areas ▫ Start second round of hurricane operations ▫ Coordinate with GDOT contractors for needed equipment ▫ Assign trucks to routes and enforce this action ▫ Remove debris from roadways ▫ Set up traffic control for I-16 contraflow ▫ Identify road closures and coordinate with ESF partners on available routes ▫ Coordinate with multi-agency teams to assist in clearing route

Source: GDOT Hurricane Plan, November 2019

GDOT and GEMA have identified certain state routes, US routes, and interstate highways as official hurricane evacuation routes that are the subject of advanced strategic planning and preparation. I-75, I-16, and US-82 are AFCs that have segments that are also evacuation routes. **Figure 26** depicts these routes.

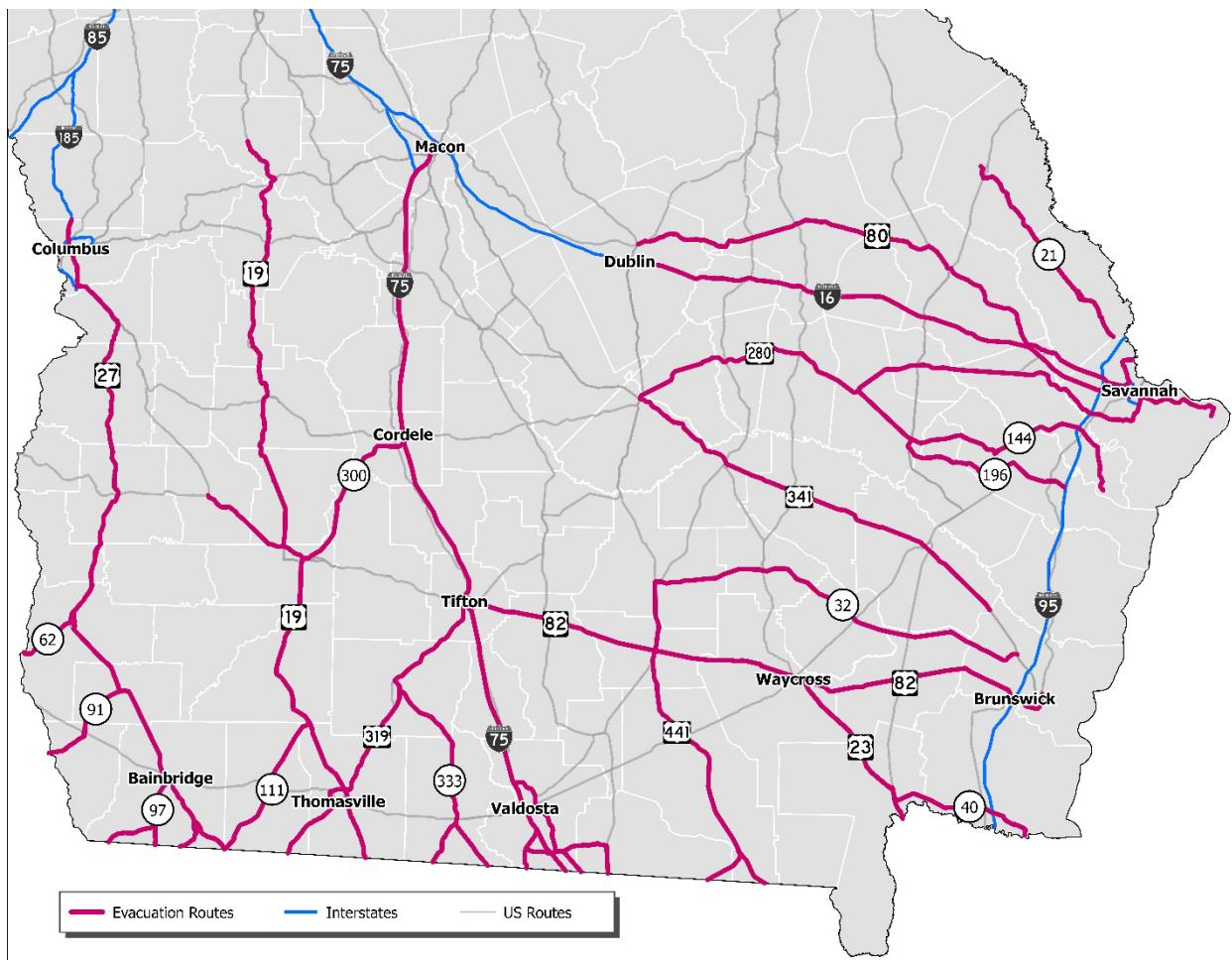


Figure 26: Georgia Hurricane Evacuation Routes

Source: Georgia Emergency Management Agency

GDOT, GEMA, and Georgia State Patrol have begun preparing for emergencies in relation to EVs. Electrification will require a substantial re-evaluation of how to manage the evacuation of large numbers of people and vehicles from coastal areas to safe inland areas. Any adjustments will then need to be reflected in each of Georgia's Emergency Operating Conditions listed above. Given Georgia's location, state agencies will need to address evacuees coming not only from its own Atlantic coast but also from South Carolina, Florida, and Alabama.

Emergency preparedness for EVs concerns the temporary provision of battery charging for EVs along corridors identified as evacuation routes. It entails collaboration with utilities, border states, local governments, and DOT rapid response teams. From a Federal emergency management perspective, EVs would fall under Emergency Support Function (ESF)-1 – Transportation, and ESF-12 – Energy, which together govern the roadways and the utilities used by EVs in evacuation conditions. ESF-12, in coordination with ESF-7, “assists Federal departments and agencies by locating fuel for transportation, communications, emergency operations, and national defense...” Georgia will coordinate with the Federal emergency

response process and seek grant funding opportunities to help defray the cost of emergency preparedness for EVs.

8.5 STRATEGIES TO PROMOTE STRONG LABOR, SAFETY, TRAINING, AND INSTALLATION STANDARDS

An important objective for Georgia is to ensure that entities and individuals working on EV charging infrastructure are appropriately trained and qualified to perform the work. See **Figure 27** for a high-level workforce readiness plan. Contractors must demonstrate their technical skill to perform all aspects of the work as well as conform to all Federal, state, and local laws or guidelines. A major initiative by the Technical College System of Georgia is to train Georgia's workforce, including from underserved populations, and employees of small business owners. As such, partnering with universities, technical colleges, and other state and private organizations will be a key to growing the workforce necessary to make NEVI a success.

Installation Requirements	Safety Compliance and Standards	Training	Qualifications
<ul style="list-style-type: none"> • DCFC 4x150KW • Equipment certification <ul style="list-style-type: none"> » UL or equivalent » National standards » Local standards • Permitting • Procurement • Distribution • Panel/metering • ADA compliance <ul style="list-style-type: none"> » Access » Reach 	<ul style="list-style-type: none"> • Standards <ul style="list-style-type: none"> » NFPA » National electric code » IEEE » Local standards • Emergency shutoff for Electric vehicle supply equipment • Emergency response plan 	<ul style="list-style-type: none"> • Local workforce <ul style="list-style-type: none"> » GaDOE » EVI Training program » Community colleges • Job classes <ul style="list-style-type: none"> » Electricians » Inspectors » Utility workers » Automotive technicians • Local agency oversight <ul style="list-style-type: none"> » Plan reviews » Fire department » Weights and measures inspectors 	<ul style="list-style-type: none"> • Prequalification <ul style="list-style-type: none"> » State DOT » DBE/small business Requirements • Contractor experience • Certifications

Figure 27: Workforce Readiness Plan

As a collaboration of automakers, EVSE manufacturers, educational institutions, utility companies, electrical industry professionals, and others, EVITP is already offering training courses through programs such as the Atlanta Joint Apprenticeship and Training Committee to ensure electricians are certified to do EVSE work. The International Brotherhood of Electrical

Workers (IBEW) offers EVITP training and has a robust apprenticeship program available at five locations across the state. Additionally, the Georgia Department of Education (GaDOE) is working to develop a pathway of courses to support a career in the electric vehicle industry.

Electrical and general contractors and EVSE operators must all be aware of state and local permitting requirements, electrical codes, mandates such as Buy America, and utility company standards. As much EVSE work involves high-power circuits, training and qualification is imperative. Each employee working on EVSE must be trained in, and familiar with, safety-related practices and procedures. As vehicle and EVSE technology are advancing at a rapid pace, designers, vendors, and contractors must ensure employee skills are regularly updated.

Georgia is committed to working with public and private agencies, and small businesses to ensure that the workforce is trained and ready to deliver the projects to support and promote EV adoption in the state.

9 CIVIL RIGHTS

While every employee at GDOT is responsible for complying with civil rights laws, statutes, and regulations, GDOT's Office of Equal Employment Opportunity^[17] is responsible for the administration and coordination of all departmental activity related to civil rights. This office oversees, monitors, and reports on all programs, employment considerations, and public participation activity where there is a civil rights consideration. Therefore, this office will be a partner in Georgia's EV Deployment Plan from planning through implementation. This plan will ensure compliance with the following: state and Federal civil rights laws, statutes and regulations including but not limited to, Title VI of the Civil Rights Act, the Americans with Disabilities Act, and Section 504 of the Rehabilitation Act. Civil Rights compliance will be ensured through the general phases shown in **Table 15** and through existing GDOT plans and policies (i.e., 2022 Title VI Program Plan^[18] and GDOT ADA Policy Statement.^[19])

Table 15: Civil Rights Compliance Efforts

Planning, Outreach and Development	Outreach opportunities, as discussed in the preceding chapters and in compliance with the NEPA process, will be open to anyone who wants to participate and give feedback on the NEVI plan. GDOT will conduct specific outreach to rural and disadvantaged groups to ensure they can access these opportunities as identified in Section 10.1. This will allow for diverse ideas from across the state. The comments received and the discussions had at these meetings are being taken into consideration as this NEVI plan is being developed and will continue to have an impact on planning throughout the five-year implementation. As part of this phase, an assessment of impacts of Federal activities on the human and natural environments will also be completed.
Procurement	Contracts, with the help of the Office of Transportation Services Procurement, will be let via competitive solicitation to third parties to design, install, operate, and maintain the EV charging stations. Contract language will cover the third parties' compliance with local, state, and Federal laws, regulations, and policies, as appropriate.

Planning, Outreach and Development	Outreach opportunities, as discussed in the preceding chapters and in compliance with the NEPA process, will be open to anyone who wants to participate and give feedback on the NEVI plan. GDOT will conduct specific outreach to rural and disadvantaged groups to ensure they can access these opportunities as identified in Section 10.1. This will allow for diverse ideas from across the state. The comments received and the discussions had at these meetings are being taken into consideration as this NEVI plan is being developed and will continue to have an impact on planning throughout the five-year implementation. As part of this phase, an assessment of impacts of Federal activities on the human and natural environments will also be completed.
Installation/Testing	Installation and testing allow further touchpoints to verify compliance from both installation checklists and the testing perspective.
Operations and Maintenance	Ongoing compliance verification through performance measure collection and ongoing data reporting will take place through the operations and maintenance portion of the contracts.

10 EQUITY CONSIDERATIONS

Georgia's NEVI Plan addresses equity considerations, as it is being developed through engagement with rural, underserved, and disadvantaged communities and stakeholders to satisfy the goals outlined in the Justice40 Initiative, as elaborated by guidance from the USDOE and USDOT. This section addresses how disadvantaged communities ("DAC's) are identified and engaged.

GDOT understands that many of the burdens of transportation infrastructure and related energy systems have fallen on rural and historically disadvantaged communities and is committed to implementing an EV program that is convenient, reliable, affordable, and equitable for all users.

Transportation electrification provides an opportunity for Georgia to address social equity concerns such as air quality and energy burden. Providing improved access to EV charging, NEVI can 1) improve air quality as shared vehicles provide a significant number of trips in underserved areas and 2) reduce the transportation energy cost burden as the overall cost of owning and operating an EV is lower than for internal combustion engine vehicles.

Furthermore, as many NEVI-funded EV charging installations will be in remote areas or lower-income neighborhoods with aging utility infrastructure, necessary electricity upgrades can improve grid resilience and increase equitable access to a safer and more secure electrical grid.

10.1 IDENTIFICATION AND OUTREACH TO DISADVANTAGED COMMUNITIES

Georgia's NEVI Plan is focusing outreach on DACs by engaging the general public, local governments, workforce education, and social/environmental justice organizations, as shown in **Table 16**. This outreach will be organized around two key concepts:

- 1 Listening to members of these communities regarding their needs and the most appropriate methods for ensuring their involvement in the NEVI planning process going forward. This will include an understanding of what are the perceived benefits to members of these communities of the NEVI investments; and
- 2 Educating members of historically disadvantaged communities regarding the opportunities and challenges of the electrification transition in transportation. This includes translating available materials to be accessible

Table 16: Georgia's NEVI Equity Engagement Strategy

Group	Who?	Why?
Local Governments and Regional Planning Entities	Metropolitan and Regional Planning Organizations	Regional processes for managing governmental investments in disadvantaged communities
	Association of City/County Governments	Specific local needs for investment in disadvantaged communities
General Public	General Public	Provide materials on how/where to get information
Workforce Education Leaders	Technical College System of Georgia	Plans and timeline for expanding EVSE training across the state, especially in disadvantaged communities
	West Georgia Technical College	Specific EVSE training programs and lessons learned
	Gwinnett Technical College	Specific EVSE training programs and lessons learned
	IBEW, Local 613	EVITP training programs plus apprenticeship programs
	Atlanta Career Rise	Apprenticeship programs and entry level EVSE workforce
Social/Environmental Equity Organizations	Partnership for Southern Equity	EV needs and expectations in rural and disadvantaged communities
	Southern Alliance for Clean Energy	EV needs and expectations in rural and disadvantaged communities
	Georgia Budget and Policy Institute	State policies related to equitable procurement

Group	Who?	Why?
	EVNoire	EV needs and expectations in disadvantaged communities
	Environmental Defense Fund	EV needs and expectations in rural and disadvantaged communities
	Georgia Conservation Voters	EV needs and expectations in rural and disadvantaged communities
	Chambers of Commerce representing minority interests in Georgia	EV needs and expectations in rural and disadvantaged communities
	Dream Corps	EV needs and expectations in rural and disadvantaged communities

GDOT has begun the process of interviewing DAC stakeholders and will continue gathering inputs to the plan to be provided in subsequent plan updates. Some key themes that have emerged so far include needs for further DAC stakeholder outreach, to prioritize projects in areas with higher pollution, to ensure that NEVI charging equipment will have the same level of uptime across communities, and to emphasize the needs for EV charging opportunities in multi-family housing.

Going forward, GDOT will engage the equity community in three main areas: local governments, technical workforce training, and interviews with equity community organizations.

Interviewing local governments and regional planning partners will be valuable to gain an understanding of how existing mechanisms can be leveraged or buttressed to site, install, and operate EV charging equipment in disadvantaged communities. These partnerships will then be used to gain broader access to the public than might otherwise be the case with statewide planning initiatives.

Technical workforce training will be key to a successful EV transition throughout the implementation of the NEVI program and beyond. As electrification accelerates, many businesses, and workers, especially those in low-wealth communities, will need to upskill workers to ensure they remain competitive. GDOT will coordinate with other state agencies such as the Department of Labor and the Technical College System of Georgia to encourage the expansion of training programs designed to offer members of historically disadvantaged communities a sustainable path forward during this economic transition.

There are many equity-focused community organizations that have formed to plan for and address challenges in historically disadvantaged communities related to energy – whether this be energy burden in the community, siting of energy production facilities in low-wealth neighborhoods, or the disproportionate impact of air quality on low-wealth and minority neighborhoods. GDOT understands that these organizations have valuable perspectives and will continue gathering their feedback in future phases of the outreach plan, as well as

engage electric utility companies in their similar equity-related efforts (see **Chapter 3** for additional information on outreach).

10.2 IDENTIFYING, QUANTIFYING, AND MEASURING DAC BENEFITS

The Department of Energy has developed a working definition of “disadvantaged communities” (DACs) that relies on 36 indicators collected primarily from Federal databases generated by the US Census, EPA, HUD, USDA, Commerce, Energy, and FEMA and mapped at the census tract level.^[20] These indicators are grouped into four broad categories of disadvantage:

1. Energy burden
2. Dependence on fossil fuels
3. Exposure to environmental and climate hazards
4. Social vulnerability (low-wealth households, housing burdens, transportation burdens, etc.)

Each census tract receives a score for each indicator. These scores are equally weighted and summed; wealthier locations are screened by further identifying a DAC as having at least 30% of households at or below 200% of the Federal poverty level or that make less than 80% of area median income. For further details regarding DOE and OMB methodology, please see the DOE's web page regarding the Justice40 Initiative.^[21]

Applying this methodology, and in ongoing collaboration with equity community stakeholders, GDOT is gathering feedback on the following benefits and measurements:

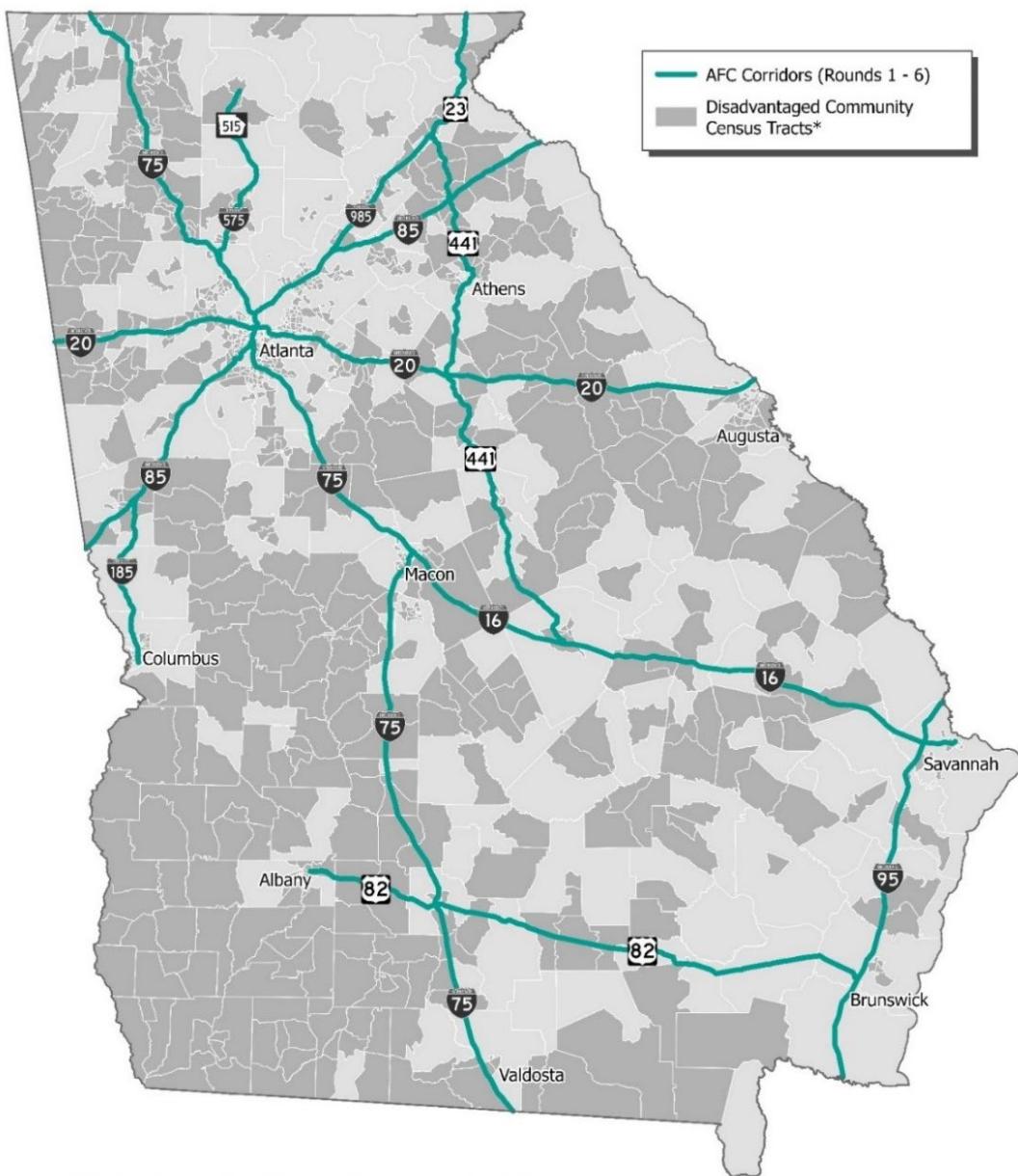
Table 17: Measuring Benefits to DACs

Benefit to Measure	Quantification	Source
Access to clean transportation	Percentage of NEVI-funded chargers in disadvantaged communities	GDOT
Community cohesion	Meaningful engagement in NEVI planning as evidenced by number of attendees and survey responses from disadvantaged communities	GDOT
Reducing environmental exposures to transportation emissions	Using AADT, vehicle type, overlaying DACS locations determine the value of increased EV usage	GDOT

GDOT will work to ensure that the benefits of the NEVI Plan are aligned with the Justice40 initiative, where 40 percent of benefits accrue to disadvantaged communities. Continuous engagement with underserved communities will also be important to make sure benefits are being delivered as intended.

10.3 BENEFITS TO DACS THROUGH THIS PLAN

Figure 28 shows how Georgia's Alternative Fuel Corridors (AFCs) overlay with DACs. While Georgia's NEVI investments will ultimately go beyond implementation for AFCs, the first phase of the NEVI investment will be an early opportunity to showcase Georgia's commitment to equity. Forty-eight percent of Georgia's AFC mileage passes through disadvantaged communities, and initial planning indicates that over 60 percent of the charging stations likely to be needed for AFC certification would be located within disadvantaged communities.



*As defined by the Joint Office of Energy and Transportation, May 2022

Figure 28: Map of Georgia's Alternative Fuel Corridors and Disadvantaged Communities

11 LABOR AND WORKFORCE CONSIDERATIONS

Georgia has an established EVSE workforce ready to support the EV transition. The state currently has 24 Electric Vehicle Infrastructure Training Program (EVITP) certified electrical contractors^[22] serving all areas of the state. Furthermore, the Georgia State Board of Electrical Contractors has a long-established process to certify and license electricians.

Technical workforce training will be key to the successful implementation of the NEVI program and beyond as the nation transitions to electric vehicles. Today, over 55,000 Georgians^[23] are employed in some aspect of the automotive industry. Georgia is working to assist companies to maintain and grow this workforce by encouraging innovation and leveraging the opportunities afforded by the electrification transition.

For example, to assist skilled incumbent workers, TCSG, DOR and GDEcD jointly manage a retraining program that enables Georgia businesses to offset their investment in employees, whether retraining to use new equipment or new technology or upgrading a company's competitiveness. The tax credit covers 50 percent of direct training expenses up to \$500 credit per employee with an annual maximum of \$1,250 per employee.^[24] From an EVSE perspective, this program will be crucial to ensure that internal combustion engine mechanics can service and repair electric vehicles. It will also be a key strategy for ensuring that electricians can receive proper certification (such as EVITP or DOL-certified equivalent) for EVSE installations and maintenance.

To grow the workforce necessary to support EVSE installations and maintenance as well as the broader array of OEMs and software technology companies doing business in Georgia, the state, in collaboration with private-sector stakeholders, will encourage the development of electrical apprenticeship programs focused on EVSE to build a pipeline of talent and avoid shortages of labor. Two professional associations – The Atlanta Electrical Contractors Association and the Atlanta Chapter of the Independent Electrical Contractors offer apprenticeship programs.^[25] The International Brotherhood of Electrical Workers (IBEW), Local 613, in Atlanta also has a well-established apprentice program.^[26]

In addition to the above, GDOT intends to collaborate with the GDEcD and the Technical College System of Georgia to ensure State agencies understand the workforce demands of the various aspects of the EV industry and create training curricula and conduct marketing for EV-related training and job opportunities. These programs would support the Electric Vehicle Infrastructure Training Program.

GDOT recognizes that the Justice40 requirements include goals to broaden participation to better include women and people of color in the procurement process. While its NEVI-related procurement processes are still being determined, GDOT may include evaluation criteria on how the bidder proposes to address workforce development and equal opportunities for

members of historically disadvantaged communities based on a Federally approved process to identify Disadvantaged Business Enterprise (DBE) participation.

12 CYBERSECURITY

Cybersecurity and the personal privacy of individuals that will be using the EV charging stations is of the utmost importance as this plan is being developed and will be an ongoing focus throughout the five-year implementation period. As Georgia will be contracting with a third party for the purchase, operation, maintenance, and data collection of the EV chargers, the responsibility for cybersecurity and privacy will lie with the third party.

To ensure the charging providers will meet the cybersecurity expectation and requirements of Georgia,^[27] GDOT, along with the Georgia Technology Authority (GTA),^[28] will include cybersecurity and privacy related requirements to the competitive solicitation documents and final contracts. These requirements and this contract language will include initial and ongoing assessments of cybersecurity and data collection methodologies, ongoing updates to those methodologies over the contract period, an understanding of software updates (timing and how it affects users), notification requirements for any security or privacy breaches, and a requirement that the charging provider comply with local, state, and Federal law as it relates to cybersecurity or privacy.

13 PROGRAM EVALUATION

GDOT's Division of Permits and Operations will monitor and report on the progress and reliability of the overall statewide EV network annually, as required by the NEVI program. This evaluation plan will be updated annually to reflect lessons learned and opportunities for improvement to ensure that GDOT's implementation achieves NEVI program as well as GDOT's program goals.

GDOT's NEVI program goals and the rationale behind them are described in **Chapter 4**. The table below lists the goals and the evaluation process.

Table 18: Evaluation of Progress to Goal

GDOT NEVI Program Goal	High-Level Evaluation Process or Criteria
Customer-driven deployment	Utilization, customer surveys, safety factors
Economic development	Economic activity correlating to station deployment
Private/Nonprofit Ownership and Operations	Listing of private/nonprofit entity operators
Sustainability and reliability of operations	Uptime
Compliance with Federal requirements	NEVI and associated program requirements

GDOT will require NEVI-funded EVSE owners to operate networked EVSE on Open Charge Point Protocol (OCPP) networks that provide charging station usage reports. GDOT will use EVSE report information to perform NEVI program evaluation. The reporting information submitted will identify aggregate utilization data for the previous reporting period for all EVSE funded by

the program. Examples of information that GDOT may require as key performance metrics for annual reporting are listed below.

Sample Charging Station Data Reporting for NEVI Program Compliance

- Location: Site name, EVSE ID number, address, city, ZIP, county
- Characteristics: number of ports, nameplate power for each port
- Operational uptime (percentage) for each port
- Number of charge events
- Number of unique vehicles
- Average charge time per event (minutes)
- Average maximum actual kW per charge event
- Average kWh per charge event
- Total kWh consumed

In addition to being supplied in the annual plan update, the information described above could be summarized and included in the development of an online dashboard, accessible to the public, which would show progress made towards program goals and be used as the basis of an evaluation of the amount of charging leveraged per NEVI program dollar.

14 DISCRETIONARY EXCEPTIONS

As indicated in Section 7.3, site selection analysis has provided GDOT with a fundamental understanding of the market potential along the AFCs. For FY 2022, as GDOT analyzes options for locations, it would be helpful to have exceptions secured for two existing charging stations which are power-compliant but are just beyond the 1-mile from the AFC requirement.

Granting these exceptions will enable GDOT to be flexible in finalizing locations that meet NEVI requirements.

In the sections below, GDOT has completed all information required by the "Exception Template" provided by the Joint Office for this plan. The table listing the two exception requests is followed by a map showing their locations relative to the respective AFC. Finally, GDOT provides the justification for the exception and the analysis undertaken to support the request.

Table 19: Discretionary Exception Requests

Exception #	Type	Distance of Deviation	Included in Round 6 AFC Nomination	Reason for Exception Request
1	<input type="checkbox"/> 50 miles apart <input checked="" type="checkbox"/> 1 mile from exit	0.6 miles	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Grid Capacity <input type="checkbox"/> Geography <input type="checkbox"/> Equity <input checked="" type="checkbox"/> Extraordinary Cost
2	<input type="checkbox"/> 50 miles apart <input checked="" type="checkbox"/> 1 mile from exit	0.1 miles	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Grid Capacity <input type="checkbox"/> Geography <input type="checkbox"/> Equity <input checked="" type="checkbox"/> Extraordinary Cost

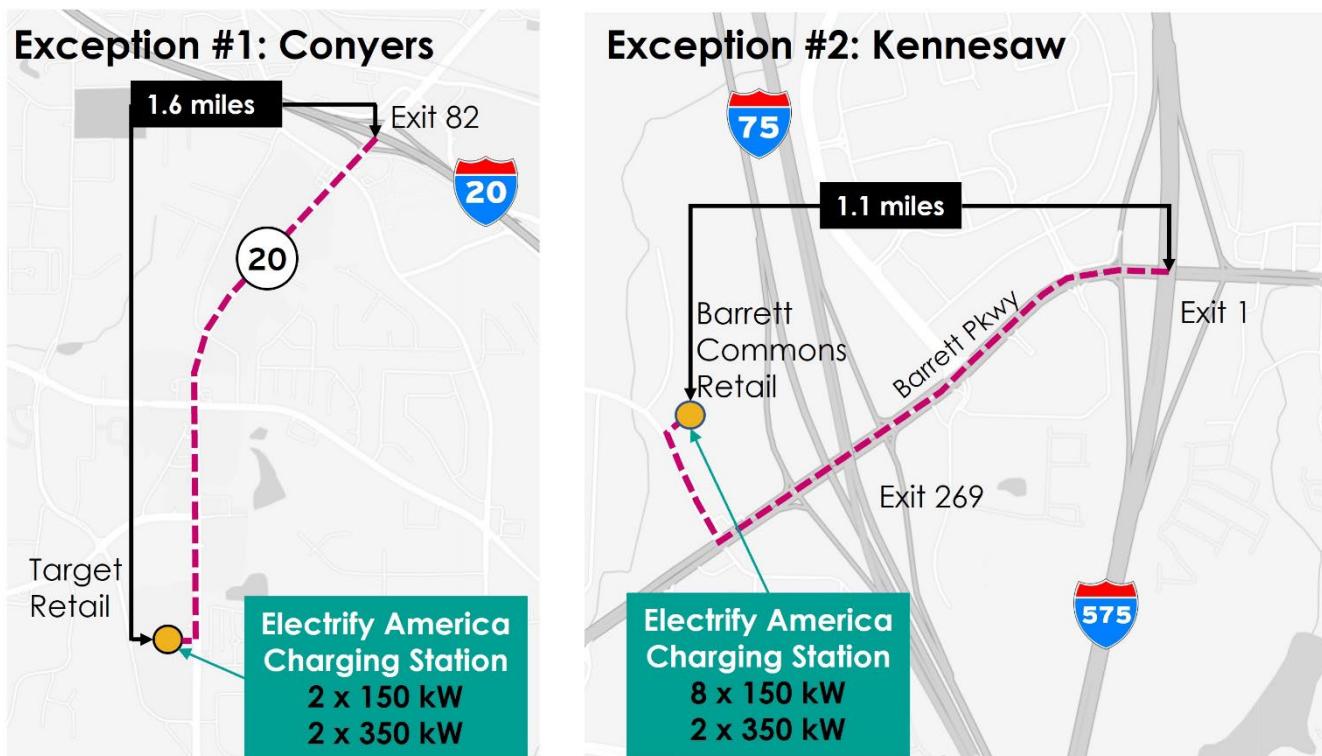


Figure 29: Discretionary Exceptions

14.1 JUSTIFICATION FOR EXCEPTION

Given the economics of EV charging in this early phase of the electrification transition, GDOT believes that it is not a prudent use of government funds to duplicate charging services close to existing and otherwise compliant charging services as it would draw customer demand away from an existing resource potentially impairing its marketability.

1. **Conyers, GA:** An existing Electrify America station with two – 350 kW and two – 150 kW CCS ports is located approximately 1.6 miles from Exit 82 on I-20 in Conyers. The station is on a clearly marked highway (SR-20), easily accessible from the interstate and adjacent to a shopping center with restaurants, a grocery store, and other retail offerings. It is

well-lit and receives high reviews from users. Compliant signage would be installed to guide users.

2. **Kennesaw, GA:** An existing Electrify America station with two – 350 kW and eight – 150 kW CCS ports is located approximately 1.1 miles from Exit 1 on I-575 in Kennesaw and .5 miles from I-75. This large, 10-port station has the capacity to serve both AFCs and is on a clearly marked roadway (Barrett Parkway) easily accessible from the interstate at Barrett Place, a large suburban shopping area with many retail offerings. It is also well-lit and receives high reviews from users. Compliant signage would be installed to guide users.

FIGURE SOURCES

Figure 9 Map Sources:

Elevation/10 Meter Digital Elevation Model (DEM) for the State of Georgia. U.S. Geological Survey via University of Georgia/ Georgia GIS Clearinghouse.

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[2] Cooperative Institute for Satellite Earth Systems Studies (CISESS). National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information (NCEI)

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END NOTES

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- [8] FHWA Notice N 4510.863 - Apportionment Of Fiscal Year (FY) 2022 Highway Infrastructure Program Funds for the National Electric Vehicle Infrastructure Formula Program Pursuant to the Infrastructure Investment and Jobs Act | Federal Highway Administration (dot.gov)
- [9] http://www.dot.ga.gov/InvestSmart/Freight/GeorgiaFreight/Task%203_Georgia%20Multimodal%20Summary.pdf, p. 1-3
- From the Statewide Freight Plan Update (2022): "In state FY 21, 379 Companies expanded or located in Georgia, resulting in \$11 billion in private investment, with \$6.3 billion being logistics-enabled. This includes manufacturing and automotive, logistics/ distribution, and Agribusiness and Food Processing. Nearly half a billion tons of freight moved on Georgia's transportation network in 2019, and Georgia's freight system carried nearly \$700 billion of goods in 2019. In the 2nd quarter of 2021, logistics-enabled industries accounted for 38% of the state's total employment. For the first time in its history, in FY 21 the Port of Savannah moved 5.3 million TEUs, growing cargo volumes by 20%, or nearly 900,000 TEUs, compared to the previous year."
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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
5DPM	Five-Dimensional Project Management
AADT	Average Annual Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ACM	Assistant Construction Manager
AFC	Alternative Fuel Corridors
AHTD	Arkansas Highway and Transportation Department
ARC	Atlanta Regional Commission
ATC	Alternative Technical Concepts
ATL	Atlanta-Region Transit Link Authority
BIL	Bipartisan Infrastructure Law
BMP	Best Management Practice
Board/the Board	Program Accountability Board
CCS	Combined Charging System
CEI	Construction Engineering and Inspection
CID	Community Improvement Districts
CISESS	Cooperative Institute for Satellite Earth Systems Studies
CM	Construction Manager
CPM	Communications Project Manager
CPMP	Construction Project Management Plan
DAC	Disadvantaged Communities
DB	Design-Build
DBE	Disadvantaged Business Enterprise
DBF	Design-Build-Finance
DBFOM	Design-Build-Finance-Operate-Maintain
DCFC	Direct Current Fast Charge
DNR	Department of Natural Resources
DOE	Department of Energy
DOL	Department of Labor
DPM	Deputy Project Manager
DPS	Detailed Project Schedule
EEO	Equal Employment Opportunity
EMIA	Electric Mobility and Innovation Alliance
EPA	Environmental Protection Agency
EMC	Electric Municipal Cooperative
EV	Electric Vehicle
EVITP	Electric Vehicle Infrastructure Training Program
EVSE	Electric Vehicle Supply Equipment
FDOT	Florida Department of Transportation

Acronym/Abbreviation	Definition
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FMVSS	Federal Motor Vehicle Safety Standard
GaDOE	Georgia Department of Education
GCO	Georgia Commute Options
GDOT	Georgia Department of Transportation
GDEcD	Georgia Department of Economic Development
GEC	General Engineering Consultant
GEFA	Georgia Environmental Finance Authority
GEL	Georgia Express Lanes
GEMA	Georgia Emergency Management Agency
GIS	Geographic Information Systems
GOHS	Governor's Office of Highway Safety
GTA	Georgia Technology Authority
GTIC	GDOT Technical Innovation Committee
GW	Gigawatt
HERO	Highway Emergency Response Operators
HUD	Housing and Urban Development
IBEW	International Brotherhood of Electrical Workers
IBTTA	International Bridge, Tunnel and Turnpike Association
ICE	Internal Combustion Engine
ITS	Intelligent Transportation System
KPI	Key Performance Indicator
kW	Kilowatt
LOS	Level of Service
MARTA	Metropolitan Atlanta Rapid Transit Authority
MMIP	Major Mobility Investment Program
MOU	Memorandum/Memoranda of Understanding
MPE	Master Program Estimate
MPO	Metropolitan Planning Organization
MPS	Master Program Schedule
MW	Megawatt
NAICS	North American Industry Classification System
NCEI	National Centers for Environmental Information
NEMAC	National Environmental Modeling and Analysis Center
NEPA	National Environmental Policy Act
NESDIS	National Environmental Satellite Data and Information Service
NEVI	National Electric Vehicle Infrastructure
NGO	Nongovernment Organization
NHTSA	National Highway Traffic Safety Administration

Acronym/Abbreviation	Definition
NOAA	National Oceanic and Atmosphere Administration
NOS	National Ocean Service
NPRM	Notice of Proposed Rulemaking
NTP	Notice to Proceed
O&M	Operations and Maintenance
OCEI	Oversight Construction Engineering and Inspection
OCPP	Open Charge Point Protocol
OEM	Original Equipment Manufacturers
OID	Office of Innovative Delivery
OMB	Office of Management and Budget
P3	Public-Private Partnership
PE	Preliminary Engineering
PEL	Planning and Environmental Linkage
PI	Public Involvement
PICP	Public Involvement and Communications Plan
PIP	Public Involvement Plan
PM	Project Manager
PMC	Program Management Consultant
PMCS	Project Management and Controls System
PMP	Project Management Plan
PQM	Program Quality Manager
PSS	Project Summary Sheets
QA	Quality Assurance
QC	Quality Control
QL	Quality Level
QMS	Quality Management System
RIMS	Right-of-Way Information Management System
RFI	Request for Information
RFP	Request for Proposals
RFQ	Request for Qualifications
ROW	Right-of-Way
RTP	Regional Transportation Plan
SAAG	Special Assistant to Attorney General
SB	Senate Bill
SHRP	Strategic Highway Research Program
SME	Subject Matter Expert
SMW	Success Management Workshop
SOW	Statement of Work
SPP	Strategic Program Plan
STIP	Statewide Transportation Improvement Program

Acronym/Abbreviation	Definition
SUE	Subsurface Utility Engineering
TFA	Transportation Funding Act
TIA	Transportation Investment Act of 2010
TIR	Traffic Impact Report
TMA	Transportation Management Area
TMC	Transportation Management Center
TMP	Transportation Management Plan
TO	Traffic Operations
TTC	Temporary Traffic Control
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USDOE	United States Department of Energy
USDOT	United States Department of Transportation
V2I	Vehicle-to-Infrastructure
V2V	Vehicle-to-Vehicle
WBS	Work Breakdown Structure